

WCRF/AICR Systematic Literature Review Continuous Update Report

The Associations between Food, Nutrition and Physical Activity and the Risk of Breast Cancer

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The Associations between Food, Nutrition and Physical Activity and the Risk of Breast Cancer

Breast Cancer

Prepared by: Continuous Update Team, Imperial College London

Introduction

The World Cancer Research Fund/American Institute for Cancer Research (WCRF/AICR) Continuous Update is an ongoing project to follow the Second Expert Report. In the same way that the report was informed by a process of systematically reviewing the literature and evidence, the Continuous Update will systematically review the epidemiological evidence and have the results of that review considered by a panel of experts that will draw conclusions.

The report reviews the results of cohort studies and controlled trials on diet, nutrition, physical activity and breast cancer published from Jan 2006 till Dec 2007. The number of reports included is 100, from which 1 is a randomised controlled trial, 74 are reports based on prospective cohort designs, 4 are historical cohorts, 1 report has a case cohort design, and 21 are case-control studies nested in cohorts (see Figure 1 Flow Chart of Search).

The continuous update should ensure consistency of approach to the evidence, common approach to the analysis and format for displaying the evidence used as in the literature reviews for the Global Report, 2007.

The starting point for this protocol are:

- The convention for conducting systematic reviews developed by WCRF International for the Global Report, 2007 (See 16.1 Additional references)
- The protocol developed by the Continuous Update - Imperial College group on breast cancer (Appendix 1)

In the judgment of the Panel of the **WCRF-AICR Global Report, 2007**, the factors listed below modify the risk of breast cancer. Judgments are graded according to the strength of the evidence.

CANCER OF THE BREAST (PREMENOPAUSE)

	DECREASES RISK	INCREASES RISK
Convincing	Lactation	Alcoholic drinks
Probable	Body fatness	Adult attained height Greater birth weight
Limited –suggestive	Physical activity	
Limited –no conclusion	Cereals (grains) and their products; (grains) and their products; potatoes; vegetables; fruits; pulses (legumes); soya and soya products; meat; poultry; fish; eggs; fats and oils; vegetable fat; sugar; sugary foods and drinks; milk and dairy products; coffee; tea; carbohydrate; starch; dietary fibre; sugars; total fat; fatty acid composition; <i>trans</i> -fatty acids; cholesterol; protein; vitamin A; carotenoids; folate; riboflavin; vitamin B6; cobalamin; vitamin C; vitamin D; vitamin E; iron; calcium; selenium; isoflavones; dieldrin; <i>trans</i> -nonachlor; dichlorodiphenyltrichloroethane; dichlorodiphenyldichloroethylene; polychlorinated biphenyls; hexachlorocyclohexane; hexachlorobenzene; energy intake; adult weight gain; adult attained height; dietary patterns; culturally defined diets; glycaemic index; and being breastfed.	
Substantial effect on risk unlikely	None identified	

CANCER OF THE BREAST (POSTMENOPAUSE)

	DECREASES RISK	INCREASES RISK
Convincing	Lactation	Alcoholic drinks Body fatness Adult attained height
Probable	Physical activity	Abdominal fatness Adult weight gain Total fat
Limited –suggestive		
Limited –no conclusion	Cereals (grains) and their products; potatoes; vegetables and fruits; pulses; soya and soya products; meat; poultry; fish; eggs; fats and oils; sugar; sugary drinks and foods; milk and dairy products; coffee; tea; carbohydrate; starch; dietary fibre; vegetable fat; fatty acid composition; cholesterol; protein; vitamin A and carotenoids; riboflavin; vitamin B6; vitamin B12; folate; vitamin C; vitamin D; vitamin E; isoflavones; iron; calcium; selenium; dieldrin; <i>trans</i> -nonachlor; dichlorodiphenyltrichloroethane; dichlorodiphenyldichloroethylene; polychlorinated biphenyls; hexachlorocyclohexane; hexachlorobenzene; energy intake; birth length; culturally defined diets; dietary patterns; glycaemic index; being breastfed; and birth weight.	
Substantial effect on risk unlikely	None identified	

1. Research question

The research topic is:

The associations between food, nutrition, physical activity and the risk of breast cancer.

2. Review team

Name	Current position at ICL	Role within team
Teresa Norat	Research Fellow	Principal investigator
Rui Vieira	Data manager	Responsible of the data management, the design and architecture of the database
Doris Chan	Research Assistant	Nutritional epidemiologist, reviewer
Rosa Lau	Research Assistant	Nutritional epidemiologist, reviewer

Review coordinator, WCRF: Rachel Thompson

3. Timeline

Literature search for the continuous update was performed in PubMed for the period from January 2006 to May 2008 using the same search strategy developed for the Global Report, 2007.

The review for the Global Report, 2007 ended in December 30th 2005. A pre-publication update extended the search to May 30th 2006 for exposures and cancer sites with suggestive, probable, convincing associations with the exposure of interest. In order to ensure the completeness of the literature search, the search period of the continuous update overlapped with that in the pre-publication update.

Data extraction was conducted until the end of December 2007 and further relevant articles published in 2008 are awaiting data extraction (see Figure 1. Flowchart of search, p.14 and Appendix 5). Pooled analysis and meta-analysis published during the update were used as supporting evidence in this report.

4. Search strategy

The Continuous update team used the search strategy established in the SLR Guidelines with the modifications implemented by the SLR centre (Milan) for the Global Report, 2007, as explained in the protocol presented to the CUP on March 5th 2007. The complete search strategy and the modifications can be found in Appendix 2.

5. Selection of articles

Only articles that match the inclusion criteria (see 5.1) were updated in the database.

3829 articles were identified through the PubMed search between January 2006 and May 2008. Of these articles, 99 were reports of cohort studies or case-control studies nested within a cohort on diet, physical activity, nutrition and breast cancer, and one report was a controlled

trial. 131 articles with a case-control design were also recorded. Data are not extracted from these articles. A flow chart with the details of study selection is in Figure 1.

Eleven pooled analyses and meta-analyses relating to the topic of research were identified in the search, but they were not included in the database. The results of these studies are used as a support for the interpretation of the evidence in this report.

5.1 Inclusion criteria

The articles included in the review:

- Were included in Medline from January 1st 2006 (closure date of the database for the Global Report, 2007).
- Present results from an epidemiologic study of one of the following types:
 - Randomised controlled trial
 - Group randomized controlled trial (Community trial)
 - Prospective cohort study
 - Nested case-control study
 - Case-cohort study
 - Historical cohort study
- Must have as outcome of interest breast cancer incidence or mortality. Results of the associations of the exposures of interest with incidence of breast cancer *in situ* have been updated in the database but are not included in the report.
- Were published in English language¹

5.2 Exclusion criteria

The articles excluded from the review:

- Are out of the research topic
- Do not report measure of association between the exposure and the risk of breast cancer
- The measure of the relationship between exposure and outcome is only the mean difference of exposure
- Are supplement to the main manuscript (e.g. Authors' Reply)
- Are not in English language
- Study designs other than those listed in the inclusion criteria

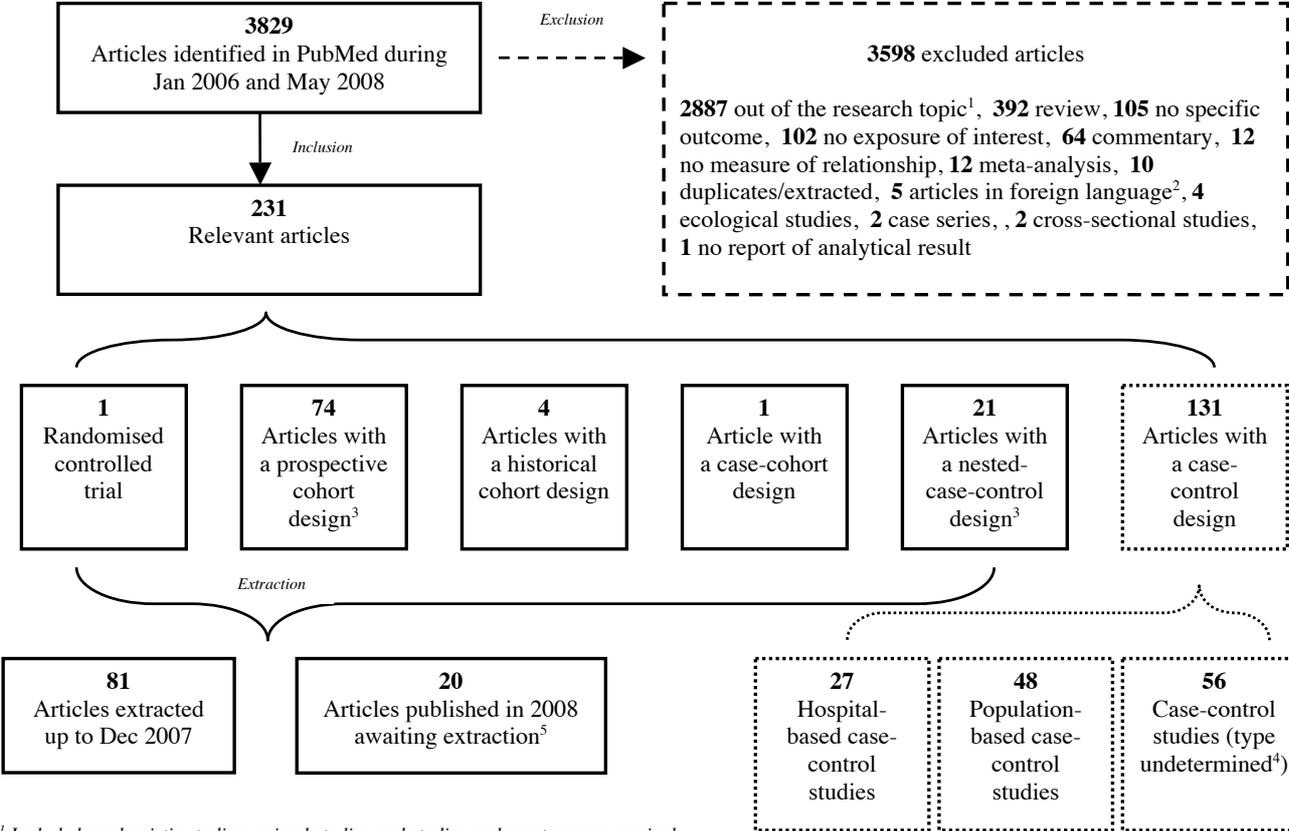
The selection of the study designs was based first, on the scale of the evidence of study designs (SLR Specification Manual pp 126) and second, in the fact that the evidence for exposures graded probable in the Global Report, 2007 was based mainly on the results of cohort studies and trials. Filters for study design will not be implemented in the search strategy.

The extent of the update has to be adequate to time and resources. For this reason the proposal is to give priority to articles published in English language. Most, if not all, high quality studies will be published in peer-reviewed journals in English language and referenced in the Medline database.

Mean differences as measure of association had been included in the SLRs for the Global Report, 2007. We have not included such results in the continuous update because the RRs

estimated from the mean differences are not adjusted and are thus not comparable to adjusted relative risks estimated.

Figure 1. Flowchart of search



¹ Included mechanistic studies, animal studies and studies on breast cancer survival
² Included 4 case-control studies and 1 prospective cohort study
³ One article had a prospective cohort and a nested case-control design
⁴ Abstract alone was insufficient to determine the type of case-control study
⁵ Included 2 articles pending from 2007

6. Exposures

The continuous update used the exposure labels and codes listed in the SLR Guidelines for the Global Report, 2007.

During the SLR for the Global Report, 2007, the SLR centres assigned new sub-codes for exposures that were more detailed than the WCRF list of exposures. When all the databases produced in the SLR for the Global Report were merged, it became evident that all the sub-codes used were not the same in all centres and that several sub-exposures were not grouped under the same main exposure in all centres. With all databases merged into one, it was necessary to recode the exposures to ensure the identity of exposure codes with the corresponding exposure labels in the merged database.

The process of recodification of sub-exposures for its “harmonisation” was carried out at ICL. First, all the codes and labels in the merged database were reviewed by Teresa Norat (ICL), Doris Chan (ICL) and Rachel Thompson (WCRF). Second, a comparison of subcodes used in different centres was done and the final code was the one used by the highest number of centres.

The updated list of sub-exposures and codes is in Appendix 3. The codes defined in the SLR Guidelines remained the same. Originally, there were 4 509 distinct sub-exposures. After the “harmonisation”, the number was reduced to 3930 by merging of redundant sub-exposures. The changes affected a total of 34 537 results (for a comparison term, the total number of individual breast results is 11 765).

The table below shows the number of sub-exposures by main exposure in the original Access database and in the last version of the MySQL database.

Main exposure	Number of sub-exposures under the main exposure in the Access databases	Number of sub-exposures under the main exposure in the MySQL merged database
1. Patterns of diet	221	210
2. Foods	1335	1191
3. Beverages	307	242
4. Food production, preservation, processing and preparation	557	512
5. Dietary constituents	1446	1236
6. Physical activity	273	225
7. Energy balance	96	66
8. Anthropometry	274	248
Total	4509	3930

The actualisation of the database with the new sub-exposure codes was implemented by Rui Vieira (Data manager ICL) and the new exposure list incorporated in the interface for data

entry. The ICL team keeps a copy of the merged database containing the original information generated by the SLR centres. All the modifications of the database can be traced in a log file. The log file contains 12 548 changes recorded.

7. Outcome

The outcome of interest is breast cancer encompassing incidence and mortality. Results of studies on premenopausal, postmenopausal and all breast cancers combined (or menopausal status not specified) are presented separately.

8. Databases

Only the Medline database was searched. Data from the SLR for the Global Report, 2007 indicates that 95% of the articles included in the review have been retrieved from the Medline database. PubMed was used as interface to access Medline.

9. Hand searching for cited references

For feasibility reasons, journals have not been hand searched systematically in the continuous update. Hand searching and searching in other databases will be done if there is some evidence that an important study has been missed by the search strategy. The references of the published meta-analyses and pooled analyses were checked to verify the completeness of the search. Six relevant studies published before 2006 were identified through checking the reference lists of reviews and the Global Report. Data from these studies were either not available for the 2005 SLR analysis (Ekbohm, A. et al., 1997 , BRE80172; Folsom, A. R. and Demissie, Z. 2004 , BRE80171; Van Gils, C. H. et al., 2005 , BRE80167; Muti, P. et al., 2000, BRE80180) or were only cited in the Global Report (Macinnis, R. J. et al., 2004 , BRE80159; Olsen, A. et al., 2004 , BRE80170). These studies had been extracted to the WCRF/AICR database and were included in the present report.

10. Retrieving papers

The abstracts of the articles retrieved with the search strategy in PubMed were reviewed to assess whether each reference was relevant or potentially relevant.

The articles of relevant and potentially relevant references and of references that could not be excluded upon reading the title and abstracts were downloaded. A second assessment was done after review of the complete article.

11. Labelling of references

For consistency with the previous data collected during the SLR process for the Global Report, 2007, the Continuous Update team used the same labelling of references: the unique identifier for a particular reference was constructed using a 3-letter code to represent the cancer site (e.g. BRE for breast cancer), followed by a 5-digit number that was allocated in sequence.

12. Reference Manager Files

All the references retrieved with the PubMed search strategy are stored in Reference Manager databases with the following additional customized fields:

- 1) One of the customized fields (User Def 1) is named 'inclusion' and this field is marked 'included', 'excluded' for each paper, thereby indicating which papers are deemed potentially relevant based on an assessment of the title and abstract.
- 2) One of the customized fields (User Def 2) is named 'reasons' and this field include the reason for exclusion for each paper.
- 3) The study identifier was entered under the field titled 'label'.
- 4) One of the customized fields (User Def 3) is named "study design". This field indicates the study design of each paper:

13. Data extraction

The Access databases generated during the SLR for the Global Report, 2007 have been merged into one database at Imperial College and upgraded to MySQL.

The Continuous Update team has updated the merged database using an interface created at Imperial College. The interface allows the update of all variables included in the Access databases for the SLR for the Global Report. Several facilities have been implemented to facilitate data entry, retrieval and reporting.

The study design algorithm devised for use of the SLR centres for the Global Report, 2007 was used to allocate study designs to papers (SLR specification manual –version 15 pp 123). In some cases it was needed to assign more than one design to a particular paper because the data were analysed in the entire cohort and using a case-control design nested in the cohort.

13.1 Choice of Result

All the relative risks estimates reported in each paper have been extracted. The results should be labelled as not adjusted, minimally adjusted, intermediately adjusted and maximally adjusted, according to the model used for its estimation. In addition, the reviewer should indicate a "best model" for inclusion in reports. Unadjusted results were extracted but not used in the reports.

The best model has to be controlled for confounding by age, either by adjustment or by matching. Where there was more than one model adjusting for age, the most adjusted one was considered to be the best model. Exception to this criterion is "mechanistic" models, adjusting for variables likely to be in the causal pathway. Examples of mechanistic models are results for BMI adjusted for height or weight (or other similar combinations) and results for waist-to-hip ratio adjusted for either waist or hip circumference.

When such results (over adjusted results) were reported, the most adjusted results that were not over-adjusted were considered as "best models", while the over-adjusted results were identified as "maximally adjusted", but not as "best models".

Sometimes, some of the potential risk factors are not kept in the final model because their inclusion does not modify the risk estimates. If this is specified in the article text, this model was also considered the "best model".

13.2 Effect modification

Although one of the aims of the Continuous update is to report whether effect modification has been investigated for a particular association, this information has not been included into the database in a standardized way. The Continuous Update team is developing a module for data entry of data on effect modification and interactions. This module is at its early stage of development. Some interactions are described in the report but the completeness of the data requires further improvement.

13.3 Gene-nutrient interaction

No attempt was made to critically appraise or analyse the studies that reported gene-nutrient interactions in the Global Report, 2007. The results of these studies were described in the narrative review under the relevant exposures and the same approach is followed in the Continuous update.

A separate protocol to handle gene-nutrient interactions is in the process of being developed by the ICL.

13.4 Multiple articles

Data has been extracted for each individual paper, even if there is more than one paper from any one cohort study or trial. For report purposes, the most appropriate data set was selected amongst the papers published from a study on a particular exposure to ensure there was no duplication of data from the same study in an analysis.

The selection of the most appropriate data set was approached in the following way:

- a) The result has to be the “Best adjusted”
- b) The results are of the analysis based on the larger number of cases compared to other results of the same study. Often, it is equivalent to use the most recently published article.
- c) The data set is the most complete result from that study regarding the data needed for the meta-analysis.

14. Report

14.1 Data presentation.

This report contains the results of the study of the association of food, nutrition, physical activity and breast cancer risk in cohort studies and trials, that has been published from January 2006 to Dec 2007 studies and with the inclusion criteria listed under **5.1**.

The Continuous Update report present results only for the exposures investigated in the articles published in the update period. The exposures for which no new results have been published from January 2006 are not included in the Continuous Update report. The presentation of updated results is ordered by exposure code.

This report does not repeat the results of the SLR for the Global Report 2007. A short summary of the results of the SLR is given for each updated exposure. The summary is followed by a description of the study results published in the update period.

As in the SLR, the results are displayed graphically in forest plots comparing the highest vs. the lowest category of exposure in each study, together with the name of the cohort study, its specific WCRF code and the exposure categories used. The Continuous update team has developed a new interface equipped with a facility to export the data needed to generate the forest plots. However, it was necessary to visually check the data exported for verification of the process, the consistency of the exposure and to detect study duplicity. It was therefore not possible for the team to present in this report forest plots for all the exposures and it was done for selected exposures. Exposures to be presented graphically were selected using the same criteria for performing dose-response meta-analysis, i.e. when 3 or more cohort studies were published from January 2006 to Dec 2007 and if the total number of study results retrieved during the SLR and the continuous update totalised to more than 3 trials or 5 cohort studies.

In forest plots, studies are presented by descending year of publication. The list of exposures for which forest plots are displayed is in “15. Results of the update”.

14.2 Dose-response meta-analysis

Dose-response meta-analysis were conducted when 3 or more cohort studies were published from January 2006 to Dec 2007 and if the total number of study results retrieved during the SLR and the continuous update totalised to more than 3 trials or 5 cohort studies. The list of exposures for which meta-analyses have been conducted is in “15. Results of the update”.

Special care was taken to avoid including more than once the results of the same study (e.g. previous analyses and re-analyses after a longer follow-up). For that reason, some studies included in meta-analyses in the SLR have been replaced by updated results. A few studies that were duplicated have been removed. Studies included in the previous meta-analyses that reported only mean differences between cases and non-cases as measure of association have been removed from the updated meta-analysis. The list of studies included and excluded from the meta-analysis as well as the reasons for exclusions are tabulated in each section under the exposure heading.

The statistical methods used in the meta-analyses are the same described in the WCRF Guidelines for the SLR. To investigate the dose-response relationship, the relative risk (RR) associated with a unit of increase in exposure was estimated from the category-specific risk estimates using the method of generalised least-squares for trend estimation (Orsini N et al, 2006). The unit of increment was the same unit used in the SLR. Summary RR estimates with their corresponding 95% CIs has been derived by the method of DerSimonian and Laird, 1986 using the assumption of a random effects model. The current dose-response meta-analysis assumes linear relationship between the exposure and breast cancer.

Heterogeneity between studies was assessed with the I^2 statistic as a measure of the proportion of total variation in estimates that is due to heterogeneity, where I^2 values of 25%, 50%, and 75% correspond to cut-off points for low, moderate, and high degrees of heterogeneity (Higgins and Thompson, 2002). As usual method of assessing and displaying heterogeneity, we also examined forest plots. We attempted to assess the sources of heterogeneity by meta-regression. However, the number of studies was often limited. The main variables examined were geographic area, year of publication, length of follow-up and exposure assessment methods. Publication bias was examined in funnel plots.

All analyses were conducted using STATA version 9.2 (College Station, TX, USA).

14.2.1 Missing values

The data needed to estimate the dose-response associations are often incompletely reported, which may result in exclusion of results from meta-analyses.

A recent review published by the SLR Bristol showed that only 64% of the results of cohort studies provide enough data to be included in dose-response meta-analyses (Bekkering et al, 2008) and that the results that showed evidence of an association were more likely to be usable in dose-response meta-analysis than results that found no such evidence. Insufficient detail in reporting of results of observational studies can lead to exclusion of these results from meta-analyses.

Failure to include all available evidence will reduce precision of summary estimates and may also lead to bias if propensity to report results in sufficient detail is associated with the magnitude and/or direction of associations. We therefore computed missing data using the

assumptions recently reviewed by participants of the SLR Bristol (Bekkering et al, 2008) and listed below:

Type of data	Missing data	Assumptions
Dose-response data	Standard error	The p value (either exact or the upper bound) was used to estimate the standard error
Quantile-based data	Numbers of controls (or the denominator in cohort studies) Confidence interval	Group sizes are assumed to be approximately equal Standard error were calculated from raw numbers (although doing so may result in a somewhat smaller standard error than would be obtained in an adjusted analysis)
	Group mean are missing	This information was estimated by using the method of Chene and Thompson (Chene G et al., 1996) with a normal or lognormal distribution in unbounded groups or by taking midpoints in bounded groups.
Category data	Numbers of cases and controls (or the denominator in cohort studies) is missing	These numbers may be inferred based on numbers of cases and the reported odds ratio (proportions will be correct unless adjustment for confounding factors considerably alter the crude odds ratios)

Methods proposed in the literature allows the computation of unadjusted odds ratios by using numbers of cases and comparison subjects (controls) or person-years in each group, or from the mean difference between cases and controls (Chene G, Thompson SG, 1996). Since “best models” are included in the meta-analysis, unadjusted odds ratios were not imputed to replace missing odds ratios.

15. Results of the update

Highest vs. lowest forest plots are presented for the following exposures:

- 2.5 Total meat
- 2.5.1.2 Processed meat
- 2.5.1.3 Red meat
- 2.5.2 Fish
- 5.1.2 Dietary fibre
- 5.2 Total fat
- 5.4 Alcohol (as ethanol)
- 5.5.3 Dietary folate
- 6 Physical activity
- 7.1 Energy

- 8.1.1 BMI
- 8.1.6 Weight change
- 8.2.1 Waist circumference
- 8.2.3 Waist-hip ratio
- 8.3.1 Height
- 8.4.1 Birthweight

Dose-response meta-analyses were conducted for the following exposures:

- 5.1.2 Dietary fibre
- 5.4 Alcohol (as ethanol)
- 8.1.1 BMI
- 8.2.1 Waist circumference
- 8.2.3 Waist-hip ratio
- 8.3.1 Height

The number of cohort studies by exposure are in Table 1.

Table 1. Number of cohort studies by exposure
(updates of previously published cohort studies are in brackets)
** the same cohort has 2 or more articles cited in the text*

Code	Name	Total	SLR	CU
1. Patterns of diet				
1.3.1	Vegetarianism	3	2*	1
1.4a	Dietary guideline index score	3	2	1
1.4b	Individual level dietary patterns	1	0	1
1.6.1	Breastfeeding, Mother	3	1	2
1.6.1	Total duration of breastfeeding	8	5*	3
2. Foods				
2.1.1.0.4	Cold cereals (breakfast)	3	2	1
2.2	Fruit and (non-starchy) vegetables	4	4	(2)
2.2.1	Non-starchy vegetables	5	5	(1)
	Green-leafy vegetables (excluding cruciferous)	4	4	(1)
	Cruciferous vegetables	2	2*	(1)
2.2.2.1.1	Grapefruit	2	0	2
2.3.1	Soy products	3	2	1
2.3.1.1	Miso, soy paste soup	3	2	1
2.3.2.2	Tofu	3	2	1
2.5.1	Meat (unspecified)	10	8*	2
2.5.1.2	Processed meat	6	3*	3
2.5.1.3	Red meat	8	5*	3+(1)
2.5.1.4	Poultry	6	4*	2
2.5.1.5	Liver (fish)	1	0	1
2.5.1.5	Offals	1	0	1
2.5.2	Fish	10	9*	1*

2.6.2	Plant oils	3	2	1
2.7	Milk and dairy products	9	6	3
	Milk	9	8	1
2.7.2	Cheese, fresh cheese	6	5	1
2.7.3	Yoghurt	3	2	1
3. Beverages				
3.5	Fruit juices	6	3	3
3.6.1	Coffee	6	4	2
3.6.2	Tea	7	6	1+(1)
3.7.1	Alcoholic drinks	14	12	2+(3)
3.7.1.1	Beers	14	11*	3
3.7.1.2	Wines	14	10*	4
3.7.1.3	Spirits/liquor	14	11*	3
4. Food production, preservation, processing and preparation				
4.4.2	Acrylamide	2	1	1
4.4.2.6	Broiled	2	1	1
5. Dietary constituents				
5.1.2	Dietary fibre	12	10*	2+(1)
5.1.2	Vegetable fibre	5	3*	2
5.1.2.1	Cereal fibre	5	3*	2
5.1.2.3	Fruit fibre	5	3*	2
5.1.5	Glycemic index	8	7*	1
5.1.5	Glycemic load	8	7*	1
5.2	Total fat	8	7*	1+(1)
5.2.2	Saturated fatty acids	20	19	1
5.2.3	Monounsaturated fatty acids	17	15	2
5.2.4	Polyunsaturated fatty acids	15	13	2
5.5.2	Vitamin B	5	4	1
5.5.10	Vitamin D	6	4	2+(1)
5.5.0	Multivitamin supplement	5	3*	2
5.5.3	Folate	10	8	2+(3)
5.6.2	Iron	1	0	1
5.6.3	Calcium	8	3	5+(1)
5.6.4	Selenium	9	7	2
5.6.7	Zinc	1	0	1
5.7.5	Phytoestrogens	12	9	3
6. Physical activity				
6.1	Total physical activity	8	7	1
6.1.1.1	Occupational physical activity	6	5*	1
6.1.1.2	Recreational activity	14	12	2+(1)
6.1.3	Vigorous physical activity	10	9	1
7. Energy balance				
7.1	Energy intake	15	14*	1+(1)
7.1.1	Energy from fat	8	7*	1+(1)
7.1.2	Energy from carbohydrate	4	3	1
8. Anthropometry				
8.1.1	BMI	57	44*	13+(6)
8.1.6	Weight change	11	8*	3+(2)
8.2.1	Waist circumference	13	8	5+(2)
8.2.3	Waist to hip ratio	15	10	5+(1)

8.3.1	Height (and proxy measures)	41	35*	6+(1)
8.4.1	Birthweight	12	9*	3+(2)

Results

Results from the new studies identified during the update period January 2006 and December 2007 are detailed in this section along with previous findings from the Global Report. This part of the report is sectioned by the exposure headings and the assigned WCRF exposure codes. The order of appearance is kept as per the Global Report. Additional details on the studies can be found in the accompanying result tables. List of abbreviations can be found in appendix 4.

1. Patterns of diet

Four new studies from cohorts on patterns of diet were identified in the Continuous Update: one study on vegetarianism, one cohort on “a posteriori” individual level dietary patterns and two cohort studies on dietary index scores.

One randomized controlled diet testing a dietary pattern low in fat, high in fibre, fruits, and vegetables was identified.

1.3.1 Vegetarianism

Global Report, 2007

The "UK Cohort of Vegetarians and other Health Conscious People, 1973" found that a vegetarian diet was associated with a significant increase in mortality from breast cancer (Key, T. J. A. et al., 1996 , BRE15654). Another study, The "California 7th-day Adventist" study found that vegetarian diet was not significantly associated to breast cancer incidence (Mills, P. K. B. 1989 , BRE17837) and mortality (Mills, P. K. A. 1988 , BRE17836).

Update

Only one study was identified: the EPIC-Oxford cohort, United Kingdom (Travis, R. C. et al., 2007 , BRE80141).

Menopause age unspecified

Vegetarianism was not related to breast cancer in the same cohort. The RR in vegetarians compared to non-vegetarians was 0.91 (95% CI = 0.72-1.14). No association was observed in never users of hormone replacement therapy (RR = 0.89; 95% CI = 0.70-1.14).

Overall, three cohort studies have investigated vegetarianism in relation to breast cancer incidence. Vegetarianism has not been related to reduction of breast cancer incidence in two studies. In a fourth report, vegetarianism was not related to mortality for breast cancer.

Premenopause

There was a non-significant inverse association between vegetarianism and risk of premenopausal breast cancer in the EPIC-Oxford cohort, United Kingdom (Travis, R. C. et

al., 2007 , BRE80141). The RR of breast cancer in vegetarians compared to non-vegetarians was 0.95 (95% CI = 0.68-1.32) (196 cancer cases).

Postmenopause

In the same cohort study (Travis, R. C. et al., 2007 , BRE80141) vegetarianism was non-significantly inversely related to risk of postmenopausal breast cancer. The RR of breast cancer in vegetarians compared to non- vegetarians was 0.79 (95% CI = 0.54-1.16) (290 cancer cases).

1.4a Individual level dietary patterns

No cohort study was identified in the SLR.

Update

The ORDET study, Italy (Sant, M. et al., 2007 , BRE80036) was the only cohort study identified. The following patterns were derived from factor analysis in a population including 40 breast cancer cases HER2 – and 198 HER2+:

- Salad vegetables score (highest factor loadings on raw vegetables and olive oil)
- Western diet score (highest factor loadings on potatoes, ravioli, red and processed meat)
- Canteen diet score (highest factor loading on pasta, tomato sauce, olive oil, wine)
- Prudent diet score (highest factor loading, on cooked vegetables, rice poultry fish low)

The analyses were stratified according to HER2 status.

No significant association was observed in most analyses. The only significant result was an inverse relationship associated with highest value of the salad score in HER-2+ women (RR_{Q3 vs Q1} = 0.25 (95% CI = 0.1-0.64)).

The authors conducted exploratory factor analysis to reduce the food groups to a small number of factors that explained the maximum fraction of the variance. The Scree test was employed to determine the number of factors to retain (4 factors).

1.4b Diet low in fat, high in fibre, fruits, and vegetables

Update

One clinical trial was identified. The results of the Women's Health Initiative Dietary Modification Randomised Controlled Trial (WHI DM trial) were published in the update period (Prentice, R. L. et al., 2006 , BRE80155). In this trial, women were randomly assigned to the dietary modification intervention group (40%, n = 19 541) or the comparison group (60%, n = 29 294). The intervention was designed to promote dietary change with the goals of reducing intake of total fat to 20% of energy and increasing consumption of vegetables and fruit to at least 5 servings daily and grains to at least 6 servings daily. Comparison group participants were not asked to make dietary changes.

The low-fat dietary pattern did not result in a statistically significant reduction in invasive breast cancer risk over an 8.1- year average follow-up period (655 breast cancer cases in the

intervention group and 1072 in the comparison group; RR = 0.91, 95% CI = 0.83-1.01 for the comparison between the two groups).

On average, the target of reducing intake of dietary fat to 20% of energy was not achieved. The low-fat dietary pattern did not result in a statistically significant reduction in invasive breast cancer risk over an 8.1- year average follow-up period (655 breast cancer cases in the intervention group and 1072 in the comparison group; RR = 0.91, 95% CI = 0.83-1.01 for the comparison between the two groups).

Women in the upper quartile of percent energy from fat at baseline (>36.8% of total energy from fat) had a larger estimated reduction in risk with the intervention (HR = 0.78, 95% CI = 0.64-0.95). Similar results were reported in women with more than or equal to 76 g/day total fat intake at baseline (RR = 0.79, 95% CI = 0.64-0.96).

The hazard ratio estimate was lower for tumors negative for the progesterone receptor(PR) than for tumors positive for the progesterone receptor (P=0.04) but did not depend on estrogen receptor (ER) status. When tumors were classified by both ER and PR status, there was an indication (P=0.04) of hazard ratio variation with stronger evidence for a reduction in the occurrence of tumors that are positive for the estrogen receptor and negative for the progesterone receptor.

1.4c Dietary guideline index score

Global Report, 2007

One study showed an inverse association of breast cancer risk with increasing levels of a score of compliance with the *Dietary Guidelines for Americans* in the Iowa Women's Health Study (Harnack, Lisa et al., 2002 , BRE19762). In the BCDDP study, the Recommended Foods Score (RFS), a measure of overall diet quality was inversely but not related to breast cancer incidence (RR = 0.75; P < 0.06) (Mai, V. et al., 2005 , BRE23275).

Update

Only one cohort study had been identified, the Nurses' Health Study, USA (3580 postmenopausal cancer cases) (Fung, T. T. et al., 2006 , BRE80107).

Postmenopause

The Nurses' Health Study, USA (3580 postmenopausal cancer cases) investigated the relationship of the following diet indexes: Healthy Eating Index (HEI), Alternative Healthy Eating Index (AHEI), Diet Quality Index-Revised (DQI-R), Recommended Food Score (RFS) and Alternate Mediterranean Diet Score (A-MDS), in relation to postmenopausal breast cancer. No significant association was observed with any of the indexes.

In stratified analysis, none of the indexes was significantly related to risk of ER+ postmenopausal breast cancer. However, several significant results emerged in the analyses for ER- postmenopausal breast cancer. The RRs associated to the highest vs. the lowest quintile of the score are presented in Table 1.4.

Table 1.4 Relative risks (95% Confidence Intervals) of ER+ and ER- postmenopausal breast cancer for the highest vs. the lowest quintile of dietary index score in the Nurses' Health Study (Fung, T. T. et al., 2006 , BRE80107).

Index	RR (95% CI, Q5 vs. Q1)	
	ER+ (n=2367 cases)	ER- (n=575 cases)
HEI	1.1 (0.95 - 1.28)	0.92 (0.68 - 1.24)
AHEI	1.05 (0.91 - 1.21)	0.78 (0.59 - 1.04), p=0.01
DQI-R	1.09 (0.94 - 1.27)	0.97 (0.72 - 1.31)
RFS	1.06 (0.92 - 1.23)	0.69 (0.51 - 0.94) p=0.003
A-MDS	1.05 (0.91 - 1.18)	0.79 (0.6 - 1.03) p=0.03

The inverse association of ER- breast cancer with higher scores of the Alternative Healthy Eating Index was explained by the vegetable component (RR_{Q5 vs Q1}=0.68; 95% CI = 0.51-0.91) and the polyunsaturated:saturated fat ratio component (RR_{Q5 vs Q1}=0.75; 95% CI = 0.58-0.98) of the Alternative Healthy Eating Index.

The inverse association of ER- breast cancer with the Alternate Mediterranean Diet Score was explained by the component of the ratio monounsaturated: saturated fat (RR_{Q5 vs. Q1} = 0.79; 95% CI = 0.63-0.99). No association was observed with the nuts and soy component, the cereal fibre component, the white: red meat ratio component, the trans-fat component, the multivitamin use component and the alcohol components of the A-MDS.

The inverse association of ER- breast cancer with the Recommended Food Score was explained by the vegetable component. The RR of yellow/orange vegetable was 0.76 (95% CI = 0.57-0.99; P_{trend}=0.04) with ER-breast cancer for 1+/day vs. <2/week intake. The RR of other vegetable (eggplant, green peppers, celery) was 0.67 (95% CI = 0.53-0.87; P_{trend}=0.03) and the RR of leafy vegetable was 0.71 (95% CI = 0.55-0.90; P_{trend}=0.13) with ER-breast cancer for the same consumption comparison.

1.6 Lactation

1.6.1 Breastfeeding, Mother

Global Report, 2007

A case-control study nested in the Icelandic cohort showed that breastfeeding significantly lowered breast cancer risk in parous women (Tryggvadottir, L. et al., 2002 , BRE12507; Tryggvadottir, L. et al., 2001 , BRE12506). This was particularly evident for early breast cancers (<40 yrs). No significant protective association was shown with postmenopausal breast cancer.

Update

Two studies were identified in the Continuous Update. The retrospective international cohort study in BRCA carriers from United Kingdom, France, Netherlands and Canada reported no significant association between breastfeeding (ever vs. never) and breast cancer risk (797

breast cancer cases) (Andrieu, N. et al., 2006 , BRE80136). Subgroup analyses showed a relative risk estimate of 0.70 (95% CI = 0.44-1.39, 215 cases) in BRCAII carriers and 1.07 (95% CI = 0.81-1.4, 582 cases) in BRCAI carriers respectively when comparing ever vs. never breastfeeding.

The Japan Public Health Center-based prospective study (JPHC) reported a non-significant moderate inverse association between breastfeeding and breast cancer among premenopausal women (RR_{breastfeeding yes vs. no} = 0.80, 95% CI = 0.55-1.17) (176 cases) (Iwasaki, M. et al., 2007 , BRE20027). For postmenopausal women, a small non-significant protective effect was observed (RR_{breastfeeding yes vs. no} = 0.94, 95% CI = 0.60-1.47) (193cases).

Published meta-analysis

The relationship of breastfeeding and breast cancer by hormone receptor status was investigated in a meta-analysis that included five population-based case-control studies. The RR_{>6 months vs. never} was 0.78 (95% CI = 0.64-0.94) in ER+/PR+ and 0.74 (95% CI = 0.61-0.89) in ER-/PR- (Ma, H. et al., 2006).

1.6.1 Total duration of breastfeeding

Global Report, 2007

The meta-analysis performed on four prospective studies (Goodman, M. T. et al., 1997 , BRE03352;Kvale, G. H. 1988 , BRE17728;Li, W. et al., 2005 , BRE23123;Michels, K. B. W. 1996 , BRE17829) showed a borderline significant negative association with breast cancer (RR = 0.98, 95% CI = 0.97-1.00) for a total increase of 5 months of breastfeeding during life. The Nurses' Health Study has two reports (London, S. J. et al., 1990 , BRE15914;Michels, K. B. W. 1996 , BRE17829). The most recent report was included in the SLR meta-analysis. In a cohort of premenopausal parous Korean women (360 incident cases of breast cancer), a period of lactation of 13-24 months compared to no history of lactation was related to a non-significant decreased risk of breast cancer (RR = 0.7, 95% CI = 0.5-1.1). The association was slightly stronger for breastfeeding of more than 24 months (RR = 0.6, 95% CI = 0.3-1.0) (Lee, S. Y. K. 2003 , BRE17745).

Update

Three studies were identified during the update. One of them involved women who carried a mutation in BRCA1 or BRCA2 (Andrieu, N. et al., 2006 , BRE80136).

The International BRCA1/2 Carrier Cohort Study (IBCCS), a historical cohort study including 1601 pre- and postmenopausal breast cancer cases from United Kingdom, France, Netherlands and Canada in BRCAI and II carriers reported no association (RR_{>24 months vs nil} = 1.08 ; 95% CI = 0.62-1.89) (Andrieu, N. et al., 2006 , BRE80136). While the CLUE II study reported an OR for > 6 versus 0 months breast feeding of 0.79 (95% CI = 0.45-1.41) (67 cases, excluding 33 cases with missing data) (Visvanathan, K. et al., 2007 , BRE80020).

A non-significant relationship between duration of breastfeeding and breast cancer risk was reported in a nested case-control study including 237 postmenopausal breast cancer cases from the Malmo, Cancer and Diet study (RR_{>7 months vs nil} = 0.72; 95% CI = 0.5-1.05) (Wirfalt, E. et al., 2005 , BRE11111).

2. Foods

2.1.1 Cereals

Cold cereals (breakfast)

Global Report, 2007

No significant association between breast cancer and adolescent consumption of cold cereals (breakfast) was observed in a nested case-control study on premenopausal women (Frazier, A. L. et al., 2003 , BRE02941). An Australian cohort on postmenopausal women reported no association between breast cancer and intake of breakfast cereals (Giles, G. G. et al., 2006 , BRE22430).

Update

A report of the PLCO Cancer Screening Trial cohort study (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) did not find a significant association of breast cancer risk with intake of cereals fortified with 25% Recommended Dietary Allowance (RDA) (RR >0.95 vs. <0.01 g/day = 1.15; 95% CI = 0.64-2.07) or 100% RDA (RR >0.65 g/day vs. no consumption = 1.69; 95% CI = 1.69; 95% CI 0.92-3.1) in women who never took multivitamins.

2.2. Fruit and (non-starchy) vegetables

Global Report, 2007

Menopause age unspecified

One nested case-control study from China (Shannon, J. et al., 2003 , BRE18714) reported an RR of 0.46 (95% CI = 0.28-0.75) for highest versus lowest intake of fruit and vegetables (unspecified).

Premenopause

One report from the Nurses' Health Study (Zhang, S. et al., 1999 , BRE13953) was identified. Women who consumed five or more servings per day of fruits and vegetables had modestly lower risk of breast cancer than those who had less than two servings per day (RR = 0.77, 95% CI = 0.58-1.02); this association was stronger among women with a positive family history of breast cancer (RR = 0.29, 95% CI = 0.13-0.62) or those who consumed 15g or more of alcohol per day (RR = 0.53, 95% CI = 0.27-1.04).

Postmenopause

No association was observed in the Diet, Cancer and Health Study, Denmark (Olsen, A. T. 2003 , BRE17890). (IRR= 1.02, 95% CI = 0.98-1.06) per 100 g/d increment of total intake of fruits, vegetables and juice). Olsen 2003 reported for ER+ breast cancer, a borderline significant increase, IRR: 1.05 (95% CI = 1.00-1.10), whereas a preventive effect was seen for ER- breast cancers, IRR= 0.90 (95% CI = 0.81-0.99).

A prospective study in the Malmo Diet and Cancer cohort (Mattisson, I. et al., 2004 , BRE16042) and the Nurses' Health Study did not find any association (Zhang, S. et al., 1999 , BRE13953).

Update

Two cohort studies (previous reports of the same studies were included in the SLR) published updated results on intake of fruits and vegetables and breast cancer risk.

Postmenopause

The intake of fruit and vegetables was not related to postmenopausal breast cancer in the update of the Diet, Cancer and Health Study, Denmark (377 cases) (Ravn-Haren, G. et al., 2006 , BRE80151). In the update of the Malmo Diet and Cancer Study, Sweden (Sonestedt, E. et al., 2007 , BRE80147) (428 cases), the intake of fruits, berries and vegetables was not significantly related to postmenopausal breast cancer (RR_{626 vs 190g/d}=0.78; 95% CI = 0.57-1.05). However, a significant inverse association was observed in women with BMI<27 kg/m² (RR_{626 vs 190g/d}=0.66; 95% CI = 0.46-0.97) and in women who did not modify dietary habits before recruitment (RR_{626 vs 190g/d}=0.59; 95% CI = 0.40-0.87).

2.2.1 Non-starchy vegetables

Global Report, 2007

Menopause age unspecified

In the EPIC study (3 659 cases), the intake of total vegetables was not related to breast cancer (RR = 0.98, 95% CI = 0.84-1.14) (Van Gils, C. H. et al., 2005 , BRE80167). *This paper by van Gils CH et al., 2005 was not included in the previous SLR and Global Report. It was not on the SLR database.*

Postmenopause

A prospective study on postmenopausal breast cancer (Olsen, A. T. 2003 , BRE17890) did not find any significant association (RR = 0.98, 95% CI = 0.89-1.09) with consumption of non-starchy vegetables. The analysis by ER status in this cohort did not show any significant associations. The RR for ER+ was 1.01 (95% CI = 0.9-1.13) and for ER- was 0.92 (95% CI = 0.73-1.16) for highest versus lowest intake.

Vegetables- unspecified

Menopause age unspecified

Two studies were included in the meta-analysis. The summary estimate was 0.95 (95% CI = 0.88-1.03) per 100g/d (I² = 90%). (Li, W. et al., 2005 , BRE23123;Rohan, T. E. H. 1993 , BRE17965) .

Premenopause

In the Nurses' Health Study, intake of vegetables was inversely related to premenopausal breast cancer after 14 years of follow-up (Zhang, S. et al., 1999 , BRE13953).

No association with vegetables was observed in the Pooling project of cohort studies (RR = 0.99, 95% CI = 0.93-1.06) per 100g/d (Smith-Warner et al. 2001)

Postmenopause

In the Nurses' Health Study (Zhang, S. et al., 1999 , BRE13953) and the Netherlands' cohort study (Verhoeven, D. T. et al., 1997 , BRE12868) postmenopausal breast cancer was not associated with the intake of vegetables.

In the Pooling Project of Cohort Studies, no association was observed. The overall estimate was 1.00 (95% CI = 0.97-1.02) per 100g/d (Smith-Warner et al. 2001)

Update

Postmenopause

The only report identified was the update of the association of postmenopausal breast cancer and vegetable intake in the Nurses' Health Study, USA (Fung, T. T. et al., 2006 , BRE80107) (575 cancer cases). In this analysis the risk of postmenopausal breast cancer was significantly inversely related to the score of vegetable intake of the RFS index (reviewed in "1.4 Dietary guideline index score")(RR_{7 or more times/week vs. less than 2 times/week} = 0.67; 95% CI = 0.53-0.87). ER+ breast cancer was not related to any of the diet quality scores investigated in this study. All diet quality scores included fruits and vegetables, but they contributed only 10–20% of the total score except for the RFS to which they contribute 80% of the total score (See also 1.4c Dietary guideline index score, p.25).

Green leafy vegetables (excluding cruciferous vegetables)

Global Report, 2007

No significant association with adolescent consumption of spinach was observed in a case control study nested in the Nurse' Health Study (Frazier, A. L. et al., 2003 , BRE02941). In a Chinese nested case-control study the intake of lettuce was inversely but non-significantly related to breast cancer (Li, W. et al., 2005 , BRE23123). The intake of salad vegetables was not related to breast cancer in a prospective cohort on vegetarians (Key, T. J. A. et al., 1996 , BRE15654).

The EPIC study (Van Gils, C. H. et al., 2005 , BRE80167) (609 cases) showed no evidence of association between leafy vegetables intake (excluding cabbages) and the risk of breast cancer. *The EPIC paper by van Gils CH et al., 2005 was not included or cited in the previous SLR and Global Report.*

Update

Postmenopause

In the updated analysis in the Nurses' Health Study, USA (Fung, T. T. et al., 2006 , BRE80107) (575 cancer cases) the risk of postmenopausal breast cancer was significantly inversely related to the intake of leafy vegetables (RR_{>7 vs <2 times/week} = 0.71; 95% CI = 0.55-0.90).

Cruciferous vegetables

Global Report, 2007

Menopause age unspecified

In a Chinese nested case-control study the intake of cruciferous vegetables was not associated with breast cancer (Li, W. et al., 2005 , BRE23123).

Breast cancer in adulthood was not related with the intake of cabbage or broccoli during adolescence in a case-control study nested in the Nurse's Health Study (Frazier, A. L. et al., 2003 , BRE02941).

The EPIC study (Van Gils, C. H. et al., 2005 , BRE80167) reported no evidence of association between cabbage intake and the risk of breast cancer ($RR_{\text{Quintile 5 vs. quintile 1}} = 1.18$, 95% CI = 1.01-1.38, $P_{\text{trend}} = 0.11$). *The EPIC paper by van Gils CH et al., 2005 was not included or cited in the previous SLR and Global Report.*

Premenopause

In the Nurses' Health Study the RR of breast cancer in premenopausal women was 0.83 (95% CI = 0.52-1.32) for 1.00 vs 0.24 servings per day of cruciferous vegetables (Zhang, S. et al., 1999 , BRE13953).

Postmenopause

In the Nurses' Health Study the RR of breast cancer in postmenopausal women was 0.98 (95% CI = 0.77-1.25) for 1.00 vs 0.24 servings per day of cruciferous vegetables (Zhang, S. et al., 1999 , BRE13953).

Update

Postmenopause

In the update of the Nurses' Health Study, USA (Fung, T. T. et al., 2006 , BRE80107), postmenopausal breast cancer risk was inversely but not significantly related to the intake of cruciferous vegetables ($RR_{>5 \text{ vs } <2 \text{ times/week}} = 0.88$, 95% CI = 0.68- 1.15).

2.2.2.1.1 Grapefruit

The two studies identified in the update are the first studies investigating grapefruit intake and breast cancer risk.

Update

Postmenopause

Grapefruit intake was associated with a significant increased risk of postmenopausal breast cancer in the Multi-ethnic Cohort Study, USA (Monroe, K. R. et al., 2007 , BRE80126) (1657 cases; $RR_{>60 \text{ g/day vs never}} = 1.3$; 95% CI = 1.06-1.58). The association between grapefruit intake and breast cancer risk was clearly seen in never hormone therapy users, as well as current

estrogen treatment users. The risk of breast cancer associated with consumption of grapefruit was 32% higher among lean/normal weight women and 26% higher among overweight/obese women. There was also a positive cross-sectional relationship between grapefruit intake and serum oestrogen levels.

These results were not replicated in the Nurses' Health Study (Kim, E. H. et al., 2008 , BRE80156) (3570 cases; $RR_{>1/4 \text{ portion/day vs. none}} = 0.97$; 95% CI = 0.83-1.14). Moreover, a protective effect was observed in women with ER-PR- tumours who had never used hormone replacement therapy ($RR_{>1/4 \text{ portion/day vs. none}} = 0.60$; 95% CI = 0.37- 0.98) in this study. There was no cross-sectional relationship between consumption of grapefruit and grapefruit juice and plasma levels of oestrogens among these 701 postmenopausal women not using hormone replacement.

It is not clear if the discordant results might be explained by differences in serum oestrogens levels and BMI (higher prevalence of overweight women in the Nurses' Health Study compared to the women in the MEC) amongst populations of the two cohort studies.

Possible mechanism

In vitro and in vivo studies have shown that cytochrome P450 3A4 (CYP3A4) is involved in the metabolism of oestrogens. There is evidence that grapefruit, an inhibitor of CYP3A4, increases plasma oestrogen concentrations. Since it is well established that oestrogen is associated with breast cancer risk, it is plausible that regular intake of grapefruit would increase a woman's risk of breast cancer.

2.3.1 Soy products

Global Report, 2007

Only two cohort studies had reported data on soy products (the Japanese study included soybeans, tofu, deep-fried tofu and natto; the Chinese study included soybean milk, fried bean curd puff, fresh bean curd, soybeans and other soybean foods) (Li, W. et al., 2005 , BRE23123; Yamamoto, S. et al., 2003 , BRE17122).

Menopause age unspecified

A Japanese cohort study (Yamamoto, S. et al., 2003 , BRE17122) and a Chinese nested case-control study (Li, W. et al., 2005 , BRE23123) did not show evidence of association of intake of soy products with breast cancer. The overall relative risk estimate in both studies was 1.00 (95% CI = 0.94-1.06) per 1 time/week increase.

Update

Only the Japan Collaborative Cohort study was identified during the update (Nishio, K. et al., 2007 , BRE80129).

Menopause age unspecified

In the Japan Collaborative Cohort Study (JACC) (Nishio, K. et al., 2007 , BRE80129) no significant association was observed between soy products and breast cancer risk (RR_{highest}

$\text{intake vs other} = 1.42, 95\% \text{ CI} = 0.84-2.4$) (145 breast cancer cases). Results for premenopausal women were not reported separately.

Postmenopause

In the same cohort (Nishio, K. et al., 2007 , BRE80129) an inverse but not significant association was observed in postmenopausal women ($\text{RR}_{\text{highest intake vs other}} = 0.88, 95\% \text{ CI} = 0.41-1.89$) (92 cases).

2.3.1.1 Miso, soya paste soup

Global Report, 2007

Two cohorts (Key, T. J. et al., 1999 , BRE04758; Yamamoto, S. et al., 2003 , BRE17122) were identified. Results from the Japan Nurses' Health Study were also reviewed in the Global Report, but this study analysed baseline miso soup intake and history of breast cancer in postmenopausal women cross-sectionally only (Fujimaki, S. and Hayashi, K. 2003 , BRE03015). Also the Shanghai study reviewed here were misclassified, the exposure should be fermented beancurd instead of miso soup (Li, W. et al., 2005 , BRE23123).

Menopause age unspecified

The Japan Public Health Centre-Based Prospective Study on Cancer and Cardiovascular Diseases Cohort (JPHC) (Yamamoto, S. et al., 2003 , BRE17122) and the Japanese cohort in Hiroshima and Nagasaki (Key, T. J. et al., 1999 , BRE04758) were included in a dose-response meta-analysis of miso soup. The meta-analysis with an increment of 0.5 serving/week showed a borderline significant protection (summary RR 0.98, 95% CI = 0.96-1.00).

Note: The suggestive 20% reduction in risk observed in a Chinese cohort study from Shanghai reported in the Global Report was on fermented beancurd, not miso soup (Li, W. et al., 2005 , BRE23123). This study was not included in the dose-response meta-analysis.

Postmenopause

A significant inverse association of intake of miso soup 6 days/week vs. 1.9 days/week and breast cancer in postmenopausal women was observed in a Japan Nurses' Health Study from a cross-sectional analysis (Fujimaki, S. and Hayashi, K. 2003 , BRE03015).

Update

Only the JACC study had reported data on miso soup during the update (Nishio, K. et al., 2007 , BRE80129).

For miso soup, the JACC study (Nishio, K. et al., 2007 , BRE80129) reported similar results. No significant associations were found for postmenopausal women at baseline ($\text{RR}_{\geq 2 \text{ vs. } < 1 \text{ cup/day}} = 0.92, 95\% \text{ CI} = 0.52-1.62$) (92 cases) and the overall group (pre and post menopausal women; 145 cases) ($\text{RR}_{\geq 2 \text{ vs. } < 1 \text{ cup/day}} = 0.80, 95\% \text{ CI} = 0.46-1.39$).

2.3.2.2 Tofu

Global Report, 2007

Overall, two studies (Fujimaki, S. and Hayashi, K. 2003 , BRE03015;Key, T. J. et al., 1999 , BRE04758) were identified with one on postmenopausal women only (Fujimaki, S. and Hayashi, K. 2003 , BRE03015).

Menopause age unspecified

No association was observed in the Japanese cohort in Hiroshima and Nagasaki (Key, T. J. et al., 1999 , BRE04758).

Postmenopause

A Japanese cohort study (Fujimaki, S. and Hayashi, K. 2003 , BRE03015) of registered nurses found a significant increased risk of postmenopausal breast cancer risk with an increasing tofu intake.

Update

Only the JACC study had reported data (Nishio, K. et al., 2007 , BRE80129).

Menopause age unspecified

The JACC (Nishio, K. et al., 2007 , BRE80129) found tofu intake was not significantly associated with the risk of breast cancer (RR_{almost daily vs. <3times/week} = 1.14, 95% CI = 0.74-1.77) (145 cases).

Postmenopause

When the analysis was limited to only postmenopausal women (92 cases) at baseline, no significant association was found (Nishio, K. et al., 2007 , BRE80129).

Published meta-analysis

Two meta-analyses on soy products were recently published (Qin, L.Q. et al., 2006; Trock, B.J. et al., 2006.).

In the meta-analysis of six case-control and three cohort studies of Qin et al., the overall estimate for soy products was 0.75 (95% CI = 0.59-0.95). One of the cohort studies was reviewed in the SLR (Key, T. J. et al., 1999 , BRE04758) while the other two cohort studies were either not reviewed in the SLR under the soy products section: a study on the Nurses' Health Study II reporting data on beans and lentils (Adebamowo, C. A. et al., 2005 , BRE21537), or not reviewed: an American study (Greenstein, J. et al., 1996) that reported a relative risk of 0.76 (95% CI = 0.51-1.18) for highest vs lowest intake of soy or tofu.

In the same meta-analysis (Qin, L.Q. et al., 2006), the results for miso soup are consistent with the results of the SLR (RR_{highest vs. lowest}=0.88, 95% CI = 0.78-1.00). This analysis included three case-control and three cohort studies. Two of the cohorts were reviewed in the

SLR: (Yamamoto, S. et al., 2003 , BRE17122), but the remaining cohort published by Hirayama in 1990 was not reviewed in the SLR (RR_{daily vs. non-daily} was 0.85 (95% CI = 0.68-1.06) reported in *Hirayama T: Life style and mortality: A large scale census-based cohort study in Japan. In: Contributions to Epidemiology and Statistics (Wahrendorf J, Ed) Vol 6 Karger, Basel, Switzerland, 1990*. One of the studies included in the SLR as miso soup was not included in this meta-analysis (Li, W. et al., 2005 , BRE23123). The exposure should be fermented beancurd instead of miso soup as included in the SLR.

Finally, in this meta-analysis the overall relative risk estimate for tofu was 0.78 (95% CI = 0.70- 0.88). Only two out of nine studies were cohort studies .

The second meta-analysis was published in the Journal of the National Cancer Institute by Trock B.J. et al., 2006 using data from 12 case-control and six cohort studies. The exposure variable was the intake of soy protein estimated from the intake of soy food and dietary isoflavones. Trock et al. reported an OR_{highest vs. lowest} of 0.86 (95% CI = 0.75-0.99). Cohort or nested case-control studies exhibited somewhat larger pooled odds ratios (OR = 0.93) than retrospective case-control studies (OR = 0.83), but the difference was not statistically significant.

One meta-analysis on estimated intake of isoflavones (Wu, A. H. et al., 2008) reported an overall relative risk of 0.88 (95% CI = 0.78-0.98) combining case-control and cohort studies. The subgroup analysis showed a non-significant association (RR_{highest vs lowest consumption of isoflavones} =1.08, 95% CI = 0.95-1.24) in cohort/nested case-control studies from Western populations. In the analysis restricted to Asian populations (seven case-control and one cohort studies), the overall RR was 0.71 (95% CI = 0.60-0.85).

These meta-analyses are limited by the difficulty in the standardisation of measure of soy intake. The quantity and type of soy consumed varied greatly across the studies, such that the contrasts in intake levels for the reported risk estimates differed widely. Additional variability is introduced by issues such as fermented versus nonfermented soy foods, total soy versus soy protein, or soy versus urinary isoflavone estimates. Although results of these meta-analyses suggest that soy intake is associated with a modest reduction in breast cancer risk, heterogeneity across studies limits the ability to interpret the findings.

2.5.1 Meat (Unspecified)

Global Report, 2007

Menopause age unspecified

Six cohort studies on meat intake and cancer incidence and two on cancer mortality were identified. Three studies were included in a SLR meta-analysis (Key, T. J. et al., 1999 , BRE04758;van der Hel, O. L. et al., 2004 , BRE12728). The summary estimate (per increase of 1 time/week) was 1.02 (95% CI = 0.99-1.06). Two other studies not included in the meta-analysis showed an increased risk (Gaard, M. T. 1995 , BRE17516;Taylor, E. F. et al., 2007 , BRE80008;Toniolo, P. et al., 1994 , BRE12398) and the third showed non-significant inverse association (RR = 0.89, 95% CI = 0.79-1.00). (Holmes, M. D. et al., 2003 , BRE15400).

In the case-cohort analysis in the MPCDRF study from the Netherlands (van der Hel, O. L. et al., 2004 , BRE12728), neither presence of NAT1 or NAT2 rapid genotype, or GSTT1 null genotype, alone or in combination with meat consumption affected breast cancer risk.

Two studies investigated cancer mortality (Kinlen, L. J. 1982 , BRE17702; Mills, P. K. A. 1988 , BRE17836).

Premenopause

No association in the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400)

Postmenopause

No association in the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400)

No meta-analysis was done in both pre- and postmenopausal breast cancer in the Global Report.

Update

Two studies were identified during the update period – the UK Women's Cohort Study (UKWCS) (Taylor, E. F. et al., 2007 , BRE80008) and the Diet, Cancer and Health Study from Denmark (Egeberg, R. et al., 2008 , BRE80153).

Menopause age unspecified

One study reporting an increased risk (RR_{more than 103 g/day vs none} = 1.34 (1.05-1.71)) (UKWCS) (Taylor, E. F. et al., 2007 , BRE80008) was identified during the update period.

A total of six studies on breast cancer with unspecified menopausal status were included in the highest versus lowest forest plot (Fig. TM1). Two other studies from the SLR also reported an increased risk, the New York Women's Health Study (Toniolo, P. et al., 1994 , BRE12398) and a Norwegian study (Toniolo, P. et al., 1994 , BRE12398). No significant association was observed in the remaining three studies, one from the Netherlands (van der Hel, O. L. et al., 2004 , BRE12728); the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400), and the LSS (Key, T. J. et al., 1999 , BRE04758).

Premenopause

The UKWCS reported no significant association (Taylor, E. F. et al., 2007 , BRE80008). The RR for more than 103 g/day vs none was 1.20 (95% CI = 0.86-1.68).

This result together with that of the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400) are presented in the highest versus lowest plot (Fig. TM1, premenopausal). No significant association was observed in any of the two studies.

Postmenopause

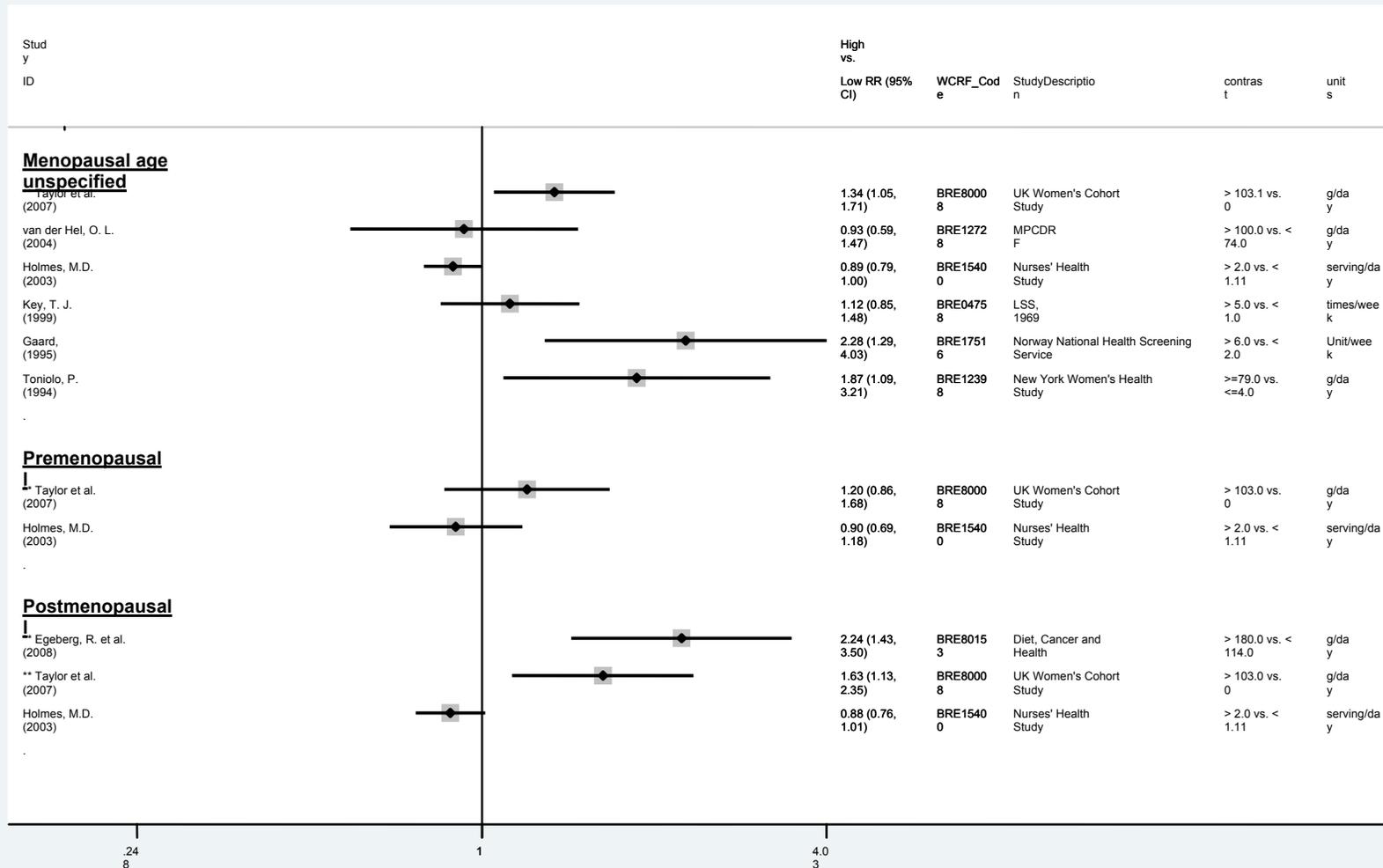
Two studies were identified. In the UK Women's Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) (395 cases) intake of red meat, offals, poultry and processed meat was related to increased risk of breast cancer (RR=1.1; 95% CI = 1.01-1.2 for an increase of 50 g of meat

intake). The RR associated to intake of meat excluding processed meat was 1.09 (95% CI = 0.99-1.2 for an increase of 50 g/day).

These results are consistent with the findings of the Diet, Cancer and Health Study, Denmark (Egeberg, R. et al., 2008 , BRE80153) (378 postmenopausal cases) that reported a relative risk of 1.09 (95% CI = 1.02-1.17 for 25 g increase of intake of red meat, poultry, fish and processed meat. The increased risk in the Danish study was observed in NAT2 intermediate and fast acetylator genotypes (RR_{per 25 g} 1.20; 95% CI = 1.05-1.37) but not in NAT2 slow acetylator genotypes (RR 1.01; 95% CI = 0.93-1.10) ($P_{interactions} = 0.03$). No statistical significance association with meat intake was observed in subgroup analysis according to NAT1 genotype ($P_{interactions} = 0.63$).

These results are presented in a forest plot with the results of a previously published study (the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400)) that reported a non-significant decreased risk (RR = 0.88, 95% CI = 0.76-1.01) (Fig. TM1, postmenopausal).

i. Fig. TM1 Highest versus lowest forest plot on meat (unspecified) and breast cancer, by menopausal status (= new studies identified during the update)**



2.5.1.2 Processed meat

Global Report, 2007

A pooled estimate of two studies (Gertig, D. M. et al., 1999 , BRE03215;van der Hel, O. L. et al., 2004 , BRE12728) showed a non-significant increased risk of invasive breast cancer with an increase of processed meat consumption of 20 g/day.

Overall, five reports that were published by three cohort studies were retrieved from the SLR database. The Nurses' Health Study had published three reports (Fung, T. T. et al., 2005 , BRE22370;Gertig, D. M. et al., 1999 , BRE03215;Holmes, M. D. et al., 2003 , BRE15400). The Netherlands Cohort Study on Diet and Cancer (Voorrips, L. E. et al., 2002 , BRE13011) and the Monitoring Project on Cardiovascular Disease Risk Factors, also from the Netherlands (van der Hel, O. L. et al., 2004 , BRE12728), had each published one report.

The Netherland cohort study (Voorrips, L. E. et al., 2002 , BRE13011) not included in the meta-analysis found no evidence of association between breast cancer risk and intake of processed meat.

Update

Data from three new reports – the Nurses' Health Study II on premenopausal women (Cho, E. et al., 2006 , BRE80034), the Diet, Cancer and Health study on postmenopausal women (Egeberg, R. et al., 2008 , BRE80153) and the UK Women's Cohort Study (UKWCS) (Taylor, E. F. et al., 2007 , BRE80008) on breast cancer were identified during the update period.

Menopause age unspecified

Only the UK Women's Cohort Study had reported data during the update period (Taylor, E. F. et al., 2007 , BRE80008). A significant increased risk was reported (678 cases) ($RR_{\text{for } \geq 20 \text{ vs. } 0\text{g/day}}$ was 1.39 (95%CI = 1.09-1.78).

Three other studies had presented results previously (Holmes, M. D. et al., 2003 , BRE15400;van der Hel, O. L. et al., 2004 , BRE12728;Voorrips, L. E. et al., 2002 , BRE13011), but the results were inconsistent and only this result from the UKWCS was statistically significant (95% CI = 1.09-1.78). The results are presented in the Figure PM1.

Only one report was included from the Nurses' Health Study. The publication by Holmes et al. (Holmes, M. D. et al., 2003 , BRE15400) was selected instead of Gertig et al. (Gertig, D. M. et al., 1999 , BRE03215) as in the Global Report because there were more cases with unspecified menopause age (4107 cases vs. 455 cases) ascertained after 18 years of follow-up. The publication by Gertig et al. was a case-control study nested within the Nurses' Health Study cohort of 8 years follow up. The change in report selection for the Nurses' Health Study (Holmes et al., 2003 vs. Gertig et al., 1999) had resulted to a lower risk estimate from 1.3 (95% CI = 1-1.8) to 0.94 (95% CI = 0.85-1.05) for the highest versus lowest comparison (Gertig, D. M. et al., 1999 , BRE03215;Holmes, M. D. et al., 2003 , BRE15400) compared to the SLR.

Premenopause

A positive association that did not reach statistical significance was observed for premenopausal breast cancers in the UK Women's Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) (283 cases) ($RR_{\text{for } \geq 20 \text{ vs. } 0 \text{g/day}} = 1.20$; 95% CI = 0.85-1.70). Similarly, non-significant positive association was observed in the Nurses' Health Study II ($RR_{\text{for } \geq 13 \text{ vs. } \leq 0.9 \text{ serving/month}} = 1.28$, 95% CI = 0.87-1.88) (Cho, E. et al., 2006 , BRE80034).

In the Nurses' Health Study II, a significant increased risk of premenopausal breast cancer with processed meat consumption was observed in women with ER+PR+ breast tumours ($RR_{>12.9 \text{ vs } <1 \text{ servings/month}} = 2.34$; 95% CI = 1.47-3.71) but not in women with ER-PR- tumours ($RR_{>12.9 \text{ vs } <1 \text{ servings/month}} = 0.79$; 95% CI = 0.24-2.61). An inverse association was observed with higher intakes of bacon ($RR_{>4.3 \text{ servings/month vs } <1 \text{ serving/month}} = 0.23$; 95% CI = 0.06-0.93) in premenopausal women with ER-PR- tumours. This is likely a chance result due to multiple testing.

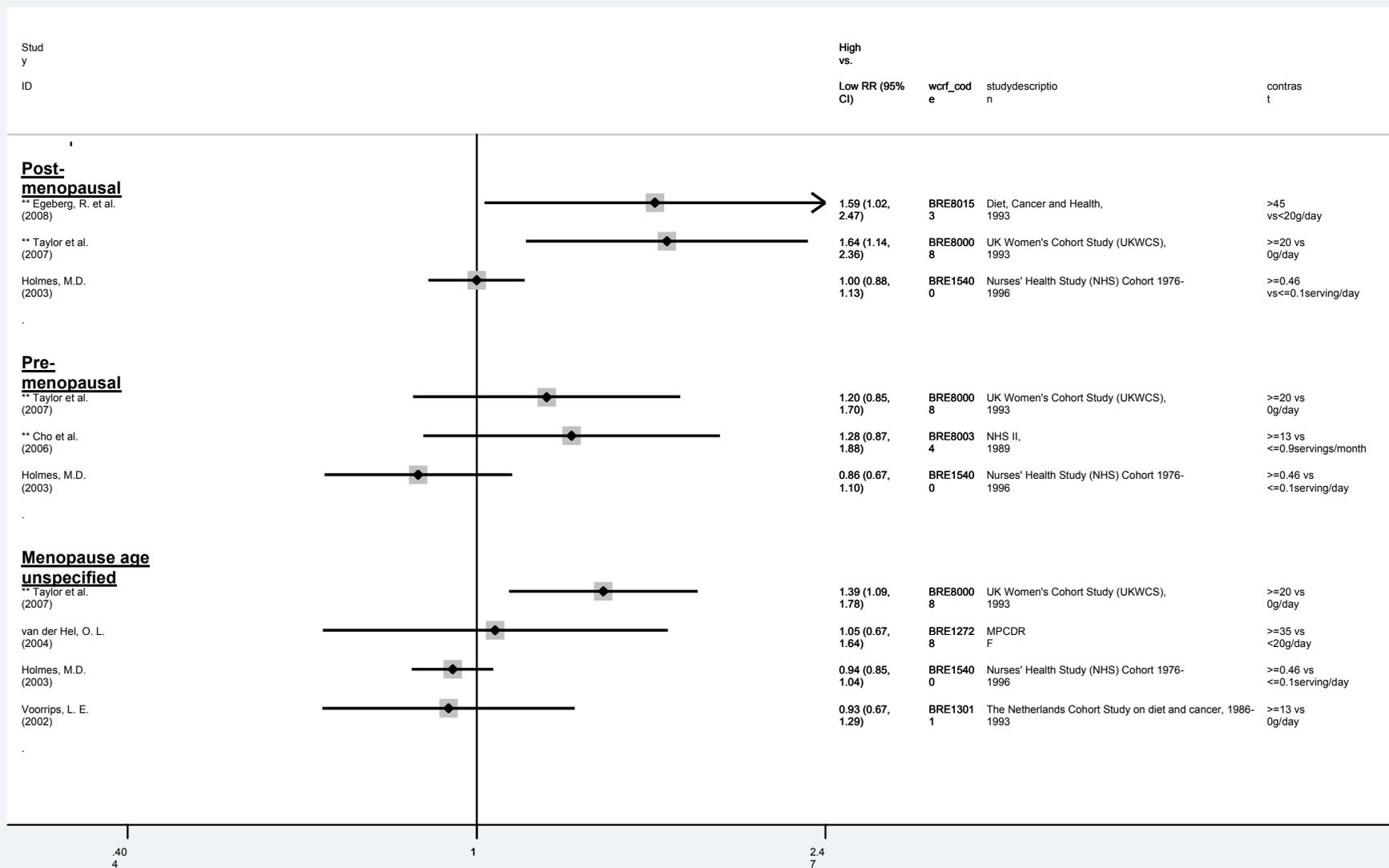
The results of the updated studies are shown in the highest versus lowest plot (Fig. PM1) together with the report from the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400) retrieved in the SLR ($RR_{\text{highest vs lowest}} = 0.86$, 95%CI = 0.67-1.10) (Figure PM1).

Postmenopause

Two studies were retrieved during the update. In the UK Women's Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) (395 cases) intake of processed meat was related to increased risk of breast cancer ($RR_{\text{for } \geq 20 \text{ vs. } 0 \text{g/day}} = 1.64$; 95% CI = 1.14-2.36). These results are consistent with those of the Diet, cancer and Health Study, Denmark (378 postmenopausal cases) (Egeberg, R. et al., 2008 , BRE80153) that found a relative risk of 1.59 (95% CI = 1.02-2.47 for the comparison of ≥ 45 vs. ≤ 20 g/day). Statistical significance was lost in subgroup analyses by NAT1 and NAT2 genotypes. The association of postmenopausal breast cancer with processed meat was positive but not significant in the groups with NAT1 fast and intermediate, NAT1 slow, NAT2 fast and intermediate, and NAT2 slow genotypes.

The results, together with a report from the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400) retrieved during the SLR are presented in highest versus lowest forest plots in Fig. PM1.

ii. Fig. PM1 Highest versus lowest forest plot on processed meat and breast cancer, by menopausal status (** = new studies identified during the update)



2.5.1.3 Red meat

Global Report, 2007

A meta-analysis was performed combining three prospective studies (Gaard, M. T. 1995 , BRE17516;Gertig, D. M. et al., 1999 , BRE03215;van der Hel, O. L. et al., 2004 , BRE12728). The results showed a pooled RR = 1.02 (95% CI = 0.98-1.06) for an increase of meat consumption of 5 times/months. The great significant heterogeneity ($I^2 = 74\%$) was partially explained by different adjustment for confounders. The study of Gaard et al. (Gaard, M. et al., 1994 , BRE03044;Gaard, M. T. 1995 , BRE17516) controlled only for age.

Two studies that could not be included in the dose-response meta-analysis did not find any association of red meat with breast cancer: the Seventh-day Adventists Cohort Study (Mills, P. K. A. 1988 , BRE17836) on cancer mortality and the Nurses' Health Study II (Cho, E. S. 2003 , BRE17370). Two other reports of the Nurses' Health Study were also not included (Fung, T. T. et al., 2005 , BRE22370;Holmes, M. D. et al., 2003 , BRE15400).

In addition, the Nurses' Health Study reported that rapid acetylators with the highest red meat intake were not at increased risk of breast cancer compared with slow acetylators with the lowest red meat intake ($OR_{\geq 1 \text{ \& rapid acetylators vs. } \leq 0.5 \text{ servings/day \& slow acetylators}} = 1.1, 95\% \text{ CI} = 0.7-1.8$). In this study, individuals were classified as rapid acetylators if they were wild-type or heterozygous for the *NAT2* slow-acetylator alleles (Gertig, D. M. et al., 1999 , BRE03215).

Update

Four reports on red meat intake were identified during the update period. The Canadian National Breast Screening Study (Kabat, G. C. et al., 2007 , BRE80138) and the UK Women's Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) both investigated pre- and postmenopausal breast cancers while the Nurses' Health Study II investigated risk of premenopausal breast cancer (Cho, E. et al., 2006 , BRE80034) and the Diet, Cancer and Health study investigated postmenopausal breast cancer (Egeberg, R. et al., 2008 , BRE80153). The results are displayed in Fig RM1.

Menopause age unspecified

Two prospective cohort studies with inconsistent results were identified over the period Jan 2006 and Jun 2008: the Canadian National Breast Screening Study (Kabat, G. C. et al., 2007 , BRE80138) ($RR_{>108.9 \text{ vs } <48.4 \text{ g/day}} = 0.98 (95\% \text{ CI} = 0.86-1.12)$) and the UK Women's Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) ($RR_{>57 \text{ g/day vs none}} = 1.41 (95\% \text{ CI} = 1.10-1.81)$).

In total, six studies were included in the high vs. low plot (Fig RM1) on red meat and unspecified breast cancer (Gaard, M. T. 1995 , BRE17516;Gertig, D. M. et al., 1999 , BRE03215;Kabat, G. C. et al., 2007 , BRE80138;Li, W. et al., 2005 , BRE23123;Mills, P. K. A. 1988 , BRE17836;Taylor, E. F. et al., 2007 , BRE80008;van der Hel, O. L. et al., 2004 , BRE12728). One report of the Nurses' Health Study (Gertig, D. M. et al., 1999 , BRE03215) was not included because it was superseded by Holmes et al. 2003 (Gertig, D. M. et al., 1999 , BRE03215); whereas the Seventh-day Adventist Cohort (Mills, P. K. A. 1988 , BRE17836) only reported mortality data, therefore it was also excluded from the meta-analysis.

In two studies red meat was found to be associated with an increased risk of breast cancer in women with unspecified menopausal status (Gaard, M. T. 1995 , BRE17516;Li, W. et al., 2005 , BRE23123;Mills, P. K. A. 1988 , BRE17836;Taylor, E. F. et al., 2007 , BRE80008;van der Hel, O. L. et al., 2004 , BRE12728). In two studies the association was positive but not significant and in two studies there was no association.

Premenopause

Three prospective cohort studies were identified over the period Jan 2006 and Jun 2008 (Cho, E. et al., 2006 , BRE80034) Nurses' Health Study II; (Kabat, G. C. et al., 2007 , BRE80138) Canadian National Breast Screening Study and (Taylor, E. F. et al., 2007 , BRE80008) the UK Women's Cohort Study.

The Nurses' Health Study II (Cho, E. et al., 2006 , BRE80034) (1021 premenopausal breast cancer cases) reported a significant dose-response relationship (RR = 1.44; 95% CI = 1.18-1.77 for an increase of 1 serving/day of red meat – cumulative updated consumption, questionnaires years 1991, 1995, 1999). The RR of the highest vs. the lowest category of consumption was 1.27 (95% CI = 0.96-1.67). In subgroup analysis, the positive significant association was observed for ER+PR+ breast tumors (512 cases; RR = 1.97; 95% CI = 1.35-2.88 for an increase of 1 serving/day) but not for ER-PR- breast tumours (167 cases) (RR = 0.89; 95% CI = 0.43-1.84 for an increase of 1 serving/day).

In the UK Women' Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) the dose-response relationship was borderline significant (RR_{per 50g/day increase} = 1.13; 95% CI = 0.99-1.29; 283 cases).

In the Canadian National Breast Screening Study (Kabat, G. C. et al., 2007 , BRE80138), red meat intake was not related to premenopausal breast cancer risk (RR_{>109 vs <48 g/day} = 0.87; 95% CI = 0.71-1.06)

In total, results of four cohort studies (Cho, E. et al., 2006 , BRE80034;Holmes, M. D. et al., 2003 , BRE15400;Kabat, G. C. et al., 2007 , BRE80138;Taylor, E. F. et al., 2007 , BRE80008) were included in the highest vs. lowest forest plot on red meat and premenopausal breast cancer. A previous report of the Nurses' Health Study II (Cho, E. S. 2003 , BRE17370) was superseded by the more recent report (Cho, E. et al., 2006 , BRE80034).

No high vs. low plot was conducted on red meat and premenopausal breast cancer in the Global Report.

Postmenopause

Three prospective cohort studies were identified over the update period Jan 2006 and Dec 2007 (Egeberg, R. et al., 2008 , BRE80153;Kabat, G. C. et al., 2007 , BRE80138;Taylor, E. F. et al., 2007 , BRE80008).

No association with red meat was observed in the Canadian National Breast Screening Study (Kabat, G. C. et al., 2007 , BRE80138). The RR was 1.13 (95% CI = 0.99-1.29) for an increase of 50 g of red meat intake.

In the UK Women' Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) the association of postmenopausal breast cancer with intake of red meat was statistically significant (RR_{per 50g/day increase} = 1.12; 95% CI = 1.01-1.26; 395 cases).

A significant positive association was also observed in a case-control study nested in the Diet and Cancer Health Study, Denmark (Egeberg, R. et al., 2008 , BRE80153) ($RR_{\text{per 25g/day increase}} = 1.15$; 95% CI = 1.01-1.31; 378 cases). In this study, the association of breast cancer risk with red meat intake was significant in the group of women with NAT2 intermediate and fast acetylator genotype ($RR_{\text{per 25g/day increase}} = 1.37$; 95% CI = 1.07-1.76; 147 cases), but not in the group with NAT2 slow genotype. In subgroup analyses defined by NAT1 genotype, the $RR_{\text{per 25g/day increase}}$ was 1.27; 95% CI = 0.98-1.64 (137 cases) in the fast or intermediate acetylator genotype while intake of red meat was not associated with breast cancer risk in the group with the NAT1 slow genotype.

The RRs for the highest vs the lowest category of consumption reported by four studies are displayed in a forest plot in Fig RM1 (Egeberg, R. et al., 2008 , BRE80153;Holmes, M. D. et al., 2003 , BRE15400;Kabat, G. C. et al., 2007 , BRE80138;Mills, P. K. A. 1988 , BRE17836;Taylor, E. F. et al., 2007 , BRE80008). The 2003 Nurses' Health Study report (Holmes, M. D. et al., 2003 , BRE15400) was included instead of the analysis published in 2005 (Fung, T. T. et al., 2005 , BRE22370) because the latter report only provided continuous data.

In one of the analysis of the Nurses' Health Study (Fung, T. T. et al., 2005 , BRE22370) ER-breast cancers were not significantly associated with the intake of red meat.

The Seventh-day Adventists Cohort (Mills, P. K. A. 1988 , BRE17836) only reported on mortality, therefore it was excluded from the highest vs. lowest plot.

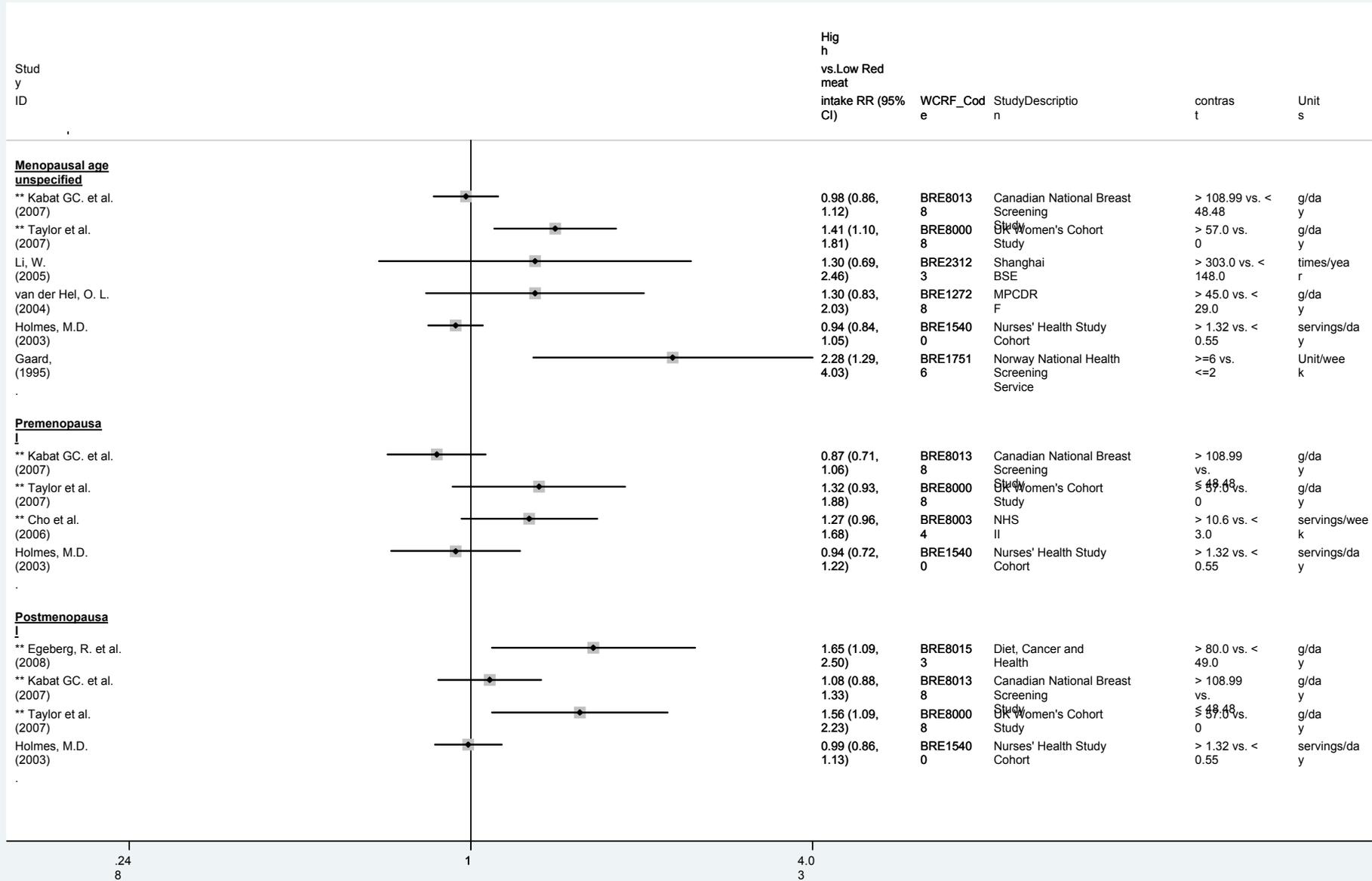
High vs. low plot was not conducted on red meat and postmenopausal breast cancer in the Global Report.

Pooled analysis of cohort studies

In 2002, Missmer et al. performed a pooled analysis using primary data of eight cohort studies with 7379 invasive breast cancers. Three of the participating cohorts are included in the figure RM1 (Nurses' Health Study, Canadian National Breast Screening Study, Adventists Health Study). The other cohort studies in the pooled analysis are the Iowa Women's Health Study, the Netherlands Cohort Study, New York State Cohort, New York University Women's Study, Sweden Mammography Cohort.

None of the studies showed a significant association of red meat with breast cancer risk. Positive associations had been observed only in the New York University Women's Study and the Adventists Health Study, but none of them were statistically significant. The pooled relative risk estimate was 0.94 (95% CI = 0.87-1.02) –quartile 4 vs. quartile 1 (Missmer et al, 2002).

iii. Fig RM1 Highest vs. lowest forest plot on red meat and breast cancer, by menopausal status (**=new studies identified during the update)



2.1.1.4 Poultry

Global Report, 2007

Poultry intake was not associated with breast cancer in the Nurses' Health Study (Fung, T. T. et al., 2005 , BRE22370;Holmes, M. D. et al., 2003 , BRE15400)]; the Seventh-day Adventist Cohort Study (Mills, P. K. B. 1989 , BRE17837), the New York University Women's Health Study (Toniolo, P. et al., 1994 , BRE12398) and in a Chinese nested case-control study (Li, W. et al., 2005 , BRE23123).

Update

Two cohort studies were identified, the UK Women' Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) and the Diet and Cancer Health Study, Denmark (Egeberg, R. et al., 2008 , BRE80153).

Premenopause

Poultry intake was not associated with breast cancer in the UK Women' Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) ($RR_{\text{high vs low}} = 1.28$, 95% CI = 0.93-1.75).

Postmenopause

No association with breast cancer was observed in the UK Women' Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) ($RR_{\text{high vs low}} = 1.00$, 95% CI = 0.78-1.28) and the Diet and Cancer Health Study, Denmark (Egeberg, R. et al., 2008 , BRE80153) ($RR_{>25 \text{ vs } <10 \text{ g/day}} = 1.33$, 95% CI = 0.85–2.07).

The associations between poultry intake and risk of postmenopausal breast cancer did not vary statistically significantly by NAT2 phenotypes, however intermediate/fast NAT2 acetylators was associated with a stronger effect than slow NAT2 acetylators ($RR_{\text{for a 25g increment}} = 1.12$, 95% CI = 0.77-1.63; $RR = 0.97$, 95% CI = 0.75-1.25 respectively; $P_{\text{interactions}} = 0.53$). The opposite was observed in NAT1 polymorphism ($RR_{\text{for a 25g increment}} = 0.85$, 95% CI = 0.57-1.27; $RR = 1.06$, 95% CI = 0.82-1.36 respectively for fast and slow NAT1 acetylators; $P_{\text{interactions}} = 0.37$) (Egeberg, R. et al., 2008 , BRE80153).

2.5.1.5 Liver

Global Report, 2007

No cohort study was identified.

Update

Fish liver

No significant associations were observed in the Norwegian Women and Cancer Study(NOWAC) (Brustad, M. et al., 2007 , BRE80127). The relative risk of breast cancer

(menopausal age unspecified) was 0.82 (95% CI = 0.63-1.07) comparing ever vs. never consumption.

2.5.1.5 Offals

Premenopause

Breast cancer in premenopausal women was not related to offal intake in UK Women' Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) ($RR_{\text{high vs low}} = 1.66$ (95% CI = 0.22-11.9)).

Postmenopause

Breast cancer in postmenopausal women was not related to offal intake in the UK Women' Cohort Study (Taylor, E. F. et al., 2007 , BRE80008) ($RR_{\text{high vs low}} = 1.62$, 95% CI = 0.57-4.59).

2.5.2 Fish

Global Report, 2007

Eight cohort studies (Frazier, A. L. et al., 2004 , BRE02942;Gago-Dominguez, M. Y. 2003 , BRE17518;Gertig, D. M. et al., 1999 , BRE03215;Holmes, M. D. et al., 2003 , BRE15400;Key, T. J. et al., 1999 , BRE04758;Mills, P. K. B. 1989 , BRE17837;Stripp, C. et al., 2003 , BRE11883;Vatten, L. J. et al., 1990 , BRE12832) were identified, in which four of them are from the Nurses' Health Study (Frazier, A. L. et al., 2004 , BRE02942;Gertig, D. M. et al., 1999 , BRE03215;Holmes, M. D. et al., 2003 , BRE15400). In addition, there were three nested case-control studies (Frazier, A. L. et al., 2003 , BRE02941;Li, W. et al., 2005 , BRE23123;Toniolo, P. et al., 1994 , BRE12398); so altogether there were eleven reports identified in the Global Report.

Menopause age unspecified

Eight cohort studies were identified. Four studies were included in the meta-analysis (Gertig, D. M. et al., 1999 , BRE03215;Key, T. J. et al., 1999 , BRE04758;Li, W. et al., 2005 , BRE23123;Mills, P. K. B. 1989 , BRE17837) and it showed a non-significant positive association between breast cancer and fish intake ($RR_{\text{for 70 gr/day increase}} = 1.11$ (95% CI = 0.98-1.26) with no significant heterogeneity).

Regarding the studies not included in the meta-analysis due to inadequate data, the intake of fish was not related to breast cancer in in the Norwegian NHSS cohort (Vatten, L. J. et al., 1990 , BRE12832) , in the Danish Diet and Cancer health Study (Egeberg, R. et al., 2008 , BRE80153;Stripp, C. et al., 2003 , BRE11883) and in the New York Health Study (Toniolo, P. et al., 1994 , BRE12398) An inverse non-significant association was shown in the Singapore Chinese Health Study (Gago-Dominguez, M. Y. 2003 , BRE17518).

No association was observed in a report of the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400) . The intake of fish in adolescence was not related to breast cancer in a case-control study nested in this cohort (Frazier, A. L. et al., 2003 , BRE02941) ($RR_{3-5 \text{ ounces}} = 0.94$, 95% CI = 0.64-1.37).

Premenopause

Fish intake was not related to breast cancer in premenopausal women in the Nurses' Health Study (Cho, E. S. 2003 , BRE17370), in a Norwegian cohort (Vatten, L. J. et al., 1990 , BRE12832), in a Danish cohort (Egeberg, R. et al., 2008 , BRE80153; Stripp, C. et al., 2003 , BRE11883) and in another report of Nurses' Health Study after 18 years of follow up (Holmes, M. D. et al., 2003 , BRE15400).

In addition, adolescent intake of fish was not related to risk in premenopausal breast cancer ($RR_{Q5 \text{ vs. } Q1} = 0.94$, 95% CI = 0.67-1.31) (Frazier, A. L. et al., 2004 , BRE02942).

Postmenopause

Fish intake was not related to breast cancer in postmenopausal women in the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400), in the Iowa Women's Health Study (Folsom, A. R. and Demissie, Z. 2004 , BRE80171), in a Norwegian cohort (Vatten, L. J. et al., 1990 , BRE12832) and in a Danish cohort (Egeberg, R. et al., 2008 , BRE80153; Stripp, C. et al., 2003 , BRE11883). High intake of fish was inversely associated with breast cancer risk in the Singapore Chinese Health Study (Gago-Dominguez, M. Y. 2003 , BRE17518).

Update

Two cohort studies have been published during the Continuous Update, the EPIC study (Engeset, D. et al., 2006 , BRE80109) and one of the cohorts participating in the EPIC study, the Diet, Cancer and Health Study from Denmark (Egeberg, R. et al., 2008 , BRE80153). No association was observed in the Diet and Cancer Health Study (Egeberg, R. et al., 2008 , BRE80153) (included in EPIC).

Menopause age unspecified

The only study identified was the European Prospective Investigation into Cancer (EPIC) (Engeset, D. et al., 2006 , BRE80109) (4776 cases) . No association between fish intake and breast cancer risk was observed ($RR_{>96.7 \text{ vs. } <5.5 \text{ g/day}} = 1.07$ (95% CI = 0.95-1.12). In this study, breast cancer risk was positively associated with the intake of fatty fish ($RR_{36 \text{ vs } 0.28 \text{ g/day}} = 1.13$; 95% CI = 1.01- 1.26) but not with the intake of lean fish ($RR_{>61.2 \text{ vs. } <0.3 \text{ g/day}} = 1.07$ (95% CI = 0.95-1.21).

Overall, nine studies on the relationship of fish intake with risk of breast cancer (menopausal age unspecified) had been identified during the SLR and the Continuous Update. Six of them had a prospective cohort design and three were nested case-control studies. Only one out of the nine studies was identified during the update period (Engeset, D. et al., 2006 , BRE80109).

Eight studies were included in the highest vs. lowest forest plot (Engeset, D. et al., 2006 , BRE80109; Gago-Dominguez, M. Y. 2003 , BRE17518; Holmes, M. D. et al., 2003 , BRE15400; Key, T. J. et al., 1999 , BRE04758; Li, W. et al., 2005 , BRE23123; Mills, P. K. B. 1989 , BRE17837; Toniolo, P. et al., 1994 , BRE12398; Vatten, L. J. et al., 1990 , BRE12832) (Fig F1). One study was excluded (Gertig, D. M. et al., 1999 , BRE03215) as it was superseded by Holmes et al. 2003.

The Singapore Chinese Health Study reported a non-significant inverse association ($RR_{\text{Quantile 4 vs. Quantile 1}} = 0.74$, 95% CI = 0.54-1.01) (314 cases) (Gago-Dominguez, M. Y. 2003 , BRE17518). Four other studies have reported non-significant positive associations (including the EPIC, Norway National Health Screening Service study, Shanghai BSE and LSS) (Engeset, D. et al., 2006 , BRE80109; Key, T. J. et al., 1999 , BRE04758; Li, W. et al., 2005 , BRE23123; Vatten, L. J. et al., 1990 , BRE12832). No association was observed in the Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400) and New York Women's Health Study (Toniolo, P. et al., 1994 , BRE12398). The California Seventh-day Adventists Cohort showed a significant increased risk associated with increasing levels with fish intake (Mills, P. K. B. 1989 , BRE17837) ($RR_{\geq 1 \text{ vs. } 0.0 \text{ times/week}} = 1.54$, 95% CI = 1.14-2.07).

Premenopause

Only the EPIC study was identified during the update. No association was observed ($RR_{96.77 \text{ vs. } 5.54 \text{ g/day}} = 1.11$, 95% CI = 0.84-1.46).

The four studies identified during the SLR and the Continuous Update have been included in the forest plot (Cho, E. S. 2003 , BRE17370; Engeset, D. et al., 2006 , BRE80109; Gago-Dominguez, M. Y. 2003 , BRE17518; Holmes, M. D. et al., 2003 , BRE15400) (Fig F1). A non-significant weak positive association was observed in the Nurses' Health Study ($RR_{>0.4 \text{ vs. } <0.13 \text{ serving/day}} = 1.17$, 95% CI = 0.92- 1.49) and the EPIC, while the Nurses' Health Study II and the Singapore Chinese Health Study provided results in the opposite direction ($RR_{0.4 \text{ vs. } 0.07 \text{ serving/day}} = 0.92$, 95% CI = 0.73-1.15; $RR_{\text{Quantile 4 vs. Quantile 1}} = 0.89$, 95% CI = 0.48-1.66, respectively).

Postmenopause

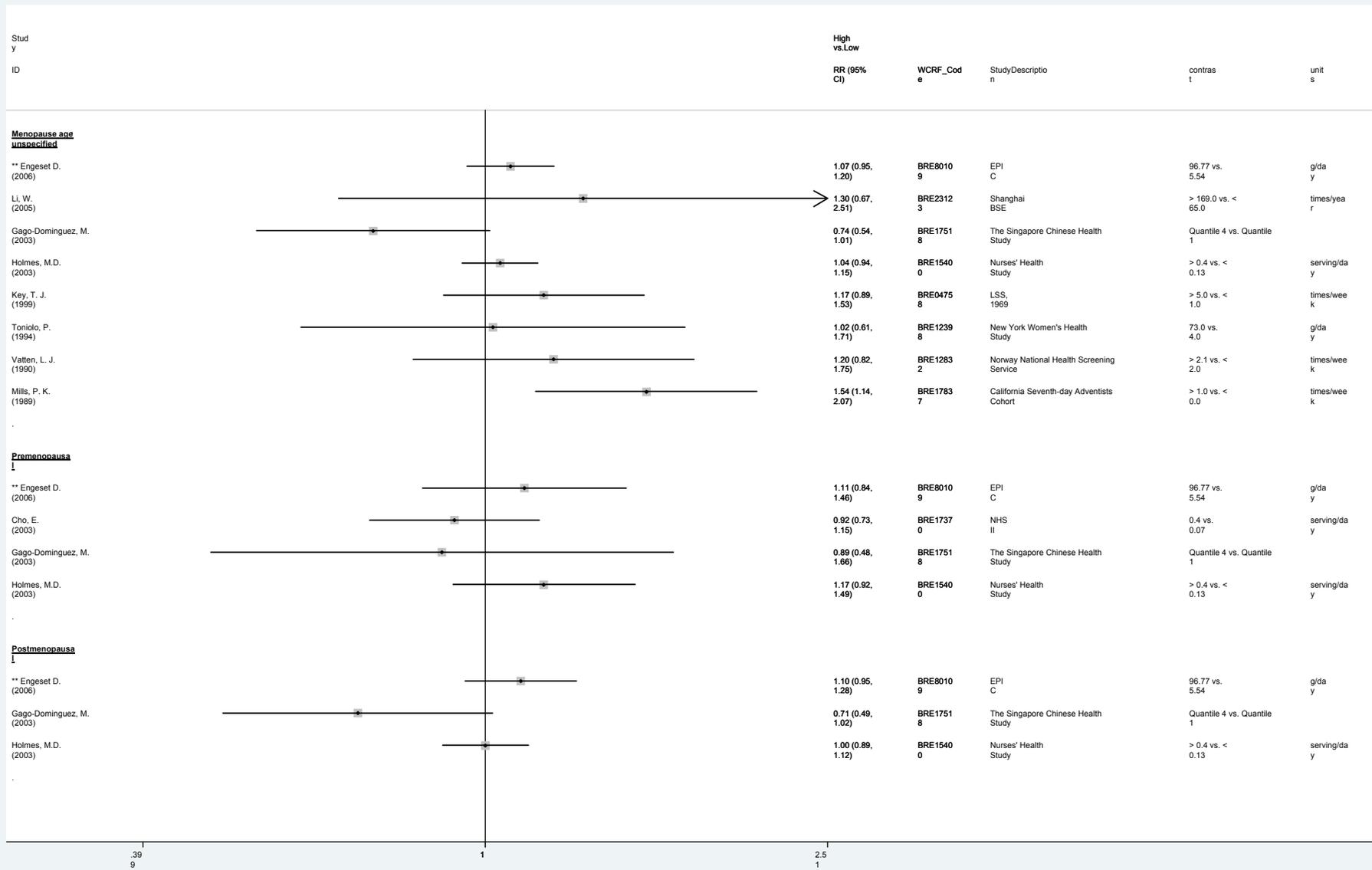
The EPIC study and one of its component cohort, the Diet, Cancer and Health study from Denmark investigated fish intake on relation to postmenopause breast cancer in the period. The EPIC study reported a non-significant positive association ($RR_{96.77 \text{ vs. } 5.54 \text{ g/day}} = 1.10$, 95% CI = 0.95-1.28).

Three studies are included in a forest plot showing the results of the highest vs. lowest exposure comparison – the EPIC study (Engeset, D. et al., 2006 , BRE80109), Nurses' Health Study (Holmes, M. D. et al., 2003 , BRE15400) and the Singapore Chinese Health Study (Gago-Dominguez, M. Y. 2003 , BRE17518) (Fig F1). Three other studies were excluded because two of them are from the Diet, Cancer and Health study, a component of the EPIC study (Egeberg, R. et al., 2008 , BRE80153; Stripp, C. et al., 2003 , BRE11883) and the Nurses' Health Study only provided continuous data (Fung, T. T. et al., 2005 , BRE22370). The results were inconsistent for all three studies: the Nurses' Health Study showed no association, the EPIC study reported an increased cancer risk but the risk estimate was not significant ($RR_{96.77 \text{ vs. } 5.54 \text{ g/day}} = 1.10$, 95% CI = 0.95-1.28), the Singapore Chinese Health Study reported a non-significant decreased risk in breast cancer ($RR_{\text{Quantile 4 vs. Quantile 1}} = 0.71$, 95% CI = 0.49-1.02).

The associations between fish intake and risk of postmenopausal breast cancer did not vary statistically significantly by NAT2 phenotypes, however intermediate/fast NAT2 acetylators was associated with a stronger effect than slow NAT2 acetylators ($RR_{\text{for a } 25\text{g increment}} = 1.39$, 95% CI = 0.87-2.22; $RR = 1.03$, 95% CI = 0.82-1.30 respectively; $P_{\text{interactions}} = 0.27$). RR was

1.09 (95% CI = 0.67-1.78) and 1.11 (95% CI = 0.87-1.41) for fast and slow NAT1 acetylators respectively ($P_{\text{interactions}} = 0.96$) (Egeberg, R. et al., 2008 , BRE80153).

iv. Fig F1 Highest vs. lowest forest plot on fish intake and risk of breast cancer, by menopausal status (** = new studies)



2.6.2 Plant oils (refer to 5.2 total fat section, page 75)

Global Report, 2007

Breast cancer was not related to the consumption of seed and olive oils in the French EPIC-E3N cohort (Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244). In addition, the intake of sesame oil and soy oil was not related to breast cancer in a Chinese nested case-control study (Li, W. et al., 2005 , BRE23123).

Update

Postmenopause

The Malmo Diet and Cancer Study (Wirfalt, E. et al., 2005 , BRE11111) reported an increased risk of postmenopausal breast cancer related to vegetable oil intake (RR_{28.0 vs 4.2 g/day} = 1.65; 95% CI = 1.05-2.58)

No new studies were identified on premenopause and menopause age unspecified during the update period.

2.7 Milk and dairy products

Global Report, 2007

Six cohort studies were identified.

Menopause age unspecified

Milk and dairy products were not associated with breast cancer in the Nurses' Health Study (Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658) and in the Netherlands Cohort Study on Diet and Cancer (Voorrips, L. E. et al., 2002 , BRE13011).

There was no significant association with adolescent consumption in a case-control study nested in the Nurses' Health Study (Frazier, A. L. et al., 2003 , BRE02941).

Two other studies included in the SLR database, but not mentioned in the SLR reported significant inverse association of breast cancer and intake of dairy products. In the New York Cohort Study (Toniolo, P. et al., 1994 , BRE12398) the RR_{>675 vs. < 37 g/day} was 0.59 (95% CI = 0.35-0.99; P_{trend} = 0.10) and in a Finnish cohort (Knekt, P. et al., 1996 , BRE04900) the RR_{Q3 vs. < Q1} was 0.42 (95% CI = 0.23-0.78; P_{trend} = 0.02).

Premenopause

Milk and dairy products were not associated with breast cancer in the Nurses' Health Study II (Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658).

Postmenopause

A significant inverse relationship was found in a cohort of postmenopausal women (McCullough, M. L. et al., 2005 , BRE23368).

Update

Three studies investigated intake of dairy products and breast cancer risk.

Menopausal age unspecified

The SUVIMAX study (France) (Kesse-Guyot, E. et al., 2007 , BRE11112) (92 cases) reported a significant inverse trend of risk of breast cancer with increasing intake of dairy products ($RR_{>401.0 \text{ vs. } <164.0 \text{ g/day}} = 0.55$; 95% CI = 0.29- 1.03, $P_{\text{trend}} = 0.03$). The Boyd Orr Cohort (van der Pols, J. C. et al., 2007 , BRE80154) (97 cases) reported non-significant inverse associations of breast cancer risk with intake of dairy products during childhood ($RR_{>471 \text{ vs. } <89 \text{ g/day}} = 0.89$ (95% CI = 0.45-1.75).

Premenopause

The SUVIMAX study (France) (Kesse-Guyot, E. et al., 2007 , BRE11112) (92 cases) reported a significant inverse trend of risk of breast cancer with increasing intake of dairy products ($RR_{>401.0 \text{ vs. } <164.0 \text{ g/day}} = 0.35$; 95% CI = 0.12- 0.95). In the Women's Health Study (Lin, J. et al., 2007 , BRE80165) the intake of dairy products was significantly inversely associated with premenopausal breast cancer ($RR_{>=3.13 \text{ vs. } <0.93 \text{ serving/day}} = 0.64$, 95% CI = 0.42-0.95, $P_{\text{trend}} = 0.09$).

Postmenopause

The SUVIMAX study (France) (Kesse-Guyot, E. et al., 2007 , BRE11112) (92 cases) reported no association between dairy product intake and breast cancer after menopause ($RR_{>401.0 \text{ vs. } <164.0 \text{ g/day}} = 0.72$; 95% CI = 0.32- 1.66). Similar results were reported in the Women's Health Study (Lin, J. et al., 2007 , BRE80165) ($RR_{>=3.13 \text{ vs. } <0.93 \text{ serving/day}} = 1.07$, 95% CI = 0.82-1.39).

2.7.1 Milk

Global Report, 2007

Eight studies investigated milk intake in relation to breast cancer. (Voorrips, L. E. et al., 2002 , BRE13011) (Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658) (Knekt, P. et al., 1996 , BRE04900) (McCullough, M. L. et al., 2005 , BRE23368) (Mills, P. K. A. 1988 , BRE17836).

Menopause age unspecified

Four studies on breast cancer incidence and one study on fatal breast cancer were identified. No association with breast cancer was observed in a meta-analysis that included two studies ($RR = 1.00$ (95% CI = 0.99-1.01) per 1 time/week) (Gaard, M. T. 1995 , BRE17516;Key, T. J. et al., 1999 , BRE04758).

Of the two studies not included in the meta-analysis one reported a significant inverse (Knekt, P. et al., 1996 , BRE04900) and the study on mortality reported no association (Mills, P. K. A. 1988 , BRE17836).

Premenopause

Two studies were identified. In one study, milk intake was significantly inversely related to premenopausal breast cancer risk (Nurses' Health Study, (Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658)), while in the other the association was inverse but not statistically significant (Hjartaker, A. et al., 2001 , BRE03955).

Postmenopause

A meta-analysis of two studies (Nurses' Health Study and CPS II) did not show any association (RR = 1.00 (95% CI = 0.99-1.00) (McCullough, M. L. et al., 2005 , BRE23368;Shin, M. H. et al., 2002 , BRE16658).

Update

The French study SUVIMAX investigated milk intake during adulthood in relation to breast cancer incidence (Kesse-Guyot, E. et al., 2007 , BRE11112).

The Boyd Orr Cohort (van der Pols, J. C. et al., 2007 , BRE80154) (97 cases) reported non-significant inverse associations of breast cancer risk with intake of milk during childhood (RR >1.2 vs. <0.5 cups/day = 0.83 (95% CI = 0.41-1.69).

Premenopause

In the SUVIMAX study (France) (Kesse-Guyot, E. et al., 2007 , BRE11112) the relationship of milk intake with premenopausal breast cancer (44 cases) was inverse although non-significant (RR _{>249 vs. <24 g/day} = 0.41; 95% CI = 0.16-1.04), opposite to what was observed for postmenopausal cancer in the same cohort.

Postmenopause

The SUVIMAX study (France) (Kesse-Guyot, E. et al., 2007 , BRE11112) reported a non-significant positive association of risk of postmenopausal breast cancer risk (48 cases) with increasing intake of milk (RR _{>249 vs. <24 g/day} = 1.82; 95% CI = 0.79- 4.17).

No new studies were identified in relation to milk intake and women with menopause age unspecified.

2.7.2 Cheese, fresh cheese

Global Report, 2007

Five studies were retrieved.

Menopause age unspecified

Two studies on breast cancer incidence (Knekt, P. et al., 1996 , BRE04900;Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244) and one study on fatal breast cancer reported no association (Mills, P. K. A. 1988 , BRE17836).

Premenopause

One study reported no association with intake of hard cheese (Nurses' Health Study, (Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658), while in the other the association was inverse but not statistically significant (Hjartaker, Laake et al., 2001, BRE03955).

Postmenopause

One study reported no association with intake of hard cheese (Nurses' Health Study, (Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658).

Update

Premenopause

In the same cohort (SUVIMAX) (Kesse-Guyot, E. et al., 2007 , BRE11112) intake of cheese and fresh cheese were not related to premenopausal breast cancer (44 cases). The relative risks were $RR_{>49 \text{ vs. } <14 \text{ g/day}} = 1.16$ (95% CI = 0.46-2.91) for cheese and $RR_{>51 \text{ g/day vs. } <14} = 0.5$ (95% CI = 0.17-1.44) for fresh cheese.

Postmenopause

The SUVIMAX study (France) (Kesse-Guyot, E. et al., 2007 , BRE11112) reported non-significant association of breast cancer with cheese intake. The relative risks were $RR_{>49 \text{ vs. } <14 \text{ g/day}} = 1.05$ (95% CI = 0.44-2.55) for cheese and $RR_{>51 \text{ g/day vs. } <14} = 1.23$ (95% CI = 0.59-2.57) for fresh cheese.

2.7.3 Yoghurt

Global Report, 2007

Menopause age unspecified

Yoghurt intake was not related to breast cancer in a Finnish cohort (Knekt, P. et al., 1996 , BRE04900).

Premenopause

No association with yoghurt consumption was found in the Nurses' Health Study ((Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658).

Postmenopause

No association with yoghurt consumption was found in the Nurses' Health Study ((Cho, E. S. 2003 , BRE17370;Shin, M. H. et al., 2002 , BRE16658).

Update

Premenopause

In the SUVIMAX study (France) (Wirfalt, E. et al., 2005 , BRE11111) the RR was 1.01 (95% CI = 0.40-2.58) for premenopausal breast cancer (44 cases).

Postmenopause

The SUVIMAX study (France) (Wirfalt, E. et al., 2005 , BRE11111) reported a non-significant association of breast cancer with yoghurt intake. The relative risk was $RR_{>126 \text{ vs. } <24 \text{ g/day}} = 0.59$ (95% CI = 0.22-1.54) for postmenopausal breast cancer risk (48 cases).

3. Beverages

3.5 Fruit juices

Global Report, 2007

Intake of fruit and vegetable juice (Olsen, A. T. 2003 , BRE17890) or tomato juice (Sesso, H. D. et al., 2005 , BRE24061) was not related to breast cancer.

No significant association was observed with adolescent consumption of orange juice in a case control study nested in the Nurses' Health Study cohort (Frazier, A. L. et al., 2003 , BRE02941).

Update

Menopause age unspecified

Intake of fruit juices was not related to breast cancer risk in the SUVIMAX Study (Hirvonen, T. et al., 2006 , BRE80105) (95 cases) ($RR_{>150 \text{ g/day vs. none}} = 1.29$ (95% CI = 0.8-2.09)).

Two cohort studies investigated citrus fruits in relation to breast cancer. The PLCO Cancer Screening Trial cohort, USA (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) reported a relative risk of 0.86 (95% CI = 0.43-1.72) associated with more of 180 g/day of juice of orange or grapefruit compared to none in non-vitamin users. Grapefruit juice intake was investigated in the Nurses' Health Study (Kim, E. H. et al., 2008 , BRE80156). No association with breast cancer risk was observed ($RR_{>1/2 \text{ glass/day vs. none}} = 1.02$ (95% CI = 0.85-1.22)).

3.6.1 Coffee

Global Report, 2007

Three studies were combined in a meta-analysis (Key, T. J. et al., 1999 , BRE04758;Michels, Karin et al., 2002 , BRE20406;Vatten, L. J. et al., 1990 , BRE12833).. No association was observed ($RR_{\text{for 1 cup/day}} = 0.97$ (95% CI = 0.93-1.01)). A positive non-significant association was observed in one excluded cohort study.(Hoyer, A. P. and Engholm, G. 1992 , BRE04086).

Note: One eight ounce cup is approximately 230 milliliters.

Premenopause

A meta-analysis combining two studies did not find any association (Michels, Karin et al., 2002 , BRE20406; Vatten, L. J. et al., 1990 , BRE12833).

Postmenopause

A meta-analysis combining two studies did not find any association (Michels, Karin et al., 2002 , BRE20406; Vatten, L. J. et al., 1990 , BRE12833).

Update

Menopause age unspecified

Coffee intake was not related to breast cancer risk in the SUVIMAX study (Hirvonen, T. et al., 2006 , BRE80105) (95 cases) ($RR_{>253 \text{ vs. } <111 \text{ ml/day}} = 1.1$ (95% CI = 0.66-1.84) and in the Nurses' Health Study (Ganmaa, D. et al., 2008 , BRE80158) (5272 cases) ($RR_{>4 \text{ cups/day vs. } <1 \text{ cup/month}} = 0.92$ (95% CI = 0.82-1.03). In the latter study, BMI did not modify the relationship of coffee intake with BMI.

3.6.2 Tea

Global Report, 2007

Intake of tea was not associated with breast cancer in three cohort studies (The Sweden Mammography Screening Cohort (Michels, Karin et al., 2002 , BRE20406), the Iowa cohort (Zheng, W. et al., 1999 , BRE17172), the Nurses' Health Study (Adebamowo, C. A. et al., 2005 , BRE21537) and a Chinese nested case-control study (Li, W. et al., 2005 , BRE23123). Black tea was not shown to be related to breast cancer in the meta-analysis of three studies (Goldbohm, R. A. et al., 1996 , BRE03308; Key, T. J. et al., 1999 , BRE04758; Yuan, J. M. et al., 2005 , BRE24717).

Green tea was not related to breast cancer in two studies (Key, T. J. et al., 1999 , BRE04758; Yuan, J. M. et al., 2005 , BRE24717).

Update

Menopause age unspecified

Breast cancer risk was inversely but not significantly related to intake of tea in the SUVIMAX study ($RR_{>350 \text{ ml/day vs. none}} = 0.75$ (95% CI = 0.45-1.28)) (Hirvonen, T. et al., 2006 , BRE80105) (95 cases) and in the Nurses' Health Study ($RR_{>4 \text{ cups/month vs. none}} = 0.94$ (95% CI = 0.77-1.14)) (Ganmaa, D. et al., 2008 , BRE80158) (5272 cases).

Intake of herbal tea was inversely related to breast cancer risk in the SUVIMAX cohort ($RR_{>150 \text{ ml/day vs. none}} = 0.43$ (95% CI = 0.20-0.94), $p=0.05$).

3.7.1 Alcoholic drinks (refer to 5.4 alcohol as ethanol, page 83)

Global Report, 2007

Menopause age unspecified

Twelve cohort studies (two studies were reported in one article) on alcoholic drinks were identified during the SLR; 25 cohort studies investigated ethanol intake and all-age breast cancer (see Section 5.4)

The meta-analysis of 3 studies showed non-significant increased association between alcoholic drinks and breast cancer risk (RR per 5 times a week was 1.07 (95% CI = 0.89-1.29). There was no consistent dose response effect. Of the studies not included in the meta-analysis, four reported significant increased risk, two a non-significant increased risk, one reported no effect and two non-significant decreased risk.

Premenopause

Two cohort studies reported increased risk, one was statistically significant.

Postmenopause

Of three cohort studies, one reported a significant increased risk, one a non-significant increased risk and the other a non-significant decreased risk.

Update

Menopause age unspecified

In the study of Danish Registered Nurses', the intake of alcoholic drinks was associated with an increased risk of breast cancer (365 cases) ($RR_{1 \text{ drink/week}} = 1.02$; 95% CI = 1.01-1.03) (Morch L.S. et al, 2007, BRE80004). New data from the CLUE II study showed a statistically non-significant increased risk in drinkers compared to non-drinkers (262 cases) ($RR = 1.40$, 95% CI = 0.97-2.03) (Visvanathan, K. et al., 2007 , BRE80020).

Premenopause

The CLUE II study reported an increased risk with a wide confidence intervals (41 cases) ($RR_{\text{drinkers vs nondrinkers}} = 2.69$, 95% CI = 1.00-7.26) (Visvanathan, K. et al., 2007 , BRE80020).

Postmenopause

Four studies were identified during the update. All showed positive associations, but statistical significance was only attained in one study. Significant positive associations were observed in the Malmo Cancer and Diet Study (Wirfalt, E. et al., 2005 , BRE11111) ($RR_{\text{high vs none}} = 3.14$; 95% CI = 1.17-8.39). In the Diet Cancer and Health Study, Denmark, increased risk that was not statistically significant was observed when comparing drinkers with abstainers ($RR = 1.23$, 95% CI = 0.47-3.21) (Vogel, U. et al., 2007 , BRE80150). The CLUE II study reported similar results ($RR_{\text{drinkers vs nondrinkers}} = 1.25$, 95% CI = 0.84-1.87) (Visvanathan, K. et al., 2007 , BRE80020). In the Copenhagen City Heart Study, Denmark (Nielsen, N. R. and Gronbaek, M. 2007 , BRE80143), with a nested case-control design, a positive but not significant association was observed with intake of alcoholic drinks ($RR_{>21 \text{ vs } <1 \text{ drinks/weeks}} = 1.54$; 95% CI = 0.77-3.1). In this latter study, subgroup analyses by use of hormone replacement therapy resulted in a significant increasing trend in users of hormone replacement therapy

($RR_{>21 \text{ vs } <1 \text{ drinks/weeks}} = 2.17$; 95% CI = 0.79-5.9; $P_{\text{trend}} = 0.004$) while no significant result was observed in non-users of hormone replacement therapy.

Published meta-analysis

In 2006, Key et al. conducted a comprehensive meta-analysis involving 98 unique observational studies (> 75 000 cases) on the relation of alcohol and breast cancer; with particular attentions drawn to study quality issues including treatment of confounders and data reporting and the methodology in meta-analysis. For the studies judged high quality, by a simple index developed by the authors, and adjusted for appropriate confounders, excess risk associated with alcohol drinking was 22% (95% CI = 9-37%; $Q = 54$, 18 d.f). In the dose-response meta-analysis among the drinkers, a 10% increased risk (95% CI = 5 – 15%; $Q = 56$, 32 d.f) for each additional 10g of ethanol consumption was observed. Findings were robust to study design and analytic approaches in the meta-analyses. There was no significant difference in risk by menopausal status and alcoholic type. There was no evidence of publication bias (Key, J. et al., 2006).

3.7.1.1 Beer

Global Report, 2007

Overall eleven cohort studies were identified, of which one study published three articles.

Menopause age unspecified

Seven studies were identified. A meta-analysis of three prospective studies showed a non-significant increased risk of invasive breast cancer, all menopausal status together ($RR = 1.02$ (95% CI = 0.99-1.06) per 100 g/day of beer consumption). No significant heterogeneity and no publication bias were found.

Of the four studies were not included in the meta-analysis, one study showed a non-significant increased risk, one showed a null association and one study showed a non-significant inverse association with beer intake.

Premenopause

Two studies were identified. A meta-analysis of two prospective studies showed a similar result as for all menopausal status combined ($RR = 1.04$, 95%CI = 0.96-1.13) per 100 g/day of beer consumption).

Postmenopause

Eight studies were identified. A meta-analysis of five prospective studies did not provide evidence of association ($RR = 1.00$, 95% CI = 0.96-1.04, per 100 g/day of beer consumption). Three studies were not included in the meta-analysis; 2 studies reported non-significant positive associations and one study reported a null association.

Update

Only three studies were identified (Tjønneland, A. et al., 2007 , BRE80013; Visvanathan, K. et al., 2007 , BRE80020; Zhang, S. M. et al., 2007 , BRE20023). All studies presented results for pre- and postmenopausal breast cancer combined.

Menopause age unspecified

Beer intake was not associated with increased risk of breast cancer in the CLUE II Study (Visvanathan, K. et al., 2007 , BRE80020) and the EPIC study (Tjønneland, A. et al., 2007 , BRE80013), while it was related to a significant increase of breast cancer risk in the Women's Health Study (Zhang, S. M. et al., 2007 , BRE20023).

A highest versus lowest forest plot was not performed, as the Women's Health Study (Zhang, S. M. et al., 2007 , BRE20023) and the EPIC study (Tjønneland, A. et al., 2007 , BRE80013) had only performed dose-response analysis; and since the CLUE II study (Visvanathan, K. et al., 2007 , BRE80020) had only compared between drinkers and non-drinkers, a dose-response meta-analysis was also not performed.

3.7.1.2 Wines

Global Report, 2007

Overall ten cohort studies had published 12 articles. One study reported three articles.

Menopause age unspecified

Six studies were identified. A meta-analysis on three prospective studies showed a non-significant increased risk of breast cancer, pre- and postmenopausal status combined ($RR_{\text{per one time/day}} = 1.08$, 95% CI = 0.96-1.22). No publication bias was found. Of the three studies not included in the meta-analysis, two studies showed positive associations (one significant) and one study reported no association.

Wine intake was significantly positively related to mortality for breast cancer in one study.

Premenopause

A non-significant positive association with invasive breast cancer appeared in the subgroup meta-analyses of two studies ($RR_{\text{per 1 time/day}} = 1.36$, 95% CI = 0.98-1.88).

Postmenopause

Six studies were identified. The meta-analysis of five studies showed a non-significant positive association ($RR_{\text{per 1 time/day}} = 1.14$, 95% CI = 1.06-1.23). Non-significant positive association was observed in one study that was not included in the meta-analysis.

Update

Four studies were identified (Hirvonen, T. et al., 2006 , BRE80105; Tjønneland, A. et al., 2007 , BRE80013; Visvanathan, K. et al., 2007 , BRE80020; Zhang, S. M. et al., 2007 , BRE20023). Wine intake was positively associated with increased risk of breast cancer in the CLUE II Study (Visvanathan, K. et al., 2007 , BRE80020). No significant positive associations with intake of red or white wine were observed in the French SUVIMAX study (Hirvonen, T. et al., 2006 , BRE80105) and in the Women's Health Study (Zhang, S. M. et

al., 2007 , BRE20023). The EPIC study reported no association (Tjønneland, A. et al., 2007 , BRE80013).

A highest versus lowest forest plot was not performed, as the Women's Health Study (Zhang, S. M. et al., 2007 , BRE20023) and the EPIC study (Tjønneland, A. et al., 2007 , BRE80013) had only performed dose-response analysis; in addition since the exposure was captured specifically as red and white wine in two studies, a dose-response meta-analysis was also not performed.

3.7.1.3 Spirits/liquors

Global Report, 2007

Eleven cohorts had published 13 reports on spirits or liquors.

Menopause age unspecified

Six studies, eight reports were identified (Hiatt, R. A. et al., 1988 , BRE03888;Horn-Ross, P. L. et al., 2002 , BRE15412;Morch, L. S. et al., 2005 , BRE23480;Rohan, T. E. et al., 2000 , BRE16489;Willett, W. C. et al., 1987 , BRE13441;Zhang, Y. et al., 1999 , BRE13965). The NBSS had published three reports (Friedenreich, C. M. H. 1993 , BRE17508;Jain, M. G. F. 2000 , BRE17653;Rohan, T. E. et al., 2000 , BRE16489).

A meta-analysis of three prospective studies (Friedenreich, C. M. H. 1993 , BRE17508;Rohan, T. E. et al., 2000 , BRE16489;Willett, W. C. et al., 1987 , BRE13441) showed a significant increased risk in breast cancer per 1 time/day consumption of spirits/liquor (RR= 1.18 (95% CI = 1.06-1.32). No significant heterogeneity and no publication bias were found. However, two of these three studies were from the same NBSS cohort (Friedenreich, C. M. H. 1993 , BRE17508;Rohan, T. E. et al., 2000 , BRE16489). Rohan et al. should have been selected instead as there were more cases in the analysis (1336 vs. 519 cases) (RR=1.09 vs. 1.14, both non-significant).

Two of the four remaining studies reported significant positive associations (Horn-Ross, P. L. et al., 2002 , BRE15412;Morch, L. S. et al., 2005 , BRE23480), one study reported a significant inverse association (Zhang, Y. et al., 1999 , BRE13965) and one reported a non-significant increased risk (Hiatt, R. A. et al., 1988 , BRE03888). The NBSS also reported a significant negative association of spirits intake with breast cancer mortality (Jain, M. G. F. 2000 , BRE17653).

Premenopause

The meta-analysis of two studies (Friedenreich, C. M. H. 1993 , BRE17508;Petri, A. L. et al., 2004 , BRE16325) showed a positive but not significant association of premenopausal breast cancer with spirits/liquor intake (RR_{for increment of 1time/day}= 1.17 (95% CI = 0.86-1.58)).

Postmenopause

The meta-analysis of five studies (Friedenreich, C. M. H. 1993 , BRE17508;Mattisson, I. W. 2004 , BRE17807;Petri, A. L. et al., 2004 , BRE16325;Tjønneland, A. et al., 2003 , BRE12350;van den Brandt, P. A. et al., 1995 , BRE12719) showed no association of

postmenopausal breast cancer with spirits/liquor intake (RR for increment of 1 time/day = 1.03, 95% CI = 0.94-1.13). The CPS- II cohort that was not included in the meta-analysis showed a significant positive association in the highest versus lowest comparison (RR for ≥ 3 vs. 0 drinks/day = 1.66, 95% CI = 1.12-2.46, $P_{\text{trend}}=0.51$) (Feigelson, Heather et al., 2001 , BRE19514).

Update

All three studies identified during the update reported no associations - the CLUE II Study (Visvanathan, K. et al., 2007 , BRE80020), the Women's Health Study (Zhang, S. M. et al., 2007 , BRE20023) and the EPIC study (Tjønneland, A. et al., 2007 , BRE80013).

A highest versus lowest forest plot was not generated as two results were presented as dose-response slopes (Tjønneland, A. et al., 2007 , BRE80013; Zhang, S. M. et al., 2007 , BRE20023); and since the remaining study (Visvanathan, K. et al., 2007 , BRE80020) compared between drinkers and non-drinkers only, a dose-response meta-analysis was also not performed.

4. Food production, preservation, processing and preparation

4.4.2 Acrylamide

Global Report, 2007

No association in a Sweden Cohort Study (Mucci, L. A. et al., 2005 , BRE23500).

Update

Breast cancer was not related with acrylamide intake in the Netherlands Cohort Study on Diet and Cancer (Hogervorst, J. G. et al., 2007 , BRE80145). Results were similar in the subgroup of non-smokers women compared to the entire population.

4.4.2.6. Broiled food

Global Report, 2007

No association with broiled red meat consumption in a case-control study nested in the Nurses' Health Cohort study (Gertig, D. M. et al., 1999 , BRE03215).

Update

Results from the cohort CLUE II (Gallicchio, L. et al., 2006 , BRE80112), United States suggested an increased risk of breast cancer in women with fast/intermediate phenotype related to the consumption of broiled food (RR ever vs never = 2.62; 95% CI = 1.06-6.46).

5. Dietary constituents

5.1.2. Dietary fibre

Global Report, 2007

In the Global Report, a dose-response meta-analysis of two cohorts of women with unspecified menopausal age (Rohan, T. E. H. 1993 , BRE17965; Willett, W. C. et al., 1992 , BRE13438) did not show an association between fiber intake and breast cancer risk . Two other studies included in the highest vs. lowest forest plot showed non-significant inverse associations (Horn-Ross, P. L. et al., 2002 , BRE15412; Terry, P. et al., 2002 , BRE12199). Neither the dose-response (Graham, S. et al., 1992 , BRE03424; Kushi, L. H. et al., 1992 , BRE05141; Mattisson, I. et al., 2004 , BRE16042; Verhoeven, D. T. et al., 1997 , BRE12868) (RR = 0.94 (95% CI = 0.86-1.03) for 10g/day) nor the dicotomic analysis (Graham, S. et al., 1992 , BRE03424; Holmes, M. D. et al., 2004 , BRE04010; Kushi, L. H. et al., 1992 , BRE05141; Mattisson, I. et al., 2004 , BRE16042; Verhoeven, D. T. et al., 1997 , BRE12868) showed an association in the postmenopausal cohorts. The Nurses' Health Study and Nurses' Health Study II (NHS II) had also investigated the relation of adolescent dietary fibre consumption and breast cancer (Frazier, A. L. et al., 2003 , BRE02941; Frazier, A. L. et al., 2004 , BRE02942). A statistically non-significant decreased risk in premenopausal breast cancer for the highest versus lowest comparison was observed in NHS II (Frazier, A. L. et al., 2004 , BRE02942).

Summary of results of the dose-response meta-analysis

	Postmenopausal breast cancer	
	2nd Report	Updated meta-analysis
Studies (n)	4	7
Cases (n)	-	3340
RR (95% CI) for 10g/day	0.94 (0.86-1.03)	0.96 (0.91-1.01)
Heterogeneity (I ²)	47.1% (0-82.4%)	0%, p=0.577

Overall summary

Overall 12 studies had published 20 reports on dietary fibre/crude fibre/non-starch polysaccharides. The Nurses' Health Study and the Nurses' Health Study II had respectively published five (Cho, E. et al., 2003 , BRE01651; Frazier, A. L. et al., 2003 , BRE02941; Giovannucci, E. et al., 1993 , BRE03262; Holmes, M. D. et al., 2004 , BRE04010; Willett, W. C. et al., 1992 , BRE13438) and one (Frazier, A. L. et al., 2004 , BRE02942) reports. The Iowa Women's Health Study (Kushi, L. H. et al., 1992 , BRE05141; Kushi, L. H. et al., 1995 , BRE05142), the Canadian National Breast Screening Study (Rohan, T. E. H. 1993 , BRE17965; Terry, P. et al., 2002 , BRE12199) and the Malmo Diet and Cancer study (Mattisson, I. et al., 2004 , BRE16042; Sonestedt, E. et al., 2007 , BRE80147) had two reports each. In addition, one report each was published by the New York State Cohort (Graham, S. et al., 1992 , BRE03424), the Netherlands Cohort Study on Diet and Cancer (Verhoeven, D. T. et al., 1997 , BRE12868), the California Teachers Study (Horn-Ross, P. L. et al., 2002 , BRE15412), the ORDET study (Sieri, S. et al., 2002 , BRE20941), the Shanghai Breast Self-Examination study (Li, W. et al., 2005 , BRE23123), the Melbourne Collaborative Cohort Study (Giles, G. G. et al., 2006 , BRE22430), the UK Women's Cohort Study (Cade, J. E. et al., 2007 , BRE20021) and the Swedish Mammography Cohort (Suzuki, R. et al., 2008 , BRE80148). Only three reports (Cade, J. E. et al., 2007 , BRE20021; Sonestedt, E. et al., 2007 , BRE80147; Suzuki, R. et al., 2008 , BRE80148) were newly identified during the update period. The remaining 17 reports were retrieved from the SLR database.

Update

Menopause age unspecified

No new study found during the update period.

Premenopause

Only the UK Women's Cohort Study (Cade, J. E. et al., 2007 , BRE20021) had reported new data during the update period. An inverse significant association with premenopausal breast cancer was observed in this study (232 cases; RR = 0.48, 95% CI = 0.24-0.96).

Postmenopause

Three cohort studies: the Swedish Mammography Cohort (Suzuki, R. et al., 2008 , BRE80148), the Malmo Diet and Cancer Study (Sonestedt, E. et al., 2007 , BRE80147) and the UK Women's Cohort Study (Cade, J. E. et al., 2007 , BRE20021) had reported new data on dietary fibre and postmenopausal breast cancer during the update period.

Studies selected for the dose-response meta-analysis

All three new reports had provided appropriate format of data to be included in the dose-response meta-analysis. Among these was a report published by Sonestedt et al. in 2007 on the Malmo Diet and Cancer Study (Sonestedt, E. et al., 2007 , BRE80147). This report had replaced an older report published by Mattisson et al. in 2004 on the same study that was included in the previous analysis in 2005 (Mattisson, I. et al., 2004 , BRE16042) (RR = 0.94 vs. RR = 0.73). In addition, four (Graham, S. et al., 1992 , BRE03424;Kushi, L. H. et al., 1992 , BRE05141;Sieri, S. et al., 2002 , BRE20941;Verhoeven, D. T. et al., 1997 , BRE12868) out of the ten reports retrieved from the SLR database were also appropriate to include in the present analysis. Three reports were included previously in the SLR meta-analysis from the Global Report. The fourth study, the ORDET study (Sieri, S. et al., 2002 , BRE20941), was not included in the meta-analysis because dietary fiber was measured as non-starch polysaccharides; which was kept separate before has now been included in this analysis. Details on the inclusion and exclusion of studies for the analysis are provided in Table FI 1.

Results

As shown in Fig. FI 1, majority of the studies either observed a small decreased risk (Sieri, S. et al., 2002 , BRE20941;Sonestedt, E. et al., 2007 , BRE80147;Suzuki, R. et al., 2008 , BRE80148;Verhoeven, D. T. et al., 1997 , BRE12868) or no association (Graham, S. et al., 1992 , BRE03424;Kushi, L. H. et al., 1992 , BRE05141). Only the UK Women's Cohort study reported an increased risk (Cade, J. E. et al., 2007 , BRE20021). Apart from the Swedish Mammography Cohort (Suzuki, R. et al., 2008 , BRE80148) with a borderline significant result, none of these studies had reported statistically significant results. Risk estimates ranged from 0.71 – 1.10 and the summary risk estimate was 0.96 (95% CI = 0.91-1.01) for each 10g/day increase in dietary fibre intake – very similar to the summary risk estimate 0.94 (95% CI = 0.86-1.03) in the Global Report. There is no suggestion of heterogeneity between the studies ($I^2 = 0\%$, $P=0.577$), which is different to the previous

analysis of four studies ($I^2 = 47.1\%$, 95% CI = 0-82.4%). There is also no suggestion of publication bias (Fig. FI 2) and none of the individual studies had any strong influence on the pooled result.

The highest versus lowest forest plot also shows inconsistent results (Fig. FI3). Compared to the dose-response meta-analysis, one more report was included from the Nurses' Health Study. It showed a small non-significant decreased risk (Holmes, M. D. et al., 2004 , BRE04010). None of the studies reported statistical significant results but similar to the dose-response analysis, majority of the studies had either observed a small decreased risk or no association. Only two studies (Cade, J. E. et al., 2007 , BRE20021;Graham, S. et al., 1992 , BRE03424) had reported an increased risk.

For the studies that were not included in the meta-analysis, the Melbourne Collaborative Cohort Study (Giles, G. G. et al., 2006 , BRE22430) presented a RR of 1.08 (95% CI = 0.92-1.26) for an increase of one standard deviation in fibre intake. This study had also reported results by hormone receptor type. The relative risks were 1.36 in ER+/PR+ and 0.65 in ER-/PR- breast cancers, both statistically significant, while no association was shown in the tumour type of ER+/PR-. Non- statistically significant associations were reported by the Iowa Women's Health Study (Kushi, L. H. et al., 1995 , BRE05142) (RR = 0.92 in ER+/PR+; RR = 0.98 in ER-/PR-; RR = 1.24 in ER+/PR-; RR = 1.48 in ER-/PR+).

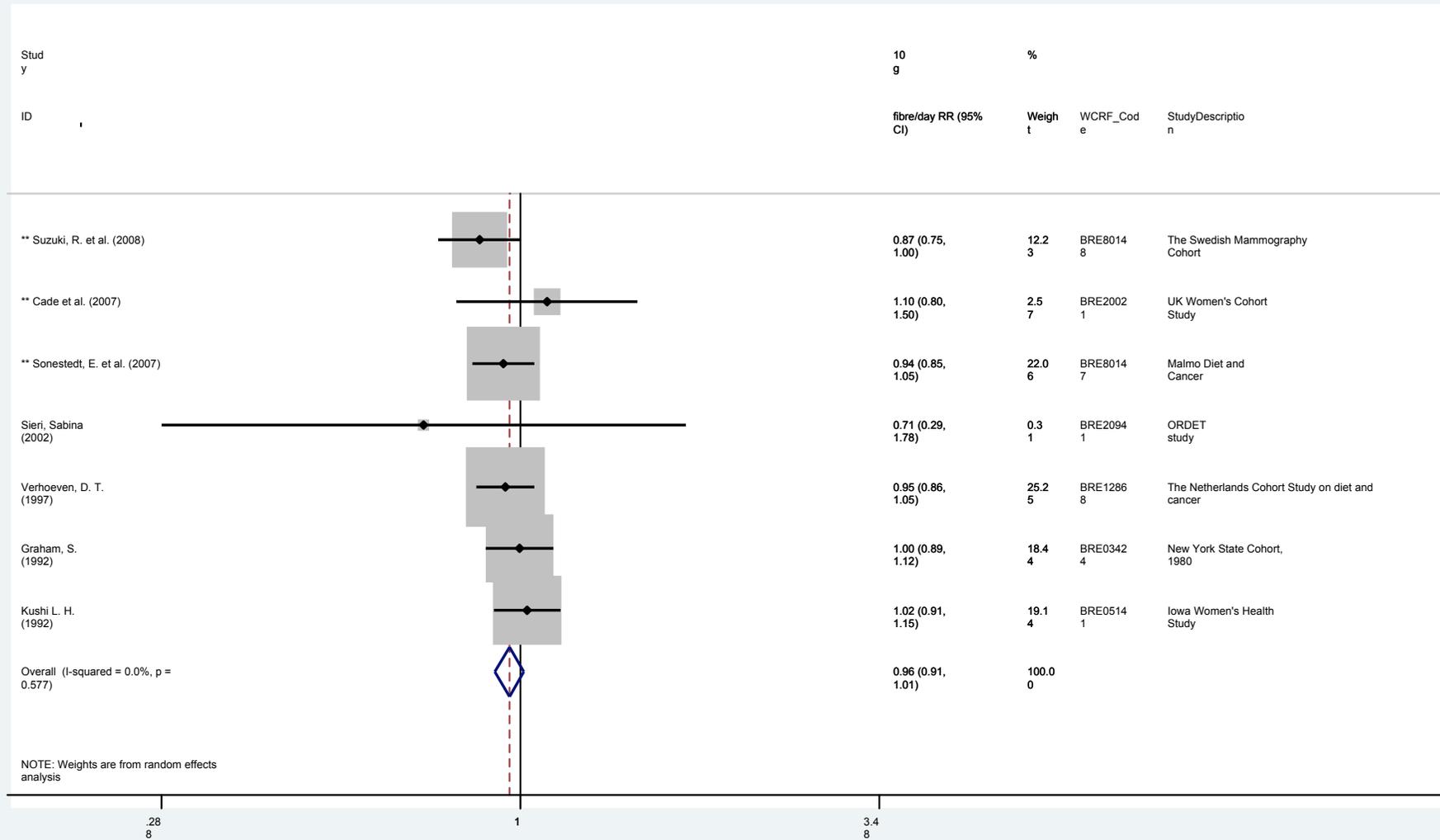
Subgroup analyses defined by alcohol intake, ER status and family history of breast cancer were conducted in the Swedish Mammography Cohort (Suzuki, R. et al., 2008 , BRE80148).The only significant result was the inverse association observed in ever users of postmenopausal hormones with ER+/PR+ breast cancer (243 cases RR_{Q4 vs. Q1}=0.50; 95% CI = 0.31-0.80). In the Malmo Diet and Cancer Study, Sweden (Sonestedt, E. et al., 2007 , BRE80147), analyses were stratified by dietary modification before recruitment in the cohort and BMI. Significant inverse associations were observed only in the subgroup of women with BMI < 27 kg/m² and in women that did not modify diet before baseline.

a) Table FI 1 Inclusion and exclusion of cohort studies on dietary fibre and postmenopausal breast cancer

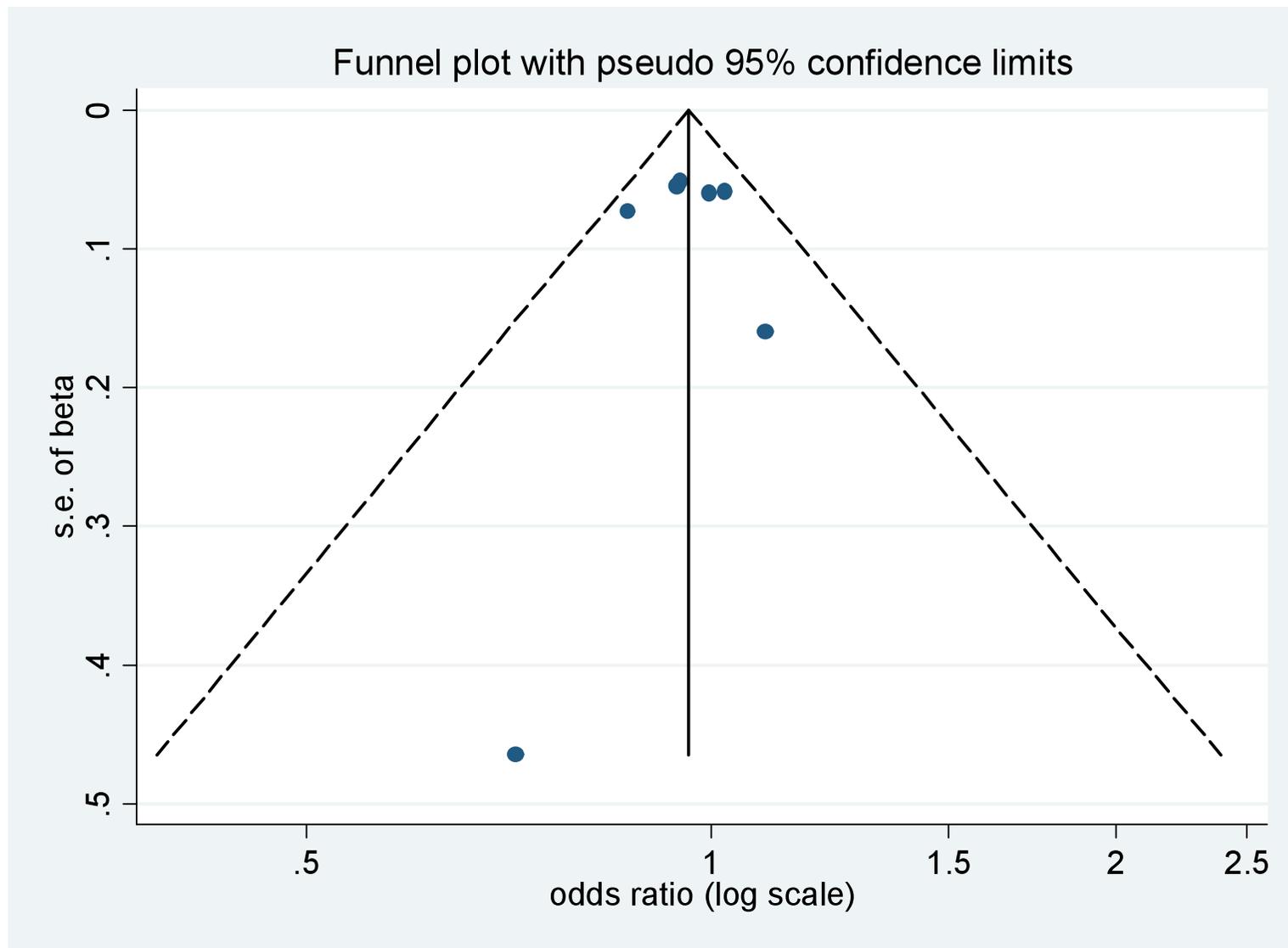
Author	Year	WCRF Code	Study name	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Estimated values for meta-analysis	Exclusion reasons	Included in the 2008 high vs. low forest plot	Remarks
Suzuki, R. et al.	2008	BRE80148	The Swedish Mammography Cohort	Prospective Cohort	New Study	Yes	mean exposures		Yes	
Cade et al.	2007	BRE20021	UK Women's Cohort Study	Prospective Cohort	New Study	Yes	mean exposures		Yes	
Sonestedt, E. et al.	2007	BRE80147	Malmo Diet and Cancer	Prospective Cohort	New Study	Yes			Yes	mean/median exposure values were provided - used directly in estimating the dose-response slope
Giles, G. G.	2006	BRE22430	Melbourne Collaborative Cohort Study	Prospective Cohort	No	No		unknown unit of increment for the dietary fibre intake; only dose-response slope was provided - unable to include in the high/low plot	No	
Holmes, M. D.	2004	BRE04010	Nurses' Health Study	Prospective Cohort	No	No		missing no. of cases and non-cases and exposure levels; dose-response analysis was not conducted	Yes	
Mattsson, I.	2004	BRE16042	Malmo Diet and Cancer	Prospective Cohort	Yes	No		superseded by Sonestedt 2007, BRE80147; both high/low & dose-response plots were not done	No	
Sieri, Sabina	2002	BRE20941	ORDET study	Nested Case Control	No	Yes	mean exposures, number of cases and controls		Yes	exposure is NSP/dietary fibre, was able to estimate nos. of cases and controls as tertile of exposure was defined in the controls
Verhoeven, D. T.	1997	BRE12868	The Netherlands Cohort Study on diet and cancer	Case Cohort	Yes	Yes			Yes	mean/median exposure values were provided - used directly in estimating the dose-response slope

Kushi, L. H.	1995	BRE05142	Iowa Women's Health Study	Prospective Cohort	No	No		Cancer outcome by hormone receptor type only	No	
Graham, S.	1992	BRE03424	New York State Cohort, 1980	Prospective Cohort	Yes	Yes	mean exposures		Yes	
Kushi L. H.	1992	BRE05141	Iowa Women's Health Study	Prospective Cohort	Yes	Yes			Yes	mean/median exposure values were provided - used directly in estimating the dose-response slope
Willett, W. C.	1992	BRE13438	Nurses' Health Study	Prospective Cohort	No	No		missing nos. of cases and non-cases & superceded by Holmes 2004, BRE04010; both high/low & dose-response plots were not done	No	
Total no. of articles = 12			Total no. of cohort studies = 10		Total no. of studies included = 4	Total no. of studies included = 7			Total no. of studies included = 8	

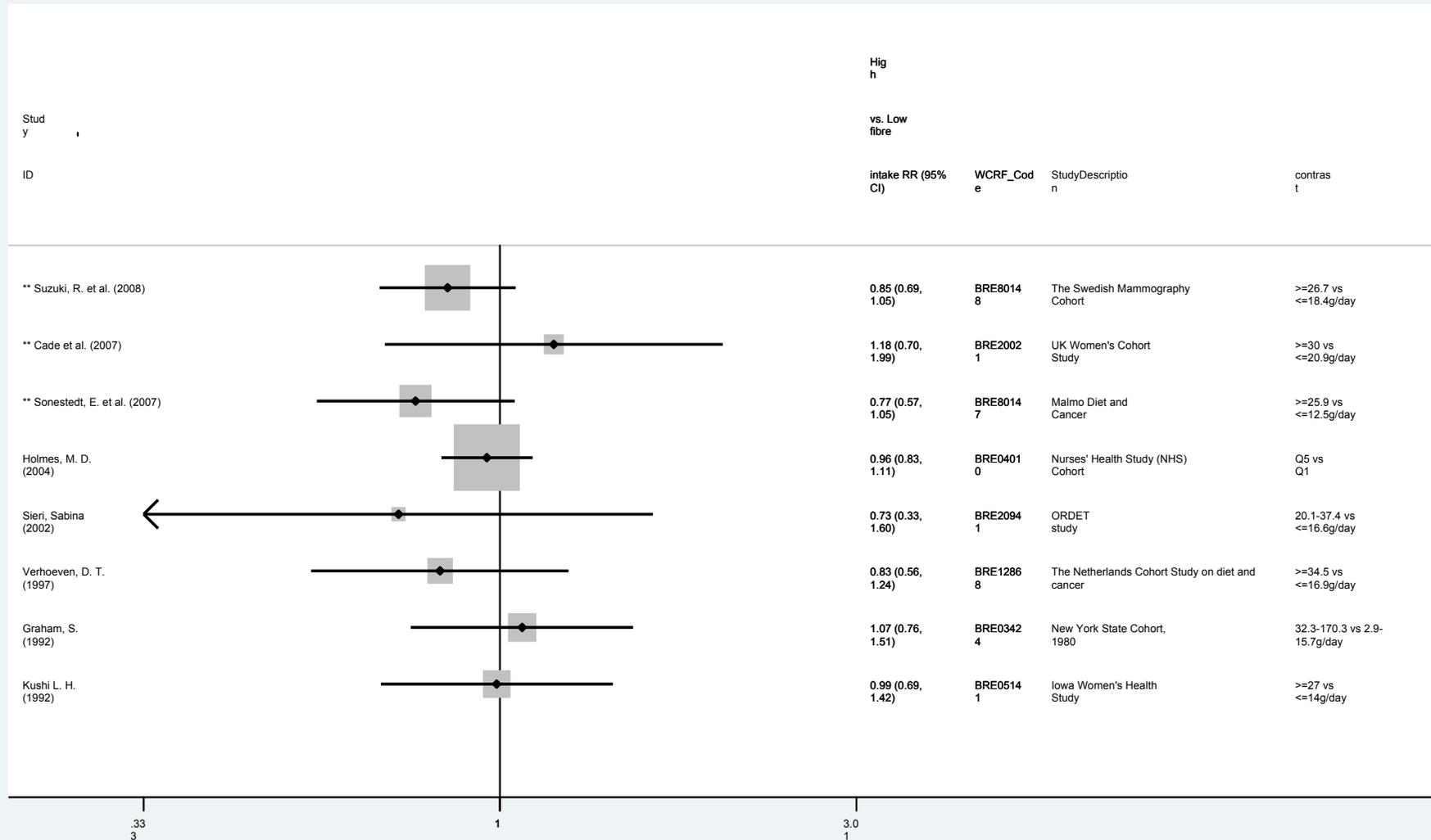
v. Fig. F11 Dose-response meta-analysis on dietary fibre and postmenopausal breast cancer (= new studies identified during the update)**



vi. Fig. FI2 Funnel plot for dietary fibre and postmenopausal breast cancer



vii. Fig. FI3 Highest versus lowest forest plot on dietary fibre and postmenopausal breast cancer (= new studies identified during the update)**



5.1.2 Vegetable fibre

Global Report, 2007

No association was reported in the Canadian National Breast Screening Study (menopause age unspecified) (Terry, P. et al., 2002 , BRE12199), the Nurses' Health Study (premenopause and menopause age unspecified respectively in two reports) (Cho, E. et al., 2003 , BRE01651;Holmes, M. D. et al., 2004 , BRE04010) and the Melbourne Collaborative Cohort Study on postmenopausal women (Giles, G. G. et al., 2006 , BRE22430). RR ranged from 0.9 - 1.07 for the highest versus lowest comparisons and none of these results reached statistical significance. The Melbourne Collaborative Cohort Study (Giles, G. G. et al., 2006 , BRE22430) stratified the results by hormone receptor status. For ER-PR- group, they gave a RR of 0.83 but the result was not significant (95% CI = 0.58-1.19). For the other two groups (ER+PR+ and ER+PR-), they provided RRs of 1.13 and 1.14, respectively and both results were not statistically significant.

Update

Two prospective cohort studies were identified during the update period (Cade, J. E. et al., 2007 , BRE20021;Suzuki, R. et al., 2008 , BRE80148).

In the Swedish Mammography Cohort (Suzuki, R. et al., 2008 , BRE80148), they did not observe any inverse association of vegetable fibre intake with the overall risk ($P_{\text{trend}} = 0.31$) or any subtypes of breast cancer. However among postmenopausal hormone never users, they found a statistically significant inverse association of vegetable fibre with all breast tumours ($P_{\text{interactions}} = 0.006$). In addition, there was a statistically significant inverse association with vegetable fibre with ER+PR+ tumours only ($P_{\text{trend}} = 0.023$).

The UK Women's Health Study (Cade, J. E. et al., 2007 , BRE20021) reported no significant relationships between breast cancer and fibre from vegetables among pre- and postmenopausal women ($RR_{>7 \text{ vs. } <3 \text{ g/day}} = 1.26$, 95% CI = 0.73-2.18; $RR_{>7 \text{ vs. } <3 \text{ g/day}} = 1.20$, 95% CI = 0.74-1.94, respectively).

5.1.2.1 Cereal fibre

Global Report, 2007

No association was reported in the Canadian National Breast Screening Study (menopause age unspecified) (Terry, P. et al., 2002 , BRE12199), the Nurses' Health Study (premenopausal and menopause age unspecified respectively in two reports) (Cho, E. et al., 2003 , BRE01651;Holmes, M. D. et al., 2004 , BRE04010) and the Melbourne Collaborative Cohort Study on postmenopausal women (Giles, G. G. et al., 2006 , BRE22430). RR ranged from 0.9 - 1.08 for the highest versus lowest comparisons and none of these results reached statistical significance. The Melbourne Collaborative Study had also observed a non-significant increased risk in the ER+/PR+ and ER+/PR- tumour type ($RR_{\text{for 1 S.D. increase}} = 1.17$, 95% CI = 0.98-1.39; $RR_{\text{for 1 S.D. increase}} = 1.24$, 95% CI = 0.83-1.86 respectively), but the opposite was reported in the ER-/PR- tumour type ($RR_{\text{for 1 S.D. increase}} = 0.78$, 95% CI = 0.55-1.11).

Update

Two prospective cohort studies were identified during the update period (Cade, J. E. et al., 2007 , BRE20021;Suzuki, R. et al., 2008 , BRE80148).

The UK Women's Cohort Study observed an approximately 40% decreased risk in premenopausal women (232 cases) and a small increased risk in postmenopausal women. The results were not statistically significant ($RR_{\text{for } \geq 13 \text{ vs. } < 3.9 \text{g/day}} = 0.59$, 95% CI = 0.32-1.1; $RR_{\text{for } \geq 13 \text{ vs. } < 3.9 \text{g/day}} = 1.15$, 95% CI = 0.68-1.94 respectively, but in the former association, a negative dose-response relationship was presented ($P_{\text{trend}} = 0.05$) (Cade, J. E. et al., 2007 , BRE20021).

The Swedish Mammography Screening Cohort (Suzuki, R. et al., 2008 , BRE80148) examined the relationship between cereal fibre and postmenopausal breast cancer risk by receptor-defined subtype. They observed a non-significant inverse association between cereal fibre intake and overall invasive breast cancer risk, with a $RR_{>19 \text{ vs. } < 12 \text{g/day}} = 0.91$ (95% CI = 0.75-1.11). For ER+PR+, ER+PR- and ER-PR-, they obtained RRs of 0.99 (95% CI = 0.77-1.29), 0.86 (95% CI = 0.56-1.32) and 0.69 (95% CI = 0.39-1.24), respectively. When the result was stratified by postmenopausal hormone (PMH) use, the statistically significant inverse association of cereal fibre with all breast cancer was confined to PMH users ($RR = 0.44$, 95% CI = 0.31-0.63, $P_{\text{trend}} < 0.0001$). In addition, although the inverse dose-response association was strongly statistically significant for ER+PR+ tumours only ($P_{\text{trend}} = 0.001$), non-significant decreased risk was observed in the ER+/PR- and the ER-/PR- tumour type ($RR_{\text{for } \geq 19.1 \text{ vs. } < 11.9 \text{g/day}} = 0.86$, 95% CI=0.56-1.32; $RR_{\text{for } \geq 19.1 \text{ vs. } < 11.9 \text{g/day}} = 0.69$, 95% CI=0.39-1.24 respectively). No statistically significant heterogeneity across tumour subtypes was found.

5.1.2.3 Fruit fibre

Global Report, 2007

No association was reported in the Canadian National Breast Screening Study (menopause age unspecified) (Terry, P. et al., 2002 , BRE12199), the Nurses' Health Study (premenopausal and menopause age unspecified respectively in two reports) (Cho, E. et al., 2003 , BRE01651;Holmes, M. D. et al., 2004 , BRE04010) and the Melbourne Collaborative Cohort Study on postmenopausal women (Giles, G. G. et al., 2006 , BRE22430).

Update

Two prospective cohort studies were identified during the update period (Cade, J. E. et al., 2007 , BRE20021;Suzuki, R. et al., 2008 , BRE80148).

The Swedish Mammography Screening Cohort (Suzuki, R. et al., 2008 , BRE80148) reported statistically significant associations between fruit fibre intake and the risk of overall invasive cancer and of ER+PR+ cancer; the multivariate-adjusted RRs for the highest vs. lowest quintile for all tumours was 0.66 (95% CI = 0.47-0.93, $P_{\text{trend}} = 0.007$) and for ER+PR+ tumours it was 0.62 (95% CI = 0.39-0.97), $P_{\text{trend}} = 0.022$). Among PMH never users, it showed a statistically significant inverse association of fruit fibre with ER+PR+ tumours only ($RR_{>5.1 \text{ vs. } < 1.7 \text{g/day}} = 0.45$, 95% CI = 0.25-0.81, $P_{\text{trend}} = 0.010$) and there was no significant heterogeneity across the tumour subtypes.

The results from the UK Women's Health Cohort Study (Cade, J. E. et al., 2007 , BRE20021) showed that fibre from fruit had a borderline statistically significant inverse relationship with premenopausal breast cancer ($RR_{>6 \text{ vs. } <2 \text{ g/day}} = 0.81$, 95% CI = 0.44-1.49, $P_{\text{trend}} = 0.09$). No association was found in postmenopausal women.

5.1.5 Glycemic index

Global Report, 2007

Seven prospective cohort studies were reported previously in the Global Report, 2007 (Cho, E. et al., 2003 , BRE01651; Giles, G. G. et al., 2006 , BRE22430; Higginbotham, S. et al., 2004 , BRE15353; Holmes, M. D. et al., 2004 , BRE04010; Jonas, C. R. et al., 2003 , BRE04456; Nielsen, T. G. et al., 2005 , BRE23581; Silvera, S. A. et al., 2005 , BRE24119); from which one, four and six studies reported results in menopause age unspecified, pre- and postmenopausal women respectively. In addition, the Nurses' Health Study II had published an article on adolescent glycemic index and breast cancer (Frazier, A. L. et al., 2004 , BRE02942).

Menopause age unspecified

A statistically non-significant decreased risk was reported by the Canadian National Breast Screening Study (NBSS) (Silvera, S. A. et al., 2005 , BRE24119).

Premenopause

No association was observed between glycemic index and premenopausal breast cancer in the Nurses' Health Study (Holmes, M. D. et al., 2004 , BRE04010); while the Women's Health Study (Higginbotham, S. et al., 2004 , BRE15353) reported a non-significant increased risk ($RR_{\text{highest vs. lowest}} = 1.29$, 95% CI = 0.92-1.81) and the NBSS observed a non-significant protective effect ($RR_{\text{for } \geq 96.1 \text{ vs. } \leq 63} = 0.78$, 95% CI = 0.52-1.16) (Silvera, S. A. et al., 2005 , BRE24119). No association was observed in neither lean nor overweight premenopausal women in the Nurses' Health Study and Nurses' Health Study II (Cho, E. et al., 2003 , BRE01651; Holmes, M. D. et al., 2004 , BRE04010) after stratification by BMI.

In the Nurses' Health study II, it showed an increased risk of premenopausal breast cancer was associated with high glycemic index diets during adolescence (Frazier, A. L. et al., 2004 , BRE02942).

Postmenopause

A statistically significant positive association of glycemic index with postmenopausal breast cancer was reported in the Nurses' Health Study (Holmes, M. D. et al., 2004 , BRE04010) and the NBSS (Silvera, S. A. et al., 2005 , BRE24119) ($RR_{\text{for highest vs. lowest}} = 1.15$, 95% CI = 1.02-1.30; $RR_{\text{for highest vs. lowest}} = 1.87$, 95% CI = 1.18-2.97 respectively), whereas a non-significant inverse association was observed in the WHS (Higginbotham, S. et al., 2004 , BRE15353) and the Diet, Cancer and Health Study from Denmark (Nielsen, T. G. et al., 2005 , BRE23581). The remaining two studies showed no association (Giles, G. G. et al., 2006 , BRE22430; Jonas, C. R. et al., 2003 , BRE04456).

Update

One study investigated glycemic index in relation to breast cancer in pre- and postmenopausal breast cancer, namely the ORDET study (Sieri, S. et al., 2007 , BRE80142).

In the ORDET study (Sieri, S. et al., 2007 , BRE80142) (289 cases) high glycemic index was related to an increased risk of breast cancer in premenopausal women ($RR_{>57.6 \text{ vs } <53.4} = 1.82$, 95% CI = 1.01-3.27) but not in postmenopausal women.

5.1.5 Glycemic load

The seven prospective cohort studies reported data previously in the Global Report, 2007 on glycemic index, as well as glycemic load (Cho, E. et al., 2003 , BRE01651; Giles, G. G. et al., 2006 , BRE22430; Higginbotham, S. et al., 2004 , BRE15353; Holmes, M. D. et al., 2004 , BRE04010; Jonas, C. R. et al., 2003 , BRE04456; Nielsen, T. G. et al., 2005 , BRE23581; Silvera, S. A. et al., 2005 , BRE24119); from which one, four and six studies reported results in menopause age unspecified, pre- and postmenopausal women respectively. In addition, the Nurses' Health Study II had published an article on adolescent glycemic load and breast cancer (Frazier, A. L. et al., 2004 , BRE02942).

Menopause age unspecified

No association was observed in the NBSS with glycemic load ($RR_{\text{highest vs. lowest}} = 0.95$, 95% CI = 0.79-1.14) (Silvera, S. A. et al., 2005 , BRE24119).

Premenopause

Four studies reported lack of association: the Nurses' Health Study (Holmes, M. D. et al., 2004 , BRE04010), the Nurses' Health Study II (Cho, E. et al., 2003 , BRE01651), the WHS (Higginbotham, S. et al., 2004 , BRE15353) and the NBSS study (Silvera, S. A. et al., 2005 , BRE24119). Risk estimates ranged from 0.87 to 1.27 but none of the results were statistically significant.

No association was reported in the Nurses' Health Study II with high glycemic load diets during adolescence ($RR_{\text{highest vs. lowest}} = 1.23$, 95% CI = 0.91-1.67 respectively) (Frazier, A. L. et al., 2004 , BRE02942).

Postmenopause

Six studies reported no association: the Nurses' Health Study (Holmes, M. D. et al., 2004 , BRE04010), the Diet, Cancer and Health Study from Denmark (Nielsen, T. G. et al., 2005 , BRE23581), the WHS (Higginbotham, S. et al., 2004 , BRE15353), the NBSS study (Silvera, S. A. et al., 2005 , BRE24119), the CPS-II (Jonas, C. R. et al., 2003 , BRE04456) and the MCCS (Giles, G. G. et al., 2006 , BRE22430). Risk estimates ranged from 0.81 to 1.19 but all the results were statistically non-significant.

Update

One study investigated glycemic load in relation to breast cancer (Sieri, S. et al., 2007 , BRE80142).

Glycemic load was significantly positively related to premenopausal breast cancer risk ($RR_{>138.8 \text{ vs } <103.25} = 3.89$, 95% CI = 1.81-8.34) and the risk estimate almost reached statistical significance among postmenopausal women ($RR_{>133.8 \text{ vs } <103.25} = 1.67$, 95% CI = 0.80-3.46).

Published meta-analysis

A meta-analysis including results of eight cohort studies investigating the relationship of glycemic index/glycemic load and breast cancer was published in March 2008. The authors reported an overall $RR_{\text{highest vs. lowest}}$ of 1.06 (95% CI = 0.98-1.15) for glycemic index and 0.99 (95% CI = 0.94-1.06) for glycemic load (Barclay, A. W. et al., 2008).

5.2 Total fat (Lipids, as nutrients in the Global Report)

Global Report, 2007

Menopause age unspecified

Fourteen reports were retrieved during the SLR (Bingham, S. A. et al., 2003 , BRE14387;Byrne, C. et al., 1996 , BRE05719;Gaard, M. T. 1995 , BRE17516;Giovannucci, E. et al., 1993 , BRE03262;Horn-Ross, P. L. et al., 2002 , BRE15412;Howe, G. R. F. 1991 , BRE17622;Jones, D. Y. et al., 1987 , BRE04461;Kinlen, L. J. 1982 , BRE17702;Knekt, P. et al., 1990 , BRE04898;Kushi, L. H. et al., 1995 , BRE05142;Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244;Toniolo, P. et al., 1994 , BRE12398;Willett, W. C. et al., 1987 , BRE13442;Wolk, A. et al., 1998 , BRE13548). The dose- response meta-analysis of 4 cohort studies found an overall RR of 1.01 (95% CI = 0.96-1.07) for 20 g/day increase of lipid intake, but results were heterogeneous (Gaard, M. T. 1995 , BRE17516;Howe, G. R. F. 1991 , BRE17622;Jones, D. Y. et al., 1987 , BRE04461;Willett, W. C. et al., 1992 , BRE13438).

Ten did not enter the meta-analysis with half showing no association and half showing non-significant positive associations (Bingham, S. A. et al., 2003 , BRE14387;Byrne, C. et al., 1996 , BRE05719;Giovannucci, E. et al., 1993 , BRE03262;Horn-Ross, P. L. et al., 2002 , BRE15412;Kinlen, L. J. 1982 , BRE17702;Knekt, P. et al., 1990 , BRE04898;Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244;Toniolo, P. et al., 1994 , BRE12398;van den Brandt, P. A. et al., 1993 , BRE16919;Wolk, A. et al., 1998 , BRE13548).

The study of Bingham et al. (Bingham, S. A. et al., 2003 , BRE14387) showed a significant increased risk when analysed data that were collected from food diaries but no association when data were collected from food frequency questionnaire, suggesting a major misclassification problem when using only FFQ.

One study from Britain (Kinlen, L. J. 1982 , BRE17702) reported a standardised mortality ratio of 1.33 when comparing not known vs. 70g/week.

The analysis was stratified by hormone receptor status in a multiethnic cohort study. Non-significant positive associations was observed in ER+/PR+ tumours (Kushi, L. H. et al., 1995 , BRE05142). Non-significant inverse associations were observed among ER-/PR- and ER-/PR+ tumours. The association with ER+/PR- tumors was null.

Eleven studies were included in the highest versus lowest forest plot (Bingham, S. A. et al., 2003 , BRE14387;Byrne, C. et al., 1996 , BRE05719;Gaard, M. T. 1995 , BRE17516;Horn-Ross, P. L. et al., 2002 , BRE15412;Howe, G. R. F. 1991 , BRE17622;Jones, D. Y. et al., 1987 , BRE04461;Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244;Toniolo, P. et

al., 1994 , BRE12398;Willett, W. C. et al., 1992 , BRE13438;Wolk, A. et al., 1998 , BRE13548). Six of them showed non-significant increased risk in breast cancer, three showed non-significant decreased risk (Horn-Ross, P. L. et al., 2002 , BRE15412;Jones, D. Y. et al., 1987 , BRE04461;Willett, W. C. et al., 1992 , BRE13438) and two showed no association (Byrne, C. et al., 1996 , BRE05719;Wolk, A. et al., 1998 , BRE13548).

Premenopause

No association was reported in the Nurses' Health Study (Willett, W. C. et al., 1987 , BRE13442).

Postmenopause

Twelve reports reported specifically on postmenopausal breast cancer and total fat intake (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581;Byrne, C. et al., 2002 , BRE01315;Graham, S. et al., 1992 , BRE03424;Howe, G. R. F. 1991 , BRE17622;Kushi, L. H. et al., 1992 , BRE05141;Mattisson, I. W. 2004 , BRE17807;Sieri, S. et al., 2002 , BRE20941;van den Brandt, P. A. et al., 1993 , BRE16919;Voorrips, L. E. et al., 2002 , BRE13011;Willett, W. C. et al., 1987 , BRE13442;Willett, W. C. et al., 1992 , BRE13438;Wirfalt, E. et al., 2002 , BRE13504). No association was observed in a dose-response meta-analysis of five cohort studies (RR= 1.06, 95% CI=0.99-1.14) (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581;Graham, S. et al., 1992 , BRE03424;Howe, G. R. F. 1991 , BRE17622;Kushi, L. H. et al., 1992 , BRE05141;Mattisson, I. W. 2004 , BRE17807) with moderate heterogeneity. Not included in the meta-analysis were the Italian small ORDET study (Sieri, S. et al., 2002 , BRE20941) (reported a significant increasing risk associated to higher intake of total fats) and three reports of the Nurses' Health Study that reported no association (Byrne, C. et al., 2002 , BRE01315;Willett, W. C. et al., 1987 , BRE13442;Willett, W. C. et al., 1992 , BRE13438). In the Iowa cohort study (Kushi, L. H. et al., 1992 , BRE05141) non-significant decreased risk for ER-/PR+ and ER-/PR- and non-significant increased risk for ER+/PR- and ER+/PR+ were reported. Two reports of the Netherlands Cohort Study on Diet and Cancer gave RRs of 1.08 (95% CI = 0.73-1.59) and 1.16 (95% CI = 0.87-1.56) respectively (van den Brandt, P. A. et al., 1993 , BRE16919;Voorrips, L. E. et al., 2002 , BRE13011).

Seven cohort studies were included in the highest vs. lowest forest plot (Byrne, C. et al., 2002 , BRE01315;Graham, S. et al., 1992 , BRE03424;Kushi, L. H. et al., 1992 , BRE05141;Mattisson, I. W. 2004 , BRE17807;Sieri, S. et al., 2002 , BRE20941;Voorrips, L. E. et al., 2002 , BRE13011;Willett, W. C. et al., 1992 , BRE13438), with four showed positive associations (one of which being statistically significant (Kushi, L. H. et al., 1992 , BRE05141)). Two studies reported negative associations and one reported no association.

Update

Two new prospective cohort studies had been identified during the update period: the Women's Lifestyle and Health Study (Lof, M. et al., 2007 , BRE80144) (974 cases) and Malmo Diet and Cancer Cohort from Sweden (component study of the EPIC) (Sonestedt, E. et al., 2007 , BRE80147) (428cases). Both articles reported results on breast cancer with menopausal age unspecified; the Malmo Diet and Cancer Cohort had also reported results on postmenopausal women. For menopausal age unspecified group, 16 reports in total were retrieved from both the SLR and update; whereas for pre- and postmenopausal group, there were three reports and fourteen reports retrieved from the SLR and update, respectively. No

dose-response meta-analysis was conducted due to the lack of new studies identified during the update period.

Menopause age unspecified

There were sixteen reports in total (from both the SLR and update). Of those sixteen reports, twelve were included in the highest vs. lowest forest plot (see Fig. F1): the Women's Lifestyle and Health Study (Lof, M. et al., 2007 , BRE80144) (974 cases); the EPIC-UK nested case-control study (Bingham, S. A. et al., 2003 , BRE14387) (168 cases); California Teachers Study (Horn-Ross, P. L. et al., 2002 , BRE15412) (711 cases); E3N-EPIC from France (Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244) (838 cases); the Swedish Mammography Cohort (Wolk, A. et al., 1998 , BRE13548) (674 cases); Norway National Health Screening Service Cohort (Gaard, M. T. 1995 , BRE17516) (248 cases); New York Women's Health nested case-control study (Toniolo, P. et al., 1994 , BRE12398) (180 cases); the Nurses' Health Study (Willett, W. C. et al., 1992 , BRE13438) (1439 cases); Mobile Clinic Health Examination Survey from Finland (Knekt, P. et al., 1990 , BRE04898) (54 cases); NHANES I (Jones, D. Y. et al., 1987 , BRE04461) (99 cases); The NHEFS cohort (Byrne, C. et al., 1996 , BRE05719) (53 cases) and the NBSS nested case-control study (Howe, G. R. F. 1991 , BRE17622) (519 cases).

Four were excluded from the analysis due to the following reasons: one historical cohort study provided data on mortality (Kinlen, L. J. 1982 , BRE17702); two were Nurses' Health Study (Giovannucci, E. et al., 1993 , BRE03262; Willett, W. C. et al., 1987 , BRE13442) and superseded by Willett WC et al. (Willett, W. C. et al., 1992 , BRE13438) as it had larger number of cases; the Iowa Women's Health Study only provided data on ER/PR subgroups (Kushi, L. H. et al., 1995 , BRE05142).

Six studies showed an increased risk of breast cancer with high total fat intake (Bingham, S. A. et al., 2003 , BRE14387; Gaard, M. T. 1995 , BRE17516; Howe, G. R. F. 1991 , BRE17622; Knekt, P. et al., 1990 , BRE04898; Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244; Toniolo, P. et al., 1994 , BRE12398); however none of them was significant. A decreased risk was observed in three studies (Horn-Ross, P. L. et al., 2002 , BRE15412; Jones, D. Y. et al., 1987 , BRE04461; Willett, W. C. et al., 1992 , BRE13438) with one study showed significant result (Jones, D. Y. et al., 1987 , BRE04461) ($RR_{>74.0 \text{ g/day vs. } <37.9 \text{ g/day}} = 0.34$, 95% CI = 0.16-0.73). The remaining three studies showed no associations between total fat and breast cancer (Byrne, C. et al., 1996 , BRE05719; Lof, M. et al., 2007 , BRE80144; Wolk, A. et al., 1998 , BRE13548), including the new study identified during the update period (Lof, M. et al., 2007 , BRE80144).

Premenopause

In total, there were three studies (from the SLR: (Willett, W. C. et al., 1987 , BRE13442; Willett, W. C. et al., 1992 , BRE13438) and update: (Lof, M. et al., 2007 , BRE80144)). Of those three studies, two were included in the highest vs. lowest plot (see Fig. F1) (Lof, M. et al., 2007 , BRE80144; Willett, W. C. et al., 1992 , BRE13438). One was excluded (Willett, W. C. et al., 1987 , BRE13442) as it was a duplicate of the Nurses' Health Study and replaced by a more recent report in 1992 (Willett, W. C. et al., 1992 , BRE13438).

The Women's Lifestyle and Health Study (Lof, M. et al., 2007 , BRE80144) reported a non-significant increased risk in premenopausal breast cancer. However, the Nurses' Health Study

reported a small statistically non-significant negative association (Willett, W. C. et al., 1992 , BRE13438).

Postmenopause

Altogether there were fourteen reports (from both SLR and update). Seven out of fourteen articles were included in the highest vs. lowest forest plot (see Fig. F1), including the two new articles (Lof, M. et al., 2007 , BRE80144; Sonestedt, E. et al., 2007 , BRE80147) (974 cases and 428 cases), the Nurses' Health Study (Byrne, C. et al., 2002 , BRE01315) (1071 cases), the ORDET nested case-control study from Italy (Sieri, S. et al., 2002 , BRE20941) (56 cases), the Netherlands Cohort Study on diet and cancer (Voorrips, L. E. et al., 2002 , BRE13011) (1812 cases), New York State Cohort (Graham, S. et al., 1992 , BRE03424) (395 cases) and the Iowa Women's Health Study (Kushi, L. H. et al., 1992 , BRE05141) (459 cases).

Seven reports were excluded: two were the Malmo Diet and Cancer cohort (Mattisson, I. W. 2004 , BRE17807; Wirfalt, E. et al., 2002 , BRE13504) and they were replaced by a more recent article (Sonestedt, E. et al., 2007 , BRE80147); two reports were from the Nurses' Health Study (Willett, W. C. et al., 1987 , BRE13442; Willett, W. C. et al., 1992 , BRE13438) and they were replaced by Bryne C (Byrne, C. et al., 2002 , BRE01315) which is a more recent article; two articles reported on continuous data only: the NBSS nested case-control study (Howe, G. R. F. 1991 , BRE17622) and Rancho Bernardo cohort from the US (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581). The Netherlands Cohort Study on Diet and cancer published in 1993 (van den Brandt, P. A. et al., 1993 , BRE16919) was also replaced by Voorrips L et al. (Voorrips, L. E. et al., 2002 , BRE13011) which is a more recent article.

Four studies reported an elevated risk in breast cancer with an increased intake of total fat among postmenopausal women (Kushi, L. H. et al., 1992 , BRE05141; Sieri, S. et al., 2002 , BRE20941; Sonestedt, E. et al., 2007 , BRE80147; Voorrips, L. E. et al., 2002 , BRE13011) and one of them was significant (which came from the ORDET study) ($RR_{<=146.6 \text{ vs. } <54.3 \text{ g/day}} = 3.47, 95\% \text{ CI} = 1.43-8.43$) (Sieri, S. et al., 2002 , BRE20941). The Women's Lifestyle and Health Study (Lof, M. et al., 2007 , BRE80144) showed a non-significant negative relationship between total fat and breast cancer. The Nurses' Health Study reported a small statistically non-significant decreased risk in breast cancer (Byrne, C. et al., 2002 , BRE01315) and the New York State Cohort showed no association (Graham, S. et al., 1992 , BRE03424).

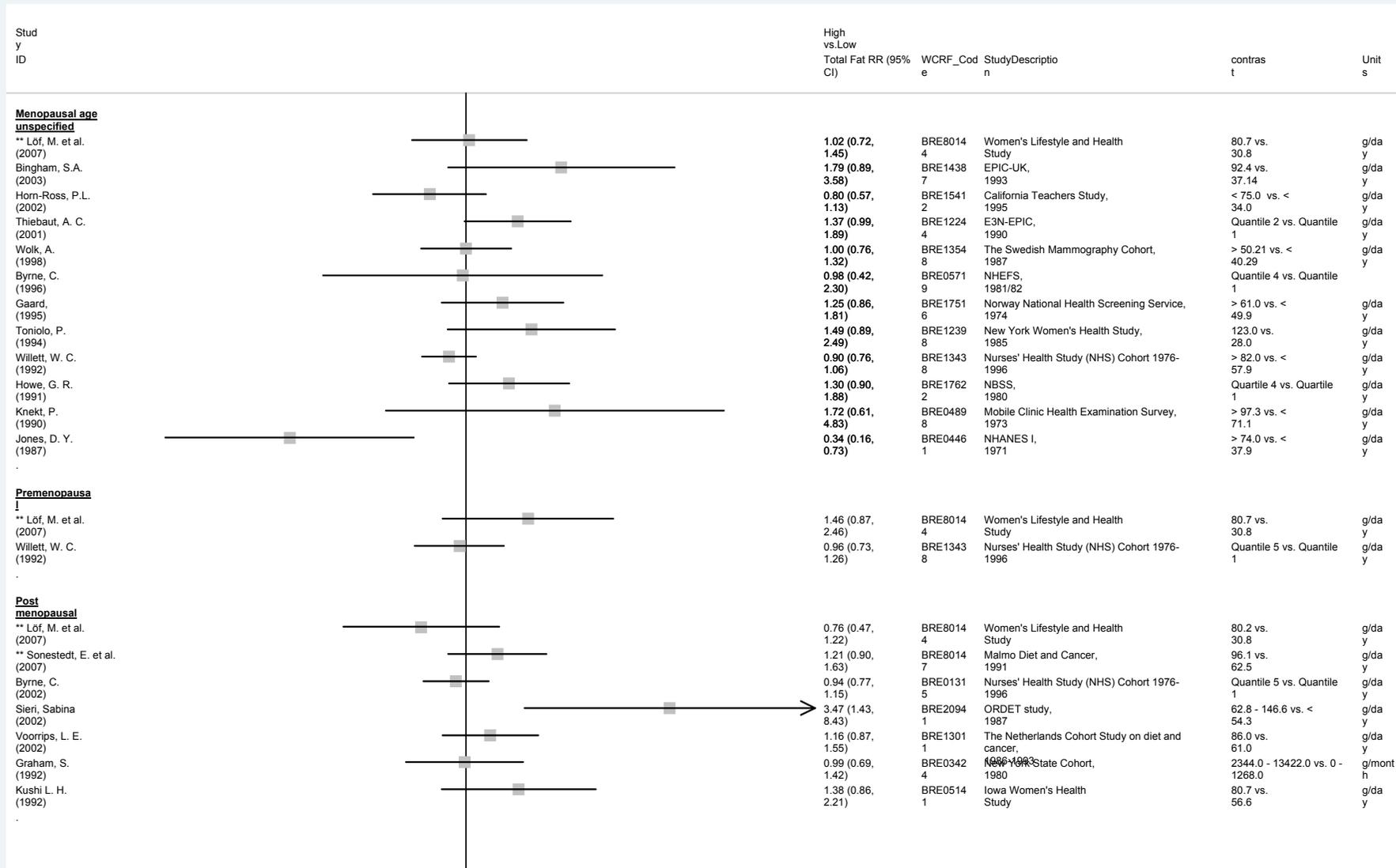
In the Malmo Diet and Cancer study (Sonestedt, E. et al., 2007 , BRE80147) (428 cases), an increased risk associated with high fat intake was observed in women with $BMI < 27 \text{ kg/m}^2$ (Sonestedt, E. et al., 2007 , BRE80147) (276 cases) ($RR_{96 \text{ vs } 62 \text{ g/day}} = 1.59; 95\% \text{ CI} = 1.09-2.32$). Regarding n-6 fatty acids intake, it was found to be positively related to breast cancer risk only in postmenopausal women with $BMI < 27 \text{ kg/m}^2$ ($RR_{14.1 \text{ vs } 6.6 \text{ g/day}} = 1.84; 95\% \text{ CI} = 1.4-2.71$) and in women who did not modified dietary habits before baseline.

Change in fat intake and breast cancer

The Women's Health Initiative Dietary Modification Randomised Controlled Trial (Prentice, R. L. et al., 2006 , BRE80155) was designed to promote dietary change with the goals of reducing intake of total fat to 20% of energy and increasing consumption of vegetables and

fruit to at least 5 servings daily and grains to at least 6 servings daily. The low-fat dietary pattern did not result in a statistically significant reduction in invasive breast cancer risk over an 8.1- year average follow-up period (655 breast cancer cases in the intervention group and 1072 in the comparison group; RR = 0.91, 95% CI = 0.83-1.01 for the comparison between the 2 groups). For women with more than or equal to 36.8% energy from fat at baseline, a statistically significant decreased in breast cancer risk was observed in the intervention group versus the comparison group (RR = 0.78, 95% CI = 0.64-0.95). Similar results were reported in women with more than or equal to 76 g/day total fat intake at baseline (RR = 0.79, 95% CI = 0.64-0.96). See point 1.4b Diet low in fat, high in fibre, fruits, and vegetables for more detailed results.

viii. Fig TF1. Highest vs. lowest forest plot on total fat and breast cancer, by menopausal status (** = new studies identified during the update)_



5.2.2 Saturated fatty acids

Global Report, 2007

19 articles were retrieved from the SLR (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581;Byrne, C. et al., 2002 , BRE01315;Gaard, M. T. 1995 , BRE17516;Giovannucci, E. et al., 1993 , BRE03262;Horn-Ross, P. L. et al., 2002 , BRE15412;Howe, G. R. F. 1991 , BRE17622;Jones, D. Y. et al., 1987 , BRE04461;Knekt, P. et al., 1990 , BRE04898;Kushi, L. H. et al., 1992 , BRE05141;Kushi, L. H. et al., 1995 , BRE05142;Sieri, S. et al., 2002 , BRE20941;Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244;Toniolo, P. et al., 1994 , BRE12398;van den Brandt, P. A. et al., 1993 , BRE16919;Voorrips, L. E. et al., 2002 , BRE13011;Willett, W. C. et al., 1987 , BRE13442;Willett, W. C. et al., 1992 , BRE13438;Wirfalt, E. et al., 2002 , BRE13504;Wolk, A. et al., 1998 , BRE13548).

Menopause age unspecified

No association in the meta-analysis of four studies (RR = 0.97, 95% CI=0.91-1.03 for 10 g /day) (Gaard, M. T. 1995 , BRE17516;Howe, G. R. F. 1991 , BRE17622;Jones, D. Y. et al., 1987 , BRE04461;Willett, W. C. et al., 1992 , BRE13438), with no significant heterogeneity. The highest versus lowest forest plot, however, shows 5 other studies, 1 of which only with non-significant negative association (Gaard, M. T. 1995 , BRE17516;Horn-Ross, P. L. et al., 2002 , BRE15412;Howe, G. R. F. 1991 , BRE17622;Jones, D. Y. et al., 1987 , BRE04461;Knekt, P. et al., 1990 , BRE04898;Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244;Toniolo, P. et al., 1994 , BRE12398;Wolk, A. et al., 1998 , BRE13548).

Postmenopause

The summary RR of four post-menopausal studies was 1.12 (95% CI = 1.01-1.24), no heterogeneity (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581;Kushi, L. H. et al., 1992 , BRE05141;van den Brandt, P. A. et al., 1993 , BRE16919;Wirfalt, E. et al., 2002 , BRE13504). Two other studies (of three) in the highest versus lowest forest plot did not confirm this positive association.

Update

Menopause age unspecified

One study was identified during the update: the Swedish Women's Lifestyle and Health Cohort (Lof, M. et al., 2007 , BRE80144). The results showed no association between saturated fatty acid intake and the overall risk of breast cancer, or with ER or PR status (974 cases).

5.2.3 Monounsaturated fatty acids

Global Report, 2007

15 articles were retrieved from the SLR, in which two were reports of the Iowa Women Health Study (Kushi, L. H. et al., 1992 , BRE05141;Kushi, L. H. et al., 1995 , BRE05142), two reports of the Nurses' Health Study (Giovannucci, E. et al., 1993 , BRE03262;Willett, W.

C. et al., 1992 , BRE13438), two reports of the Netherlands Cohort Study (van den Brandt, P. A. et al., 1993 , BRE16919; Voorrips, L. E. et al., 2002 , BRE13011), French E3N-EPIC (Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244), Malmo Diet and Cancer (Wirfalt, E. et al., 2002 , BRE13504), the NBSS (Howe, G. R. F. 1991 , BRE17622), NHANES (Jones, D. Y. et al., 1987 , BRE04461), Norway NHSS (Gaard, M. T. 1995 , BRE17516), ORDET (Sieri, S. et al., 2002 , BRE20941), Rancho Bernardo (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581), Mobile Clinic Health Examination Survey (Knekt, P. et al., 1990 , BRE04898) and Swedish Mammography Cohort (Wolk, A. et al., 1998 , BRE13548).

Menopause age unspecified

No association in the meta-analysis of four studies (RR = 1.00, 95% CI = 0.94-1.07), with significant heterogeneity (different age adjustment) but no major change upon excluding studies in sensitivity analysis (Gaard, M. T. 1995 , BRE17516; Howe, G. R. F. 1991 , BRE17622; Jones, D. Y. et al., 1987 , BRE04461; Willett, W. C. et al., 1992 , BRE13438). Four further studies with RR ranging from 0.95 to 2.70 (non-significant) were found in the highest versus lowest forest plot.

Postmenopause

No significant positive significant association in the meta-analysis of four studies in postmenopausal women (RR = 1.10, 95% CI = 0.96-1.25) with significant heterogeneity ($I^2 = 86\%$) possibly explained by differential adjustment for energy and reproductive factors (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581; Kushi, L. H. et al., 1992 , BRE05141; van den Brandt, P. A. et al., 1993 , BRE16919; Wirfalt, E. et al., 2002 , BRE13504).

Update

Two articles were identified during the update (Gallicchio, L. et al., 2007 , BRE80006; Lof, M. et al., 2007 , BRE80144).

Menopause age unspecified

In the BBD cohort-CLUE II, only mean differences were presented (Gallicchio, L. et al., 2007 , BRE80006). The Swedish Women's Lifestyle and Health Cohort (Lof, M. et al., 2007 , BRE80144) (974 cases) reported that monounsaturated fatty acid (MUFA) was not associated with the risk of breast cancer overall. However, women in the highest MUFA quintile intake had a reduced breast cancer risk after age 50 years (HR = 0.45, 95% CI = 0.25-0.99) compared to women in the lowest quintile. The association did not differ by oestrogen or progesterone receptor status.

5.2.4 Polyunsaturated fatty acids

Global Report, 2007

13 articles were retrieved from the SLR (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581; Giovannucci, E. et al., 1993 , BRE03262; Howe, G. R. F. 1991 , BRE17622; Jones, D. Y. et al., 1987 , BRE04461; Knekt, P. et al., 1990 , BRE04898; Kushi, L. H. et al., 1992 ,

BRE05141;Kushi, L. H. et al., 1995 , BRE05142;Sieri, S. et al., 2002 , BRE20941;Thiebaut, A. C. and Clavel-Chapelon, F. 2001 , BRE12244;van den Brandt, P. A. et al., 1993 , BRE16919;Voorrips, L. E. et al., 2002 , BRE13011;Wirfalt, E. et al., 2002 , BRE13504;Wolk, A. et al., 1998 , BRE13548).

Postmenopause

The meta-analysis of three studies (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581;Kushi, L. H. et al., 1992 , BRE05141;Wirfalt, E. et al., 2002 , BRE13504) showed a significant positive association with postmenopausal breast cancer (summary RR = 1.56, 95% CI = 1.33-1.84, for 5 g/day), and each study was significantly associated in the same direction. The above three studies were included in the highest versus lowest forest plot, along with the fourth study (Sieri, S. et al., 2002 , BRE20941). It was the Italian ORDET and it showed a non-significant positive association (OR =2.03)

Update

Two prospective studies had been identified during the update. The BBD cohort-CLUE II only presented mean differences (Gallicchio, L. et al., 2007 , BRE80006). In the Swedish Women's Lifestyle and Health Cohort (Lof, M. et al., 2007 , BRE80144) (974 cases), it reported a non-significant association between polyunsaturated fatty acids (PUFA) intake and the risk of breast cancer (HR=0.72, 95% CI = 0.52-1.00; $P_{\text{trend}} = 0.08$). Women in the highest PUFA quintile intake had a reduced breast cancer risk after age 50 years compared to women in the lowest quintile (HR=0.54, 95% CI = 0.35-0.85, $P_{\text{trend}} = 0.08$).

5.4 Alcohol (as ethanol)

Global Report, 2007

The meta-analysis including studies on women with unspecified menopausal age shows a significant positive association (RR= 1.10, 95% CI = 1.06-1.14, for 10g/day, with significant heterogeneity ($I^2 = 82\%$, partly explained by differential adjustment for age and reproductive history). There was a significant positive association with premenopausal breast cancer (5 studies: RR = 1.09, 95% CI = 1.01-1.17, with significant heterogeneity ($I^2 = 66\%$, possibly explained by differential adjustment for age, anthropometry and genetic factors) and postmenopausal breast cancer (11 studies: RR =1.08, 95% CI = 1.05-1.10, no heterogeneity). The highest versus lowest forest plots show several other studies that did not enter the dose-response meta-analysis: most of them show a positive association, thus confirming the overall positive pattern emerging from the meta-analysis.

To our knowledge, the Iowa Women's Health Study and the Swedish Mammography Cohort study are the only two other large prospective studies that have examined the association of alcohol intake with joint ER and PR status, and the results were mixed. In the Swedish Mammography Cohort, alcohol intake was associated with an elevated risk of both ER+PR+ and ER+PR- breast tumors, but not with ER- PR+ and ER-PR- breast tumors. In contrast, alcohol intake was most strongly associated with ER-PR- tumors in the Iowa Women's Health Study. Our findings that alcohol was associated with ER+PR+ tumors, but not with ER-PR- and ER+PR- tumors, are in general consistent with the results from the Swedish Mammography Cohort. The small number of cases in the present analysis, however, precluded us from calculating precise estimates of the association between alcohol and

ER+PR– tumors. We also did not have enough cases to evaluate the association between alcohol and ER–PR+ tumors. Overall pooled estimates from these three prospective studies showed a significant positive association for ER+PR+ tumors, but not for ER–PR– and ER+PR– tumors (table 5). Although our data on the presence or absence of hormone receptors were determined from laboratories affiliated with hospitals in which breast cancer cases were diagnosed and not from a single reference laboratory, the measurement of hormone receptors has been standardized, and the distribution of hormone receptors in the Women’s Health Study is comparable to those reported in previous studies for postmenopausal women .

Update

Five prospective cohort or nested case-control studies have published seven reports in the relation to alcohol (as ethanol) consumption and risk of breast cancer between Jan 2006 and Dec 2007, which include the Women’s Health Study (Zhang, S. M. et al., 2007 , BRE20023), the PLCO Cancer Screening Trial (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) and the EPIC study (Tjonneland, A. et al., 2007 , BRE80013). The four remaining reports were components of the EPIC: three of them were the Diet, Cancer and Health Study from Denmark (Mellemkjaer, L. et al., 2006 , BRE80039;Ravn-Haren, G. et al., 2006 , BRE80151;Vogel, U. et al., 2007 , BRE80150) and one was Malmo Diet and Cancer study from Sweden (Ericson, U. et al., 2007 , BRE80128).

We conducted a dose-response meta-analysis of the relationship of alcohol intake with postmenopausal breast cancer. No meta-analysis was performed on women with menopausal age unspecified or premenopausal status as only two (Tjonneland, A. et al., 2007 , BRE80013;Zhang, S. M. et al., 2007 , BRE20023) and one (Zhang, S. M. et al., 2007 , BRE20023) studies had reported data respectively.

Menopause age unspecified

The EPIC study (Tjonneland, A. et al., 2007 , BRE80013) and the Women’s Health study (Zhang, S. M. et al., 2007 , BRE20023) published data on the relationship of alcohol and breast cancer (women with pre- or postmenopausal status combined). Both studies reported a statistically significant increased risk of breast cancer with an increased alcohol intake. For 10g/day increase in consumption, the EPIC study (Tjonneland, A. et al., 2007 , BRE80013) reported a 3% increase risk (95% CI = 1.01-1.05); while the Women’s Health Study (Zhang, S. M. et al., 2007 , BRE20023) reported a 7% increase risk (95% CI = 1.01-1.14). The EPIC study had also examined the association between alcohol intake and breast cancer risk by level of dietary folate intake. No significant interaction was observed ($P_{interactions} = 0.59$).

Premenopause

A statistically non-significant increase risk in premenopausal breast cancer was reported in the Women’s Health study (Zhang, S. M. et al., 2007 , BRE20023) ($RR_{for\ 10g/day\ increase} = 1.08$, 95% CI = 0.96-1.22).

Postmenopause

Six reports published by four cohort studies were identified during the update period: one report each from the Women’s Health Study (Zhang, S. M. et al., 2007 , BRE20023), the

PLCO Cancer Screening Trial (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) and the Malmo Diet and Cancer study (Ericson, U. et al., 2007 , BRE80128) and 3 separate reports from the Diet, Cancer and Health Study in Denmark (Mellemkjaer, L. et al., 2006 , BRE80039;Ravn-Haren, G. et al., 2006 , BRE80151;Vogel, U. et al., 2007 , BRE80150).

We conducted a meta-analysis that confirms the results of the meta-analysis conducted in the SLR with less heterogeneity between study results. A summary comparing the results of the meta-analysis in the SLR and the updated meta-analysis is shown below:

Summary of results of the dose-response meta-analysis

	Postmenopausal breast cancer	
	2nd Report	Continuous update
Studies (n)	11	13
Cases (n)	-	10915
RR (95% CI) (10g/day increase)	1.08 (1.05-1.10)	1.08 (1.05-1.11)
Heterogeneity (I ²)	39.5% (0.0-70.2%)	21.0%, p=0.231

Studies selected for the dose-response meta-analysis

13 out of 28 studies with appropriate format of data on postmenopausal women were included in the dose-response meta-analysis for this update report. The four cohort studies identified during the update (Ericson, U. et al., 2007 , BRE80128;Mellemkjaer, L. et al., 2006 , BRE80039;Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113;Zhang, S. M. et al., 2007 , BRE20023) had contributed new data in the dose-response meta-analysis. Some previous reports published by these cohort studies were superseded in the selection process: one each from the Malmo Diet and Cancer study (Mattisson, I. W. 2004 , BRE17807) and PLCO Screening Trial (Stolzenberg-Solomon, R. Z. et al., 2004 , BRE18746); four reports from the Diet, Cancer and Health study (Ravn-Haren, G. et al., 2006 , BRE80151;Tjonneland, A. et al., 2003 , BRE12350;Tjonneland, A. et al., 2004 , BRE12349;Vogel, U. et al., 2007 , BRE80150). In addition, nine studies (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581;Chen, Wendy et al., 2002 , BRE19205;Feigelson, H. S. et al., 2003 , BRE02720;Holmberg, L. et al., 1995 , BRE15392;Horn-Ross, P. L. et al., 2004 , BRE15413;Rohan, T. E. et al., 2000 , BRE16489;Sellers, T. A. G. 2004 , BRE18027;Suzuki, R. et al., 2005 , BRE24245;van den Brandt, P. A. et al., 1995 , BRE12719) were retrieved from the SLR, giving a total of 13 studies (10915 cases) for the meta-analysis. Details of these studies and their selection are given in Table A1.

Results

The summary estimate obtained in the meta-analysis was 1.08 (95% CI = 1.05-1.11) for 10g/day increase in alcohol consumption, which is the same as reported in 2007 (RR=1.08, 95% CI = 1.05-1.10) (Fig A1).

There was no suggestion of excess heterogeneity between the studies ($I^2=21.0\%$, $P=0.231$) and no indication of any strong influence from each individual study on the summary estimate. The funnel plot did not suggest any publication bias (Fig A2).

Overall, the categorical results are consistent with a positive significant association as shown in the forest plot of relative risks comparing highest versus lowest category of intake in each study (Fig A3). Three studies not included in the dose-response meta-analysis – the Women’s Health Initiative Study (Duffy, C. et al., 2004 , BRE18359), the CPS-II Cohort (Feigelson, H. S. et al., 2003 , BRE02720) and the ORDET study (Sieri, S. et al., 2002 , BRE20941) - were included in the highest versus lowest forest plot. All three studies showed significant positive associations, with two results (Duffy, C. et al., 2004 , BRE18359; Feigelson, H. S. et al., 2003 , BRE02720) being statistically significant.

The Danish Diet, Cancer and Health Study reported statistically significant interaction between alcohol consumption and *PPAR* γ 2 Pro¹²Ala genotype in relation to postmenopausal breast cancer. Among homozygous wild-type carriers, the RR for an increment of 10g/day alcohol was 1.21 (95% CI = 1.06-1.35); but no association was observed in variant allele carriers ($P_{\text{interaction}} = 0.005$). No effects were reported for *IL6* G-174C, *IL8* T-251A and *COX2* T8473C genotypes. (Vogel, U. et al., 2007 , BRE80150).

Published meta-analyses

In 2006, Key et al. conducted a comprehensive meta-analysis involving 98 unique observational studies (> 75 000 cases) on the relation of alcohol and breast cancer; with particular attentions drawn to study quality issues including treatment of confounders and data reporting and the methodology in meta-analysis. For the studies judged high quality, by a simple index developed by the authors, and adjusted for appropriate confounders, excess risk associated with alcohol drinking was 22% (95% CI = 9-37%; $Q = 54$, 18 d.f). In the dose-response meta-analysis among the drinkers, a 10% increased risk (95% CI = 5 – 15%; $Q = 56$, 32 d.f) for each additional 10g of ethanol consumption was observed. Findings were robust to study design and analytic approaches in the meta-analyses. There was no significant difference in risk by menopausal status and alcoholic type. There was no evidence of publication bias (Key, J. et al., 2006).

A meta-analysis assessed the association between alcohol intake and the risk of ER-/PR-defined breast cancer (Suzuki et al., 2008). It included cohort and case-control studies published through April 2007. The number of cohort studies included was three and the number of case-control studies varied from three to seven depending on the analysis. The dose-response meta-analysis showed that an increase in alcohol consumption of 10 g of ethanol per day was associated with statistically significant increased risks for all ER+ (12%), all ER- (7%), ER+PR+ (11%) and ER+PR- (15%), but not ER-PR-. A statistically significant heterogeneity of the results across all ER+ *versus* ER-PR- was observed ($P_{\text{heterogeneity}} = 0.02$).

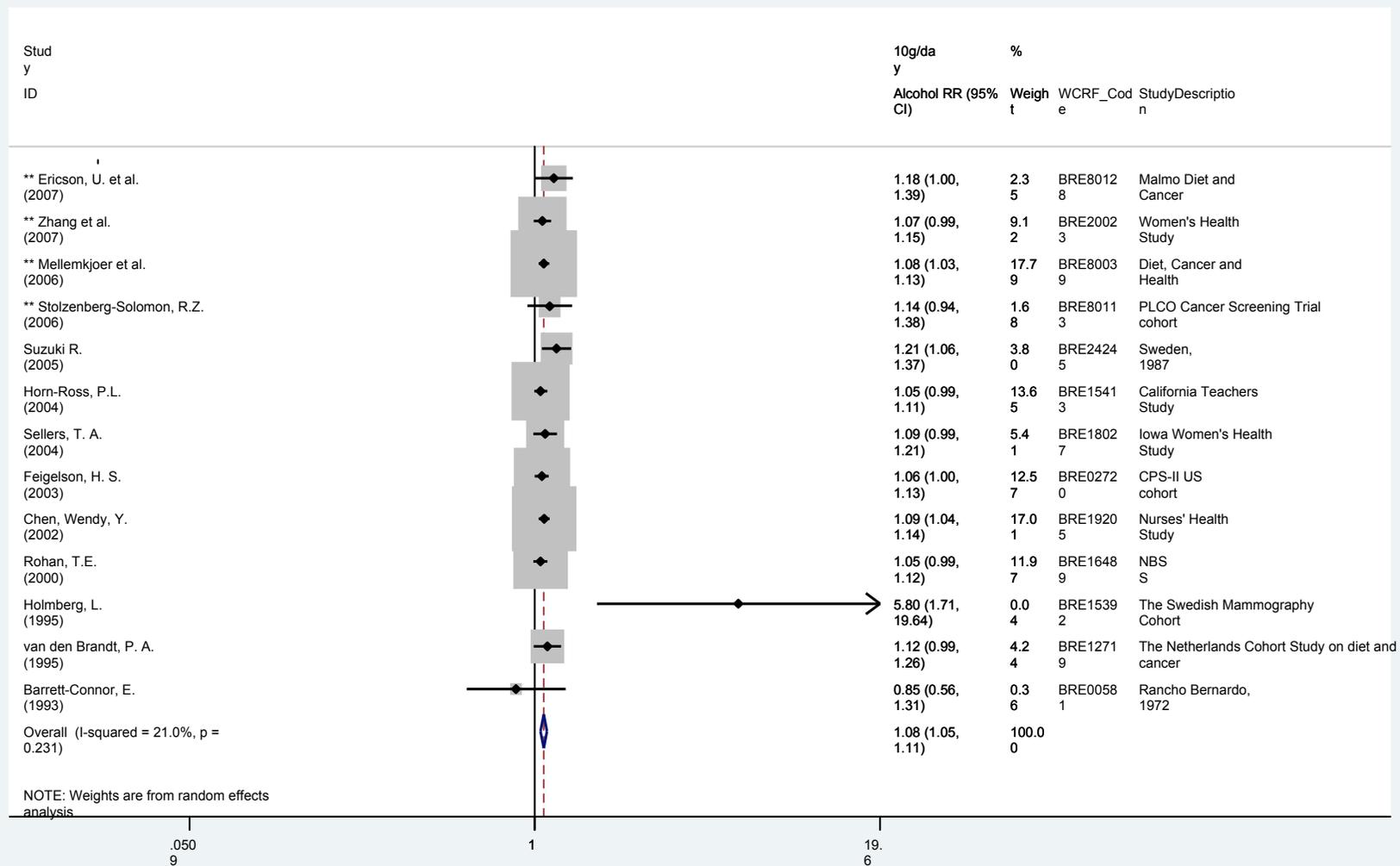
b)Table A1 Inclusion and exclusion of cohort studies on alcohol (as ethanol) and postmenopausal breast cancer

Author	Year	WCRF Code	Study name	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Estimated values for meta-analysis	Exclusion reasons	Included in the 2008 high vs. low forest plot	Remarks
Ericson, U. et al.	2007	BRE80128	Malmo Diet and Cancer	Prospective Cohort	New study	Yes	Mean exposure values		Yes	Component study of EPIC
Vogel, U. et al.	2007	BRE80150	Diet, Cancer and Health	Nested Case Control	New study	No		Although more recent than Mellemkjoer, 2006 BRE80039, less number of cases (361 cases)	No	Component study of EPIC
Zhang et al.	2007	BRE20023	Women's Health Study	Prospective Cohort	New study	Yes			Not included in H vs L as they only provided continuous data	
Mellemkjoer et al.	2006	BRE80039	Diet, Cancer and Health	Prospective Cohort	New study	Yes			Continuous data only - not included in high vs. low analysis	Increment converted to 10g/day; component study of EPIC
Ravn-Haren, G. et al.	2006	BRE80151	Diet, Cancer and Health	Nested Case Control	New study	No		Superseded by Mellemkjoer 2006, BRE80039	No	Component study of EPIC
Stolzenberg-Solomon, R.Z.	2006	BRE80113	PLCO Cancer Screening Trial cohort	Prospective Cohort	New study	Yes	Mean exposure values		Yes	
Suzuki R.	2005	BRE24245	Sweden, 1987	Prospective Cohort	Yes	Yes	Mean exposure values		Yes	
Colditz, G. A.	2004	BRE01783	Nurses' Health Study	Prospective Cohort	No	No		Stratified by ER breast cancer status	No	
Duffy, C.	2004	BRE18359	Women's Health Initiative Study	Prospective Cohort	No	No		Number of non-cases and cases missing; can't estimate	Yes	
Horn-Ross, P.L.	2004	BRE15413	California Teachers Study	Prospective Cohort	Yes	Yes	Mean exposure values		Yes	
Mattisson, I.	2004	BRE17807	Malmo Diet and Cancer	Prospective Cohort	No	No		Superseded by Ericson, 2007 BRE80128	No	Component study of EPIC

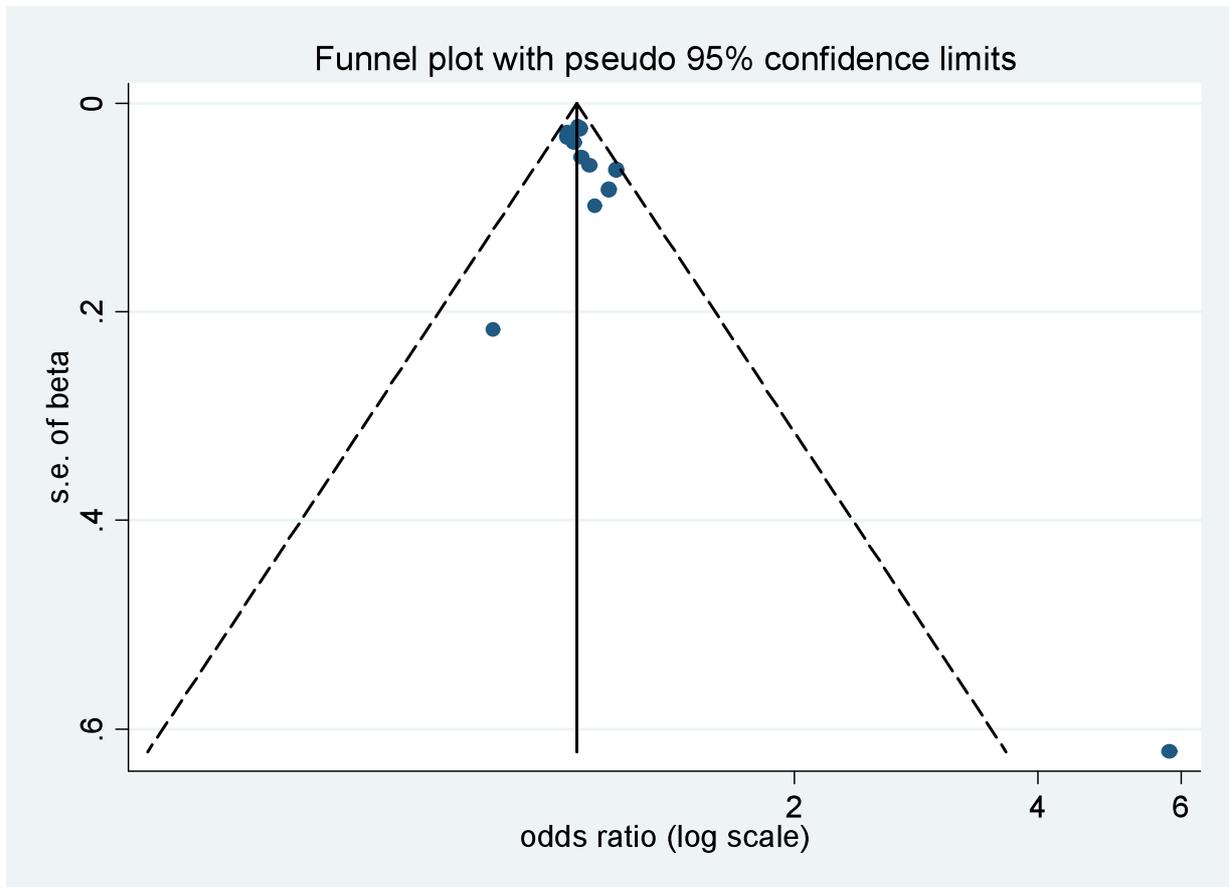
Sellers, T. A.	2004	BRE18027	Iowa Women's Health Study	Prospective Cohort	Yes	Yes	Mean exposure values		Yes	
Stolzenberg-Solomon, R. Z.	2004	BRE18746	PLCO Cancer Screening Trial cohort	Prospective Cohort	No	No		Superseded by Stolzenberg-Solomon 2006 BRE80113	No	
Tjonneland, A.	2004	BRE12349	Diet, Cancer and Health	Prospective Cohort	Yes	No		Superseded by Mellemkjoer 2006, BRE80039	No	Component study of EPIC
Feigelson, H. S.	2003	BRE02720	CPS-II US cohort	Prospective Cohort	Yes	Yes	Mean exposure values		Yes	
Rissanen, H.	2003	BRE17954	Mobile Clinic Health Examination Survey	Nested Case Control	Yes	No		Mean difference	No	
Tjonneland, A.	2003	BRE12350	Diet, Cancer and Health	Prospective Cohort	No	No		Dose-response slope provided by Mellemkjoer 2006, BRE80039	Yes, selected for H _v L plot as this was the only categorical analysis performed in Diet, Cancer and Health study	Component study of EPIC
Chen, Wendy, Y.	2002	BRE19205	Nurses' Health Study	Prospective Cohort	Yes	Yes	Mean exposure values		Yes	
Sieri, Sabina	2002	BRE20941	ORDET study	Nested Case Control	No	No		Number of cases and non-cases not provided, can't estimate as quantiles were only calculated from the non-cases	Yes	
Jain, M.G.	2000	BRE17653	NBSS	Prospective Cohort	No	No		Outcome was mortality	No	
Rohan, T.E.	2000	BRE16489	NBSS	Case Cohort	No	Yes		Continuous data only - not included in high vs. low analysis	No	
Holmberg, L.	1995	BRE15392	The Swedish Mammography Cohort	Nested Case Control	Yes	Yes	Mean exposure values		Yes	
van den Brandt, P. A.	1995	BRE12719	The Netherlands Cohort Study on diet and cancer	Case Cohort	Yes	Yes	Mean exposure values		Yes	
Barrett-Connor, E.	1993	BRE00581	Rancho Bernardo, 1972	Prospective Cohort	Yes	Yes		Continuous data only - not included in high vs. low analysis	No	Increment converted to 10g/day

Friedenreich, C. M.	1993	BRE17508	NBSS	Nested Case Control	Yes	No		Superseded by Rohan 2000 BRE16489	Yes, included in HvL plot as this was the only categorical analysis performed in NBSS
Gapstur, S. M.	1992	BRE03101	Iowa Women's Health Study	Prospective Cohort	No	No		Superseded by Sellers 2004; missing cases and non-cases, can't estimate	No
Schatzkin, A.	1987	BRE18010	NHEFS	Prospective Cohort	No	No		2 categories: drinkers and non-drinkers only	No
Willett, W. C.	1987	BRE13441	Nurses' Health Study	Prospective Cohort	No	No		Superseded by Chen 2002 BRE19205	No
Total no. of articles = 28			Total no. of cohort studies = 17		Total no. of studies included = 11	Total no. of studies included = 13			Total no. of studies included = 13

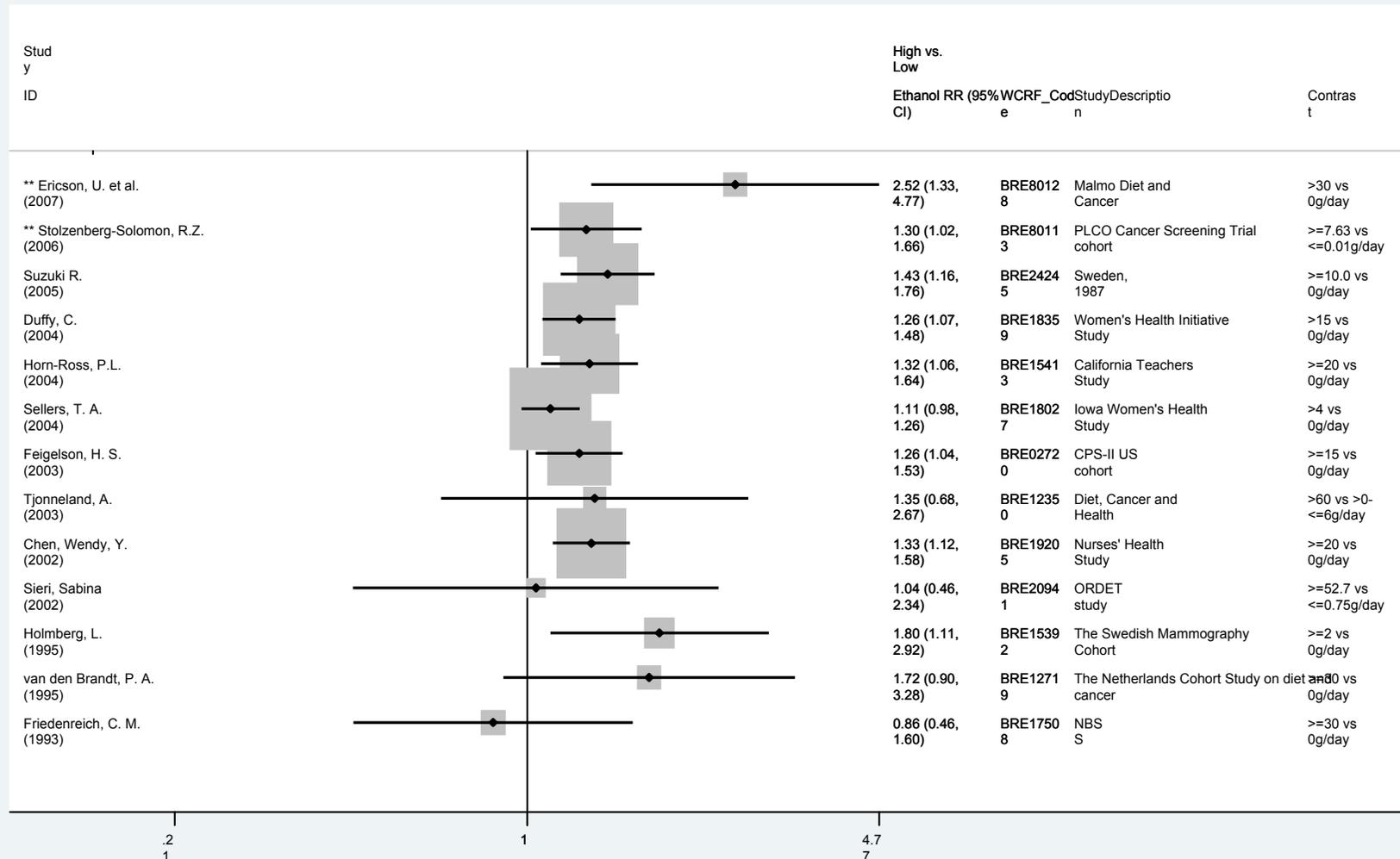
ix. Fig.A1 Dose-response meta-analysis on alcohol (as ethanol) and postmenopausal breast cancer (=new studies identified during the update)**



x. Fig. A2 Funnel plot for alcohol (as ethanol) and postmenopausal breast cancer



xi. Fig.A3 Highest versus lowest forest plot on alcohol (as ethanol) and postmenopausal breast cancer (=new studies identified during the update)**



5.5.2 Vitamin B

Global Report, 2007

Four articles were retrieved from the SLR (Goodman, J. E. et al., 2001 , BRE03354; Wu, K. et al., 1999 , BRE13618; Wu, K. et al., 1999 , BRE63618; Zhang, S. M. et al., 2003 , BRE13958). The Nurses' Health Study reported on plasma cobalamin and plasma pyridoxine (Zhang, S. M. et al., 2003 , BRE13958). CLUE I (Wu, K. et al., 1999 , BRE13618) and II (Wu, K. et al., 1999 , BRE63618) study cohorts reported on vitamin B supplement, plasma/serum cobalamin (B12), and serum pyridoxal 5'-Phosphate (B6) and they presented the result by menopausal status.

For B-vitamin use, they gave matched ORs of 1.06 (95% CI = 0.47-2.38) and 0.57 (95% CI = 0.27- 1.21) for CLUE I (133 cases) and CLUE II (110 cases) cohorts (overall breast cancer risks), respectively, when comparing never users with ever users. In the total 1974 population (CLUE I), women in the lowest fifth of B12 concentration had a significantly increased risk of breast cancer compared to those in the highest fifth B12 concentration (OR = 2.54, 95% CI = 1.11–5.80; median B12 concentration in the lowest fifth group 5 280 pg/ml). The observed increased risk in the lowest fifth B12 concentration was primarily due to increased risk of breast cancer among women in the lowest fifth of B12 who were postmenopausal at donation. For CLUE II study, no significant association were found for total population, pre- and postmenopausal women.

Plasma cobalamin (vitamin B12) was not significantly inversely related to breast cancer risk in the Nurses' Health Study (RR = 0.76) (Zhang, S. M. et al., 2003 , BRE13958). For plasma pyridoxine (B6), the Nurses' Health Study also did not show any significant protective association (Zhang, S. M. et al., 2003 , BRE13958).

A study from Washington US (Goodman, J. E. et al., 2001 , BRE03354) investigated COMT genotype, serum cobalamin (B12) and breast cancer. However, only mean differences were given.

Update

Only one study on premenopausal women was identified – Nurses' Health Study [Cho, E. et al., 2007, BRE80152]. They investigated total vitamin B6 (from foods and supplements) (RR = 1.11, 95% CI = 0.91-1.35), vitamin B6 from foods only (RR = 1.18, 95% CI = 0.96-1.44), total vitamin B12 (from foods and supplements) (RR = 0.92, 95% CI = 0.76-1.12), vitamin B12 from foods only (RR = 0.96, 95% CI = 0.78-1.19), total choline (RR = 0.88, 95% CI = 0.72-1.07) and total betaine (RR = 0.99, 95% CI = 0.79-1.22) in relation to the risk of breast cancer; and all of them showed non-significant positive/negative associations (221 cases). In the ER- subgroup, no association was found between vitamin B6 (total vitamin B6 and vitamin B6 from foods only), B12 (total vitamin B12 and vitamin B12 from foods only), total choline and betaine and breast cancer. No inverse associations were observed when stratified by levels of alcohol consumption and total folate intake.

Interactions between B vitamins and folate on the risk of breast cancer

The E3N EPIC-French study reported stronger inverse associations of folate intake and postmenopausal breast cancer in the two highest tertiles as compared to the first tertile of

vitamin B₁₂ intake (RR_{Q5 vs. Q1} = 0.62, 95% CI = 0.47-0.81, P_{trend} = 0.02 for 11.6 µg/day vitamin B₁₂ intake; RR_{Q5 vs. Q1} = 0.73, 95% CI = 0.56-0.97, P_{trend} = 0.01 for 6.7µg/day vitamin B₁₂ intake; RR_{Q5 vs. Q1} = 0.92, 95% CI = 0.70-1.20, P_{trend} = 0.44 for 4.2 µg/day vitamin B₁₂ intake), although the test for interaction did not yield statistically significant results (P_{interactions} = 0.28). There was no evidence to support effect modification by Vitamin B₂ intake (Lajous, M. et al., 2006 , BRE80135).

5.5.0 Multivitamin supplements

Global Report, 2007

No association was found in the ACS Cancer Prevention II (Feigelson, H. S. et al., 2003 , BRE02720), nor in the Nurses' Health Study (Hunter, D. J. et al., 1993 , BRE04168;Zhang, S. et al., 1999 , BRE13953). CLUE I Study Cohort (Wu, K. et al., 1999 , BRE13618) reported RRs of 0.77 (95% CI = 0.42-1.43) and 1.25 (95% CI = 0.67-2.36) when comparing multivitamin never users with ever users in the 1974 cohort and 1989 cohort, respectively.

Update

The relative risk of postmenopausal breast cancer was 1.18 (95% CI = 0.95-1.48) in ever users of multivitamin supplements compared to never users in the PLCO Cancer Screening Trial Cohort, USA (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) (691 cases). The Malmo Diet and Cancer study reported a non-significant decreased risk in postmenopausal breast cancer in multivitamin supplements users compared to non-users (OR = 0.80, 95% CI = 0.57-1.12) (Wirfalt, E. et al., 2005 , BRE11111) (237 cases).

5.5.10 Vitamin D

Global Report, 2007

Dietary vitamin D

There were four studies identified in the SLR. The Nurses' Health Study (Nurses' Health Study) (Shin, M. H. et al., 2002 , BRE16658) gave adjusted RRs of 0.84 (95% CI = 0.59-1.18) and 0.86 (95% CI = 0.70-1.05) for pre- and postmenopausal breast cancer. The NBSS study (Simard, A. V. 1991 , BRE18039) also reported results on dietary vitamin D but risk estimate was not provided. In the NHANES I cohort, they reported an adjusted RR (>=200 IU vs. <100 IU) of 0.85 (95% CI = 0.59-1.24) (John, E. M. et al., 1999 , BRE04433). The CPS II Nutrition Cohort gave an adjusted RR (>300 IU/day vs. <=100 IU/day) of 0.95 (95% CI = 0.81-1.13) (McCullough, M. L. et al., 2005 , BRE23368).

Vitamin D from diet or/and supplements or total vitamin D

Three prospective studies had been identified in the SLR. The CPS-II US cohort (McCullough, M. L. et al., 2005 , BRE23368) investigated total vitamin D (dietary plus multivitamins) and gave an adjusted RR (comparing >700 IU/day vs. <=100 IU/day) of 0.95 (95% CI = 0.81-1.13). The Nurses' Health Study cohort reported RRs (>500 vs. <=150 IU/day) of 0.89 (95% CI = 0.68-1.15) and 0.93 (95% CI = 0.80-1.08) for pre- and postmenopausal breast cancer (Shin, M. H. et al., 2002 , BRE16658). In the NHANES I

cohort (John, E. M. et al., 1999 , BRE04433), they observed an adjusted RR (≥ 200 IU or daily supplements vs. < 100 IU without daily supplements) of 0.86 (95% CI = 0.61-1.20).

Vitamin D from supplements

Vitamin D from supplements was not related to invasive breast cancer in the NHANES I (John, E. M. et al., 2003 , BRE04434).

Blood 1,25-dihydroxyvitamin D

The Nurses' Health Study cohort investigated plasma 25(OH)D and 1,25(OH)₂D and breast cancer risk. They reported adjusted RRs of 0.73 (95% CI = 0.49-1.07; $P_{\text{trend}} = 0.06$) and 0.76 (95% CI = 0.47-1.21; $P_{\text{trend}} = 0.28$) (Bertone-Johnson, E. R. et al., 2005 , BRE21759).

Update

Two prospective studies and one case-control study nested within a cohort were identified during the update period (Lin, J. et al., 2007 , BRE80165; Robien, K. et al., 2007 , BRE80130; McCullough, M. L. et al., 2007 , BRE20022).

Dietary vitamin D

The Women's Health Study (Lin, J. et al., 2007 , BRE80165) (1019 cases) observed no association between dietary vitamin D and premenopausal breast cancer risk ($RR_{Q5 \text{ vs. } Q1} = 1.02$, 95% CI = 0.69-1.53) but found a non-significant increased risk among postmenopausal women ($RR_{Q5 \text{ vs. } Q1} = 1.22$, 95% CI = 0.95-1.55; $P_{\text{trend}} = 0.09$). Whereas in the Iowa Women's Health Study (Robien, K. et al., 2007 , BRE80130) (2440 postmenopausal cases), it gave an adjusted RR of 0.55 (≥ 800 vs. < 400 IU/day) (95% CI = 0.24-1.22).

Gene-diet interactions

The CPS II Nutrition Cohort reported no effect modification with dietary vitamin D in the associations between polymorphisms of the VDR (vitamin D receptor) genes (*FokI*, *TaqI*, *ApaI*, *BsmI*, Poly(A) tail SNPs) and risk of postmenopausal breast cancer (McCullough, M. L. et al., 2007 , BRE20022).

Vitamin D from diet and supplements or total vitamin D

In the Women's Health Study (Lin, J. et al., 2007 , BRE80165), they reported a borderline significant inverse association between vitamin D from diet and supplements and premenopausal breast cancer (276 cases) ($RR_{Q5 \text{ vs. } Q1} = 0.65$, 95% CI = 0.42-1.00, $P_{\text{trend}} = 0.07$) and a non-significant increased risk in postmenopausal women (743 cases) ($RR_{Q5 \text{ vs. } Q1} = 1.30$, 95% CI = 0.97-1.73). In addition, an inverse association was observed between total vitamin D and risk of estrogen receptor positive (ER+) and progesterone receptor positive (PR+) breast cancer ($RR_{\geq 548 \text{ vs. } < 162 \text{ IU/day}} = 0.53$, 95% CI = 0.31-0.88, $P_{\text{trend}} = 0.03$; $RR_{\geq 548 \text{ vs. } < 162 \text{ IU/day}} = 0.55$, 95% CI = 0.32-0.94, $P_{\text{trend}} = 0.04$, respectively).

Whereas in the Iowa Women's Health Study (Robien, K. et al., 2007 , BRE80130) (2440 postmenopausal cases), the adjusted RR of breast cancer for women consuming > 800 IU/day vs. < 400 IU/day total vitamin D was 0.89 (95% CI = 0.77-1.03). RRs were stronger among women with negative (ER-PR- subgroup $RR = 0.77$, 95% CI = 0.48-1.25) than positive ER or

PR status. In addition, the association of high vitamin D intake with breast cancer was strongest in the first 5 years after baseline dietary assessment (RR = 0.66, 95% CI = 0.46-0.94 compared with lowest intake group).

Vitamin D from supplements

In the Women's Health Study (Lin, J. et al., 2007 , BRE80165), it showed non-significant inverse associations in both pre and postmenopausal breast cancer (RR = 0.78, 95% CI = 0.50-1.17 and 0.87, 95% CI = 0.68-1.12, respectively). The Iowa Women's Health Study observed a small non-significant inverse association (RR = 0.89; 95% CI = 0.74-1.08).

Blood 1,25-dihydroxyvitamin D

No new study was found during the update.

Published meta-analysis

Vitamin D intake (total intake from foods and supplements combined) was not related to breast cancer risk in a meta-analysis including five cohort studies and one case-control study (RR_{high versus low} = 0.98, 95% CI = 0.93-1.03; P_{heterogeneity} = 0.01) (Gissel, T. et al., 2008; Phipps, A. I. et al., 2008). However, most studies reported on very low intakes of vitamin D (typically in the range 100-400 IU/day). The analysis was then restricted to intakes of ≥ 400 IU/day and this yielded a more homogenous result with a trend towards less breast cancer ≥ 400 IU/day vs. the lowest intake (typically < 50 -150 IU/day), RR = 0.92, 95% CI = 0.87-0.97, P_{heterogeneity} = 0.14, three studies. For studies with a vitamin D intake < 400 IU/day, the RR was 1.01 (95% CI = 0.94-1.07, P_{heterogeneity} 0.01, six studies with data).

5.5.3 Folate

Global Report, 2007

Folate intake was not significantly associated with breast cancer in premenopausal women in the Nurses' Health Study II (Cho, E. et al., 2003 , BRE01652); and in postmenopausal women in the ACS Cancer Prevention Study II (Feigelson, H. S. et al., 2003 , BRE02720); in the Iowa Cohort Study (Sellers, T. A. G. 2004 , BRE18027), in which however, there was a significant protective association for women with family history of BC; and in the Malmo Diet and Cancer cohort (Mattisson, I. W. 2004 , BRE17807). Two studies found a significant protective association confined to women consuming over 14-15 g of alcohol per day (Rohan, T. E. J. 2000 , BRE17968; Zhang, S. et al., 1999 , BRE13954).

Four studies on postmenopausal breast cancer were included in the meta-analysis (Feigelson, H. S. et al., 2003 , BRE02720; Mattisson, I. W. 2004 , BRE17807; Rohan, T. E. J. 2000 , BRE17968; Sellers, T. A. G. 2004 , BRE18027), with a non-significant overall estimate RR = 0.90 (95% CI = 0.59-1.39) per 1mg/day, with no significant heterogeneity.

Update

Five new reports examined folate intake and breast cancer: the French EPIC-E3N study (Lajous, M. et al., 2006 , BRE80135) (1812 cases), the Diet, Cancer and Health Study, Denmark (Tjonneland, A. et al., 2006 , BRE80104) (388 cases), the PLCO Cancer Screening Trial cohort (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) (700 cases), the Nurses'

Health Study II [Cho, 2007 3763 /id] (1032 cases) and the Malmo Diet and Cancer Study (392 cases). The PLCO Cancer Screening Trial cohort, the Nurses' Health Study II and the Malmo Diet and Cancer Study have published before and were included in the Global Report (Cho, E. et al., 2003 , BRE01652;Mattisson, I. W. 2004 , BRE17807;Stolzenberg-Solomon, R. Z. et al., 2004 , BRE18746). Of these five reports, four provided data on postmenopausal breast cancer (Ericson, U. et al., 2007 , BRE80128;Lajous, M. et al., 2006 , BRE80135;Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113;Tjonneland, A. et al., 2006 , BRE80104), one reported on premenopausal breast cancer [Cho, 2007 3763 /id] and none reported on breast cancer with menopausal age unspecified.

Premenopause

Folate from foods and supplements were not related to premenopausal breast cancer in the Nurses' Health Study II [Cho, 2007 3763 /id] (1032 cases, $RR_{822 \text{ vs. } 237 \text{mcg/day}} = 1.09$ (95% CI = 0.88-1.34)). The associations were similar across levels of alcohol intake and in the subgroup of women with ER- breast cancer.

Postmenopause

In total seven reports had been included in the highest versus lowest forest plot. The 2007 Malmo Diet and Cancer Study report (Ericson, U. et al., 2007 , BRE80128) was included in the analysis and replaced the one in 2004 (Mattisson, I. W. 2004 , BRE17807) as it is more recent, had longer follow-up and provided risk estimates and 95% confidence intervals. Dietary folate was significantly inversely related to postmenopausal breast cancer only in one of the three cohort studies identified during the update (Fig FO1). In the French EPIC-E3N study (Lajous, M. et al., 2006 , BRE80135) (1812 cases) the $RR_{522 \text{ vs } 296 \text{ mcg/day}}$ was 0.78(95% CI = 0.67-0.90). In the Diet, Cancer and Health Study, Denmark (Tjonneland, A. et al., 2006 , BRE80104) (388 cases) the $RR_{>400 \text{ vs } <=250}$ was 0.80 (95% CI= 0.37-1.69); in the PLCO Cancer Screening Trial cohort (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) (700 cases) the $RR_{>412.0 \text{ vs } <261.3} = 1.04$ (95% CI = 0.83-1.31).

Folate from supplement was related to an increased risk of breast cancer in the PLCO Cancer Screening Trial cohort (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) (700 cases) ($RR_{>400 \text{ vs none}} = 1.19$, 95% CI = 1.01-1.41), but it was not related to breast cancer in the Diet, Cancer and Health Study ($RR_{>100 \text{ vs none}} = 0.74$, 95% CI = 0.47-1.17), where the highest category of intake was one fourth of the highest intake in the American cohort.

The results for total intake of folate from foods and supplements are inconsistent. In the PLCO Cancer Screening Trial cohort (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) (700 cases) high consumers were at increased risk ($RR_{>853.1 \text{ vs } <335.5} = 1.32$, 95% CI = 1.04-1.68). The increased risk was attributable to supplement use. In the Diet, Cancer and Health Study, Denmark (Tjonneland, A. et al., 2006 , BRE80104) (388 cases) the $RR_{>400 \text{ vs } <=300}$ was 0.80 (95% CI = 0.37-1.69).

Published meta-analysis

In a meta-analysis of studies published in any language from 1st January, 1966, through 1st November, 2006 folate intake in increments of 200 mg/day was not associated with the risk of breast cancer in prospective studies. For dietary folate, the meta-analysis gave an estimated summary RR of 0.97, 95% CI = 0.88 -1.07 and it included eight studies, 302,959 participants

and 8367 patients with breast cancer. For total folate, estimated summary RR was 1.01 (95% CI = 0.97-1.05) (included six studies; 306,209 participants and 8165 patients with breast cancer). However in case-control studies, it showed a statistically significant inverse association for dietary folate with an estimated summary OR of 0.80 (95% CI = 0.72 to 0.89) (13 studies; 8558 case patients and 10,812 control subjects), and OR of 0.93 (95% CI = 0.81-1.07) for total folate (three studies; 2184 case patients and 3233 control subjects) (Larsson S.C et al., 2007).

High blood folate levels versus low levels were not statistically significantly associated with the risk of breast cancer in prospective studies (OR = 0.81, 95% CI = 0.59-1.10; three studies) or in case-control studies (OR = 0.41, 95% CI = 0.15-1.10; two studies).

Among the two prospective studies and two case-control studies that were stratified by alcohol consumption, high folate intake (comparing the highest with the lowest category) was associated with a statistically significant decreased risk of breast cancer among women with moderate or high alcohol consumption (summary estimate = 0.51, 95% CI = 0.41-0.63) but not among women with low or no alcohol consumption (summary estimate = 0.95, 95% CI = 0.78 - 1.15). Few studies examined whether the relation between folate intake and breast cancer was modified by intakes of methionine or vitamins B6 and B12, and the findings were inconsistent. The meta-analysis did not present separate results on pre- or post- menopausal breast cancer.

Interaction between folate and alcohol on the risk of breast cancer

Five cohort studies, namely the Nurses' Health Study (Zhang, S. et al., 1999 , BRE13954; Zhang, S. M. et al., 2005, BRE24752), the Iowa Women's Health Study (Sellers, T.A et al., 2001; Sellers, T.A et al., 2002; Sellers, T.A et al., 2004, BRE18027), the Melbourne collaborative cohort study (Baglietto, L. et al., 2005 , BRE21669), the Canadian National Breast Screening Study (Rohan T.E et al., 2000, BRE17968) and the Cancer Prevention Study II (Feigelson, H. S. et al., 2003 , BRE02720) had published data on the interactions between folate and alcohol intake on the risk of breast cancer. In addition was the Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) identified during the update.

In the Nurses' Health Study (Zhang, S. et al., 1999 , BRE13954), it showed among women consuming ≥ 15 g/day of alcohol, for total folate intake of at least 600 μ g/day compared with 150-299 μ g/day, the multivariate RR was 0.55 (95% CI = 0.39-0.76; $P_{\text{trend}} = 0.001$). Although women who consumed more folate were likely to have larger intakes of beta carotene, lutein/zeaxanthin, preformed vitamin A, total vitamin C and E, including supplements, the study showed the RR remained the same after adjusting for these variables. This inverse association is also observed among both pre- (RR =0.65; 95% CI = 0.33-1.28) and postmenopausal women (RR = 0.49; 95% CI = 0.33-0.74); however the RR among premenopausal women was not significant. No association was shown between total folate intake and breast cancer risk among women who consumed < 15 g/day of alcohol. When the analysis was stratified by multivitamin supplement use (major source of folate intake), it showed among women who consumed at least 15g/day of alcohol, the multivariate RRs were 0.77 (95% CI = 0.59-0.93) for past multivitamin users and 0.74 (95% CI = 0.59-0.93) for current multivitamin users compared with never users. They could not exclude the possibility that other constituents of multivitamin supplements contribute to lower breast cancer among regular alcohol consumers as the analysis only adjusted for vitamin A, C and E.

Another report of the Nurses' Health Study (Zhang, S. M. et al., 2005, BRE24752) stratified the results by hormone receptor status. The multivariable RRs and 95% CIs of ER- tumors comparing the highest to the lowest quintile of total folate intake were 0.46 (95% CI = 0.25-0.86) among women consuming at least 15 g/d of alcohol and 0.88 (95% CI = 0.71-1.10) among women consuming less than 15 g/d of alcohol.

Results reported by the NBSS (Rohan T.E et al., 2000, BRE17968) on the same association were very similar to those observed by the Nurses' Health Study (Zhang, S. et al., 1999 , BRE13954). This Canadian study reported a protective effect of folate intake among women who consumed > 14g alcohol per day (76 cases) ($IRR_{Q5 \text{ vs } Q1} = 0.34$, 95% CI = 0.18-0.61, $P_{\text{trend}} = 0.004$), and the inverse association remained within subgroups of premenopausal women (22 cases) ($IRR_{Q5 \text{ vs } Q1} = 0.47$, 95% CI = 0.04-6.01, $P_{\text{trend}} = 0.65$) and postmenopausal women (43 cases) ($IRR_{Q5 \text{ vs } Q1} = 0.28$, 95% CI = 0.14-0.55, $P_{\text{trend}} = 0.003$). The same protective effect was not observed in women with ≤ 14 g/day alcohol intake.

Evidence supporting the protective effect of folate among drinkers was also published by the Iowa Women's Health Study (Sellers, T.A et al., 2001). Compared to nondrinkers with high dietary folate intake of >294 $\mu\text{g}/\text{day}$ (432 cases), the RRs of postmenopausal breast cancer associated with low dietary folate intake ($\leq 172 \mu\text{g}/\text{day}$) were 1.33 (95% CI = 0.86-2.05) (35 cases) among drinkers of ≤ 4 g/day and 1.59 (95% CI = 1.05-2.41) among drinkers of >4 g/day (41 cases). The RR was 1.08 (95% CI = 0.78-1.49) (99 cases) among nondrinkers. When stratified by tumour receptor status, the RRs for the comparison of $\leq 251 \mu\text{g}/\text{day}$ total folate and >4g/day alcohol intake versus >351 $\mu\text{g}/\text{day}$ total folate and zero alcohol intake were 2.14 (95% CI = 1.18-3.85), 1.04 (95% CI = 0.76-1.42), 1.22 (95% CI = 0.88-1.70) and 1.18 (95% CI = 0.69-2.02) respectively in ER-, ER+, PR+ and PR- tumours (Sellers, T.A et al., 2002). *Note: Sellers T.A. et al., 2001 and 2002 were not included in the Global Report.*

A further report published by the Iowa Women's Health Study (1823 cases) in 2004 suggested that among women with no family history of breast cancer, low folate was not a risk factor among non-drinkers (RR=0.96, 95% CI = 0.73–1.26), but was among drinkers (RR=1.40, 95% CI = 1.05–1.86). Drinkers with high folate were not at elevated risk (RR=1.03, 95% CI = 0.89–1.19). Among women with family history, low folate was a risk factor among drinkers (RR=2.21, 95% CI = 1.43–3.41) and non-drinkers (RR=2.39, 95% CI = 1.36–4.20). Further, drinkers with high folate remained at increased risk (RR=1.67, 95% CI = 1.30–2.14). However, women with family history and high folate who did not drink alcohol had no elevated risk (Sellers, T. A. G. 2004 , BRE18027).

The Cancer Prevention Study II Nutrition Cohort (Feigelson, H. S. et al., 2003 , BRE02720) (1303 cases) found no evidence of an interaction between levels of dietary folate ($P_{\text{interaction}} = 0.10$) or total folate ($P_{\text{interaction}} = 0.61$) and alcohol.

The Melbourne collaborative cohort study (Baglietto, L. et al., 2005 , BRE21669) found that women who had high alcohol consumption and low intake of folate intake (folic acid = 200 $\mu\text{g}/\text{day}$) had a non-significant increased risk of breast cancer (folic acid = 200 $\mu\text{g}/\text{day}$ RR ≥ 40 g/day alcohol vs. abstainers = 2.00; 95% CI = 1.14-3.49), but those women who had high alcohol consumption and moderate to high levels of folate intake had no increased risk. However among those who consumed 400 μg of folate per day and also consumed high levels of alcohol (≥ 40 g/day), the multivariate RR was 0.77 (95% CI = 0.33-1.80) compared with abstainers.

Alcohol consumption did not significantly modify the association of any of the folate variables (folate from food/supplements/natural folate in foods) in the PLCO cohort (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) (691 cases); however, total folate intake qualitatively modified the association with alcohol intake. The greater risk with greater alcohol intake tended to be stronger in postmenopausal women with low total folate intake ($\leq 335.5 \mu\text{g}/\text{day}$); those in the highest quintile of alcohol use had a risk of breast cancer about twice that of those in the lowest quintile ($\text{RR}_{\text{alcohol intake } >7.61 \text{ g/day vs. } \leq 0.01 \text{ g/day}} = 2.10$; 95% CI = 1.08-4.07; $P_{\text{trend}} = 0.004$).

Interactions between folate and B vitamins on the risk of breast cancer

The E3N EPIC-French study reported stronger inverse associations of folate intake and postmenopausal breast cancer in the two highest tertiles as compared to the first tertile of vitamin B₁₂ intake ($\text{RR}_{\text{Q5 vs. Q1}} = 0.62$, 95% CI = 0.47-0.81, $P_{\text{trend}} = 0.02$ for 11.6 $\mu\text{g}/\text{day}$ vitamin B₁₂ intake; $\text{RR}_{\text{Q5 vs. Q1}} = 0.73$, 95% CI = 0.56-0.97, $P_{\text{trend}} = 0.01$ for 6.7 $\mu\text{g}/\text{day}$ vitamin B₁₂ intake; $\text{RR}_{\text{Q5 vs. Q1}} = 0.92$, 95% CI = 0.70-1.20, $P_{\text{trend}} = 0.44$ for 4.2 $\mu\text{g}/\text{day}$ vitamin B₁₂ intake), although the test for interaction did not yield statistically significant results ($P_{\text{interactions}} = 0.28$). There was no evidence to support effect modification by Vitamin B₂ intake (Lajous, M. et al., 2006 , BRE80135).

Food fortification with folate

In the US, the Food and Drug Administration now requires mandatory fortification of grain products with folic acid (140 μg folic acid/100g grain products), which is estimated to increase average folate intake by about 100 $\mu\text{g}/\text{day}$. Whereas in Australia, more than 100 foods have been approved for fortification with folate since 1995 and changes in serum folate concentration following the voluntary fortification have been shown to be very small.

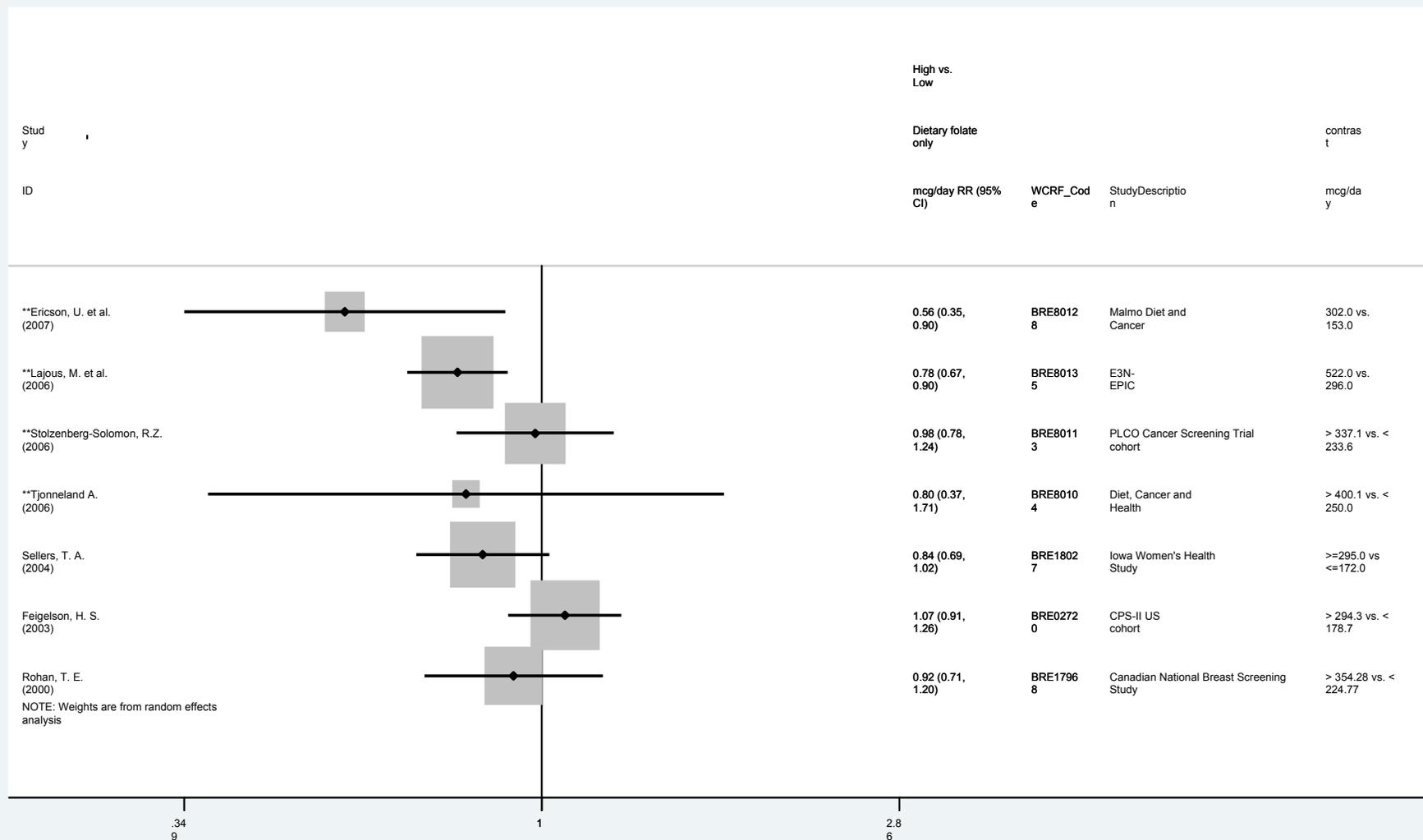
The PLCO cohort (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) examined the relationship between total folate intake (foods and supplements combined)/folate from foods/supplemental folic acid intake/ natural folate in foods (such as green vegetables and oranges) and the risk of breast cancer among postmenopausal women (691 cases). They also looked at both prefortification and postfortification period. Unfortunately, they showed only results using the prefortification folate values as most of their population's exposure occurred before fortification in 1998. In women who remained in the cohort after 1997 and thus were exposed to and using postfortification folic acid concentrations (592 cases), food folate was not positively associated with breast cancer; whereas total folate was positively but marginally not significantly associated ($\text{RR}_{\text{highest vs. lowest quintile}} = 1.29$; 95% CI = 0.99-1.68; $P_{\text{trend}} = 0.22$) In addition, an increased intake of fortified cereal (100% RDA fortified) was shown to be associated with an increased risk ($\text{RR}_{>0.64 \text{ vs. } 0\text{g}} = 1.66$; 95% CI = 0.90-3.06; $P_{\text{trend}} = 0.04$).

Stolzenberg-Solomon (Stolzenberg-Solomon, R. Z. et al., 2006 , BRE80113) stated that the postmenopausal women from the PLCO trial have considerably higher total folate intake (median intake: 660 $\mu\text{g}/\text{d}$) than do other cohorts (about 300-500 $\mu\text{g}/\text{d}$), particularly from folic acid which is the more biologically available form. Therefore, their population may have not had sufficiently low folate range to allow the observation of protective associations if they exist.

Dietary folate equivalent (DFE)

Dietary folate equivalents (DFEs) were calculated in the Malmo Diet and Cancer cohort (Ericson, U. et al., 2007 , BRE80128) and the EURAMIC Berlin study (case-control study) (Thorand, B. et al., 1998 , BRE12297) and DFEs were based on the assumption that the bioavailability of synthetic folic acid consumed in a meal is 1.7 times the bioavailability of food folate, i.e. $DFEs = \mu g \text{ food folate} + 1.7 \times \mu g \text{ folic acid from supplements}$. However, the majority of the studies combined folic acid and folate as total folate intake and that could be a substantial limitation.

xii. Fig FO1 Highest versus lowest forest plot on dietary folate only and postmenopausal breast cancer (=new studies identified during the update)**



5.6.2. Iron

Global Report, 2007

No cohort study on iron and breast cancer was identified. The meta-analysis of five case-control studies gave a combined RR of 0.92 (95% CI = 0.84-0.99) for a daily intake of 5mg, suggesting a protective effect.

Update

The relationship of iron intake (total dietary iron intake, iron from meat and heme iron) with breast cancer risk was examined in the Canadian National Breast Screening Study (Kabat, G. C. et al., 2007 , BRE80138). None of the results was statistically significant.

For total dietary iron, the $RR_{>14.99 \text{ vs} <11.89 \text{ mg/day}}$ was 1.07 (95% CI = 0.89-1.30) in premenopausal women (1171 cases) and 0.87 (95% CI = 0.71-1.06) (993 cases) in postmenopausal women.

For iron from meat (heme and nonheme iron from 22 meat items and 2 mixed dishes containing meat), the $RR_{>6.11 \text{ vs} <3.3 \text{ mg/day}}$ was 1.13 (95% CI = 0.93-1.37) in premenopausal women (1171 cases) and 1.03 (95% CI = 0.83-1.27) (993 cases) in postmenopausal women.

For heme iron (computed by using different proportions for heme iron from different types of meat: 69% for beef; 39% for pork, ham, bacon, pork-based luncheon meats, and veal; 26% for chicken and fish; and 21% for liver), the $RR_{>2.95 \text{ vs} <1.57 \text{ mg/day}}$ was 1.03 (95% CI = 0.84-1.25) in premenopausal women (1171 cases) and 0.97 (95% CI = 0.98-1.20) in postmenopausal women (993 cases).

Iron from breast cancer tissue was investigated in high risk population in a case-control nested in the cohort of the Kaiser Permanente Centre (Cui, Y. et al., 2007 , BRE80149) (248 cases). Breast cancer risk was positively related to iron levels in breast tissue. The $RR_{Q5 \text{ vs} Q1}$ was 1.56 (95% CI = 1.01-2.41); $P_{\text{trend}} = 0.08$. In the subgroup of postmenopausal women the RR was 2.77 (95% CI = 1.25-6.13); $P_{\text{trend}} = 0.008$.

5.6.3 Calcium

Global Report, 2007

A meta-analysis of two studies on postmenopausal breast cancer showed no significant association ($RR_{\text{for } 300 \text{ mg increase}}$ was 0.98, 95% CI = 0.96-1.01) (McCullough, M. L. et al., 2005 , BRE23368; Shin, M. H. et al., 2002 , BRE16658). In addition to these results, the Finnish cohort that was not included in the meta-analysis reported an inverse association of calcium intake with breast cancer (Jarvinen, R. et al., 1997 , BRE04383). An inverse significant association was also observed in the premenopausal women in the Nurses' Health Study (Shin, M. H. et al., 2002 , BRE16658).

Update

Five new studies in relation to calcium were identified during the update, including the SUVIMAX study (Kesse-Guyot, E. et al., 2007 , BRE11112), Kaiser Permanente Northwest study (Cui, Y. et al., 2007 , BRE80149), Malmo Diet and Cancer study (Almquist, M. et al.,

2007 , BRE80007) and the Women's Health Study (Lin, J. et al., 2007 , BRE80165) and the Boyd Orr Cohort (van der Pols, J. C. et al., 2007 , BRE80154). In addition, the CPS II Nutrition Cohort had also produced a new report (McCullough, M. L. et al., 2007 , BRE20022).

Calcium from diet and/or supplements or total calcium

A protective effect of dietary calcium was observed in the SUVIMAX study (Kesse-Guyot, E. et al., 2007 , BRE11112) (92 cases) The RR $_{>1145 \text{ vs } <806 \text{ mg/day}}$ was 0.50 (95% CI = 0.27- 0.91). The protective effect was both explained by calcium from dairy $_{RR >734 \text{ vs. } <421 \text{ mg/day}}$ = 0.58 (95% CI = 0.32-1.04) and non-dairy sources (RR $_{>452 \text{ vs. } <307 \text{ mg/day}}$ = 0.76, 95% CI = 0.42- 1.36).

In the Women's Health Study (Lin, J. et al., 2007 , BRE80165), a high intake of total calcium was associated with a lower risk of premenopausal breast cancer and the point estimate was statistically significant (RR $_{>=1366 \text{ vs } <617 \text{ mg/day}}$ = 0.61, 95% CI = 0.40-0.92). However, the results for postmenopausal women did not show any association between total calcium (also calcium from diet and calcium supplement) and breast cancer. Separate analysis of calcium intake from diet or from supplements showed a non-significant inverse association with premenopausal breast cancer. They also examined the relationship between total calcium and breast cancer by hormone receptor status but no association was found.

In the Boyd Orr Cohort from the United Kingdom (van der Pols, J. C. et al., 2007 , BRE80154), dietary calcium intake during childhood was not related to breast cancer risk in adulthood.

Gene-diet interactions

The CPS II Nutrition Cohort reported postmenopausal women with the *Bsm1 bb* SNP in their VDR (vitamin D receptor) gene and consumed greater than the median intake of total calcium (≥ 902 mg/day) had lower odds of breast cancer compared to women with the *Bb* or *BB* genotype and less than the median intake (OR = 0.61, 95% CI = 0.38-0.96, $P_{\text{interaction}} = 0.01$). Effect modifications with total calcium were also observed in *TaqI TT* and the poly(a) LL tail (McCullough, M. L. et al., 2007 , BRE20022).

Calcium level in tissue

A positive non-significant association was observed between calcium in breast tissue and breast cancer risk in a study in the Kaiser Permanente Northwest (Cui, Y. et al., 2007 , BRE80149) (248 cases) (RR $_{Q5 \text{ vs } Q1} = 1.44$, 95% CI = 0.96-2.14).

Calcium level in blood

Serum calcium levels were inversely but not significantly related to breast cancer in a study in the Malmo Preventive Project, Sweden (Almquist, M. et al., 2007 , BRE80007) with 437 cases. The RR $_{<2.28 \text{ vs } >2.41 \text{ mmol/liter}}$ was 0.89 (95% CI = 0.67-1.19). An inverse association was observed in women with BMI $< 25 \text{ kg/m}^2$ (261 cases; RR $_{<2.28 \text{ vs } >2.41 \text{ mmol/liter}}$ = 0.82, 95% CI = 0.56-2.28) but not in women with BMI $\geq 25 \text{ kg/m}^2$ (176 cases; RR $_{<2.28 \text{ vs } >2.41 \text{ mmol/liter}}$ = 1.09, 95% CI = 0.68-1.74).

Due to the differences between the exposures, neither dose-response meta-analysis nor highest versus lowest forest plot are generated.

5.6.4 Selenium

Global Report, 2007

Breast cancer was not related to blood levels of selenium (Criqui, M. H. et al., 1991 , BRE01946;Dorgan, J. F. et al., 1998 , BRE14889;Overvad, K. W. 1991 , BRE17893) or selenium in nail (Hunter, D. J. et al., 1990 , BRE04166;van den Brandt, P. A. et al., 1994 , BRE12721;van Noord, P. A. et al., 1987 , BRE12755;Van Noord, P. A. H. et al., 1993 , BRE16938).

Update

Intake of selenium was not related to postmenopausal breast cancer in a case-control study nested in the Diet, Cancer and Health study, Denmark (Ravn-Haren, G. et al., 2006 , BRE80151) (377 cases). The RR for 10 mg increase of intake of selenium was 1.01 (95% CI = 0.97-1.06).

Selenium in breast tissue was not related to breast cancer risk in a study in the Kaiser Permanente Northwest, USA (Cui, Y. et al., 2007 , BRE80149) (248 cases). The RR_{Q5 vs Q1} was 1.06 (95 % CI = 0.7-1.62).

5.6.7 Zinc

Global Report, 2007

No cohort study was identified. Significant protection was found in a German hospital based case-control study (Adzersen, K. H. et al., 2003 , BRE00180) and a significantly increased risk was observed in a Swiss hospital based case-control study (Levi, F. P. 2001 , BRE17747).

Update

Zinc in breast tissue was not related to breast cancer risk in a study in the Kaiser Permanente Northwest, USA (Cui, Y. et al., 2007 , BRE80149) (248 cases) (RR_{Q5 vs. Q1}=1.32 (95% CI = 0.89-1.98).

No study on zinc levels in breast tissue was identified during the SLR.

5.7.5 Phytoestrogens

Global Report, 2007

Dietary phytoestrogens

Only three cohort studies – the EPIC-Utrecht (Keinan-Boker, L. et al., 2004 , BRE04713), the California teachers cohort (Horn-Ross, P. L. et al., 2002 , BRE15412) and the JPHC study (Yamamoto, S. et al., 2003 , BRE17122) had reported dietary phytoestrogen data.

Menopause age unspecified

In the California teachers cohort (Horn-Ross, P. L. et al., 2002 , BRE15412), no association was observed with intake of genistein, daidzein, biochanin A, formononetin, coumestrol, matairesinol or secoisolariciresinol.

Premenopause

A statistically non-significant inverse association with dietary isoflavone in the premenopausal women was reported by the JPHC study ($RR_{\text{for } \geq 25 \text{ vs. } < 6.9 \text{ mg/day}} = 0.66$, 95% CI = 0.25-1.7, $P_{\text{trend}} = 0.97$) (Yamamoto, S. et al., 2003 , BRE17122).

Postmenopause

The statistically significant protective effect of dietary isoflavone remained among the postmenopausal Japanese women in the JPHC study ($RR_{\text{for } \geq 25 \text{ vs. } < 6.9 \text{ mg/day}} = 0.32$, 95% CI 0.14-0.71, $P_{\text{trend}} = 0.006$) (Yamamoto, S. et al., 2003 , BRE17122).

The dose-response meta-analysis of the JPHC study (Yamamoto, S. et al., 2003 , BRE17122) and the EPIC-Utrecht study from the Netherlands (Keinan-Boker, L. et al., 2004 , BRE04713) showed a borderline significant decreased risk with dietary isoflavone (summary $RR_{\text{for } 1 \text{ mg/day}} = 0.97$, 95% CI = 0.95-1.00), but the result was contributed mostly by the significant effect observed in the Japanese study (weight = 99.8%).

The Netherlands study also observed a statistically non-significant decreased risk with lignans (matairesinol and secoisolariciresinol) ($RR_{\text{for } 0.77 \text{ vs. } 0.59 \text{ mg/day}} = 0.7$, 95% CI = 0.46-1.09) (Keinan-Boker, L. et al., 2004 , BRE04713).

Biomarkers – serum and urinary phytoestrogen

Six cohorts had investigated phytoestrogens using biomarkers – the New York Women's Health Study (Zeleniuch-Jacquotte, A. et al., 2004 , BRE13929), the EPIC-Norfolk (Grace, Philip et al., 2004 , BRE19680), the Danish Diet, Cancer and Health study (another component of the EPIC study) (Olsen, A. et al., 2004 , BRE80170), the Dom project from Utrecht (Den Tonkelaar, I. et al., 2001 , BRE14840), one Finnish cohort (Kilkinen, A. V. 2004 , BRE17698) and one Italian cohort (Boccardo, F. et al., 2004 , BRE05549). In addition, a pooling study was performed using data from the Västerbotten Intervention Project, the Monitoring of Trends and Cardiovascular Disease study and the Mammary Screening Project (Hulten, K. et al., 2002 , BRE04156).

Breast cancer was not associated with serum levels of phytoestrogens in a Finnish study nor in a New York study, neither in pre- nor in postmenopausal women (Kilkinen, A. V. 2004 , BRE17698; Zeleniuch-Jacquotte, A. et al., 2004 , BRE13929).

Plasma enterolactone was investigated in the Diet, Cancer and Health study, Denmark (Olsen, A. et al., 2004 , BRE80170). No association was observed with postmenopausal breast cancer and ER+ cancers. The study showed a protective effect of plasma enterolactone in ER– breast cancers. While the Swedish study that pooled together data from 3 cohort studies found a significant positive association with plasma enterolactone ($RR_{\text{for } 39.1-143.5 \text{ vs. } 10.2-27.39 \text{ } \mu\text{mol/L}} = 1.8$, 95% CI = 1.4-4.3) (Hulten, K. et al., 2002 , BRE04156).

In the EPIC Norfolk cohort (Grace, Philip et al., 2004 , BRE19680) significant positive associations were observed with serum and urine levels of equol and with serum daidzen levels. No significant associations were observed with both serum and urine levels of O-DMA, genistein, glycitein, enterodiol and enterolactone and with urinary daidzein. Serum enterolactone was inversely related to breast cancer in women with breast cyst disease in the same cohort (Boccardo, F. et al., 2004 , BRE05549).

In the DOM Dutch cohort, urinary excretion of genistein and enterolactone were not related to postmenopausal breast cancer risk (Den Tonkelaar, I. et al., 2001 , BRE14840).

Update

Dietary phytoestrogens

Two cohort studies had published three reports on dietary phytoestrogen during the update. Both are component cohorts of the EPIC study – the Oxford centre (Travis, R. C. et al., 2007 , BRE80141) and the centre from France (Touillaud, M. S. et al., 2007 , BRE80015; Touillaud, M. S. et al., 2006 , BRE80111).

Menopause age unspecified

The EPIC – Oxford study found no evidence for a strong association with dietary isoflavone ($RR_{\text{for } \geq 20 \text{ vs. } < 10 \text{ mg/day}} = 1.10$ (95% CI = 0.75-1.61) (Travis, R. C. et al., 2007 , BRE80141).

Premenopause

There was no evidence of an association between dietary intake of phytoestrogens and risk of premenopausal breast cancer in the French EPIC-E3N study (Touillaud, M. S. et al., 2006 , BRE80111). The relative risks for the highest vs. the lowest quartile of intake were 1.00 (95% CI = 0.76-1.31) for total isoflavones (sum of individual isoflavones, lignans and enterolignans); 1.22 (95% CI = 0.89-1.66) for coumestrol, 1.07 (95% CI = 0.81-1.41) and 0.94 (95% CI = 0.71-1.24) for total enterolignans. The EPIC-Oxford study also reported no association with dietary isoflavone in the premenopausal women ($RR_{\text{for } \geq 10 \text{ vs. } < 10 \text{ mg/day}} = 1.31$, 95% CI = 0.95-1.81) (Travis, R. C. et al., 2007 , BRE80141).

Postmenopause

The EPIC-Oxford study reported no association with dietary isoflavone in postmenopausal women ($RR_{\text{for } \geq 10 \text{ vs. } < 10 \text{ mg/day}} = 0.95$, 95% CI = 0.66-1.38) and HRT non-users ($RR_{\text{for } \geq 10 \text{ vs. } < 10 \text{ mg/day}} = 1.16$, 95% CI = 0.92-1.48) (Travis, R. C. et al., 2007 , BRE80141).

The dietary intake of four plant lignans (pinoresinol, lariciresinol, secoisolariciresinol, and matairesinol) and two enterolignans (enterodiol and enterolactone) estimated through dietary questionnaires was examined in relation to postmenopausal breast cancer in the French EPIC-E3N study (Touillaud, M. S. et al., 2007 , BRE80015). Total plant lignans were inversely related to postmenopausal breast cancer ($RR_{>1395 \text{ vs. } <878 \text{ } \mu\text{g/day}} = 0.83$ (95% CI = 0.71-0.96) $P_{\text{trend}} = 0.02$). Inverse but not significant associations were observed with enterodiol and enterolactone ($P_{\text{trend}} = 0.07$ and 0.08, respectively).

Further analyses stratified by hormone receptor status showed that the inverse associations between phytoestrogen intakes and postmenopausal breast cancer risk were limited to ER- and PR-positive disease (e.g., RR for highest versus lowest quartiles of total plant lignan intake = 0.72, 95% CI = 0.58-0.88, $P_{\text{trend}} = 0.01$, 174 versus 214 cases per 100 000 person-years, and RR for highest versus lowest quartiles of total enterolignan level = 0.77, 95% CI = 0.62-0.95, $P_{\text{trend}} = 0.01$, 164 versus 204 cases per 100 000 person-years).

Biomarkers - plasma phytoestrogens

In the EPIC-Utrecht cohort study (Verheus, M. et al., 2007 , BRE20024) (388 cases), plasma samples were analysed for three isoflavones (daidzein, genistein, and glycitein), two metabolites of daidzein (*O*-DMA and equol), and two mammalian lignans (enterodiol and enterolactone). High genistein circulation levels are associated with reduced breast cancer risk in this Dutch population. The risk estimate for the highest versus the lowest tertile was 0.68 (95% CI = 0.47-0.98). Similar inverse associations, although not statistically significant, were seen for the other isoflavones. No effects of lignans on breast cancer risk were observed. Results were the same in pre- or perimenopausal women, and in postmenopausal women.

6. Physical activity

Global Report, 2007

In the 2007 Global Report, dose-response meta-analysis and highest versus lowest forest plot was conducted only on recreational physical activity and postmenopausal breast cancer mainly because of the lack of consistency on exposure definition. The wide variability in the measurement methods of physical activity-related exposures between studies, made it difficult to pool the results together. In this report, we have presented forest plots for four types of physical activities. Below shows a list of the groups of physical activities used and their definitions in the articles:

1. Total physical activity (total PA): variables that include several kinds of activities combined, e.g. combined occupational, recreational and household activities; or combined recreational and household activities; or recreational activity when it includes sitting/walking time, stair climbing and city block walking, since these activities are not considered as recreational activity but more like daily routine physical activities.

Seven studies were retrieved from the SLR database, with six of them measured total physical activity (overall summary measures) (Cerhan, J. R. et al., 1998 , BRE14588;Colditz, G. A. et al., 2003 , BRE01782;Dorgan, J. F. et al., 1994 , BRE02385;Hoyer, A. P. et al., 1998 , BRE15433;Lee, S. Y. K. 2003 , BRE17745;Wyrwich, K. W. and Wolinsky, F. D. 2000 , BRE13664) and one measured recreational physical activity (Margolis, K. L. et al., 2005 , BRE23306) (Women's Lifestyle and Health Study); however, because their measure included daily routine activities such as sitting we had re-classified the exposure as "total physical activity".

2. Recreational physical activity (recreational PA): variables that include physical activity in leisure time.

Twelve studies were retrieved from the SLR database (Albanes, D. et al., 1989 , BRE00236;Colditz, G. A. et al., 2003 , BRE01782;Dirx, M. J. et al., 2001 , BRE02326;Drake,

D. A. 2001 , BRE02418;Lee, I. M. et al., 2001 , BRE15848;Margolis, K. L. et al., 2005 , BRE23306;Mertens, A. J. et al., 2005 , BRE23405;Moore, D. B. et al., 2000 , BRE16124;Patel, A. V. et al., 2003 , BRE16299;Schnohr, P. et al., 2005 , BRE24028;Sesso, H. D. et al., 1998 , BRE16626;Thune, I. et al., 1997 , BRE12313).

3. Occupational physical activity (occupational PA): variables that include work-related physical activity.

Five prospective studies (seven reports) were retrieved from the SLR database (Albanes, D. et al., 1989 , BRE00236;Byrne, C. et al., 1996 , BRE05719;Dirx, M. J. et al., 2001 , BRE02326;Mertens, A. J. et al., 2005 , BRE23405;Moradi, T. et al., 1999 , BRE16127;Steenland, K. et al., 1995 , BRE11742;Thune, I. et al., 1997 , BRE12313). Two of them were the NHANES I (Albanes, D. et al., 1989 , BRE00236;Steenland, K. et al., 1995 , BRE11742) and one was the NHEFS (Byrne, C. et al., 1996 , BRE05719) – a follow up study of the NHANES.

4. Vigorous physical activity (vigorous PA): any type of vigorous activity, e.g. vigorous recreational activity and total vigorous physical/recreational activity.

Nine prospective studies were retrieved from the SLR database (Chang, S. C. et al., 2003 , BRE18295;Dallal, C. M. et al., 2007 , BRE80016;Dorgan, J. F. et al., 1994 , BRE02385;Drake, D. A. 2001 , BRE02418;Lee, I. M. et al., 2001 , BRE15848;McTiernan, A. K. 2003 , BRE17819;Moore, D. B. et al., 2000 , BRE16124;Silvera, S. A. et al., 2006 , BRE24118;Vena, J. E. et al., 1987 , BRE12852). Two of them measured specific types of vigorous physical activity: the ACLS cohort (Drake, D. A. 2001 , BRE02418) assessed vigorous racquet sports and the Washington State Study (Vena, J. E. et al., 1987 , BRE12852) assessed vigorous occupational physical activity. Therefore, both were excluded.

Update

Six prospective cohort studies have been published over the period Jan 2006 and Dec 2007 in relation to physical activity and breast cancer (Bardia, A. et al., 2006 , BRE20028;Chang, S. C. et al., 2006 , BRE80110;Dallal, C. M. et al., 2007 , BRE80016;Ericson, U. et al., 2007 , BRE80128;Lahmann, P. H. et al., 2007 , BRE20026;Tehard, B. et al., 2006 , BRE80108).

Overall, thirty-seven reports on physical activity in relation to breast cancer have been identified during the SLR and the Continuous Update. Fourteen reports are not included in the forest plots due to the following reasons:

- One study that provided RR for a continuous variables (Dorgan, J. F. et al., 1994 , BRE02385).
- Studies that used a specific population, e.g. former college athletes compared to non-athletes (Wyshak, G. and Frisch, R. E. 2000 , BRE13666) or elderly (age 70+) (Wyrwich, K. W. and Wolinsky, F. D. 2000 , BRE13664) or fitness centre members (Drake, D. A. 2001 , BRE02418).
- EPIC component study (Ericson, U. et al., 2007 , BRE80128) also included in the report of the overall EPIC study.
- Two or more studies reported on the same population (Breslow, R. A. et al., 2001 , BRE01123;Cerhan, J. R. et al., 1998 , BRE14588;Steenland, K. et al., 1995 , BRE11742).

- Outcome was cancer mortality (Vena, J. E. et al., 1987 , BRE12852).
- Studies that measured physical activities during different periods of life, e.g. age 14 to 30 (Margolis, K. L. et al., 2005 , BRE23306) or high recreational PA in teens (Frisch, R. E. et al., 1985 , BRE02992;Frisch, R. E. et al., 1987 , BRE02995), which made it hard to compare with other study variables.
- Uncommon exposure – e.g. sitting time index during working hours (Pukkala, E. et al., 1993 , BRE24790;Zheng, W. et al., 1993 , BRE13994).
- Studies that provided a combined variable, for example in the AHS cohort, they measured “exercise” containing information relating to both occupational and leisure/recreational activities. In this case, it is difficult to determine which group this kind of variable should fit in (Fraser, G. E. and Shavlik, D. 1997 , BRE02940).

Postmenopause

Five new studies on physical activity and postmenopausal breast cancer were identified during the update period: Iowa Women’s Health Study (Bardia, A. et al., 2006 , BRE20028), California Teachers Study (Dallal, C. M. et al., 2007 , BRE80016), Malmo Diet and Cancer Study (Ericson, U. et al., 2007 , BRE80128) EPIC Study (Lahmann, P. H. et al., 2007 , BRE20026) and PLCO Cancer Screening Trial Cohort (Chang, S. C. et al., 2006 , BRE80110).

Of those five studies, the Iowa Women’s Health Study provided results for recreational physical activity; the NBSS study provided results for vigorous physical activity; the EPIC study provided results for total physical activity, occupational and recreational physical activity; the PLCO Cancer Screening Trial Cohort provided results for recreational physical activity. The Malmo Diet and Cancer Study was excluded because it is a component study of the EPIC.

Fig P1 shows a high vs. low forest plot on physical activity-related variables and postmenopausal breast cancer.

Total physical activity

The two studies identified (Lahmann, P. H. et al., 2007 , BRE20026;Sesso, H. D. et al., 1998 , BRE16626) reported a significant inverse association between total physical activity and postmenopausal breast cancer (RR = 0.83, 95% CI = 0.73-0.95 and RR = 0.49, 95% CI = 0.28-0.86, respectively).

Vigorous physical activity

Two studies (Moore, D. B. et al., 2000 , BRE16124;Silvera, S. A. et al., 2006 , BRE24118) reported a non-significant inverse association between vigorous physical activity and postmenopausal breast cancer risk. Two studies showed no association (Moore, D. B. et al., 2000 , BRE16124;Silvera, S. A. et al., 2006 , BRE24118).

Occupational activity

Four out of five studies reported a non-significant decreased risk of breast cancer with high levels of occupational activity (Albanes, D. et al., 1989 , BRE00236;Dirx, M. J. et al., 2001 , BRE02326;Mertens, A. J. et al., 2005 , BRE23405;Thune, I. et al., 1997 , BRE12313). However, the EPIC reported a small non-significant increased disease risk (Lahmann, P. H. et al., 2007 , BRE20026).

Recreational activity

Nine studies showed that recreational activity was associated with a decreased risk of breast cancer in postmenopausal women, in which three of them showed significant inverse associations (Chang, S. C. et al., 2006 , BRE80110;Dirx, M. J. et al., 2001 , BRE02326;McTiernan, A. K. 2003 , BRE17819). On the contrary, two studies reported a non-significant increased cancer risk (Mertens, A. J. et al., 2005 , BRE23405;Schnohr, P. et al., 2005 , BRE24028), including the Copenhagen Center for Prospective Studies and the Atherosclerosis risk in communities study.

Premenopause

Total physical activity

The EPIC study was the only prospective cohort study on total physical activity and premenopausal breast cancer identified during the update period (Lahmann, P. H. et al., 2007 , BRE20026). It provided results for total physical activity, occupational physical activity and recreational physical activity.

The results, together with those of the cohort studies retrieved during the SLR are included in a forest plot showing the relative risks of the highest vs. the lowest category of total physical activity, vigorous physical activity, occupational activity, and recreational physical activity. The EPIC study (Lahmann, P. H. et al., 2007 , BRE20026) showed a borderline significant inverse association of total physical activity level with risk of premenopausal breast cancer. Two studies reported no association (Colditz, G. A. et al., 2003 , BRE01782;Lee, S. Y. K. 2003 , BRE17745) and in two studies there was a non-significant increased risk associated with physical activity (Margolis, K. L. et al., 2005 , BRE23306;Sesso, H. D. et al., 1998 , BRE16626). One of these studies was on college alumni (Sesso, H. D. et al., 1998 , BRE16626).

Vigorous physical activity

The NBSS (Silvera, S. A. et al., 2006 , BRE24118) was the only study on vigorous physical activity and premenopausal breast cancer; therefore, high vs. low forest plots are not given.

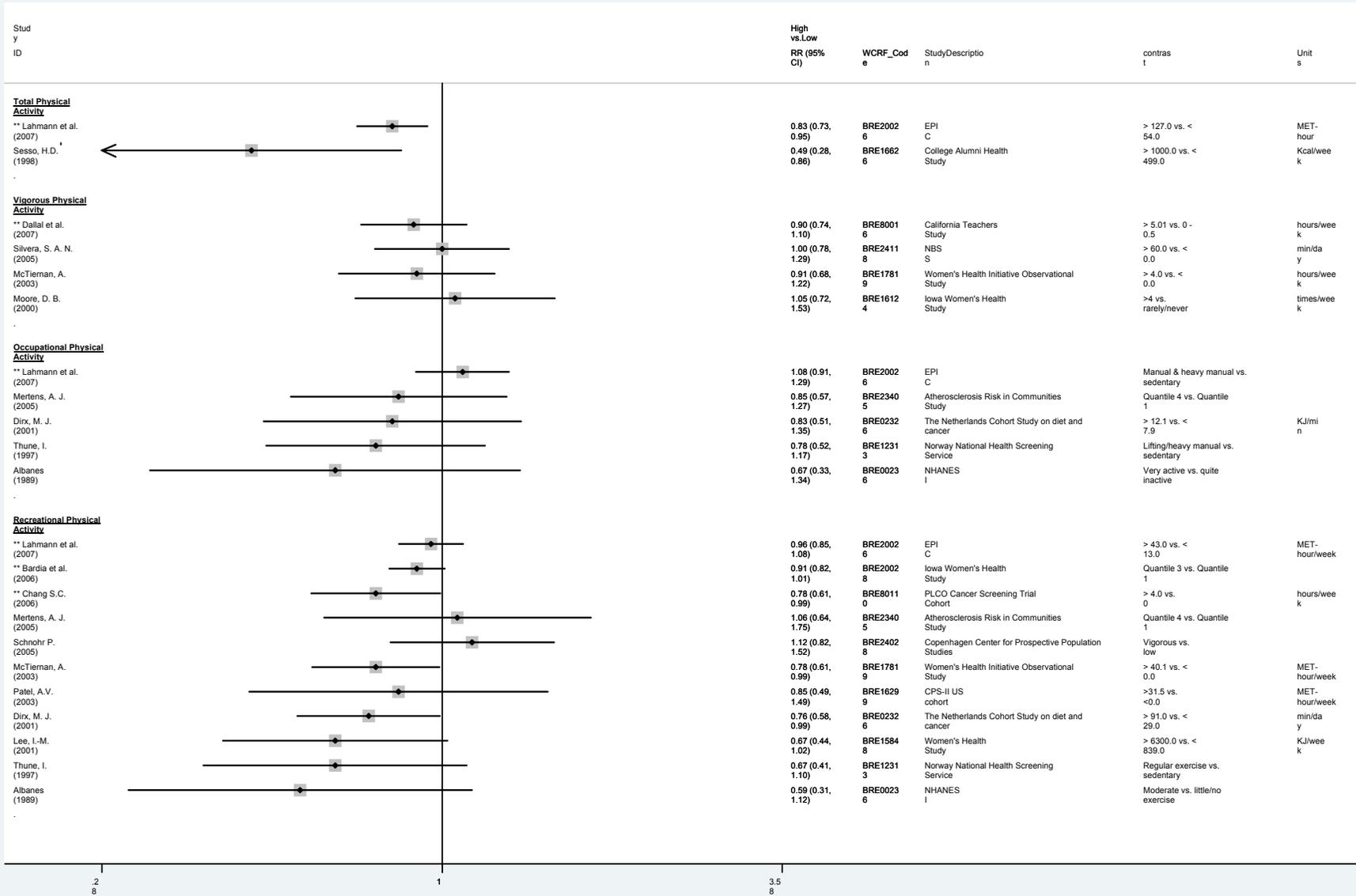
Occupational activity

The Norway National Health Screening Service Study (Thune, I. et al., 1997 , BRE12313) showed that occupational activity was associated with significant decreased risk of cancer in premenopausal women (RR = 0.48, 95%CI = 0.24-0.95). On the other hand, the NHANES I (Albanes, D. et al., 1989 , BRE00236) reported a non-significant positive relationship with very wide confidence intervals (RR = 2.5, 95%CI = 0.59-10.60). The EPIC study and a Swedish cohort (Moradi, T. et al., 1999, BRE16127) both observed no association.

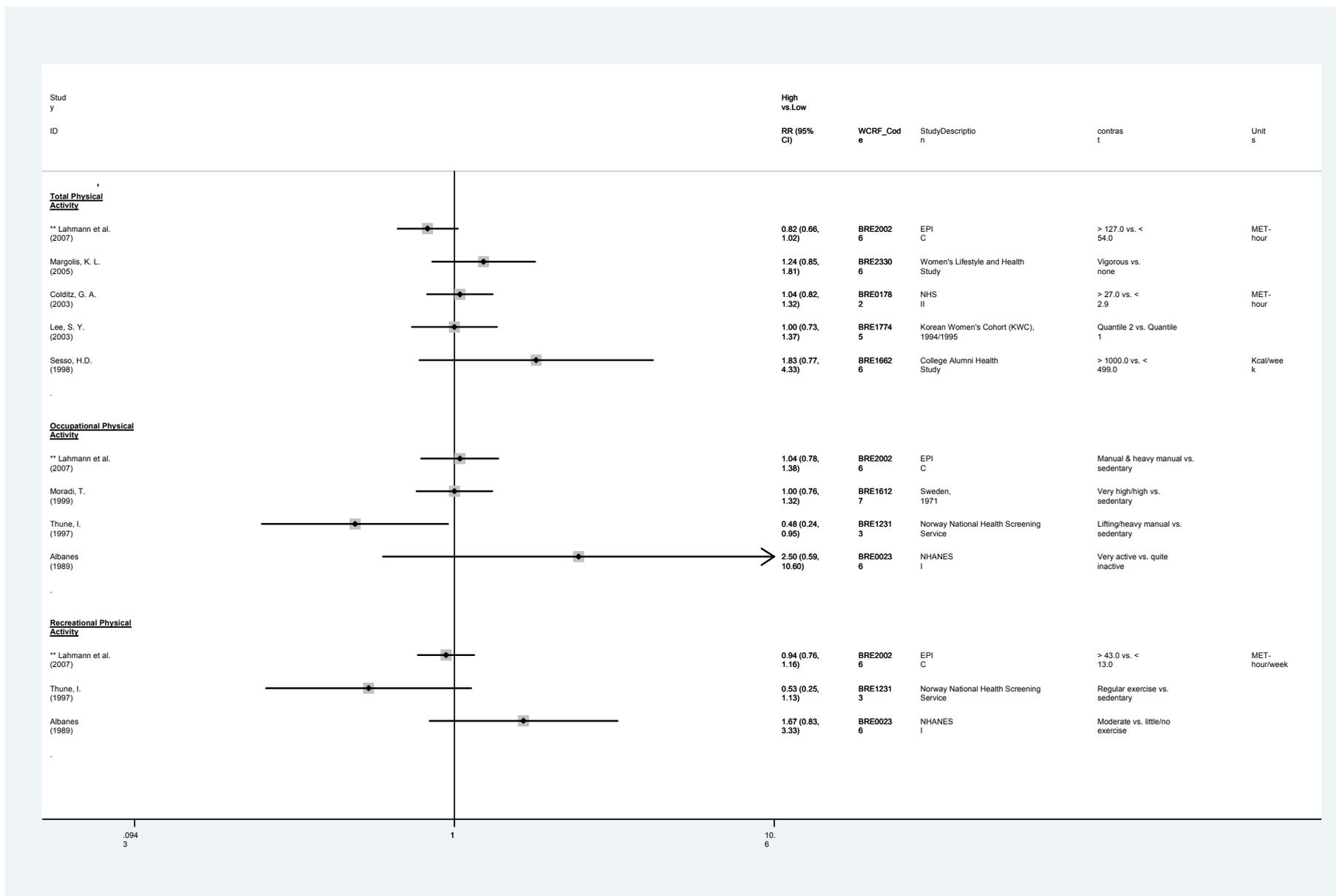
Recreational physical activity

Two out of three studies, including the EPIC study (Lahmann, P. H. et al., 2007 , BRE20026) reported a non-significant inverse association between recreational physical activity and premenopausal breast cancer risk. Again, the NHANES I observed a non-significant increased risk.

xiii. Fig P1 Highest vs. lowest forest plot on physical activity and postmenopausal breast cancer (**=new studies identified during the update)



xiv. Fig P2 Highest vs. lowest forest plot on physical activity-related variables and premenopausal breast cancer (**=new studies identified during the update)



Menopause age unspecified

Update

Two prospective cohort studies on physical activity and unspecified breast cancer were identified during the update period: The California Teachers Study (Dallal, C. M. et al., 2007 , BRE80016) and French EPIC-E3N study (Tehard, B. et al., 2006 , BRE80108). The California Teachers Study provided results for vigorous physical activity. The French EPIC-E3N study provided results for total physical activity, vigorous physical activity and recreational physical activity.

The results for the highest vs. the lowest category of exposure are shown in forest plots, (Fig P3) including three studies for total physical activity, five studies for vigorous physical activity, four studies for occupational physical activity and five studies for recreational physical activity identified during the SLR and the Continuous Update.

Total Physical Activity

The French EPIC-E3N study, College Alumni Health Study and Copenhagen CHS (Hoyer, A. P. et al., 1998 , BRE15433; Sesso, H. D. et al., 1998 , BRE16626; Tehard, B. et al., 2006 , BRE80108) reported non-significant decreased risk of breast cancer with increasing levels of total physical activity. The Framingham Study (Dorgan, J. F. et al., 1994 , BRE02385) showed a non-significant increased risk.

Vigorous Physical Activity

Overall, four studies observed a protective effect of vigorous physical activity on breast cancer with unspecified menopausal status. In three of them, the results were statistically ($RR = 0.62$, $95\%CI = 0.49-0.78$; $RR = 0.80$, $95\% CI = 0.69-0.93$) (Dallal, C. M. et al., 2007 , BRE80016; Tehard, B. et al., 2006 , BRE80108) or borderline significant ($RR = 0.83$, $95\% CI = 0.69-1.00$) (Chang, S. C. et al., 2003 , BRE18295), respectively. The Women's Health Study (Lee, I. M. et al., 2001 , BRE15848) did not show any association.

Occupational Physical Activity

The Norway National Health Screening Service Study (Thune, I. et al., 1997 , BRE12313) reported a significant inverse association between occupational activity and risk of unspecified breast cancer ($RR = 0.48$, $95\%CI = 0.25-0.92$). The Atherosclerosis Risk in Communities Study (Mertens, A. J. et al., 2005 , BRE23405) and the NHEFS (Byrne, C. et al., 1996 , BRE05719) also showed similar association but not significant. A Swedish cohort (Moradi, T. et al., 1999, BRE16127) has reported a borderline statistically significant protective effect against breast cancer with a RR of 0.91 ($95\%CI = 0.83-1.00$).

Recreational Physical Activity

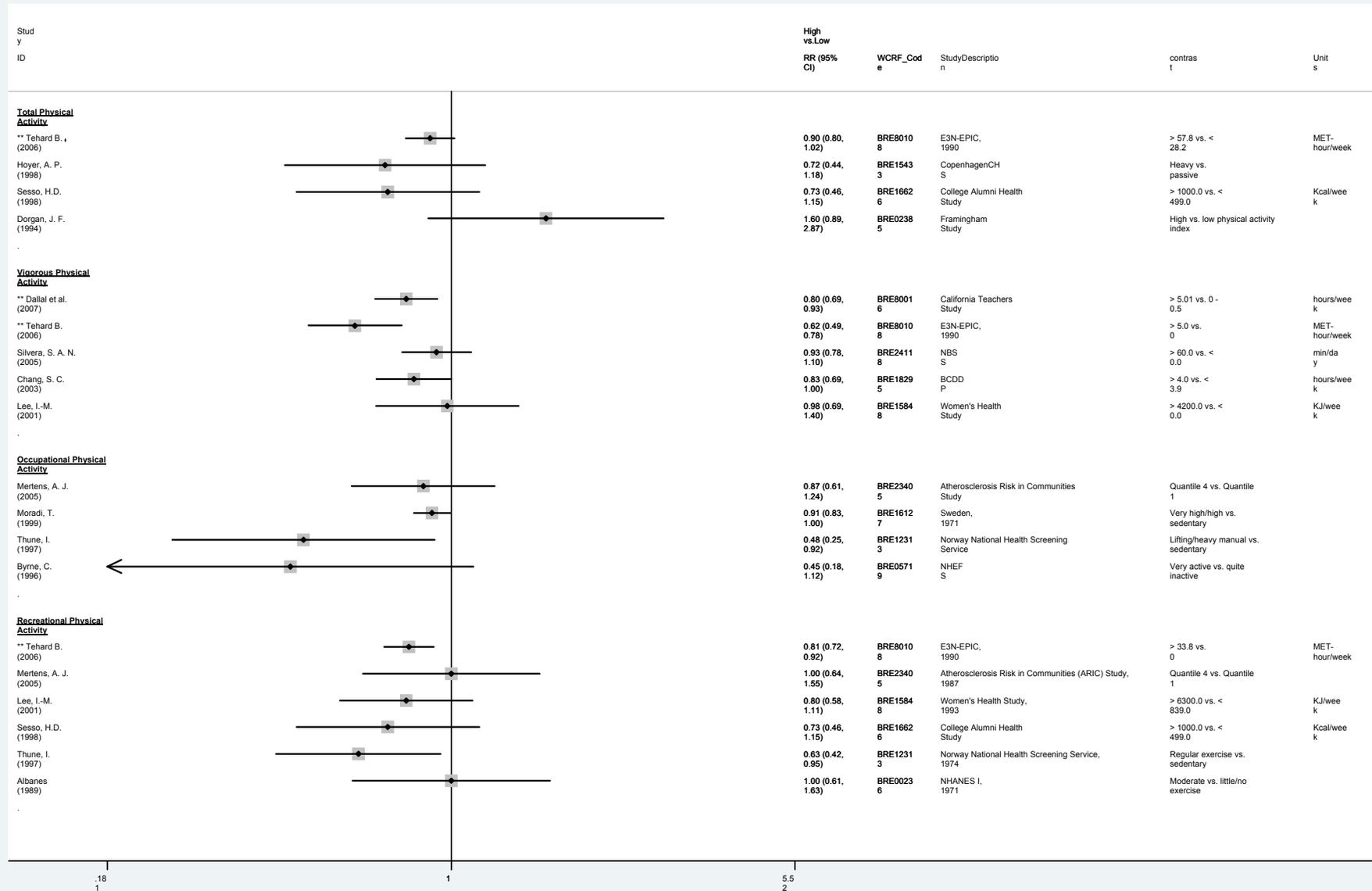
In two studies, increasing levels of recreational activity was associated with reduced risk of breast cancer in women with unspecified menopausal status ($RR = 0.81$, $95\%CI = 0.72-0.92$; $RR = 0.63$, $95\% CI = 0.42-0.95$, respectively) (Tehard, B. et al., 2006 , BRE80108; Thune, I. et al., 1997 , BRE12313). Two studies (NHANES I and ARIC Study) reported no association (Albanes, D. et al., 1989 , BRE00236; Mertens, A. J. et al., 2005 , BRE23405). The Womens' Health Study and College Alumni Health Study observed a non-significant decreased breast

cancer risk (RR = 0.80; 95%CI = 0.58-1.11; RR = 0.73; 95%CI = 0.46-1.15, respectively) (Lee, I. M. et al., 2001 , BRE15848;Sesso, H. D. et al., 1998 , BRE16626).

Published meta-analysis

A systematic review provided qualitative summaries of the association of breast cancer and physical activity in a recently published review including nineteen cohort studies. There was evidence for an inverse association between physical activity and postmenopausal breast cancer, with risk reduction ranging from 20% to 80%. For premenopausal breast cancer, however, the evidence was much weaker (Monninkhof EM et al., 2007).

xv. Fig P3 Highest vs. lowest forest plot on physical activity and breast cancer (menopause age unspecified) (**=new studies)



6.1.1.3 Household activity

Global Report, 2007

One prospective study investigated the effect of household activity on breast cancer (Drake, D. A. 2001 , BRE02418) – the Aerobic Center Longitudinal Study, 1970 (ACLS, 1970, from the US). The study population was fitness centre members and the number of participants was 4520, in which 150 were incident cases. Relative risk and 95% confidence intervals were not given. Their results showed participants with breast cancer on average did 6.68 times/sessions of housework per week, compared to 7.04 times/sessions among those without breast cancer ($t = 0.37$, non-significant p-value).

Update

Three articles were identified during the update, in which one is the EPIC (Lahmann, P. H. et al., 2007 , BRE20026) and two are components of EPIC from Sweden and France (Ericson, U. et al., 2007 , BRE80128; Tehard, B. et al., 2006 , BRE80108).

The EPIC had a study population of 218169 (3423 incident cases: 856 premenopausal women and 2547 postmenopausal cases) (Lahmann, P. H. et al., 2007 , BRE20026). Household activity was measured as MET-hour per week. Their result suggested a statistically significant inverse association between household physical activity and risk of both premenopausal and postmenopausal breast cancer. The RRs $_{>90 \text{ vs. } <28 \text{ MET-h/week}}$ were 0.71 (95% CI = 0.55-0.99; $P_{\text{trend}} = 0.003$) and 0.81 (95% CI = 0.7-0.93; $P_{\text{trend}} = 0.001$) for premenopausal and postmenopausal breast cancer, respectively. They also looked at combined recreational and household activity and found significant reduced risk in postmenopausal breast cancer (multivariate adjusted RR $_{>126 \text{ vs. } <55 \text{ MET-h/week}} = 0.83$, 95%CI = 0.73-0.95; $P_{\text{trend}} = 0.002$), but not in premenopausal breast cancer. In addition, they presented country-specific multivariate adjusted RRs (only presented for countries with ≥ 50 cases) in relation to continuous household activity by 20MET-h/week. An increase of one increment of household activity (20MET-h/week) was associated with a pooled HR of 0.96 (95% CI = 0.92-1.00; $P_{\text{trend}} = 0.06$) in premenopausal women and 0.97 (95% CI = 0.94-0.99; $P_{\text{trend}} = 0.008$) in postmenopausal women. The paper stated that household activity is one of the main sources of physical activity for women in most developed countries. In addition, this evidence was supported by a number of case-control studies, including a Canadian population-based case-control study (Friedenreich, C. M. et al., 2001 , BRE02973).

Because there were only two studies altogether, neither dose-response meta-analysis nor highest versus lowest forest plot was conducted.

7. Energy balance

7.1 Energy intake

Global Report, 2007

Fourteen cohort studies had published a total of 23 reports on energy intake. One report each had been published by the Adventist Health Study (Fraser, G. E. and Shavlik, D. 1997 , BRE02940), the California Teachers Study (Horn-Ross, P. L. et al., 2002 , BRE15412), the Malmö Diet and Cancer study (Wirfalt, E. et al., 2004 , BRE17083), the Mobile Clinic Health

Examination Survey (Knekt, P. et al., 1990 , BRE04898), the New York State Cohort (Graham, S. et al., 1992 , BRE03424), the Norway National Health Screening Service (Gaard, M. T. 1995 , BRE17516), the ORDET study (Sieri, S. et al., 2002 , BRE20941) and the Rancho Bernardo Study (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581). And two reports each were from the BCDDP study (Chang, S. C. et al., 2003 , BRE18295; Velie, E. et al., 2000 , BRE12851), the National Breast Cancer Screening Study (Howe, G. R. F. 1991 , BRE17622; Silvera, S. A. et al., 2006 , BRE24118), the Netherlands Cohort Study on Diet and Cancer (van den Brandt, P. A. et al., 1993 , BRE16919; Voorrips, L. E. et al., 2002 , BRE13011), the Iowa Women's Health Study (Kushi, L. H. et al., 1992 , BRE05141; Kushi, L. H. et al., 1995 , BRE05142) and NHANES I (Jones, D. Y. et al., 1987 , BRE04461) and its follow-up study (NHEFS) (Byrne, C. et al., 1996 , BRE05719). In addition, the Nurses' Health Study had published five reports (Byrne, C. et al., 2002 , BRE01315; Frazier, A. L. et al., 2004 , BRE02942; Giovannucci, E. et al., 1993 , BRE03262; Holmes, M. D. et al., 1999 , BRE04008; Willett, W. C. et al., 1992 , BRE13438)

Menopause age unspecified

A meta-analysis of seven studies of women of any age indicated no association between energy intake and breast cancer risk (RR = 1.00, 95% CI= 0.98-1.02 for an increase of 300 kcal/day, non-significant heterogeneity) (Byrne, C. et al., 1996 , BRE05719; Gaard, M. T. 1995 , BRE17516; Holmes, M. D. et al., 1999 , BRE04008; Howe, G. R. F. 1991 , BRE17622; Silvera, S. A. et al., 2006 , BRE24118; van den Brandt, P. A. et al., 1993 , BRE16919; Willett, W. C. et al., 1992 , BRE13438). Three other studies gave RR point estimates of high versus low values around 1 (Fraser, G. E. and Shavlik, D. 1997 , BRE02940; Horn-Ross, P. L. et al., 2002 , BRE15412; Knekt, P. et al., 1990 , BRE04898) and one reported a significant positive association (Chang, S. C. et al., 2003 , BRE18295).

Postmenopause

No significant association was observed in the meta-analysis of five studies of postmenopausal breast cancer (OR_{increase of 300 kcal/day} = 0.98, 95% CI = 0.98-1.01) with significant heterogeneity ($I^2 = 69\%$, not explained by meta-regression) (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581; Graham, S. et al., 1992 , BRE03424; Holmes, M. D. et al., 1999 , BRE04008; Kushi, L. H. et al., 1992 , BRE05141; Wirfalt, E. et al., 2004 , BRE17083). Five other studies reported no association (Giovannucci, E. et al., 1993 , BRE03262; Sieri, S. et al., 2002 , BRE20941; Silvera, S. A. et al., 2006 , BRE24118; Velie, E. et al., 2000 , BRE12851; Voorrips, L. E. et al., 2002 , BRE13011). The RR_{Q5 vs. Q1} was 0.81; 95% CI, 0.67-0.99 in women without history of benign breast disease in the Nurses' Health Study (Byrne, C. et al., 2002 , BRE01315). Energy intake during adolescence was related with an increased risk of breast cancer in adulthood (Frazier, A. L. et al., 2004 , BRE02942).

In the analyses stratified by hormone receptor status, energy intake was inversely although not significantly related to ER-/PR- breast cancers, and positively but not significantly related to other breast cancer (Kushi, L. H. et al., 1995 , BRE05142).

Update

Postmenopause

Two cohort studies have been identified during the update period. In the PLCO Cancer Screening Trial cohort (Chang, S. C. et al., 2006 , BRE80110) (764 cases), high energy intake was associated with increased risk of postmenopausal breast cancer ($RR_{>2084 \text{ vs } <1315 \text{ kcal/day}} = 1.25$ (95% CI = 1.02- 1.53). Energy intake was not related to postmenopausal breast cancer risk in the Nurses' Health Study (Kim, E. H. et al., 2006 , BRE80115) (3537 cases). The RR for an increase of 500 kcal was 1.01 (95% CI = 0.97-1.04). In the subgroup analysis by hormonal receptor status, energy intake was not related to breast cancer risk.

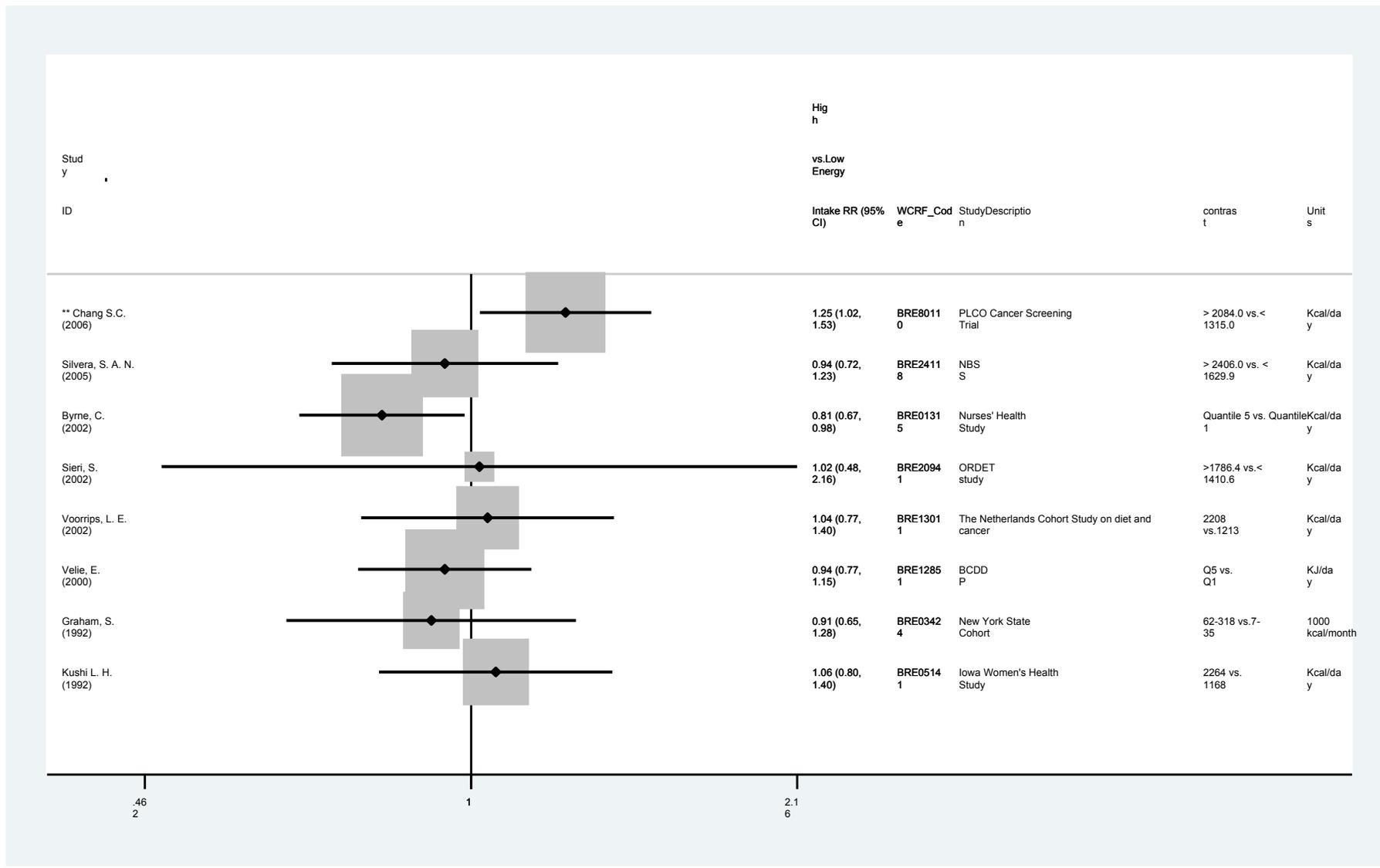
Overall, twelve prospective studies have investigated energy intake in relation to postmenopausal breast cancer. The results of eight studies were included in a forest plot showing the relative risks of the highest versus lowest comparison on energy intake and postmenopausal breast cancer. One of them was identified during the update period (Chang, S. C. et al., 2006 , BRE80110).

The reasons that the four studies were excluded are shown as follows:

- No risk ratio or confidence intervals were provided in their articles (Wirfalt, E. et al., 2004 , BRE17083)
- Two were reports for the Nurses' Health Study with one being more recent (Kim, E. H. et al., 2006 , BRE80115) than the other (Holmes, M. D. et al., 1999 , BRE04008). However, both provided continuous data only; therefore not included in the analysis. The Rancho Bernado Study is another study that only reported continuous estimate. (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581; Holmes, M. D. et al., 1999 , BRE04008; Kim, E. H. et al., 2006 , BRE80115) .

Highest versus lowest forest plot was not done on premenopausal breast cancer because there was only one study (Silvera, S. A. et al., 2006 , BRE24118). It was also not done on breast cancer with menopause age unspecified as there had not been any studies published during the update period.

xvi. Fig E1 Highest versus lowest forest plot on energy intake and postmenopausal breast cancer (=new studies identified during the update)**



*Note: Graham S. (1992) (BRE03424) contrast and units should read Quintile 5 (62-318 kcal*1000/month) vs. Quintile 1 (7-35kcal*1000/month)*

7.1.1 Energy from fat

Global Report, 2007

Eight articles were retrieved during the SLR (Byrne, C. et al., 1996 , BRE05719; Cho, E. S. 2003 , BRE17370; Gago-Dominguez, M. Y. 2003 , BRE17518; Holmes, M. D. et al., 1999 , BRE04008; Jones, D. Y. et al., 1987 , BRE04461; Velie, E. et al., 2000 , BRE12851; Wakai, K. et al., 2005 , BRE24482; Wirfalt, E. et al., 2004 , BRE17083). The dose-response meta-analysis of two studies (Byrne, C. et al., 1996 , BRE05719; Holmes, M. D. et al., 1999 , BRE04008) suggested a significant negative association (RR = 0.96, 95% CI = 0.93-0.99, for 5% of energy from fat, no heterogeneity). These results were confirmed by the highest versus lowest forest plot adding one Japanese prospective study included in the Global Report prepublication update (Wakai, K. et al., 2005 , BRE24482). A dose-response meta-analysis was also performed to test the relationship with postmenopausal breast cancer (Holmes, M. D. et al., 1999 , BRE04008; Wirfalt, E. et al., 2004 , BRE17083). The summary RR was 0.95, 95% CI = 0.92-0.98, for 5% of energy from fat, without heterogeneity. The association was not confirmed by the highest versus lowest forest plot.

Update

There were two new studies identified during the update (Kim, E. H. et al., 2006 , BRE80115; Thiebaut, A. C. et al., 2007 , BRE80012).

The relationship of postmenopausal breast cancer with dietary fat was examined in the Nurses' Health Study (Kim, E. H. et al., 2006 , BRE80115) (3, 537 incident cases prospectively followed for 20 years). The multivariable relative risk for an increment of 5% of energy from total dietary fat intake was 0.98 (95% CI = 0.95-1.00). Additionally, specific types of fat were not associated with an increased risk of breast cancer. Furthermore, secondary analyses indicated no differences in breast cancer risk by estrogen receptor or progesterone receptor status. However, stratification by waist circumference indicated a significant decreased in breast cancer risk for participants with a waist circumference of 88.9 cm or greater ($P_{\text{trend}} = 0.04$). Fat intake before menopause was not related to risk of postmenopausal breast cancer.

In the NIH- AARP Diet and Health Study (Thiebaut, A. C. et al., 2007 , BRE80012) (3501 cases) the hazard ratio of breast cancer for the highest (median intake, 40.1% energy from total fat; 434 cases per 100 000 person-years) versus the lowest (median intake, 20.3% energy from total fat; 392 cases per 100 000 person-years) quintile of energy from fat intake was 1.11 (95% CI = 1.00-1.24, $P_{\text{trend}} = 0.017$). Positive associations with percentage of energy from subtypes of fat were also observed (hazard ratio for a twofold increase in percentage of energy from saturated fat, HR = 1.13, 95% CI = 1.05-1.22; from monounsaturated fat, HR = 1.12, 95% CI = 1.03-1.21; from polyunsaturated fat, HR = 1.10, 95% CI = 1.01-1.20). Correction for measurement error in nutrient intakes, on the basis of a calibration sub-study that used two 24-hour dietary recalls, strengthened the associations, yielding an estimated hazard ratio for energy from total fat of 1.32 (95% CI = 1.11 to 1.58). Secondary analyses showed that associations between total, saturated, and monounsaturated fat intakes were confined to women who were not using menopausal hormone therapy at baseline.

7.1.2 Energy from carbohydrates (also known as calories from carbohydrates, in the Global Report)

Global Report, 2007

Three prospective studies were identified during the update (Cho, E. et al., 2003 , BRE01651; Velie, E. et al., 2000 , BRE12851; Wirfalt, E. et al., 2004 , BRE17083). In the Nurses' Health Study II, energy from carbohydrates was not related to risk of premenopausal breast cancer in the cohort. However, the associations differed by body mass index (BMI): among women with BMI < 25 kg/m², the multivariate relative risks for the increasing quintiles of carbohydrate intake were 1.00 (referent), 0.87, 0.77, 0.66, and 0.62 (95% CI = 0.40–0.97, P_{trend} = 0.02); and among women with BMI ≥ 25 kg/m², the corresponding relative risks were 1.00 (referent), 1.30, 1.35, 1.50, and 1.47 (95% CI = 0.84–2.59, P_{trend} = 0.14, P_{interaction} = 0.02). Non-significant negative association (RR = 0.91, 95% CI = 0.73-1.12) was found among postmenopausal breast cancer in a cohort of women who attended at a mammography screening program conducted from 1973 through 1981 at 29 centres throughout the US (Velie, E. et al., 2000 , BRE12851). No risk estimates were given in the Swedish Malmo Diet and Cancer study (Wirfalt, E. et al., 2004 , BRE17083).

Carbohydrate intake was not related to postmenopausal breast cancer in the Breast Cancer Detection Demonstration Project (BCDDP) Follow-up Cohort Study (Vecchia, C. I. T. 1986 , BRE18116).

Update

In the ORDET study (Sieri, S. et al., 2007 , BRE80142) (289 cases), the percentage of energy from carbohydrates was not related to breast cancer. There was a positive association with energy from carbohydrates from high glycemic index foods (RR_{for 5% increase} = 1.55 (95% CI = 1.07-2.26)), but not with energy from carbohydrates from low glycemic foods.

8. Anthropometry

8.1.1 Body Mass Index

Dose-response meta-analyses were conducted to examine the association of BMI with risk of premenopausal and postmenopausal breast cancer, and with both combined. A comparison of the results of the updated meta-analyses and the meta-analyses conducted for the Global Report is given below.

Summary of results of the dose-response meta-analysis

	Menopausal status not specified	
	2nd Report	Continuous update
Studies (n)	16	15
Cases (n)	Not provided	7200
RR (95% CI) (2 kg/m ² increase)	1.01 (1.00-1.02)	1.02(0.99-1.05)
Heterogeneity (I ²)	66.4% (43.2-80.1%)	68.4%, p=0.000

	Premenopausal breast cancer	
	2nd Report	Continuous update
Studies (n)	14	16
Cases (n)	-	8274
RR (95% CI) (2 kg/m ² increase)	0.94 (0.92-0.95)	0.97 (0.95-0.99)
Heterogeneity (I ²)	53.8% (15.4-74.8%)	50.1%, p= 0.012

	Postmenopausal breast cancer	
	2nd Report	Continuous update
Studies (n)	17	19
Cases (n)	-	17459
RR (95% CI) (2 kg/m ² increase)	1.03 (1.01-1.04)	1.05 (1.03-1.07)
Heterogeneity (I ²)	79.9% (68.5-87.1%)	59.8%, p=0.000

Update

Twenty-three new reports were identified during the update period. Apart from one Japanese study (the JPHC study) (Iwasaki, M. et al., 2007 , BRE20027), the remaining studies were either from North America or Europe, as listed below.

American reports identified during the update:

- BBD cohort-CLUE II (Gallicchio, L. et al., 2007 , BRE80006)
- Black Women's Health Study (Palmer, J. R. et al., 2007 , BRE80122)
- CLUE II (Visvanathan, K. et al., 2007 , BRE80020)
- Nurses' Health Study II (Michels, K. B. et al., 2006 , BRE80033)
- NIH- AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139)
- PLCO Cancer Screening Trial cohort (Chang, S. C. et al., 2006 , BRE80110)
- Study of Osteoporotic Fractures (Krebs, E. E. et al., 2006 , BRE80106)
- Vermont Mammography Cohort (Reinier, K. S. et al., 2006 , BRE80038)
- Women at Risk Cohort, New York (Chun, J. et al., 2006 , BRE80134)
- Women's Health Initiative (WHI) Observational Study (Modugno, F. et al., 2006 , BRE80137)

European reports identified during the update:

- EPIC (Rinaldi, S. et al., 2006 , BRE80101)
- Diet, Cancer and Health (Mellekjaer, L. et al., 2006 , BRE80039; Ravn-Haren, G. et al., 2006 , BRE80151; Vogel, U. et al., 2007 , BRE80150)
- French EPIC-E3N (Tehard, B. 2006 , BRE80103)

- Malmo Diet and Cancer (Ericson, U. et al., 2007 , BRE80128;Wirfalt, E. et al., 2005 , BRE11111)
- Sweden, Finland Co-twin study (1 article, 2 study designs) (Lundqvist, E. et al., 2007 , BRE80002;Lundqvist, E. et al., 2007 , BRE80003)
- Northern Sweden Health and Disease Cohort (Lukanova, A. et al., 2006 , BRE80100)
- The Million Women Study (Reeves, G. K. et al., 2007 , BRE80146)
- The Swedish Mammography Cohort (Suzuki, R. et al., 2006 , BRE80116).

Overall summary

Sixty-one reports were retrieved during the SLR. In addition, the Melbourne Collaborative Cohort Study (Macinnis, R. J. et al., 2004 , BRE80159) published in 2004, was referenced in the Global Report but not included in the database. Altogether 85 reports from 57 cohorts had provided data on body mass index (BMI) and breast cancer. The list of studies included and excluded from the meta-analyses by menopausal status and the reasons for exclusion are detailed in Tables BMI1, BMI2 and BMI3.

Menopause age unspecified

Table BMI1 shows both the included and excluded studies on body mass index (BMI) and breast cancer with unspecified menopausal status in the meta-analysis. A total of three new prospective cohort or nested case-control studies were identified (Chun, J. et al., 2006 , BRE80134;Lukanova, A. et al., 2006 , BRE80100;Visvanathan, K. et al., 2007 , BRE80020) over the update period.

Studies selected for the dose-response meta-analysis

Out of 26 individual studies, 15 studies (two studies retrieved in the update and 13 in the SLR) for a total of 7200 cases, with the appropriate format of data were included in the dose-response meta-analysis (the Northern Sweden Health and Disease Control (Lukanova, A. et al., 2006 , BRE80100), the Women at Risk Cohort, New York (Chun, J. et al., 2006 , BRE80134), the Canadian National Breast Screening Program (Silvera, S. A. et al., 2006 , BRE24118), a study in Taiwan (Wu, M. H. et al., 2006 , BRE24628), the VHM&PP (Vorarlberg Health Monitoring and Promotion Program) (Rapp, K. et al., 2005 , BRE23858), the LSS (Key, T. J. et al., 1999 , BRE04758), CLUEI (Wu, K. et al., 1999 , BRE13618), CLUEII (Wu, K. et al., 1999 , BRE63618), the Swedish Mammography Cohort (Wolk, A. et al., 1998 , BRE13548), the Hawaii State Department of Health (Galanis, D. J. et al., 1998 , BRE03058), a study from Finland (Knekt, P. et al., 1996 , BRE04900), the NHANESI/NHEFS (Byrne, C. et al., 1996 , BRE05719), a cohort from Sweden (Tornberg, S. A. and Carstensen, J. M. 1994 , BRE12417), a cohort from Norway (Vatten, L. J. and Kvinnsland, S. 1992 , BRE12828) and the California Seventh-day Adventist Cohort (Mills, P. K. B. 1989 , BRE17837)).

Sixteen reports were excluded: CLUEII* (Visvanathan, K. et al., 2007 , BRE80020), a study in Miyagi, Japan (Kuriyama, S. et al., 2005 , BRE22995), two reports of the Nurses' Health Study (Colditz, G. A. et al., 2004 , BRE01783;Zhang, S. M. et al., 2003 , BRE13958), a study in Helsinki and Oulu (Kilkinen, A. V. 2004 , BRE17698), the Swedish Twin Cohort study (Jonsson, F. et al., 2003 , BRE04482), the Mobile Clinic Health Examination Survey (Rissanen, H. K. 2003 , BRE17954), the AHS (Fraser, G. E. and Shavlik, D. 1997 , BRE02940), the LSS (Goodman, M. T. et al., 1997 , BRE03352), three reports of the Norway National Health Screening Service (Gaard, M. et al., 1994 , BRE03044;Vatten, L. J. et al.,

1990 , BRE12833;Vatten, L. J. and Kvinnsland, S. 1990 , BRE12826), the Glostrup Population study (Hoyer, A. P. and Engholm, G. 1992 , BRE04086), the Guernsey study (Overvad, K. W. 1991 , BRE17893), the Framingham study (Schatzkin, A. C. 1989 , BRE18013) and a Swedish cohort (Tornberg, S. A. et al., 1988 , BRE12418).

The reasons for exclusion are in Table BMI1.

* Other results from the same cohort are included.

Results

No significant association was observed in the dose-response meta-analysis of 15 studies (RR = 1.02, 95% CI = 0.99-1.05 for 2 kg/m² increase in BMI) (Fig BMI1). The result reported here is consistent with the risk estimate reported in the 2007 Global Report (RR_{for 2 kg/m² increase} = 1.01, 95% CI = 1.00-1.02).

Significant heterogeneity was reported ($I^2 = 68.4\%$, $P = 0.000$). We did not attempt to explore the sources of heterogeneity because these studies included both pre- and postmenopausal women, and the relationship of BMI with breast cancer risk is thought to be in opposite direction in both cancer types.

Four studies (Fraser, G. E. and Shavlik, D. 1997 , BRE02940;Hoyer, A. P. and Engholm, G. 1992 , BRE04086;Jonsson, F. et al., 2003 , BRE04482;Kuriyama, S. et al., 2005 , BRE22995) not included in the dose-response meta-analysis reported an increase in risk that was not statistically significant in the extreme categories comparison, but the other two studies (Schatzkin, A. C. 1989 , BRE18013;Vatten, L. J. et al., 1990 , BRE12833) observed a significant opposite effect. In general, results from the highest versus lowest forest plot (Fig. BMI3) were consistent with the dose-response meta-analysis (Fig. BMI1).

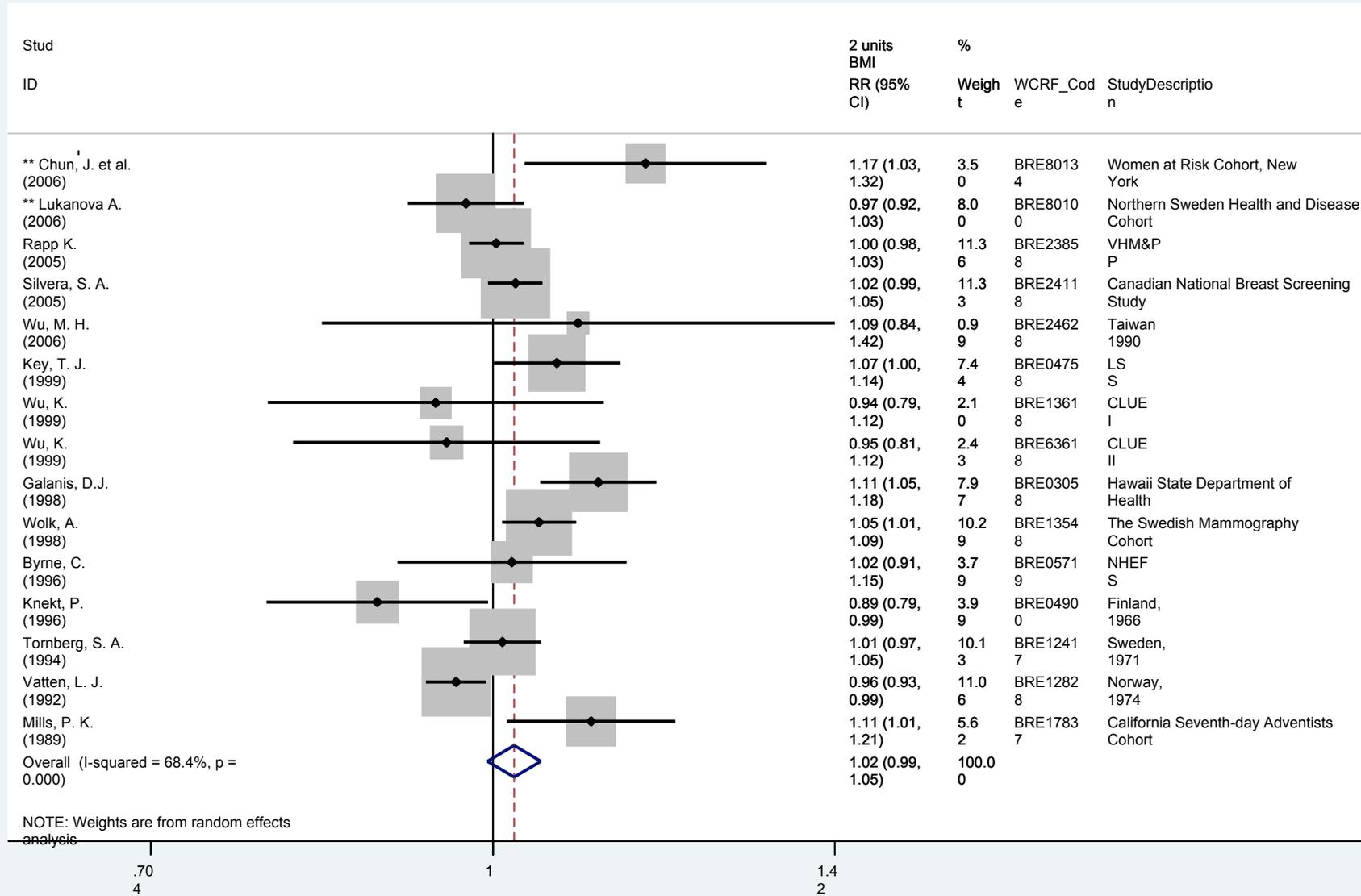
c)Table BMI1 Inclusion and exclusion of cohort studies on body mass index and breast cancer (menopause age unspecified)

Author	Year	WCRF Code	Study name	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs. low forest plot	Estimated values for meta-analysis	Exclusion reasons	Remarks
Visvanathan et al.	2007	BRE80020	CLUE II	Nested Case Control	New study	No	No		Although more recent than Wu 1999, BRE63618, less no. of cases	
Chun, J. et al.	2006	BRE80134	Women at Risk Cohort, New York	Prospective Cohort	New study	Yes	Yes	Mean exposure values		The 2 nd exposure category (BMI=19-24, normal weight) was used as a reference group in this study
Lukanova A.	2006	BRE80100	Northern Sweden Health and Disease Cohort	Prospective Cohort	New study	Yes	Yes			For the close-ended exposure categories, mid-exposure was taken. For the upper open-ended category, middle exposure plus half the width of the last exposure range was taken in estimating the dose-response slope
Kuriyama, S.	2005	BRE22995	Miyagi, 1993	Prospective Cohort	No	No	Yes		Number of non cases not provided, categorical analysis	
Rapp K.	2005	BRE23858	VHM&PP	Prospective Cohort	Yes	Yes	Yes			For the close-ended exposure categories, mid-exposure was taken. For the upper open-ended category, middle exposure plus half the width of the last exposure range was taken in estimating the dose-response slope
Silvera, S. A.	2005	BRE24118	Canadian National Breast Screening Study	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Wu, M. H.	2006	BRE24628	Taiwan 1990	Prospective Cohort	No	Yes	Yes	Mean exposure values		
Colditz, G. A.	2004	BRE01783	Nurses' Health Study (NHS) Cohort	Prospective Cohort	No	No	No		Nominal categories only, specific cancer outcome by hormone type	
Kilkinen, A.	2004	BRE17698	Helsinki and Oulu	Nested Case Control	Yes	No	No		Mean difference only	

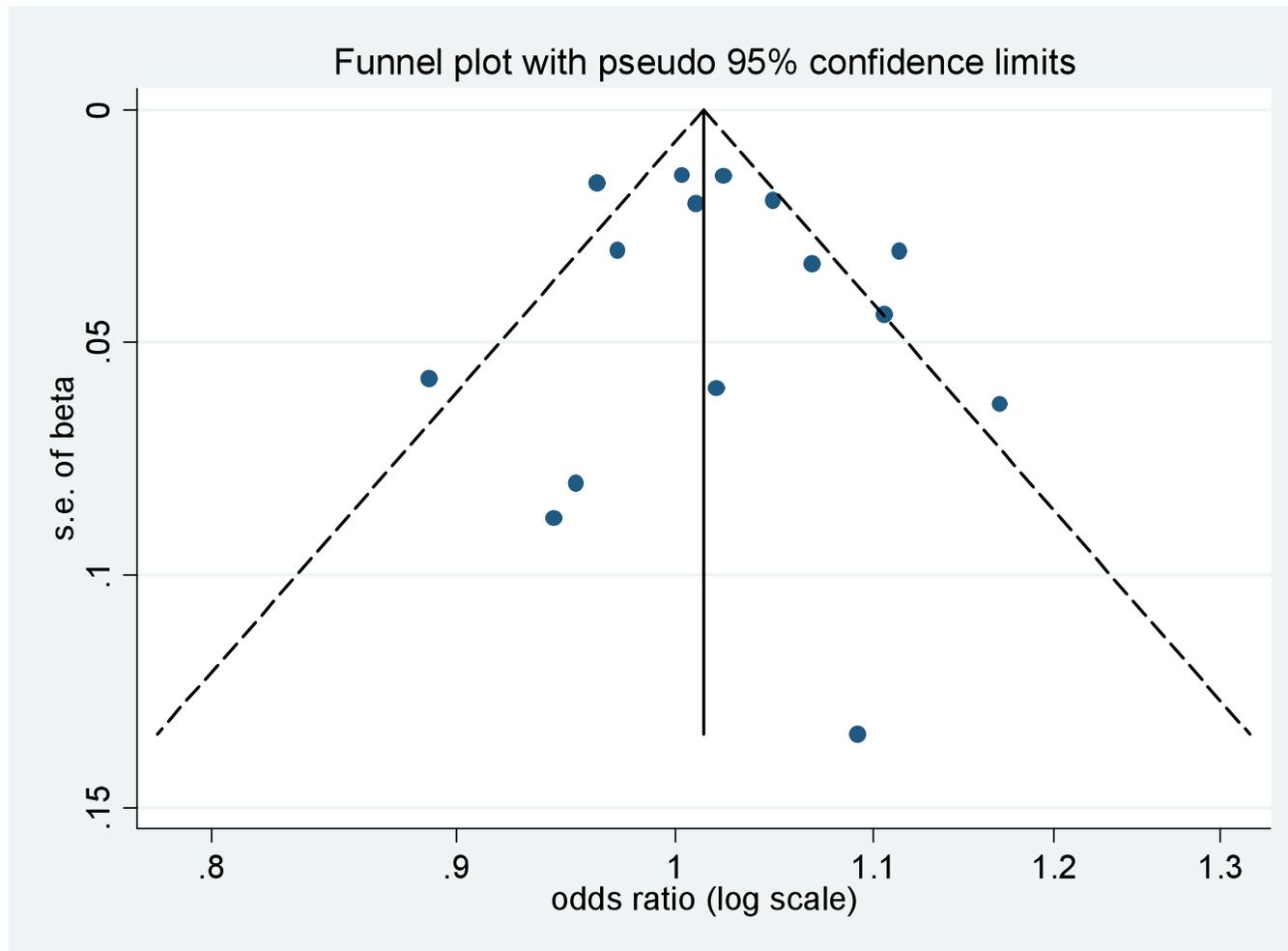
Jonsson, F.	2003	BRE04482	Swedish twin cohort, 1969	Prospective Cohort	No	No	Yes		Number of non cases not provided, can't estimate	
Rissanen, H.	2003	BRE17954	Mobile Clinic Health Examination Survey	Nested Case Control	Yes	No	No		Mean difference only	
Zhang, S. M.	2003	BRE13958	Nurses' Health Study (NHS) Cohort	Nested Case Control	Yes	No	No		Mean difference only	
Key, T. J.	1999	BRE04758	LSS	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Wu, K.	1999	BRE13618	CLUE I	Nested Case Control	Yes	Yes	Yes	Mean exposure values		Results on the CLUE I and II cohorts were presented in the same article
Wu, K.	1999	BRE63618	CLUE II	Nested Case Control	Yes	Yes	Yes	Mean exposure values		Results on the CLUE I and II cohorts were presented in the same article
Galanis, D.J.	1998	BRE03058	Hawaii State Department of Health	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Wolk, A.	1998	BRE13548	The Swedish Mammography Cohort	Prospective Cohort	Yes	Yes	No		Only dose-response slope was provided in the study – not included in the highest vs. lowest forest plot	
Fraser, G. E.	1997	BRE02940	AHS, 1974	Prospective Cohort	No	No	Yes		Only 2 categories - not included in dose-response analysis	
Goodman, M. T.	1997	BRE03352	LSS	Prospective Cohort	No	No	No		Superseded by Key 1999, BRE04758	
Byrne, C.	1996	BRE05719	NHEFS	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Knekt, P.	1996	BRE04900	Finland, 1966	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Gaard, M.	1994	BRE03044	Norway National Health Screening Service	Prospective Cohort	No	No	No		A different kind of weight by height measurement, unit = g/cm ²	
Tornberg, S. A.	1994	BRE12417	Sweden, 1971	Prospective Cohort	Yes	Yes	Yes	Estimated C.I.		
Hoyer, A. P.	1992	BRE04086	Glostrup Population Studies	Prospective Cohort	No	No	Yes		Number of cases & controls not provided, can't estimate	
Vatten, L. J.	1992	BRE12828	Norway, 1974	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Overvad	1991	BRE17893	Guernsey, 1967	Case Cohort	Yes	No	No		Mean difference only	

Vatten, L. J.	1990	BRE12833	Norway National Health Screening Service	Prospective Cohort	No	No	Yes	Estimate C.I.	2 categories only - not included in dose-response analysis	
Vatten, L. J.	1990	BRE12826	Norway National Health Screening Service	Prospective Cohort	No	No	No		A different kind of weight by height measurement, unit = g/cm ²	
Mills, P. K.	1989	BRE17837	California Seventh-day Adventists Cohort	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Schatzkin, A.	1989	BRE18013	Framingham Study	Prospective Cohort	No	No	Yes		Missing no. of non cases, can't estimate	
Tornberg, S. A.	1988	BRE12418	Swedish cohort, 1963	Prospective Cohort	No	No	No		Superseded by Tornberg 1994, BRE12418	
Total no. of articles = 30			Total no. of cohort studies = 26		Total no. of studies included = 16	Total no. of studies included = 15	Total no. of studies included = 20			

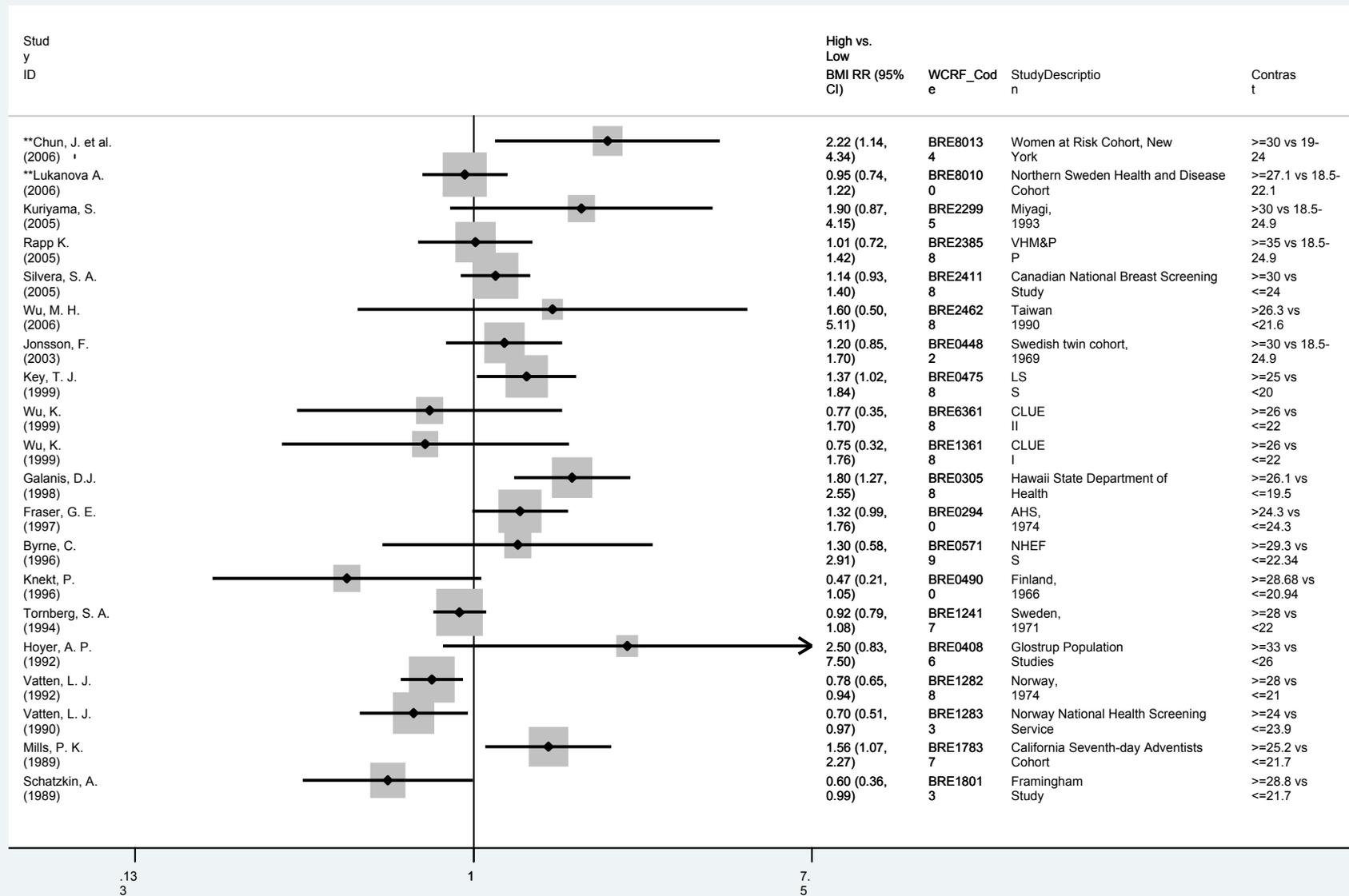
xvii. Fig. BMI1 Dose-response meta-analysis on BMI and breast cancer (menopause age unspecified)(**=new studies identified during the update)



xviii. Fig. BMI2 Funnel plot for BMI and breast cancer (menopause age unspecified)



xix. Fig. BMI3 Highest versus lowest forest plot on BMI and breast cancer (menopause age unspecified)(**=new studies identified during the update)



Premenopause

Cohort studies identified in the Jan 2006- Dec 2007 update

Nine new prospective cohort or nested case-control studies were identified (Iwasaki, M. et al., 2007 , BRE20027;Lukanova, A. et al., 2006 , BRE80100;Lundqvist, E. et al., 2007 , BRE80002;Lundqvist, E. et al., 2007 , BRE80003;Michels, K. B. et al., 2006 , BRE80033;Palmer, J. R. et al., 2007 , BRE80122;Reeves, G. K. et al., 2007 , BRE80146;Reinier, K. S. et al., 2006 , BRE80038;Tehard, B. 2006 , BRE80103) over the update period.

Studies selected for the dose-response meta-analysis

Sixteen out of a total of 27 studies with appropriate format of data were included in the dose-response meta-analysis. A total of 8274 cases were included. The studies included in the dose response meta-analysis are: the JPHC (Iwasaki, M. et al., 2007 , BRE20027), the Sweden, Finland Co-twin study (Lundqvist, E. et al., 2007 , BRE80002), the Black Women's Health Study (Palmer, J. R. et al., 2007 , BRE80122), The Million Women Study (Reeves, G. K. et al., 2007 , BRE80146), the Nurses' Health Study II (Michels, K. B. et al., 2006 , BRE80033), the Northern Sweden Health and Disease Cohort (Lukanova, A. et al., 2006 , BRE80100), (Lahmann, P. H. et al., 2004 , BRE15804) the combined analysis of two cohorts (Sweden + Norway) (Weiderpass, E. B. 2004 , BRE18151), the Malmo Preventive Project (MPP) (Manjer, J. K. 2001 , BRE17790), the New York Women's Health Study (Sonnenschein, E. et al., 1999 , BRE11604) , the Hawaii State Department of Health (Galanis, D. J. et al., 1998 , BRE03058), the DOM-project Utrecht (Kaaks, R. et al., 1998 , BRE04522), the Reykjavik Study (Tulinius, H. et al., 1997 , BRE12565), the Nurses' Health Study (NHS) Cohort (Huang, Z. et al., 1997 , BRE04117), a cohort from Sweden, 1971 (Tornberg, S. A. and Carstensen, J. M. 1994 , BRE12417) and a cohort from Norway, 1974 (Vatten, L. J. and Kvinnsland, S. 1992 , BRE12828).

Studies excluded from the dose-response meta-analysis

Fifteen reports of 14 different cohort studies were excluded: the Canadian National Breast Screening Study (Silvera, S. A. et al., 2006 , BRE24118), the Danish Cohort, 1930 (Ahlgren, M. et al., 2004 , BRE14201), two reports of the French EPIC-E3N cohort, the French component of EPIC (Tehard, B. et al., 2004 , BRE12173;Tehard, B. 2006 , BRE80103), the Guernsey G2 and G3 study (De Stavola, B. L. et al., 1993 , BRE02122), a study from Hawaii 1942, 1960, 1972 (Le Marchand, L. et al., 1988 , BRE15836), the Korean Women's Cohort (KWC) (Lee, S. Y. K. 2003 , BRE17745) a cohort from Miyagi, Japan 1993 (Kuriyama, S. et al., 2005 , BRE22995), the Mobile Clinic Health Examination Survey (Rissanen, H. K. 2003 , BRE17954), two reports of the New York Women's Health Study (Saadatian-Elahi, M. et al., 2002 , BRE21486;Tonio, P. et al., 1994 , BRE12398), the Norway National Health Screening Service (Vatten, L. J. and Kvinnsland, S. 1990 , BRE12826), the Sweden, Finland Co-twin study (Lundqvist, E. et al., 2007 , BRE80003), the Swedish cohort, 1963 (Tornberg, S. A. et al., 1988 , BRE12418) and the Vermont Mammography Cohort (Reinier, K. S. et al., 2006 , BRE80038).

Results

BMI was inversely and significantly associated with breast cancer risk in premenopausal women (RR = 0.97, 95%CI = 0.95-0.99, for each 2 kg/m² increase in BMI), although excess heterogeneity was reported (I² = 50.1%, p = 0.012) (Fig BMI4). Only three studies reported non-significant increased risk (Galanis, D. J. et al., 1998 , BRE03058;Iwasaki, M. et al., 2007 , BRE20027;Tulinius, H. et al., 1997 , BRE12565). Risk estimate reported here was similar to that in the 2007 Global Report (RR = 0.94, 95% CI = 0.92-0.95).

Meta-regression was performed on each of the following factors: year of publication, geographic area, length of follow-up, anthropometric measurement method and number of exposure categories to explore heterogeneity between the 16 studies included in the dose-response meta-analysis. It was suggested that most recent publications and studies from Asia (Iwasaki, M. et al., 2007 , BRE20027) and Hawaii (Galanis, D. J. et al., 1998 , BRE03058) were more likely to associate with an increased risk than less recent studies and studies conducted in non-Asian populations ($p = 0.009$; $p = 0.002$ respectively). No publication bias was observed (Fig BMI5). None of the studies showed a strong influence on the pooled risk estimate as suggested by the sensitive tests.

The highest versus lowest forest plot of 21 studies supported the previous results (Fig. BMI6). Five out of the six studies not included in the dose-response meta-analysis provided a RR that was less than one or around one in the extreme categories comparison (Kuriyama, S. et al., 2005 , BRE22995; Le Marchand, L. et al., 1988 , BRE15836; Lee, S. Y. K. 2003 , BRE17745; Reinier, K. S. et al., 2006 , BRE80038; Silvera, S. A. et al., 2006 , BRE24118). Only the Guernsey G2 and G3 study observed a 10% increase in risk but this result was not statistically significant (De Stavola, B. L. et al., 1993 , BRE02122).

A recent dose-response meta-analysis on BMI and premenopausal breast cancer (Renehan AG et al., 2008) pooling results from 20 studies, reported an overall risk estimate of 0.92 (95% CI = 0.88-0.97; $I^2 = 38.7\%$, $p = 0.04$) for an increment of 5 kg/m² in BMI. If we use the same increment used in this paper, our estimate is 0.93 (95% CI = 0.88-0.98). Renehan et al. suggested that the heterogeneity observed might be explained by the differences in study populations. When stratified by geographic area, they observed a positive association between increased BMI and premenopausal breast cancer in Asia-Pacific populations ($p=0.009$).

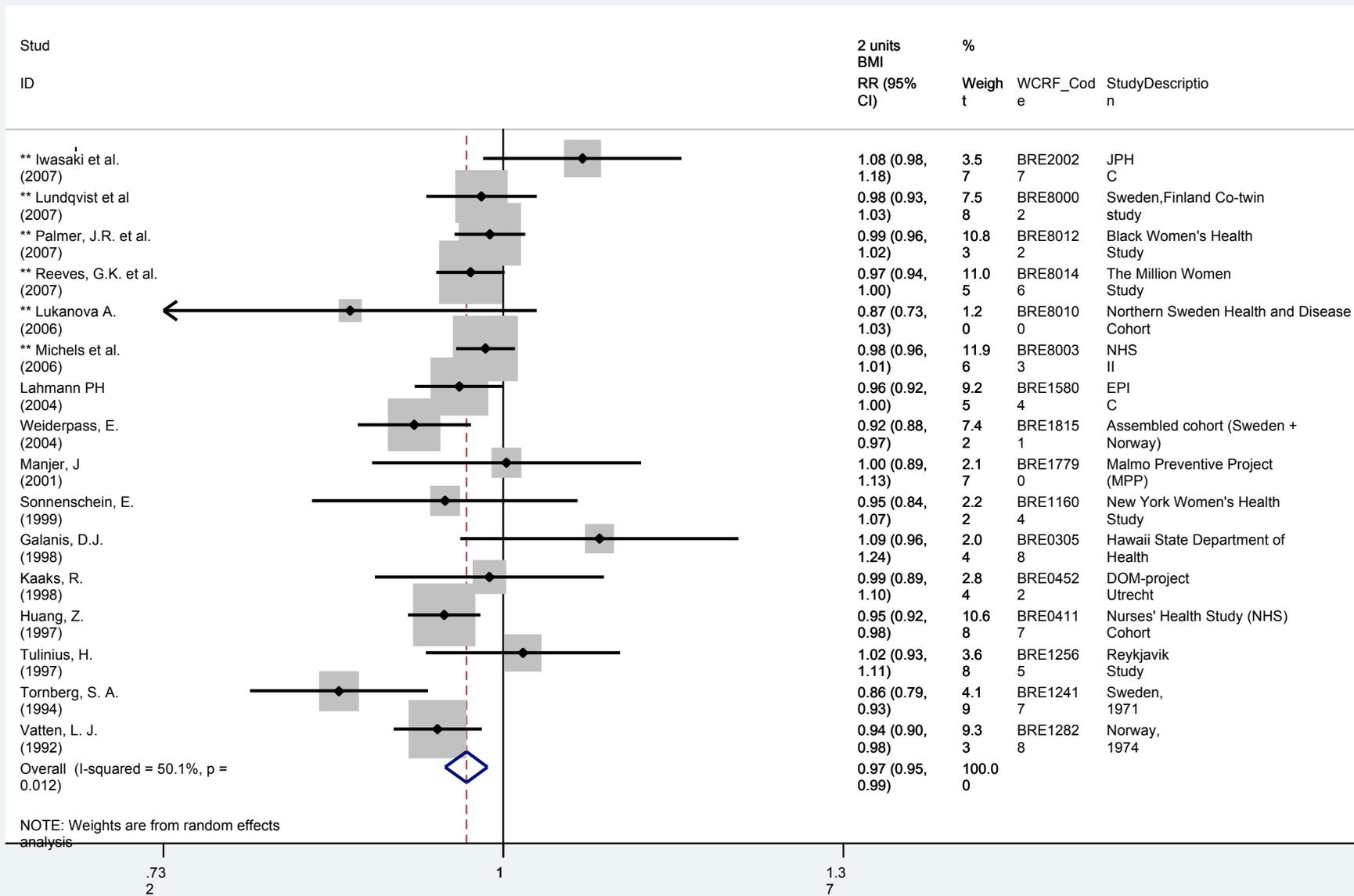
d)Table BMI2 Inclusion and exclusion of cohort studies on body mass index and premenopausal breast cancer

Author	Year	WCRF Code	Study name	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs. low forest plot	Estimated values for meta-analysis	Exclusion reasons	Remarks
Iwasaki et al.	2007	BRE20027	JPHC	Prospective Cohort	New Study	Yes	Yes	Mean exposure values		
Lundqvist et al	2007	BRE80002	Sweden,Finland Co-twin study	Prospective Cohort	New Study	Yes	Yes			This study had 2 different design (BRE80002/3)
Lundqvist et al	2007	BRE80003	Sweden,Finland Co-twin study	Nested Case Control	New Study	No	No		Selected same study with the prospective design, BRE80002 more cases	This study had 2 different design (BRE80002/3)
Palmer, J.R. et al.	2007	BRE80122	Black Women's Health Study	Prospective Cohort	New Study	Yes	Yes	Mean exposure values		
Reeves, G.K. et al.	2007	BRE80146	The Million Women Study	Prospective Cohort	New Study	Yes	Yes			
Reinier et al.	2007	BRE80038	Vermont Mammography Cohort	Prospective Cohort	New Study	No	Yes		Number of cases and non cases were not provided, categorical analysis	
Lukanova A.	2006	BRE80100	Northern Sweden Health and Disease Cohort	Prospective Cohort	New Study	Yes	Yes			For the close-ended exposure categories, mid-exposure was taken. For the upper open-ended category, middle exposure plus half the width of the last exposure range was taken in estimating the dose-response slope
Michels et al.	2006	BRE80033	NHS II	Prospective Cohort	New Study	Yes	Yes			
Tehard B.	2006	BRE80103	French EPIC-E3N	Prospective Cohort	New Study	No	No		Pooled results from the EPIC study Lahmann PH 2004, BRE15804 were selected instead	French EPIC-E3N is a component study of EPIC
Kuriyama, S.	2005	BRE22995	Miyagi, 1993	Prospective Cohort	No	No	Yes		Number of non-cases not provided, can't estimate	
Silvera, S. A.	2005	BRE24118	Canadian National Breast Screening Study	Prospective Cohort	No	No	Yes		Number of cases and non-cases not provided, can't estimate	
Ahlgren, M.	2004	BRE14201	Danish Cohort, 1930	Historical Cohort	Yes	No	No		A different exposure to BMI	Study measured BMI in childhood

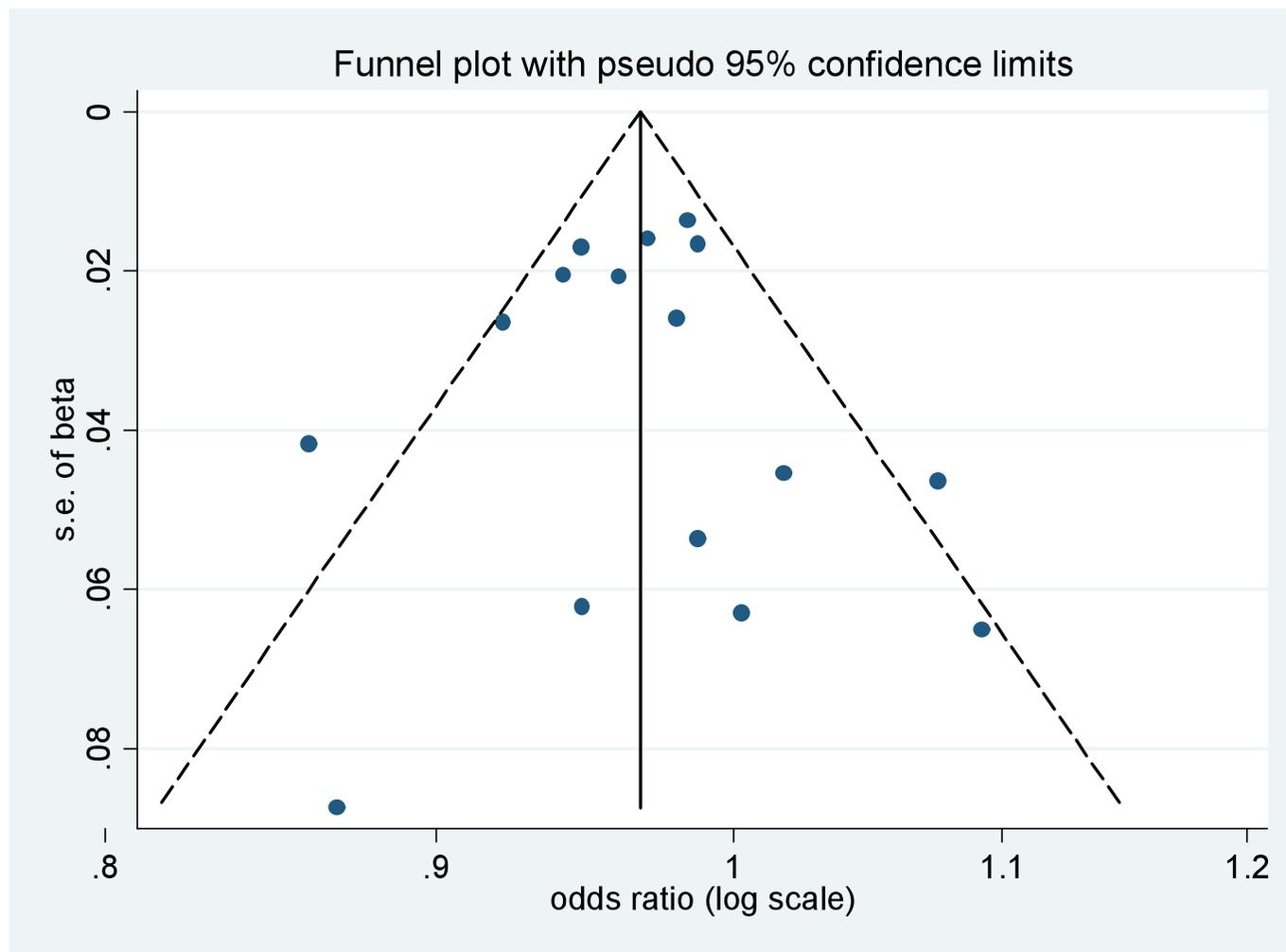
Lahmann PH	2004	BRE15804	EPIC	Prospective Cohort	No	Yes	Yes			
Tehard, B.	2004	BRE12173	French EPIC-E3N	Prospective Cohort	Yes	No	No		Pooled results from the EPIC study Lahmann PH 2004, BRE15804 were selected instead	French EPIC-E3N is a component study of EPIC
Weiderpass, E.	2004	BRE18151	Assembled cohort (Sweden + Norway)	Prospective Cohort	Yes	Yes	Yes			
Lee, S. Y.	2003	BRE17745	Korean Women's Cohort (KWC)	Prospective Cohort	No	No	Yes		Only 2 categories – not included in the dose-response meta-analysis	
Rissanen, H.	2003	BRE17954	Mobile Clinic Health Examination Survey	Nested Case Control	Yes	No	No		Mean difference only	
Saadatian-Elahi, M.	2002	BRE21486	New York Women's Health Study	Nested Case Control	Yes	No	No		Mean difference only	
Manjer, J	2001	BRE17790	Malmö Preventive Project (MPP)	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Sonnenschein, E.	1999	BRE11604	New York Women's Health Study	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Galanis, D.J.	1998	BRE03058	Hawaii State Department of Health	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Huang, Z.	1997	BRE04117	Nurses' Health Study (NHS) Cohort	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Tulinius, H.	1997	BRE12565	Reykjavik Study	Prospective Cohort	Yes	Yes	No		Only dose-response slope was provided	
Toniolo, P.	1994	BRE12398	New York Women's Health Study	Nested Case Control	Yes	No	No		Supersede by Sonnenschein 1999, BRE11604	
Tornberg, S. A.	1994	BRE12417	Sweden, 1971	Prospective Cohort	Yes	Yes	Yes			
De Stavola, B. L.	1993	BRE02122	Guernsey G2 and G3	Prospective Cohort	No	No	Yes		Missing no. of non cases, can't estimate	
Vatten, L. J.	1992	BRE12828	Norway, 1974	Prospective Cohort	Yes	Yes	Yes	Mean exposure values		
Vatten, L. J.	1990	BRE12826	Norway National Health Screening Service	Prospective Cohort	No	No	No		A different kind of weight by height measurement, unit = g/cm ²	

Le Marchand, L	1988	BRE15836	Hawaii 1942, 1960, 1972	Nested Case Control	No	No	Yes		Details on exposure levels not provided
Tornberg, S. A.	1988	BRE12418	Swedish cohort, 1963	Prospective Cohort	No	No	No		Superseded by Tornberg 1994, BRE12418
Total no. of articles = 30			Total no. of cohort studies = 27		Total no. of studies included = 14	Total no. of studies included = 16	Total no. of studies included = 21		

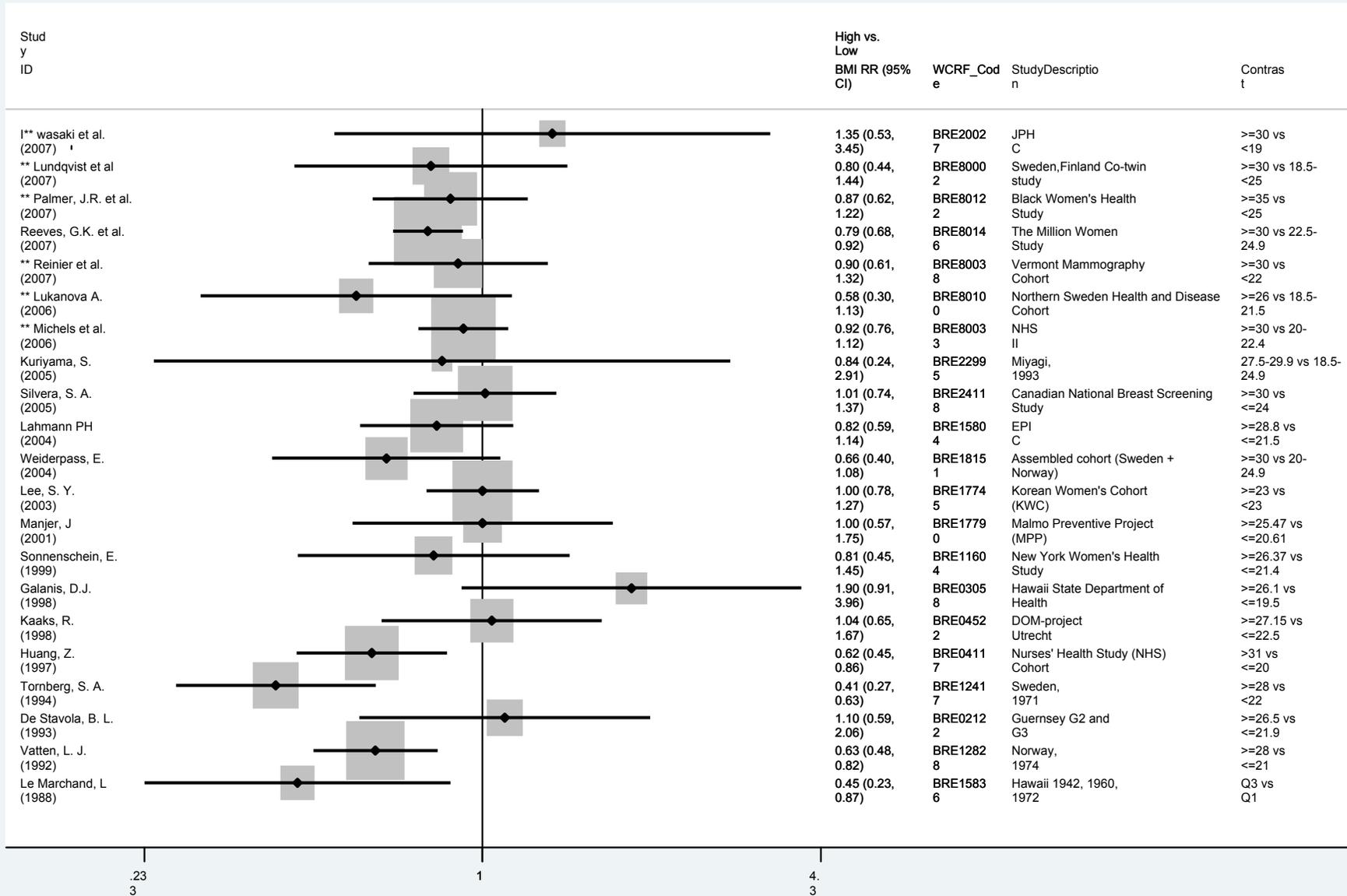
xx. Fig. BMI4 Dose-response meta-analysis on BMI and premenopausal breast cancer (**=new studies identified during the update)



xxi. Fig. BMI5 Funnel plot for BMI and premenopausal breast cancer



xxii. Fig. BMI6 Highest versus lowest forest plot on BMI and premenopausal breast cancer (**=new studies)



Postmenopause

Cohort studies identified in the Jan 2006- Dec 2007 update

Table BMI3 shows the included and excluded studies on body mass index (BMI) and breast cancer in postmenopausal women in the meta-analysis. A total of nineteen new prospective cohort, nested case-control and case cohort studies were identified over the update period. (Ahn, J. et al., 2007 , BRE80139;Chang, S. C. et al., 2006 , BRE80110;Ericson, U. et al., 2007 , BRE80128;Gallicchio, L. et al., 2007 , BRE80006;Iwasaki, M. et al., 2007 , BRE20027;Krebs, E. E. et al., 2006 , BRE80106;Lukanova, A. et al., 2006 , BRE80100;Lundqvist, E. et al., 2007 , BRE80002;Lundqvist, E. et al., 2007 , BRE80003;Mellemkjaer, L. et al., 2006 , BRE80039;Modugno, F. et al., 2006 , BRE80137;Palmer, J. R. et al., 2007 , BRE80122;Ravn-Haren, G. et al., 2006 , BRE80151;Reeves, G. K. et al., 2007 , BRE80146;Reinier, K. S. et al., 2006 , BRE80038;Rinaldi, S. et al., 2006 , BRE80101;Suzuki, R. et al., 2006 , BRE80116;Tehard, B. 2006 , BRE80103;Vogel, U. et al., 2007 , BRE80150).

Studies selected for the dose-response meta-analysis

Nineteen studies were included in the dose-response meta-analysis: the JPHC (Iwasaki, M. et al., 2007 , BRE20027), Sweden, the Finland Co-twin study (Lundqvist, E. et al., 2007 , BRE80002), the Black Women's Health Study (Palmer, J. R. et al., 2007 , BRE80122), The Million Women Study (Reeves, G. K. et al., 2007 , BRE80146), the Northern Sweden Health and Disease Cohort (Lukanova, A. et al., 2006 , BRE80100) , the Study of Osteoporotic Fractures (Krebs, E. E. et al., 2006 , BRE80106), the PLCO Cancer Screening Trial cohort/BCDDP (Chang, S. C. et al., 2006 , BRE80110), The Swedish Mammography Cohort (Suzuki, R. et al., 2006 , BRE80116), EPIC (Lahmann, P. H. et al., 2004 , BRE15804), the Melbourne Collaborative Cohort Study (Macinnis, R. J. et al., 2004 , BRE80159), the Iowa Women's Health Study (Sellers, Thomas et al., 2002 , BRE20892), the Malmo Preventive Project (MPP) (Manjer, J. K. 2001 , BRE17790), the New York Women's Health Study (Sonnenschein, E. et al., 1999 , BRE11604), the Hawaii State Department of Health study (Galanis, D. J. et al., 1998 , BRE03058), the DOM-project Utrecht (Kaaks, R. et al., 1998 , BRE04522), a cohort in Sweden, 1971(Tornberg, S. A. and Carstensen, J. M. 1994 , BRE12417), The Netherlands Cohort Study on diet and cancer (van den Brandt, P. A. et al., 1997 , BRE12717), the Reykjavik Study (Tulinius, H. et al., 1997 , BRE12565) and the Nurses' Health Study (Huang, Z. et al., 1997 , BRE04117).

Studies with appropriate format of data to allow inclusion in the subgroup analyses by HRT use were also listed in Table BMI3.

Studies excluded from the dose-response meta-analysis

Forty-one studies from twenty different cohort studies were excluded: BBD cohort-CLUE II (Gallicchio, L. et al., 2007 , BRE80006), Canadian National Breast Screening Study (Silvera, S. A. et al., 2006 , BRE24118), CPS-II US cohort (Calle, E. E. et al., 2003 , BRE01340;Feigelson, H. S. et al., 2004 , BRE02721;Patel, A. V. et al., 2003 , BRE16299;Petrelli, Jennifer et al., 2002 , BRE20653), Danish Cohort, 1930 (Ahlgren, M. et al., 2004 , BRE14201), Diet, Cancer and Health (Mellemkjaer, L. et al., 2006 , BRE80039;Ravn-Haren, G. et al., 2006 , BRE80151;Vogel, U. et al., 2007 , BRE80150), DOM-project Utrecht (Den Tonkelaar, I. et al., 1994 , BRE02222;Den Tonkelaar, I. et al.,

1995 , BRE02224), French EPIC-E3N (Tehard, B. et al., 2004 , BRE12173;Tehard, B. 2006 , BRE80103), EPIC (Rinaldi, S. et al., 2006 , BRE80101), Guernsey G2 and G3 (De Stavola, B. L. et al., 1993 , BRE02122), Hawaii 1942, 1960, 1972 (Le Marchand, L. et al., 1988 , BRE15836), Iowa Women's Health Study (Folsom, A. R. et al., 1990 , BRE02836;Gapstur, S. M. et al., 1992 , BRE03101), Malmo Diet and Cancer (Ericson, U. et al., 2007 , BRE80128;Lahmann, P. H. et al., 2003 , BRE20119;Wirfalt, E. et al., 2004 , BRE17083;Wirfalt, E. et al., 2005 , BRE11111;Wirfalt, E. et al., 2002 , BRE13504), Miyagi, 1993 (Kuriyama, S. et al., 2005 , BRE22995), Mobile Clinic Health Examination Survey (Rissanen, H. K. 2003 , BRE17954), New York State Cohort (Graham, S. et al., 1992 , BRE03424), New York Women's Health Study (Saadatian-Elahi, M. et al., 2002 , BRE21486;Toniolo, P. et al., 1994 , BRE12398), NIH- AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139), Norway National Health Screening Service (Vatten, L. J. and Kvinnsland, S. 1990 , BRE12826), PLCO Cancer Screening Trial cohort/ BCDDP (Chang, S. C. et al., 2003 , BRE18295), Rancho Bernardo, 1972 (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581), Sweden, Finland Co-twin study (Lundqvist, E. et al., 2007 , BRE80003), Swedish cohort, 1963 (Tornberg, S. A. et al., 1988 , BRE12418), The Netherlands Cohort Study on diet and cancer (van den Brandt, P. A. et al., 1993 , BRE16919), The Swedish Mammography Cohort (Jumaan, A. O. et al., 1999 , BRE04514), Vermont Mammography Cohort (Reinier, K. S. et al., 2006 , BRE80038), Women's Health Initiative (WHI) Study (Modugno, F. et al., 2006 , BRE80137;Morimoto, Libby et al., 2002 , BRE20457).

The BBD cohort-CLUE II study was not included in the meta-analysis because this study investigated possible effect modifications in selected obesity-related genetic polymorphisms in the association of body mass and breast cancer in postmenopausal women with benign breast disease. They reported no statistically significant associations for single nucleotide polymorphisms in *PPARG*, *PON1*, *PON2*, *LPL*, *LEPR* or *TNF- α* and BMI and breast cancer risk (Gallicchio, L. et al., 2007 , BRE80006).

Subgroup analyses by Hormone Replacement Therapy (HRT) Use

Only the EPIC study (494 cases) (Lahmann, P. H. et al., 2004 , BRE15804) had the appropriate format of data to be included in a potential dose-response meta-analysis of HRT users. Results from this study were displayed in Fig. BMI10, along with the summary risk estimate of HRT non users generated from three studies (6705 cases); namely the EPIC study (Lahmann, P. H. et al., 2004 , BRE15804), the Black Women's Health Study (Palmer, J. R. et al., 2007 , BRE80122) and the Million Women Study (Reeves, G. K. et al., 2007 , BRE80146). A highest versus lowest forest plot subgrouped by menopausal status and HRT use was also generated from relevant studies (Fig. BMI11). Studies with premenopausal women were included in this plot for comparison.

HRT use is classified as a dichotomous variable (users or non-users) for the present analysis. The definition could vary between the studies. HRT users could either be current users only (Ahn, J. et al., 2007 , BRE80139;Feigelson, H. S. et al., 2004 , BRE02721;Lahmann, P. H. et al., 2004 , BRE15804) or ever users (Morimoto, Libby et al., 2002 , BRE20457;Suzuki, R. et al., 2006 , BRE80116); while HRT non-users could either be never users (Morimoto, Libby et al., 2002 , BRE20457;Palmer, J. R. et al., 2007 , BRE80122;Reeves, G. K. et al., 2007 , BRE80146;Suzuki, R. et al., 2006 , BRE80116) or never or former users (Ahn, J. et al., 2007 , BRE80139;Feigelson, H. S. et al., 2004 , BRE02721;Lahmann, P. H. et al., 2004 , BRE15804).

Results

The summary relative risk estimate from the dose-response meta-analysis of 19 studies was 1.05 (95% CI = 1.03-1.07), for 2kg/m² increase in BMI in postmenopausal women, which was similar to the RR of 1.03 (95% CI = 1.01-1.04) reported in 2007 by pooling 17 studies.

Out of 19 studies, only two European studies (Kaaks, R. et al., 1998 , BRE04522; Manjer, J. K. 2001 , BRE17790) reported a decreased risk with confidence intervals included one. Excess heterogeneity was observed ($I^2 = 59.8%$, $p = 0.000$).

Meta-regression was performed on each of the following factors: year of publication, geographic area, length of follow-up, anthropometric measurement method and number of exposure categories, but none of these factors significantly explained the heterogeneity observed between the 19 studies included in the dose-response meta-analysis, as clarified below. Possible publication bias was observed in the funnel plot (Fig BMI8), but none of the studies showed a strong influence on the pooled risk estimate as suggested by the sensitive testing.

The NIH-AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139) and the Vermont Mammography Cohort (Reinier, K. S. et al., 2006 , BRE80038) were not included in the dose-response meta-analysis. In the NIH-AARP Diet and Health Study, a significant positive trend across BMI quantiles was reported in menopausal hormonal therapy (MHT) non-users ($p < 0.001$), but not in current MHT users ($p = 0.22$); whereas in the Vermont Mammography Cohort, they found increased BMI was associated with an increased risk of invasive breast cancer in postmenopausal women (RR = 1.9 for BMI ≥ 30 vs. BMI < 22 , 95% CI = 1.40-2.50). These two studies were included in the highest vs. lowest plot (Fig. BMI9). This highest vs. lowest plot on 27 studies presented results in BMI that were mostly positively associated with postmenopausal breast cancer, which supported the effect observed in the dose-response plot (Fig. BMI7).

Overall our results were consistent with Renehan's meta-analysis (Renehan A.G. et al., 2008). The authors reported a pooled RR from 31 studies of 1.12 (95% CI = 1.08-1.16; $I^2 = 63.9%$, $p = 0.0$) per 5kg/m² increase in BMI. Although the present analysis was generated from a smaller number of studies (31 vs 19 studies), when converted to the same unit of increment, the RR became very comparable (RR = 1.13, 95% CI = 1.08-1.18). As suggested in this paper, the association tended to be stronger in Asian-Pacific studies than in North American, European and Australian studies ($p = 0.06$). The same was not observed in the present meta-regression ($p = 0.32$) that included only two Asian-Pacific studies (Galanis, D. J. et al., 1998 , BRE03058; Iwasaki, M. et al., 2007 , BRE20027), as compared to five (Galanis, D. J. et al., 1998 , BRE03058; Iwasaki, M. et al., 2007 , BRE20027; Kuriyama, S. et al., 2005 , BRE22995; Wu, M. H. et al., 2006 , BRE24628) (Li H.L. et al., 2006) in Renehan's analysis. Three Asian-Pacific studies were not included because the number of non-cases per exposure level was missing (Kuriyama, S. et al., 2005 , BRE22995), results were not provided by menopausal status (Wu, M. H. et al., 2006 , BRE24628) and one article was published in Chinese (Li H.L. et al., 2006).

The summary risk estimate was 1.06 (95% CI = 1.05-1.08; $I^2 = 14.8%$, $p = 0.309$) per 2 units increase in BMI in the HRT non users (Fig. BMI 10), which was almost the same as the RR of 1.05 (95% CI = 1.03-1.07) observed in the postmenopausal women in general (Fig. BMI7). As for the HRT users, the EPIC study (Lahmann, P. H. et al., 2004 , BRE15804) reported a RR of 0.98 (95% CI = 0.93-1.03) for the same unit of increment in a dose-response analysis. However, as shown in the highest versus lowest forest plot (Fig. BMI11), the association

between BMI and postmenopausal breast cancer was generally stronger (risk estimates ranged from 0.96-1.10) in the other studies with HRT users than in the EPIC study; in which the women generally had a lower BMI (for extreme categories comparison: $RR_{>=28.8 \text{ vs } <=21.5} = 0.71$, 95% CI = 0.5-1.01). All the other studies had a maximum exposure category of greater or equal to 30.

In general, the positive association between BMI and breast cancer for the highest versus lowest comparison was weaker in the HRT users than in the HRT non users, but an inverse association was not observed, as in the premenopausal women (Fig. BMI11).

Published meta-analysis

In addition to the meta-analysis on BMI and breast cancer by Renehan et al. (Renehan A.G. et al., 2008) cited before, a pooled analysis of two population-based case-control studies on body size, luminal, HER2-overexpression and triple negative breast cancer in postmenopausal women was published. The analysis included 1008 luminal (hormone receptor positive), 39 HER2-overexpressing (hormone receptor negative, HER2 positive), and 77 triple-negative (hormone receptor and HER2 negative) cases. Among women not currently using menopausal hormone therapy, body mass index (BMI) and weight were associated with the risk of luminal tumors ($OR_{\text{for highest versus lowest quartiles}} = 1.7$, 95% CI = 1.2-2.4 and $OR = 1.7$, 95% CI = 1.2-2.4, respectively) and suggestively associated with risk of triple-negative tumors ($OR = 2.7$, 95% CI = 1.0-7.5 and $OR = 5.1$, 95% CI = 1.1-23.0 respectively). Neither BMI nor weight was associated with the risk of any tumor subtype among hormone therapy users (Phipps, A. I. et al., 2008).

e)Table BMI3 Inclusion and exclusion of cohort studies on body mass index and postmenopausal breast cancer

Author	Year	WCRF Code	Study name	Study type	Sub-group description	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs low forest plot	Estimated values for meta-analysis	Exclusion reasons	Included in the dose-response ¹ or high vs. low ² meta-analysis subgrouped by HRT use	Remarks
Ahn, J. et al.	2007	BRE80139	NIH- AARP Diet and Health Study	Prospective Cohort	non MHT users, postmenopausal	New study	No	Yes		Missing no. of non cases, can't estimate	Yes ²	MHT subgroups were pooled by fixed effect meta-analysis before analysis with other studies
Ahn, J. et al.	2007	BRE80139	NIH- AARP Diet and Health Study	Prospective Cohort	Current MHT users, postmenopausal	New study	No	Yes		Missing no. of non cases, can't estimate	Yes ²	MHT subgroups were pooled by fixed effect meta-analysis before analysis with other studies
Ericson, U. et al.	2007	BRE80128	Malmo Diet and Cancer	Prospective Cohort	Postmenopausal	New study	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	Malmo Diet and Cancer is a component study of EPIC
Gallicchio et al.	2007	BRE80006	BBD cohort- CLUE II	Prospective Cohort	Genotype subgroups	New study	No	No		Measured genes-diet interactions in subgroups	N/A	
Iwasaki et al.	2007	BRE20027	JPHC	Prospective Cohort	Postmenopausal	New study	Yes	Yes	Mean exposure values		N/A	
Lundqvist et al.	2007	BRE80003	Sweden,Finland Co-twin study	Nested Case Control	older subjects	New study	No	No		Results were selected from the same study with a prospective design - more cases	N/A	This study had 2 study designs (BRE80003 & BRE80002)
Lundqvist et al.	2007	BRE80002	Sweden,Finland Co-twin study	Prospective Cohort	Postmenopausal	New study	Yes	Yes			N/A	This study had 2 study designs (BRE80003 & BRE80002)
Palmer, J.R. et al.	2007	BRE80122	Black Women's Health Study	Prospective Cohort	Postmenopausal	New study	Yes	Yes	Mean exposure values		Yes ^{1,2}	Additional analysis was only performed in HRT non users
Reeves, G.K. et al.	2007	BRE80146	The Million Women Study	Prospective Cohort	Post-menop & HRT nonusers	New study	Yes	Yes			Yes ^{1,2}	

Reinier et al.	2007	BRE80038	Vermont Mammography Cohort	Prospective Cohort	Postmenopausal	New study	No	Yes		Missing no. of cases and non cases, can't estimate	N/A	
Vogel, U. et al.	2007	BRE80150	Diet, Cancer and Health	Nested Case Control	Postmenopausal	New study	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	Diet, Cancer and Health study is a component study of EPIC
Chang S.C.	2006	BRE80110	PLCO Cancer Screening Trial cohort/ BCDDP	Prospective Cohort	Postmenopausal	New study	Yes	Yes	Mean exposure values		N/A	
Krebs E.E.	2006	BRE80106	Study of Osteoporotic Fractures	Prospective Cohort	Postmenopausal	New study	Yes	Yes	Mean exposure values, no. of cases, non-cases & person-years		N/A	
Lukanova A.	2006	BRE80100	Northern Sweden Health and Disease Cohort	Prospective Cohort	Postmenopausal	New study	Yes	Yes			N/A	For the close-ended exposure categories, mid-exposure was taken. For the upper open-ended category, middle exposure plus half the width of the last exposure range was taken in estimating the dose-response slope
Mellemkjoer et al.	2006	BRE80039	Diet, Cancer and Health	Prospective Cohort	HRT never, postmenopausal	New study	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	No (pooled results from EPIC were selected instead)	Diet, Cancer and Health study is a component study of EPIC
Mellemkjoer et al.	2006	BRE80039	Diet, Cancer and Health	Prospective Cohort	HRT ever, postmenopausal	New study	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	No (pooled results from EPIC were selected instead)	Diet, Cancer and Health study is a component study of EPIC
Modugno, F. et al.	2006	BRE80137	Women's Health Initiative (WHI) Observational Study	Nested Case Control	Post-menop & HRT users	New study	No	No		Missing no. of non cases	No (format of data not appropriate)	

Modugno, F. et al.	2006	BRE80137	Women's Health Initiative (WHI) Observational Study	Nested Case Control	Post-menop & HRT non users	New study	No	No		Missing no. of non cases	No (format of data not appropriate)	
Ravn-Haren, G. et al.	2006	BRE80151	Diet, Cancer and Health	Nested Case Control	Postmenopausal	New study	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	Diet, Cancer and Health study is a component study of EPIC
Rinaldi S.	2006	BRE80101	EPIC	Nested Case Control	Postmenopausal	New study	No	No		Although more recent, less no. of cases than Lahmann PH 2004, BRE15804	N/A	
Suzuki, R.	2006	BRE80116	The Swedish Mammography Cohort	Prospective Cohort	Postmenopausal , also subgrouped by HRT use	New study	Yes	Yes	Mean exposure values		Yes ²	The 2 nd exposure category (BMI=18.5-24.9, normal weight) was used as a reference group in this study
Tehard B.	2006	BRE80103	French EPIC-E3N	Prospective Cohort	Postmenopausal	New study	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	French EPIC-E3N is a component study in EPIC
Kuriyama, S.	2005	BRE22995	Miyagi, 1993	Prospective Cohort	Postmenopausal	No	No	Yes		No. of non cases missing	N/A	
Silvera, S. A.	2005	BRE24118	Canadian National Breast Screening Study	Prospective Cohort	Postmenopausal	No	No	Yes		No. of cases & non-cases were not provided, can't estimate	N/A	
Wilfart, E et al.	2005	BRE11111	Malmö Diet and Cancer	Nested Case Control	Postmenopausal	New study	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	Malmö Diet and Cancer study is a component study in EPIC
Tehard, B.	2004	BRE12173	French EPIC-E3N	Prospective Cohort	Postmenopausal	Yes	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	French EPIC-E3N is a component study in EPIC
Ahlgren, M.	2004	BRE14201	Danish Cohort, 1930	Historical Cohort	Postmenopausal	Yes	No	No		A different exposure to BMI	N/A	Study measured BMI in childhood

Feigelson, H. S.	2004	BRE02721	CPS-II US cohort	Prospective Cohort	HRT - No, postmenopausal	No	No	Yes		No. of non cases not provided, can't estimate (2686 cases), included in HvL plot	Yes ²	Pooled HRT subgroups by fixed effect meta-analysis
Feigelson, H. S.	2004	BRE02721	CPS-II US cohort	Prospective Cohort	HRT - Yes, postmenopausal	No	No	Yes		No. of non cases not provided, can't estimate (2686 cases), included in HvL plot	Yes ²	Pooled HRT subgroups by fixed effect meta-analysis
Lahmann PH	2004	BRE15804	EPIC	Prospective Cohort	HRT - No, postmenopausal	No	Yes	Yes			Yes ^{1,2}	Data from HRT subgroups were pooled by fixed effect meta-analysis before analysing with other studies
Lahmann PH	2004	BRE15804	EPIC	Prospective Cohort	HRT - Yes, postmenopausal	No	Yes	Yes			Yes ^{1,2}	Data from HRT subgroups were pooled by fixed effect meta-analysis before analysing with other studies
Macinnis, R.J et al.	2004	BRE80159	Melbourne Collaborative Cohort Study	Prospective Cohort	Postmenopausal	No, not in the database but was referenced in the text	Yes	Yes			N/A	
Wirfalt, E.	2004	BRE17083	Malmo Diet and Cancer	Nested Case Control	Postmenopausal	Yes	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	Malmo Diet and Cancer study is a component study in EPIC
Calle, E. E.	2003	BRE01340	CPS-II US cohort	Prospective Cohort	Postmenopausal	No	No	No		Mortality data	N/A	
Chang, S.	2003	BRE18295	PLCO Cancer Screening Trial cohort/ BCDDP	Prospective Cohort	Postmenopausal	No	No	No		Superseded by Chang 2006 BRE80110	N/A	

Lahmann, P. H.	2003	BRE20119	Malmö Diet and Cancer	Prospective Cohort	Postmenopausal	No	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	Malmö Diet and Cancer is a component study in EPIC
Patel, A.V.	2003	BRE16299	CPS-II US cohort	Prospective Cohort	Postmenopausal & Lean	No	No	No		No. of non cases not provided, can't estimate (1233 cases)	N/A	
Patel, A.V.	2003	BRE16299	CPS-II US cohort	Prospective Cohort	Postmenopausal & Overweight	No	No	No		No. of non cases not provided, can't estimate (1233 cases)	N/A	
Rissanen, H.	2003	BRE17954	Mobile Clinic Health Examination Survey	Nested Case Control	Postmenopausal	Yes	No	No		Mean difference only	N/A	
Morimoto, Libby, M.	2002	BRE20457	Women's Health Initiative (WHI) Observational Study	Prospective Cohort	HRT - No, postmenopausal	No	No	Yes		missing no. of non cases, can't estimate	Yes ²	Data on HRT subgroups were pooled by a fixed effect meta-analysis before analysing with other studies
Morimoto, Libby, M.	2002	BRE20457	Women's Health Initiative (WHI) Observational Study	Prospective Cohort	HRT - Yes, postmenopausal	No	No	Yes		missing no. of non cases, can't estimate	Yes ²	Data on HRT subgroups were pooled by a fixed effect meta-analysis before analysing with other studies
Petrelli, Jennifer, M.	2002	BRE20653	CPS-II US cohort	Prospective Cohort	Postmenopausal	No	No	No		Mortality data	N/A	
Saadatian-Elahi, M.	2002	BRE21486	New York Women's Health Study	Nested Case Control	Postmenopausal	Yes	No	No		Less no. of cases although more recent publication, mean difference only	N/A	
Sellers, Thomas, A.	2002	BRE20892	Iowa Women's Health Study	Prospective Cohort	Family history of BC - No	No	Yes	Yes	Mean exposure values		N/A	Family history of BC subgroups were pooled together by fixed effect meta-analysis
Sellers, Thomas, A.	2002	BRE20892	Iowa Women's Health Study	Prospective Cohort	Family history of BC - Yes	No	Yes	Yes	Mean exposure values		N/A	Family history of BC subgroups were pooled together by fixed effect meta-analysis

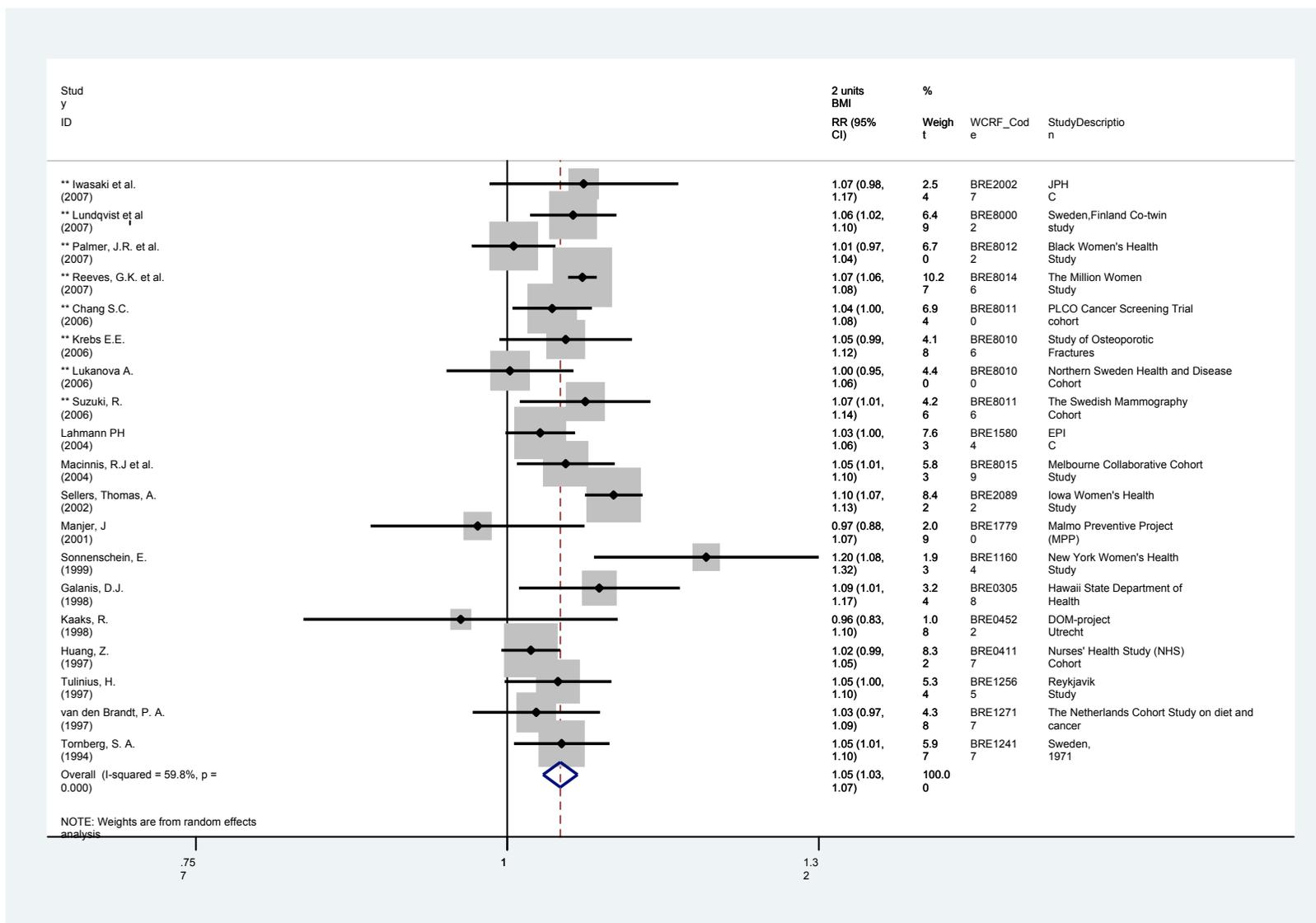
Wirfalt, E.	2002	BRE13504	Malmö Diet and Cancer	Nested Case Control	Postmenopausal	No	No	No		Selected result pooled by all EPIC centres instead, Lahmann PH 2004, BRE15804	N/A	Malmö Diet and Cancer is a component study in EPIC
Manjer, J	2001	BRE17790	Malmö Preventive Project (MPP)	Prospective Cohort	Postmenopausal	Yes	Yes	Yes	Mean exposure values		N/A	
Jumaan, A. O.	1999	BRE04514	The Swedish Mammography Cohort	Nested Case Control	Postmenopausal	Yes	No	No		Supersede by Suzuki 2006, BRE80116	N/A	
Sonnenschein, E.	1999	BRE11604	New York Women's Health Study	Prospective Cohort	Postmenopausal	Yes	Yes	Yes	Mean exposure values		N/A	
Galanis, D.J.	1998	BRE03058	Hawaii State Department of Health	Prospective Cohort	Postmenopausal	Yes	Yes	Yes	Mean exposure values		N/A	
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Prospective Cohort	Postmenopausal	Yes	Yes	Yes	Mean exposure values		N/A	
Huang, Z.	1997	BRE04117	Nurses' Health Study (NHS) Cohort	Prospective Cohort	Postmenopausal	Yes	Yes	Yes	Mean exposure values		N/A	
Tulinius, H.	1997	BRE12565	Reykjavik Study	Prospective Cohort	Postmenopausal	Yes	Yes	No		Only dose-response slope was provided – not included in the highest vs. lowest forest plot	N/A	
van den Brandt, P. A.	1997	BRE12717	The Netherlands Cohort Study on diet and cancer	Case Cohort	Postmenopausal	Yes	Yes	Yes	Mean exposure values		N/A	
den Tonkelaar, I.	1995	BRE02224	DOM-project Utrecht	Prospective Cohort	Postmenopausal	No	No	No		Supersede by Kaaks 1998, BRE0452	N/A	
Toniolo, P.	1994	BRE12398	New York Women's Health Study	Nested Case Control	Postmenopausal	Yes	No	No		Supersede by Sonnenschein 1999, BRE11604	N/A	
Tornberg, S. A.	1994	BRE12417	Sweden, 1971	Prospective Cohort	Postmenopausal	Yes	Yes	Yes	Mean exposure values, C.I.s		N/A	
Barrett-Connor, E.	1993	BRE00581	Rancho Bernardo, 1972	Prospective Cohort	Postmenopausal	Yes	No	No		Mean differences only	N/A	

De Stavola, B. L.	1993	BRE02122	Guernsey G2 and G3	Prospective Cohort	Postmenopausal	No	No	Yes		Missing no. of non cases, can't estimate	N/A
Van den Brandt, P.A.	1993	BRE16919	The Netherlands Cohort Study on diet and cancer	Prospective Cohort	Postmenopausal	No	No	No		Superseded by Van den Brandt 1993, BRE12717	N/A
den Tonkelaar, I.	1992	BRE02222	DOM-project Utrecht	Prospective Cohort	Postmenopausal	No	No	No		Superseded by Kaaks 1998, BRE04522	N/A
Gapstur, S. M.	1992	BRE03101	Iowa Women's Health Study	Prospective Cohort	Postmenopausal	Yes	No	No		Superseded by Sellers 2002, BRE20892	N/A
Graham, S.	1992	BRE03424	New York State Cohort	Prospective Cohort	Postmenopausal	No	No	Yes		Only 2 categories – included in the highest vs. lowest forest plot	N/A
Folsom, AR	1990	BRE02836	Iowa Women's Health Study	Nested Case Control	Postmenopausal	No	No	No		Superseded by Sellers 2002, BRE20892	N/A
Vatten, L. J.	1990	BRE12826	Norway National Health Screening Service	Prospective Cohort	Postmenopausal	No	No	No		A different measurement of weight to height index (g/cm ²)	N/A
Le Marchand, L.	1988	BRE15836	Hawaii 1942, 1960, 1972	Nested Case Control	Postmenopausal	No	No	Yes		Missing exposure levels	N/A
Tornberg, S. A.	1988	BRE12418	Swedish cohort, 1963	Prospective Cohort	Postmenopausal	No	No	No		Supersede by Tornberg 1994, BRE12418	N/A
Total number of articles = 58			Total number of cohort studies = 37			Total number of studies included = 17	Total number of studies included = 19	Total number of studies included = 27			Total number of studies included: HRT users = 1¹ & 5² HRT non-users = 3¹ & 7²

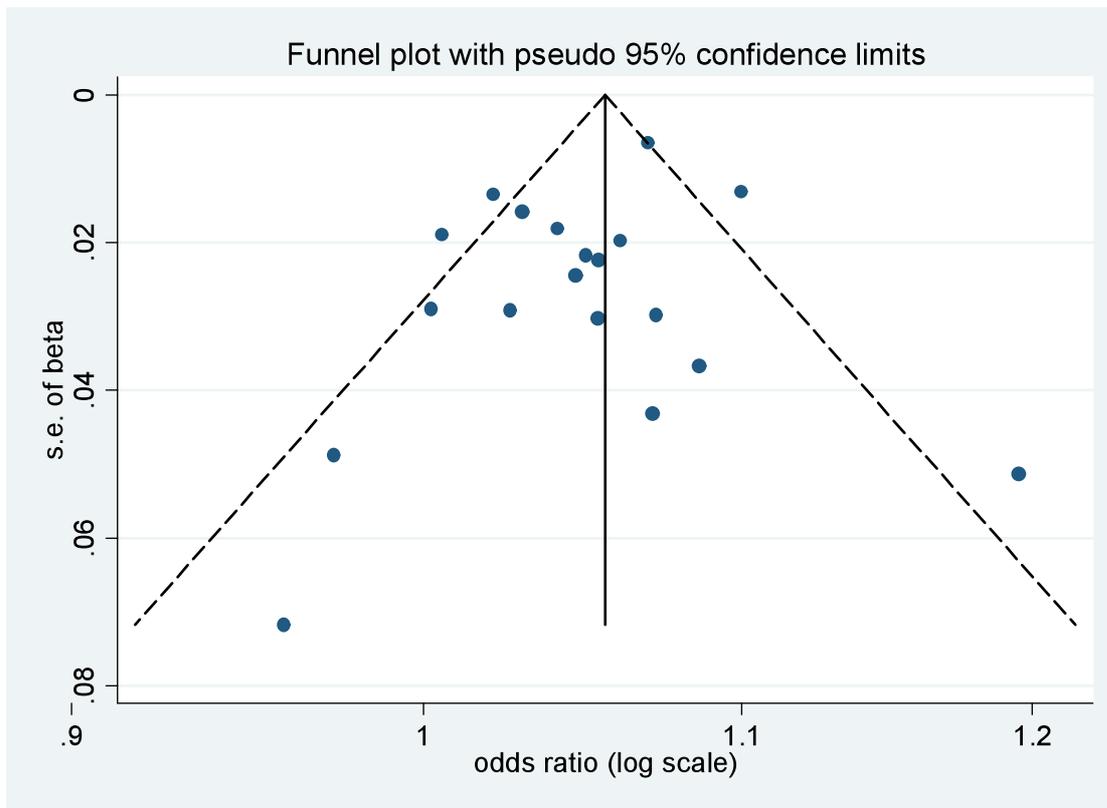
¹ Studies included in the dose-response meta-analysis by HRT use

² Studies included in the highest versus lowest forest plot by HRT use

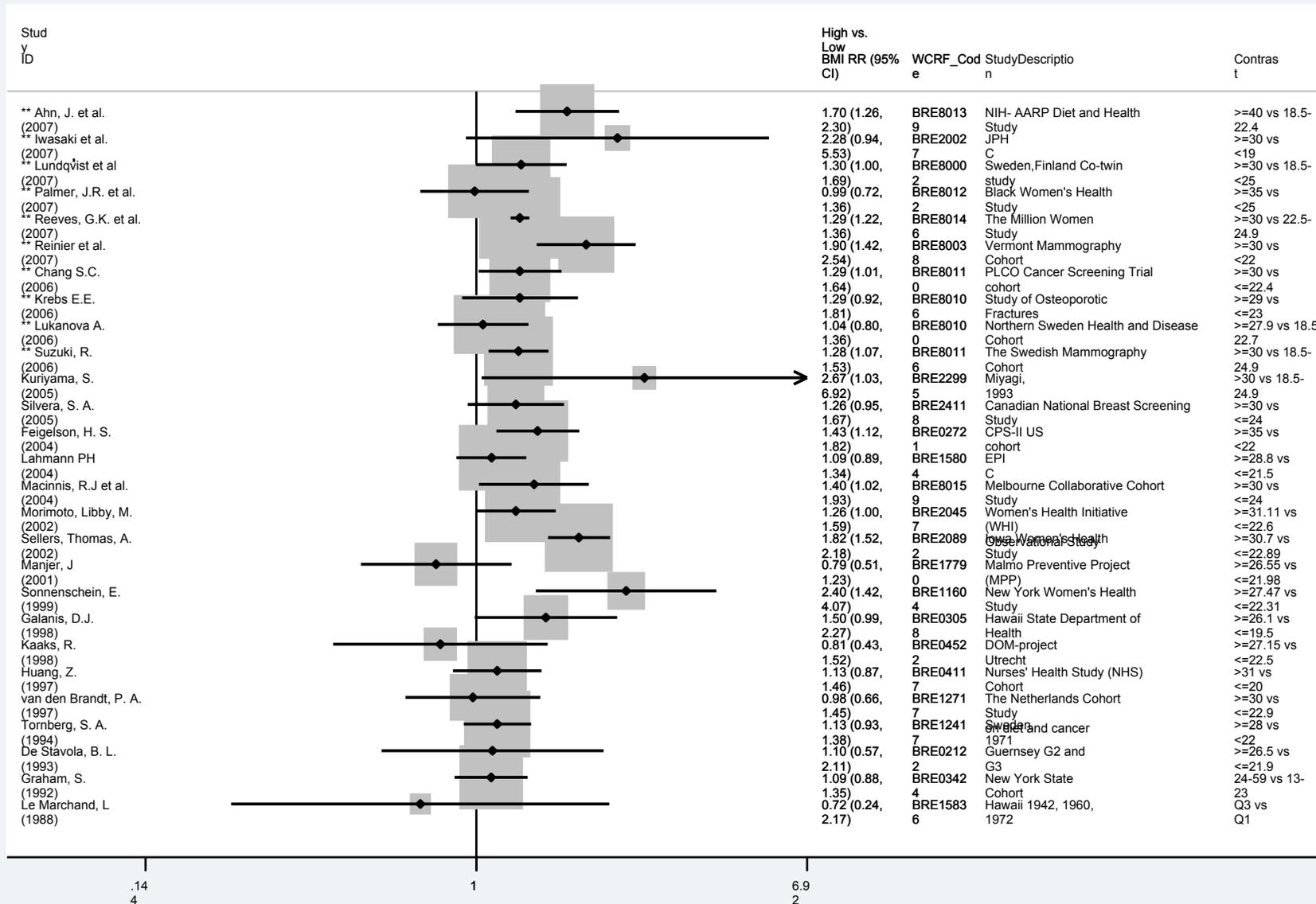
xxiii. Fig. BMI7 Dose-response meta-analysis on BMI and postmenopausal breast cancer (**=new studies identified during the update)



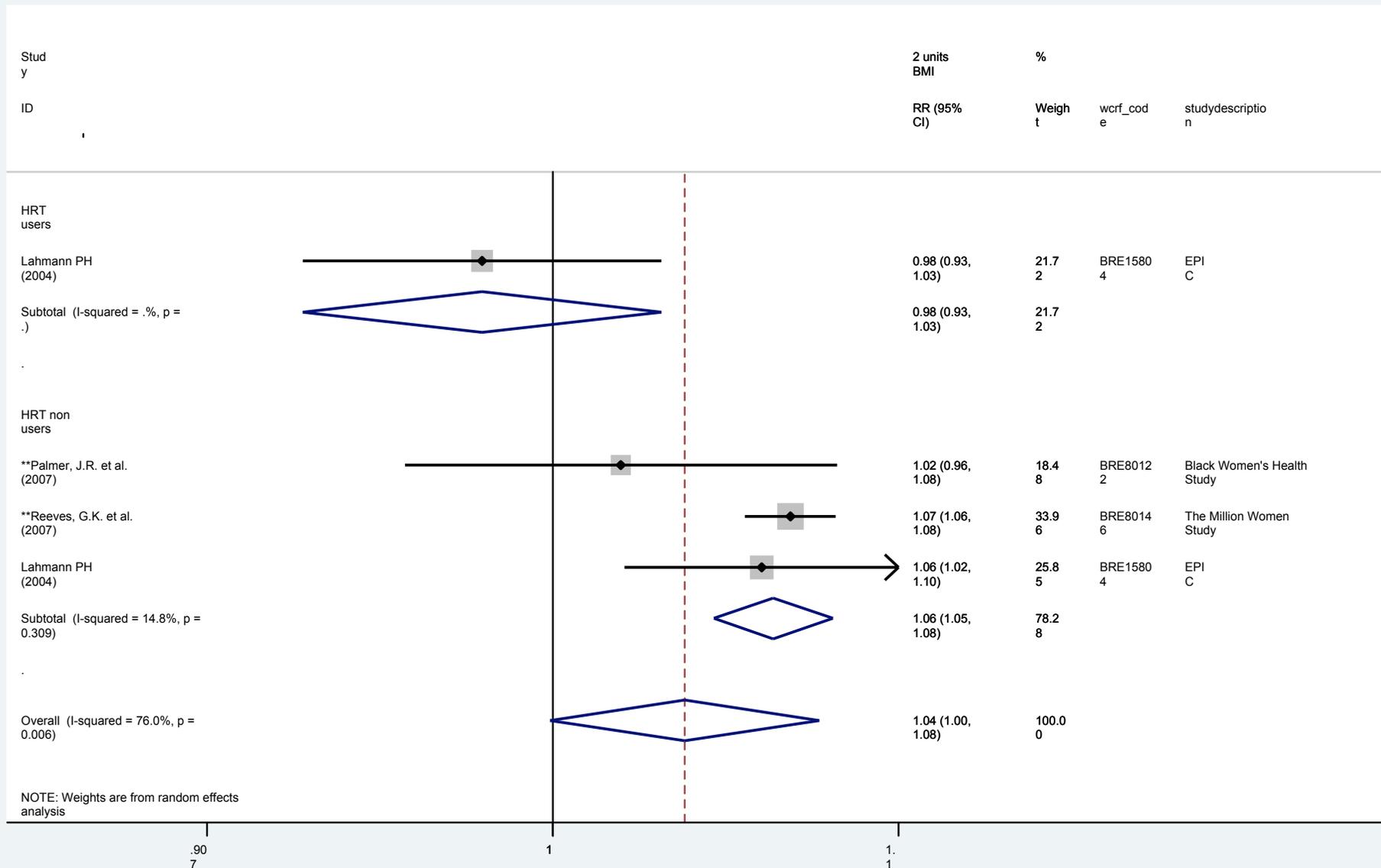
xxiv. Fig. BMI8 Funnel plot for BMI and postmenopausal breast cancer



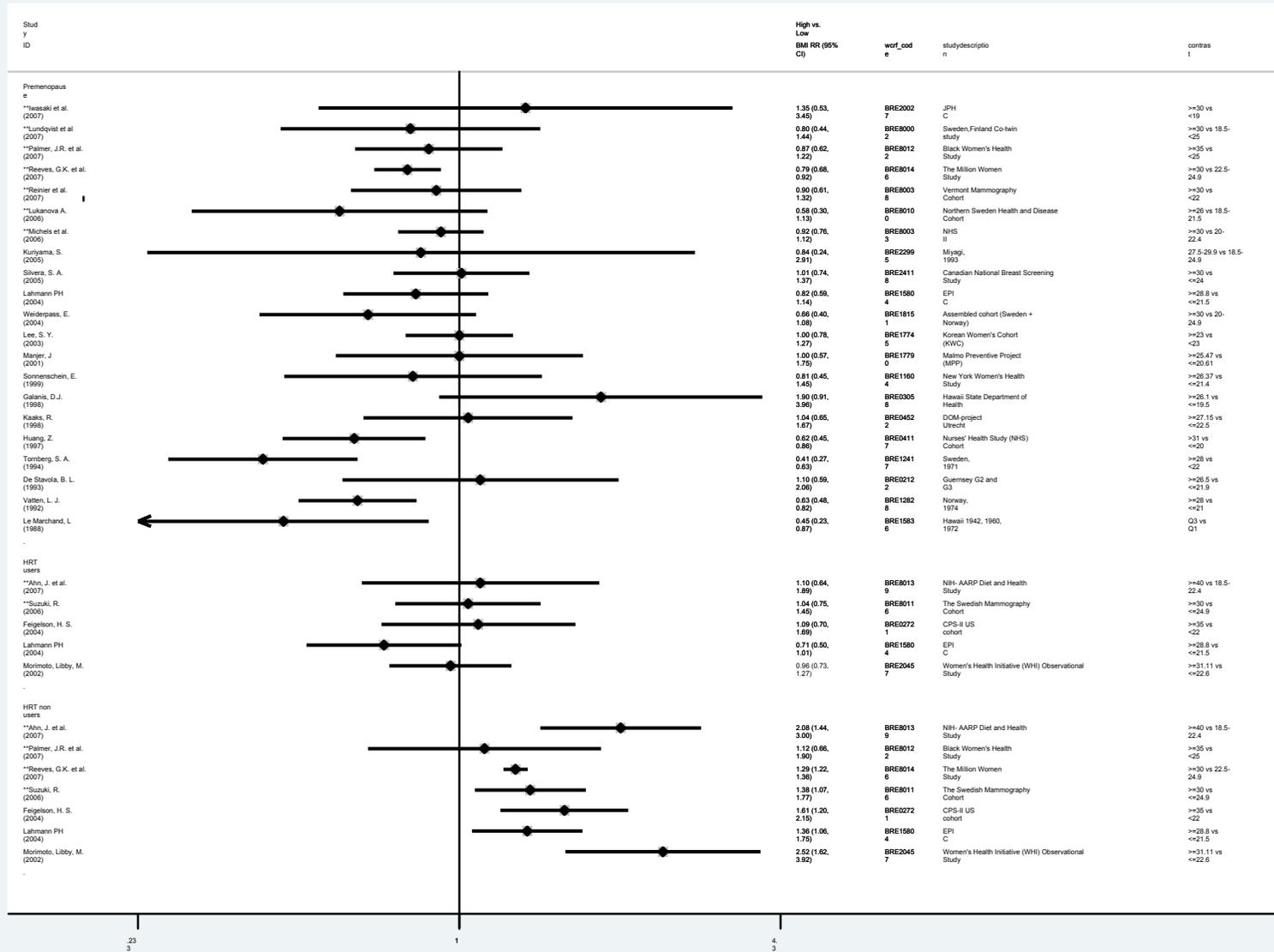
xxv. Fig. BMI9 Highest versus lowest forest plot on BMI and postmenopausal breast cancer (**=new studies identified during the update)



xxvi. Fig.BMI10 Dose-response meta-analysis on BMI and postmenopausal breast cancer by HRT use (**=new studies identified during the update)



xxvii. Fig.BMI11 Highest versus lowest forest plot on BMI and pre- and postmenopausal breast cancer by HRT use (**=new studies)



8.1.6 Weight Change

Global Report, 2007

Thirteen reports were retrieved. These included five reports from the Iowa Women's Health Study (Barnes-Josiah, D. et al., 1995 , BRE00566;Folsom, A. R. et al., 1990 , BRE02836;French, S. A. et al., 1997 , BRE02957;Harvie, M. et al., 2005 , BRE22559;Parker, E. D. F. 2003 , BRE17900), two reports from the EPIC study (Lahmann, P. H. et al., 2004 , BRE18516;Lahmann, P. H. et al., 2005 , BRE23014) and one report each from the NHANES I (Breslow, R. A. et al., 2001 , BRE01123), CPS-II (Feigelson, H. S. et al., 2004 , BRE02721), the Nurses' Health Study (Huang, Z. et al., 1997 , BRE04117), the Framingham Study (Radimer, K. L. et al., 2004 , BRE16401), the Swedish Twin Cohort (Jonsson, F. et al., 2003 , BRE04482) and the Netherlands Cohort Study on Diet and Cancer (van den Brandt, P. A. et al., 1997 , BRE12717).

Update

Five reports have been identified during the update period – the Study of Osteoporotic Fractures (Krebs, E. E. et al., 2006 , BRE80106), the NIH-AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139), the Nurses' Health Study (Eliassen, A. H. et al., 2006 , BRE80114), the CPS-II study (Feigelson, H. S. et al., 2006 , BRE80117) and the Black Women's Health Study (Palmer, J. R. et al., 2007 , BRE80122). The exposures studied were weight change, weight gain, weight change since age 18 years or 25 years.

Menopause age unspecified

No new studies identified during the update period.

Premenopause

Only the Black Women's Health study (Palmer, J. R. et al., 2007 , BRE80122) had presented data during the update period. A statistically non-significant increase risk in premenopausal breast cancer was reported ($RR_{\text{for } \geq 25 \text{ vs. } < 10 \text{ kg increase in wt since 18 years}} = 1.17, 95\% \text{ CI} = 0.90-1.52$).

Postmenopause

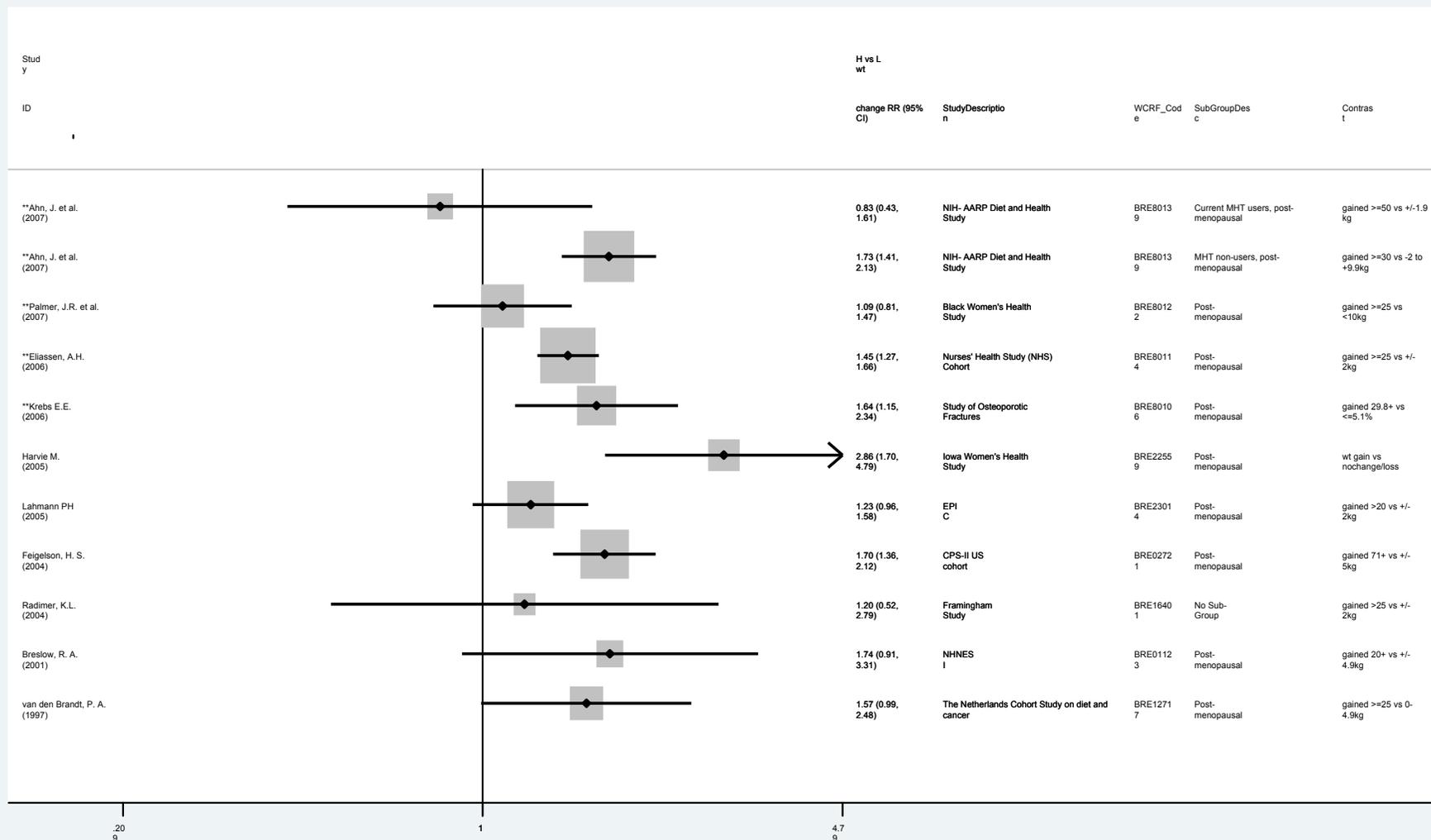
Five cohort studies - the Study of Osteoporotic Fractures (Krebs, E. E. et al., 2006 , BRE80106), the NIH-AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139), the Nurses' Health Study (Eliassen, A. H. et al., 2006 , BRE80114), the CPS-II study (Feigelson, H. S. et al., 2006 , BRE80117) and the Black Women's Health Study (Palmer, J. R. et al., 2007 , BRE80122) had reported new data on weight change and postmenopausal breast cancer. A dose-response meta-analysis was not generated as three out of four potentially included studies (Ahn, J. et al., 2007 , BRE80139;Eliassen, A. H. et al., 2006 , BRE80114;Krebs, E. E. et al., 2006 , BRE80106) had not provided appropriate data.

The results of all but one new study are shown in the plot of highest vs. lowest comparisons (Fig. Wtchange1). The exception was the CPS-II study (Feigelson, H. S. et al., 2006 , BRE80117), which investigated weight gain from 18 years and specific cancer outcomes. However, the same study had reported data on weight change and breast cancer previously

(Feigelson, H. S. et al., 2004 , BRE02721) and the previous findings were included in the plot along with the results of five other cohort studies retrieved in the SLR (Breslow, R. A. et al., 2001 , BRE01123;Harvie, M. et al., 2005 , BRE22559;Lahmann, P. H. et al., 2005 , BRE23014;Radimer, K. L. et al., 2004 , BRE16401;van den Brandt, P. A. et al., 1997 , BRE12717).

Note: The results on the menopausal hormone nonusers in the NIH-AARP Diet and Health Study were pooled from four sub-groups defined by age at menarche. Further grouping with the menopausal hormone nonusers in the same cohort was not performed as the exposure ranges were different. The Framingham study was included here as the cancer outcome investigated was late onset breast cancer.

xxviii. Fig.Wtchange1 Highest versus lowest forest plot on weight change and postmenopausal breast cancer (=new studies identified during the update)**



8.2.1 Waist Circumference

Summary of results of the dose-response meta-analysis

	Premenopausal breast cancer			
	Results unadjusted for BMI		Results adjusted for BMI	
	2nd Report	Continuous update	2nd Report	Continuous update
Studies (n)	2	4	-	2
Cases (n)		998		671
RR (95% CI) (8 cm increase)	1.04(0.92-1.16)	0.97 (0.90-1.05)	-	1.12 (1.00-1.25)
Heterogeneity	67.5 %(0-92.7%)	39.9%,p=0.172	-	0%,p=0.578

	Postmenopausal breast cancer			
	Results unadjusted for BMI		Results adjusted for BMI	
	2nd Report	Continuous update	2nd Report	Continuous update
Studies (n)	4	7	-	3
Cases (n)		2856		4119
RR (95% CI) (8 cm increase)	1.05(1.00-1.10)	1.07 (1.04-1.10)	-	1.04 (1.00-1.06)
Heterogeneity	0 %(0-85.5%)	6.3%,p=0.380	-	16.7%,p=0.301

Note: In the 2nd report studies adjusted and not adjusted for BMI were pooled together.

Overall summary

During the update (closure date Dec 2007) seven articles from prospective cohort or case-control studies nested in cohorts investigating the relationship of waist circumference with breast cancer risk were published: the Black Women's Health Study, USA (Palmer, J. R. et al., 2007 , BRE80122) the Study of Osteoporotic Fractures, USA (Krebs, E. E. et al., 2006 , BRE80106) the NIH- AARP Diet and Health Study, USA (Ahn, J. et al., 2007 , BRE80139), the European Prospective Investigation into Cancer (EPIC) (Rinaldi, S. et al., 2006 , BRE80101) and one report each from the three cohorts included in the EPIC study - the Malmo Diet and Cancer Study (Wirfalt, E. et al., 2005 , BRE11111), the Diet, Cancer and Health study (Mellemkjaer, L. et al., 2006 , BRE80039) and the French EPIC-E3N study (Tehard, B. 2006 , BRE80103).

Overall, there are results from 19 reports of cohort studies (12 retrieved in the SLR and seven retrieved in the continuous update). All 19 reports present data on postmenopausal women but

only five have additionally reported results on premenopausal women. One Chinese study published in 2005 did not specify menopausal status (Wu, M. H. et al., 2006 , BRE24628).

First, meta-analyses by menopausal status were performed using results from the models indicated as best-adjusted models, i.e. models that were maximally adjusted but without further adjustment of BMI. Second, we conducted further meta-analyses including only the results additionally adjusted for BMI. This is different from the meta-analysis performed in 2005, when the studies had been pooled regardless of the BMI adjustment. In the Global Report, two pre-menopausal studies were included in the dose-response meta-analysis. The model selected for Huang et al. (Huang, Z. et al., 1999 , BRE04118) was additionally adjusted for BMI, while Kaaks et al. (Kaaks, R. et al., 1998 , BRE04522) was not. For the post-menopausal analysis, three out of the four studies included did not have BMI accounted for (Folsom, A. R. et al., 1990 , BRE02836;Kaaks, R. et al., 1998 , BRE04522;Mattisson, I. W. 2004 , BRE17807); but the selected model for Huang et al. (Huang, Z. et al., 1999 , BRE04118) was.

Premenopause

Cohort studies identified in the Jan 2006 – Dec 2007 update

Only two studies had published waist circumference and premenopausal breast cancer data during the update period – the Black Women’s Health Study (Palmer, J. R. et al., 2007 , BRE80122) and the French EPIC-E3N study (Tehard, B. 2006 , BRE80103).

Studies selected for the dose-response meta-analysis

Four out of five studies (Huang, Z. et al., 1999 , BRE04118;Kaaks, R. et al., 1998 , BRE04522;Palmer, J. R. et al., 2007 , BRE80122;Tehard, B. 2006 , BRE80103) with data unadjusted for BMI had provided appropriate format of data to be included in the dose-response meta-analysis. The EPIC study (Lahmann, P. H. et al., 2004 , BRE15804) was excluded from this analysis because the number of non-cases women by category was not reported in the article and it could not be estimated from the data. Reasons for exclusions are in Table W1.

Results

Waist circumference was not significantly related to premenopausal breast cancer in the dose-response meta-analysis ($RR_{\text{for 8 cm increase}} = 0.97$, 95%CI = 0.90-1.05) (Fig W1). There was not significant evidence of heterogeneity ($I^2 = 39.9\%$, $p = 0.172$). The results are similar to what was observed in the SLR, where the overall estimate obtained by pooling two studies was 1.04 (95% CI = 0.92-1.16) for the same increment of waist circumference.

The small number of studies did not allow the examination of publication bias. In sensitivity testings, there was no indication of strong influence from any of the four studies on the pooled risk estimate.

Two studies presented results additionally adjusted for BMI, the EPIC study (Lahmann, P. H. et al., 2004 , BRE15804) and the Nurses’ Health Study (Huang, Z. et al., 1999 , BRE04118). The overall estimate of these two studies was borderline statistically significant ($RR_{\text{for 8 cm increase}} = 1.12$, 95% CI = 1.00-1.25, $I^2 = 0\%$, $p = 0.578$). In both studies waist circumference was related to risk of premenopausal breast cancer only after accounting for overall obesity. In the EPIC study, the $RR_{\text{highest vs. lowest}}$ was 1.07 (95% CI = 0.77-1.48) before and 1.81 (95% CI = 1.11-2.97) after adjustment for BMI. In the Nurses’ the $RR_{\text{highest vs. lowest}}$ was 0.90 (95% CI = 0.52-1.55) before adjustment for BMI and 1.74 (95% CI = 0.74-4.07) after adjustment. The highest versus lowest forest plots supported the results of the dose-response meta-analysis (Figs W3 and W4).

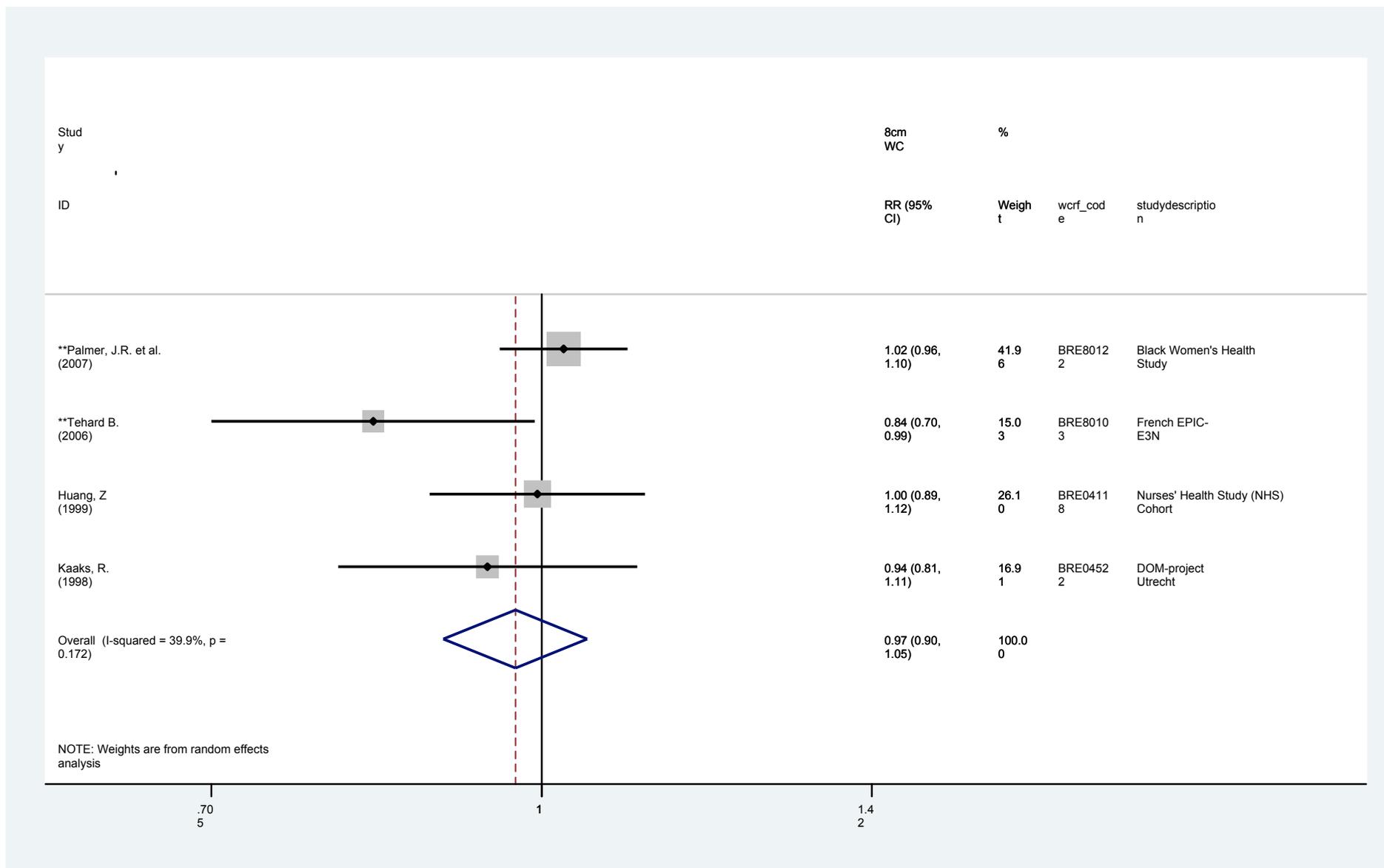
f)Table W1 Inclusion and exclusion of cohort studies on waist circumference and premenopausal breast cancer

Author	Year	WCRF Code	Study name	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs low forest plot	Estimated values for meta-analysis	Exclusion reasons	Remarks
Palmer, J.R. et al.	2007	BRE80122	Black Women's Health Study	Prospective Cohort	New study	Yes ¹	Yes ¹	Mean exposure values		
Tehard B.	2006	BRE80103	French EPIC-E3N	Prospective Cohort	New study	Yes ¹	No	Mean exposure values	Excluded from high vs. low plot as pooled results from EPIC was selected instead	French EPIC-E3N is a component study of EPIC; when appropriate, either data from this study or data pooled from all EPIC centres presented in the Lahmann PH 2004 BRE15804 paper were used
Lahmann PH	2004	BRE15804	EPIC	Prospective Cohort	No	Yes ²	Yes ^{1,2}		No. of non-cases were not provided on the results not adjusted for BMI, can't estimate	
Huang, Z	1999	BRE04118	Nurses' Health Study (NHS) Cohort	Prospective Cohort	Yes	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values		
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Prospective Cohort	Yes	Yes ¹	Yes ¹	Mean exposure values		
Total no. of articles=5			Total no. of cohort studies=5		Total no. of studies included=2	Total no. of studies included=4¹& 2²	Total no. of studies=4¹& 2²			

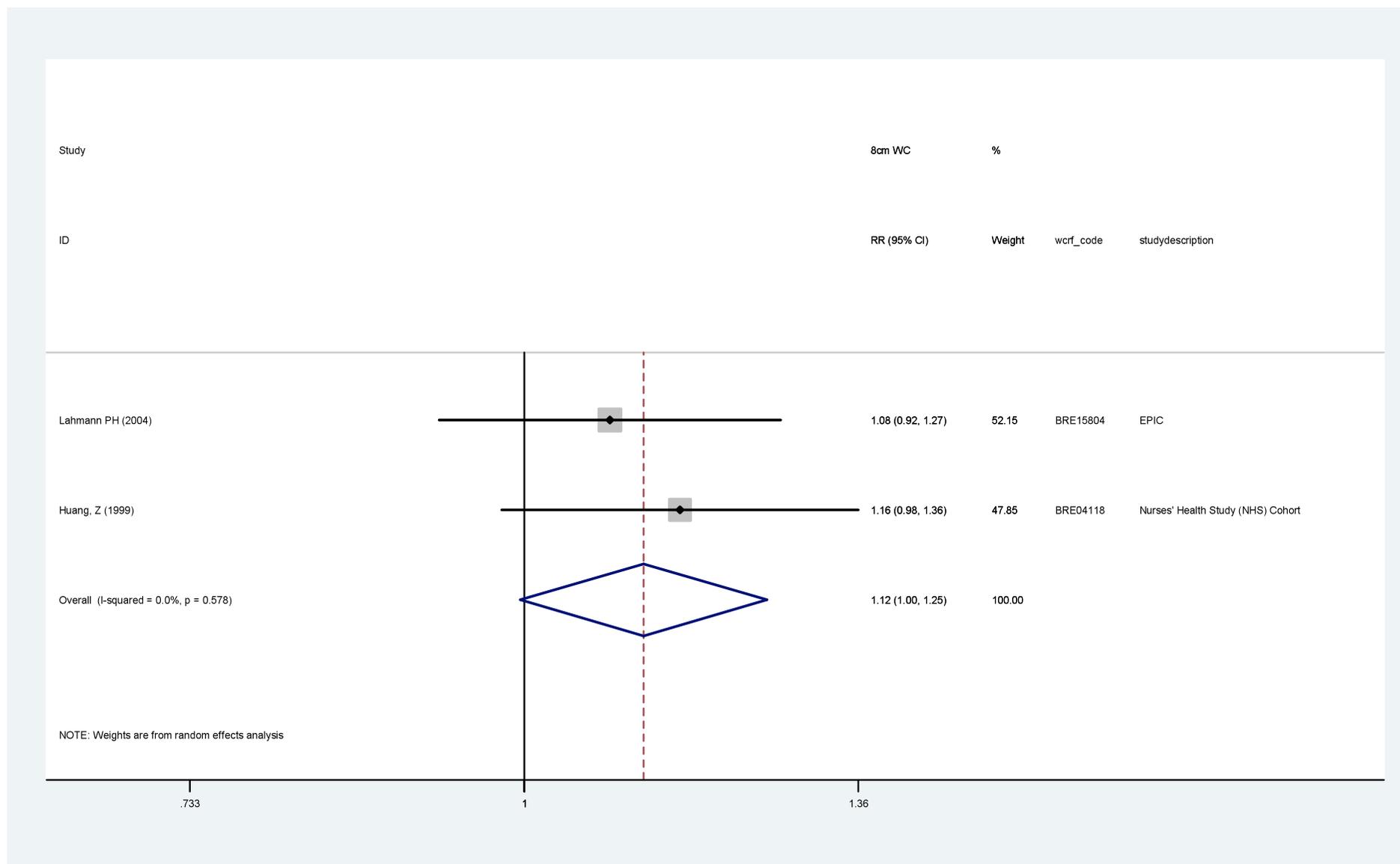
¹Results from a model not adjusted for BMI

²Results from a model adjusted for BMI

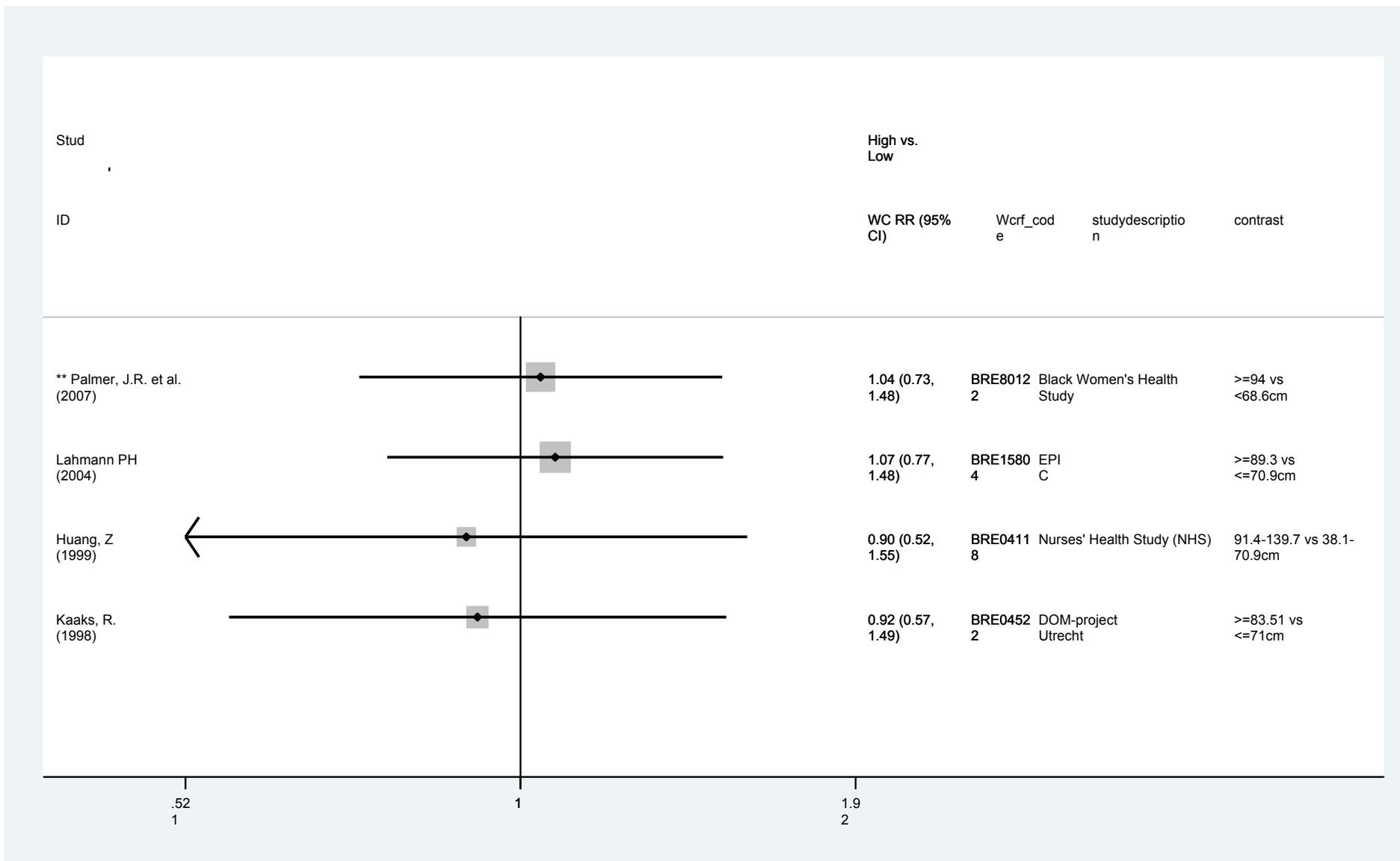
xxix. Fig. W1 Dose-response meta-analysis on waist circumference and premenopausal breast cancer, results unadjusted for BMI (=new studies)**



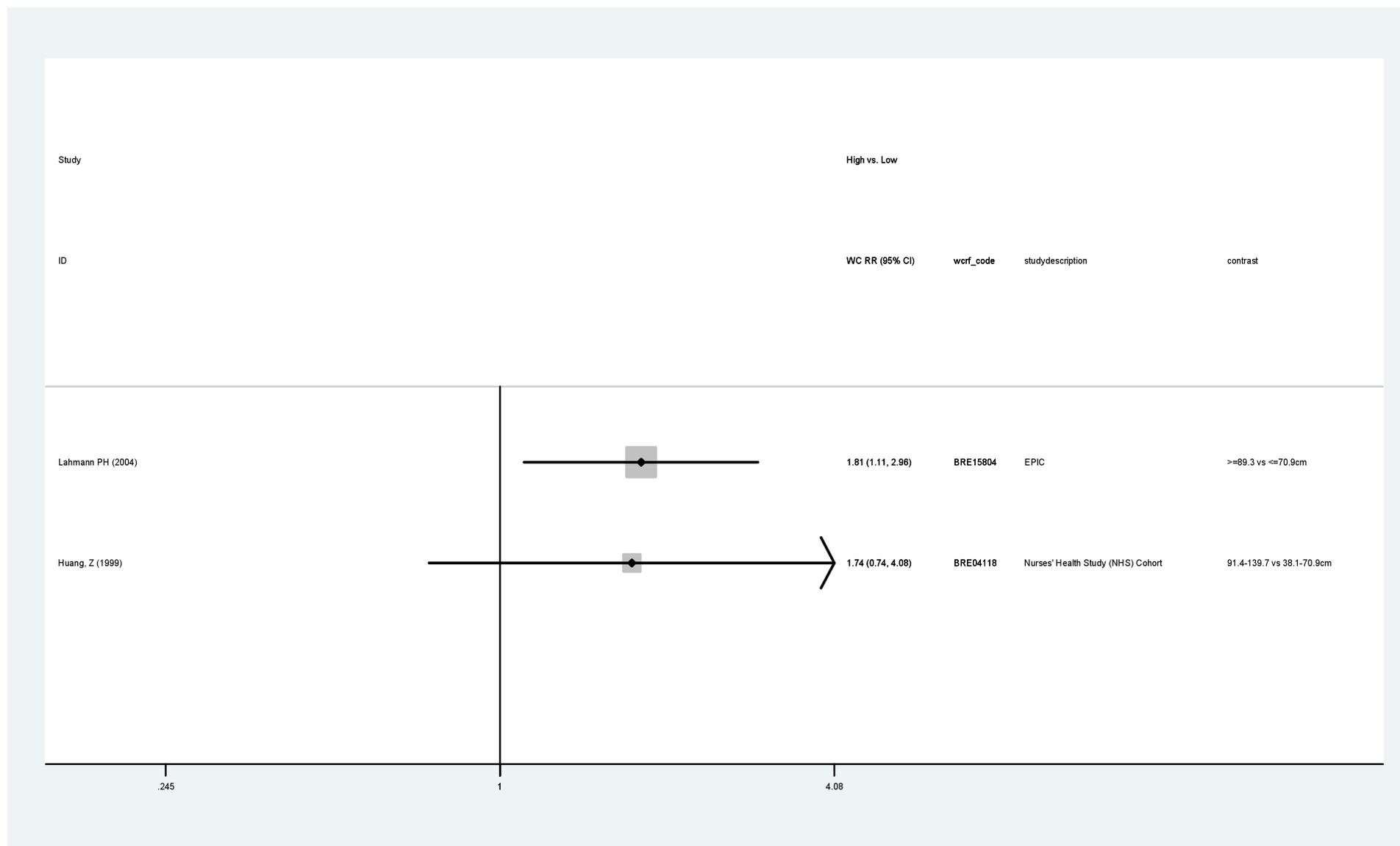
xxx. Fig. W2 Dose-response meta-analysis on waist circumference and premenopausal breast cancer, results adjusted for BMI



xxxi. Fig. W3 Highest versus lowest forest plot on waist circumference and premenopausal breast cancer, results unadjusted for BMI



xxxii. Fig. W4 Highest versus lowest forest plot on waist circumference and premenopausal breast cancer, results adjusted for BMI



Postmenopause

Cohort studies identified in the Jan 2006 – Dec 2007 update

Seven prospective cohort or nested case-control studies had published results on waist circumference and postmenopausal breast cancer during the update period (Ahn, J. et al., 2007 , BRE80139; Krebs, E. E. et al., 2006 , BRE80106; Mellekjaer, L. et al., 2006 , BRE80039; Palmer, J. R. et al., 2007 , BRE80122; Rinaldi, S. et al., 2006 , BRE80101; Tehard, B. 2006 , BRE80103; Wirfalt, E. et al., 2005 , BRE11111). This included a report from the EPIC study (Rinaldi, S. et al., 2006 , BRE80101) and three other reports from its component study centres in Sweden (Wirfalt, E. et al., 2005 , BRE11111), Denmark (Mellekjaer, L. et al., 2006 , BRE80039) and France (Tehard, B. 2006 , BRE80103).

Studies selected for the dose-response meta-analysis

Ten reports from six different cohort studies were excluded from the meta-analysis: the NIH-AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139), the Women Health Initiative (Morimoto, Libby et al., 2002 , BRE20457), the Diet Cancer and Health study (Mellekjaer, L. et al., 2006 , BRE80039), the E3N-EPIC study (Tehard, B. 2006 , BRE80103), five different reports of the Malmo Diet and Cancer (Lahmann, P. H. et al., 2003 , BRE20119; Mattisson, I. W. 2004 , BRE17807; Wirfalt, E. et al., 2002 , BRE13504; Wirfalt, E. et al., 2004 , BRE17083; Wirfalt, E. et al., 2005 , BRE11111) and one report of the DOM Project, Netherlands (Den Tonkelaar, I. et al., 1995 , BRE02224).

Seven studies with appropriate format of data were included in the meta-analysis on BMI unadjusted results. Amongst them, a report of the EPIC study (3580 cases) (Rinaldi, S. et al., 2006 , BRE80101), a report of the Iowa's Women Health Study (227 cases) (Folsom, A. R. et al., 1990 , BRE02836) and of the DOM Project (275 cases) (Kaaks, R. et al., 1998 , BRE04522). Reasons for exclusions are detailed in Table W2.

Results

The updated meta-analysis including results of seven studies confirms the results of the meta-analysis of four studies in the SLR for the 2007 Global Report (Fig W5). The estimates of the updated meta-analysis attained statistical significance ($RR_{\text{for 8 cm increase}} = 1.07$, 95% CI = 1.04-1.10). The association was borderline statistical significance in the 2007 Report ($RR_{\text{for 8 cm increase}} = 1.05$, 95% CI = 1.00-1.10).

There was no significant heterogeneity across study results ($I^2 = 6.3\%$, $p = 0.380$). Sensitivity testing performed by omitting one study at a time did not show strong influence of any of the seven studies on the pooled risk estimate.

The meta-analysis of three studies reporting results adjusted for BMI showed similar results to the meta-analysis of studies not adjusted for BMI (Fig W6) ($RR_{\text{for 8 cm increase}} = 1.04$, 95% CI = 1.00-1.06). Although the number of studies is limited, these results suggest that body fat distribution may be related to breast cancer independently of overall adiposity in pre- but not in postmenopausal women. The results are supported by the highest versus lowest forest plots (Figs W8, W9).

g)Table W2 Inclusion and exclusion of cohort studies on waist circumference and postmenopausal breast cancer

Author	Year	WCRF Code	Study name	Sub-groups description	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs. low forest plot	Estimated values for meta-analysis	Exclusion reasons	Remarks
Ahn, J et al.	2007	BRE80139	NIH-AARP Diet and Health Study	Current MHT users	Prospective Cohort	New study	No	Yes ¹		Missing numbers of non-cases, categorical analysis	MHT users and non-users were pooled by fixed effect meta-analysis
Ahn, J et al.	2007	BRE80139	NIH-AARP Diet and Health Study	Non MHT users	Prospective Cohort	New study	No	Yes ¹		Missing numbers of non-cases, categorical analysis	MHT users and non-users were pooled by fixed effect meta-analysis
Palmer, J.R. et al.	2007	BRE80122	Black Women's Health Study	Postmenopausal	Prospective Cohort	New study	Yes ¹	Yes ¹	Mean exposure values		
Krebs E.E.	2006	BRE80106	Study of Osteoporotic Fractures	Postmenopausal	Prospective Cohort	New study	Yes ¹	Yes ¹	Mean exposure values, no. of cases, non-cases & person-years		
Rinaldi S.	2006	BRE80101	EPIC	Postmenopausal	Nested Case Control	New study	Yes ¹	Yes ¹			Only results unadjusted for BMI were provided
Mellekjoer et al.	2006	BRE80039	Diet, Cancer and Health	HRT never	Prospective Cohort	New study	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ²	
Mellekjoer et al.	2006	BRE80039	Diet, Cancer and Health	HRT ever	Prospective Cohort	New study	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ²	

Tehard B.	2006	BRE80103	French EPIC-E3N	Postmenopausal	Prospective Cohort	New study	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ²	
Wilfart, E et al.	2005	BRE11111	Malmo Diet and Cancer	Postmenopausal	Nested Case Control	New study	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ² ; mean difference only	
Lahmann PH	2004	BRE15804	EPIC	HRT-yes	Prospective Cohort	No	Yes ²	Yes ²			Only results adjusted for BMI had the appropriate format to include in the dose-response meta-analysis; HRT – yes and no subgroups were pooled by a fixed effect meta-analysis
Lahmann PH	2004	BRE15804	EPIC	HRT-no	Prospective Cohort	No	Yes ²	Yes ²			Only results adjusted for BMI had the appropriate format to include in the dose-response meta-analysis; HRT – yes and no subgroups were pooled by a fixed effect meta-analysis
Macinnis, R.J et al.	2004	BRE80159	Melbourne Collaborative Cohort Study	Postmenopausal	Prospective Cohort	No, not in database but was referenced in the report	Yes ¹	Yes ¹			
Mattisson, I.	2004	BRE17807	Malmo Diet and Cancer	Postmenopausal	Prospective Cohort	Yes	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ² ; mean difference	

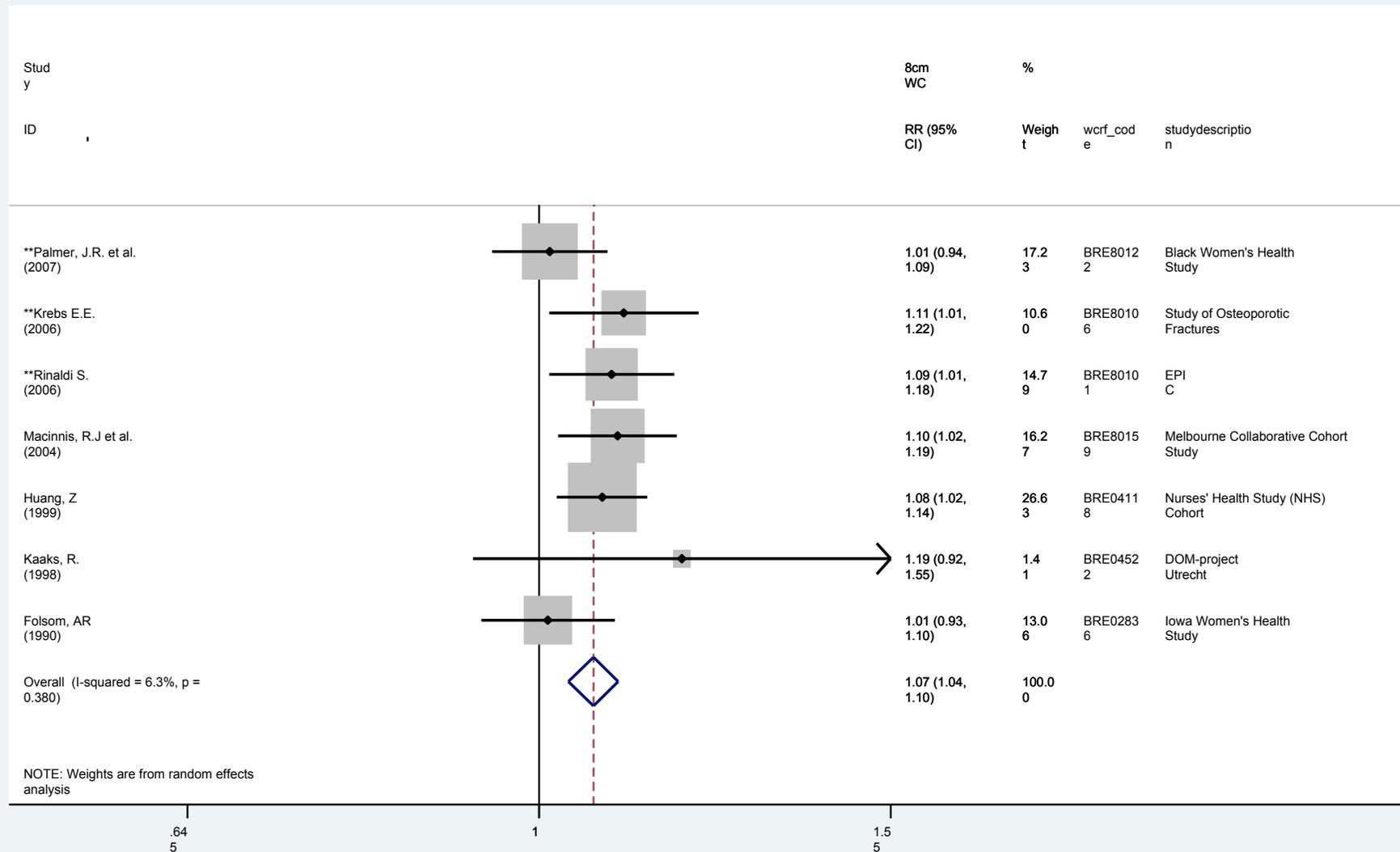
										only	
Wirfalt, E.	2004	BRE17083	Malmö Diet and Cancer	Postmenopausal	Nested Case Control	No	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ² ; mean difference only	
Lahmann, P.H.	2003	BRE20119	Malmö Diet and Cancer	Postmenopausal	Prospective Cohort	No	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ²	
Morimoto, Libby, M.	2002	BRE20457	Women's Health Initiative (WHI) Observational Study	HRT-no	Prospective Cohort	No	No	Yes ¹		Missing number of non-cases, can't estimate as analyses were subgrouped by HRT status	HRT-no and yes users were grouped by fixed effect meta-analysis
Morimoto, Libby, M.	2002	BRE20457	Women's Health Initiative (WHI) Observational Study	HRT-yes	Prospective Cohort	No	No	Yes ¹		Missing number of non-cases, can't estimate as analyses were subgrouped by HRT status	HRT-no and yes users were grouped by fixed effect meta-analysis
Sellers, Thomas, A.	2002	BRE20892	Iowa Women's Health Study	Family history BC – No, postmenopausal	Prospective Cohort	No	Yes ²	Yes ²	Mean exposure values		Combined with family history of breast cancer - yes using fixed effect meta-analysis, model was further adjusted for BMI
Sellers, Thomas, A.	2002	BRE20892	Iowa Women's Health Study	Family history BC – Yes, postmenopausal	Prospective Cohort	No	Yes ²	Yes ²	Mean exposure values		Combined with family history of breast cancer - no using fixed effect meta-analysis, model was further adjusted for BMI

Wirfalt, E.	2002	BRE13504	Malmo Diet and Cancer	Postmenopausal	Nested Case Control	No	No	No		Pooled results on EPIC were selected instead from Rinaldi, 2006 BRE80101 ¹ & Lahmann PH, 2004 BRE15804 ² ; mean difference only	
Huang, Z	1999	BRE04118	Nurses' Health Study (NHS)	Postmenopausal	Prospective Cohort	Yes	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values		
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Postmenopausal	Prospective Cohort	Yes	Yes ¹	Yes ¹	Mean exposure values		
den Tonkelaar, I.	1995	BRE02224	DOM-project Utrecht	Postmenopausal	Prospective Cohort	No	No	No		Superseded by Kaaks 1998, BRE04522	
Folsom, AR	1990	BRE02836	Iowa Women's Health Study	Postmenopausal	Nested Case Control	Yes	Yes ¹	Yes ¹			
Total no. of articles=19			Total no. of cohort studies=12			Total no. of studies included=4	Total no. of studies included =7¹& 3²	Total no. of studies included =9¹& 3²			

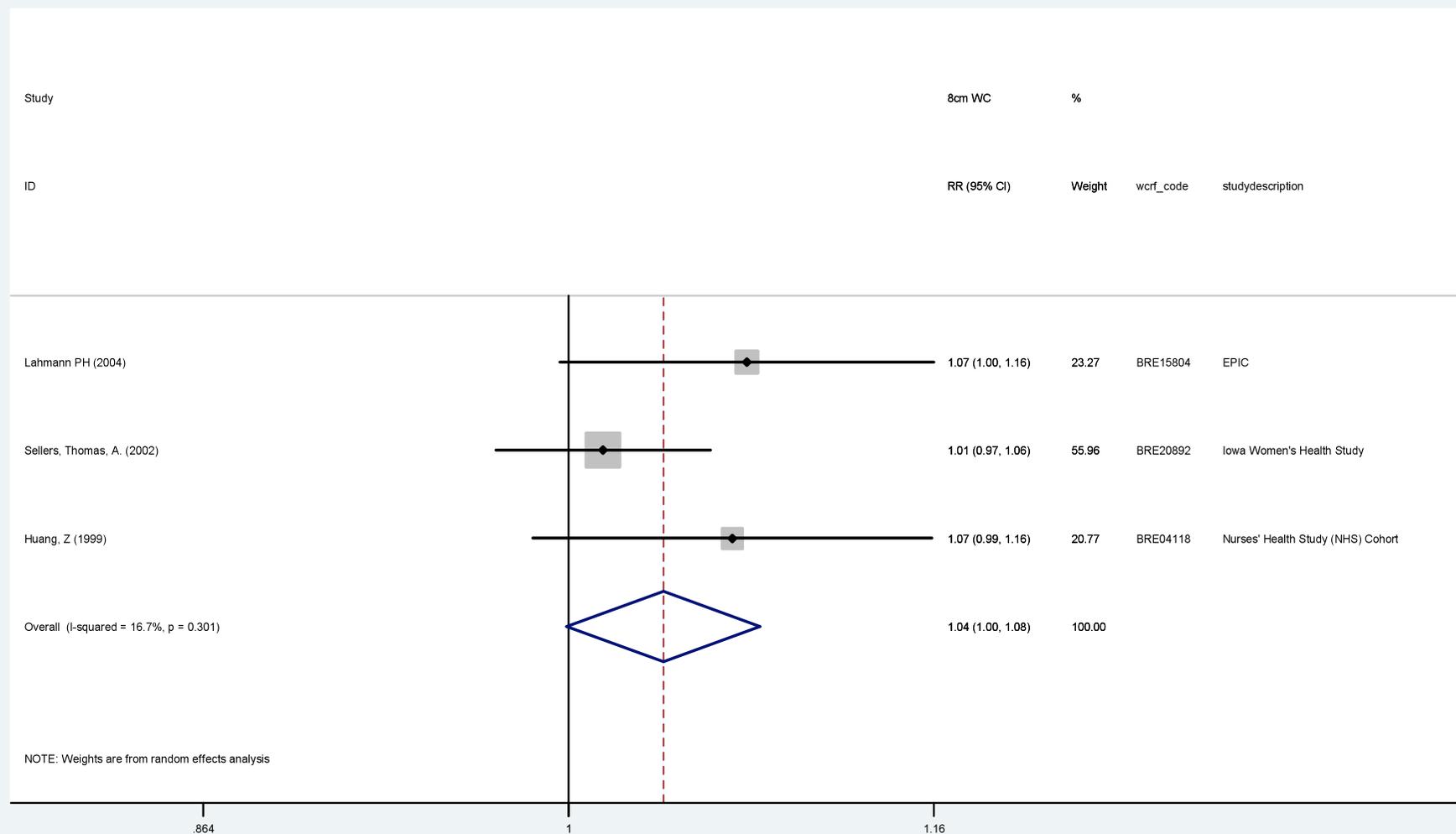
¹Results from a model not adjusted from BMI

²Results from a model adjusted from BMI

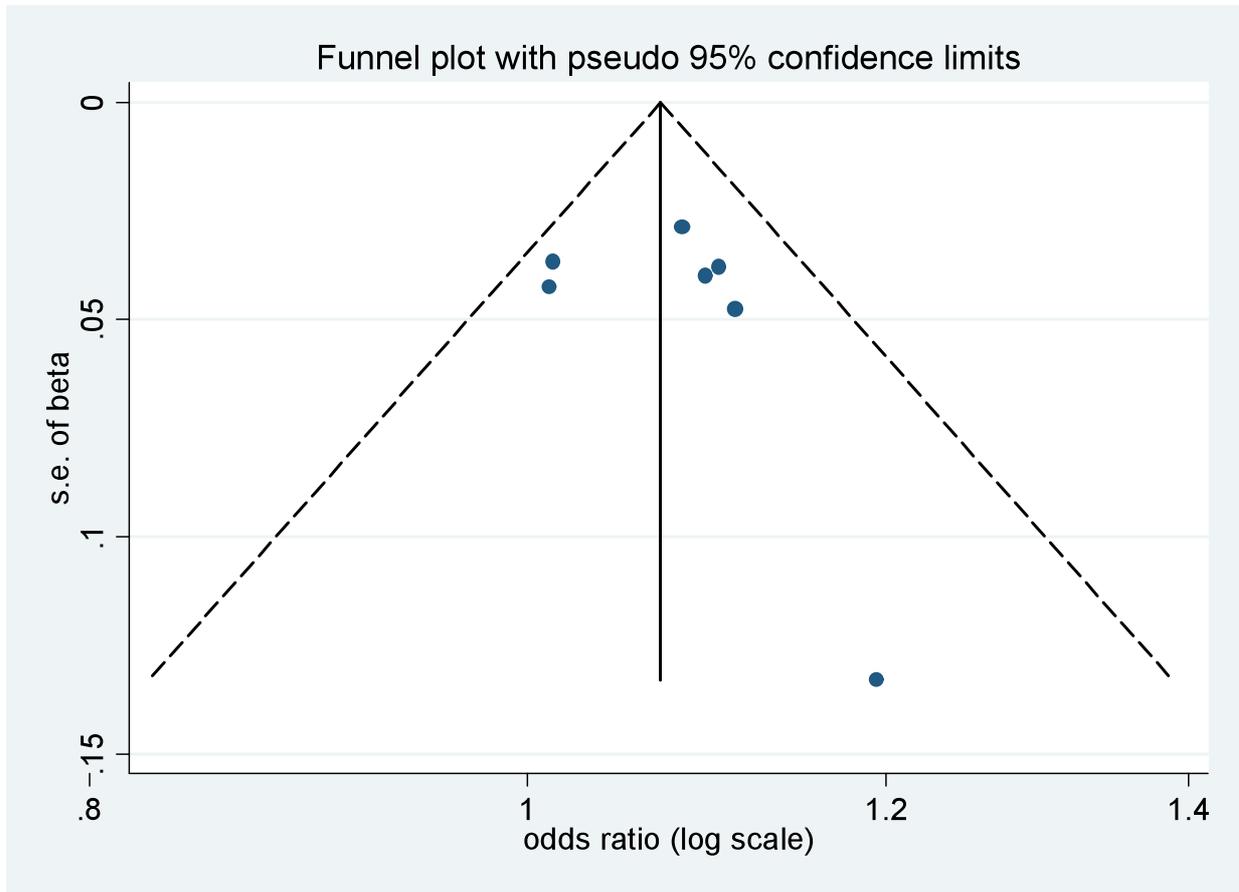
xxxiii. Fig. W5 Dose-response meta-analysis on waist circumference and postmenopausal breast cancer, results unadjusted for BMI (= new studies identified during the update)**



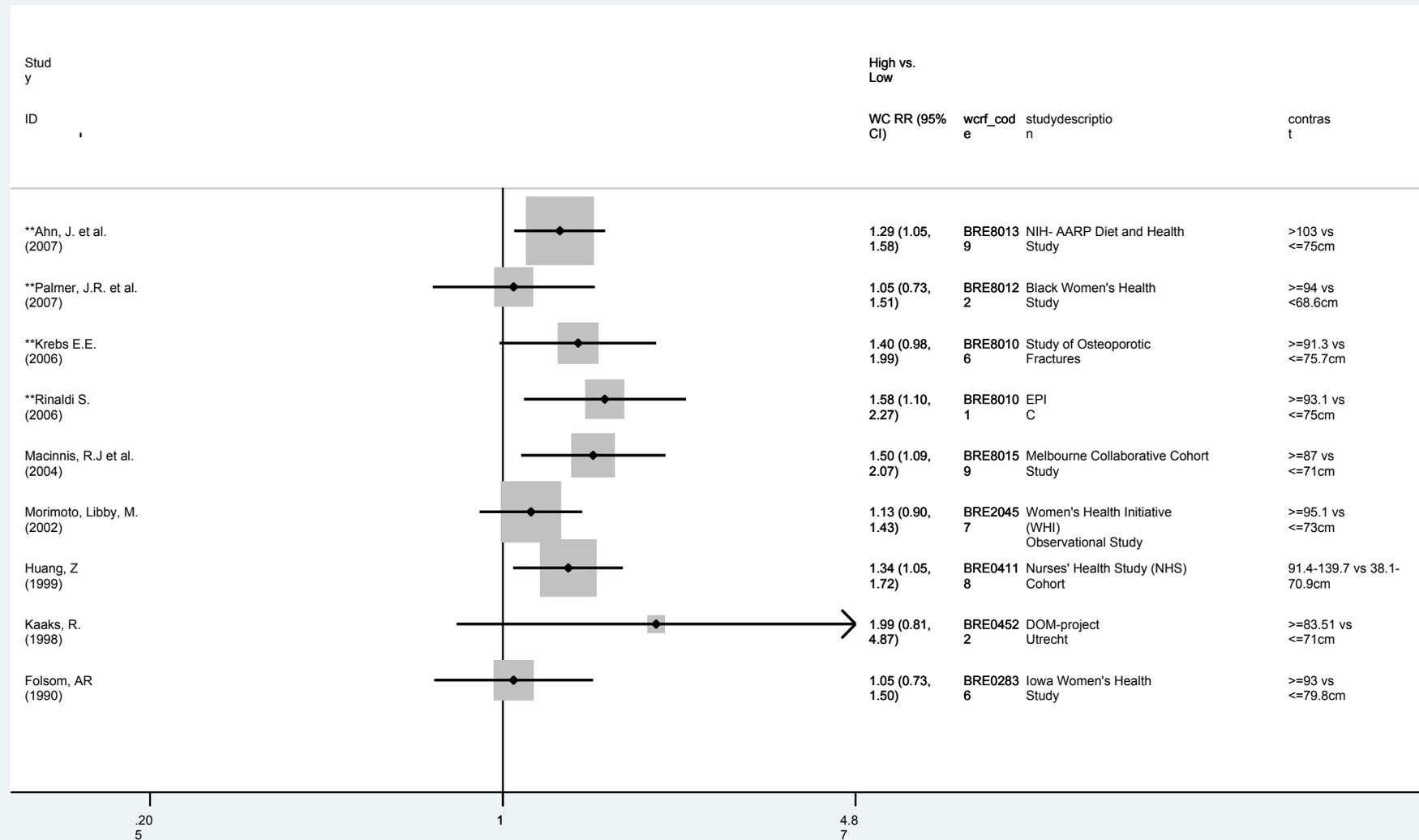
xxxiv. Fig. W6 Dose-response meta-analysis on waist circumference and postmenopausal breast cancer, results adjusted for BMI



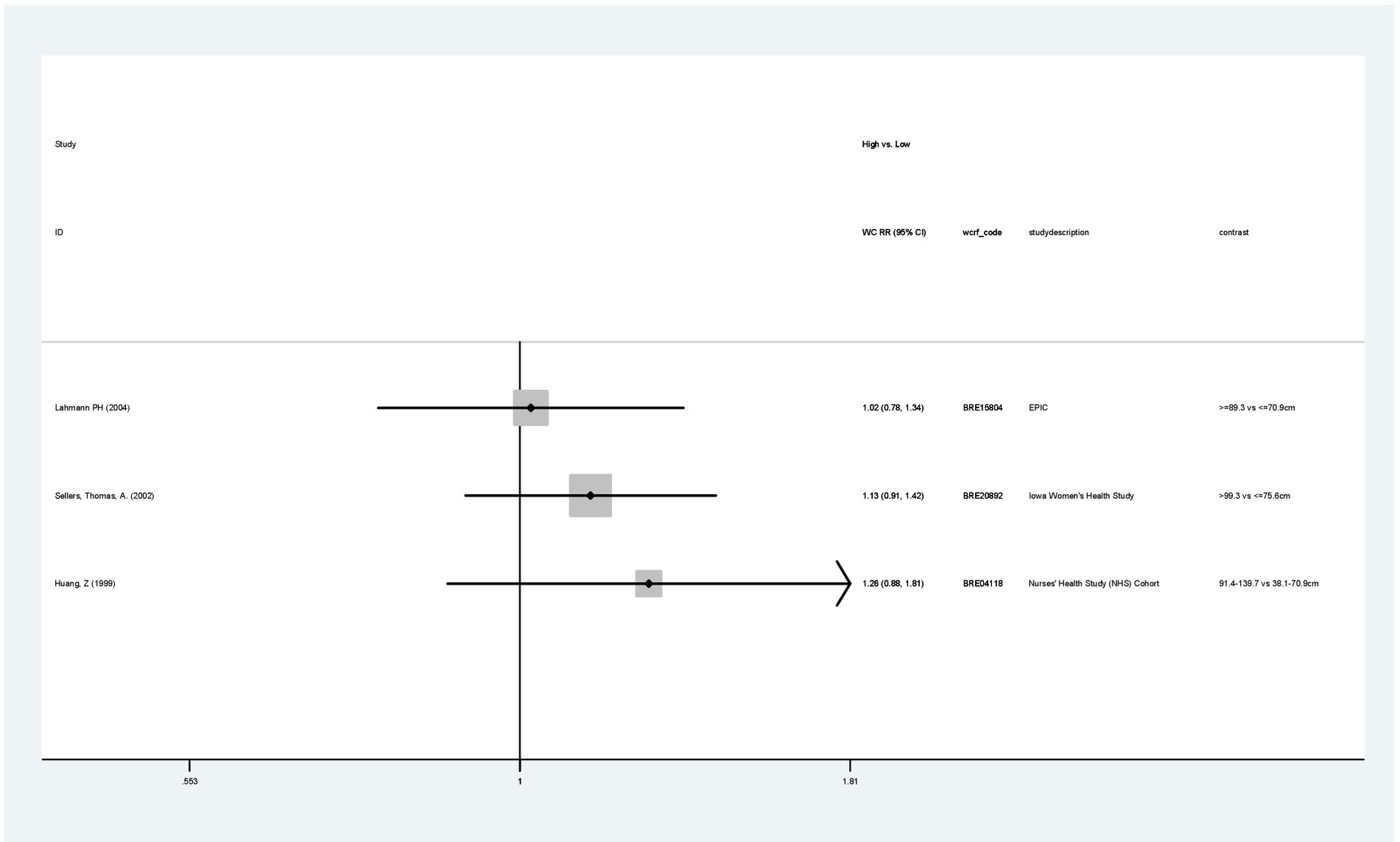
xxxv. Fig. W7 Funnel plot for waist circumference and postmenopausal breast cancer, results unadjusted for BMI



xxxvi. Fig. W8 Highest versus lowest forest plot on waist circumference and postmenopausal breast cancer, results unadjusted for BMI (=new studies identified during the update)**



xxxvii. Fig. W9 Highest versus lowest forest plot on waist circumference and postmenopausal breast cancer, results adjusted for BMI



8.2.3 Waist to hip ratio

Summary of results of the dose-response meta-analysis

Premenopausal breast cancer				
	Results unadjusted for BMI		Results adjusted for BMI	
	2nd Report	Continuous update	2nd Report	Continuous update
Studies (n)	3	6	-	4
Cases (n)		1169		844
RR (95% CI) (0.1 unit increase)	1.20(1.01-1.44)	1.07 (0.90-1.26)	-	1.24(0.91-1.67)
Heterogeneity (I ²)	36.0%(0.0- 79.5%)	59.2%, p=0.031	-	75.6%, p=0.006

Postmenopausal breast cancer				
	Results unadjusted for BMI		Results adjusted for BMI	
	2nd Report	Continuous update	2nd Report	Continuous update
Studies (n)	5	11	-	5
Cases (n)		4648		3857
RR (95% CI) (0.1 unit increase)	1.19(1.10-1.28)	1.09(1.00-1.19)	-	1.03(0.95-1.12)
Heterogeneity (I ²)	45.5%(0.0- 80.0)	63.1%, p=0.003	-	30.3%, p=0.220

Note: In the 2nd report studies adjusted and not adjusted for BMI were pooled together.

Overall summary

Six cohort studies had provided data on waist to hip ratio (WHR) during the update period - the EPIC study (Rinaldi, S. et al., 2006 , BRE80101) and its component studies - Diet, Cancer and Health (Mellekjaer, L. et al., 2006 , BRE80039) and French EPIC-E3N study (Tehard, B. 2006 , BRE80103); the Study of Osteoporotic Fractures (Krebs, E. E. et al., 2006 , BRE80106), the Black Women's Health Study (Palmer, J. R. et al., 2007 , BRE80122) and the NIH-AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139). In addition were the Melbourne Collaborative Cohort Study (Macinnis, R. J. et al., 2004 , BRE80159) published in 2004, which was referenced in the Global Report only and the ORDET study (Muti, P. et al.,

2000, BRE80180) published in 2000, which was missed in the Global Report. A total of 15 cohorts had provided 20 reports on WHR since the beginning of the WCRF/AICR review.

First, meta-analyses by menopausal status were performed using results from the models indicated as best-adjusted models, i.e. models that were maximally adjusted but without further adjustment of BMI. Second, we conducted further meta-analyses including only the results additionally adjusted for BMI. This is different from the meta-analysis of the SLR-2006, when the studies had been pooled regardless of the BMI adjustment.

In the Global Report, three pre-menopausal studies were included in the dose-response meta-analysis. The models selected for Huang et al. (Huang, Z. et al., 1999 , BRE04118) and Sonnenschein et al. (Sonnenschein, E. et al., 1999 , BRE11604) were additionally adjusted for BMI, while Kaaks et al. (Kaaks, R. et al., 1998 , BRE04522) was not. The same two studies with data that had BMI accounted for were also included in the post-menopausal analysis, but the remaining three studies were not (Gapstur, S. M. et al., 1992 , BRE03101;Kaaks, R. et al., 1998 , BRE04522;Wirfalt, E. et al., 2004 , BRE17083).

Menopause age unspecified

No new study had reported data during the update period.

Premenopause

Cohort studies identified in the Jan 2006-Dec 2007 update

Only two new prospective cohort studies – the Black Women’s Health Study (Palmer, J. R. et al., 2007 , BRE80122) and the French EPIC-E3N study (Tehard, B. 2006 , BRE80103) were identified over the update period.

Studies selected for the dose-response meta-analysis unadjusted for BMI

Together with four other studies retrieved in the SLR database, six studies with appropriate format of data were included in the dose-response meta-analysis unadjusted for BMI (Muti, P. et al., 2000, BRE80180, Huang, Z. et al., 1999 , BRE04118;Kaaks, R. et al., 1998 , BRE04522;Palmer, J. R. et al., 2007 , BRE80122;Sonnenschein, E. et al., 1999 , BRE11604;Tehard, B. 2006 , BRE80103). The EPIC study (Lahmann, P. H. et al., 2004 , BRE15804) was not included as the dose-response slope provided was derived from a BMI adjusted model. A total of 1169 cancer cases were included (Table WHR1).

Studies selected for the dose-response meta-analysis adjusted for BMI

Only four studies - the EPIC study (1879 cases), the Nurses’ Health Study (1037 cases), the New York Women’s Health study (259 cases) and the ORDET study (70 cases) were included in the dose-response meta-analysis adjusted for BMI (Huang, Z. et al., 1999 , BRE04118;Lahmann, P. H. et al., 2004 , BRE15804;Sonnenschein, E. et al., 1999 , BRE11604, Muti, P. et al., 2000, BRE80180). There were 844 cancer cases in this analysis. The study selection process is detailed in Table WHR1.

Results

No association was observed between WHR and premenopausal breast cancer in the dose-response meta-analysis that was not adjusted for BMI ($RR_{\text{for 0.1 unit increase}}=1.07$, 95% CI = 0.90-1.26). Among these six studies, only the French EPIC-E3N study reported a decrease in risk that was statistically significant (Tehard, B. 2006 , BRE80103) (Fig WHR1).

When BMI was taken into account, the risk estimate for an increment of 0.1 unit in WHR was 1.24, (95% CI = 0.91-1.67) (Fig WHR2). Both analyses were not statistically significant and excess heterogeneity between the studies were observed ($I^2 = 59.2\%$, $p = 0.031$; $I^2=75.6\%$, $p = 0.006$ respectively).

Only Huang et al. (Huang, Z. et al., 1999 , BRE04118), Sonnenschein et al. (Sonnenschein, E. et al., 1999 , BRE11604) and Muti et al. (Muti, P. et al., 2000, BRE80180) had reported data both with and without BMI additionally accounted for. As shown in Figs.WHR1 and WHR2, an increased in risk was observed in all three studies when BMI was adjusted ($RR_{\text{BMI adjusted}} = 1.20$ vs. $RR_{\text{BMI not adjusted}} = 1.09$; $RR_{\text{BMI adjusted}} = 1.56$ vs. $RR_{\text{BMI not adjusted}} = 1.48$ and $RR_{\text{BMI adjusted}} = 1.86$ vs. $RR_{\text{BMI not adjusted}} = 1.51$ respectively). This is one of the reasons why as compared to the BMI unadjusted model presented in this report, a stronger summary RR was reported in the Global Report ($RR_{\text{for 0.1 unit increase}}=1.20$, 95% CI = 1.01-1.44), where models that were additionally adjusted for BMI were selected from Huang's and Sonnenschein's reports.

Also, the contribution of each study towards the summary RR changed after new studies were added to the analysis. Previously in the Global Report, the Nurses' Health Study was a main contributor (weight = 54.5%), while in the present analyses, this study weighted 19.93% & 29.28% respectively in the BMI unadjusted and BMI adjusted analyses.

The number of studies was quite small to fully investigate the heterogeneity between the studies. Nevertheless meta-regression was performed on each of the following factors: year of publication, ethnicity, geographic area, length of follow-up, anthropometric measurement method and number of exposure categories. None of these factors could significantly explain the heterogeneity observed. No publication bias was observed (Fig WHR3) and none of the studies showed a strong influence on the pooled risk estimate as suggested by the sensitivity testing.

The results are supported by the highest versus lowest forest plots. (Figs WHR4, WHR5).

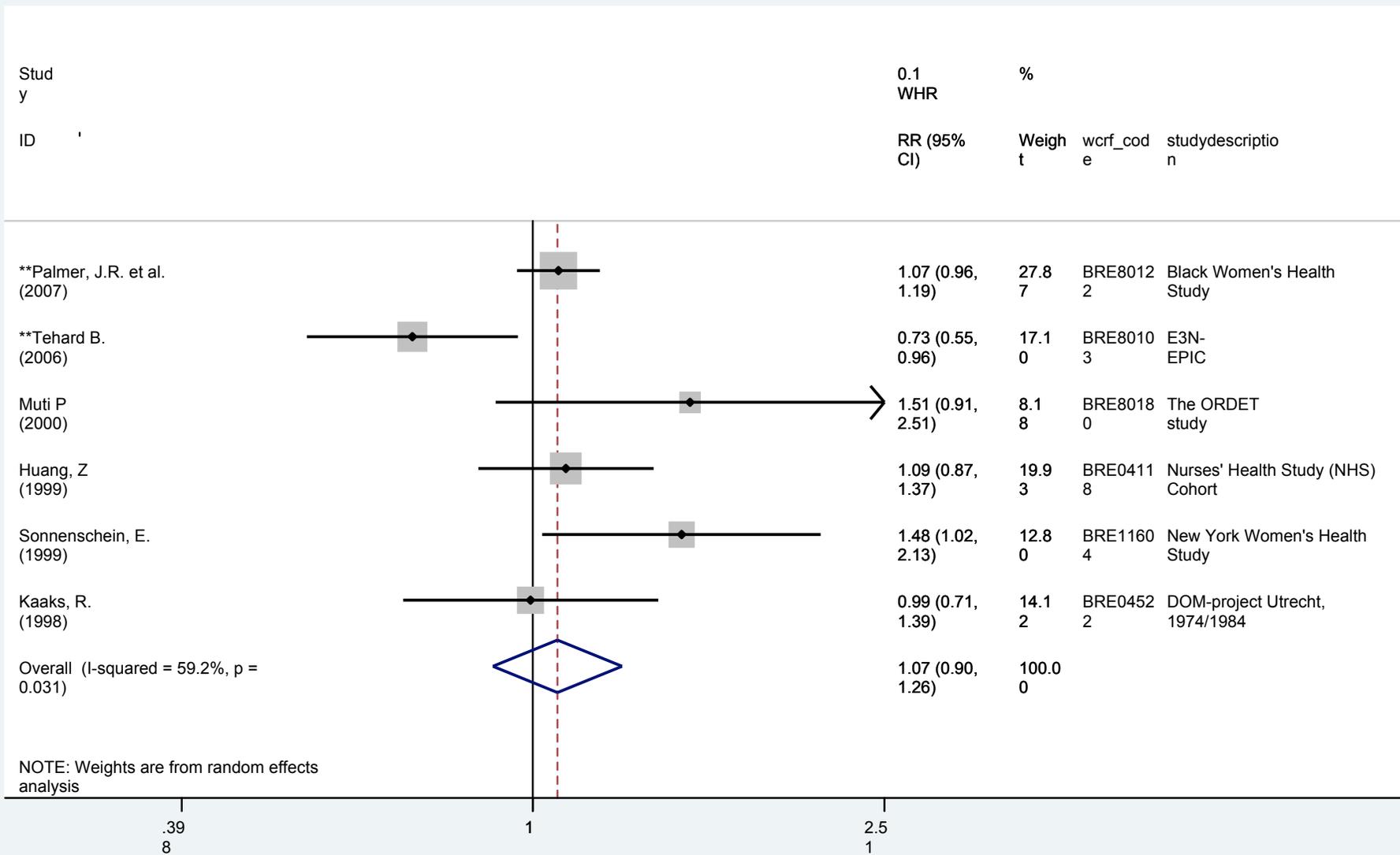
h)Table WHR1 Inclusion and exclusion of cohort studies on waist to hip ratio and premenopausal breast cancer

Author	Year	WCRF Code	Study name	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs. low forest plot	Estimated values for meta-analysis	Remarks
Palmer, JR. et al.	2007	BRE80122	Black Women's Health Study	Prospective Cohort	New study	Yes ¹	Yes ¹	Mean exposure values	
Tehard B.	2006	BRE80103	French EPIC-E3N	Prospective Cohort	New study	Yes ¹	No	Mean exposure values	French EPIC-E3N is a component study of EPIC
Lahmann PH.	2004	BRE15804	EPIC	Prospective Cohort	No	Yes ²	Yes ^{1,2}		
Muti, P.	2000	BRE80180	The ORDET study	Nested case-control	No	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values	
Huang, Z.	1999	BRE04118	Nurses' Health Study (NHS) Cohort	Prospective Cohort	Yes	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values	
Sonnenschein, E.	1999	BRE11604	New York Women's Health Study	Prospective Cohort	Yes	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values	
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Prospective Cohort	Yes	Yes ¹	Yes ¹	Mean exposure values	
Total no. of articles = 7			Total no. of studies = 7		Total no. of studies included = 3	Total no. of studies included = 6¹ & 4²	Total no. of studies included = 6¹ & 4²		

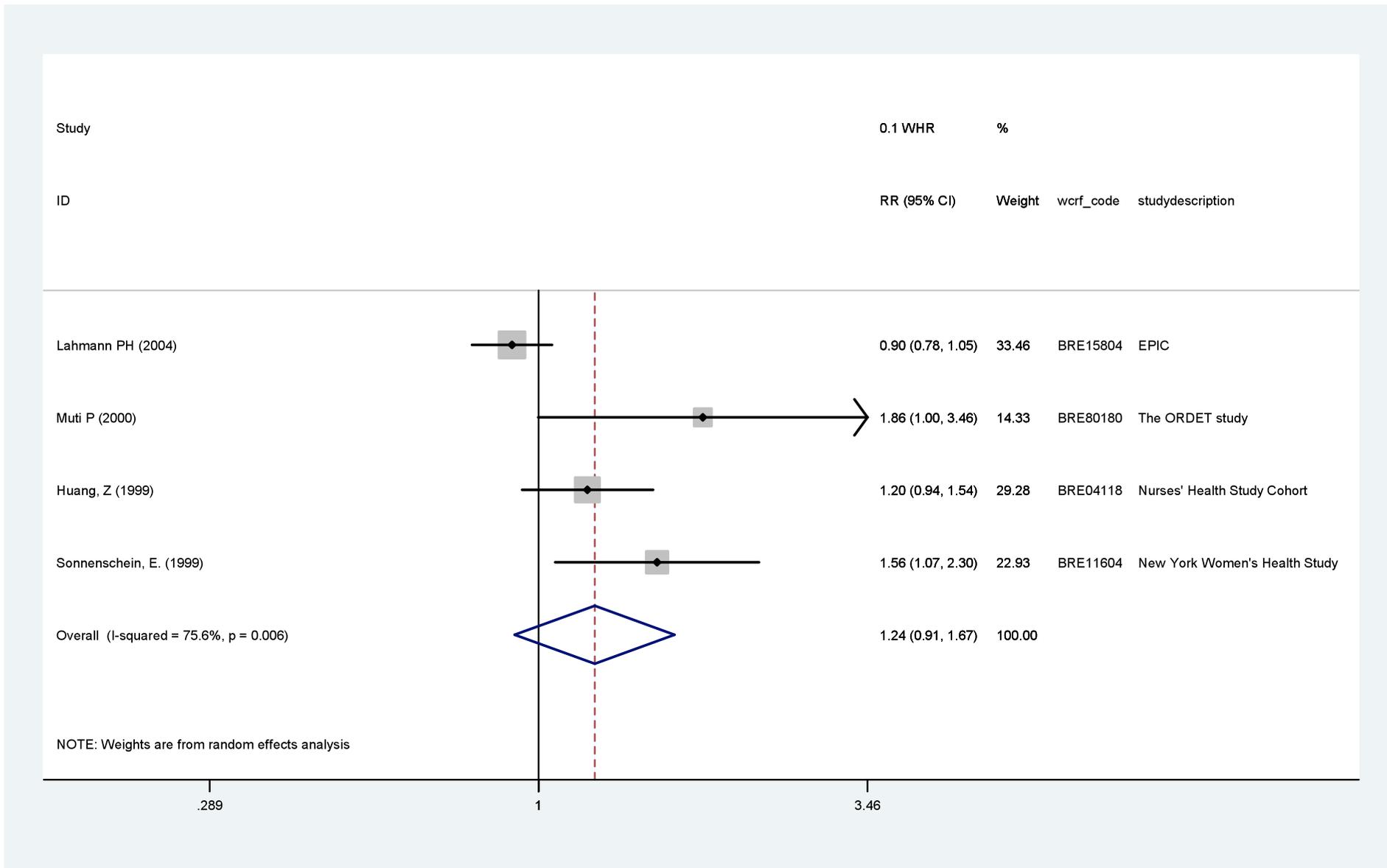
¹ Results from a model not adjusted for BMI

² Results from a model adjusted for BM

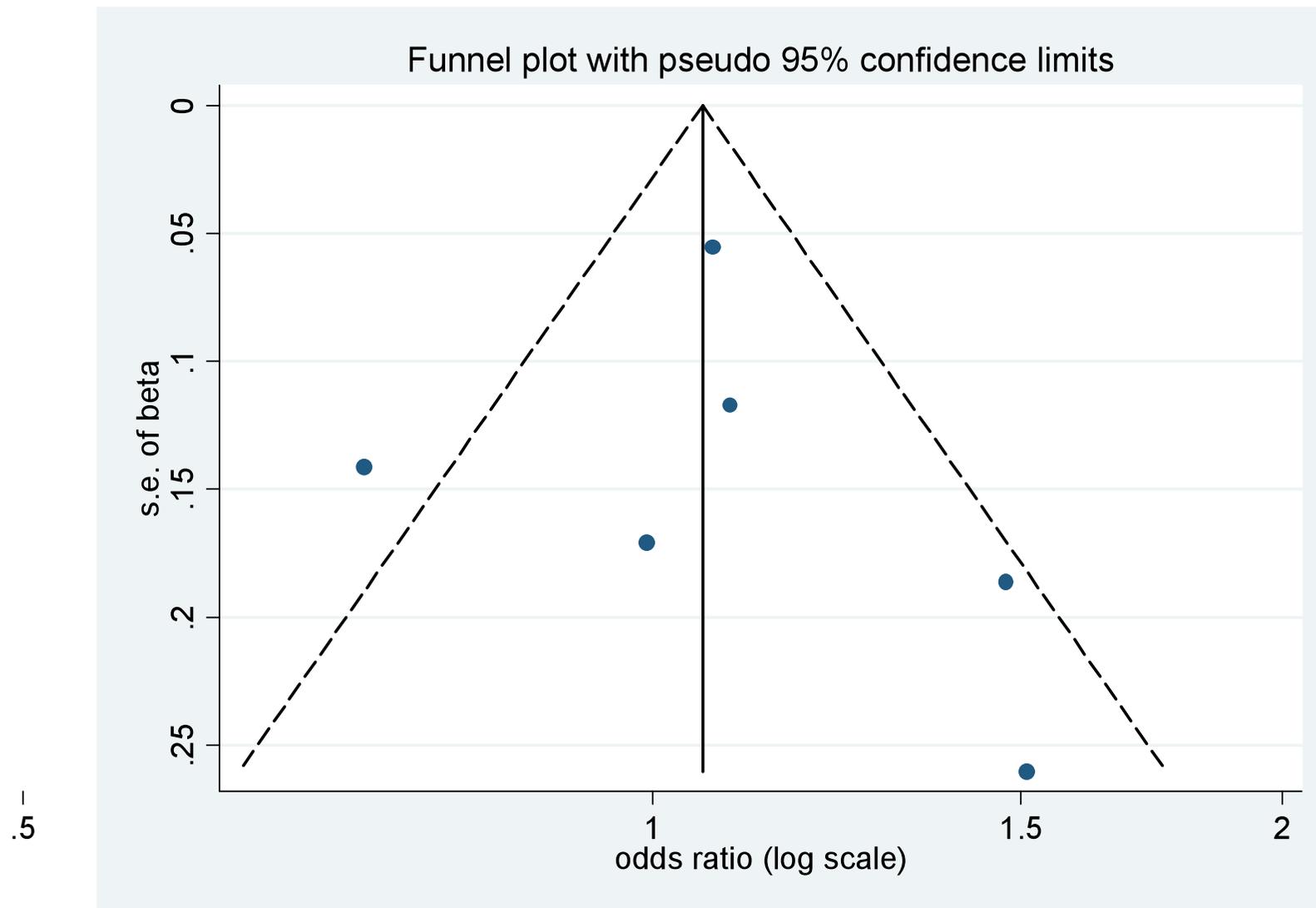
xxxviii. Fig. WHR1 Dose-response meta-analysis on waist-hip ratio and premenopausal breast cancer, results unadjusted for BMI (=new studies identified during the update)**



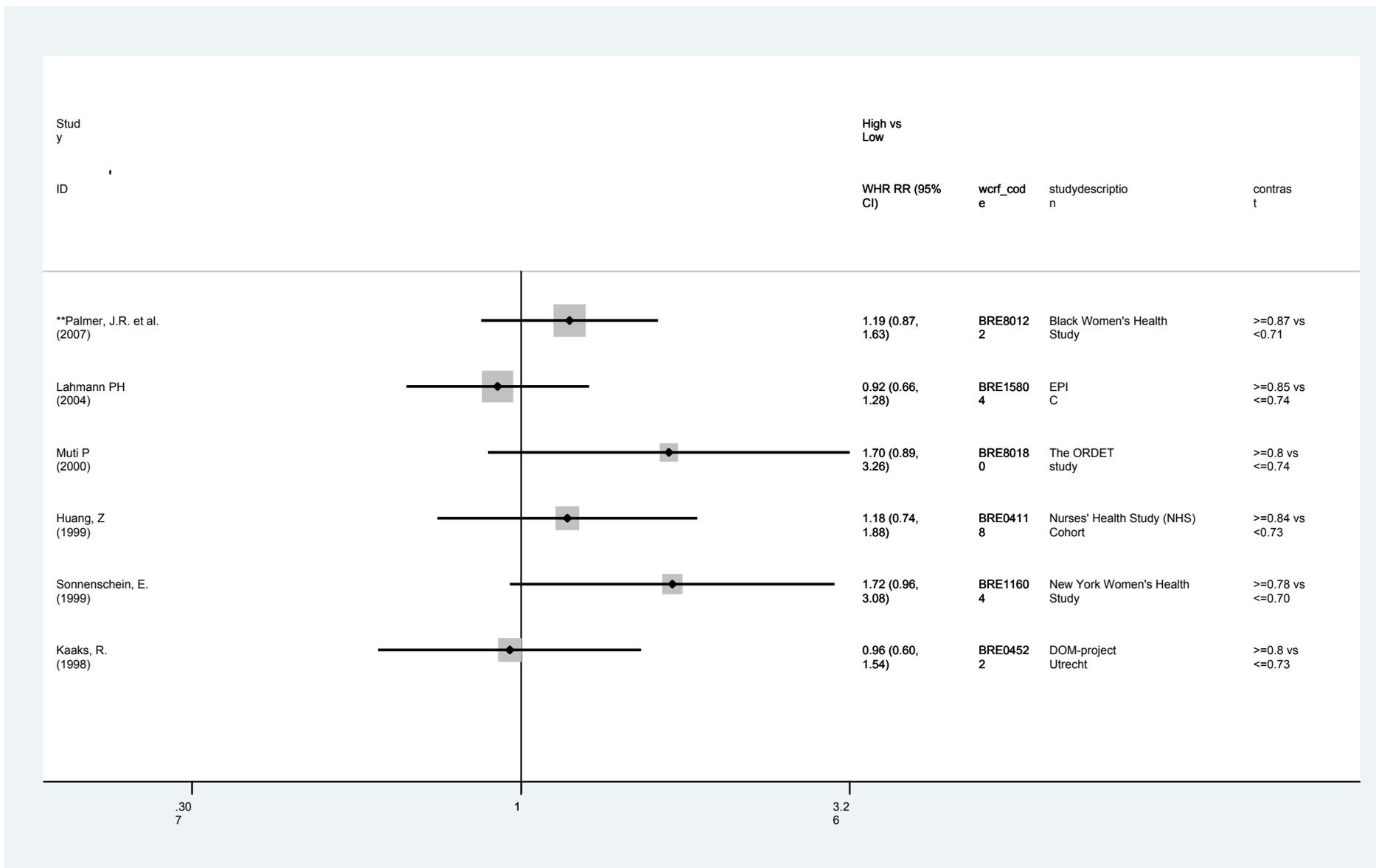
xxxix. Fig. WHR2 Dose-response meta-analysis on waist-hip ratio and premenopausal breast cancer, results adjusted for BMI



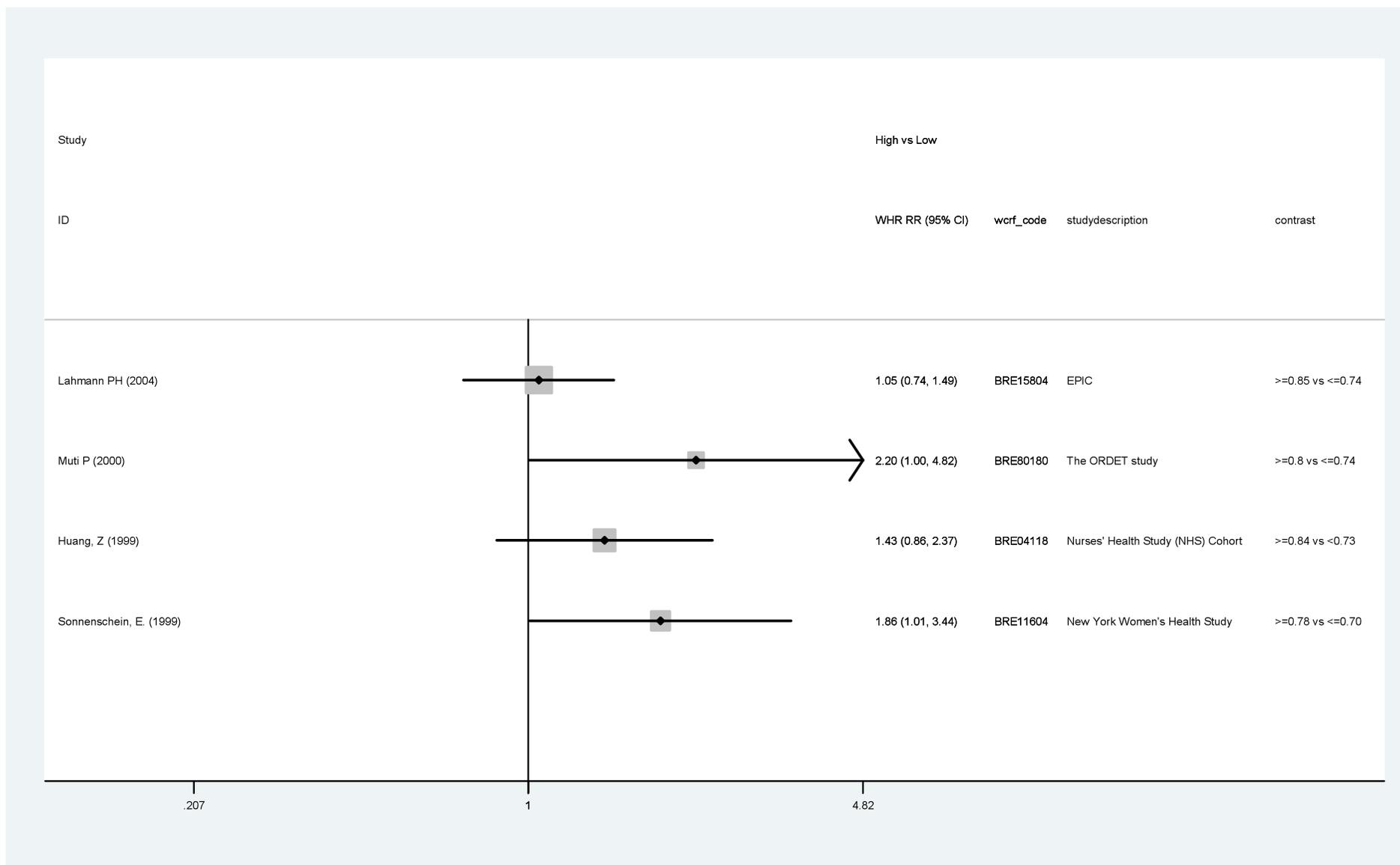
xl. Fig. WHR3 Funnel plot for waist-hip ratio and premenopausal breast cancer, results unadjusted for BMI



xli. Fig. WHR4 Highest versus lowest forest plot on waist-hip ratio and premenopausal breast cancer, results unadjusted for BMI (= new studies identified during the update)**



xlii. Fig. WHR5 Highest versus lowest forest plot on waist-hip ratio and premenopausal breast cancer, results adjusted for BMI



Postmenopause

Cohort studies identified in the Jan 2006-Dec 2007 update

A total of six new prospective cohort or nested case-control studies were identified (Ahn, J. et al., 2007 , BRE80139;Krebs, E. E. et al., 2006 , BRE80106;Mellemkjaer, L. et al., 2006 , BRE80039;Palmer, J. R. et al., 2007 , BRE80122;Rinaldi, S. et al., 2006 , BRE80101;Tehard, B. 2006 , BRE80103) over the update period.

Studies selected for the dose-response meta-analysis, unadjusted for BMI

Of the 20 studies, eleven studies with the appropriate format of data were included in the BMI unadjusted dose-response meta-analysis (Muti, P. et al., 2000, BRE80180; Gapstur, S. M. et al., 1992 , BRE03101;Huang, Z. et al., 1999 , BRE04118;Kaaks, R. et al., 1998 , BRE04522;Krebs, E. E. et al., 2006 , BRE80106;Lahmann, P. H. et al., 2003 , BRE20119;Macinnis, R. J. et al., 2004 , BRE80159;Mellemkjaer, L. et al., 2006 , BRE80039;Palmer, J. R. et al., 2007 , BRE80122;Sonnenschein, E. et al., 1999 , BRE11604;Tehard, B. 2006 , BRE80103), giving a total of 4648 cases. Although Sellers et al. had published a more recent report on the Iowa Women's Health Study (Sellers, Thomas et al., 2002 , BRE20892) in 2002 (1650 cases), results presented in this report was further adjusted for BMI; therefore data from the same study, presented by Gapstur et al. in 1992 (Gapstur, S. M. et al., 1992 , BRE03101) (489 cases) were retained in the analysis, as in the 2007 Global Report.

Studies selected for the dose-response meta-analysis, adjusted for BMI

Five studies (3857 cases) with the appropriate format of data were included in the BMI adjusted dose-response meta-analysis (Muti, P. et al., 2000, BRE80180; Huang, Z. et al., 1999 , BRE04118;Lahmann, P. H. et al., 2004 , BRE15804;Sellers, Thomas et al., 2002 , BRE20892;Sonnenschein, E. et al., 1999 , BRE11604).

A number of studies had not provided an appropriate format of data and were not included in the dose-response meta-analysis. These included the NIH-AARP Diet and Health Study (Ahn, J. et al., 2007 , BRE80139) and the Women Health Initiative Observational study (Morimoto, Libby et al., 2002 , BRE20457). Details of study selection are given in Table WHR2.

Results

No association between WHR and postmenopausal breast cancer was observed in the dose-response meta-analyses - for each 0.1 unit increment in WHR, RR = 1.09, 95% CI = 1.00-1.19 with models not adjusted for BMI and RR = 1.03, 95% CI = 0.96-1.12 with models adjusted for BMI. A significant amount of heterogeneity was found across the studies in the analysis unadjusted for BMI ($I^2 = 63.1\%$, $p = 0.003$; $I^2 = 30.3\%$, $p = 0.220$ respectively).

The separation of BMI adjusted and unadjusted models in the analyses had not produced very different summary risk estimates (1.03 vs. 1.09). In the Global Report, data from the Nurses' Health Study (Huang, Z. et al., 1999 , BRE04118) and the New York Women's Health Study (Sonnenschein, E. et al., 1999 , BRE11604) were further adjusted for BMI. In the former study, the risk estimate remained similar when BMI was unaccounted for (1.15 vs. 1.18), but the difference observed in the latter study was larger (0.99 vs. 1.20) (Figs.WHR6, WHR7).

Unlike the premenopausal analysis, the association between WHR and postmenopausal breast cancer was weaker when BMI was further adjusted.

The addition of new studies may contribute to the lower summary risk estimates as compared to the risk estimate generated in 2005 for the Global Report ($RR_{\text{for } 0.1 \text{ unit increase}} = 1.19$, 95% CI = 1.10-1.28). In the 2005 analysis of five studies, more weights were given to the big American studies such as the Iowa Women's Health Study (47.5%) (Gapstur, S. M. et al., 1992 , BRE03101) and the Nurses' Health Study (39.3%) (Huang, Z. et al., 1999 , BRE04118), in which the effect observed was strong ($RR = 1.18$ and 1.15 respectively). Presently in the analysis without BMI further adjusted (Fig. WHR6), these studies only weighted 13.13% and 12.94% respectively.

Notice that the WHR data selected for the Malmo Diet and Cancer Study – Lahmann et al. (Lahmann, P. H. et al., 2003 , BRE20119) had replaced Wirfalt et al. (Wirfalt, E. et al., 2004 , BRE17083) with a lower risk estimate of 1.17 vs. 1.49 (Fig. WHR6). The latter nested case-control report with 237 cases had only presented mean WHR data, while the former report (246 cases ascertained after an average of 5.7 years of follow-up) had various confounders controlled for in the model. However, there is no suggestion that the replacement of these study data would contribute to the lower summary risk estimate observed in the present analysis unadjusted for BMI. When the same risk estimate of Wirfalt et al. from the 2005 analysis for the Global Report was used instead of Lahmann et al., the summary risk estimate was 1.11 (95% CI = 1.01-1.22, $I^2 = 31.35\%$, d.f. = 10), which is also lower than 1.19 observed in the Global Report.

Exploring the heterogeneity through meta-regression suggested that more recent publications were associated with lower risk estimates. This may explain the smaller effect size in the present analysis. No publication bias was observed (Fig. WHR8) and none of the studies showed a strong influence on the pooled risk estimate as suggested by the sensitive testing.

The NIH-AARP Diet and Health study (Ahn, J. et al., 2007 , BRE80139) that was not included in the dose-response meta-analysis reported a significant increased risk of breast cancer in relation to WHR in menopausal hormone therapy non-users ($RR = 1.88$, 95% CI = 1.10-3.23 for WHR >0.94 vs. <0.7). A positive trend that was statistically significant was also reported ($p < 0.001$). When data by MHT use were merged, the risk estimate became $RR_{\text{highest vs. lowest}} = 1.26$ (95% CI = 0.91-1.76) (Fig WHR9). The results are supported by the highest versus lowest forest plots. (Figs WHR9, WHR10).

i)Table WHR2 Inclusion and exclusion of cohort studies on waist to hip ratio and postmenopausal breast cancer

Author	Year	WCRF Code	Study name	Sub-group description	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs. low forest plot	Estimated values for meta-analysis	Exclusion reasons	Remarks
Ahn, J. et al.	2007	BRE80139	NIH- AARP Diet and Health Study	Current MHT users, postmenopausal	Prospective Cohort	New study	No	Yes ¹		Number of non-cases not provided, categorical analysis; - not included in dose-response analysis	
Ahn, J. et al.	2007	BRE80139	NIH- AARP Diet and Health Study	Non MHT users, postmenopausal	Prospective Cohort	New study	No	Yes ¹		Number of non-cases not provided, categorical analysis; - not included in dose-response analysis	
Palmer, JR. et al.	2007	BRE80122	Black Women's Health Study	Postmenopausal	Prospective Cohort	New study	Yes ¹	Yes ¹	Mean exposure values		
Krebs EE.	2006	BRE80106	Study of Osteoporotic Fractures	Postmenopausal	Prospective Cohort	New study	Yes ¹	Yes ¹	Mean exposure values, no. of cases, non-cases & person-years		
Mellemkjoer et al.	2006	BRE80039	Diet, Cancer and Health	HRT ever, postmenopausal	Prospective Cohort	New study	Yes ¹	Yes ¹			Data from the HRT subgroups were merged for the meta-analysis
Mellemkjoer et al.	2006	BRE80039	Diet, Cancer and Health	HRT never, postmenopausal	Prospective Cohort	New study	Yes ¹	Yes ¹			Data from the HRT subgroups were merged for the meta-analysis
Rinaldi S.	2006	BRE80101	EPIC	Postmenopausal	Nested Case Control	New study	No	No		Although more recent than Lahmann PH 2004, BRE15804, less no. of cases - not included in both dose-response meta-analysis and high vs. low forest plot	
Tehard B.	2006	BRE80103	French EPIC-E3N	Postmenopausal	Prospective Cohort	New study	Yes ¹	Yes ¹	Mean exposure values		
Lahmann PH.	2004	BRE15804	EPIC	HRT - No, postmenopausal	Prospective Cohort	No	Yes ²	Yes ²			Data from the HRT subgroups were merged for the meta-analysis

Lahmann PH.	2004	BRE15804	EPIC	HRT - Yes, postmenopausal	Prospective Cohort	No	Yes ²	Yes ²			Data from the HRT subgroups were merged for the meta-analysis
Macinnis, RJ. et al.	2004	BRE80159	Melbourne Collaborative Cohort Study	Postmenopausal	Prospective Cohort	No	Yes ¹	Yes ¹			
Wirfalt, E.	2004	BRE17083	Malmö Diet and Cancer	Postmenopausal	Nested Case Control	Yes	No	No		Mean difference only	
Lahmann, PH.	2003	BRE20119	Malmö Diet and Cancer	Postmenopausal	Prospective Cohort	No	Yes ¹	Yes ¹	Mean exposure values, no. of non-cases & person-years		
Morimoto, LM.	2002	BRE20457	Women's Health Initiative (WHI) Observational Study	HRT - No, postmenopausal	Prospective Cohort	No	No	Yes ¹		Number of non-cases not provided, can't estimate as analyses were subgrouped by HRT status - not included in dose-response analysis	Data from the HRT subgroups were merged for the meta-analysis
Morimoto, LM.	2002	BRE20457	Women's Health Initiative (WHI) Observational Study	HRT - Yes, postmenopausal	Prospective Cohort	No	No	Yes ¹		Number of non-cases not provided, can't estimate as analyses were subgrouped by HRT status - not included in dose-response analysis	Data from the HRT subgroups were merged for the meta-analysis
Sellers, TA.	2002	BRE20892	Iowa Women's Health Study	Family History BC - No	Prospective Cohort	No	Yes ²	Yes ²	Mean exposure values		Data from the family history of BC subgroups were merged for the meta-analysis, total no. of cases = 1650 after 13 yrs of follow-up; results further adjusted for BMI
Sellers, TA.	2002	BRE20892	Iowa Women's Health Study	Family History BC - Yes	Prospective Cohort	No	Yes ²	Yes ²	Mean exposure values		Data from the family history of BC subgroups were merged for the meta-analysis, total no. of cases = 1650 after 13 yrs of follow-up; results further adjusted for

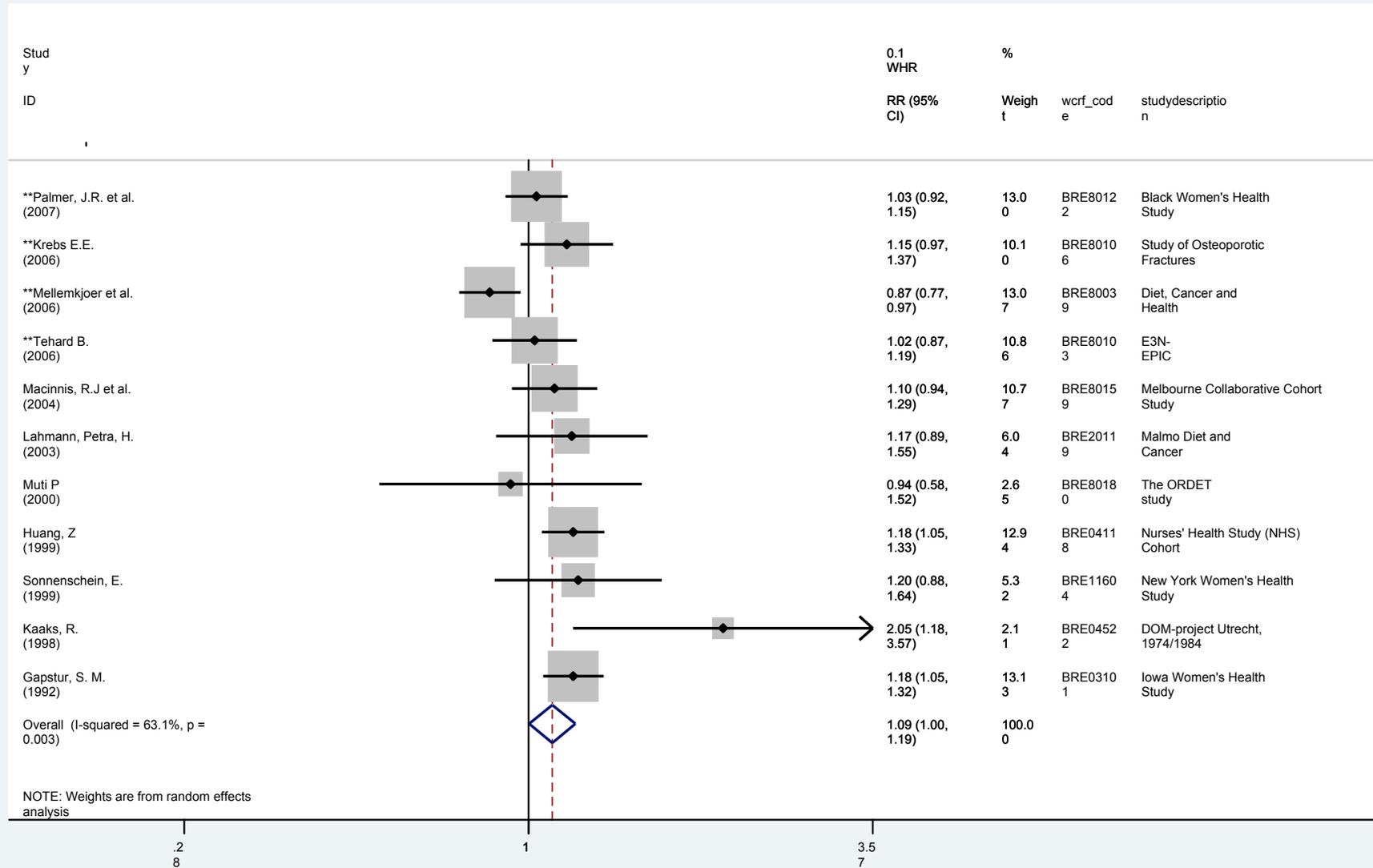
											BMI
Muti, P.	2000	BRE80180	The ORDET study	Postmenopausal	Nested case-control	No	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values		
Huang, Z.	1999	BRE04118	Nurses' Health Study (NHS) Cohort	Postmenopausal	Prospective Cohort	Yes	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values		
Sonnenschein, E.	1999	BRE11604	New York Women's Health Study	Postmenopausal	Prospective Cohort	Yes	Yes ^{1,2}	Yes ^{1,2}	Mean exposure values		
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Postmenopausal	Prospective Cohort	Yes	Yes ¹	Yes ¹	Mean exposure values		
den Tonkelaar, I.	1995	BRE02224	DOM-project Utrecht	Postmenopausal	Prospective Cohort	No	No	No		Superseded by Kaaks 1998 BRE04522 - not included in both dose-response meta-analysis and high vs. low forest plot	
Sellers, TA.	1993	BRE18025	Iowa Women's Health Study	Family History BC - No	Prospective Cohort	No	No	No		Superseded by Sellers, 2002 BRE20892 - not included in both dose-response meta-analysis and high vs. low forest plot	
Sellers, TA.	1993	BRE18025	Iowa Women's Health Study	Family History BC - Yes	Prospective Cohort	No	No	No		Superseded by Sellers, 2002 BRE20892 - not included in both dose-response meta-analysis and high vs. low forest plot	
Gapstur, SM.	1992	BRE03101	Iowa Women's Health Study	Postmenopausal	Prospective Cohort	Yes	Yes ¹	Yes ¹	Mean exposure values		Total no. of cases = 489, 4 yrs of follow-up; results not further adjusted for BMI

Folsom, AR.	1990	BRE02836	Iowa Women's Health Study	Postmenopausal	Nested Case Control	No	No	No		Superseded by Sellers, 2002 BRE20892 - not included in both dose-response meta-analysis and high vs. low forest plot	
Total no. of article = 20						Total no. of studies included = 5	Total no. of studies include = 11¹ & 5²	Total no. of studies included = 13¹ & 5²			

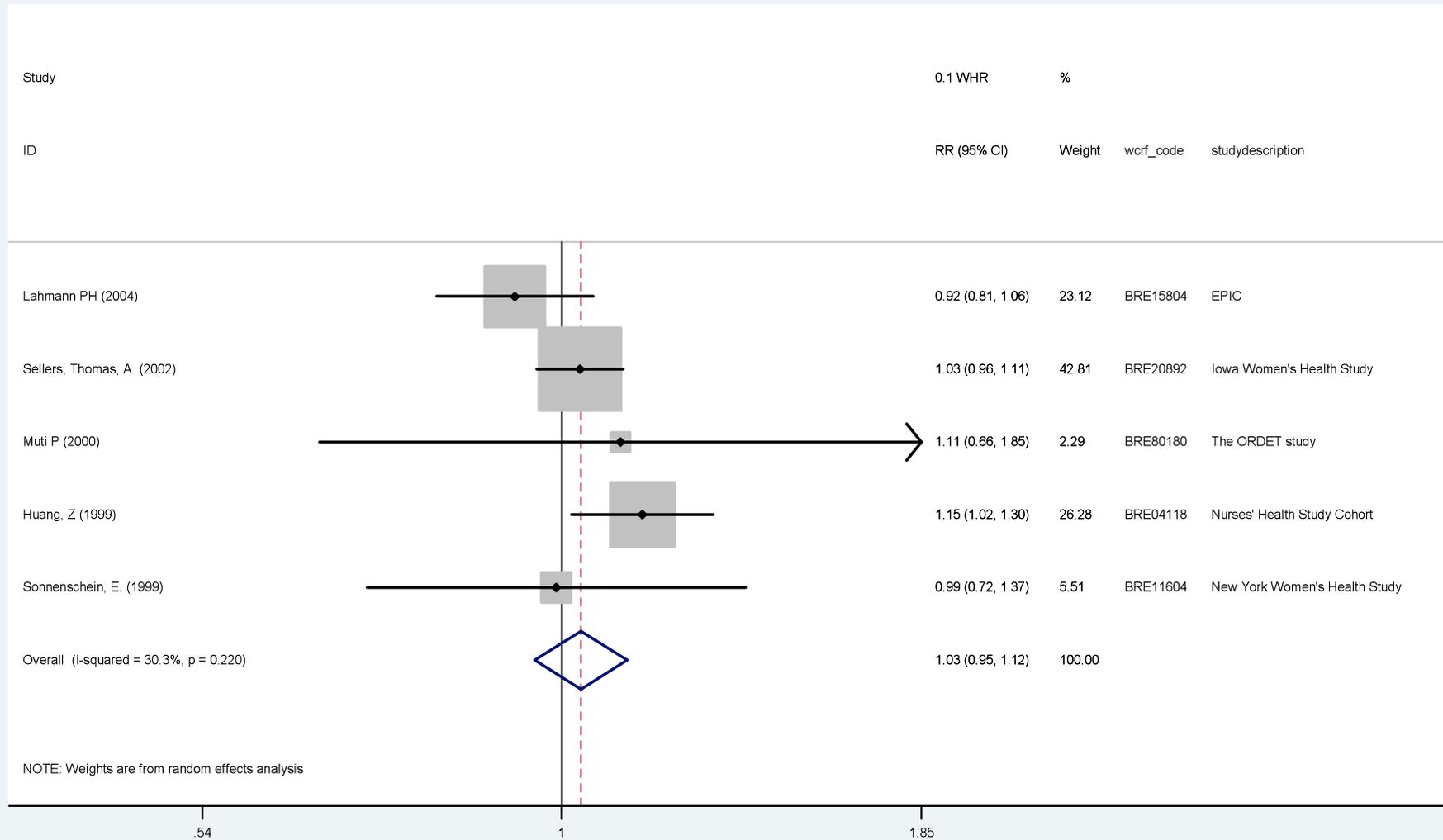
¹ Results from BMI adjusted model

² Results from BMI unadjusted model

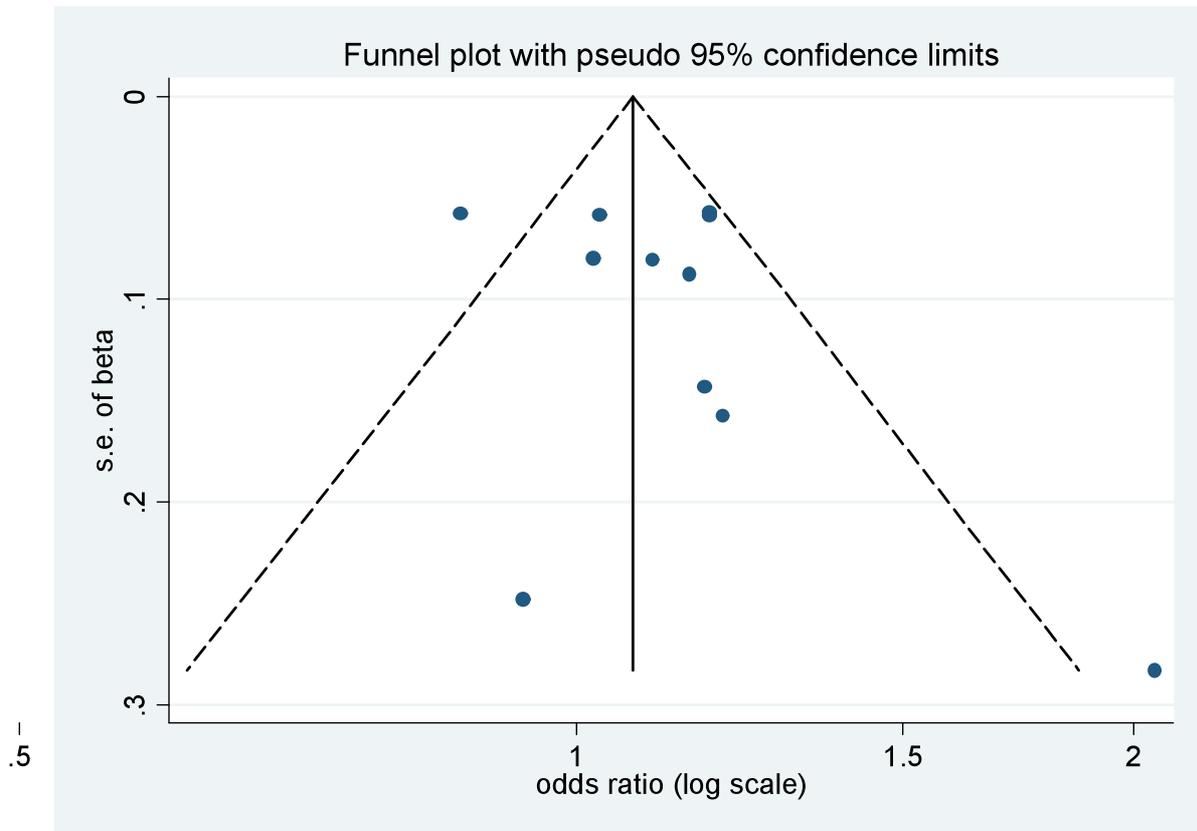
xliii. Fig. WHR6 Dose-response meta-analysis on waist-hip ratio and postmenopausal breast cancer, results unadjusted for BMI (=new studies identified during the update)**



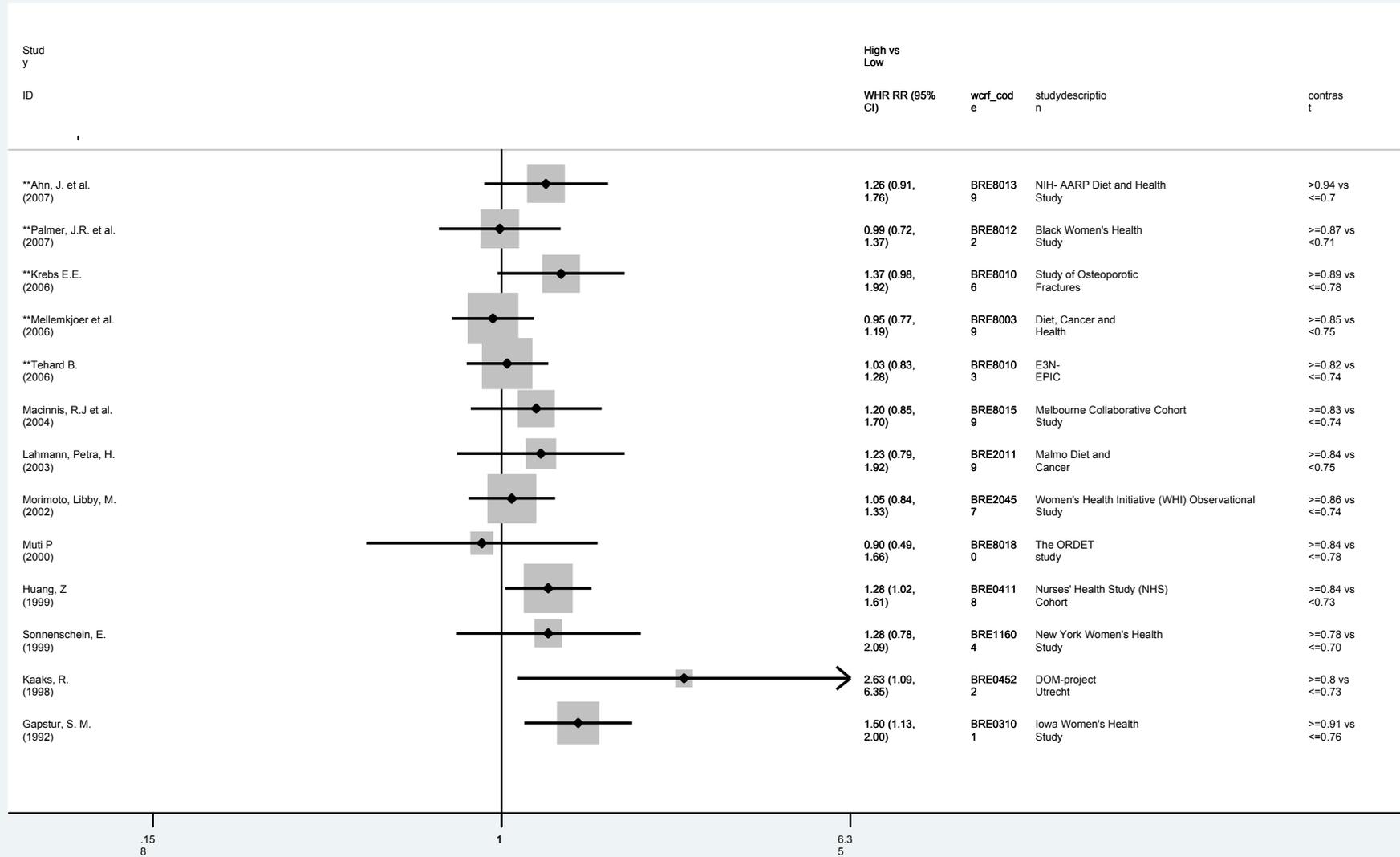
xliv. Fig. WHR7 Dose-response meta-analysis on waist-hip ratio and postmenopausal breast cancer, results adjusted for BMI



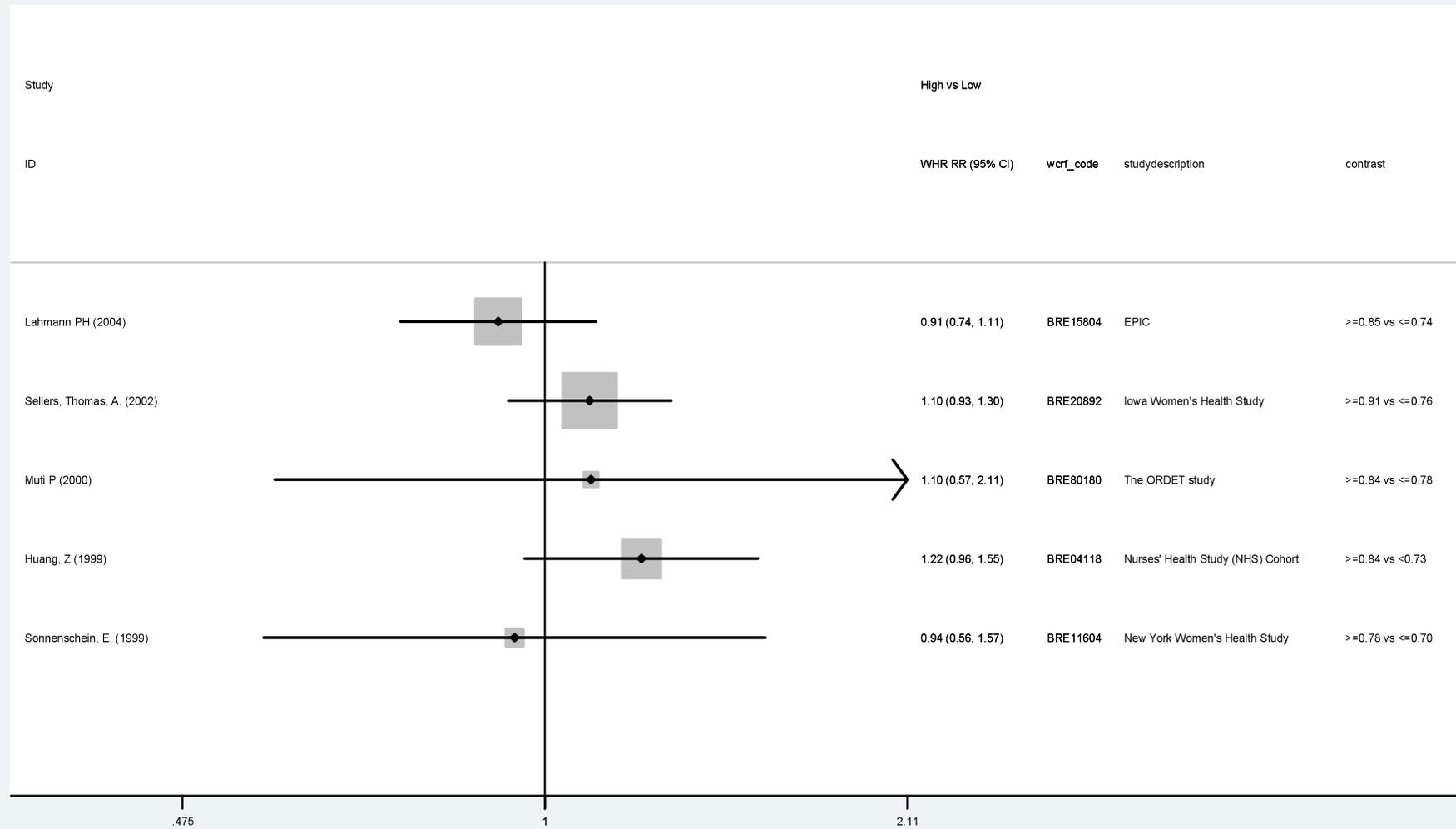
xlv. Fig. WHR8 Funnel plot for waist-hip ratio and postmenopausal breast cancer, results unadjusted for BMI



xlvi. Fig. WHR9 Highest versus lowest forest plot on waist-hip ratio and postmenopausal breast cancer, results unadjusted for BMI (= new studies identified during the update)**



xlvi. Fig. WHR10 Highest versus lowest forest plot on waist-hip ratio and postmenopausal breast cancer, results adjusted for BMI



8.3.1 Height (and proxy measure)

Summary of results of the dose-response meta-analysis

	Premenopausal breast cancer		Postmenopausal breast cancer	
	2nd Report	Continuous update	2nd Report	Continuous update
Studies (n)	11	12	15	16
Cases (n)		3206		9024
RR (95% CI) (5 cm increase)	1.09 (1.05-1.14)	1.09 (1.05-1.12)	1.11 (1.09-1.13)	1.10 (1.07-1.13)
Heterogeneity I^2	29.6%(0-65.3%)	0%, p=0.449	0% (0-53.6%)	36.2%, p=0.074

Overall summary

During the update period, seven reports were identified; from Europe - the Malmo Diet and Cancer study (Wirfalt, E. et al., 2005 , BRE11111), the French EPIC-E3N study (Tehard, B. 2006 , BRE80103) and the Sweden, Finland Co-twin study (Lundqvist, E. et al., 2007 , BRE80002;Lundqvist, E. et al., 2007 , BRE80003); from the United States – the Nurses’ Health Study II (Baer, H. J. et al., 2006 , BRE80118), the PLCO Cancer Screening Trial (Chang, S. C. et al., 2006 , BRE80110) and the Study of Osteoporotic Fractures (Krebs, E. E. et al., 2006 , BRE80106) and from Japan - the JPHC study (Iwasaki, M. et al., 2007 , BRE20027). In addition, data from the Melbourne Collaborative Cohort Study from Australia with European participants were included in the meta-analysis. This study was referenced in the 2007 Global Report only.

Forty-six reports were retrieved from the SLR database, which included reports from cohort studies such as the Dom-project from the Netherlands (three reports) (Den Tonkelaar, I. et al., 1994 , BRE02222;Den Tonkelaar, I. et al., 1995 , BRE02224;Kaaks, R. et al., 1998 , BRE04522), the Malmo Diet and Cancer Study (four reports) (Lahmann, P. H. et al., 2003 , BRE20119;Mattisson, I. W. 2004 , BRE17807;Wirfalt, E. et al., 2004 , BRE17083;Wirfalt, E. et al., 2002 , BRE13504), the Nurses’ Health Study (two reports) (Berkey, C. S. et al., 1999 , BRE00743;Colditz, Graham and Rosner, Bernard 2000 , BRE19251), the New York Women’s Health Study (Saadatian-Elahi, M. et al., 2002 , BRE21486;Sonnenschein, E. et al., 1999 , BRE11604;Toniolo, P. et al., 1994 , BRE12398) and the NHANES I (Freni, S. C. et al., 1996 , BRE02960;Swanson, C. A. et al., 1988 , BRE11981), etc. The Nord-Trondelag Health Survey published results on five birth cohorts (Nilsen, T. I. L. and Vatten, L. J. 2001 , BRE16210). Other studies had presented one or two reports that were also mostly based in Europe (De Stavola, B. L. et al., 2004 , BRE02123;De Stavola, B. L. et al., 1993 , BRE02122;Gaard, M. et al., 1994 , BRE03044;Hoyer, A. P. et al., 1998 , BRE15433;Hoyer, A. P. and Engholm, G. 1992 , BRE04086;Jonsson, F. et al., 2003 , BRE04482;Kilkinen, A. V. 2004 , BRE17698;Lahmann, P. H. et al., 2004 , BRE15804;Manjer, J. K. 2001 , BRE17790;Overvad, K. W. 1991 , BRE17893;Tornberg, S. A. et al., 1988 , BRE12418;Tryggvadottir, L. et al., 2002 , BRE12507;Tulinius, H. et al., 1997 , BRE12565;van den Brandt, P. A. et al., 1997 , BRE12717;Vatten, L. J. et al., 1990 , BRE12833;Vatten, L. J. and Kvinnsland, S. 1992 , BRE12828;Vatten, L. J. and Kvinnsland,

S. 1990 , BRE12827;Weiderpass, E. B. 2004 , BRE18151) or the United States (Barrett-Connor, E. and Friedlander, N. J. 1993 , BRE00581;Cerhan, J. R. et al., 2004 , BRE01495;Drake, D. A. 2001 , BRE02418;Galanis, D. J. et al., 1998 , BRE03058;Le Marchand, L. et al., 1988 , BRE15836;Morimoto, Libby et al., 2002 , BRE20457;Palmer, Julie et al., 2001 , BRE20603;Petrelli, Jennifer et al., 2002 , BRE20653;Schatzkin, A. C. 1989 , BRE18013;Sellers, Thomas et al., 2002 , BRE20892). Only three reports were from Asia (Goodman, M. T. et al., 1997 , BRE03352;Key, T. J. et al., 1999 , BRE04758;Wu, M. H. et al., 2006 , BRE24628).

Menopause age unspecified

Cohort studies identified in the Jan 2006 - Dec 2007 update

Only one study (Lundqvist, E. et al., 2007 , BRE80002;Lundqvist, E. et al., 2007 , BRE80003) had provided data, no meta-analysis was generated.

Results

This Swedish and Finnish study on twins had two study designs - a prospective cohort design (Lundqvist, E. et al., 2007 , BRE80002) and a case-control nested within the cohort (Lundqvist, E. et al., 2007 , BRE80003). With 1637 cases, a RR_{for Q4 vs. Q1} of 1.6 (95% CI = 1.4-1.8) was reported in the prospective cohort. While a RR_{for Q4 vs. Q1} of 1.8 (95% CI = 1.3-2.7) was presented in the 1170 nested cases.

Premenopause

Cohort studies identified in the Jan 2006 - Dec 2007 update

Three prospective cohort studies - the JPHC study (Iwasaki, M. et al., 2007 , BRE20027), the Nurses' Health Study II (Baer, H. J. et al., 2006 , BRE80118) and the French EPIC-E3N study (Tehard, B. 2006 , BRE80103) had published data on height and premenopausal breast cancer during the update period.

Studies selected for the dose-response meta-analysis

Table Ht1 shows the inclusion and exclusion of studies for the meta-analysis performed on height and premenopausal breast cancer for this update report. Altogether twelve studies, two from the update and ten retrieved from the SLR database, were included in the dose-response meta-analysis. The increment unit for the dose-response meta-analysis was remained as 5 cm, as in the Global Report.

Results

As shown in Fig. Ht1, the estimated summary relative risk on the 12 studies of premenopausal breast cancer was 1.09 (95% CI = 1.05-1.12) for an increase in height of 5cm, which is almost the same as that presented in the 2007 Global Report (RR = 1.09, 95% CI = 1.05 -1.14). There was no suggestion of excess heterogeneity ($I^2 = 0\%$, $p = 0.449$). No indication of strong influence from any single study on the summary risk estimate and no indication of publication bias (Fig. Ht2).

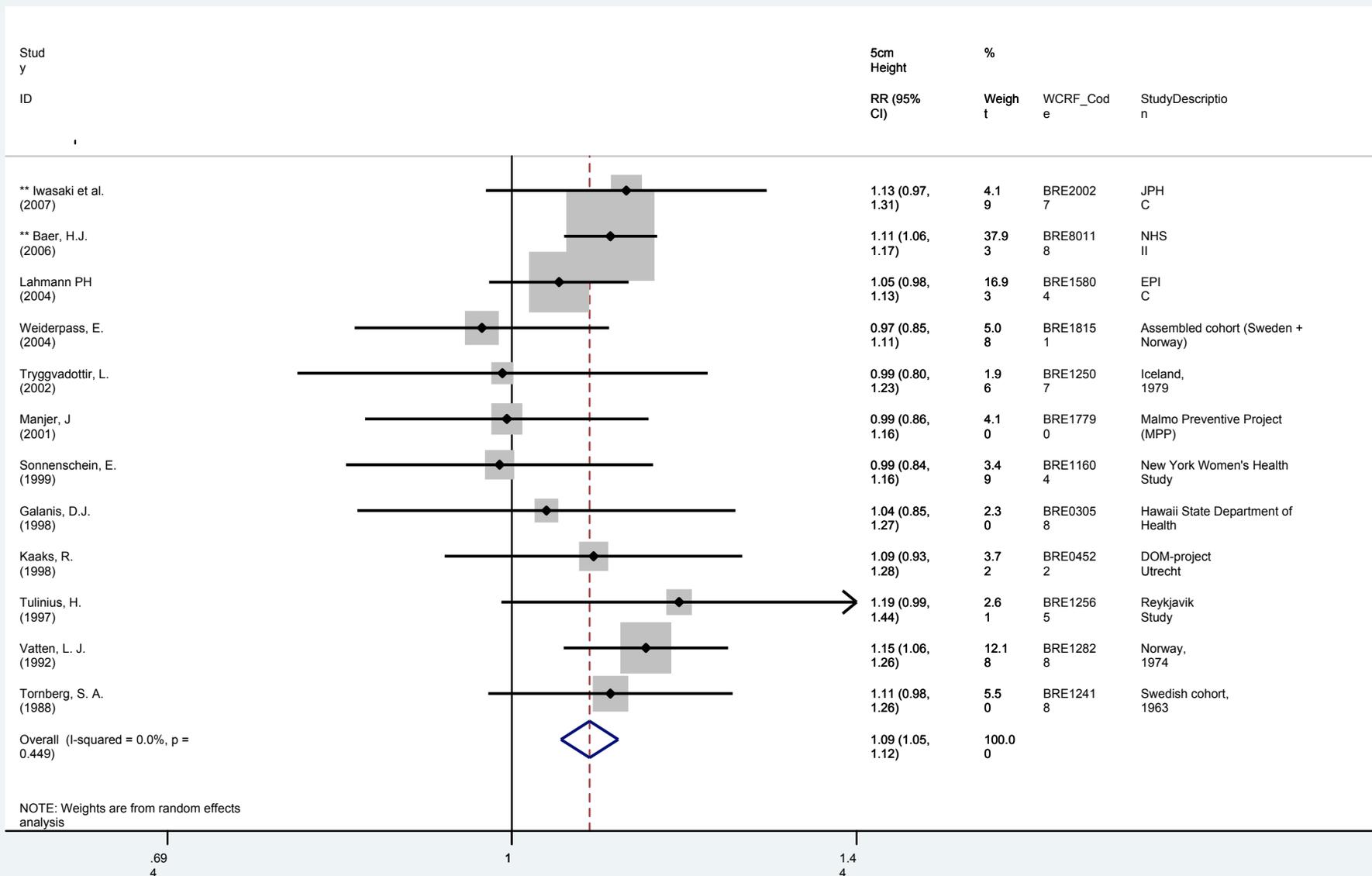
For the three studies (De Stavola, B. L. et al., 1993 , BRE02122;Freni, S. C. et al., 1996 , BRE02960;Le Marchand, L. et al., 1988 , BRE15836) not included in the dose-response meta-analysis, all reported an increased in risk for the comparison of highest versus lowest exposure categories (Fig. Ht3).

j)Table Ht1 Inclusion and exclusion of cohort studies on height and premenopausal breast cancer

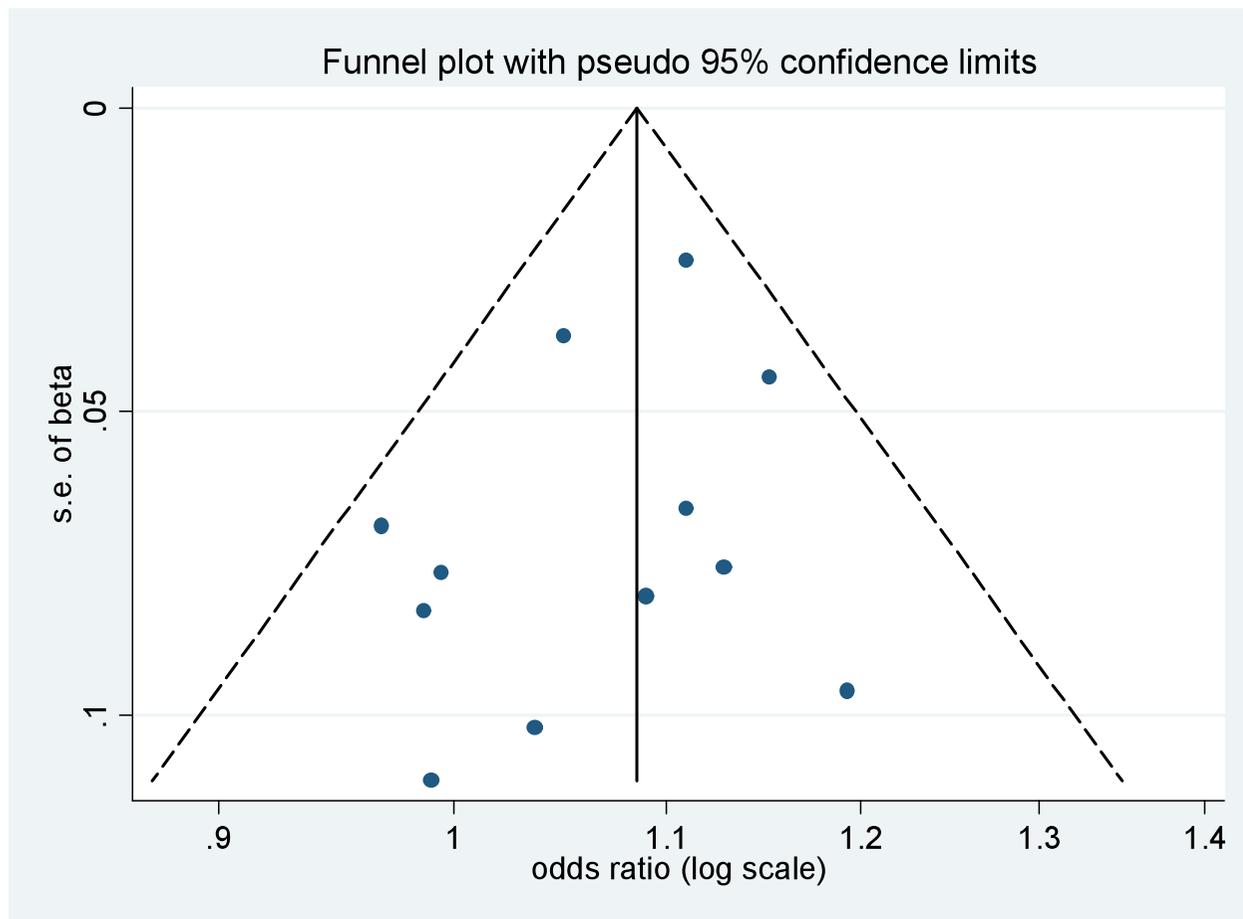
Author	Year	WCRF Code	Study name	Study type	Included in the 2005 dose-response meta-analysis	Included in the 2008 dose-response meta-analysis	Included in the 2008 high vs. low forest plot	Exclusion reasons	Estimated values for the analysis	Remarks
Iwasaki et al.	2007	BRE20027	JPHC	Prospective Cohort	New study	Yes	Yes		Mean exposure values	
Baer, H.J.	2006	BRE80118	NHS II	Prospective Cohort	New study	Yes	Yes			
Tehard B.	2006	BRE80103	French EPIC-E3N	Prospective Cohort	New study	No	No	Data pooled from all the EPIC centres (Lahmann PH 2004, BRE15804) were selected instead		French EPIC-E3N is a component study of EPIC
Lahmann PH	2004	BRE15804	EPIC	Prospective Cohort	No	Yes	Yes			
Weiderpass, E.	2004	BRE18151	Assembled cohort (Sweden + Norway)	Prospective Cohort	No	Yes	Yes			Reference group was kept as the 3rd quantile as provided in article; mid-exposure values were calculated for the close-ended categories; mid-point plus half of the width of the last exposure category was used for the highest open-ended category
Saadatian-Elahi, M.	2002	BRE21486	New York Women's Health Study	Nested Case Control	Yes	No	No	Mean difference only		
Tryggvadottir, L.	2002	BRE12507	Iceland, 1979	Nested Case Control	Yes	Yes	No	Only dose-response analysis were performed		
Manjer, J	2001	BRE17790	Malmö Preventive Project (MPP)	Prospective Cohort	Yes	Yes	Yes		Mean exposure values	
Palmer, Julie, R.	2001	BRE20603	Black Women's Health Study	Nested Case Control	Yes	No	No	A mixture of prevalent and incident cases		
Berkey, C. S.	1999	BRE00743	Nurses' Health Study (NHS) Cohort	Prospective Cohort	No	No	No	Missing no. of cases and non cases & C.I.s, can't estimate		
Sonnenschein, E.	1999	BRE11604	New York Women's Health Study	Prospective Cohort	Yes	Yes	Yes		Mean exposure values	

Galanis, D.J.	1998	BRE03058	Hawaii State Department of Health	Prospective Cohort	Yes	Yes	Yes		Mean exposure values	
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Prospective Cohort	Yes	Yes	Yes		Mean exposure values	
Tulinius, H.	1997	BRE12565	Reykjavik Study	Prospective Cohort	Yes	Yes	No	Only dose-response analysis were performed		
Freni, S. C.	1996	BRE02960	NHANES I	Prospective Cohort	No	No	Yes	Missing no. of non cases, can't estimate		
Toniolo, P.	1994	BRE12398	New York Women's Health Study	Nested Case Control	Yes	No	No	Superseded by Sonnenschein 1999, BRE11604		
De Stavola, B. L.	1993	BRE02122	Guernsey G2 and G3	Prospective Cohort	No	No	Yes	Missing no. of non cases, can't estimate		
Vatten, L. J.	1992	BRE12828	Norway, 1974	Prospective Cohort	Yes	Yes	Yes		Mean exposure values	
Vatten, L.J.	1990	BRE12827	Norway, 1974	Prospective Cohort	No	No	No	Superseded by Vatten 1992, BRE12828		
Le Marchand, L.	1988	BRE15836	Hawaii 1942, 1960, 1972	Nested Case Control	No	No	Yes	Missing exposure levels		
Tomberg, S. A.	1988	BRE12418	Swedish cohort, 1963	Prospective Cohort	Yes	Yes	No	Only dose-response analysis were performed		
Total no. of articles =22			Total number of cohort studies =17		Total number of studies included =11	Total number of studies included =12	Total number of studies included =12			

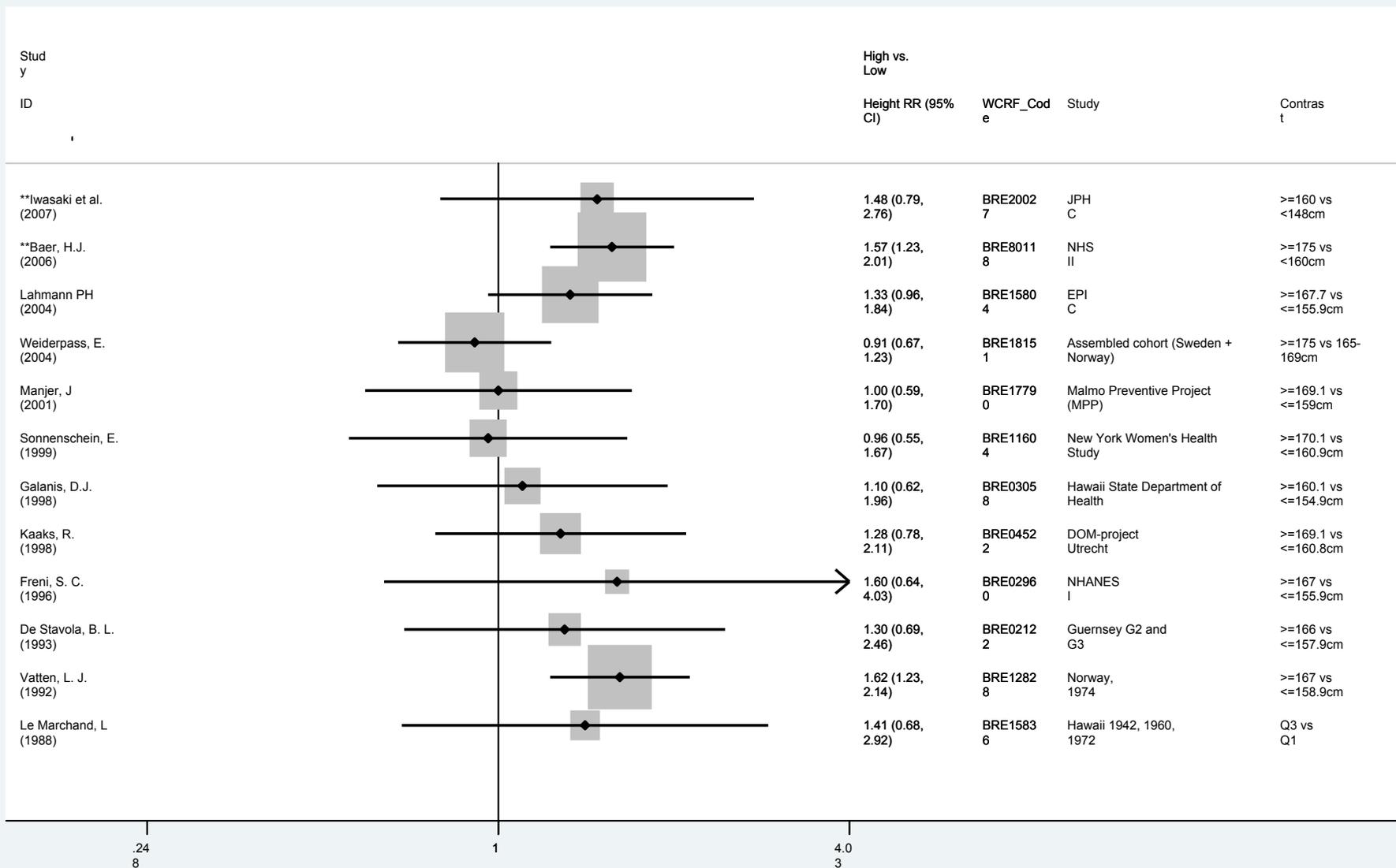
xlvi. Fig. Ht1 Dose-response meta-analysis on height and premenopausal breast cancer (**=new studies identified during the update)



xlix. Fig. Ht2 Funnel plot for height and premenopausal breast cancer



I. Fig. Ht3 Highest versus lowest forest plot on height and premenopausal breast cancer (= new studies identified during the update)**



Postmenopause

Cohort studies identified in the Jan 2006- Dec 2007 update

Five new studies were identified during the update period, namely the JPHC study (Iwasaki, M. et al., 2007 , BRE20027), the Study of Osteoporotic Fractures (Krebs, E. E. et al., 2006 , BRE80106), the French EPIC-E3N study (Tehard, B. 2006 , BRE80103), the PLCO Cancer Screen Trial Cohort (Chang, S. C. et al., 2006 , BRE80110) and the Malmo Diet and Cancer study (Wirfalt, E. et al., 2005 , BRE11111).

Studies selected for the dose-response meta-analysis

Table Ht2 shows the inclusion and exclusion of studies for the meta-analyses performed on height and postmenopausal breast cancer for this update report. A dose-response meta-analysis was generated on 16 studies, with three new and 13 old studies retrieved from the SLR database. The increment unit for the dose-response meta-analysis was remained as 5 cm, as in the Global Report.

Results

The estimated summary relative risk on the 16 studies of postmenopausal breast cancer was 1.10 (95% CI = 1.07-1.13) for an increase in height of 5cm (Fig. Ht4), which is fairly similar to summary risk estimate of 1.11 (95% CI = 1.09-1.13) in the 2007 Global Report. There was no suggestion of excess heterogeneity ($I^2 = 36.2\%$, $p = 0.074$). No indication of strong influence from any single study on the summary risk estimate and no indication of publication bias (Fig. Ht5).

For the three studies (De Stavola, B. L. et al., 1993 , BRE02122;Freni, S. C. et al., 1996 , BRE02960;Le Marchand, L. et al., 1988 , BRE15836) not included in the dose-response meta-analysis, all reported an increase in risk for the comparison of highest versus lowest exposure categories (Fig. Ht6).

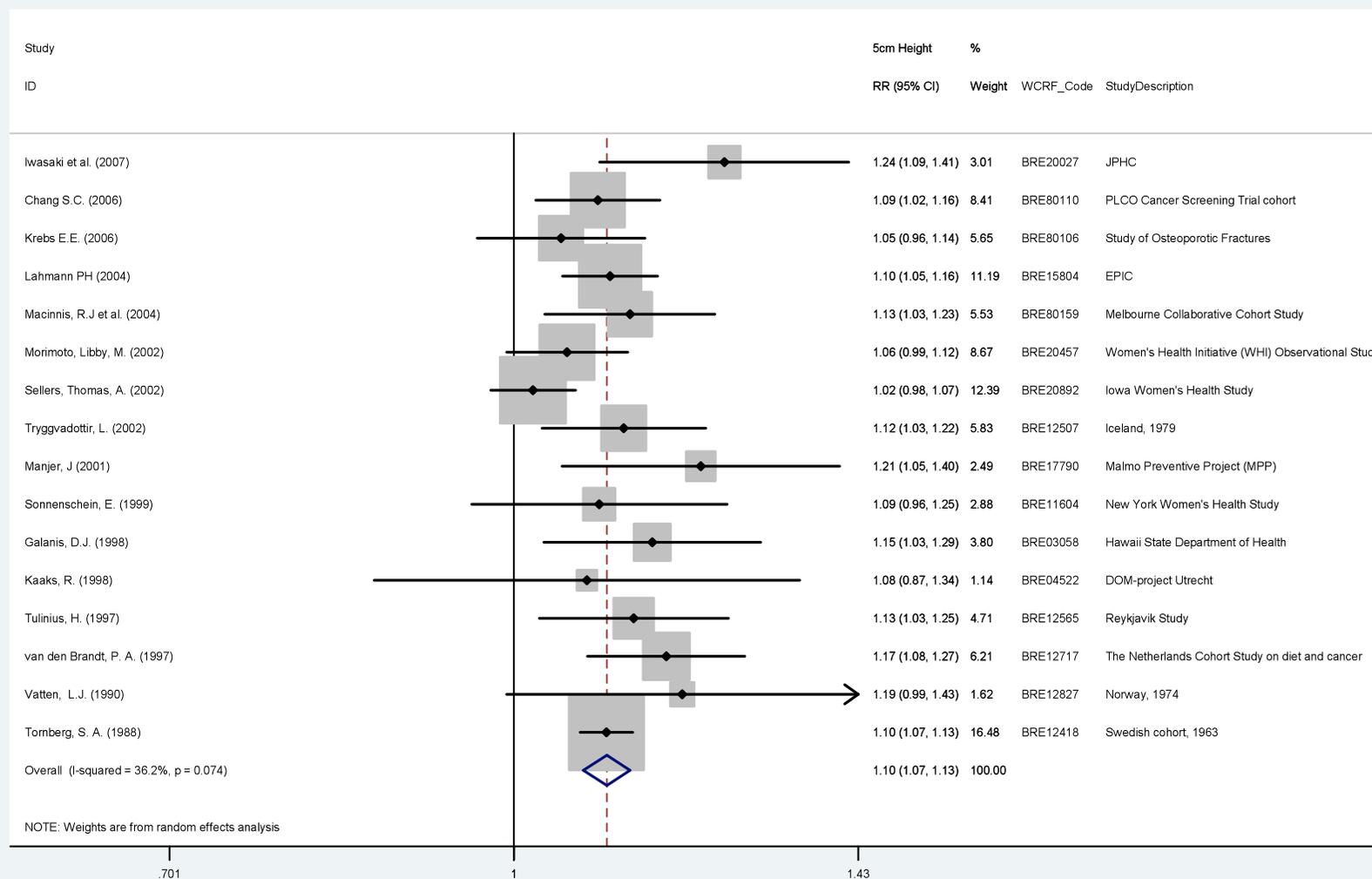
k)Table Ht2 Inclusion and exclusion of cohort studies on height and postmenopausal breast cancer

Author	Year	WCRF Code	Study name	Study type	SubGroupDesc	Included in the 2005 meta-analysis	Included in the 2008 meta-analysis	Included in the 2008 high vs. low forest plot	Exclusion reasons	Estimated values for the analysis	Remarks
Iwasaki et al.	2007	BRE20027	JPHC	Prospective Cohort	Postmenopausal	New study	Yes	Yes		Mean exposure values	
Chang S.C.	2006	BRE80110	PLCO Cancer Screening Trial cohort	Prospective Cohort	Postmenopausal	New study	Yes	Yes		Mean exposure values	
Krebs E.E.	2006	BRE80106	Study of Osteoporotic Fractures	Prospective Cohort	Postmenopausal	New study	Yes	No	Only dose-response analysis were performed		
Tehard B.	2006	BRE80103	French EPIC-E3N	Prospective Cohort	Postmenopausal	New study	No	No	Data pooled from all the EPIC centres (Lahmann PH 2004, BRE15804) were selected instead		French EPIC E3N is a component study of EPIC
Wilfart, E et al.	2005	BRE11111	Malmo Diet and Cancer	Nested Case Control	Postmenopausal	New study	No	No	Data pooled from all the EPIC centres (Lahmann PH 2004, BRE15804) were selected instead, mean difference only		Malmo Diet and Cancer is a component study of EPIC
Colditz, G. A.	2004	BRE01783	Nurses' Health Study (NHS) Cohort	Prospective Cohort	HRT - No, postmenopausal	No	No	No	Cancer outcome by hormone type		
Lahmann PH	2004	BRE15804	EPIC	Prospective Cohort	Postmenopausal	No	Yes	Yes			
Macinnis, R.J et al.	2004	BRE80159	Melbourne Collaborative Cohort Study	Prospective Cohort	Postmenopausal	No	Yes	Yes			
Mattsson, I.	2004	BRE17807	Malmo Diet and Cancer	Prospective Cohort	Postmenopausal	Yes	No	No	Data pooled from all the EPIC centres (Lahmann PH 2004, BRE15804) were selected instead		Malmo Diet and Cancer is a component study of EPIC
Wirfalt, E.	2004	BRE17083	Malmo Diet and Cancer	Nested Case Control	Postmenopausal	Yes	No	No	Data pooled from all the EPIC centres (Lahmann PH 2004, BRE15804) were selected instead		Malmo Diet and Cancer is a component study of EPIC
Lahmann, PH.	2003	BRE20119	Malmo Diet and Cancer	Prospective Cohort	Postmenopausal	No	No	No	Data pooled from all the EPIC centres (Lahmann PH 2004, BRE15804) were selected instead		Malmo Diet and Cancer is a component study of EPIC

Morimoto, Libby, M.	2002	BRE20457	Women's Health Initiative (WHI) Observational Study	Prospective Cohort	Postmenopausal	No	Yes	Yes		Mean exposure values, no. of non-cases & person-years	
Petrelli, Jennifer, M.	2002	BRE20653	CPS-II US cohort	Prospective Cohort	Postmenopausal	No	No	No	Mortality as disease outcome		
Saadatian-Elahi, M.	2002	BRE21486	New York Women's Health Study	Nested Case Control	Postmenopausal	Yes	No	No	Mean difference only		
Sellers, Thomas, A.	2002	BRE20892	Iowa Women's Health Study	Prospective Cohort	Family History BC - No & Postmenopausal	No	Yes	Yes		Mean exposure values	
Sellers, Thomas, A.	2002	BRE20892	Iowa Women's Health Study	Prospective Cohort	Family History BC - Yes & Postmenopausal	No	Yes	Yes		Mean exposure values	
Tryggvadottir, L.	2002	BRE12507	Iceland, 1979	Nested Case Control	Postmenopausal	Yes	Yes	No	Only dose-response analysis were performed		
Wirfalt, E.	2002	BRE13504	Malmo Diet and Cancer	Nested Case Control	Postmenopausal	No	No	No	Data pooled from all the EPIC centres (Lahmann 2004, BRE15804) were selected instead		Malmo Diet and Cancer is a component study of EPIC
Manjer, J	2001	BRE17790	Malmo Preventive Project (MPP)	Prospective Cohort	Postmenopausal	Yes	Yes	Yes		Mean exposure values	
Palmer, Julie, R.	2001	BRE20603	Black Women's Health Study	Nested Case Control	Postmenopausal	Yes	No	No	A mixture of prevalent and incident cases		
Berkey, C. S.	1999	BRE00743	Nurses' Health Study (NHS) Cohort	Prospective Cohort	Postmenopausal	No	No	No	Missing no. of cases and non cases & C.I.s, can't estimate		
Sonnenschein, E.	1999	BRE11604	New York Women's Health Study	Prospective Cohort	Postmenopausal	Yes	Yes	Yes		Mean exposure values	
Galanis, D.J.	1998	BRE03058	Hawaii State Department of Health	Prospective Cohort	Postmenopausal	Yes	Yes	Yes		Mean exposure values	
Kaaks, R.	1998	BRE04522	DOM-project Utrecht	Prospective Cohort	Postmenopausal	Yes	Yes	Yes		Mean exposure values	
Tulinius, H.	1997	BRE12565	Reykjavik Study	Prospective Cohort	Postmenopausal	Yes	Yes	No	Only dose-response analysis were performed		
van den Brandt, P. A.	1997	BRE12717	The Netherlands Cohort Study on diet and cancer	Case Cohort	Postmenopausal	Yes	Yes	Yes			

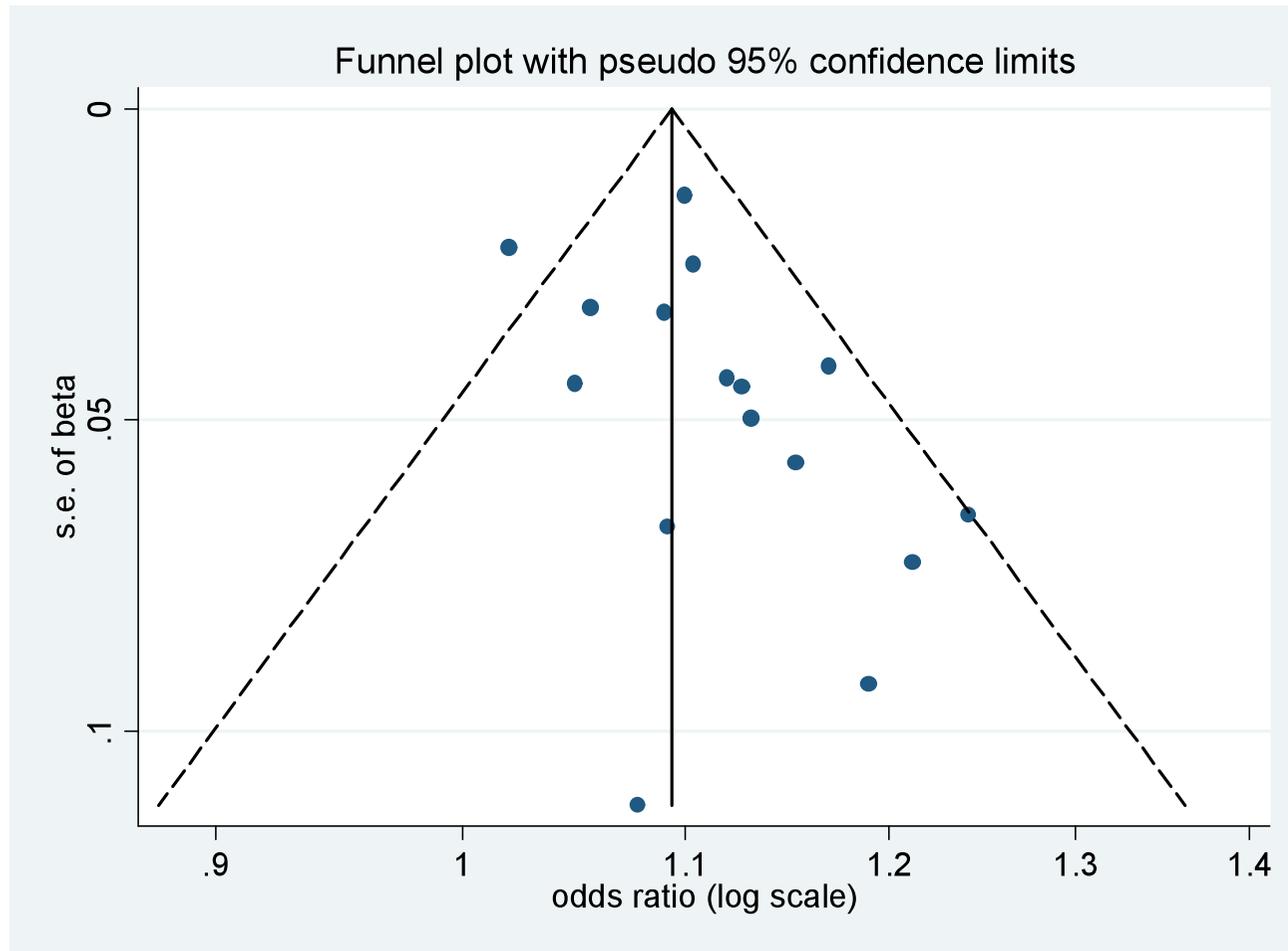
Freni, S. C.	1996	BRE02960	NHANES I	Prospective Cohort	Postmenopausal	No	No	Yes	Missing no. of non cases, can't estimate		
den Tonkelaar, I.	1995	BRE02224	DOM-project Utrecht	Prospective Cohort	Postmenopausal	No	No	No	Superseded by Kaaks 1998 BRE04522		
Toniolo, P.	1994	BRE12398	New York Women's Health Study	Nested Case Control	Postmenopausal	Yes	No	No	Superseded by Sonneschein 1999, BRE11604		
Barrett-Connor, E.	1993	BRE00581	Rancho Bernardo	Prospective Cohort	Postmenopausal	Yes	No	No	Mean difference only		
De Stavola, B. L.	1993	BRE02122	Guernsey G2 and G3	Prospective Cohort	Postmenopausal	No	No	Yes	Missing no. of non cases, can't estimate		
den Tonkelaar, I.	1992	BRE02222	DOM-project Utrecht	Prospective Cohort	Postmenopausal	No	No	No	Superseded by Kaaks 1998 BRE04522		
Vatten, L.J.	1990	BRE12827	Norway, 1974	Prospective Cohort	Postmenopausal	Yes	Yes	Yes		Mean exposure values	
Le Marchand, L.	1988	BRE15836	Hawaii 1942, 1960, 1972	Nested Case Control	Postmenopausal	No	No	Yes	Missing exposure levels		
Tornberg, S. A.	1988	BRE12418	Swedish cohort, 1963	Prospective Cohort	Postmenopausal	Yes	Yes	No	Only dose-response analysis were performed		
Total no. of articles =34			Total no. of cohort studies = 25			Total no. of studies included = 15	Total no. of studies included = 16	Total no. of studies included = 15			

ii. Fig. Ht4 Dose-response meta-analysis on height and postmenopausal breast cancer

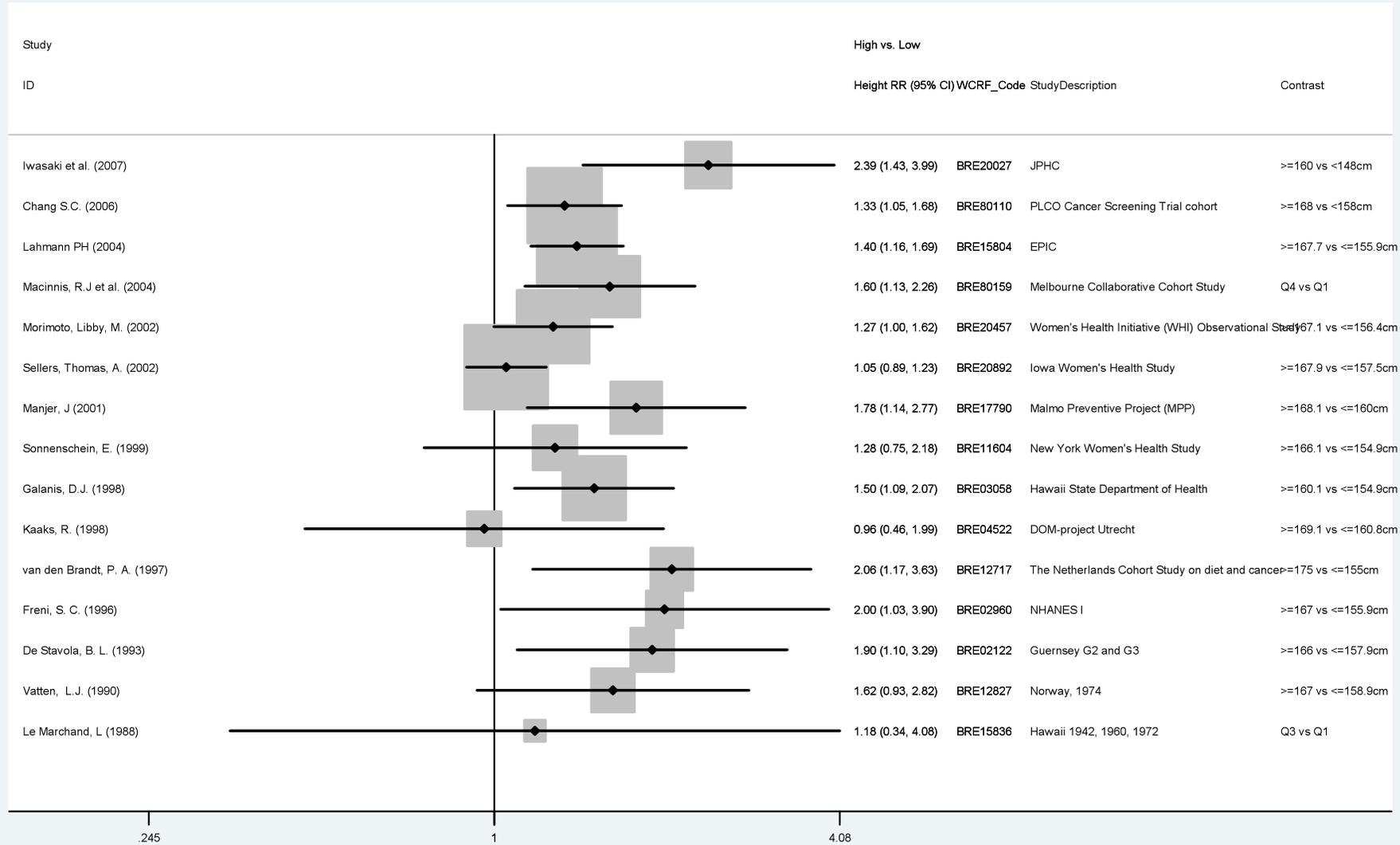


Note: Iwasaki et al., 2007, Chang et al., 2006 and Krebs et al., 2006 are the new studies identified during the update.

lii. Fig. Ht5 Funnel plot for height and postmenopausal breast cancer



liii. Fig. Ht6 Highest versus lowest forest plot on height and postmenopausal breast cancer



Note: Iwasaki et al., 2007 and Chang et al., 2006 are the new studies identified during the update.

8.4.1 Birthweight

Global Report,, 2007

Menopause age unspecified

Overall, a statistically significant increased risk was reported in the dose-response meta-analysis of five cohort studies (summary RR_{for increment of 1kg}=1.07, 95% CI = 1.03-1.11) (Ahlgren, M. et al., 2004 , BRE14201;De Stavola, B. L. et al., 2000 , BRE11734;dos Santos Silva, I. et al., 2004 , BRE02399;Hilakivi-Clarke, L. et al., 2001 , BRE03903;Vatten, L. J. et al., 2005 , BRE24432). The highest versus lowest forest plot with one additional study (Andersson, S. W. et al., 2001 , BRE00327) supported this finding in general.

Premenopause

The detrimental effect was also observed in four premenopausal cohorts (summary RR_{for increment of 1kg}=1.08, 95% CI = 1.04-1.13) (Ahlgren, M. et al., 2004 , BRE14201;De Stavola, B. L. et al., 2000 , BRE11734;dos Santos Silva, I. et al., 2004 , BRE02399;McCormack, V. A. et al., 2005 , BRE23366) and the dicotomic forest plot presented similar results (De Stavola, B. L. et al., 2000 , BRE11734;Kajiser, M. et al., 2003 , BRE04537;McCormack, V. A. et al., 2005 , BRE23366;Vatten, L. J. et al., 2005 , BRE24432).

Postmenopause

No association was shown in the postmenopausal women of three cohorts (Ahlgren, M. et al., 2004 , BRE14201;Lahmann, P. H. et al., 2004 , BRE18517;McCormack, V. A. et al., 2005 , BRE23366) (summary RR_{for increment of 1kg}=1.03, 95% CI = 0.97-1.10). Results from the dicotomic plot were also inconsistent (Lahmann, P. H. et al., 2004 , BRE18517;McCormack, V. A. et al., 2005 , BRE23366;Vatten, L. J. et al., 2005 , BRE24432).

Update

Four new reports presented respectively by the Women's Lifestyle and Health Study, NCI DES Combined Cohort Study, Nurses' Health Study I and II and a historical cohort from Denmark were identified during the update (Ahlgren, M. et al., 2007 , BRE80132;Lof, M. et al., 2007 , BRE80030;Michels, K. B. et al., 2006 , BRE80120;Troisi, R. et al., 2006 , BRE80119).

The Danish cohort (Ahlgren, M. et al., 2007 , BRE80132) had previously published two other reports (Ahlgren, M. et al., 2003 , BRE00198;Ahlgren, M. et al., 2004 , BRE14201), but since this new data lacks the appropriate format to be included in the highest versus lowest forest plot, data from 2004 was used as in the previous analysis in the Global Report (Ahlgren, M. et al., 2004 , BRE14201). The Nurses Health Study I and II (Michels, K. B. et al., 2006 , BRE80120) had provided results respectively by menopausal status and by hormone receptor type.

New studies were included in the relevant highest versus lowest forest plots as shown in Fig. BW1. There were a total of nine studies in the menopausal age unspecified subgroup and four

each in the pre and postmenopausal subgroups. Dose-response meta-analysis was not performed as only two additional studies (Ahlgren, M. et al., 2007 , BRE80132;Michels, K. B. et al., 2006 , BRE80120) had the appropriate format of data that allow inclusion in the menopause age unspecified meta-analysis. Lof et al. (Lof, M. et al., 2007 , BRE80030) did not provide the number of cases and non cases for each exposure category and the more detailed analysis in Troisi et al.'s paper had only two categories (≥ 3500 vs. 3000-3499g) (Troisi, R. et al., 2006 , BRE80119). As for the analyses by menopausal status, only the Nurses' Health Study I and II had provided new data (Michels, K. B. et al., 2006 , BRE80120).

Results

Menopause age unspecified

Consistent with the Global Report, all results presented were bigger than one (Fig. BW1). However only three studies, of which included the newly identified Women's Lifestyle and Health Study (Lof, M. et al., 2007 , BRE80030) observed a statistically significant increased risk in the dicotomic analysis (Ahlgren, M. et al., 2004 , BRE14201;Vatten, L. J. et al., 2005 , BRE24432). Results published by Vatten et al. in 2005 were included in the Global Report, but the risk estimate should be 1.50 (95% CI = 1.01-2.22) instead of 0.67 (95% CI = 0.45-0.99) for the comparison of ≥ 3840 vs. ≤ 3039 g (Vatten, L. J. et al., 2005 , BRE24432). The other six studies either reported no association (Ekbom, A. et al., 1997 , BRE80172;Troisi, R. et al., 2006 , BRE80119), or results with wide confidence intervals (Andersson, S. W. et al., 2001 , BRE00327;De Stavola, B. L. et al., 2000 , BRE11734;dos Santos Silva, I. et al., 2004 , BRE02399;Hilakivi-Clarke, L. et al., 2001 , BRE03903).

The results published by Ekbom et al. on the Uppsala Birth Cohort Study in 1997 ($RR_{\text{for } \geq 4000 \text{ vs. } 2500-2999\text{g}} = 1.04, 95\% \text{ CI} = 0.77-1.41$) (1068 cases) were not included in the highest versus lowest forest plot in the Global Report (Ekbom, A. et al., 1997 , BRE80172). Prior to this 1997 report, Ekbom et al. found a statistically non-significant increased risk for the same analysis in 1992 ($RR_{\text{for } \geq 4000 \text{ vs. } 2500-2999\text{g}} = 1.23, 95\% \text{ CI} = 0.75-2.0$) (458 cases) (Ekbom, A. et al., 1992 , BRE02554). In 2003, as a follow-up report, Kaijser et al. compared the observed and expected numbers of breast cancer between the Uppsala Birth Cohort born between 1925 and 1949 and the general public. The standardised incident ratio (SIR) for the ≥ 3 kg subgroup was 2.55 (95% CI = 1.03-5.25) (Kaijser, M. et al., 2003 , BRE04537).

Mogren et al. not included in the highest versus lowest forest plot (Fig. BW1) also observed an increased risk in their 2500-3999g subgroup (SIR = 1.29, 95% CI = 0.62-2.37) (10 observed cases) (Mogren, I. et al., 1999 , BRE80173).

The Nurses' Health Study I and II found statistically significant increased risks in the ER+ (81 cases) and PR+ (75 cases) tumour type ($RR_{\text{for } >8.4 \text{ vs. } \leq 5.5\text{lb}} = 1.79, 95\% \text{ CI} = 1.12-2.86$; $RR_{\text{for } >8.4 \text{ vs. } \leq 5.5\text{lb}} = 1.81, 95\% \text{ CI} = 1.11-2.94$ respectively) (Michels, K. B. et al., 2006 , BRE80120).

Premenopause

All four studies included here had presented results bigger than one (De Stavola, B. L. et al., 2000 , BRE11734;McCormack, V. A. et al., 2005 , BRE23366;Michels, K. B. et al., 2006 , BRE80120;Vatten, L. J. et al., 2005 , BRE24432), but none of these results had reached statistical significance. New evidence from the Nurses' Health Study I and II (Michels, K. B. et al., 2006 , BRE80120) observed a risk estimate of 1.37 (95% CI = 0.96-1.95) for >8.4 vs. ≤5.5lb, which supported the previous finding in 2005 that a higher birthweight may associate with an increased risk in premenopausal breast cancer.

Results published by McCormack et al. in 2005 on the Uppsala Birth Cohort Study was included in the present analysis (McCormack, V. A. et al., 2005 , BRE23366) (Fig. BW1), however unlike the previous analysis, results by Kaijser et al. in 2003 on a different but possibly overlapped cohort was omitted (Kaijser, M. et al., 2003 , BRE04537). As explained above, participants in this historical cohort had birth years of 1925-1949, while the one analysed by McCormack et al. was 1915-1929. Kaijser et al. reported a SIR of 2.46 (95% CI = 0.51-7.19).

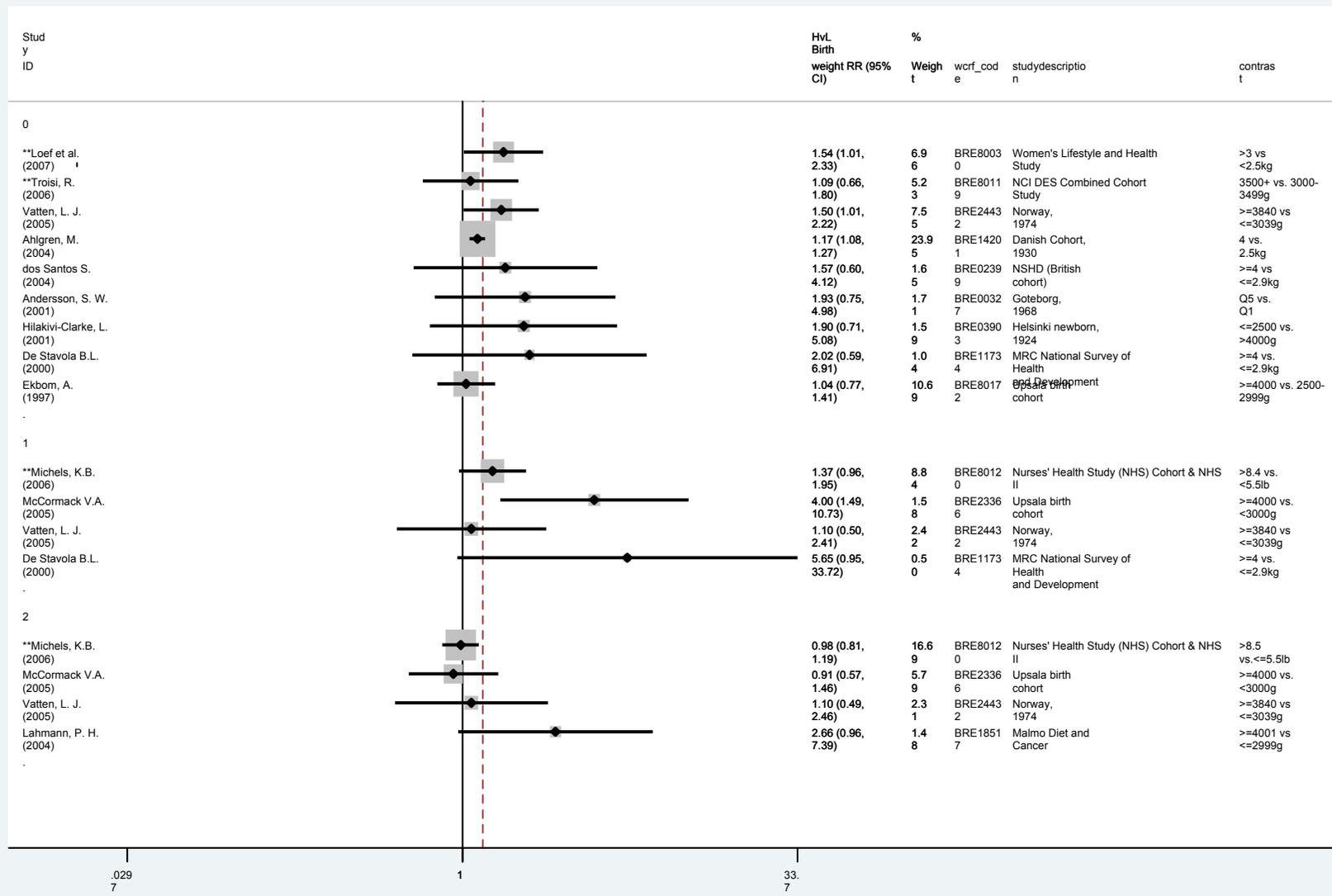
Postmenopause

Results on birthweight and postmenopausal breast cancer remained inconsistent after one more study – the Nurses' Health Study I and II (Michels, K. B. et al., 2006 , BRE80120) was added to the highest versus lowest plot. No association was observed in this new study.

Published meta-analysis

The summary risk estimate of seven cohort and 10 case-control studies, published by Michels and Xue in 2006, for breast cancer comparing women with high birthweight to low birthweight was 1.23 (95% CI = 1.13-1.34). For cohort studies alone, the RR was 1.24 (95% CI = 1.10-1.40) (Michels K.B., Xue F., 2006). In 2007 an update with three additional cohort and two case-control studies was published by the same authors. A summary RR of 1.15 (95% CI = 1.09-1.21) for the comparison of high versus low birthweight was reported (Xue F., Michels K.B., 2007). The observed positive association was consistent with our analysis of nine cohort and nested case-control studies (Fig.BW1, menopause age unspecified). In our analysis, the cohort studies conducted by Mogren et al. (Mogren, I. et al., 1999 , BRE80173) and Kaijser et al. (Kaijser, M. et al., 2003 , BRE04537) were not included as they presented standardised incident ratios.

liv. Fig. BW1 Highest versus lowest forest plot on birthweight by menopausal status (** = new studies identified during the update)



0 = menopause age unspecified, 1 = premenopause , 2 = postmenopause

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- BRE80020** - Visvanathan K et al. Alcohol dehydrogenase genetic polymorphisms, low-to-moderate alcohol consumption, and risk of breast cancer. *Alcohol Clin Exp Res* 2007; 31(3):467-476.
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Appendix 1 Breast cancer continuous update protocol

Continuous update of the WCRF-AICR report on diet and cancer

Protocol: Breast Cancer

Prepared by: Imperial College Team

The current protocol for the continuous update should ensure consistency of approach to the evidence, common approach to the analysis and format for displaying the evidence used as in the literature reviews for the Second Expert Report.

The starting point for this protocol are:

- The judgement of the Panel of the WCRF-AICR Second Expert Report on the evidence of the relationship of food, nutrition, physical activity and breast cancer (Second Expert Report Part 2 Chapter 7.10 pp 289).
- The convention for conducting systematic reviews developed by WCRF International for the Second Expert Report (SLR Specification Manual –version 15).
- The protocol developed by the SLR group on breast cancer for the Second Expert Report (National Cancer Institute, Milan, Version October 29, 2004).

The protocol will represent the agreed plan for the Continuous Update. Should departure from the agreed plan be considered necessary at a later stage, this must be agreed by the Continuous Update Panel (CUP) and the reasons documented.

Judgement of the Panel of the WCRF-AICR Second Expert Report:

The following summary has been extracted from the WCRF-AICR Second Expert Report:

CANCER OF THE BREAST (PREMENOPAUSE)		
In the judgement of the Panel, the factors listed below modify the risk of cancer of the breast (premenopause). Judgements are graded according to the strength of the evidence.		
	DECREASES RISK	INCREASES RISK
Convincing	Lactation	Alcoholic drinks
Probable	Body fatness	Adult attained height ¹ Greater birth weight
Limited –suggestive	Physical activity ²	

Limited –no conclusion	Cereals (grains) and their products; (grains) and their products; potatoes; vegetables; fruits; pulses (legumes); soya and soya products; meat; poultry; fish; eggs; fats and oils; vegetable fat; sugar; sugary foods and drinks; milk and dairy products; coffee; tea; carbohydrate; starch; dietary fibre; sugars; total fat; fatty acid composition; <i>trans</i> -fatty acids; cholesterol; protein; vitamin A; carotenoids; folate; riboflavin; vitamin B6; cobalamin; vitamin C; vitamin D; vitamin E; iron; calcium; selenium; isoflavones; dieldrin; <i>trans</i> -nonachlor; dichlorodiphenyltrichloroethane; dichlorodiphenyldichloroethylene; polychlorinated biphenyls; hexachlorocyclohexane; hexachlorobenzene; energy intake; adult weight gain; adult attained height; dietary patterns; culturally defined diets; glycaemic index; and being breastfed.	
Substantial effect on risk unlikely	None identified	

CANCER OF THE BREAST (POSTMENOPAUSE)		
In the judgement of the Panel, the factors listed below modify the risk of cancer of the breast (postmenopause). Judgements are graded according to the strength of the evidence.		
	DECREASES RISK	INCREASES RISK
Convincing	Lactation	Alcoholic drinks Body fatness Adult attained height ¹
Probable	Physical activity ²	Abdominal fatness Adult weight gain
Limited –suggestive		Total fat
Limited –no conclusion	Cereals (grains) and their products; potatoes; vegetables and fruits; pulses; soya and soya products; meat; poultry; fish; eggs; fats and oils; sugar; sugary drinks and foods; milk and dairy products; coffee; tea; carbohydrate; starch; dietary fibre; vegetable fat; fatty acid composition; cholesterol; protein; vitamin A and carotenoids; riboflavin; vitamin B6; vitamin B12; folate; vitamin C; vitamin D; vitamin E; isoflavones; iron; calcium; selenium; dieldrin; <i>trans</i> -nonachlor; dichlorodiphenyltrichloroethane; dichlorodiphenyldichloroethylene; polychlorinated biphenyls; hexachlorocyclohexane; hexachlorobenzene;	

	energy intake; birth length; culturally defined diets; dietary patterns; glycaemic index; being breastfed; and birth weight.
Substantial effect on risk unlikely	None identified

Extent of the continuous update.

The extent of the update has to be adequate to time and resources. The determination of priorities for the update will be based on:

- Study type
- Grade of evidence of the association of exposures with breast cancer
- Recommendations from the CUP and the ICL team

Study type: the study types that will be included in the update are:

- Randomized controlled trial
- Group randomized controlled trial (Community trial)
- Prospective cohort study
- Nested case-control study
- Case-cohort study
- Population based case-control study with more than 1000 cases

Factors: In this initial phase the ICL team will update the factors for which the strength of the evidence of association to breast cancer was graded as **convincing, probable, limited-suggestive and limited –no conclusion by the Panel of Second WCRF-AICR Expert Report.**

:

- Lactation
- Greater birth weight
- Adult attained height
- Alcoholic drinks
- Body fatness
- Abdominal fatness
- Adult weight gain
- Physical activity
- Total fat intake

1. Research question

The research topic is:

The associations between food, nutrition and physical activity and the risk of breast cancer.

2. Review team

Name	Current position at ICL	Role within team
Teresa Norat	Research Fellow	Principal investigator
Rui Veira	Data manager	Responsible of the data management, the design and architecture of the database
Doris Chan	Research Assistant	Nutritional epidemiologist, reviewer

3. Timeline

The update will include the articles added to Medline after January 1st 2006. The review for the Second Expert Report ended in December 30th 2005. A pre publication update extended the search to May 30th 2006 for exposures and cancer sites with suggestive, probable, convincing associations with the exposure of interest.

Task	Deadline
Preliminary output from search strategy	1 st July, 2007
Review abstracts and citations identified in initial electronic search. Select papers for complete review	1st August, 2007
Review relevant papers. Select papers for data extraction*	15 September, 2007
Data extraction	30 December, 2007
Production of preliminary tables	30 January, 2007
Production of tables.	March 30, 2007
Preparation of forrests plot with relevant data	
Preparation of report to WCRF-AICR	April 15, 2007
Transfer copy of database, Endnote files to WCRF	April 15, 2007

** It is intended to continue tasks 1, 2, 3 with a monthly periodicity*

4. Search strategy

The WCRF-PubMed search strategy and search terms used in the SLR for the Second Expert Report will be the core for this literature search.

5. Selection of articles:

5.1 Inclusion criteria

The articles to be included in the review:

- Have to be included in Medline after January 1st 2006 (closure date of the database for the Second Report).
- Have to present results from an epidemiologic study of one of the following types:
 - Randomized controlled trial

- Group randomized controlled trial (Community trial)
- Prospective cohort study
- Nested case-control study
- Case-cohort study
- Population based case-control study with more than 1000 cases
-
- Must have as outcome of interest breast cancer (*in situ*, invasive) incidence or mortality in women.
- Have to present results on the relevant exposures
- Published in English language
- Included in Medline

5.2 Exclusion criteria

The articles to be excluded from the review:

1. Are out of the research topic
2. Do not report measure of relationship
3. The measure of relationship is only the mean difference of exposure
4. Are supplement to the main manuscript (e.g. Authors' Reply).
5. Are in-press
6. Are not in English language

Pooled analysis will be used as support for interpretation, but the data will not be included in the database.

6. Exposures

The continuous update will use the same labels as used in the SLR for the Second Expert Report.

Surrogate exposures of diet at early age, such as attained height at age at menarche and height velocity, have been included as exposures in the database during the SLR for the Second Expert Report and will be included in the continuous update.

Biomarkers of dietary intake was coded under the Main exposure corresponding to the dietary exposure and specified in a sub-exposure. We propose to use the same list of biomarkers used by the SLR teams of Bristol and Leeds (Attachment 1).

7. Outcome

The outcome of interest is breast cancer encompassing incidence and mortality (except for case-control studies, for which the outcome of interest is incidence). Separate analyses for incidence and mortality will be provided.

The information of all the papers reporting outcome for more than one cancer site, will be extracted and the information inputted in the database.

8. Databases

Only the Medline database will be searched. Data provided from the SLR Breast cancer for the Second Expert Report indicates that 95% of the articles included in the review have been retrieved from the Medline database (See Appendix 2).

9. Hand searching for cited references

For feasibility reasons, journals will not be hand searched in the continuous update. However, hand searching, and searching in other databases should be done when a formal meta-analysis will be done after recommendation of the CUP.

10. Retrieving papers

The abstracts from the initial search results from PubMed will be reviewed by one person to assess each reference as to whether it is relevant and potentially relevant.

Complete papers will be retrieved for all relevant and potentially relevant references, and for references that cannot be excluded upon reading the title and abstracts.

A second assessment will be done after review of the complete papers.

The ICL team uses resources at Imperial College to retrieve the papers identified as satisfying the inclusion criteria. This should cover most of the online journal. For articles not accessible through the ICL library, funds provided by WCRF-AICR will be required.

The assessment of trials and cohort studies will be checked by a second reviewer.

11. Labelling of references

For consistency with the previous data collected during the SLR process for the Second Expert Report, the Imperial College team will use the same labelling of references: the unique identifier for a particular reference will be constructed using a 3-letter code to represent the cancer site (e.g. BRE for breast cancer), followed by a 5-digit number that will be allocated in sequence.

12. Reference Manager files

Reference Manager databases are generated in the continuous update containing the references of the initial search.

- 1) One of the customized fields (custom 1) is named 'inclusion' and this field is marked 'in', 'out' for each paper, thereby indicating which papers are deemed potentially relevant based on an assessment of the title and abstract.
- 2) One of the customized fields (custom 2) is named 'reasons' and this field should include the reason for exclusion for each paper.
- 3) The study identifier should be entered under the field titled 'label'.
- 4) One of the customized fields (custom 3) is named "study design". This field should include a letter (A-Q) representing the study design of each paper.

13. Data extraction

Ideally, data extraction should be performed in duplicate for all papers. This is not feasible with the available resources. Instead, the extracted data of 10% of the prospective cohort studies and trials in the database will be checked by a second reviewer at Imperial College.

The ICL team will update the merged MySQL database using a new interface created at Imperial College. This contains the same fields included in the Access database for the SLR for the Second Expert Report, including quality characteristics and results.

The study design algorithm devised (SLR specification manual –version 15) for use of the SLR centres for the Second Expert Report will be used to allocate study designs to papers. In some cases it will be appropriate to assign more than one design to a particular paper because the methods for assessment of different exposures may vary, because the data analyses correspond to more than one study design (e.g. analyses in the entire cohort and nested case-control).

Important overall aspects of the study that need attention are the strategy of analysis, the variables for which the exposure – disease association was adjusted for, the information given on the validity of the measurements and whether analyses were performed that attempted to correct for the likely effect of measurement error in the exposure variable. These variables were programmed in the Access database and are included in the MySQL database used by the continuous update by the ICL team.

The effect measures estimated with all the models reported in the paper should be extracted. The models should be labelled as not adjusted, minimally adjusted and intermediately adjusted. In addition, the ICL reviewer should indicate a “best model” for inclusion in reports. Where the same exposure was analyzed in more than one way with different levels of adjustment, the best model was taken to be the one with the most appropriate adjustment for confounding. Sometimes, some of the potential risk factors are not kept in the model because its inclusion does not modify the risk estimates. This model should also be considered the “best model”. The most appropriate model should adjust for:

- Age
- Socio-economic status, educational attainment
- Alcohol intake
- Anthropometric variables (BMI, weight, height, WHR)
- Total energy intake (if exposure is a dietary variable)
- Menstrual characteristics (including age at menarche, menopausal status, age at menopause, among others)
- Reproductive and hormonal factors (including parity, HRT use, OC use)
- Genetic factors (e.g. family history)
- Previous breast disease
- Factors related to laboratory determinations (e.g. batch)

In relation to effect modification, the ICL team should report whether interaction terms were included in models and extract the results, in particular any statistical tests of heterogeneity across strata.

Data should also be abstracted for sub-groups corresponding to the list of potential effect modifiers. Where the data permit, the following sub-groups must be reported:

- Age
- Obesity
- Physical activity

- Oral contraceptive use
- Menopausal status
- Hormone replacement therapy
- Ethnicity
- Family history
- Smoking
- Genetic polymorphism
- Blood levels of nutrients/hormones

Data should be extracted for each individual paper, even if there is more than one from any one study, unless the information is identical. The extracted information should only be used once per analysis. To facilitate the detection of multiple reports from the same study, the study name in each article should be extracted .

If needed, the CU team should contact the authors to confirm, refute these suspicions. If the matter remains unresolved the coordinator of the continuous update will then seek advice from the CUP if necessary.

14. Reports

14.1 Content of the report:

Results of the search

Information on number of records downloaded, number of papers thought potentially relevant after reading titles and abstracts and number of included relevant papers. The reasons for excluding papers should also be described.

Description of studies identified in the continuous update

Amount of data and study types (i.e. numbers of different types of studies)

Populations studied

Exposures identified

Outcomes identified

Summary of number of studies by exposure and study type, separated on new (studies identified in the continuous update) and total.

14.2. Tabulation of study characteristics

Information on the characteristics (e.g. population, exposure, outcome, study design) and results of the study (e.g. direction and magnitude) of the new studies should be summarised in tables using the same format as for the SLR for the Second Expert Report.

Within this table the studies should be ordered according to design (e.g. trials, cohort studies, case-control studies).

The results will be presented separately for premenopausal and postmenopausal breast cancer. Studies that did not differentiate pre and post menopausal breast cancer will be analyzed separately in the meta-analyses.

14.3 Data analysis

A meta-analysis for a particular exposure and outcome will be conducted when more than 2 trials or 2 cohort studies or 3 case-control studies has been published in the year, and if the new and the previous results totalize more than 3 trials, 5 cohort studies or 5 case-control studies.

The meta-analysis will include also the study results extracted during the SLR and included in the merged database. Special care will be taken to avoid including more than once the results of the same study (e.g. previous analyses and re-analyses after a longer follow-up).

Results of pooled analyses will be presented to the CUP to support the evaluation, but they will not be included in the meta-analyses.

The first stage of the analysis will be to investigate whether any variations in estimates of effects exist between studies. Forest plots will be used to assess and display heterogeneity. These should be presented in the report using the standard format for the presentation used in the SLR for the Second Expert Report. Heterogeneity will be formally assessed by using the I^2 statistic.

If sufficient homogeneity exists, an overall summary of effect should be determined. If there is significant heterogeneity, it should be characterised as clearly as possible. If possible meta-regression should be performed to investigate sources of heterogeneity.

The list of characteristics to be explored as possible causes of heterogeneity is:

- Method of measurement, assessment of the exposure
- Definition of exposure
- Exposure range
- Adjustment for confounders
- Age at recruitment
- Duration of follow-up
- Geographical region
- Outcome
- Study design

From this identification, it may be possible for studies to be grouped according to a particular characteristic and separate analysis performed within each sub-group.

Meta-regression analysis will be used when appropriate and possible. In addition, sensitivity analysis and influence analyses could be done when possible and appropriate.

Summary estimates should be prepared for each study design separately but not combined, and these should be displayed on the same forest plot. The studies should be ordered by study design: randomised controlled trials, cohort and then case-control studies.

Formal quality grading should not be performed on an individual study basis. Instead, study characteristics (such as aspects of study design, methods of exposure assessment etc.) will be used to explore potential sources of bias and the robustness of conclusions. This approach has the following uses:

- 1) To explore the reasons for heterogeneity in study results
- 2) To guide interpretation of findings and to aid determining the strength of inferences
- 3) To guide recommendations for future research

The recommended method for presenting the results of the meta-analyses is in terms of *log, per unit increase in exposure*. If it is not possible, the meta-analyses will summarize the comparison of extreme categories. The analyses will be conducted using STATA.

Appendix 2 Search Strategy

WCRF - PUBMED SEARCH STRATEGY (with modifications implemented by the SLR centre Milan)

a) Searching for all studies relating to breast cancer:

#1 Breast Neoplasms [MeSH Terms]

#2 Breast AND (cancer* OR neoplasm* OR tumour* OR tumor* OR carcinoma* OR adenocarcinoma*)

#3 mammary AND (cancer* OR neoplasm* OR tumour* OR tumor* OR carcinoma* OR adenocarcinoma*)

#4 #1 OR #2 OR #3

b) Searching for all studies relating to food, nutrition and physical activity:

#5 weight loss[tiab] or weight gain[tiab] OR anthropometry[tiab] OR birth weight[tiab] OR birthweight[tiab] OR birth-weight[tiab] OR child development[tiab] OR height[tiab] OR body composition[tiab] OR body mass[tiab] OR BMI[tiab] OR obesity[tiab] OR obese[tiab] OR overweight[tiab] OR over-weight[tiab] OR over weight[tiab] OR skinfold measurement*[tiab] OR skinfold thickness[tiab] OR DEXA[tiab] OR bio-impedence[tiab] OR waist circumference[tiab] OR hip circumference[tiab] OR waist hip ratio*[tiab]

#6 recreational activit*[tiab] OR household activit*[tiab] OR occupational activit*[tiab] OR physical activit*[tiab] OR physical inactivit*[tiab] OR exercise[tiab] OR exercising[tiab] OR energy intake[tiab] OR energy expenditure[tiab] OR energy balance[tiab] OR energy density[tiab]

#7 body composition[MeSH Terms] OR body constitution[MeSH Terms] OR growth[MeSH Terms] OR anthropometry[MeSH Terms] OR physical fitness[MeSH Terms] OR exertion[MeSH Terms] OR physical endurance[MeSH Terms] or walking[MeSH Terms]

#8 pesticides[MeSH Terms] OR fertilizers[MeSH Terms] OR "veterinary drugs"[MeSH Terms]

#9 supplements[tiab] OR supplement[tiab] OR vitamin*[tiab] OR retinol[tiab] OR carotenoid*[tiab] OR tocopherol[tiab] OR folate*[tiab] OR folic acid[tiab] OR methionine[tiab] OR riboflavin[tiab] OR thiamine[tiab] OR niacin[tiab] OR pyridoxine[tiab] OR cobalamin[tiab] OR mineral*[tiab] OR sodium[tiab] OR iron[tiab] OR calcium[tiab] OR selenium[tiab] OR iodine[tiab] OR magnesium[tiab] OR potassium[tiab] OR zinc[tiab] OR copper[tiab] OR phosphorus[tiab] OR manganese[tiab] OR chromium[tiab] OR phytochemical[tiab] OR allium[tiab] OR isothiocyanate*[tiab] OR glucosinolate*[tiab] OR indoles[tiab] OR polyphenol*[tiab] OR phytoestrogen*[tiab] OR genistein[tiab] OR saponin*[tiab] OR coumarin*[tiab]

#10 vitamins[MeSH Terms]

#11 salt[tiab] OR salting[tiab] OR salted[tiab] OR fiber[tiab] OR fibre[tiab] OR polysaccharide*[tiab] OR starch[tiab] OR starchy[tiab] OR carbohydrate*[tiab] OR lipid*[tiab] OR linoleic acid*[tiab] OR sterols[tiab] OR stanols[tiab] OR sugar*[tiab] OR

sweetener*[tiab] OR saccharin*[tiab] OR aspartame[tiab] OR acesulfame[tiab] OR cyclamates[tiab] OR maltose[tiab] OR mannitol[tiab] OR sorbitol[tiab] OR sucrose[tiab] OR xylitol[tiab] OR cholesterol[tiab] OR diet*protein*[tiab] OR hydrogenated dietary oils[tiab] OR hydrogenated lard[tiab] OR hydrogenated oils[tiab]

#12 dietary carbohydrates[MeSH Terms] OR dietary proteins[MeSH Terms] OR sweetening agents[MeSH Terms]

#13 cooking[tiab] OR cooked[tiab] OR grill[tiab] OR grilled[tiab] OR fried[tiab] OR fry[tiab] OR roast[tiab] OR bake[tiab] OR baked[tiab] OR stewing[tiab] OR stewed[tiab] OR casserol*[tiab] OR broil[tiab] OR broiled[tiab] OR boiled[tiab] OR microwave[tiab] OR microwaved[tiab] OR re-heating[tiab] OR reheating[tiab] OR heating[tiab] OR re-heated[tiab] OR heated[tiab] OR poach[tiab] OR poached[tiab] OR steamed[tiab] OR barbecue*[tiab] OR chargrill*[tiab] OR heterocyclic amines[tiab] OR polycyclic aromatic hydrocarbons[tiab]

#14 cookery[MeSH Terms]

#15 mycotoxin*[tiab] OR aflatoxin*[tiab] OR pickled[tiab] OR bottled[tiab] OR bottling[tiab] OR canned[tiab] OR canning[tiab] OR vacuum pack*[tiab] OR refrigerate*[tiab] OR refrigeration[tiab] OR cured[tiab] OR smoked[tiab] OR preserved[tiab] OR preservatives[tiab] OR nitrosamine[tiab] OR hydrogenation[tiab] OR fortified[tiab] OR additive*[tiab] OR colouring*[tiab] OR coloring*[tiab] OR flavouring*[tiab] OR flavoring*[tiab] OR nitrates[tiab] OR nitrites[tiab] OR solvent[tiab] OR solvents[tiab] OR ferment*[tiab] OR processed[tiab] OR antioxidant*[tiab] OR genetic modif*[tiab] OR genetically modif*[tiab] OR vinyl chloride[tiab] OR packaging[tiab] OR labelling[tiab] OR phthalates[tiab]

#16 food preservation[MeSH Terms]

#17 diet therapy[MeSH Terms] OR nutrition[MeSH Terms] OR Food Habits[MeSH Terms] OR Micronutrients[MeSH Terms]

#18 pesticide*[tiab] OR herbicide*[tiab] OR DDT[tiab] OR fertiliser*[tiab] OR fertilizer*[tiab] OR organic[tiab] OR contaminants[tiab] OR contaminate*[tiab] OR veterinary drug*[tiab] OR polychlorinated dibenzofuran*[tiab] OR PCDF*[tiab] OR polychlorinated dibenzodioxin*[tiab] OR PCDD*[tiab] OR polychlorinated biphenyl*[tiab] OR PCB*[tiab] OR cadmium[tiab] OR arsenic[tiab] OR chlorinated hydrocarbon*[tiab] OR microbial contamination*[tiab]

#19 fluid intake[tiab] OR water[tiab] OR drinks[tiab] OR drinking[tiab] OR tea[tiab] OR coffee[tiab] OR caffeine[tiab] OR juice[tiab] OR beer[tiab] OR spirits[tiab] OR liquor[tiab] OR wine[tiab] OR alcohol[tiab] OR alcoholic[tiab] OR beverage*[tiab] OR ethanol[tiab] OR yerba mate[tiab] OR ilex paraguariensis[tiab]

#20 food*[tiab] OR cereal*[tiab] OR grain*[tiab] OR granary[tiab] OR wholegrain[tiab] OR wholewheat[tiab] OR roots[tiab] OR plantain*[tiab] OR tuber[tiab] OR tubers[tiab] OR vegetable*[tiab] OR fruit*[tiab] OR pulses[tiab] OR beans[tiab] OR lentils[tiab] OR chickpeas[tiab] OR legume*[tiab] OR soy[tiab] OR soya[tiab] OR nut[tiab] OR nuts[tiab] OR peanut*[tiab] OR groundnut*[tiab] OR seeds[tiab] OR meat[tiab] OR beef[tiab] OR pork[tiab] OR lamb[tiab] OR poultry[tiab] OR chicken[tiab] OR turkey[tiab] OR duck[tiab]

OR fish[tiab] OR fat[tiab] OR fats[tiab] OR fatty[tiab] OR egg[tiab] OR eggs[tiab] OR bread[tiab] OR oils[tiab] OR shellfish[tiab] OR seafood[tiab] OR sugar[tiab] OR syrup[tiab] OR dairy[tiab] OR milk[tiab] OR herbs[tiab] OR spices[tiab] OR chilli[tiab] OR chillis[tiab] OR pepper*[tiab] OR condiments[tiab] OR Potato*[tiab] OR Cabbage*[tiab] OR Brassica[tiab] OR Cruciferous[tiab] OR Radish[tiab] OR Carrot*[tiab] OR Lettuce*[tiab] OR Spinach[tiab] OR Onion*[tiab] OR Tomato*[tiab] OR Soybean[tiab]

#21 food and beverages[MeSH Terms]

#22 diet[tiab] OR diets[tiab] OR dietetic[tiab] OR dietary[tiab] OR eating[tiab] OR intake[tiab] OR nutrient*[tiab] OR nutrition[tiab] OR vegetarian*[tiab] OR vegan*[tiab] OR "seventh day adventist"[tiab] OR macrobiotic[tiab] OR breastfeed*[tiab] OR breast feed*[tiab] OR breastfed[tiab] OR breast fed[tiab] OR breastmilk[tiab] OR breast milk[tiab] OR Lactose[tiab] OR Galactose[tiab] OR Cheese[tiab] OR Sausage[tiab] OR Ham[tiab]

#23 diet therapy[MeSH Terms] OR nutrition[MeSH Terms]

#24 #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23

Combining searches on breast cancer (a) and searches on all studies relating to food, nutrition and physical activity (b):

#4 AND #24

Appendix 3 Exposure codes

1 Patterns of diet

1.1 Regionally defined diets

*1.1.1 Mediterranean diet

Include all regionally defined diets, evident in the literature. These are likely to include Mediterranean, Mesoamerican, oriental, including Japanese and Chinese, and “western type”.

1.2 Socio-economically defined diets

To include diets of low-income, middle-income and high-income countries (presented, when available in this order). Rich and poor populations within low-income, middle-income and high-income countries should also be considered. This section should also include the concept of poverty diets (monotonous diets consumed by impoverished populations in the economically-developing world mostly made up of one starchy staple, and may be lacking in micronutrients).

1.3 Culturally defined diets

To include dietary patterns such as vegetarianism, vegan diets, macrobiotic diets and diets of Seventh-day Adventists.

1.4 Individual level dietary patterns

To include work on factor and cluster analysis, and various scores and indexes (e.g. diet diversity indexes) that do not fit into the headings above.

1.5 Other dietary patterns

Include under this heading any other dietary patterns present in the literature, that are not regionally, socio-economically, culturally or individually defined.

1.6 Breastfeeding

1.6.1 Mother

Include here also age at first lactation, duration of breastfeeding, number of children breast-fed

1.6.2 Child

Results concerning the effects of breastfeeding on the development of cancer should be disaggregated into effects on the mother and effects on the child. Wherever possible detailed

information on duration of total and exclusive breastfeeding, and of complementary feeding should be included.

1.7 Other issues

For example results related to diet diversity, meal frequency, frequency of snacking, dessert-eating and breakfast-eating should be reported here. Eating out of home should be reported here.

2 Foods

*2.0.1 Plant foods

2.1 Starchy foods

2.1.1 Cereals (grains)

* 2.1.1.0.1 Rice, pasta, noodles

* 2.1.1.0.2 Bread

* 2.1.1.0.3 Cereal

** Report under this subheading the cereals when it is not specified if they are wholegrain or refined cereals (e.g. fortified cereals)*

2.1.1.1 Wholegrain cereals and cereal products

* 2.1.1.1.1 Wholegrain rice, pasta, noodles

* 2.1.1.1.2 Wholegrain bread

* 2.1.1.1.3 Wholegrain cereal

2.1.1.2 Refined cereals and cereal products

* 2.1.1.2.1 Refined rice, pasta, noodles

* 2.1.1.2.2 Refined bread

* 2.1.1.2.3 Refined cereal

2.1.2 Starchy roots, tubers and plantains

* 2.1.2.1 Potatoes

2.1.3 Other starchy foods

**Report polenta under this heading*

2.2 Fruit and (non-starchy) vegetables

Results for “fruit and vegetables” and “fruits, vegetables and fruit juices” should be reported here. If the definition of vegetables used here is different from that used in the first report, this should be highlighted.

2.2.1 Non-starchy vegetables

This heading should be used to report total non-starchy vegetables. If results about specific vegetables are reported they should be recorded under one of the sub-headings below or if not covered, they should be recorded under '2.2.1.5 other'.

2.2.1.1 Non-starchy root vegetables and tubers

*2.2.1.1.1 Carrots

2.2.1.2 Cruciferous vegetables

2.2.1.3 Allium vegetables

2.2.1.4 Green leafy vegetables (not including cruciferous vegetables)

2.2.1.5 Other non-starchy vegetables

*2.2.1.5.13 Tomatoes

*2.2.1.5.1 Fresh beans (e.g. string beans, French beans) and peas

Other non-starchy vegetables' should include foods that are botanically fruits but are eaten as vegetables, e.g. courgettes. In addition vegetables such as French beans that do not fit into the other categories, above.

If there is another sub-category of vegetables that does not easily fit into a category above eg salted root vegetables (ie you do not know if it is starchy or not) then report under 2.2.1.5. and note the precise definition used by the study. If in doubt, enter the exposure more than once in this way.

2.2.1.6 Raw vegetables

This section should include any vegetables specified as eaten raw. Results concerning specific groups and type of raw vegetable should be reported twice i.e. also under the relevant headings 2.2.1.1 –2.2.1.5.

2.2.2 Fruits

*2.2.2.0.1 Fruit, dried

*2.2.2.0.2 Fruit, canned

*2.2.2.0.3 Fruit, cooked

2.2.2.1 Citrus fruit

2.2.2.1.1 Oranges

2.2.2.1.2 Other citrus fruits (e.g. grapefruits)

2.2.2.2 Other fruits

*2.2.2.2.1 Bananas

*2.2.2.2.4 Melon

*2.2.2.2.5 Papaya

*2.2.2.2.7 Blueberries, strawberries and other berries

*2.2.2.2.8 Apples, pears

*2.2.2.2.10 Peaches, apricots, plums

*2.2.2.2.11 Grapes

If results are available that consider other groups of fruit or a particular fruit please report under 'other', specifying the grouping/fruit used in the literature.

2.3 Pulses (legumes)

*2.3.1 Soya, soya products

*2.3.1.1 Miso, soya paste soup

*2.3.1.2 Soya juice

*2.3.1.4 Soya milk

*2.3.1.5 Tofu

*2.3.2 Dried beans, chickpeas, lentiles

*2.3.4 Peanuts, peanut products

Where results are available for a specific pulse/legume, please report under a separate heading.

2.4 Nuts and Seeds

To include all tree nuts and seeds, but not peanuts (groundnuts). Where results are available for a specific nut/seed, e.g. brazil nuts, please report under a separate heading.

2.5 Meat, poultry, fish and eggs

Wherever possible please differentiate between farmed and wild meat, poultry and fish.

2.5.1 Meat

This heading refers only to red meat: essentially beef, lamb, pork from farmed domesticated animals either fresh or frozen, or dried without any other form of preservation. It does not refer to poultry or fish.

Where there are data for offal (organs and other non-flesh parts of meat) and also when there are data for wild and non-domesticated animals, please show these separately under this general heading as a subcategory.

2.5.1.1 Fresh Meat

2.5.1.2 Processed meat

*2.5.1.2.1 Ham

*2.5.1.2.1.7 Burgers

*2.5.1.2.8 Bacon

*2.5.1.2.9 Hot dogs

*2.5.1.2.10 Sausages

Repeat results concerning processed meat here and under the relevant section under 4. Food Production and Processing. Please record the definition of 'processed meat' used by each study.

2.5.1.3 Red meat

- *2.5.1.3.1 Beef
- *2.5.1.3.2 Lamb
- *2.5.1.3.3 Pork
- *2.5.1.3.6 Horse, rabbit, wild meat (game)

Where results are available for a particular type of meat, e.g. beef, pork or lamb, please report under a separate heading.

Show any data on wild meat (game) under this heading as a separate sub-category.

2.5.1.4 Poultry

Show any data on wild birds under this heading as a separate sub-category.

- *2.5.1.5 Offals, offal products (organ meats)

2.5.2 Fish

- *2.5.2.3 Fish, processed (dried, salted, smoked)
- *2.5.2.5 Fatty Fish
- *2.5.2.7 Dried Fish
- *2.5.2.9 White fish, lean fish

2.5.3 Shellfish and other seafood

2.5.4 Eggs

2.6 Fats, oils and sugars

2.6.1 Animal fats

- *2.6.1.1 Butter
- *2.6.1.2 Lard
- *2.6.1.3 Gravy
- *2.6.1.4 Fish oil

2.6.2 Plant oils

2.6.3 Hydrogenated fats and oils

- *2.6.3.1 Margarine

Results concerning hydrogenated fats and oils should be reported twice, here and under 4.3.2 Hydrogenation

2.6.4 Sugars

This heading refers to added (extrinsic) sugars and syrups as a food, that is refined sugars, such as table sugar, or sugar used in bakery products.

2.7 Milk and dairy products

Results concerning milk should be reported twice, here and under 3.3 Milk

*2.7.1 Milk, fresh milk, dried milk

*2.7.1.1 Whole milk, full-fat milks

*2.7.1.2 Semi skimmed milk, skimmed milk, low fat milk, 2% Milk

*2.7.2 Cheese

*2.7.2.1 Cottage cheese

*2.7.2.2 Cheese, low fat

*2.7.3 Yoghurt, buttermilk, sour milk, fermented milk drinks

*2.7.3.1 Fermented whole milk

*2.7.3.2 Fermented skimmed milk

*2.7.7 Ice cream

2.8 Herbs, spices, condiments

*2.8.1 Ginseng

*2.8.2 Chili pepper, green chili pepper, red chili pepper

2.9 Composite foods

Eg, snacks, crisps, desserts, pizza. Also report any mixed food exposures here ie if an exposure is reported as a combination of 2 or more foods that cross categories (eg bacon and eggs). Label each mixed food exposure.

*2.9.1 Cakes, biscuits and pastry

*2.9.2 Cookies

*2.9.3 Confectionery

*2.9.4 Soups

*2.9.5 Pizza

*2.9.6 Chocolate, candy bars

*2.9.7 Snacks

3 Beverages

3.1 Total fluid intake

3.2 Water

3.3 Milk

For results concerning milk please report twice, here and under 2.7 Milk and Dairy Products.

3.4 Soft drinks

Soft drinks that are both carbonated and sugary should be reported under this general heading. Drinks that contain artificial sweeteners should be reported separately and labelled as such.

3.4.1 Sugary (not carbonated)

3.4.2 Carbonated (not sugary)

The precise definition used by the studies should be highlighted, as definitions used for various soft drinks vary greatly.

*3.5 Fruit and vegetable juices

*3.5.1 Citrus fruit juice

*3.5.2 Fruit juice

*3.5.3 Vegetable juice

*3.5.4 Tomato juice

3.6 Hot drinks

3.6.1 Coffee

3.6.2 Tea

Report herbal tea as a sub-category under tea.

3.6.2.1 Black tea

3.6.2.2 Green tea

3.6.3 Maté

3.6.4 Other hot drinks

3.7 Alcoholic drinks

3.7.1 Total

3.7.1.1 Beers

3.7.1.2 Wines

3.7.1.3 Spirits

3.7.1.4 Other alcoholic drinks

4 Food production, preservation, processing and preparation

4.1 Production

4.1.1 Traditional methods (*to include 'organic'*)

4.1.2 Chemical contaminants

Only results based on human evidence should be reported here (see instructions for dealing with mechanistic studies). Please be comprehensive and cover the exposures listed below:

4.1.2.1 Pesticides

4.1.2.2 DDT

4.1.2.3 Herbicides

4.1.2.4 Fertilisers

4.1.2.5 Veterinary drugs

4.1.2.6 Other chemicals

4.1.2.6.1 Polychlorinated dibenzofurans (PCDFs)

4.1.2.6.2 Polychlorinated dibenzodioxins (PCDDs)

4.1.2.6.3 Polychlorinated biphenyls (PCBs)

4.1.2.7 Heavy metals

4.1.2.7.1 Cadmium

4.1.2.7.2 Arsenic

4.1.2.8 Waterborne residues

4.1.2.8.1 Chlorinated hydrocarbons

4.1.2.9 Other contaminants

Please also report any results that cover the cumulative effect of low doses of contaminants in this section.

4.2 Preservation

4.2.1 Drying

4.2.2 Storage

4.2.2.1 Mycotoxins

4.2.2.1.1 Aflatoxins

4.2.2.1.2 Others

4.2.3 Bottling, canning, vacuum packing

4.2.4 Refrigeration

4.2.5 Salt, salting

4.2.5.1 Salt

4.2.5.2 Salting

4.2.5.3 Salted foods

4.2.5.3.1 Salted animal food

4.2.5.3.2 Salted plant food

4.2.6 Pickling

4.2.7 Curing and smoking

4.2.7.1 Cured foods

4.2.7.1.1 Cured meats

4.2.7.1.2 Smoked foods

For some cancers e.g. colon, rectum, stomach and pancreas, it may be important to report results about specific cured foods, cured meats and smoked meats. N-nitrosamines should also be covered here.

4.3 Processing

4.3.1 Refining

Results concerning refined cereals and cereal products should be reported twice, here and under 2.1.1.2 refined cereals and cereal products.

4.3.2 Hydrogenation

Results concerning hydrogenated fats and oils should be reported twice, here and under 2.6.3 Hydrogenated fats and oils

4.3.3 Fermenting

4.3.4 Compositional manipulation

4.3.4.1 Fortification

4.3.4.2 Genetic modification

4.3.4.3 Other methods

4.3.5 Food additives

4.3.5.1 Flavours

Report results for monosodium glutamate as a separate category under 4.3.5.1 Flavours.

4.3.5.2 Sweeteners (non-caloric)

4.3.5.3 Colours

4.3.5.4 Preservatives

4.3.5.4.1 Nitrites and nitrates

4.3.5.5 Solvents

4.3.5.6 Fat substitutes

4.3.5.7 Other food additives

*Please also report any results that cover the cumulative effect of low doses of additives.
Please also report any results that cover synthetic antioxidants*

4.3.6 Packaging

4.3.6.1 Vinyl chloride

4.3.6.2 Phthalates

4.4 Preparation

4.4.1 Fresh food

4.4.1.1 Raw

Report results regarding all raw food other than fruit and vegetables here. There is a separate heading for raw fruit and vegetables (2.2.1.6).

4.4.1.2 Juiced

4.4.2 Cooked food

- 4.4.2.1 Steaming, boiling, poaching
- 4.4.2.2 Stewing, casseroling
- 4.4.2.3 Baking, roasting
- 4.4.2.4 Microwaving
- 4.4.2.5 Frying
- 4.4.2.6 Grilling (broiling) and barbecuing
- 4.4.2.7 Heating, re-heating

Some studies may have reported methods of cooking in terms of temperature or cooking medium, and also some studies may have indicated whether the food was cooked in a direct or indirect flame. When this information is available, it should be included in the SLR report.

Results linked to mechanisms e.g. heterocyclic amines, acrylamides and polycyclic aromatic hydrocarbons should also be reported here. There may also be some literature on burned food that should be reported in this section.

5 Dietary constituents

Food constituents' relationship to outcome needs to be considered in relation to dose and form including use in fortified foods, food supplements, nutrient supplements and specially formulated foods. Where relevant and possible these should be disaggregated.

5.1 Carbohydrate

- 5.1.1 Total carbohydrate
- 5.1.2 Non-starch polysaccharides/dietary fibre
 - 5.1.2.1 Cereal fibre
 - 5.1.2.2 Vegetable fibre
 - 5.1.2.3 Fruit fibre
- 5.1.3 Starch
 - 5.1.3.1 Resistant starch
- 5.1.4 Sugars
 - *5.1.5 Glycemic index, glycemic load

This heading refers to intrinsic sugars that are naturally incorporated into the cellular structure of foods, and also extrinsic sugars not incorporated into the cellular structure of foods. Results for intrinsic and extrinsic sugars should be presented separately. Count honey and sugars in fruit juices as extrinsic. They can be natural and unprocessed, such as honey, or refined such as table sugar. Any results related to specific sugars e.g. fructose should be reported here.

5.2 Lipids

- 5.2.1 Total fat
- 5.2.2 Saturated fatty acids

- 5.2.3 Monounsaturated fatty acids
- 5.2.4 Polyunsaturated fatty acids

- 5.2.4.1 n-3 fatty acids

Where available, results concerning alpha linolenic acid and long chain n-3 PUFA should be reported here, and if possible separately.

- 5.2.4.2 n-6 fatty acids
- 5.2.4.3 Conjugated linoleic acid

- 5.2.5 Trans fatty acids
- 5.2.6 Other dietary lipids, cholesterol, plant sterols and stanols.

For certain cancers, e.g. endometrium, lung, and pancreas, results concerning dietary cholesterol may be available. These results should be reported under this section.

5.3 Protein

- 5.3.1 Total protein
- 5.3.2 Plant protein
- 5.3.3 Animal protein

5.4 Alcohol

This section refers to ethanol the chemical. Results related to specific alcoholic drinks should be reported under 3.7 Alcoholic drinks. Past alcohol refers, for example, to intake at age 18, during adolescence, etc.

- *5.4.1 Total Alcohol (as ethanol)
 - *5.4.1.1 Alcohol (as ethanol) from beer
 - *5.4.1.2 Alcohol (as ethanol) from wine
 - *5.4.1.3 Alcohol (as ethanol) from spirits
 - *5.4.1.4 Alcohol (as ethanol) from other alcoholic drinks
 - * 5.4.1.5 Total alcohol (as ethanol), lifetime exposure
 - * 5.4.1.6 Total alcohol (as ethanol), past

5.5 Vitamins

- *5.5.0 Vitamin supplements
 - *5.5.0.1 Vitamin and mineral supplements
 - *5.5.0.2 Vitamin B supplement
- 5.5.1 Vitamin A
 - 5.5.1.1 Retinol
 - 5.5.1.2 Provitamin A carotenoids
- 5.5.2 Non-provitamin A carotenoids

Record total carotenoids under 5.5.2 as a separate category marked Total Carotenoids.

5.5.3 Folates and associated compounds

*5.5.3.1 Total folate

*5.5.3.2 Dietary folate

*5.5.3.3 Folate from supplements

Examples of the associated compounds are lipotropes, methionine and other methyl donors.

5.5.4 Riboflavin

5.5.5 Thiamin (vitamin B1)

5.5.6 Niacin

5.5.7 Pyridoxine (vitamin B6)

5.5.8 Cobalamin (vitamin B12)

5.5.9 Vitamin C

5.5.10 Vitamin D (and calcium)

5.5.11 Vitamin E

5.5.12 Vitamin K

5.5.13 Other

If results are available concerning any other vitamins not listed here, then these should be reported at the end of this section. In addition, where information is available concerning multiple vitamin deficiencies, these should be reported at the end of this section under 'other'.

5.6 Minerals

5.6.1 Sodium

5.6.2 Iron

5.6.3 Calcium (and Vitamin D)

5.6.4 Selenium

5.6.5 Iodine

5.6.6 Other

Results are likely to be available on other minerals e.g. magnesium, potassium, zinc, copper, phosphorus, manganese and chromium for certain cancers. These should be reported at the end of this section when appropriate under 'other'.

5.7 Phytochemicals

5.7.1 Allium compounds

5.7.2 Isothiocyanates

5.7.3 Glucosinolates and indoles

5.7.4 Polyphenols

5.7.5 Phytoestrogens eg genistein

5.7.6 Caffeine

5.7.7 Other

Where available report results relating to other phytochemicals such as saponins and coumarins. Results concerning any other bioactive compounds, which are not phytochemicals should be reported under the separate heading 'other bioactive compounds'. Eg flavonoids, isoflavonoids, glycoalkaloids, cyanogens, oligosaccharides and anthocyanins should be reported separately under this heading.

5.8 Other bioactive compounds

6 Physical activity

6.1 Total physical activity (overall summary measures)

6.1.1 Type of activity

6.1.1.1 Occupational

6.1.1.2 Recreational

6.1.1.3 Household

6.1.1.4 Transportation

6.1.2 Frequency of physical activity

*6.1.2.1 Frequency of occupational physical activity

*6.1.2.2 Frequency of recreational physical activity

6.1.3 Intensity of physical activity

*6.1.3.1 Intensity of occupational physical activity

*6.1.3.2 Intensity of recreational physical activity

6.1.4 Duration of physical activity

*6.1.4.1 Duration of occupational physical activity

*6.1.4.2 Duration of recreational physical activity

6.2 Physical inactivity

6.3 Surrogate markers for physical activity e.g. occupation

7 Energy balance

7.1 Energy intake

*7.1.0.1 Energy from fats

*7.1.0.2 Energy from protein

*7.1.0.3 Energy from carbohydrates

*7.1.0.4 Energy from alcohol

*7.1.0.5 Energy from all other sources

7.1.1 Energy density of diet

7.2 Energy expenditure

8 Anthropometry

8.1 Markers of body composition

8.1.1 BMI

- 8.1.2 Other weight adjusted for height measures
- 8.1.3 Weight
- 8.1.4 Skinfold measurements
- 8.1.5 Other (e.g. DEXA, bio- impedance, etc)
- 8.1.6 Change in body composition (including weight gain)

- 8.2 Markers of distribution of fat
 - 8.2.1 Waist circumference
 - 8.2.2 Hips circumference
 - 8.2.3 Waist to hip ratio
 - 8.2.4 Skinfolds ratio
 - 8.2.5 Other e.g. CT, ultrasound

- 8.3 Skeletal size
 - 8.3.1 Height (and proxy measures)
 - 8.3.2 Other (e.g. leg length)

- 8.4 Growth in fetal life, infancy or childhood
 - 8.4.1 Birthweight,
 - 8.4.2 Weight at one year

Appendix 4 List of abbreviations

Abbreviations

ACS	American Cancer Society Cancer Prevention Study II
ACLS	Aerobic Center Longitudinal Study
AHEI	Alternative Healthy Eating Index
AHS	Adventist Health Study
AICR	American Institute for Cancer Research
A-MDS	Alternate Mediterranean Diet Score
ARIC	The Atherosclerosis Risk in Communities (ARIC) Study
BBD	Benign breast disease
BC	Breast Cancer
BCDDP	Breast Cancer Detection Demonstration Project Follow-up Cohort
BRCA	Breast Cancer susceptibility protein
BRCA1	Breast Cancer Type 1 susceptibility protein
BRCA2	Breast Cancer Type 2 susceptibility protein
Copenhagen CHS	Copenhagen City Heart Study
CI	Confidence Interval
CLUE I	Campaign against Cancer and Stroke I
CLUE II	Campaign against Cancer and Stroke II
COMT	Catechol- <i>O</i> -methyltransferase
CPS-II	Cancer Prevention Study II
CUP	Continuous Update Panel
DFE	Dietary folate equivalent
DOM	DOM project for the early detection of breast cancer
DQI-R	Diet Quality Index-Revised
EPIC	The European Prospective Investigation into Cancer and Nutrition
ER	Estrogen receptor
GSTT1	Glutathione S-transferase theta-1
HEI	Healthy Eating Index
HER-2	Human Epidermal growth factor receptor 2
HR	Hazard ratio
HRT	Hormone replacement therapy
IBCCS	The International BRCA1/2 Carrier Cohort Study
ICL	Imperial College London
IRR	Incident rate ratio
IWHS	Iowa Women's Health Study
JACC	Japan Collaborative Cohort Study
JPHC	Japan Public Health Center-based Prospective Study on Cancer
KWC	Korean Women's Cohort
LSS	Life Span Study
MCCS	Melbourne Collaborative Cohort Study
MEC	Multi-Ethnic Cohort
MHT	Menopausal hormonal therapy
MPCDRF	Monitoring Project on Cardiovascular Disease Risk Factors (Netherlands)
MPP	Malmo Preventive Project
MUFA	Monounsaturated fatty acids
NAT	N-acetyltransferase
NBSS	Canadian National Breast Screening Study
NCI, DES Combined Cohort	National Cancer Institute Combined Diethylstilbestrol Cohorts
NHANES	National Health and Nutrition Examination Survey
NHEFS	NHANES I Epidemiologic Follow-up Study
NHS	Nurse's Health Study
NHSS	Norway National Health Screening Service Study
NIH-AARP	NIH-AARP Diet and Health Study

O-DMA	O-desmethylangolensin
OR	Odd ratio
ORDET	Hormones and Diet in the Etiology of Breast Cancer 1987-2001
PA	Physical Activity
PLCO	The Prostate, Lung, Colorectal and Ovarian cancer screening trial
PMH	Postmenopausal hormone
PR	Progesterone receptor
PUFA	Polyunsaturated fatty acids
RDA	Recommended Dietary Allowance
RFS	Recommended Food Score
RR	Relative risk
Shanghai BSE	Shanghai Breast Self-Examination
SFA	Saturated fatty acids
SIR	Standardised incidence ratio
SLR	Systematic Literature Review
SUVIMAX	The Supplémentation en Vitamines et Minéraux Antioxydants
UKWCS	UK Women's Cohort Study
VHM & PP	Vorarlberg Health Monitoring and Promotion Program
WHI	Women's Health Initiative
WHI – DM Trial	Women's Health Initiative Diet Modification Trial
WHR	Waist-to-hip ratio

Appendix 5 List of articles awaiting data extraction

Bardia A et al. Relative weight at age 12 and risk of postmenopausal breast cancer. *Cancer Epidemiol Biomarkers Prev* 2008; 17(2):374-378.

Chajes V et al. Association between serum trans-monounsaturated fatty acids and breast cancer risk in the E3N-EPIC Study. *Am J Epidemiol* 2008; 167(11):1312-1320.

Cui Y et al. Selected antioxidants and risk of hormone receptor-defined invasive breast cancers among postmenopausal women in the Women's Health Initiative Observational Study. *Am J Clin Nutr* 2008; 87(4):1009-1018.

Cust AE et al. The influence of overweight and insulin resistance on breast cancer risk and tumour stage at diagnosis: a prospective study. *Breast Cancer Res Treat* 2008.

Cutler GJ et al. Dietary flavonoid intake and risk of cancer in postmenopausal women: The Iowa Women's Health Study. *Int J Cancer* 2008; 123(3):664-671.

Dossus L et al. Polymorphisms of genes coding for ghrelin and its receptor in relation to anthropometry, circulating levels of IGF-I and IGFBP-3, and breast cancer risk: a case-control study nested within the European Prospective Investigation into Cancer and Nutrition (EPIC). *Carcinogenesis* 2008.

Freedman DM et al. Serum levels of vitamin D metabolites and breast cancer risk in the prostate, lung, colorectal, and ovarian cancer screening trial. *Cancer Epidemiol Biomarkers Prev* 2008; 17(4):889-894.

Hedelin M et al. Dietary phytoestrogens are not associated with risk of overall breast cancer but diets rich in coumestrol are inversely associated with risk of estrogen receptor and progesterone receptor negative breast tumors in Swedish women. *J Nutr* 2008; 138(5):938-945.

Ishitani K et al. A prospective study of multivitamin supplement use and risk of breast cancer. *Am J Epidemiol* 2008; 167(10):1197-1206.

Iwasaki M et al. Plasma isoflavone level and subsequent risk of breast cancer among Japanese women: a nested case-control study from the Japan Public Health Center-based prospective study group. *J Clin Oncol* 2008; 26(10):1677-1683.

Lajous M et al. Carbohydrate intake, glycemic index, glycemic load, and risk of postmenopausal breast cancer in a prospective study of French women. *Am J Clin Nutr* 2008; 87(5):1384-1391.

Lin J et al. Plasma folate, vitamin B-6, vitamin B-12, and risk of breast cancer in women. *Am J Clin Nutr* 2008; 87(3):734-743.

Maruti SS et al. A prospective study of age-specific physical activity and premenopausal breast cancer. *J Natl Cancer Inst* 2008; 100(10):728-737.

Olesen PT et al. Acrylamide exposure and incidence of breast cancer among postmenopausal women in the Danish Diet, Cancer and Health Study. *Int J Cancer* 2008; 122(9):2094-2100.

Rapp K et al. Weight change and cancer risk in a cohort of more than 65,000 adults in Austria. *Ann Oncol* 2008; 19(4):641-648.

Schulz M et al. Identification of a dietary pattern characterized by high-fat food choices associated with increased risk of breast cancer: the European Prospective Investigation into Cancer and Nutrition (EPIC)-Potsdam Study. *Br J Nutr* 2008;1-5.

Sinilnikova OM et al. Haplotype-based analysis of common variation in the acetyl-coA carboxylase alpha gene and breast cancer risk: a case-control study nested within the European Prospective Investigation into Cancer and Nutrition. *Cancer Epidemiol Biomarkers Prev* 2007; 16(3):409-415.

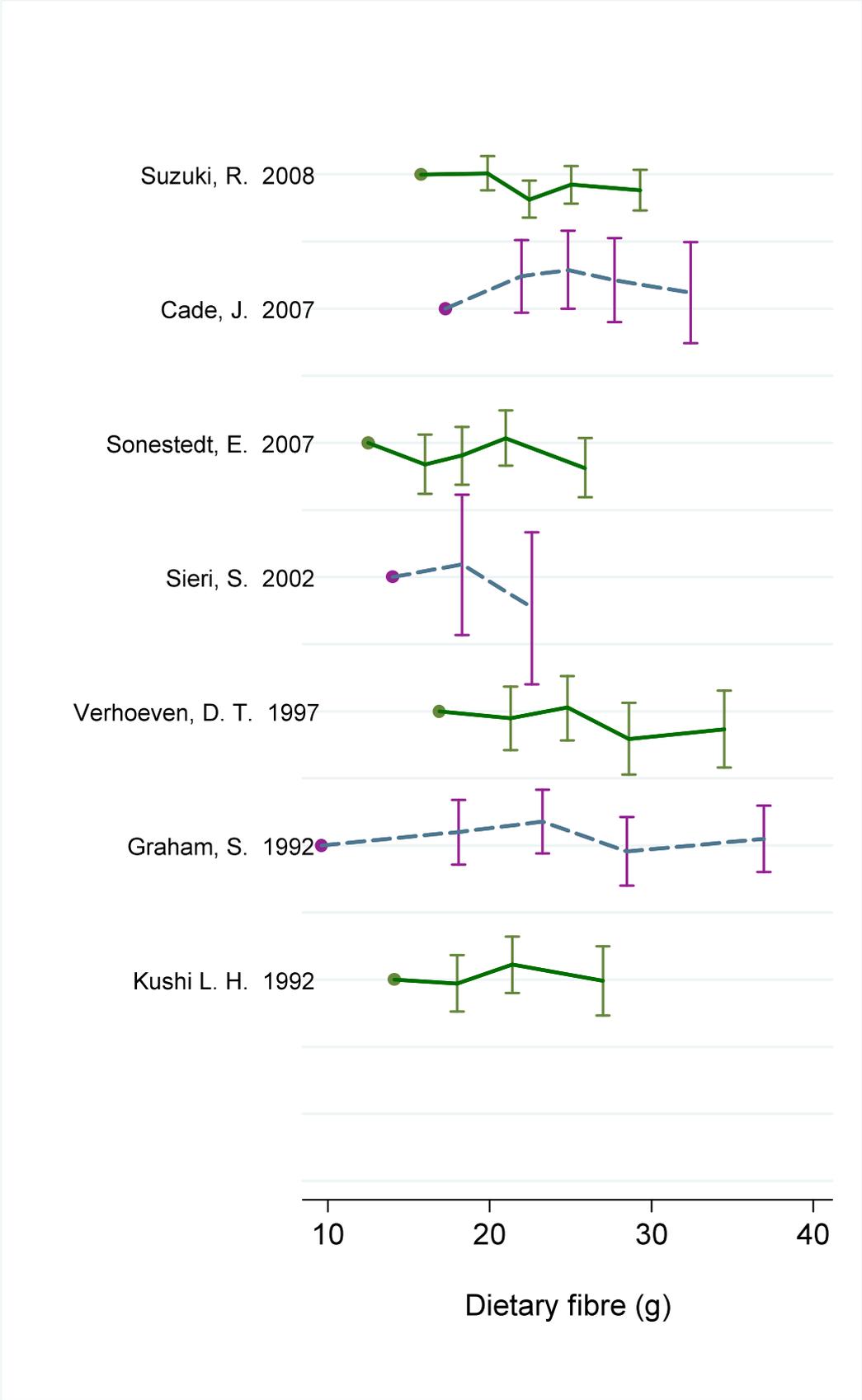
Suzuki R et al. Dietary lignans and postmenopausal breast cancer risk by oestrogen receptor status: a prospective cohort study of Swedish women. *Br J Cancer* 2008; 98(3):636-640.

Ward H et al. Breast cancer risk in relation to urinary and serum biomarkers of phytoestrogen exposure in the European Prospective into Cancer-Norfolk cohort study. *Breast Cancer Res* 2008; 10(2):R32.

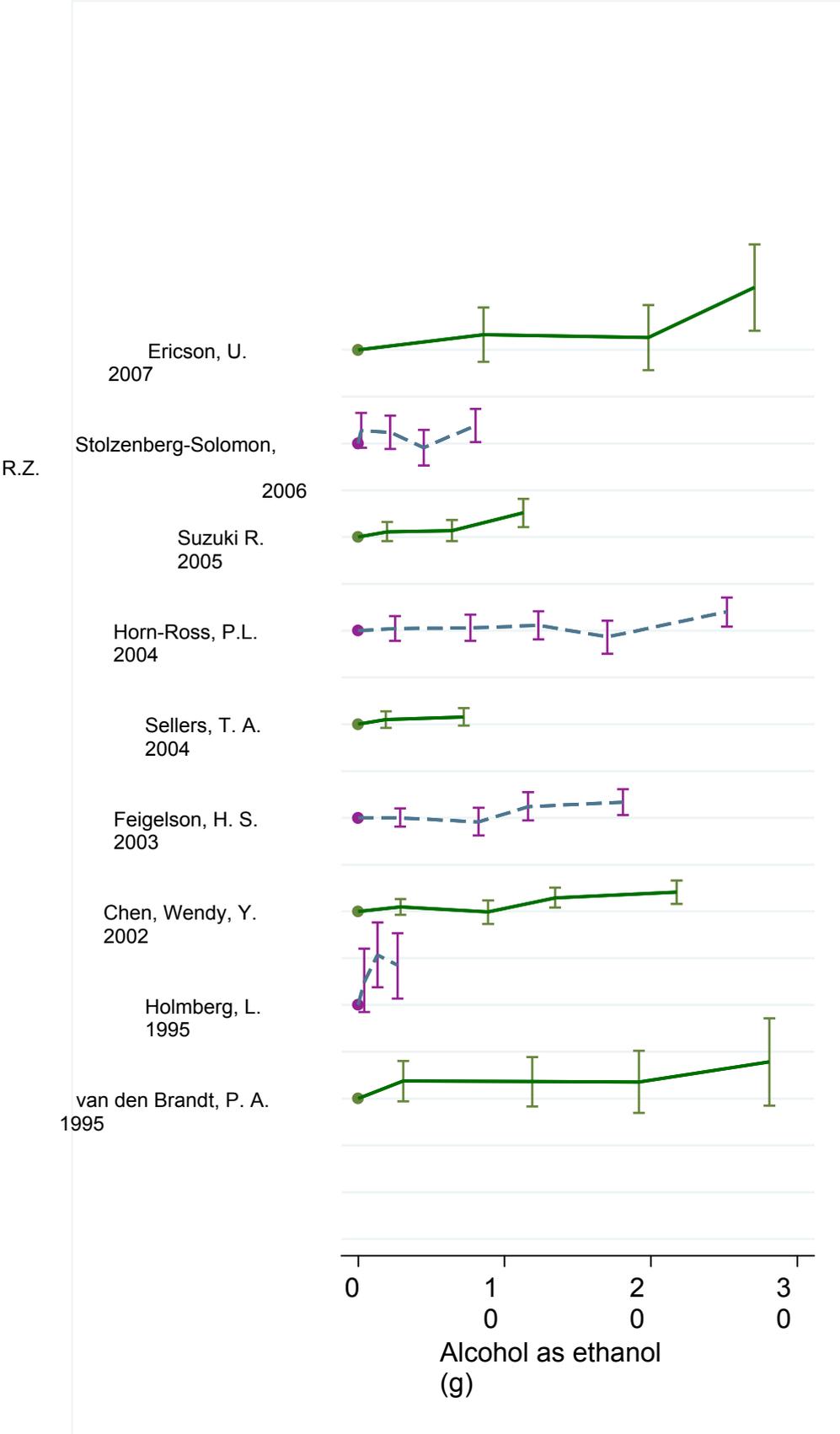
Yu CP et al. Breast cancer risk associated with multigenotypic polymorphisms in folate-metabolizing genes: a nested case-control study in Taiwan. *Anticancer Res* 2007; 27(3B):1727-1732.

Appendix 6 Dose-response curves for the studies included in the meta-analyses

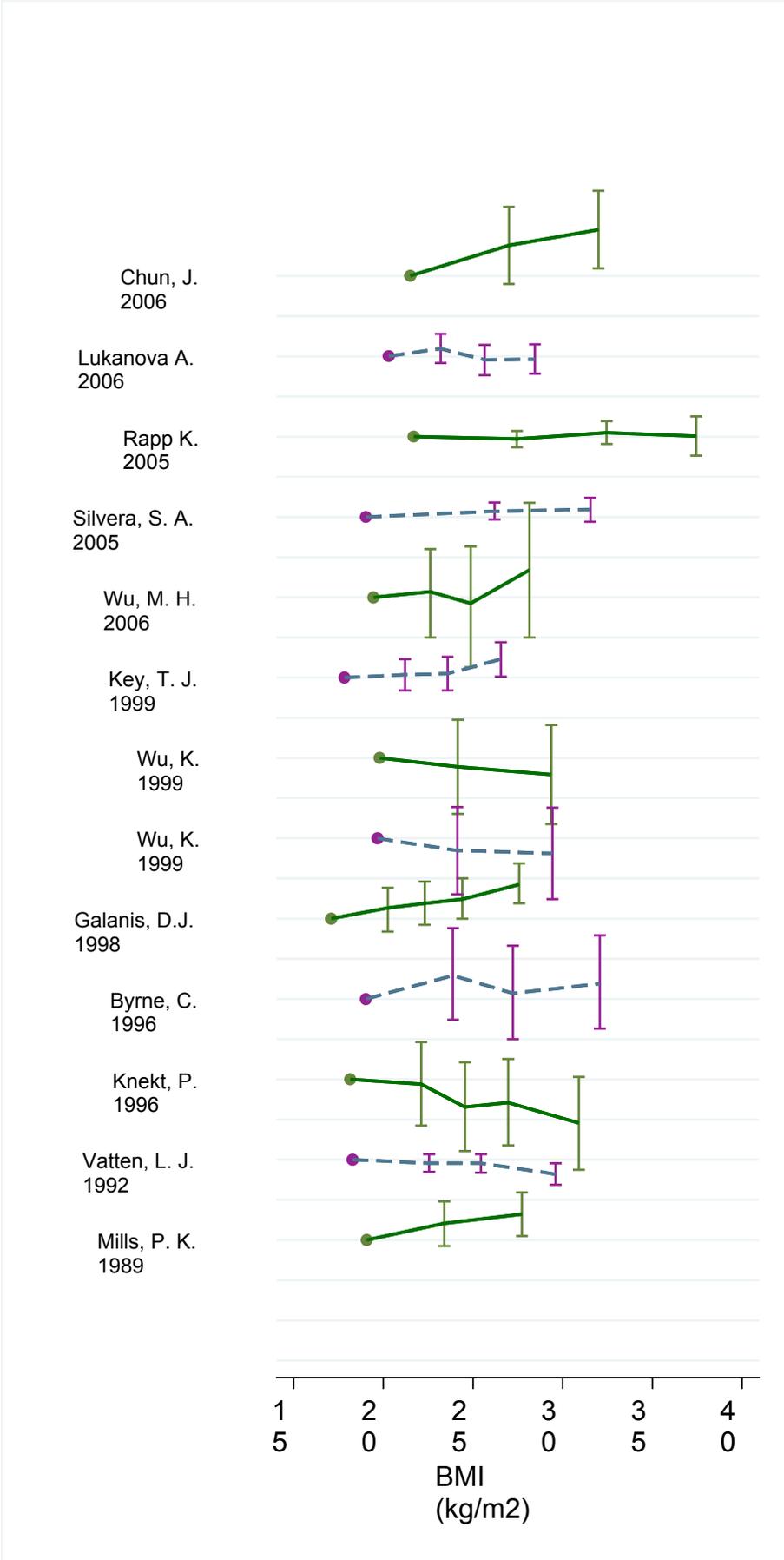
Dietary fibre and postmenopausal breast cancer: dose-response



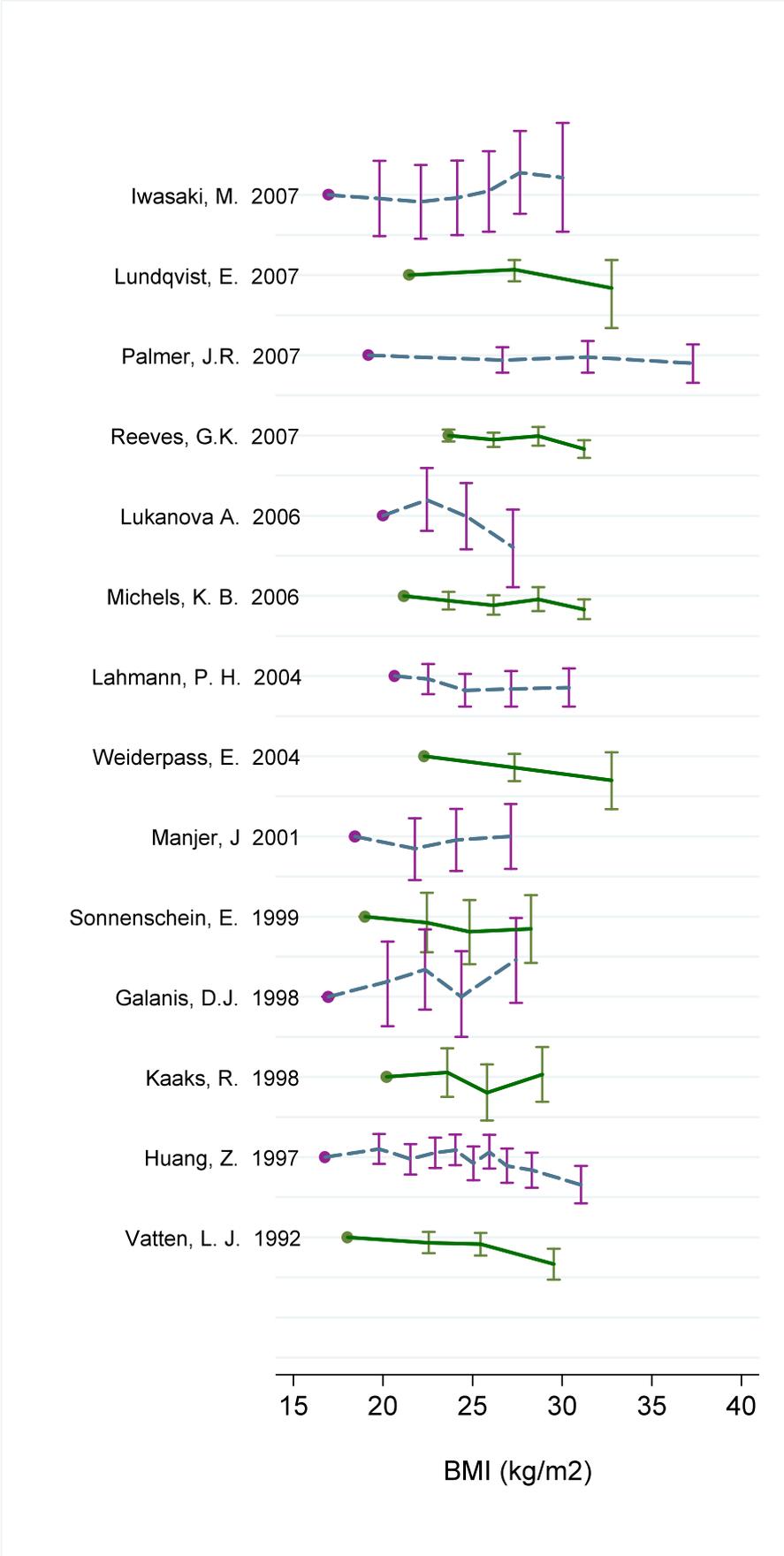
Alcohol (as ethanol) and postmenopausal breast cancer: dose-response



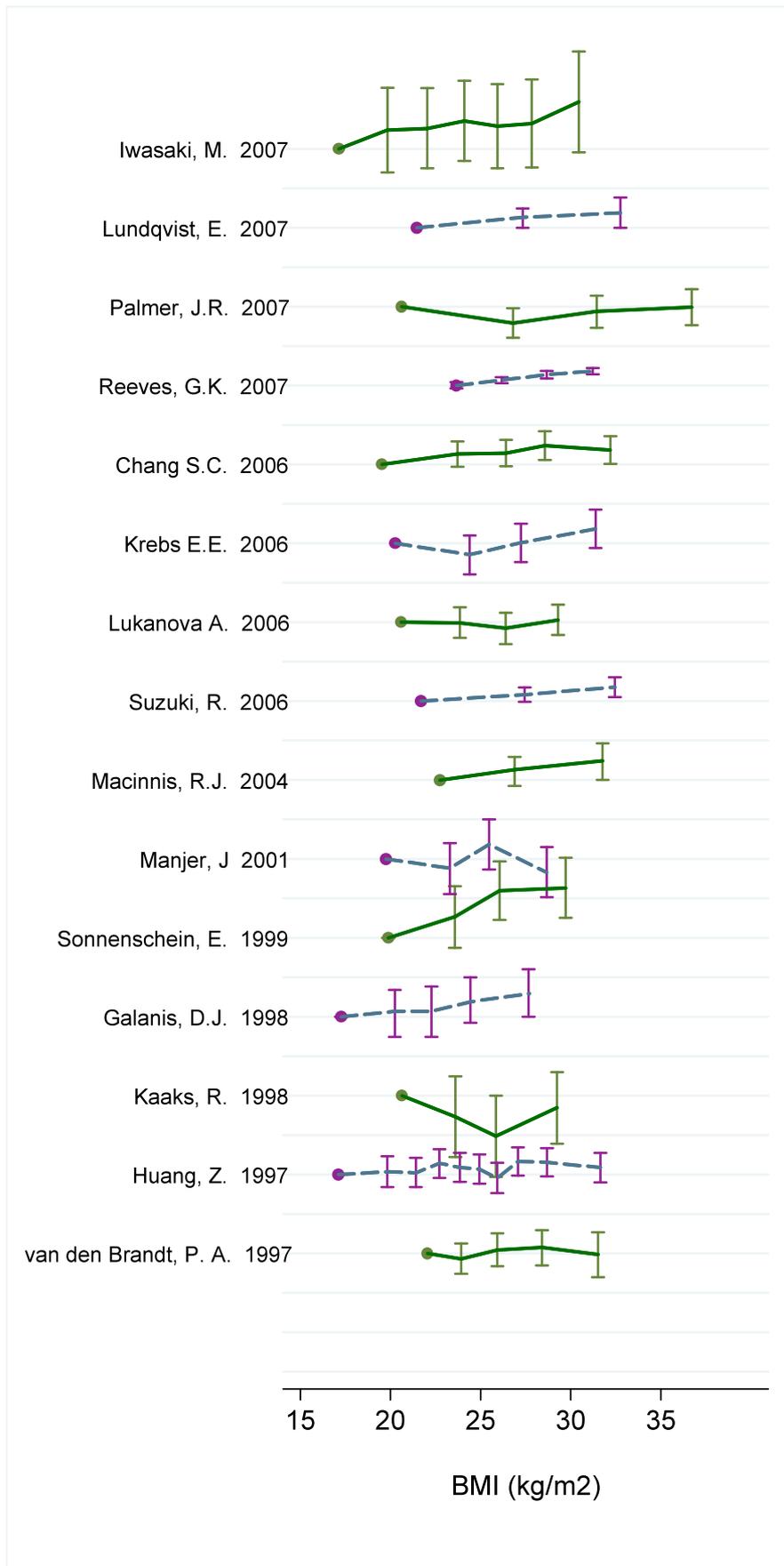
Body mass index and breast cancer, menopause age unspecified: dose-response



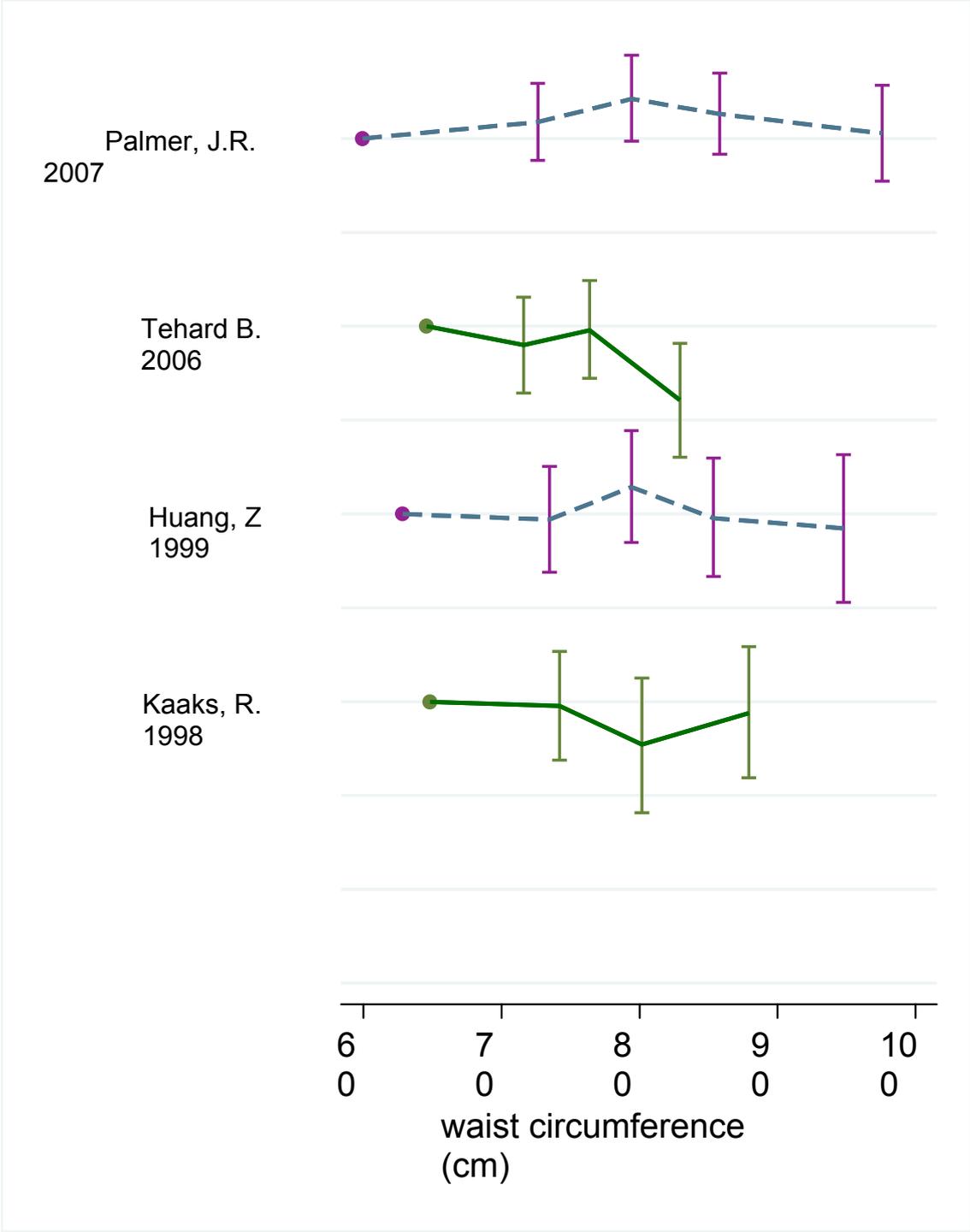
Body mass index and premenopausal breast cancer: dose-response



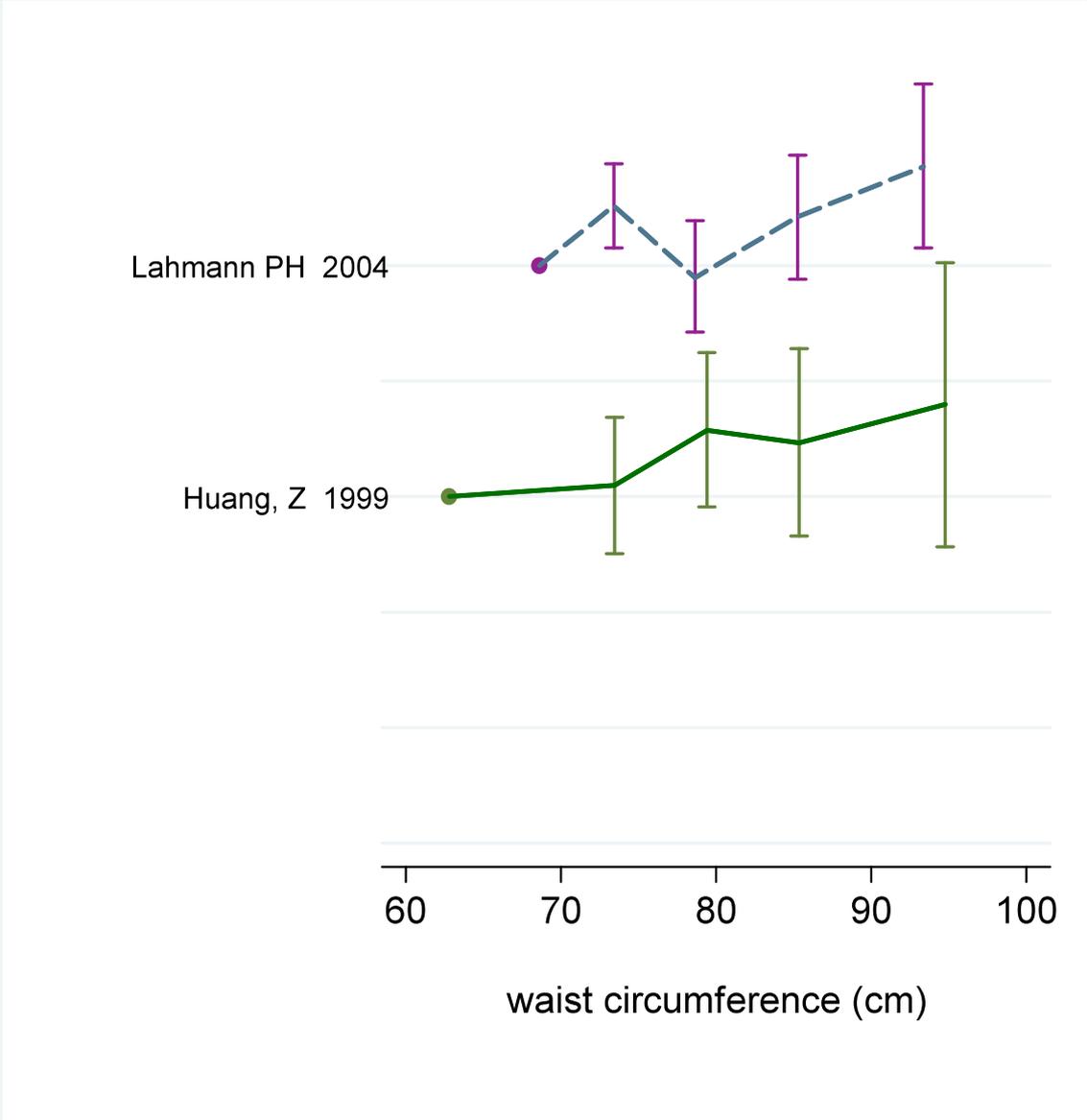
Body mass index and postmenopausal breast cancer: dose-response



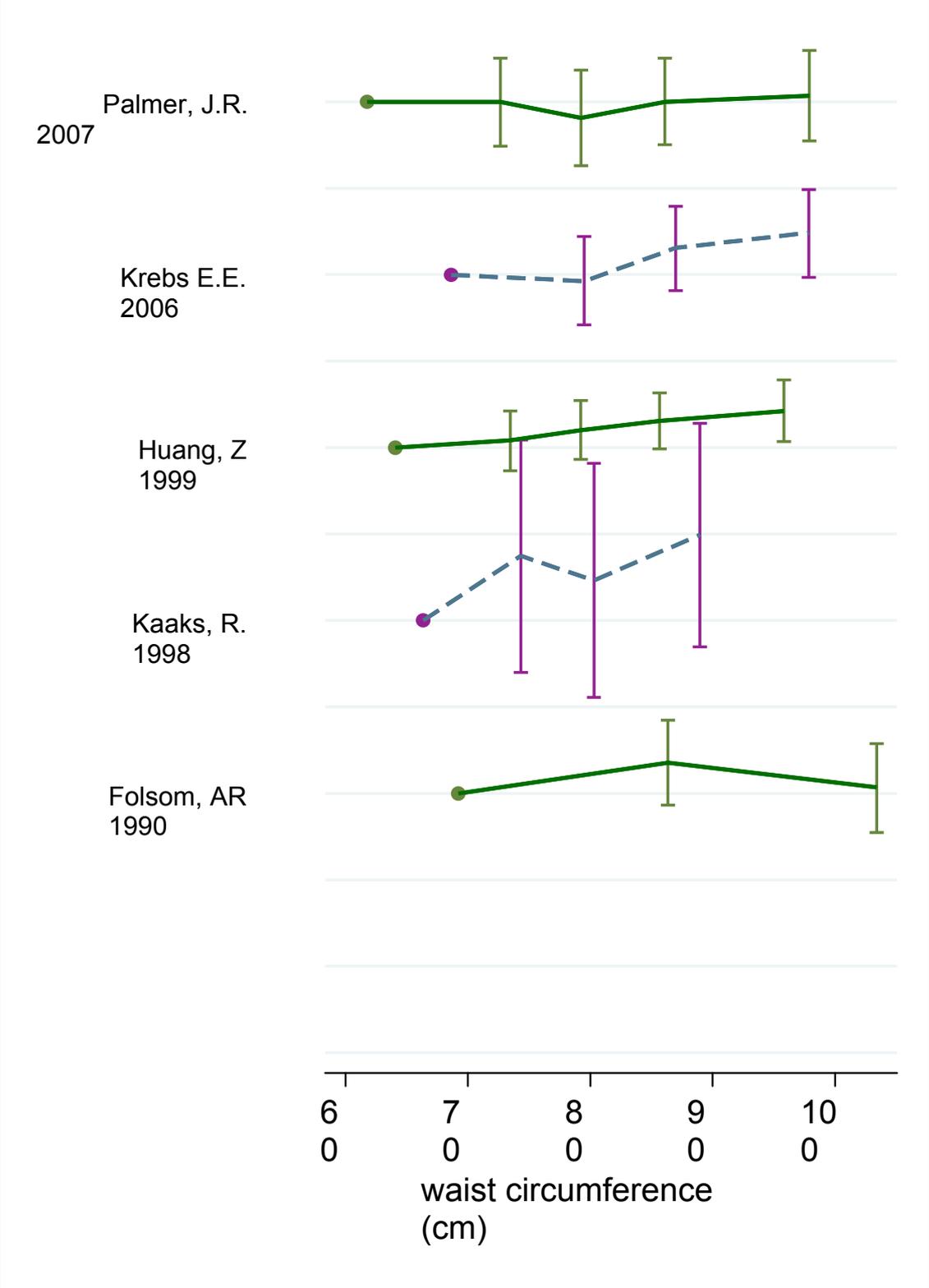
Waist circumference and premenopausal breast cancer, unadjusted for BMI: dose-response



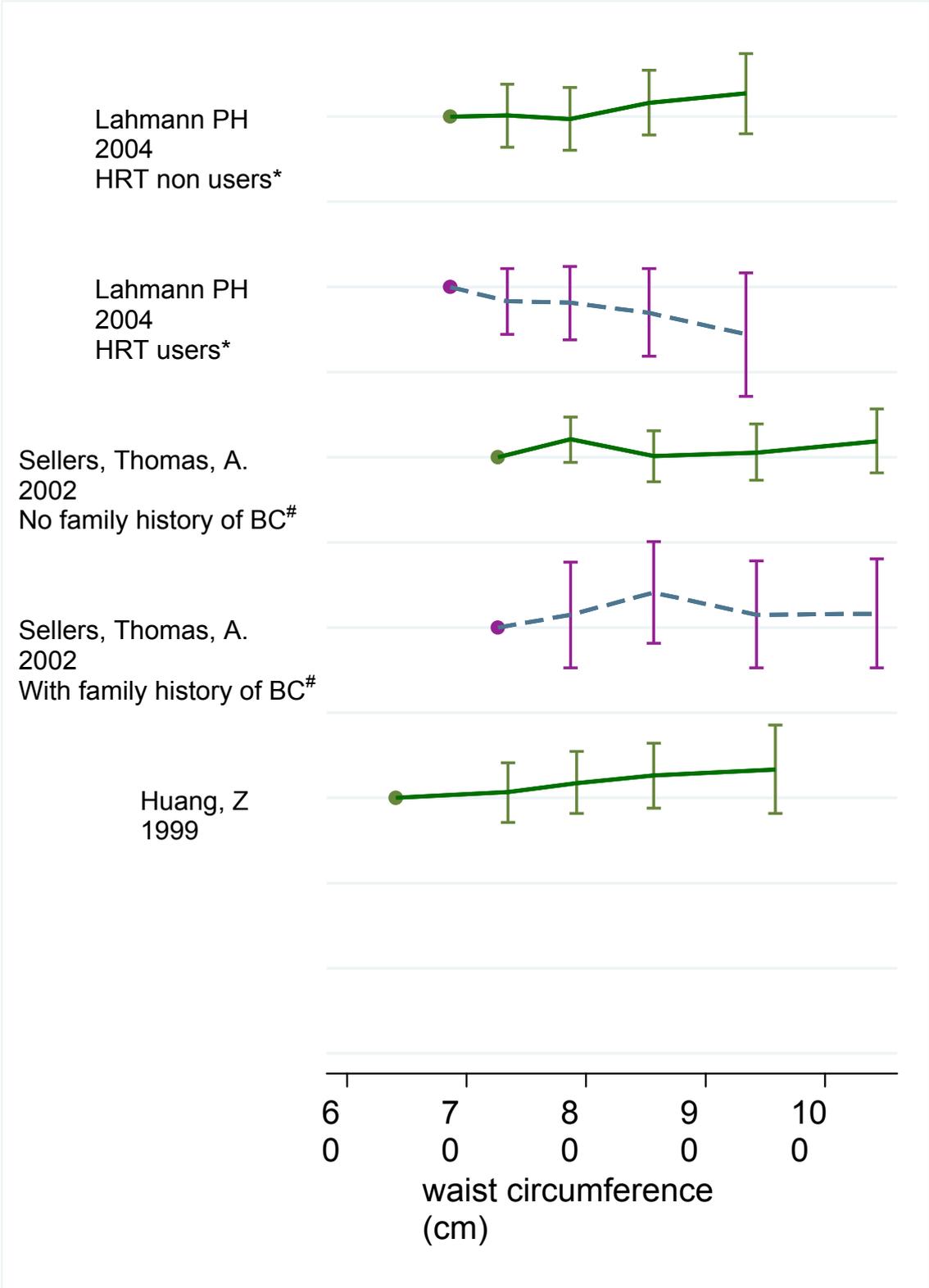
Waist circumference and premenopausal breast cancer, adjusted for BMI: dose-response



Waist circumference and postmenopausal breast cancer, unadjusted for BMI: dose-response

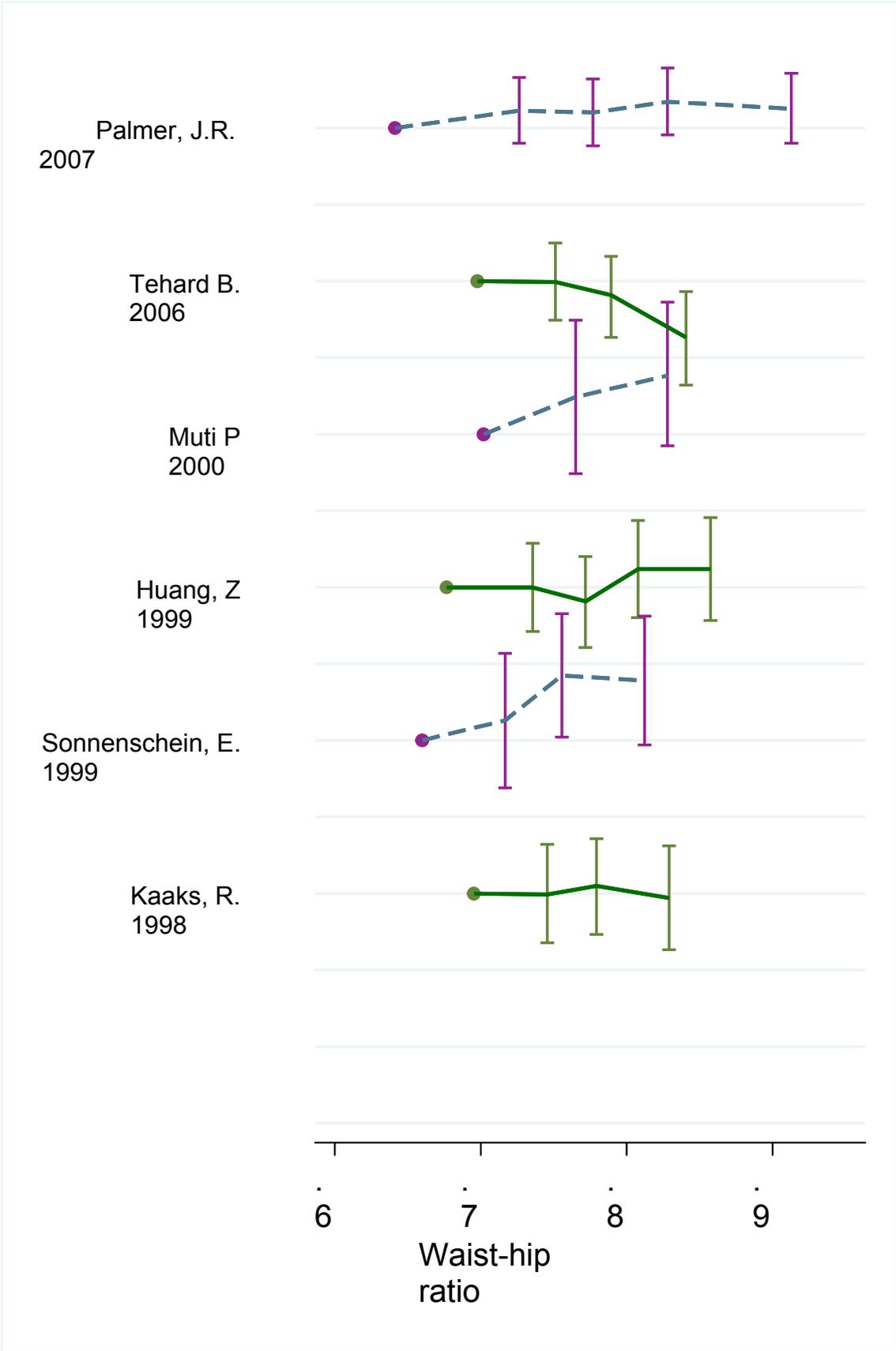


Waist circumference and postmenopausal breast cancer, adjusted for BMI: dose-response

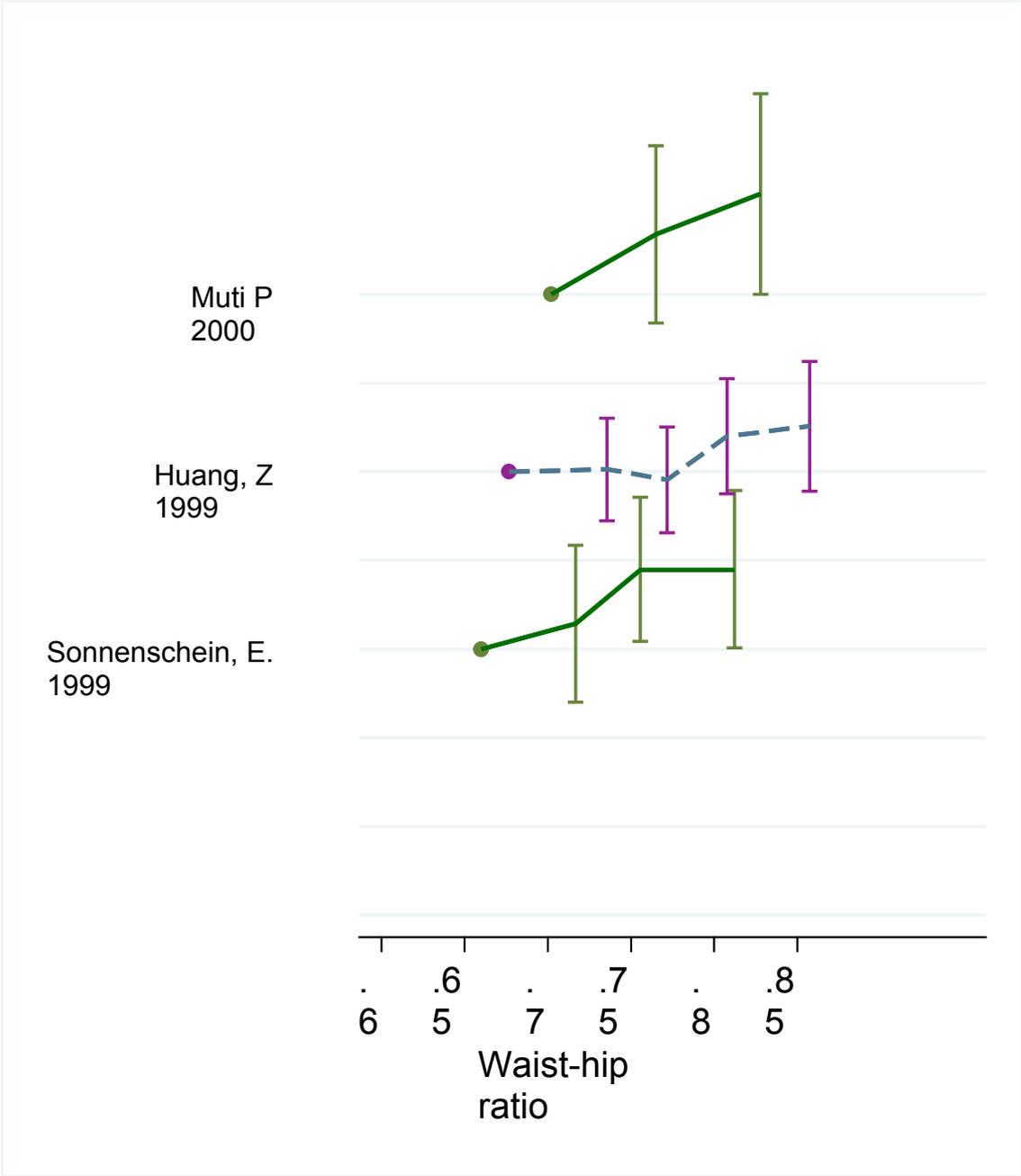


* # Subgroups were pooled by a fixed-effect model before including in the dose-response meta-analysis

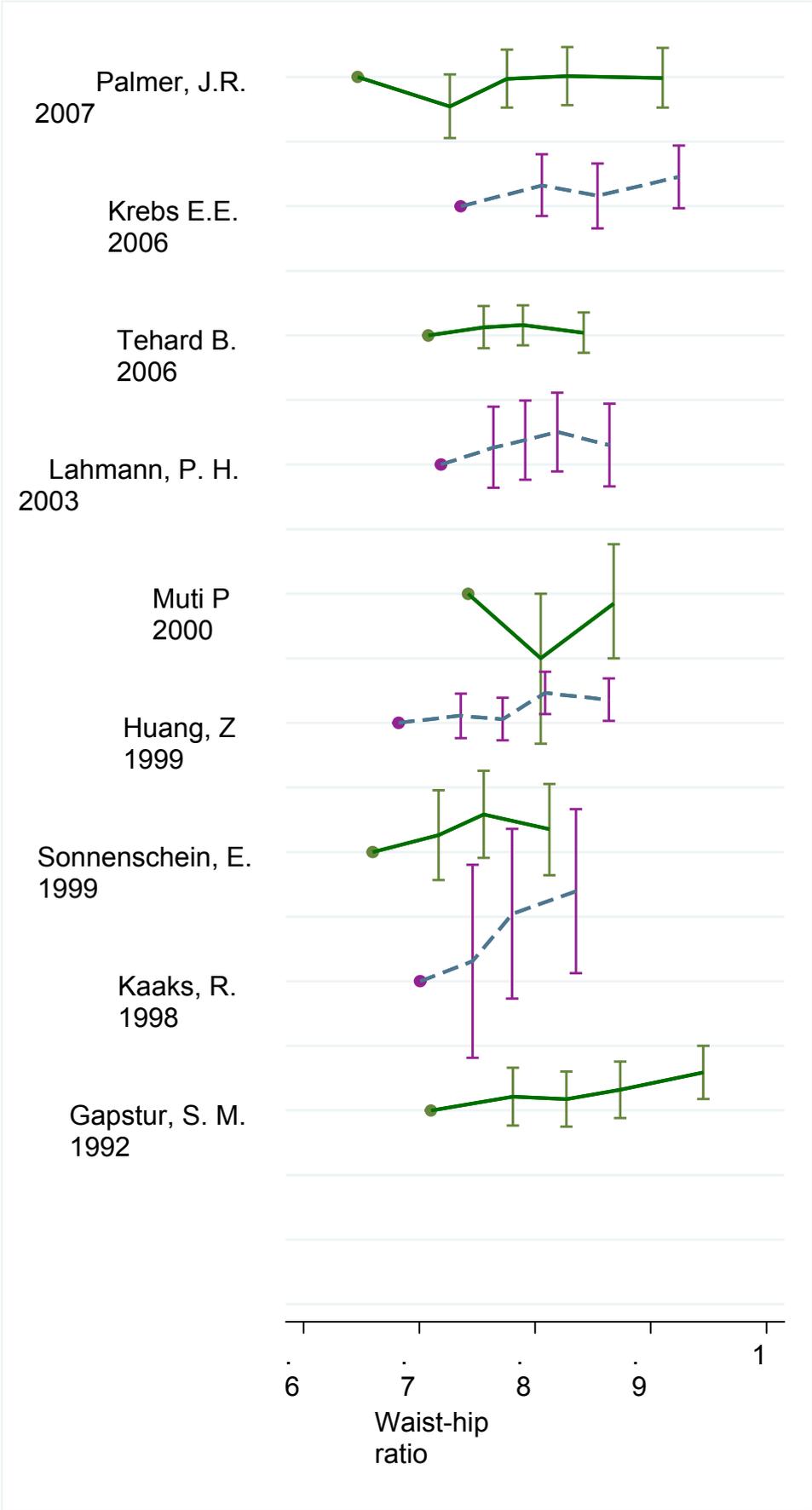
Waist-hip ratio and premenopausal breast cancer, unadjusted for BMI: dose-response



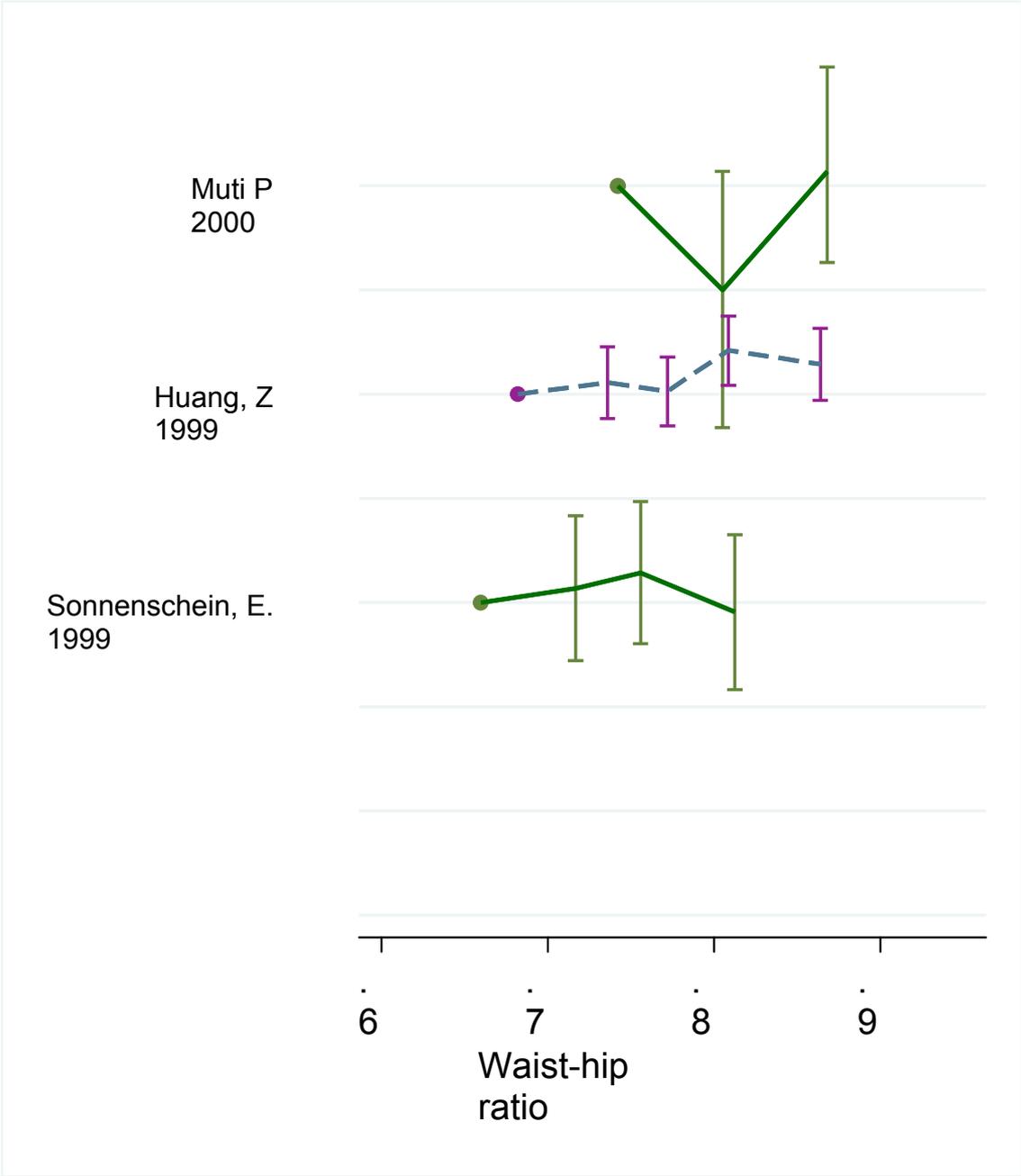
Waist-hip ratio and premenopausal breast cancer, adjusted for BMI: dose-response



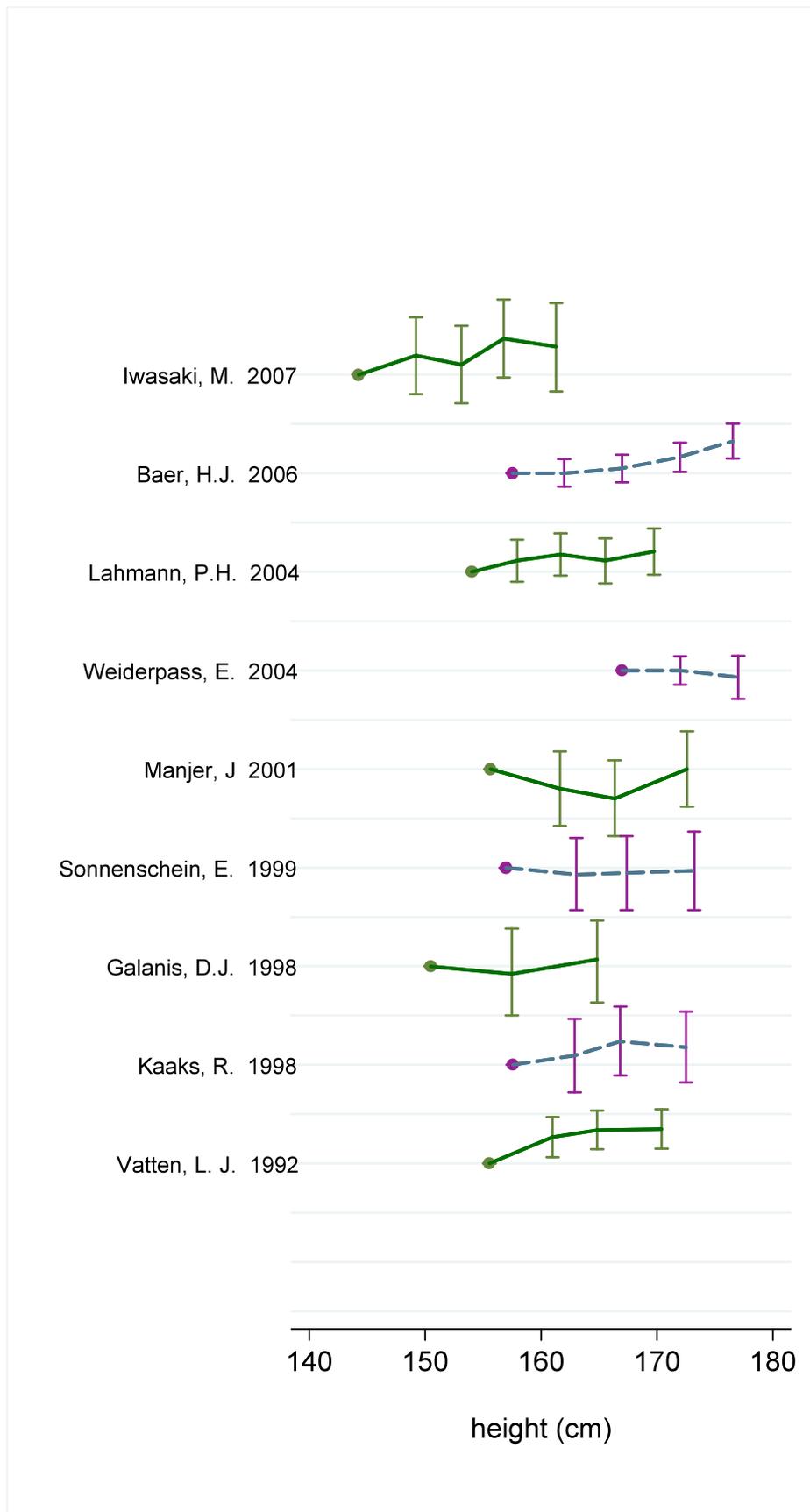
Waist-hip ratio and postmenopausal breast cancer, unadjusted for BMI: dose-response



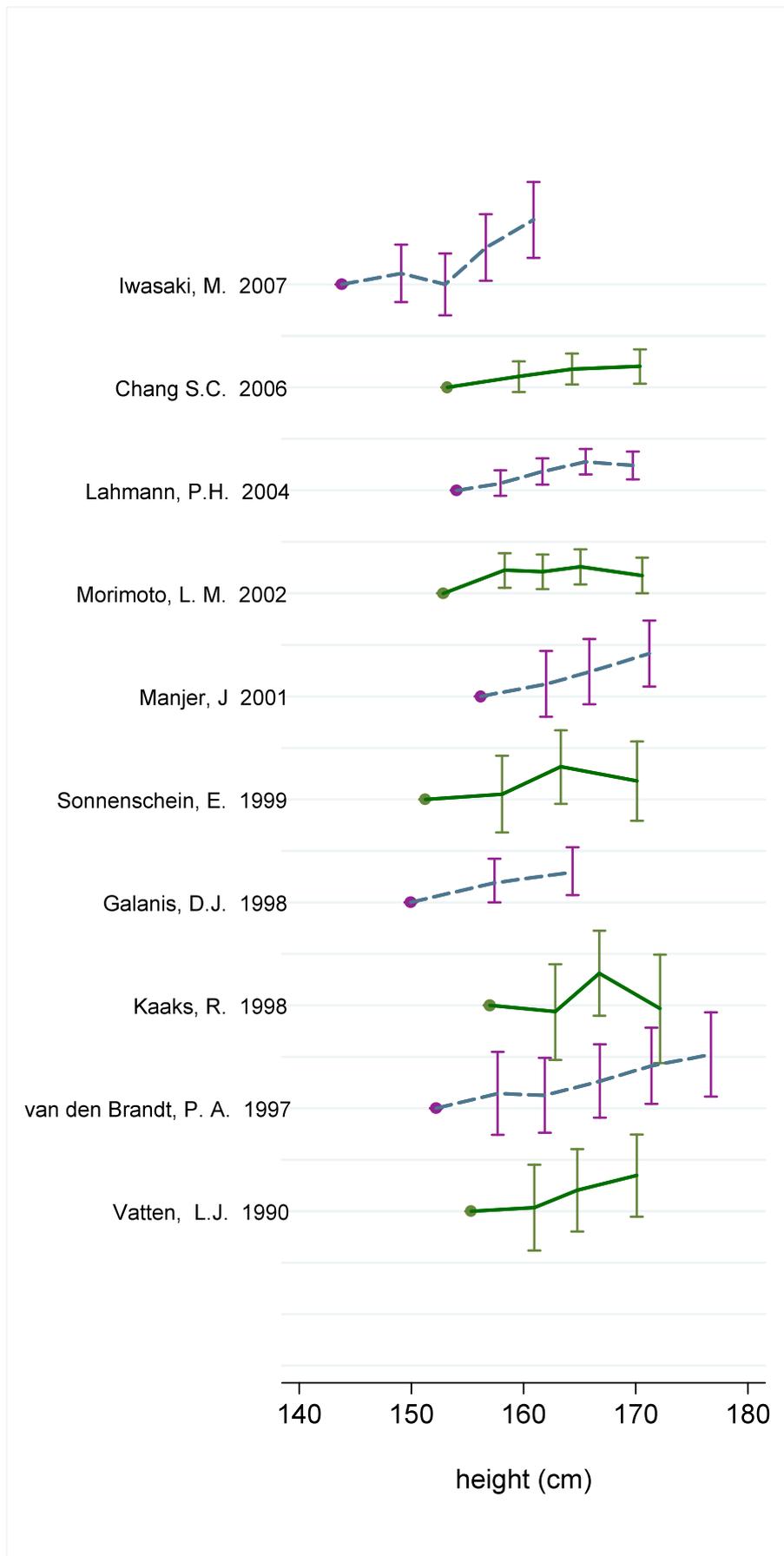
Waist-hip ratio and postmenopausal breast cancer, adjusted for BMI: dose-response



Height and premenopausal breast cancer: dose-response



Height and postmenopausal breast cancer: dose-response



Results table

Cohort studies - best models

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Lenght of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
1.3.1																								
Vegetarianism																								
<i>Pre-menopausal</i>																								
Travis, R.C. et al.,2007,BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	196	36489.0	National Health Records	7.4 years / 0.07	FFQ	Vegetarianism, self reported		Invasive & In situ breast cancer incidence	Pre-menopausal	Vegetarian vs. Nonvegetarian	2	0.95 (0.68, 1.32)			A	C	D	E	F	G	
<i>Post-menopausal</i>																								
Travis, R.C. et al.,2007,BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	290	36489.0	National Health Records	7.4 years / 0.07	FFQ	Vegetarianism, self reported		Invasive & In situ breast cancer incidence	Post-menopausal	Vegetarian vs. Nonvegetarian	2	0.79 (0.54, 1.16)			A	C	D	E	F	G	
<i>Menopausal status not specified</i>																								
Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	59	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)	at birth		Breast cancer mortality/incidence		yes vs. no	2	1.63 (0.79, 3.34)				B					
Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	55	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)	duration (years) of exposure to vegetarian lifestyle	Years	Breast cancer mortality/incidence		>=40 vs. 0-19	4	2.36 (0.65, 8.56)	0.11			C					
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	226	102434	By Mail	6.0 years / 1%	FFQ (nos)			Breast cancer incidence		pure vegetarians vs. omnivors	3	0.78 (0.56, 1.07)	0.07		A	B	C	D	F	G	
Key, T.J.A.,1996,BRE15654	Prospective Cohort	United Kingdom, Not specified, Vegetarian and health conscious people UK Cohort of Vegetarians	16 - 79		6435.0	From groups with high vegetarian likelihood	16.8 years	Questionnaire (nos)			Breast cancer cancer death		vegetarian vs. non-vegetarian	2	1.65 (1.01, 2.7)			A					G	
Travis, R.C. et al.,2007,BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	585	36489.0	National Health Records	7.4 years / 0.07	FFQ	Vegetarianism, self reported		Invasive & In situ breast cancer incidence		Vegetarian vs. Nonvegetarian	2	0.91 (0.72, 1.14)			A	C	D	E	F	G	
Travis, R.C. et al.,2007,BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	433	36489.0	National Health Records	7.4 years / 0.07	FFQ	Vegetarianism, self reported		Invasive & In situ breast cancer incidence	HRT - No	Vegetarian vs. Nonvegetarian	2	0.89 (0.7, 1.14)			A	C	D	E	F	G	

1.4

"Lowfat" habits

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Byrne, C.,1996,BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	52	23809	Unspecified	3.9 years / 252	FFQ (nos)	number of "low-fat" habits (low calorie salad dressing, or not eating skin on poultry,		Breast cancer incidence		none vs. 2 or more	3	3.5 (1.7, 7.4)			A									

Animal product index

Menopausal status not specified

Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	142	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)	animal products consumption index		Breast cancer mortality/incidence		pure-vegetarian vs. high	5	0.53 (0.18, 1.52)		0.17		B	C	D							
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Canteen pattern

Menopausal status not specified

Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Lean	>1.0 vs. >-1.0	3	0.72 (0.4, 1.3)		0.291	A	B	C	D	E	G				
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence		>1.0 vs. >-1.0	3	0.95 (0.63, 1.45)		0.935	A	B	C	D	E	F	G			
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Overweight	>1.0 vs. >-1.0	3	1.34 (0.73, 2.45)		0.320	A	B	C	D	E	G				

Dietary guideline index score

Post-menopausal

Harnack, Lisa,2002,BRE19762	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69		34708.0	By Mail	13.0 years	FFQ-Semi-quantitative			Breast cancer incidence		12.2 - 17.6 vs. 2.1 - 8.3	5	0.76 (0.65, 0.89)	<.01		A	B	C	D	E	F	G			
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	3580	121700.0	medical records	18.0 years	FFQ	Healthy Eating Index, HEI		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.04 (0.92, 1.18)		0.68	A		C	D	E	F	G			
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	3580	121700.0	medical records	18.0 years	FFQ	Alternative Healthy Eating Index, AHEI		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.99 (0.88, 1.11)		0.84	A		C	D	E	F	G			
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	3580	121700.0	medical records	18.0 years	FFQ	Diet Quality Index-Revised, DQI-R		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.03 (0.91, 1.16)		.83	A		C	D	E	F	G			
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	3580	121700.0	medical records	18.0 years	FFQ	Recommended Food Score, RFS		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.98 (0.87, 1.11)		0.56	A		C	D	E	F	G			

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	3580	121700.0	medical records	18.0 years	FFQ	Alternate Mediterranean Diet Score, aMed		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.98 (0.88, 1.1)	.69		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2367	121700.0	medical records	18.0 years	FFQ	Healthy Eating Index, HEI		Breast cancer ER+ incidence		Quantile 5 vs. Quantile 1	5	1.1 (0.95, 1.28)	0.69		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2367	121700.0	medical records	18.0 years	FFQ	Alternative Healthy Eating Index, AHEI		Breast cancer ER+ incidence		Quantile 5 vs. Quantile 1	5	1.05 (0.91, 1.21)	0.19		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2367	121700.0	medical records	18.0 years	FFQ	Diet Quality Index-Revised, DQIR		Breast cancer ER+ incidence		Quantile 5 vs. Quantile 1	5	1.09 (0.94, 1.27)	.55		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2367	121700.0	medical records	18.0 years	FFQ	Recommended Food Score, RFS		Breast cancer ER+ incidence		Quantile 5 vs. Quantile 1	5	1.06 (0.92, 1.23)	0.44		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2367	121700.0	medical records	18.0 years	FFQ	Alternate Mediterranean Diet Score, aMed		Breast cancer ER+ incidence		Quantile 5 vs. Quantile 1	5	1.12 (0.97, 1.26)	0.04		A						
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2367	121700.0	medical records	18.0 years	FFQ	Alternate Mediterranean Diet Score, aMed		Breast cancer ER+ incidence		Quantile 5 vs. Quantile 1	5	1.05 (0.91, 1.18)	0.23		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Healthy Eating Index, HEI		Breast cancer ER- incidence		Quantile 5 vs. Quantile 1	5	0.92 (0.68, 1.24)	0.47		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Alternative Healthy Eating Index, AHEI		Breast cancer ER- incidence		Quantile 5 vs. Quantile 1	5	0.78 (0.59, 1.04)	0.01		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Diet Quality Index-Revised, DQIR		Breast cancer ER- incidence		Quantile 5 vs. Quantile 1	5	0.97 (0.72, 1.31)	0.35		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Recommended Food Score, RFS		Breast cancer ER- incidence		Quantile 5 vs. Quantile 1	5	0.69 (0.51, 0.94)	0.003		A	C	D	E	F	G	
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Alternate Mediterranean Diet Score, aMed		Breast cancer ER- incidence		Quantile 5 vs. Quantile 1	5	0.89 (0.7, 1.14)	0.19		A						
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Alternate Mediterranean Diet Score, aMed		Breast cancer ER- incidence		Quantile 5 vs. Quantile 1	5	0.79 (0.6, 1.03)	0.03		A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
<i>Post-menopausal</i>																									
Harnack, Lisa, 2002, BRE19762	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69		34708.0	By Mail	13.0 years	FFQ-Semi-quantitative			Breast cancer incidence		12.2 - 17.6 vs. 2.1 - 8.3	5	0.86 (0.73, 1.0)		.15	A	B	C	D	E	F	G	
Drinker pattern																									
<i>Pre-menopausal</i>																									
Terry, P., 2001, BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	5	1.12 (0.79, 1.58)		0.35	A	B	C	D	E	F	G	
<i>Post-menopausal</i>																									
Terry, P., 2001, BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	1.31 (1.05, 1.63)		0.002	A	B	C	D	E	F	G	
<i>Menopausal status not specified</i>																									
Terry, P., 2001, BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence		>1.0 vs. >-1.0	5	1.27 (1.06, 1.52)		0.002	A	B	C	D	E	F	G	
Eating fat on beef or pork																									
<i>Menopausal status not specified</i>																									
Byrne, C., 1996, BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	44	22935	Unspecified	3.9 years / 252	FFQ (nos)		dichotomous	Breast cancer incidence		regular vs. lean or extra lean	2	2.2 (1.2, 4.0)			A							
Byrne, C., 1996, BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	50	23500	Unspecified	3.9 years / 252	FFQ (nos)		dichotomous	Breast cancer incidence		yes vs. no	2	1.0 (0.5, 2.1)			A							
Eating skin on poultry																									
<i>Menopausal status not specified</i>																									
Byrne, C., 1996, BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	50	23471	Unspecified	3.9 years / 252	FFQ (nos)		dichotomous	Breast cancer incidence		yes vs. no	2	1.7 (0.9, 2.9)			A							
Flavonol rich foods																									
<i>Menopausal status not specified</i>																									
Adebamowo, C. A., 2005, BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	706652	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		serving/day	Invasive breast cancer incidence		3.99 vs. 0.57	5	0.94 (0.72, 1.22)		0.54	A	C	D	E	F	G		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Healthy pattern																								
<i>Pre-menopausal</i>																								
Terry, P.,2001,BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	5	0.91 (0.63, 1.31)		0.68	A	B	C	D	E	F	
<i>Post-menopausal</i>																								
Terry, P.,2001,BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.91 (0.72, 1.16)		0.52	A	B	C	D	E	F	
Velie, E. M.,2005,BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		1868	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.03 (0.88, 1.2)		0.95	A	B	C	D	E	F	G
Velie, E. M.,2005,BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		1365	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.04 (0.87, 1.26)		0.77		B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Terry, P.,2001,BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence		>1.0 vs. >-1.0	5	0.92 (0.76, 1.13)		0.52	A	B	C	D	E	F	
Individual level dietary patterns																								
<i>Post-menopausal</i>																								
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Past food habit change		Breast cancer incidence	Post-menopausal	yes vs. no	2	1.28 (0.92, 1.79)									
<i>Menopausal status not specified</i>																								
Sant et al.,2007,BRE80036	Prospective Cohort	Italy ORDET study, 1987-2001	34 - 70	40	8623	Cancer registry	11.5 years	FFQ (nos)	Salad vegetables score, greatest factor loadings on raw vegetables and olive oil		Breast cancer HER-2 + incidence		Quantile 3 vs. Quantile 1	3	0.25 (0.1, 0.64)		0.001	A	B	C	D	E	F	G
Sant et al.,2007,BRE80036	Prospective Cohort	Italy ORDET study, 1987-2001	34 - 70	40	8623	Cancer registry	11.5 years	FFQ (nos)	Western diet score, greatest factor loadings on potatoes ravioli red and		Breast cancer HER-2 + incidence		Quantile 3 vs. Quantile 1	3	0.75 (0.27, 2.08)		0.584	A	B	C	D	E	F	G
Sant et al.,2007,BRE80036	Prospective Cohort	Italy ORDET study, 1987-2001	34 - 70	40	8623	Cancer registry	11.5 years	FFQ (nos)	Canteen diet score, greasting factor loading on pasta tomato sauce olive oil wine		Breast cancer HER-2 + incidence		Quantile 3 vs. Quantile 1	3	1.39 (0.5, 3.84)		0.530	A	B	C	D	E	F	G
Sant et al.,2007,BRE80036	Prospective Cohort	Italy ORDET study, 1987-2001	34 - 70	40	8623	Cancer registry	11.5 years	FFQ (nos)	Prudent diet score, greasting factor loading on cooked vegetables rice poultry fish low		Breast cancer HER-2 + incidence		Quantile 3 vs. Quantile 1	3	0.72 (0.35, 1.48)		0.372	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Fung, T., 2005, BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55	1728	71058.0	By Mail	16.0 years	FFQ (nos)			Breast cancer ER+ incidence	Post-menopausal	>1.0 vs. >-1.0	5	1.1 (0.93, 1.31)		0.77	A	C	D	E	F	G	
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		850	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer ER+ incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.75 (0.59, 0.96)		0.01		B	C	D	E	F	G
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		679	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer ER+/PR+ incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.7 (0.53, 0.91)		0.01		B	C	D	E	F	G
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		146	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer ER+/PR- incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.99 (0.56, 1.73)		0.55		B	C	D	E	F	G
Fung, T. T., 2005, BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55	446	71058.0	By Mail	16.0 years	FFQ (nos)			Breast cancer ER- incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.62 (0.45, 0.88)		0.006	A	C	D	E	F	G	
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		186	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer ER- incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.03 (0.63, 1.68)		0.41		B	C	D	E	F	G
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		35	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer ER-/PR+ incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.46 (0.11, 1.86)		0.33		B	C	D	E	F	G
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		146	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer ER-/PR- incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.82 (0.45, 1.49)		0.53		B	C	D	E	F	G
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		715	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer PR+ incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.69 (0.53, 0.89)		0.003		B	C	D	E	F	G
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		294	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer PR- incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.91 (0.6, 1.36)		0.36		B	C	D	E	F	G
Velie, E. M., 2005, BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		1365	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.78 (0.65, 0.95)		0.003		B	C	D	E	F	G

Menopausal status not specified

Sieri, S., 2004, BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Lean	>1.0 vs. >-1.0	3	1.24 (0.76, 2.03)		0.374	A	B	C	D	E	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence		>1.0 vs. >-1.0	3	1.28 (0.9, 1.83)		0.169	A	B	C	D	E	F	G
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Overweight	>1.0 vs. >-1.0	3	1.33 (0.8, 2.19)		0.282	A	B	C	D	E	G	

Salad vegetables pattern

Menopausal status not specified

Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Lean	>1.0 vs. >-1.0	3	0.39 (0.22, 0.69)		0.001	A	B	C	D	E	G	
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence		>1.0 vs. >-1.0	3	0.66 (0.47, 0.95)		0.016	A	B	C	D	E	F	G
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Overweight	>1.0 vs. >-1.0	3	0.99 (0.6, 1.61)		0.977	A	B	C	D	E	G	

Type of salad dressing

Menopausal status not specified

Byrne, C.,1996,BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	46	21514	Unspecified	3.9 years / 252	FFQ (nos)			Breast cancer incidence		other types combination vs. low-fat only	2	1.3 (0.7, 2.3)			A							
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Western pattern

Pre-menopausal

Terry, P.,2001,BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	5	1.08 (0.7, 1.67)		0.95	A	B	C	D	E	F	
Adebamowo, C. A.,2005,BRE21538	Prospective Cohort	U.S.A., Registered nurses NHS II, 1989	26 - 46	710	707337	By Mail	9.0 years	FFQ-Semi-quantitative			Invasive breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	5	0.97 (0.71, 1.33)		0.97			C	D	E	F	G

Post-menopausal

Terry, P.,2001,BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.98 (0.74, 1.28)		0.89	A	B	C	D	E	F	
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55	3026	71058.0	By Mail	16.0 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.97 (0.83, 1.14)		0.88	A		C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Velle, E. M.,2005,BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		1868	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.03 (0.89, 1.2)		0.7			B	C	D	E	F	G
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55	1728	71058.0	By Mail	16.0 years	FFQ (nos)			Breast cancer ER+ incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.98 (0.84, 1.14)		0.75	A		C	D	E	F	G	
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55	446	71058.0	By Mail	16.0 years	FFQ (nos)			Breast cancer ER- incidence	Post-menopausal	>1.0 vs. >-1.0	5	1.18 (0.77, 1.82)		0.85	A		C	D	E	F	G	
Velle, E. M.,2005,BRE24436	Prospective Cohort	U.S.A., Not specified, Post-menopausal BCDDP, 1973		1365	40559.0	Through health org. (screening, health insurance)	8.0 years	FFQ (nos)			Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.04 (0.87, 1.23)		0.53			B	C	D	E	F	G

Menopausal status not specified

Terry, P.,2001,BRE12203	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61463.0	Through health org. (screening, health insurance)	9.6 years	FFQ (nos)			Breast cancer incidence		>1.0 vs. >-1.0	5	1.0 (0.79, 1.26)		0.92		A	B	C	D	E	F	
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Lean	>1.0 vs. >-1.0	3	0.75 (0.41, 1.38)		0.342		A	B	C	D	E		G
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence		>1.0 vs. >-1.0	3	0.9 (0.58, 1.41)		0.705		A	B	C	D	E	F	G
Sieri, S.,2004,BRE16671	Prospective Cohort	Italy, White ORDET study, 1987	34 - 70	207	81634	Through network, paper, tv	9.5 years / 10	FFQ-Quantitative			Invasive breast cancer incidence	Overweight	>1.0 vs. >-1.0	3	1.01 (0.53, 1.96)		0.780		A	B	C	D	E		G

1.5

Famine

Menopausal status not specified

Michels, K. B.,2004,BRE17831	Historical Cohort	Sweden, Anorexic women Swedish anorexic women, 1965		22	7303.0	Hospital Records only		Clinical diagnosis	01.05-Starving (Anorexia nervosa)		Invasive breast cancer incidence		anorexia women vs. expected	2	0.47 (0.19, 0.97)				A						
Elias, S. G.,2004,BRE02576	Case Cohort	Netherlands, Not specified, Screening Program DOM-project Utrecht, 1974/1984	41 - 73	585	214293	By Mail	15.3 years	Questionnaire (nos)			Invasive breast cancer incidence		severely exposed vs. not exposed	3	1.48 (1.09, 2.01)		0.016		A	B	C	D			

1.6.1

Breastfeeding - Mother

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments								
																		A	B	C	D	E	F	G		
Goodman, M. T.,1997,BRE03352	Prospective Cohort	Japan, Not specified, Atomic bomb survivors LSS, 1969		56	65230	By Mail	8.31 years	Questionnaire (nos)	non parous included	months/life	Breast cancer incidence		>=24 vs. <12	3	0.83 (0.42, 1.64)		0.74		A	C						G
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		122	1025	Through social organization (profession, religion)		FFQ-Semi-quantitative		months/life	Breast cancer incidence		>25.0 vs. 0	6	1.1 (0.3, 4.0)		0.36			C						
Andrieu, N. et al.,2006,BRE80136	Historical Cohort	United Kingdom, France, Netherlands, Canada, High Risk population IBCCS, 1997	18 - (46)	797	1601.0	screening examinations		Questionnaire	Duration of breast-feeding	months	Breast cancer incidence		>24 vs. 0	6	1.08 (0.62, 1.89)					C						G
Andrieu, N. et al.,2006,BRE80136	Historical Cohort	United Kingdom, France, Netherlands, Canada, High Risk population IBCCS, 1997	18 - (46)	582	1601.0	screening examinations		Questionnaire	Duration of breast-feeding	months	Breast cancer incidence	BRCA I	>24 vs. 0	6	1.01 (0.57, 1.79)					C						G
Andrieu, N. et al.,2006,BRE80136	Historical Cohort	United Kingdom, France, Netherlands, Canada, High Risk population IBCCS, 1997	18 - (46)	215	1601.0	screening examinations		Questionnaire	Duration of breast-feeding	months	Breast cancer incidence	BRCA II	>24 vs. 0	6	1.21 (0.32, 4.54)					C						G
Visvanathan et al.,2007,BRE80020	Nested Case Control	America CLUE II - Washington, 1989	(57)	67	68			FFQ + Questionnaire	Months breast feeding	months	Breast cancer incidence		>6 vs. None	3	0.79 (0.45, 1.41)		0.43		A							F

1.6.2

Breastfeeding - Child

Pre-menopausal

Michels, Karin, B.,2001,BRE50405	Prospective Cohort	USA, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	413	500766	Through health org. (screening, health insurance)	6.0 years / 0,2	24h Recall + FFQ-Semi-quantitative			Breast cancer incidence	Pre-menopausal	Yes breastfed vs. No breastfed	2	0.97 (0.78, 1.2)						A	B	C	D	E	F	G
Michels, Karin, B.,2001,BRE50405	Prospective Cohort	USA, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	351	448964	Through health org. (screening, health insurance)	6.0 years / 0,2	24h Recall + FFQ-Semi-quantitative			Breast cancer incidence	Pre-menopausal	>9.0 vs. No breastfed	5	0.88 (0.52, 1.49)		0.60				A	B	C	D	E	F	G

Post-menopausal

Michels, Karin, B.,2001,BRE20405	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	376	114105	Through health org. (screening, health insurance)	5.0 years / 0,2	24h Recall + FFQ-Semi-quantitative	how many month the women have been bf in infancy!!!	months	Breast cancer incidence	Post-menopausal	>9.0 vs. No breastfed	4	1.3 (0.98, 1.72)		0,15			A	B	C	D	E	F	G
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Menopausal status not specified

Morgan, R. W.,1974,BRE17847	Historical Cohort	Canada, Not specified Toronto, 1970		33	1556	Through network, paper, tv		Questionnaire (nos)			Breast cancer incidence		ever vs. never	2	1.29 (null, null)												
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Ekbom A.,1993,BRE14930	Nested Case Control	Sweden, Not specified Upsala birth cohort			2463.0	Hospital Records only	32.0 years	Questionnaire (nos)			Breast cancer incidence		breast feeding-no vs. breast	2	0.97 (0.44, 2.17)	0,95		A									
Michels, Karin, B.,2001,BRE60405	Nested Case Control	USA, Multi-ethnic, Nurses' Mothers NMS		389	1501	School health records		24h Recall + FFQ-Semi-quantitative	answered by mother		Breast cancer incidence		>9.0 vs. No breastfed	5	1.5 (1.03, 2.18)		0,11			C	D	E	F	G			

2.1.1

Cereals (grains)

Menopausal status not specified

Shannon, J.,2003,BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)	excluded corn and rice	food group intake/caloric intake	Breast cancer incidence		Highest quartile vs. Lowest	2	1.72 (1.05, 2.82)		0,03	A		C		E		G			
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Wholemeal bread

Post-menopausal

Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.98, 1.02)			A					E	F	G		
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.99, 1.04)			A					E	F	G		
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.02 (0.97, 1.07)			A					E	F	G		
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.98 (0.94, 1.03)			A					E	F	G		

2.1.1.0.3

Bread

Pre-menopausal

Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	serving/day	Breast cancer incidence	Pre-menopausal	3.9 vs. 0.6	5	1.4 (0.96, 2.04)		0,01	A		C	D		E	F	G		
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Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.99, 1.03)			A					E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.99, 1.04)			A					E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.97, 1.06)			A					E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.98 (0.94, 1.02)			A					E	F	G

Menopausal status not specified

Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	518	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>101.1 vs. <38.0	5	0.95 (0.68, 1.33)		0.471	A	B	C			E	F	G
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488988	By Mail	24.0 years	Questionnaire (nos)		times/day	Breast cancer incidence		>=3 vs. <=1	4	1.66 (0.44, 6.16)		0.709	A							G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	servings/day	Breast cancer incidence		1.0 (continuous)	1	0.98 (0.92, 1.04)			A		C	D		E	F	G

2.1.1.0.4

Cereal products

Post-menopausal

Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.01 (1.0, 1.02)			A					E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.01 (1.0, 1.02)			A					E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.98, 1.04)			A					E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.98, 1.03)			A					E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G

Menopausal status not specified

Rohan, T. E., 1993, BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	518	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>23.1 vs. <0.0	5	0.74 (0.53, 1.04)		0.014	A	B	C	E	F	G
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Cold cereals (breakfast)

Post-menopausal

Stolzenberg-Solomon, R.Z., 2006, BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	98	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	25% RDA fortified cereals	g/day	Breast cancer incidence	non-vitamins users	>0.95 vs. <0.01	4	1.15 (0.64, 2.07)		0.52	A	B		E	F	
Stolzenberg-Solomon, R.Z., 2006, BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	91	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	100% RDA fortified cereals	g/day	Breast cancer incidence	non-vitamins users	>0.65 vs. 0	4	1.69 (0.92, 3.1)		0.03	A	B		E	F	
Giles, G. G., 2006, BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.97, 1.05)			A			E	F	G
Giles, G. G., 2006, BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.03 (0.97, 1.09)			A			E	F	G
Giles, G. G., 2006, BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.97 (0.87, 1.08)			A			E	F	G
Giles, G. G., 2006, BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		times/week	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.97 (0.88, 1.06)			A			E	F	G

Menopausal status not specified

Frazier L.A., 2003, BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		1.0 (continuous)	1	0.99 (0.83, 1.19)			A	C	D	E	F	G
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2.1.1.1

Refined cereals and cereal products

Post-menopausal

Nicodemus, K.K., 2001, BRE16206	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	977	273843	By Mail	9.0 years	FFQ (nos)		serving/week	Breast cancer incidence	Post-menopausal	13.0 - 78.0 vs. 0 - 2.5	5	1.06 (0.84, 1.3)		0.80	A	B	C	D	E	F	G
Fung, T., 2005, BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		serving	Breast cancer ER- incidence	Post-menopausal	1.0 (continuous)	1	1.07 (0.99, 1.17)		0.09	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Olsen, A.,2003,BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	303	23798	By Mail	4.7 years	FFQ (nos)	including fruits and vegetables juices	g/day	Breast cancer ER+ incidence	Post-menopausal	100.0 (continuous)	1	1.05 (1.0, 1.1)			A	B	C	D	E	F	G
Olsen, A.,2003,BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	91	23798	By Mail	4.7 years	FFQ (nos)	including fruits and vegetables juices	g/day	Breast cancer ER- incidence	Post-menopausal	100.0 (continuous)	1	0.9 (0.81, 0.99)			A	B	C	D	E	F	G

Fruit and vegetables (unspecified)

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>5.0 vs. <1.9	5	0.77 (0.58, 1.02)		0.05	A		C	D	E	F	G
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Post-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>5.0 vs. <1.9	5	1.03 (0.81, 1.31)		0.73	A		C	D	E	F	G
Mattisson, I.,2004,BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmö Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)									
Mattisson, I.,2004,BRE16042	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmö Diet and Cancer, 1991	50 -	342	11726	Multiple procedure	11.0 years	7-day Record + Questionnaire		g/day	Invasive & In situ breast cancer incidence	Post-menopausal	600.0 vs. 210.0	5	0.78 (0.54, 1.13)		0.275	A	B	C	D	E	F	G
Ravn-Haren, G. et al.,2006,BRE80151	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	377	377	Cancer registry		FFQ	Total fruit and vegetables intake	g/day	Breast cancer incidence	Post-menopausal	100.0 (continuous)	1	1.07 (1.0, 1.14)				B	C	D	E	F	G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	152	11726.0	Cancer registry	9.5 years	diet history questionnaire	Fruit, berries and vegetables intake	g/day	Breast cancer incidence	Post-meno & BMI ≥27	626.0 vs. 190.0	5	0.97 (0.58, 1.62)		0.3	A						G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	276	11726.0	Cancer registry	9.5 years	diet history questionnaire	Fruit, berries and vegetables intake	g/day	Breast cancer incidence	Post-meno & BMI <27	626.0 vs. 190.0	5	0.66 (0.46, 0.97)		0.035	A						G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	124	11726.0	Cancer registry	9.5 years	diet history questionnaire	Fruit, berries and vegetables intake	g/day	Breast cancer incidence	Post-meno, dietary change	626.0 vs. 190.0	5	1.13 (0.62, 2.06)		0.45	A				E		G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	304	11726.0	Cancer registry	9.5 years	diet history questionnaire	Fruit, berries and vegetables intake	g/day	Breast cancer incidence	Post-meno, no dietary change	626.0 vs. 190.0	5	0.59 (0.4, 0.87)		0.052	A				E		G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Sonestedt, E. et al., 2007, BRE0147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	428	11726.0	Cancer registry	9.5 years	diet history questionnaire	Fruit, berries and vegetables intake	g/day	Breast cancer incidence	Post-menopausal	626.0 vs. 190.0	5	0.78 (0.57, 1.05)		0.35	A					E	G

Menopausal status not specified

Shannon, J., 2003, BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)		food group intake/caloric intake	Breast cancer incidence		Highest quartile vs. Lowest	2	0.46 (0.28, 0.75)		0.004	A		C		E	G
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2.2.1

Non-starchy vegetables

Post-menopausal

Olsen, A., 2003, BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	425	23798	By Mail	4.7 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	100.0 (continuous)	1	0.98 (0.89, 1.09)				A	B	C	D	E	F	G
Olsen, A., 2003, BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	303	23798	By Mail	4.7 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	100.0 (continuous)	1	1.01 (0.9, 1.13)				A	B	C	D	E	F	G
Olsen, A., 2003, BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	91	23798	By Mail	4.7 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	100.0 (continuous)	1	0.92 (0.73, 1.16)				A	B	C	D	E	F	G
Fung T.T., 2006, BRE0107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Vegetables other than yellow/orange, leafy and cruciferous vegetables, corn,	times/week	Breast cancer ER- incidence		7+ vs. <2	4	0.67 (0.53, 0.87)		0.03					D	E	F	G

Total vegetables

Menopausal status not specified

van Gils CH, 2005, BRE0167	Prospective Cohort	EPIC	25 - 70	3659	285526.0		5.4 years	Diet questionnaire			Breast cancer Incidence		>309.1 vs. <109.0	5	0.98 (0.84, 1.14)		0.65					C	D	E	F	G
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Vegetables

Menopausal status not specified

van Gils CH, 2005, BRE0167	Prospective Cohort	EPIC	25 - 70	3659	285526.0		5.4 years	Diet questionnaire	Fruiting vegetables		Breast cancer Incidence		>309.1 vs. <109.0	5	1.06 (0.93, 1.21)		0.26					C	D	E	F	G
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Vegetables (unspecified)

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>5.0 vs. <1.9	5	0.64 (0.43, 0.95)		0.10	A	C	D	E	F	G	
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	total veg adolescent diet	servings/day	Breast cancer incidence	Pre-menopausal	5.3 vs. 1.3	5	1.0 (0.69, 1.44)		0.97	A	C	D	E	F	G	

Post-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>5.0 vs. <1.9	5	1.02 (0.85, 1.24)		0.61	A	C	D	E	F	G
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servings	Breast cancer ER-incidence	Post-menopausal	1.0 (continuous)	1	0.94 (0.88, 0.99)		0.03	A	C	D	E	F	G

Menopausal status not specified

Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	518	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>433.1 vs. <203.0	5	0.86 (0.61, 1.23)		0.752	A	B	C	E	F	G
Verhoeven, D. T.,1997,BRE12868	Case Cohort	the Netherlands, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	519	5865	Through network, paper, tv	4.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		303.0 vs. 108.0	5	0.94 (0.67, 1.31)		0.3	A	C	E	F	G	
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>957.0 vs. <538.0	5	0.4 (0.2, 0.7)		0.001				E		

Vegetables rich in vitamin C and A

Menopausal status not specified

Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	518	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>169.1 vs. <45.0	5	0.74 (0.52, 1.05)		0.086	A	B	C	E	F	G
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2.2.1.1

Carrots and Celery (umbelliferea)

Menopausal status not specified

Shannon, J.,2003,BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)		servings/day	Breast cancer incidence		Highest quartile vs. Lowest	2	1.78 (1.1, 2.89)		0.02	A	C	E	G
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Garlic and Onion

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Dorant, E.,1995,BRE02383	Case Cohort	Netherlands, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	469	5180	Unspecified	3.3 years / 0,05	FFQ-Semi-quantitative	onion	times/day	Breast cancer incidence		>=0,5 vs. 0	4	0.95 (0.61, 1.47)		0.42	A	B	C	D	E	F	G
van Gils CH,2005,BRE80167	Prospective Cohort	EPIC	25 - 70	2123	285526.0		5.4 years	Diet questionnaire			Breast cancer Incidence		>309.1 vs. <109.0	5	1.08 (0.89, 1.31)		0.39			C	D	E	F	G
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	Liliaceae	times/year	Breast cancer incidence		>372.0 vs. <38.0	5	0.5 (0.2, 1.1)		0.47	A					E	

2.2.1.1.1

Carrots

Menopausal status not specified

Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		0.5 (continuous)	1	1.15 (0.91, 1.46)			A		C	D	E	F	G
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2.2.1.2

Cruciferous vegetables

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>1.0 vs. <0.24	5	0.83 (0.52, 1.32)		0.19	A		C	D	E	F	G
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Post-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>1.0 vs. <0.24	5	0.98 (0.77, 1.25)		0.83	A		C	D	E	F	G
Fung T.T.,2006,BRE80107	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	575	121700.0	medical records	18.0 years	FFQ	Cruciferous vegetables, broccoli, cabbage, cauliflower, brussels sprouts, kale	times/week	Breast cancer ER-incidence		5+ vs. <2	3	0.88 (0.68, 1.15)		0.7				D	E	F	G

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>378.0 vs. <161.0	5	0.9 (0.4, 1.9)		0.48	A					E	
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2.2.1.2.3

Cabbage

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		0.5 (continuous)	1	1.0 (0.64, 1.57)			A	C	D	E	F	G	
van Gils CH,2005,BRE0167	Prospective Cohort	EPIC	25 - 70	3659	285526.0		5.4 years	Diet questionnaire			Breast cancer Incidence		>309.1 vs. <109.0	5	1.18 (1.01, 1.38)	0.11			C	D	E	F	G	

2.2.1.2.4

Broccoli

<i>Menopausal status not specified</i>																							
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		0.5 (continuous)	1	0.741 (0.39, 1.41)			A	C	D	E	F	G
Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	706990	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		-serving/mo nth	Invasive breast cancer incidence		17.14 vs. >0.99	5	0.99 (0.59, 1.65)	0.1		A	C	D	E	F	G

2.2.1.3

Allium vegetables

<i>Menopausal status not specified</i>																								
Dorant, E.,1995,BRE02383	Case Cohort	Netherlands, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	469	5180	Unspecified	3.3 years / 0,05	FFQ-Semi-quantitative	leek	times/mont h	Breast cancer incidence		>2 vs. 0	3	1.08 (0.79, 1.48)	0.57		A	B	C	D	E	F	G
Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	706991	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	onion	-serving/mo nth	Invasive breast cancer incidence		17.14 vs. >0.99	5	1.11 (0.77, 1.61)	0.99		A	C	D	E	F	G	

2.2.1.4.2

Spinach

<i>Menopausal status not specified</i>																							
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		0.5 (continuous)	1	1.18 (0.72, 1.93)			A	C	D	E	F	G

2.2.1.4.3

Lettuce

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	cucurbitaceae	times/year	Breast cancer incidence		>244.0 vs. <143.0	5	0.5 (0.2, 1.2)		0.08	A						E	

Salad vegetables

Menopausal status not specified

Key, T.J.A.,1996,BRE15654	Prospective Cohort	United Kingdom, Not specified, Vegetarian and health conscious people UK Cohort of Vegetarians	16 - 79		6435.0	From groups with high vegetarian likelihood	16.8 years	Questionnaire (nos)	raw salad		Breast cancer cancer death		daily consumption vs. less than	2	1.15 (0.7, 1.87)			A								G
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Sea vegetables

Menopausal status not specified

Key, T.J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488989	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	0.89 (0.69, 1.16)		0.417	A								G
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	Laminariaceae	times/year	Breast cancer incidence		>14.0 vs. <1.0	5	1.4 (0.7, 2.9)		0.49	A						E		

Solanaceae

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>183.0 vs. <80.0	5	1.0 (0.5, 2.0)		0.76	A						E	
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Tomato sauce

Menopausal status not specified

Sesso H.D.,2005,BRE74061	Prospective Cohort	USA, Not specified, Health professionals Women's Health Study, 1993		1058	37718	Through health org. (screening, health insurance)	9.9 years	FFQ-Semi-quantitative		serving/month	Breast cancer incidence		2-4 serving/wk vs. none	4	1.23 (0.93, 1.64)	0.046		A		C	D		F	G
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Umbelliferae

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>40.0 vs. <12.0	5	3.1 (1.5, 6.1)		0.001	A						E	
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Yellow-orange vegetables

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>5.0 vs. <1.9	5	0.84 (0.64, 1.09)		0.10	A	C	D	E	F	G	
Olsen, A.,2003,BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	425	23798	By Mail	4.7 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	100.0 (continuous)	1	1.05 (0.98, 1.11)			A	B	C	D	E	F	G
Olsen, A.,2003,BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	303	23798	By Mail	4.7 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	100.0 (continuous)	1	1.07 (1.0, 1.15)			A	B	C	D	E	F	G
Olsen, A.,2003,BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	91	23798	By Mail	4.7 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	100.0 (continuous)	1	0.92 (0.79, 1.08)			A	B	C	D	E	F	G
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servings	Breast cancer ER- incidence	Post-menopausal	1.0 (continuous)	1	0.88 (0.8, 0.97)		0.009	A	C	D	E	F	G	
<i>Menopausal status not specified</i>																								
Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	518	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>491.1 vs. <189.0	5	0.81 (0.57, 1.14)		0.174	A	B	C	E	F	G	
Key, T.J.A.,1996,BRE15654	Prospective Cohort	United Kingdom, Not specified, Vegetarian and health conscious people UK Cohort of Vegetarians	16 - 79		6435.0	From groups with high vegetarian likelihood	16.8 years	Questionnaire (nos)	fresh fruit		Breast cancer cancer death		daily consumption vs. less than	2	0.74 (0.41, 1.32)			A					G	
Verhoeven, D. T.,1997,BRE12868	Case Cohort	the Netherland, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	519	5866	Through network, paper, tv	4.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		343.1 vs. 64.9	5	0.76 (0.54, 1.08)		0.1	A	C	E	F	G		
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488988	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	0.95 (0.71, 1.27)		0.531	A					G	
Shannon, J.,2003,BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)		food group intake/caloric intake	Breast cancer incidence		Highest quartile vs. Lowest	2	0.37 (0.23, 0.6)		0.0001	A	C	E		G		
Sauvaget, C.,2003,BRE20841	Prospective Cohort	Japan, Not specified, Atomic bomb survivors LSS, 1969	34 - 103	76	23667.0	By Mail	16.0 years	FFQ (nos)		times/week	Breast cancer cancer death		daily or almost daily vs. once per	3	0.91 (0.48, 1.72)		0.7006	A	B	D	E	G		
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>436.0 vs. <201.0	5	0.3 (0.1, 0.5)		0.001				E			

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Cachi (persimmon)																								
<i>Menopausal status not specified</i>																								
Shannon, J.,2003,BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)	ebenaceae	serving/day	Breast cancer incidence		Highest quartile vs. Lowest	2	0.62 (0.43, 0.88)		0.009	A	C	E	G			
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	Ebenaceae	times/year	Breast cancer incidence		4.0 - 56.0 vs. <0.0	4	0.6 (0.4, 1.1)		0.10	A		E				
Lychee																								
<i>Menopausal status not specified</i>																								
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	Sapinadaceae	times/year	Breast cancer incidence		4.0 - 56.0 vs. <0.0	4	0.5 (0.2, 0.9)		0.03	A		E				
2.2.2.2.11																								
Grape																								
<i>Menopausal status not specified</i>																								
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	Vitaceae	times/year	Breast cancer incidence		>27.0 vs. <4.0	5	0.6 (0.3, 1.2)		0.19	A		E				
2.2.2.2.7																								
Blueberries																								
<i>Menopausal status not specified</i>																								
Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	707227	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		serving/month	Invasive breast cancer incidence		4,3 vs. >0.99	4	1.25 (0.86, 1.8)		0.84	A	C	D	E	F	G	
2.2.2.2.8																								
Apples																								
<i>Menopausal status not specified</i>																								
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Unit/day	Breast cancer incidence		1.0 (continuous)	1	1.0 (0.83, 1.2)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	707227	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		serving/month	Invasive breast cancer incidence		27.9 vs. >0.99	6	1.16 (0.77, 1.76)		0.72	A	C	D	E	F	G	

2.3

Beans, peas

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	other legumes	times/year	Breast cancer incidence		>202.0 vs. <97.0	5	0.4 (0.2, 0.8)		0.006						E
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Pulses (legumes)

Post-menopausal

Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		serving	Breast cancer ER- incidence	Post-menopausal	1.0 (continuous)	1	0.79 (0.57, 1.1)		0.16	A	C	D	E	F	G
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Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		134	1069	Through social organization (profession, religion)		FFQ-Semi-quantitative	Leguminosae	times/year	Breast cancer incidence		>555.0 vs. <256.0	5	0.7 (0.4, 1.3)		0.47	A					E
Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	706991	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	beans or lentils	serving/month	Invasive breast cancer incidence		4.3 vs. >0.99	4	0.76 (0.57, 1.0)		0.03	A	C	D	E	F	G

2.3.1

Soy products

Post-menopausal

Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	92	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Soy products consumption, tofu, boiled beans, miso soup, lowest		Breast cancer incidence	Post-menopausal	highest consumption vs. others	3	0.88 (0.41, 1.89)		0.85	A	C	D	E	F	G
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Menopausal status not specified

Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	145	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Soy products consumption, tofu, boiled beans, miso soup, lowest		Breast cancer incidence		highest consumption vs. others	3	1.42 (0.84, 2.4)		0.43	A	C	D	E	F	G
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Soy foods

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Yamamoto, S.,2003,BRE17122	Prospective Cohort	Japan, Not specified Japan, 1990	40 - 59	179	209354	Unspecified	9.0 years / 0.001	Questionnaire (nos)		times/week	Breast cancer incidence		almost daily vs. <2	3	0.81 (0.49, 1.3)		0.44	A	B	C	E	F	G	
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>370.0 vs. <121.0	5	1.0 (0.5, 1.9)		0.81				E			

2.3.1.1

Fermented beancurd

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	Fermented beancurd	times/year	Breast cancer incidence		Ever vs. Never	2	0.8 (0.5, 1.2)			A						
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Miso soup

Post-menopausal

Fujimaki, S.,2003,BRE03015	Prospective Cohort	Japan, Not specified, Registered nurses Japan Nurses' Health Study		176	3952			FFQ (nos)		days/week	Breast cancer incidence	Post-menopausal	>=6 vs. <=1	3	0.51 (0.3, 0.84)								F
Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	92	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Miso soup consumption	cups/day	Breast cancer incidence	Post-menopausal	>=2 vs. <1	3	0.92 (0.52, 1.62)	0.76	A	C	D	E	F	G	

Menopausal status not specified

Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488987	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	0.87 (0.68, 1.12)	0.306	A						G
Yamamoto, S.,2003,BRE17122	Prospective Cohort	Japan, Not specified Japan, 1990	40 - 59	179	209354	Unspecified	9.0 years / 0.001	Questionnaire (nos)		Cups/day	Breast cancer incidence		>=3 vs. <1	4	0.6 (0.34, 1.1)	0.042	A	B	C	E	F	G	
Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	145	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Miso soup consumption	cups/day	Breast cancer incidence		>=2 vs. <1	3	1.01 (0.65, 1.56)	0.94	A	C	D	E	F	G	

Natto (fermented soy)

Post-menopausal

Fujimaki, S.,2003,BRE03015	Prospective Cohort	Japan, Not specified, Registered nurses Japan Nurses' Health Study		176	3952			FFQ (nos)		days/week	Breast cancer incidence	Post-menopausal	>=6 vs. <=1	3	1.07 (0.61, 2.0)								F
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
2.3.2																								
Beans																								
<i>Post-menopausal</i>																								
Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	92	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Boiled beans	times/week	Breast cancer incidence	Post-menopausal	>=3 vs. <1	3	0.89 (0.5, 1.59)		0.75	A	C	D	E	F	G	
<i>Menopausal status not specified</i>																								
Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	145	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Boiled beans	times/week	Breast cancer incidence		>=3 vs. <1	3	0.77 (0.47, 1.27)		0.31	A	C	D	E	F	G	
2.3.2.2																								
Tofu																								
<i>Post-menopausal</i>																								
Fujimaki, S.,2003,BRE03015	Prospective Cohort	Japan, Not specified, Registered nurses Japan Nurses' Health Study		176	3952			FFQ (nos)		days/week	Breast cancer incidence	Post-menopausal	>=6 vs. <=1	3	1.73 (1.02, 3.02)								F	
Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	92	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Tofu consumption	times/week	Breast cancer incidence	Post-menopausal	Almost daily vs. <=2	3	1.43 (0.81, 2.52)		0.23	A	C	D	E	F	G	
<i>Menopausal status not specified</i>																								
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488990	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	1.07 (0.78, 1.47)		0.712	A						G
Nishio, K. et al.,2007,BRE80129	Prospective Cohort	Japan, Asian JACC study, 1988	40 - 79	145	30454.0	Cancer registry	7.6 years / 0.027	FFQ	Tofu consumption	times/week	Breast cancer incidence		Almost daily vs. <3	3	1.14 (0.74, 1.77)		0.55	A	C	D	E	F	G	
2.3.3																								
String beans																								
<i>Menopausal status not specified</i>																								
Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	706991	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		serving/month	Invasive breast cancer incidence		17.14 vs. >0.99	5	1.29 (0.81, 2.05)		0.48	A	C	D	E	F	G	
2.4																								

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Non-processed meat, including red meat poultry and offal	g/day	Breast cancer incidence	premenopausal women	High vs. None	4	1.2 (0.86, 1.68)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Non-processed meat, including red meat poultry and offal	g/day	Breast cancer incidence	premenopausal women	50.0 (continuous)	1	1.13 (1.01, 1.26)	0.03		A	C	D	E	F	G	

Post-menopausal

Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	73	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)			Breast cancer mortality/incidence	Post-menopausal	4 vs. 1-3	3	1.15 (0.53, 2.53)	0.94			B	C	D	E		
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Non-processed meat, including red meat poultry and offal	g/day	Breast cancer incidence	postmenopausal women	High vs. None	4	1.59 (1.1, 2.3)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Non-processed meat, including red meat poultry and offal	g/day	Breast cancer incidence	postmenopausal women	50.0 (continuous)	1	1.09 (0.99, 1.2)	0.088		A	C	D	E	F	G	

Menopausal status not specified

Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	139	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)		days/week	Breast cancer mortality/incidence		4 vs. none/occasional	3	1.17 (0.71, 1.94)	0.77			B	C	D	E		
Gaard.,1995,BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	248	281923	By Mail	10.0 years	FFQ-Semi-quantitative	meat meals	Unit/week	Breast cancer incidence		>=6 vs. <=2	5	2.28 (1.29, 4.03)	0.01		A						
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Non-processed meat, including red meat poultry and offal	g/day	Breast cancer incidence		High vs. None	4	1.33 (1.04, 1.69)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Non-processed meat, including red meat poultry and offal	g/day	Breast cancer incidence		50.0 (continuous)	1	1.1 (1.03, 1.19)	0.007		A	C	D	E	F	G	

Meat (unspecified)

Pre-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative	red and white meat	servings/day	Invasive breast cancer incidence	Pre-menopausal	>2.0 vs. <1.11	5	0.9 (0.69, 1.18)	0.98		A	C	D	E	F	G
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Post-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative	red and white meat	servings/day	Invasive breast cancer incidence	Post-menopausal	>2.0 vs. <1.11	5	0.88 (0.77, 1.02)	0.21		A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Total meat intake, red meat poultry fish and processed meat	g/day	Breast cancer incidence		>180 vs. <115	4	2.24 (1.43, 3.49)			A	B	C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Total meat intake, red meat poultry fish and processed meat	g/day	Breast cancer incidence		25.0 (continuous)	1	1.09 (1.02, 1.17)			A	B	C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	137	137	Cancer registry	/ 0.02	FFQ	Total meat intake, red meat poultry fish and processed meat	g/day	Breast cancer incidence	NAT1 fast & post-menopausal	25.0 (continuous)	1	1.1 (0.96, 1.26)			A	B	C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	218	218	Cancer registry	/ 0.02	FFQ	Total meat intake, red meat poultry fish and processed meat	g/day	Breast cancer incidence	NAT1 slow & post-menopausal	25.0 (continuous)	1	1.06 (0.98, 1.16)			A	B	C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	147	147	Cancer registry	/ 0.02	FFQ	Total meat intake, red meat poultry fish and processed meat	g/day	Breast cancer incidence	NAT2 intermediate/ fast & post-menopausal	25.0 (continuous)	1	1.2 (1.05, 1.37)			A	B	C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	220	220	Cancer registry	/ 0.02	FFQ	Total meat intake, red meat poultry fish and processed meat	g/day	Breast cancer incidence	NAT2 slow & post-menopausal	25.0 (continuous)	1	1.01 (0.93, 1.1)			A	B	C	D	E	F	G

Menopausal status not specified

Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Total meat, sum of red meat poultry offal and processed meat	g/day	Breast cancer incidence		High vs. None	4	1.34 (1.05, 1.71)			A	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Total meat, sum of red meat poultry offal and processed meat	g/day	Breast cancer incidence		50.0 (continuous)	1	1.11 (1.04, 1.18)	0.001		A	C	D	E	F	G

2.5.1.1

Fresh meat

Menopausal status not specified

Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	209	107883	By Mail	6.0 years / 1%	FFQ (nos)	other beef/veal	times/week	Breast cancer incidence		>=1 vs. never	3	1.06 (0.71, 1.58)	0.68		A	B	C	D	F	G	
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		145.0 vs. 45.0	5	0.98 (0.73, 1.33)	1		A	B	C	D	E	F	G
van der Hel, O. L.,2004,BRE12728	Nested Case Control	Denmark, Caucasian MPCDRF	20 - 5	228	262	By Mail	10.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>=70 vs. <45	3	0.93 (0.6, 1.47)			A				E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.46 vs. <0.1	5	0.86 (0.67, 1.09)		0.25	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Other processed meats, sausage, salami, or bologna, other than hotdog	servings/month	Breast cancer incidence		>12.9 vs. >1	5	1.28 (0.87, 1.88)		0.21	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Other processed meats, sausage, salami, or bologna, other than hotdog	servings/month	Breast cancer ER+/PR+		>12.9 vs. >1	5	2.34 (1.47, 3.71)		<0.001	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Other processed meats, sausage, salami, or bologna, other than hotdog	servings/month	Breast cancer ER-/PR-		>12.9 vs. >1	5	0.79 (0.24, 2.61)		0.51	A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Processed meat, bacon ham corned beef spam luncheon meats sausages pies	g/day	Breast cancer incidence	premenopausal women	High vs. None	4	1.2 (0.85, 1.7)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Processed meat, bacon ham corned beef spam luncheon meats sausages pies	g/day	Breast cancer incidence	premenopausal women	50.0 (continuous)	1	1.45 (0.95, 2.23)		0.09	A	C	D	E	F	G	

Post-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.46 vs. <0.1	5	1.0 (0.88, 1.13)		0.45	A	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative	hot dog, bacon, sausages, salami and bologna	servings/day	Invasive breast cancer incidence	Post-menopausal	>0.46 vs. <0.1	5	1.0 (0.88, 1.13)		0.45	A	C	D	E	F	G
Fung, T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servings	Breast cancer ER-incidence	Post-menopausal	1.0 (continuous)	1	1.03 (0.79, 1.33)		0.85	A	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Processed meat, bacon ham corned beef spam luncheon meats sausages pies	g/day	Breast cancer incidence	postmenopausal women	High vs. None	4	1.64 (1.14, 2.37)			A	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Processed meat, bacon ham corned beef spam luncheon meats sausages pies	g/day	Breast cancer incidence	postmenopausal women	50.0 (continuous)	1	1.64 (1.19, 2.27)		0.003	A	C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Processed meat, processed red meat and processed fish, bacon smoked ham	g/day	Breast cancer incidence		>45 vs. <20	4	1.59 (1.02, 2.47)		0.02	A	B	C	D	E	F

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Egeberg, R. et al.,2008,BRE0153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Processed meat, processed red meat and processed fish, bacon smoked ham	g/day	Breast cancer incidence		25.0 (continuous)	1	1.23 (1.04, 1.45)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE0153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	137	137	Cancer registry	/ 0.02	FFQ	Processed meat, processed red meat and processed fish, bacon smoked ham	g/day	Breast cancer incidence	NAT1 fast & post-menopausal	25.0 (continuous)	1	1.22 (0.85, 1.73)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE0153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	218	218	Cancer registry	/ 0.02	FFQ	Processed meat, processed red meat and processed fish, bacon smoked ham	g/day	Breast cancer incidence	NAT1 slow & post-menopausal	25.0 (continuous)	1	1.19 (0.96, 1.47)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE0153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	147	147	Cancer registry	/ 0.02	FFQ	Processed meat, processed red meat and processed fish, bacon smoked ham	g/day	Breast cancer incidence	NAT2 intermediate fast & post-menopausal	25.0 (continuous)	1	1.21 (0.91, 1.62)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE0153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	220	220	Cancer registry	/ 0.02	FFQ	Processed meat, processed red meat and processed fish, bacon smoked ham	g/day	Breast cancer incidence	NAT2 slow & post-menopausal	25.0 (continuous)	1	1.1 (0.87, 1.37)			A	B	C	D	E	F	

Menopausal status not specified

Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	455	462	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		servings/day	Breast cancer incidence		>.50 vs. <=0.14	3	1.0 (0.7, 1.5)					C	D	F	G	
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		13.0 vs. 0.0	4	0.93 (0.67, 1.29)	.59		A	B	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>0.46 vs. <0.1	5	0.94 (0.85, 1.05)	0.12	A		C	D	E	F	G	
van der Hel, O. L.,2004,BRE12728	Nested Case Control	Denmark, Caucasian MPCDRF	20 - 5	229	262	By Mail	10.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>=35 vs. <20	3	1.05 (0.67, 1.64)			A				E	F	G
Taylor et al.,2007,BRE00008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Processed meat, bacon ham corned beef spam luncheon meats sausages pies	g/day	Breast cancer incidence		High vs. None	4	1.39 (1.09, 1.78)			A		C	D	E	F	G
Taylor et al.,2007,BRE00008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Processed meat, bacon ham corned beef spam luncheon meats sausages pies	g/day	Breast cancer incidence		50.0 (continuous)	1	1.59 (1.22, 2.06)	<0.001		A		C	D	E	F	G

2.5.1.2.8

Bacon

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.14 vs. <0.0	5	0.93 (0.73, 1.19)		0.79	A	C	D	E	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.14 vs. <0.0	5	0.93 (0.73, 1.19)		0.79	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Bacon	servings/month	Breast cancer incidence		>=4.3 vs. <1	4	0.93 (0.68, 1.25)		0.62	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Bacon	servings/month	Breast cancer ER+/PR+ incidence		>=4.3 vs. <1	4	1.12 (0.76, 1.66)		0.53	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Bacon	servings/month	Breast cancer ER-/PR- incidence		>=4.3 vs. <1	4	0.23 (0.06, 0.93)		0.03	A	C	D	E	F	G	

Post-menopausal

Zheng, W.,1998,BRE17170	Nested Case Control	U.S.A., Not specified Iowa Women's Health Study	55 - 69	260	643	By Mail	10.0 years	FFQ-Semi-quantitative		g	Breast cancer incidence	Post-menopausal	very well done vs. rare medium	3	1.64 (0.92, 2.93)		0.02	A		D	E	F	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.14 vs. <0.0	5	1.01 (0.89, 1.14)		0.68	A	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.14 vs. <0.0	5	1.01 (0.89, 1.14)		0.68	A	C	D	E	F	G

Menopausal status not specified

Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	453	459	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		servings/day	Breast cancer incidence		>0.07 vs. never	3	1.4 (1.0, 1.9)					C	D	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>0.14 vs. <0.0	5	0.96 (0.87, 1.07)		0.92	A	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>0.14 vs. <0.0	5	0.96 (0.87, 1.07)		0.92	A	C	D	E	F	G

2.5.1.2.9

Hot dog

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Pre-menopausal</i>																								
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.12 vs. <0.01	5	1.16 (0.94, 1.44)	0.11		A	C	D	E	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.12 vs. <0.01	5	1.16 (0.94, 1.44)	0.11		A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Hot dog	servings/month	Breast cancer incidence		>=4.3 vs. <1	4	1.14 (0.83, 1.57)	0.05		A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Hot dog	servings/month	Breast cancer ER+/PR+ incidence		>=4.3 vs. <1	4	1.43 (0.93, 2.17)	0.005		A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Hotdog	servings/month	Breast cancer ER-/PR- incidence		>=4.3 vs. <1	4	0.56 (0.2, 1.56)	0.77		A	C	D	E	F	G	
<i>Post-menopausal</i>																								
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.12 vs. <0.01	5	1.01 (0.9, 1.14)	0.81		A	C	D	E	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.12 vs. <0.01	5	1.01 (0.9, 1.14)	0.81		A	C	D	E	F	G	
<i>Menopausal status not specified</i>																								
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Unit/day	Breast cancer incidence		1.0 (continuous)	1	0.82 (0.52, 1.31)			A	C	D	E	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>0.12 vs. <0.01	5	1.04 (0.95, 1.15)	0.35		A	C	D	E	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>0.12 vs. <0.01	5	1.04 (0.95, 1.15)	0.35		A	C	D	E	F	G	
2.5.1.3																								
Red meat																								
<i>Pre-menopausal</i>																								

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	1.5 vs. 0.2	5	1.2 (0.91, 1.58)		.20	A	C	D	E	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>1.32 vs. <0.55	5	0.94 (0.72, 1.22)		0.90	A	C	D	E	F	G	
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	servings/day	Breast cancer incidence	Pre-menopausal	2.5 vs. 0.7	5	1.22 (0.82, 1.82)		0.17	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Red meat	servings/week	Breast cancer incidence		>10.5 vs. <=3	5	1.27 (0.96, 1.67)		0.28	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Beef or lamb as a main dish	servings/month	Breast cancer incidence		>=4.3 vs. <1	4	1.1 (0.86, 1.39)		0.17	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Beef pork or lamb as a sandwich or mixed dish	servings/month	Breast cancer incidence		>12.9 vs. <1	5	1.01 (0.63, 1.61)		0.91	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Red meat	servings/week	Breast cancer ER+/PR+ incidence		>10.5 vs. <=3	5	1.97 (1.35, 2.88)		0.001	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Beef or lamb as a main dish	servings/month	Breast cancer ER+/PR+ incidence		>=4.3 vs. <1	4	1.33 (0.93, 1.9)		0.03	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Beef pork or lamb as a sandwich or mixed dish	servings/month	Breast cancer ER+/PR+ incidence		>12.9 vs. <1	5	1.64 (0.92, 2.93)		0.35	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Cumulative averaged red meat intake, from 1991 1995 1999 FFQs	servings/day	Breast cancer ER+/PR+ incidence		1.0 (continuous)	1	1.44 (1.18, 1.77)			A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Baseline red meat intake, from 1991 FFQ	servings/day	Breast cancer ER+/PR+ incidence		1.0 (continuous)	1	1.35 (1.14, 1.6)			A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Most recent updated red meat intake, from 1995 FFQ	servings/day	Breast cancer ER+/PR+ incidence		1.0 (continuous)	1	1.32 (1.1, 1.57)			A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Red meat	servings/week	Breast cancer ER-/PR- incidence		>10.5 vs. <=3	5	0.89 (0.43, 1.84)		0.28	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Beef or lamb as a main dish	servings/month	Breast cancer ER-/PR- incidence		>=4.3 vs. <1	4	0.79 (0.44, 1.42)		0.31	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Beef pork or lamb as a sandwich or mixed dish	servings/month	Breast cancer ER-/PR- incidence		>12.9 vs. <1	5	0.25 (0.03, 1.93)		0.64	A	C	D	E	F	G	
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	1171	48662.0	Cancer registry	16.4 years	FFQ	Red meat intake	g/day	Breast cancer incidence	Pre-menopausal	>108.99 vs. <48.48	5	0.87 (0.71, 1.06)		0.27	A	B	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Red meat, beef pork lamb other red meats included in mixed dishes	g/day	Breast cancer incidence	premenopausal women	High vs. None	4	1.32 (0.93, 1.88)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Red meat, beef pork lamb other red meats included in mixed dishes	g/day	Breast cancer incidence	premenopausal women	50.0 (continuous)	1	1.13 (0.99, 1.29)		0.08	A	C	D	E	F	G	

Post-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>1.32 vs. <0.55	5	0.99 (0.86, 1.13)		0.66	A	C	D	E	F	G	
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servings	Breast cancer ER- incidence	Post-menopausal	1.0 (continuous)	1	1.06 (0.84, 1.35)		0.62	A	C	D	E	F	G	
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	993	48662.0	Cancer registry	16.4 years	FFQ	Red meat intake	g/day	Breast cancer incidence	Post-menopausal	>108.99 vs. <48.48	5	1.08 (0.88, 1.34)		0.62	A	B	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Red meat, beef pork lamb other red meats included in mixed dishes	g/day	Breast cancer incidence	postmenopausal women	High vs. None	4	1.56 (1.09, 2.23)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Red meat, beef pork lamb other red meats included in mixed dishes	g/day	Breast cancer incidence	postmenopausal women	50.0 (continuous)	1	1.12 (1.01, 1.26)		0.04		C	D	E	F	G	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Red meat, beef veal pork lamb offal	g/day	Breast cancer incidence		>80 vs. <50	4	1.65 (1.09, 2.5)		0.03	A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Red meat, beef veal pork lamb offal	g/day	Breast cancer incidence		25.0 (continuous)	1	1.15 (1.01, 1.31)			A	B	C	D	E	F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	137	137	Cancer registry	/ 0.02	FFQ	Red meat, beef veal pork lamb offal	g/day	Breast cancer incidence	NAT1 fast & post-menopausal	25.0 (continuous)	1	1.27 (0.98, 1.64)							A	B	C	D	E	F
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	218	218	Cancer registry	/ 0.02	FFQ	Red meat, beef veal pork lamb offal	g/day	Breast cancer incidence	NAT1 slow & post-menopausal	25.0 (continuous)	1	1.03 (0.87, 1.23)							A	B	C	D	E	F
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	147	147	Cancer registry	/ 0.02	FFQ	Red meat, beef veal pork lamb offal	g/day	Breast cancer incidence	NAT2 intermediate/fast & post-menopausal	25.0 (continuous)	1	1.37 (1.07, 1.76)							A	B	C	D	E	F
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	220	220	Cancer registry	/ 0.02	FFQ	Red meat, beef veal pork lamb offal	g/day	Breast cancer incidence	NAT2 slow & post-menopausal	25.0 (continuous)	1	1.0 (0.85, 1.18)							A	B	C	D	E	F

Menopausal status not specified

Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	255	267	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		months	Breast cancer incidence	NAT2 genotype rapid	>=1.0 vs. <=0.5	3	1.1 (0.7, 1.8)											C	D	F	G		
Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	255	267	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		months	Breast cancer incidence	NAT2 genotype slow	>=1.0 vs. <=0.5	3	0.8 (0.5, 1.3)												C	D	F	G	
Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	455	462	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		servings/day	Breast cancer incidence		>1.0 vs. <=0.5	3	0.9 (0.6, 1.3)												C	D	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>1.32 vs. <0.55	5	0.94 (0.84, 1.05)	0.45					A						C	D	E	F	G
van der Hel, O. L.,2004,BRE12728	Nested Case Control	Denmark, Caucasian MPCDRF	20 - 5	229	263	By Mail	10.0 years	FFQ-Semi-quantitative	fresh	g/day	Breast cancer incidence		>=45 vs. <30	3	1.3 (0.83, 2.02)						A						E	F	G		
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	excluded cured	times/year	Breast cancer incidence		>303.0 vs. <148.0	5	1.3 (0.7, 2.5)	0.41											E				
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	2491	46170	Cancer registry	16.4 years	FFQ	Red meat intake	g/day	Breast cancer incidence		>108.99 vs. <48.48	5	0.98 (0.86, 1.12)	0.91					A	B	C	D	E	F	G				
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Red meat, beef pork lamb other red meats included in mixed dishes	g/day	Breast cancer incidence		High vs. None	4	1.41 (1.1, 1.81)						A					C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Red meat, beef pork lamb other red meats included in mixed dishes	g/day	Breast cancer incidence		50.0 (continuous)	1	1.12 (1.03, 1.22)		0.007	A	C	D	E	F	G	

2.5.1.3.1

Beef

Post-menopausal

Zheng, W.,1998,BRE17170	Nested Case Control	U.S.A., Not specified Iowa Women's Health Study	55 - 69	249	598	By Mail	10.0 years	FFQ-Semi-quantitative	steak	g	Breast cancer incidence	Post-menopausal	very well done vs. rare medium	3	2.21 (1.3, 3.77)		0.01	A		D	E	F	
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Menopausal status not specified

Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		50.0 vs. 2.0	5	1.13 (0.92, 1.66)		.36	A	B	C	D	E	F	G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	serving/day	Breast cancer incidence		1.0 (continuous)	1	1.03 (0.88, 1.2)			A	C	D	E	F	G	

Beef index (Hamburger+beef steak+other)

Menopausal status not specified

Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	202	106667	By Mail	6.0 years / 1%	FFQ (nos)		times/week	Breast cancer incidence		>=1 vs. never	3	1.05 (0.75, 1.47)		0.84	A	B	C	D		F	G
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Beef steak

Menopausal status not specified

Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	201	106603	By Mail	6.0 years / 1%	FFQ (nos)		times/week	Breast cancer incidence		>=1 vs. never	3	1.19 (0.76, 1.87)		0.46	A	B	C	D		F	G
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2.5.1.3.3

Pork

Pre-menopausal

Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Pork as a main dish	servings/month	Breast cancer incidence		>=4.3 vs. <1	4	1.1 (0.81, 1.48)		0.54	A		C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Pork as a main dish	servings/month	Breast cancer ER+/PR+ incidence		>=4.3 vs. <1	4	1.81 (1.21, 2.7)		0.005	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Pork as a main dish	servings/month	Breast cancer ER-/PR- incidence		>=4.3 vs. <1	4	0.83 (0.37, 1.86)		>0.99	A	C	D	E	F	G	

Menopausal status not specified

Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	204	102006	By Mail	6.0 years / 1%	FFQ (nos)		dichotomous	Breast cancer incidence		any vs. none	2	0.92 (0.43, 1.97)			A	B	C	D	F	G	
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		72.0 vs. 3.0	5	0.8 (0.6, 1.08)		.02	A	B	C	D	E	F	G

2.5.1.4

Chicken

Pre-menopausal

Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative	chicken or turkey	servings/day	Invasive breast cancer incidence	Pre-menopausal	0.9 vs. 0.1	5	1.04 (0.8, 1.35)		.58	A	C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	servings/day	Breast cancer incidence	Pre-menopausal	0.9 vs. 0.1	5	1.29 (0.88, 1.88)		0.94	A	C	D	E	F	G

Menopausal status not specified

Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	457	462	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		servings/day	Breast cancer incidence		>.50 vs. <=0.14	3	1.0 (0.6, 1.6)				C	D	F	G
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Poultry

Pre-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.46 vs. <0.17	5	1.08 (0.85, 1.37)		0.65	A	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Poultry, roasted chicken chicken slices bread crumbed chicken chicken or turkey in a	g/day	Breast cancer incidence	premenopausal women	High vs. None	4	1.15 (0.82, 1.61)			A	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Poultry, roasted chicken chicken slices bread crumbed chicken chicken or turkey in a	g/day	Breast cancer incidence	premenopausal women	50.0 (continuous)	1	123.0 (0.91, 1.65)		0.172	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.46 vs. <0.17	5	1.0 (0.89, 1.12)		0.97	A	C	D	E	F	G	
Fung, T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servings	Breast cancer ER-incidence	Post-menopausal	1.0 (continuous)	1	0.87 (0.6, 1.28)		0.49	A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Poultry, roasted chicken chicken slices bread crumbed chicken chicken or turkey in a	g/day	Breast cancer incidence	postmenopausal women	High vs. None	4	1.3 (0.89, 1.89)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Poultry, roasted chicken chicken slices bread crumbed chicken chicken or turkey in a	g/day	Breast cancer incidence	postmenopausal women	50.0 (continuous)	1	1.0 (0.78, 1.28)		0.985	A	C	D	E	F	G	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Poultry, chicken turkey	g/day	Breast cancer incidence		>25 vs. <10	4	1.33 (0.85, 2.07)		0.73	A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Poultry, chicken turkey	g/day	Breast cancer incidence		25.0 (continuous)	1	1.04 (0.84, 1.28)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	137	137	Cancer registry	/ 0.02	FFQ	Poultry, chicken turkey	g/day	Breast cancer incidence	NAT1 fast & post-menopausal	25.0 (continuous)	1	0.85 (0.57, 1.27)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	218	218	Cancer registry	/ 0.02	FFQ	Poultry, chicken turkey	g/day	Breast cancer incidence	NAT1 slow & post-menopausal	25.0 (continuous)	1	1.06 (0.82, 1.36)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	147	147	Cancer registry	/ 0.02	FFQ	Poultry, chicken turkey	g/day	Breast cancer incidence	NAT2 intermediate/fast & post-menopausal	25.0 (continuous)	1	1.12 (0.77, 1.63)			A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	220	220	Cancer registry	/ 0.02	FFQ	Poultry, chicken turkey	g/day	Breast cancer incidence	NAT2 slow & post-menopausal	25.0 (continuous)	1	0.97 (0.75, 1.25)			A	B	C	D	E	F	
<i>Menopausal status not specified</i>																								
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	207	108084	By Mail	6.0 years / 1%	FFQ (nos)		times/week	Breast cancer incidence		>=1 vs. never	3	1.43 (0.94, 2.13)		0.22	A	B	C	D	F	G	
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		67.0 vs. 6.0	5	1.11 (0.66, 1.86)		0.62							

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		-serving/day	Invasive breast cancer incidence		>0.46 vs. <0.17	5	1.01 (0.91, 1.11)		0.69	A	C	D	E	F	G	
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>64.0 vs. <19.0	5	1.0 (0.5, 2.0)		0.7					E		
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Poultry, roasted chicken chicken slices bread crumbed chicken chicken or turkey in a		Breast cancer incidence		Quantile null vs. Quantile null	4	null (null, null)			A	C	D	E	F	G	
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Poultry, roasted chicken chicken slices bread crumbed chicken chicken or turkey in a	g/day	Breast cancer incidence		50.0 (continuous)	1	1.11 (0.92, 1.34)		0.285	A	C	D	E	F	G	

2.5.1.5

Liver

Menopausal status not specified

Brustad, M. et al.,2007,BRE80127	Prospective Cohort	Norway Norwegian Women and Cancer Study, 1991	40 - 70	836	52069	Cancer registry	6.73 years	FFQ	Fish liver		Breast cancer incidence		Consumers vs. Never consumed	2	0.9 (0.78, 1.04)			A	C	D	E	F	G
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Offals

Pre-menopausal

Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Offals	g/day	Breast cancer incidence	premenopausal women	High vs. None	3	0.96 (0.63, 1.45)			A	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	283	15664	NHS Central Registry	8.0 years	FFQ	Offals	g/day	Breast cancer incidence	premenopausal women	50.0 (continuous)	1	1.63 (0.22, 11.0)		0.63	A	C	D	E	F	G

Post-menopausal

Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Offals	g/day	Breast cancer incidence	postmenopausal women	High vs. None	3	1.26 (0.95, 1.67)			A	C	D	E	F	G
Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	395	17383	NHS Central Registry	8.0 years	FFQ	Offals	g/day	Breast cancer incidence	postmenopausal women	50.0 (continuous)	1	1.62 (0.57, 4.59)		0.363	A	C	D	E	F	G

Menopausal status not specified

Taylor et al.,2007,BRE80008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Offals	g/day	Breast cancer incidence		High vs. None	3	1.17 (0.93, 1.48)			A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Taylor et al.,2007,BRE00008	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	678	33725	NHS Central Registry	8.0 years	FFQ	Offals	g/day	Breast cancer incidence		50.0 (continuous)	1	1.75 (0.68, 4.5)		0.248	A	C	D	E	F	G	

2.5.2

Fish

Pre-menopausal

Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	93	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence	Pre-menopausal	Quantile 4 vs. Quantile 1	4	0.89 (0.48, 1.66)		0.93	A	B	C	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		-serving/day	Invasive breast cancer incidence	Pre-menopausal	0.4 vs. 0.07	4	0.92 (0.73, 1.15)		.52	A	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		-serving/day	Invasive breast cancer incidence	Pre-menopausal	>0.4 vs. <0.13	5	1.17 (0.92, 1.5)		0.71	A	C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	-serving/day	Breast cancer incidence	Pre-menopausal	0.6 vs. 0.1	5	0.94 (0.67, 1.31)		0.97	A	C	D	E	F	G
Engeset D.,2006,BRE80109	Prospective Cohort	France, Italy, Spain, UK, NL, Greece, Germany, Sweden, Denmark, Norway European Prospective	35 - 70	786	366521.0	Population cancer registries and other		FFQ + diary	Total fish consumption, whole fish, fish products, crustaceans, molluscs, roe and roe	g/day	Invasive breast cancer incidence	Pre-menopausal	96.77 vs. 5.54	5	1.11 (0.84, 1.45)		0.27	A	C	D	E	F	G

Post-menopausal

Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	221	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	0.71 (0.49, 1.01)		0.03	A	B	C	E	F	G	
Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)	total fish intake	g/day	Breast cancer incidence	Post-menopausal	>59.0 vs. 0 - 26.0	4	1.47 (1.1, 1.98)			A	B	C	D	E	F	G
Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	303	null	By Mail	4.8 years	FFQ (nos)	total fish intake	g/day	Breast cancer ER+ incidence	Post-menopausal	25.0 (continuous)	1	1.14 (1.03, 1.26)			A	B	C	D	E	F	G
Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	91	null	By Mail	4.8 years	FFQ (nos)	total fish intake	g/day	Breast cancer ER- incidence	Post-menopausal	25.0 (continuous)	1	1.0 (0.81, 1.24)			A	B	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		-serving/day	Invasive breast cancer incidence	Post-menopausal	>0.4 vs. <0.13	5	1.0 (0.89, 1.12)		0.79	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Folsom AR,2004,BRE80171	Prospective Cohort	United States, Post menopausal Iowa Women's Health study	55 - 69	1885	41836.0	Cancer registry and death certificates and participant	14.0 years	FFQ	Total fish and seafood, dark-meat fish canned tuna, otehr fish and shrimp lobster scallops	servings/w eek	Breast cancer incidence		>2.5 vs. <0.49	5	0.92 (0.76, 1.12)		0.49	A	B	C	D	E	F	G
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servings	Breast cancer ER-incidence	Post-menopausal	1.0 (continuous)	1	0.92 (0.66, 1.3)		0.64	A		C	D	E	F	G
Engeset D.,2006,BRE80109	Prospective Cohort	France, Italy, Spain, UK, NL, Greece, Germany, Sweden, Denmark, Norway European Prospective	35 - 70	2700	366521.0	Population cancer registries and other		FFQ + diary	Total fish consumption, whole fish, fish products, crustaceans, molluscs, roe and roe	g/day	Invasive breast cancer incidence	Post-menopausal	96.77 vs. 5.54	5	1.1 (0.95, 1.28)		0.52	A		C	D	E	F	G
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Fish, total fresh fish from FFQ	g/day	Breast cancer incidence		>35 vs. <15	4	1.58 (1.0, 2.49)		0.19	A	B	C	D	E	F	
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	378	378	Cancer registry	/ 0.02	FFQ	Fish, total fresh fish from FFQ	g/day	Breast cancer incidence		25.0 (continuous)	1	1.14 (0.94, 1.39)				A	B	C	D	E	F
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	137	137	Cancer registry	/ 0.02	FFQ	Fish, total fresh fish from FFQ	g/day	Breast cancer incidence	NAT1 fast & post-menopausal	25.0 (continuous)	1	1.09 (0.87, 1.78)				A	B	C	D	E	F
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	218	218	Cancer registry	/ 0.02	FFQ	Fish, total fresh fish from FFQ	g/day	Breast cancer incidence	NAT1 slow & post-menopausal	25.0 (continuous)	1	1.11 (0.87, 1.41)				A	B	C	D	E	F
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	147	147	Cancer registry	/ 0.02	FFQ	Fish, total fresh fish from FFQ	g/day	Breast cancer incidence	NAT2 intermediate/ fast & post-menopausal	25.0 (continuous)	1	1.39 (0.87, 2.22)				A	B	C	D	E	F
Egeberg, R. et al.,2008,BRE80153	Nested Case Control	Denmark, Caucasian, Post menopausal Diet, Cancer and Health, 1993	50 - 64	220	220	Cancer registry	/ 0.02	FFQ	Fish, total fresh fish from FFQ	g/day	Breast cancer incidence	NAT2 slow & post-menopausal	25.0 (continuous)	1	1.03 (0.82, 1.3)				A	B	C	D	E	F

Menopausal status not specified

Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	207	105403	By Mail	6.0 years / 1%	FFQ (nos)		times/wee k	Breast cancer incidence		>=1 vs. never	3	1.54 (1.0, 1.81)		0.008	A	B	C	D		F	G
Vatten, L. J.,1990,BRE12832	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 51	152	161013	Through health org. (screening, health insurance)	12.0 years	FFQ (nos)	main meal containing fish	times/wee k	Breast cancer incidence		>2 vs. <=2	2	1.2 (0.8, 1.7)		0.24	A						
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		73.0 vs. 4.0	5	1.02 (0.61, 1.71)		0.79							

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	1021	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	Hamburger	servings/month	Breast cancer incidence		>=4.3 vs. <1	4	1.11 (0.85, 1.45)		0.37	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	512	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	hamburger	servings/month	Breast cancer ER+/PR+		>=4.3 vs. <1	4	1.71 (1.11, 2.62)		0.01	A	C	D	E	F	G	
Cho et al.,2006,BRE80034	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	26 - 46	167	90659.0	Self report verified by medical record	12.0 years	FFQ-Semi-quantitative	hamburger	servings/month	Breast cancer ER-/PR-		>=4.3 vs. <1	4	0.67 (0.36, 1.22)		0.45	A	C	D	E	F	G	

Post-menopausal

Zheng, W.,1998,BRE17170	Nested Case Control	U.S.A., Not specified Iowa Women's Health Study	55 - 69	247	602	By Mail	10.0 years	FFQ-Semi-quantitative		g	Breast cancer incidence	Post-menopausal	very well done vs. rare medium	3	1.54 (0.96, 2.47)		0.04	A		D	E	F	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.25 vs. <0.08	5	0.91 (0.8, 1.03)		0.15	A	C	D	E	F	G

Menopausal status not specified

Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	206	106997	By Mail	6.0 years / 1%	FFQ (nos)		times/week	Breast cancer incidence		>=1 vs. never	3	1.07 (0.75, 1.55)		0.58	A	B	C	D		F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>0.25 vs. <0.08	5	0.95 (0.86, 1.06)		0.36	A	C	D	E	F	G	

2.5.2.3

Processed Fish

Post-menopausal

Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	25.0 (continuous)	1	1.12 (0.93, 1.34)				A	B	C	D	E	F	G
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2.5.2.5

Fatty Fish

Post-menopausal

Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	25.0 (continuous)	1	1.11 (0.91, 1.34)				A	B	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	25.0 (continuous)	1	1.13 (0.99, 1.29)			A	B	C	D	E	F	G
Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	25.0 (continuous)	1	1.09 (0.95, 1.25)			A	B	C	D	E	F	G
Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	25.0 (continuous)	1	1.09 (0.85, 1.42)			A	B	C	D	E	F	G

Menopausal status not specified

Engeset D.,2006,BRE80109	Prospective Cohort	France, Italy, Spain, UK, NL, Greece, Germany, Sweden, Denmark, Norway European Prospective	35 - 70	3885	366521.0	Population cancer registries and other		FFQ + diary	Fatty fish, whole fatty fish, fatty fish products, fish with >=4% fat, excluded german and	g/day	Invasive breast cancer incidence		36.21 vs. 0.28	5	1.13 (1.01, 1.26)		0.1	A	C	D	E	F	G
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2.5.2.7

Dried Fish

Menopausal status not specified

Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488989	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	0.49 (0.24, 1.02)		0.029	A						G
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2.5.3

Shellfish and other seafood

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>52.0 vs. <11.0	5	0.8 (0.4, 1.4)		0.5						E	
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2.5.4

Eggs

Pre-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.44 vs. <0.13	5	1.15 (0.9, 1.47)		0.08	A	C	D	E	F	G
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Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	75	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)		days/week	Breast cancer mortality/incidence	Post-menopausal	3+ vs. none/occasional	4	0.67 (0.31, 1.45)		0.40		B	C	D	E		
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	171	12062	By Mail	6.0 years / 1%	FFQ (nos)		times/week	Breast cancer incidence	Post-menopausal	>2 vs. <1	3	1.28 (0.85, 1.94)			A	B	C	D	F	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Post-menopausal	>0.44 vs. <0.13	5	1.01 (0.89, 1.14)		0.57	A	C	D	E	F	G	

Menopausal status not specified

Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	141	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)		days/week	Breast cancer mortality/incidence		3+ vs. none/occasional	4	0.8 (0.46, 1.4)		0.66		B	C	D	E		
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	208	104797	By Mail	6.0 years / 1%	FFQ (nos)		times/week	Breast cancer incidence		>=2 vs. <1	3	1.07 (0.73, 1.56)		0.61	A	B	C	D	F	G	
Gaard.,1995,BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	242	277065	By Mail	10.0 years	FFQ-Semi-quantitative		Unit/week	Breast cancer incidence		>=5 vs. 0	5	1.25 (0.54, 2.9)		0.82	A						
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488990	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	1.05 (0.79, 1.38)		0.936	A						G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Unit/day	Breast cancer incidence		1.0 (continuous)	1	0.82 (0.67, 0.99)			A	C	D	E	F	G	
Shannon, J.,2003,BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)		food group intake/caloric intake	Breast cancer incidence		Highest quartile vs. Lowest	2	0.58 (0.39, 0.93)		0.004	A	C	E		G		
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence		>0.44 vs. <0.13	5	1.03 (0.93, 1.15)		0.16	A	C	D	E	F	G	
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>313.0 vs. <52.0	5	0.7 (0.4, 1.4)		0.18					E		

2.6

Fats and Oils

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments																	
																		A	B	C	D	E	F	G											
Gaard.,1995,BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	248	281828	By Mail	10.0 years	FFQ-Semi-quantitative	edible fat	g/day	Breast cancer incidence		>=29 vs. <13	4	1.14 (0.81, 1.6)		0.18	A																	

2.6.1.1

Butter

Menopausal status not specified

Knekt, P.,1996,BRE04900	Prospective Cohort	Finland, Not specified, Screening Program Finland, 1966	15 - 90		4697.0	Through health org. (screening, health insurance)	25.0 years	Dietary History questionnaire			Breast cancer mortality/incidence		>1.0 vs. >-1.0	3	0.59 (0.35, 0.99)		0.17	A																	
Jarvinen, R.,1997,BRE04383	Prospective Cohort	Finland Finland, 1966	15 -		4697.0	Unspecified	24.0 years	Dietary History questionnaire			Breast cancer incidence		Quantile 3 vs. Quantile 1	2	0.59 (null, null)			A																	
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488990	By Mail	24.0 years	Questionnaire (nos)	butter - cheese	times/week	Breast cancer incidence		>=5 vs. <=1	4	1.13 (0.85, 1.51)		0.239	A																	G
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		3 ^o tertile vs. no consumers	2	1.06 (0.87, 1.31)				A	B	C	D	E	F	G										
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer cancer death		31.0 vs. 0.0	3	1.18 (0.9, 1.54)		.08		A	B	C	D	E	F	G										
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	serving/day	Breast cancer incidence		1.0 (continuous)	1	1.06 (1.0, 1.13)			A		C	D	E	F	G											

Dairy cream

Menopausal status not specified

Knekt, P.,1996,BRE04900	Prospective Cohort	Finland, Not specified, Screening Program Finland, 1966	15 - 90		4697.0	Through health org. (screening, health insurance)	25.0 years	Dietary History questionnaire			Breast cancer mortality/incidence		>1.0 vs. >-1.0	3	0.84 (0.53, 1.34)		0.67	A																		
Jarvinen, R.,1997,BRE04383	Prospective Cohort	Finland Finland, 1966	15 -		4697.0	Unspecified	24.0 years	Dietary History questionnaire			Breast cancer incidence		Quantile 3 vs. Quantile 1	2	0.84 (null, null)			A																		
van der Pols JC, et al.,2007,BRE80154	Historical Cohort	United Kingdom The Boyd Orr Cohort	(8)	98	4374.0	National Health Records	57.0 years / 0.123	7-day food records	Childhood cream intake		Breast cancer incidence + mortality		Quantile 4 vs. Quantile 1	4	null (null, null)	>0.05		A							E									G		

2.6.2

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Olive oil																									
<i>Menopausal status not specified</i>																									
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		3° tertile vs. no consumers	2	0.88 (0.73, 1.08)				A	B	C	D	E	F	G
Seed Oil																									
<i>Menopausal status not specified</i>																									
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		4° quartile vs. 1° quartile	2	1.07 (0.88, 1.31)				A	B	C	D	E	F	G
Sesame oil																									
<i>Menopausal status not specified</i>																									
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		g/day	Breast cancer incidence		>1.66 vs. <0.55	5	0.7 (0.3, 1.2)	0.01									E
Soy oil																									
<i>Menopausal status not specified</i>																									
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		g/day	Breast cancer incidence		>49.5 vs. <28.7	5	0.6 (0.3, 1.2)	0.08									E
Vegetable oil-based dietary fats																									
<i>Post-menopausal</i>																									
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Vegetable oil-based dietary fats	g/day	Breast cancer incidence	Post-menopausal	28.0 vs. 4.2	4	1.65 (1.05, 2.58)	0.019			B	C	D	E	F	G	
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Vegetable oil-based dietary fats, adjusted for SFA, energy adjusted using	g/day	Breast cancer incidence	Post-menopausal	28.0 vs. 4.2	4	1.68 (1.07, 2.66)	0.018			B	C	D	E	F	G	
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Vegetable oil-based dietary fats, adjusted for MUFA, energy adjusted using	g/day	Breast cancer incidence	Post-menopausal	28.0 vs. 4.2	4	1.43 (0.9, 2.27)	0.088			B	C	D	E	F	G	
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Vegetable oil-based dietary fats, adjusted for omega6PUFA, energy adjusted using	g/day	Breast cancer incidence	Post-menopausal	28.0 vs. 4.2	4	1.1 (0.64, 1.88)	0.625			B	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmö Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Vegetable oil-based dietary fats, adjusted for omega3PUFA, energy adjusted using	g/day	Breast cancer incidence	Post-menopausal	28.0 vs. 4.2	4	1.59 (1.01, 2.5)		0.032		B	C	D	E	F	G

2.6.3

Margarine

Menopausal status not specified

Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		3 rd tertile vs. no consumers	2	1.05 (0.86, 1.28)			A	B	C	D	E	F	G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	servings/day	Breast cancer incidence		1.0 (continuous)	1	0.96 (0.89, 1.03)			A	C	D	E	F	G	

2.6.4

Fructose

Pre-menopausal

Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	gm/day	Breast cancer incidence	Pre-menopausal	48.17 vs. 16.98	5	1.25 (0.91, 1.74)	0.32		A	C	D	E	F	G
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Post-menopausal

Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	0.99 (0.81, 1.2)	0.99		B	C	D	E	F
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	10.0 (continuous)	1	1.06 (0.96, 1.18)	0.99		B	C	D	E	F
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	10.0 (continuous)	1	0.84 (0.67, 1.06)	0.99		B	C	D	E	F

2.7

Dairy products

Pre-menopausal

Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	276	31487.0	medical records	10.0 years	FFQ	total dairy products	servings/day	Invasive breast cancer incidence	Pre-menopausal	>3.13 vs. <0.92	6	0.64 (0.42, 0.95)	0.09		A	C				F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	743	31487.0	medical records	10.0 years	FFQ	total dairy products	servings/day	Invasive breast cancer incidence	Post-menopausal	>3.13 vs. <0.92	6	1.07 (0.82, 1.39)		0.83	A	C	F	G			
High-fat dairy																								
<i>Pre-menopausal</i>																								
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		servings/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	4	0.93 (0.86, 1.01)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	2.2 vs. 0.2	5	1.36 (1.06, 1.75)		.02	A	C	D	E	F	G	
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	servings/day	Breast cancer incidence	Pre-menopausal	4.9 vs. 0.6	5	1.11 (0.76, 1.62)		0.20	A	C	D	E	F	G	
<i>Post-menopausal</i>																								
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		servings/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.95, 1.07)			A	C	D	E	F	G	
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative		servings/day	Breast cancer incidence	Post-menopausal	>4 vs. <0.3	5	0.89 (0.79, 1.0)		0.12	A	B	C	D	E	F	G
Fung, T. T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servings	Breast cancer ER-incidence	Post-menopausal	1.0 (continuous)	1	1.03 (0.95, 1.11)		0.54	A	C	D	E	F	G	
Milk and dairy products																								
<i>Pre-menopausal</i>																								
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		servings/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.9 (0.83, 0.97)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative	total dairy foods	servings/day	Invasive breast cancer incidence	Pre-menopausal	4.0 vs. 0.7	5	1.03 (0.79, 1.36)		.72	A	C	D	E	F	G	
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	servings/day	Breast cancer incidence	Pre-menopausal	4.9 vs. 1.0	5	0.83 (0.56, 1.24)		0.81	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	45	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Dairy products	g/day	Breast cancer incidence	premenopausal women	>401.0 vs. <164.0	4	0.35 (0.12, 0.95)		0.01		B	C	D	E	F	G

Post-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		-serving/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.96, 1.04)			A	C	D	E	F	G	
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative		-serving/day	Breast cancer incidence	Post-menopausal	>3 vs. <0.5	5	0.81 (0.69, 0.96)	0.002		A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1283	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		-serving/day	Breast cancer ER+ incidence	Post-menopausal	>3 vs. <0.5	5	0.73 (0.57, 0.93)	0.0003		A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	227	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		-serving/day	Breast cancer ER- incidence	Post-menopausal	>3 vs. <0.5	5	1.23 (0.7, 2.15)	0.77		A	B	C	D	E	F	G
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Dairy products	g/day	Breast cancer incidence	postmenopausal women	>401.0 vs. <164.0	4	0.72 (0.32, 1.66)	0.61		B	C	D	E	F	G	

Menopausal status not specified

Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		675.0 vs. 37.0	5	0.59 (0.35, 0.99)	0.1								
Knekt, P.,1996,BRE04900	Prospective Cohort	Finland, Not specified, Screening Program Finland, 1966	15 - 90		4697.0	Through health org. (screening, health insurance)	25.0 years	Dietary History questionnaire			Breast cancer mortality/incidence		>1.0 vs. >-1.0	3	0.42 (0.23, 0.78)	0.02	A							
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		532.0 vs. 72.0	5	0.91 (0.67, 1.24)	.32		A	B	C	D	E	F	G
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		>376.0 vs. <12.0	5	0.9 (0.4, 2.1)	0.61					E			
van der Pols JC, et al.,2007,BRE80154	Historical Cohort	United Kingdom The Boyd Orr Cohort	(8)	97	4374.0	National Health Records	57.0 years / 0.123	7-day food records	Total childhood dairy intake, all liquid milks mostly full fat infant formulas cream cheese	g/day	Breast cancer incidence + mortality		471.0 vs. 89.0	4	0.89 (0.45, 1.75)	0.49	A				E		G	
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	82	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Dairy products	g/day	Breast cancer incidence		>401.0 vs. <164.0	4	0.55 (0.29, 1.03)	0.03		B	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Lenght of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
2.7.1																								
Milk																								
<i>Pre-menopausal</i>																								
Hjartaker, A.,2001,BRE03955	Prospective Cohort	Norway, Not specified, Young women NOWAC, 1991	34 - 49	266	42604	By Mail	6.2 years	Questionnaire (nos)		Glasses/day	Breast cancer incidence	Pre-menopausal	>3,1 vs. do not drink	4	0.56 (0.31, 1.01)		0.12	A	B	C	D	E	F	G
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		Cups/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.85 (0.79, 0.92)			A	C	D	E	F	G	
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	44	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Milk	g/day	Breast cancer incidence	premenopausal women	>249.0 vs. <24.0	4	0.41 (0.16, 1.04)		0.01		B	C	D	E	F	G
<i>Post-menopausal</i>																								
Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	76	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)		days/week	Breast cancer mortality/incidence	Post-menopausal	3+ vs. none/ occasional	4	0.89 (0.34, 2.35)		0.64		B	C	D	E		
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		Cups/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	0.99 (0.93, 1.05)			A	C	D	E	F	G	
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative	total milk		Breast cancer incidence	Post-menopausal	>3.1 vs. non-milk drinker	6	0.88 (0.76, 1.02)		0.13	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1283	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER+ incidence	Post-menopausal	>1250 vs. <=500	5	0.67 (0.51, 0.88)		0.004	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	227	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER- incidence	Post-menopausal	>1250 vs. <=500	5	0.77 (0.4, 1.47)		0.49	A	B	C	D	E	F	G
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Milk	g/day	Breast cancer incidence	postmenopausal women	>249.0 vs. <24.0	4	1.82 (0.79, 4.17)		0.96		B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	142	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)		drinks/week	Breast cancer mortality/incidence		3+ vs. none/ occasional	4	1.03 (0.56, 1.9)		0.95		B	C	D	E		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Gaard, 1995, BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	236	261056	By Mail	10.0 years	FFQ-Semi-quantitative		Glasses/day	Breast cancer incidence		>=5 vs. 1	5	1.71 (0.86, 3.38)		0.30	A									
Knekt, P., 1996, BRE04900	Prospective Cohort	Finland, Not specified, Screening Program Finland, 1966	15 - 90		4697.0	Through health org. (screening, health insurance)	25.0 years	Dietary History questionnaire		g/day	Breast cancer mortality/incidence		>1.0 vs. >-1.0	3	0.42 (0.24, 0.74)		0.003	A									
Jarvinen, R., 1997, BRE04383	Prospective Cohort	Finland, Finland, 1966	15 -		4697.0	Unspecified	24.0 years	Dietary History questionnaire			Breast cancer incidence		Quantile 3 vs. Quantile 1	2	0.42 (null, null)		0.003	A									
Key, T. J., 1999, BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488989	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	0.96 (0.76, 1.22)		0.770	A									G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	92	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Milk	g/day	Breast cancer incidence		>249.0 vs. <24.0	4	0.95 (0.52, 1.73)		0.09		B	C	D	E	F	G			

Milk only

Menopausal status not specified

van der Pols JC, et al., 2007, BRE80154	Historical Cohort	United Kingdom The Boyd Orr Cohort	(8)	98	4374.0	National Health Records	57.0 years / 0.123	7-day food records	Childhood milk intake, 1 cup milk = 235ml	cups/day	Breast cancer incidence + mortality		>=1.2 vs. <0.5	4	0.83 (0.41, 1.69)		0.45	A								E	G
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Milk shake

Menopausal status not specified

Frazier L.A., 2003, BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		1.0 (continuous)	1	1.06 (0.7, 1.6)				A	C	D	E	F	G		
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Milk, at different age

Pre-menopausal

Hjartaker, A., 2001, BRE03955	Prospective Cohort	Norway, Not specified, Young women NOWAC, 1991	34 - 49	266	42624	By Mail	6.2 years	Questionnaire (nos)	as a child	Glasses/day	Breast cancer incidence	Pre-menopausal	>7 vs. do not drink	4	0.64 (0.22, 1.87)		0.36	A	B	C	D	E	F	G		
Shin, M.-H., 2002, BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)	during high school years	Cups/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.97 (0.9, 1.05)			A	C	D	E	F	G			

Post-menopausal

Shin, M.-H., 2002, BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)	during high school years	Cups/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.02 (0.98, 1.06)			A	C	D	E	F	G		
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
2.7.1.1																								
Whole milk																								
<i>Pre-menopausal</i>																								
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		Cups/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.92 (0.8, 1.06)			A	C	D	E	F	G	
<i>Post-menopausal</i>																								
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	171	12062	By Mail	6.0 years / 1%	FFQ (nos)		times/day	Breast cancer incidence	Post-menopausal	daily+ vs. never	3	0.98 (0.66, 1.45)			A	B	C	D	F	G	
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		Cups/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	0.97 (0.9, 1.05)			A	C	D	E	F	G	
<i>Menopausal status not specified</i>																								
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	201	100224	By Mail	6.0 years / 1%	FFQ (nos)		times/day	Breast cancer incidence		>=daily vs. none	3	0.94 (0.66, 1.33)	0.45		A	B	C	D	F	G	
Gaard.,1995,BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	125	146564	By Mail	10.0 years	FFQ-Semi-quantitative		Glasses/day	Breast cancer incidence		>=5 vs. 1	5	2.91 (1.38, 6.14)	0.08		A						
Voorrips, L. E.,2000,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		232.0 vs. 0.0	5	0.9 (0.66, 1.22)	.12		A	B	C	D	E	F	G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		1.0 (continuous)	1	1.01 (0.95, 1.07)			A	C	D	E	F	G	
2.7.1.2																								
Skimmed milk																								
<i>Pre-menopausal</i>																								
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		Cups/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.88 (0.8, 0.97)			A	C	D	E	F	G	
<i>Post-menopausal</i>																								
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		Cups/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.95, 1.07)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Voorrips, L., 2002, BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		203.0 vs. 0.0	3	1.04 (0.84, 1.3)		0.83	A	B	C	D	E	F	G
Frazier L.A., 2003, BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Cups/day	Breast cancer incidence		1.0 (continuous)	1	1.03 (0.88, 1.21)			A		C	D	E	F	G

2.7.2

Cheese

Pre-menopausal

Shin, M.-H., 2002, BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)	hard cheese	servings/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.96 (0.76, 1.21)			A		C	D	E	F	G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	44	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Cheese	g/day	Breast cancer incidence	premenopausal women	>49.0 vs. <14.0	4	1.16 (0.46, 2.91)		0.70		B	C	D	E	F	G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	44	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Fresh cheese	g/day	Breast cancer incidence	premenopausal women	>51.0 vs. 0	4	0.5 (0.17, 1.44)		0.17		B	C	D	E	F	G

Post-menopausal

Mills, P. K., 1988, BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	75	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)		days/week	Breast cancer mortality/incidence	Post-menopausal	3+ vs. none/occasional	4	1.25 (0.6, 2.61)		0.92		B	C	D	E		
Mills, P. K., 1989, BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	171	12062	By Mail	6.0 years / 1%	FFQ (nos)		times/month	Breast cancer incidence	Post-menopausal	>=12 vs. <=2	3	1.33 (0.89, 2.0)			A	B	C	D		F	G
Shin, M.-H., 2002, BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)	hard cheese	servings/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.88, 1.16)			A		C	D	E	F	G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Cheese	g/day	Breast cancer incidence	postmenopausal women	>49.0 vs. <14.0	4	1.05 (0.44, 2.55)		0.73		B	C	D	E	F	G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Fresh cheese	g/day	Breast cancer incidence	postmenopausal women	>51.0 vs. 0	4	1.23 (0.59, 2.57)		0.88		B	C	D	E	F	G

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Mills, P. K.,1988,BRE17836	Nested Case Control	US, White, Adventist Seventh-day Adventists Cohort, 1960	30 - 85	141	16190.0	Through social organization (profession, religion)	20.0 years / 1.7 %	Questionnaire (nos)		days/week	Breast cancer mortality/incidence		3+ vs. none/occasional	4	1.04 (0.61, 1.75)		0.98		B	C	D	E			
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	203	103651	By Mail	6.0 years / 1%	FFQ (nos)		times/month	Breast cancer incidence		>=12 vs. <=2	3	1.43 (0.99, 2.06)		0.03	A	B	C	D		F	G	
Knekt, P.,1996,BRE04900	Prospective Cohort	Finland, Not specified, Screening Program Finland, 1966	15 - 90		4697.0	Through health org. (screening, health insurance)	25.0 years	Dietary History questionnaire			Breast cancer mortality/incidence		>1.0 vs. >-1.0	3	1.25 (0.75, 2.08)		0.66	A							
Jarvinen, R.,1997,BRE04383	Prospective Cohort	Finland, Finland, 1966	15 -		4697.0	Unspecified	24.0 years	Dietary History questionnaire			Breast cancer incidence		Quantile 3 vs. Quantile 1	2	1.25 (null, null)			A							
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		4° quartile vs. 1° quartile	2	0.92 (0.74, 1.13)				A	B	C	D	E	F	G
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		90.0 vs. 2.0	5	0.94 (0.67, 1.31)		.78	A	B	C	D	E	F	G	
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	servings/day	Breast cancer incidence		1.0 (continuous)	1	0.91 (0.71, 1.16)			A		C	D	E	F	G	
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	92	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Cheese	g/day	Breast cancer incidence		>49.0 vs. <14.0	4	1.13 (0.6, 2.13)		0.58		B	C	D	E	F	G	
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	92	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Fresh cheese	g/day	Breast cancer incidence		>51.0 vs. 0	4	0.86 (0.48, 1.55)		0.31		B	C	D	E	F	G	

2.7.2.2

Low-fat dairy

Pre-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		servings/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.82 (0.73, 0.92)			A		C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		servings/day	Invasive breast cancer incidence	Pre-menopausal	2.8 vs. 0.2	5	0.82 (0.63, 1.06)		.17	A		C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	-serving/day	Breast cancer incidence	Pre-menopausal	2.6 vs. 0.0	5	0.88 (0.6, 1.29)		0.24	A	C	D	E	F	G	

Post-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		-serving/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.02 (0.94, 1.1)			A	C	D	E	F	G	
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative		-serving/day	Breast cancer incidence	Post-menopausal	>3 vs. <0.5	5	0.86 (0.74, 0.99)		0.016	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1283	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		-serving/day	Breast cancer ER+ incidence	Post-menopausal	>3 vs. <0.5	5	0.76 (0.61, 0.94)		0.002	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	227	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		-serving/day	Breast cancer ER- incidence	Post-menopausal	>3 vs. <0.5	5	1.22 (0.74, 2.03)		0.59	A	B	C	D	E	F	G

2.7.3

Yoghurt

Pre-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		-serving/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.94 (0.65, 1.37)			A	C	D	E	F	G
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	45	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Yoghurt	g/day	Breast cancer incidence	premenopausal women	>126.0 vs. <24.0	4	1.01 (0.4, 2.58)		0.75	B	C	D	E	F	G

Post-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		-serving/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	0.94 (0.77, 1.15)			A	C	D	E	F	G
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Yoghurt	g/day	Breast cancer incidence	postmenopausal women	>126.0 vs. <24.0	4	0.59 (0.22, 1.54)		0.28	B	C	D	E	F	G

Menopausal status not specified

Knekt, P.,1996,BRE04900	Prospective Cohort	Finland, Not specified, Screening Program Finland, 1966	15 - 90		4697.0	Through health org. (screening, health insurance)	25.0 years	Dietary History questionnaire	fermented milk		Breast cancer mortality/incidence		>1.0 vs. >-1.0	3	1.37 (0.8, 2.37)		0.47	A						
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Shannon, J.,2003,BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)		serving/day	Breast cancer incidence		Highest quartile vs. Lowest	2	0.59 (0.39, 0.9)		0.01	A	C	E	G			

2.8.1.3

Ginseng

Menopausal status not specified

Shannon, J.,2003,BRE18714	Nested Case Control	China, Not specified Breast Self-Exam (BSE), unknown			null	Through health org. (screening, health insurance)		FFQ (nos)	araliacea	serving/day	Breast cancer incidence		Highest quartile vs. Lowest	2	1.53 (1.04, 2.26)		0.03	A	C	E	G
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	Araliaceae	times/year	Breast cancer incidence		Ever vs. Never	2	0.9 (0.5, 1.7)			A		E	

2.9.1

Cakes and desserts

Post-menopausal

Fung, T.,2005,BRE22370	Prospective Cohort	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1984	30 - 55		71058.0	By Mail	16.0 years	FFQ (nos)		servicing	Breast cancer ER-incidence	Post-menopausal	1.0 (continuous)	1	0.96 (0.88, 1.04)		0.28	A	C	D	E	F	G
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Menopausal status not specified

Gaard.,1995,BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	244	277364	By Mail	10.0 years	FFQ-Semi-quantitative		Unit/week	Breast cancer incidence		>=7 vs. 0	5	1.33 (0.79, 2.23)		0.15	A					
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488989	By Mail	24.0 years	Questionnaire (nos)	western-style confectionnaires	times/week	Breast cancer incidence		>=5 vs. <=1	4	0.9 (0.68, 1.18)		0.403	A					G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Unit/day	Breast cancer incidence		2.0 (continuous)	1	0.96 (0.89, 1.04)			A	C	D	E	F	G

2.9.14

Pizza

Menopausal status not specified

Sesso H. D.,2005,BRE74061	Prospective Cohort	USA, Not specified, Health professionals Women's Health Study, 1993		1071	38183	Through health org. (screening, health insurance)	9.9 years	FFQ-Semi-quantitative		serving/month	Breast cancer incidence		>=2 serving/wk vs. none	4	0.78 (0.48, 1.26)		0.54	A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Olsen, A.,2003,BRE17890	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	91	23798	By Mail	4.7 years	FFQ (nos)		g/day	Breast cancer ER-incidence	Post-menopausal	100.0 (continuous)	1	0.67 (0.42, 1.08)			A	B	C	D	E	F	G

Menopausal status not specified

van Gils CH,2005,BRE80167	Prospective Cohort	EPIC	25 - 70	3659	285526.0		5.4 years	Diet questionnaire			Breast cancer Incidence		>309.1 vs. <109.0	5	1.05 (0.92, 1.2)	0.51					C	D	E	F	G
Sesso H, D.,2005,BRE74061	Prospective Cohort	USA, Not specified, Health professionals Women's Health Study, 1993		1057	37827	Through health org. (screening, health insurance)	9.9 years	FFQ-Semi-quantitative	tomato juice	-serving/mo nth	Breast cancer incidence		>=2 serving/wk vs. none	4	0.81 (0.59, 1.11)	0.37	A		C	D	E	F	G		

Fruit juices

Menopausal status not specified

Hirvonen T.,2006,BRE80105	Prospective Cohort	France, participants of a RCT SU.VI.MAX study, 1994	35 - 60	95	4301	medical records	6.6 years	24h Recall	Fruit juices	ml/day	Breast cancer incidence		>=150 vs. 0	3	1.29 (0.8, 2.09)	0.32	A		C					F	G
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3.5.1

Citrus fruit juice

Post-menopausal

Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	91	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Orange &/or grapefruit juice	g/day	Breast cancer incidence	non-vitamins users	>180.5 vs. 0 - 5.61	5	0.86 (0.43, 1.72)	0.79	A	B					E	F
Kim EH, et al.,2008,BRE80156	Prospective Cohort	United States Nurses' Health Study (NHS) Cohort 1984	30 - 55	3570	69841	medical records		semi-quantitative ffq	Grapefruit juice, cumulatively averaged intake	glasses/day	Breast cancer incidence	Post-menopausal	>=1/2 vs. 0	4	1.02 (0.85, 1.22)	0.95	A		C	D	E	F	G	
Kim EH, et al.,2008,BRE80156	Prospective Cohort	United States Nurses' Health Study (NHS) Cohort 1984	30 - 55	4315	72735	medical records		semi-quantitative ffq	Grapefruit juice, cumulatively averaged intake	glasses/day	Breast cancer incidence	Post-menopausal	>=1/2 vs. 0	4	0.95 (0.8, 1.13)	0.52	A		C	D	E	F	G	

Orange juice

Menopausal status not specified

Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Glasses/day	Breast cancer incidence		1.0 (continuous)	1	0.97 (0.82, 1.14)			A		C	D	E	F	G
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3.6.1

Coffee

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Michels, K. B., 2002, BRE20406	Prospective Cohort	Sweden, Not specified The Swedish Mammography Cohort, 1987	40 - 76	554	203198	By Mail	9.5 years	FFQ-Semi-quantitative		Cups/week	Invasive breast cancer incidence	Overweight	4+ cups/day vs. 1 cup/week or less	5	0.95 (0.64, 1.41)		0.78	A	B	C	D	E	F	G
Hirvonen T., 2006, BRE80105	Prospective Cohort	France, participants of a RCT SU.VI.MAX study, 1994	35 - 60	95	4301	medical records	6.6 years	24h Recall	Coffee	ml/day	Breast cancer incidence		>=253 vs. 0-111	3	1.1 (0.66, 1.84)		0.71	A		C			F	G
Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	5272	85987.0	questionnaire/medical records/death record	22.0 years	FFQ	Coffee	cup/month	Breast cancer incidence		>=4 cup/day vs. <1 cup/month	5	0.92 (0.82, 1.03)		0.14	A		C	D	E	F	G
Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2685	85987.0	questionnaire/medical records/death record	22.0 years	FFQ	Coffee	cup/month	Breast cancer incidence	BMI < 25	>=4 cup/day vs. <1 cup/month	5	0.93 (0.8, 1.08)		0.43	A		C	D	E	F	G
Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2685	85987.0	questionnaire/medical records/death record	22.0 years	FFQ	Coffee	cup/month	Breast cancer incidence	BMI = 25.0-29.9	>=4 cup/day vs. <1 cup/month	5	0.87 (0.71, 1.07)		0.06	A		C	D	E	F	G
Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	913	85987.0	questionnaire/medical records/death record	22.0 years	FFQ	Coffee	cup/month	Breast cancer incidence	BMI >=30	>=4 cup/day vs. <1 cup/month	5	1.02 (0.78, 1.33)		0.52	A		C	D	E	F	G

Decaffeinated coffee

Menopausal status not specified

Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	4234	85987.0	questionnaire/medical records/death record	22.0 years	FFQ	Decaffeinated coffee	cup/month	Breast cancer incidence		>=4 cup/day vs. <1 cup/month	5	1.03 (0.81, 1.31)		0.26	A		C	D	E	F	G
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3.6.2

Black tea

Menopausal status not specified

Goldbohm, R. A., 1996, BRE03308	Case Cohort	Netherlands, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	507	1376	By Mail	4.3 years	FFQ-Semi-quantitative		Cups/day	Invasive breast cancer incidence		5 vs. non consumer	6	1.31 (0.86, 1.99)		0.185	A	B	C	D	E	F	G
Key, T. J., 1999, BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488989	By Mail	24.0 years	Questionnaire (nos)		times/week	Breast cancer incidence		>=5 vs. <=1	4	1.1 (0.82, 1.48)		0.981	A						G
Yuan JM., 2005, BRE24717	Nested Case Control	Singapore, Asian The Singapore Chinese Health Study, 1993	45 - 74	62	84	By Mail	9.0 years	FFQ (nos)		times/month	Breast cancer incidence	ACE high-activity	>4.0 vs. 0	3	1.2 (0.4, 3.59)				A	B	C		E	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Yuan JM.,2005,BRE24717	Nested Case Control	Singapore, Asian The Singapore Chinese Health Study, 1993	45 - 74	62	84	By Mail	9.0 years	FFQ (nos)		times/month	Breast cancer incidence	ACE low-activity	>4.0 vs. 0	3	1.28 (0.88, 1.86)			A	B	C	E	G		
Yuan JM.,2005,BRE24717	Nested Case Control	Singapore, Asian The Singapore Chinese Health Study, 1993	45 - 74	367	799	By Mail	9.0 years	FFQ (nos)		times/month	Breast cancer incidence		>4.0 vs. 0	3	1.21 (0.86, 1.71)			A	B	C	E	G		

Tea

Pre-menopausal

Michels, K. B.,2002,BRE20406	Prospective Cohort	Sweden, Not specified The Swedish Mammography Cohort, 1987	40 - 76	407	212573	By Mail	9.5 years	FFQ-Semi-quantitative		Cups/week	Invasive breast cancer incidence	Pre-menopausal	4+ cups/day vs. 1 cup/week or less	5	1.08 (0.76, 1.52)	0.58		A	B	C	D	E	F
Hirvonen T.,2006,BRE80105	Prospective Cohort	France, participants of a RCT SU.VI.MAX study, 1994	35 - 60	61	3191	medical records	6.6 years	24h Recall	Herbal tea, infusion of vegetable origin other than tea plant, tisane	ml/day	Breast cancer incidence	Pre-menopausal	>=150 vs. 0	3	0.38 (0.14, 1.04)	0.06		A	C			F	G

Post-menopausal

Zheng, W.,1996,BRE13990	Prospective Cohort	U.S.A., Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	1015	35369.0	By Mail	8.0 years	FFQ-Semi-quantitative		Cups/month	Breast cancer incidence	Post-menopausal	>=30 vs. 0-3	4	1.14 (0.92, 1.41)	0.28		A	B	C	D	E	F	G
Michels, K. B.,2002,BRE20406	Prospective Cohort	Sweden, Not specified The Swedish Mammography Cohort, 1987	40 - 76	864	296744	By Mail	9.5 years	FFQ-Semi-quantitative		Cups/week	Invasive breast cancer incidence	Post-menopausal	4+ cups/day vs. 1 cup/week or less	5	1.13 (0.86, 1.5)	0.12		A	B	C	D	E	F	

Menopausal status not specified

Michels, K. B.,2002,BRE20406	Prospective Cohort	Sweden, Not specified The Swedish Mammography Cohort, 1987	40 - 76	717	306120	By Mail	9.5 years	FFQ-Semi-quantitative		Cups/week	Invasive breast cancer incidence	Lean	4+ cups/day vs. 1 cup/week or less	5	1.23 (0.94, 1.6)	0.13		A	B	C	D	E	F
Michels, K. B.,2002,BRE20406	Prospective Cohort	Sweden, Not specified The Swedish Mammography Cohort, 1987	40 - 76	1271	509318	By Mail	9.5 years	FFQ-Semi-quantitative		Cups/week	Invasive breast cancer incidence		4+ cups/day vs. 1 cup/week or less	5	1.13 (0.91, 1.4)	0.11		A	B	C	D	E	F
Michels, K. B.,2002,BRE20406	Prospective Cohort	Sweden, Not specified The Swedish Mammography Cohort, 1987	40 - 76	590	203198	By Mail	9.5 years	FFQ-Semi-quantitative		Cups/week	Invasive breast cancer incidence	Overweight	4+ cups/day vs. 1 cup/week or less	5	0.97 (0.67, 1.41)	0.47		A	B	C	D	E	F
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		times/year	Breast cancer incidence		Ever vs. Never	2	0.8 (0.5, 1.3)			A					
Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46	710	707109	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		serving/month	Invasive breast cancer incidence		60 vs. >0.99	7	1.02 (0.81, 1.28)	0.83		A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Visvanathan et al.,2007,BRE00020	Nested Case Control	America CLUE II - Washington, 1989	(57)	221	219			FFQ + Questionnaire	Alcohol consumption		Breast cancer incidence	Post-menopausal	Drinkers vs. Nondrinkers	3	1.25 (0.84, 1.87)			A						F
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	361	361	Cancer registry		FFQ	Alcohol consumption		Breast cancer incidence	Post-menopausal	Drinkers vs. Abstainers	2	1.23 (0.47, 3.21)				B	C	D		F	G

Menopausal status not specified

Visvanathan et al.,2007,BRE00020	Nested Case Control	America CLUE II - Washington, 1989	(57)	262	263			FFQ + Questionnaire	Total alcohol consumption		Breast cancer incidence		Drinkers vs. Nondrinkers	3	1.4 (0.97, 2.03)			A						F
Visvanathan et al.,2007,BRE00020	Nested Case Control	America CLUE II - Washington, 1989	(57)	176	177			FFQ + Questionnaire	Alcohol consumption		Breast cancer ER+ incidence		Drinkers vs. Nondrinkers	2	1.47 (0.93, 2.31)			A						F
Visvanathan et al.,2007,BRE80020	Nested Case Control	America CLUE II - Washington, 1989	(57)	44	44			FFQ + Questionnaire	Alcohol consumption		Breast cancer ER- incidence		Drinkers vs. Nondrinkers	2	1.84 (0.75, 4.51)			A						F

Alcoholic drinks

Pre-menopausal

Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	54	97	Through health org. (screening, health insurance)		FFQ (nos)	alcohol use		Invasive breast cancer incidence	Pre-menopausal	Ever use vs. Never use	2	0.8 (0.4, 1.9)					B	C	D		F
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Post-menopausal

Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	222	355	Through health org. (screening, health insurance)		FFQ (nos)	alcohol use		Invasive breast cancer incidence	Post-menopausal	Ever use vs. Never use	2	1.9 (1.2, 2.7)					B	C	D		F	
Nielsen, N.R. et al.,2007,BRE80143	Prospective Cohort	Denmark, Post menopausal CopenhagenCHS	39 - 91	267	5035.0	Cancer registry		Dietary questionnaire	Weekly alcohol consumption, total from beer wine and spirits	drinks/week	Invasive breast cancer incidence		>21 vs. <1	5	1.54 (0.77, 3.1)	0.06			A	B	C	D		F	G
Nielsen, N.R. et al.,2007,BRE80143	Prospective Cohort	Denmark, Post menopausal CopenhagenCHS	39 - 91	182	5035.0	Cancer registry		Dietary questionnaire	Weekly alcohol consumption, total from beer wine and spirits	drinks/week	Invasive breast cancer incidence	HRT - No	>21 vs. <1	5	1.28 (0.46, 3.57)	0.79			A	B	C	D		G	
Nielsen, N.R. et al.,2007,BRE80143	Prospective Cohort	Denmark, Post menopausal CopenhagenCHS	39 - 91	85	5035.0	Cancer registry		Dietary questionnaire	Weekly alcohol consumption, total from beer wine and spirits	drinks/week	Invasive breast cancer incidence	HRT - Yes	>21 vs. <1	5	2.17 (0.79, 5.93)	0.004			A	B	C	D		G	

Menopausal status not specified

Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	276	452	Through health org. (screening, health insurance)		FFQ (nos)	alcohol use		Invasive breast cancer incidence		Ever use vs. Never use	2	1.7 (0.2, 2.4)					B	C	D		F
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Hoyer, A. P.,1998,BRE15433	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 -	237	476	Unspecified	17.0 years	Questionnaire (nos)			Breast cancer incidence		every days vs. never or hardly ever	4	1.6 (0.82, 3.11)		0.16		B	C	D	E	F	G
Colditz, G. A.,2000,BRE19251	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		58520.0	By Mail	14.0 years	Questionnaire (nos)		drinks/day	Invasive breast cancer incidence		1 drink vs. never drink	2	1.07 (1.0, 1.13)				C	D	E	F	G	
Baglietto, L.,2005,BRE21669	Prospective Cohort	Australia Melbourne,1990	7 - 75	537	17447.0		13.0 years	Questionnaire (nos)		g/day	Breast cancer incidence		>40 vs. abstainer	5	1.41 (0.9, 2.23)		0.29					E		
Morch et al.,2007,BRE80004	Prospective Cohort	Denmark Danish Nurse Cohort Study	44 - 93	365	17647	Cancer registry	7.6 years	Questionnaire (nos)	Weekly alcohol intake (nr of drinks), excluding non-drinkers	drinks/week	Invasive breast cancer incidence		1.0 (continuous)	1	1.02 (1.01, 1.03)			A		C		F	G	
Morch et al.,2007,BRE80004	Prospective Cohort	Denmark Danish Nurse Cohort Study	44 - 93	247	17647	Cancer registry	7.6 years	Questionnaire (nos)	Alcohol intake/binge drinking on last weekday, Mon to Thurs, intake of +>4	drinks/week	Invasive breast cancer incidence		1.0 (continuous)	1	1.02 (0.95, 1.1)			A		C		E	F	G
Morch et al.,2007,BRE80004	Prospective Cohort	Denmark Danish Nurse Cohort Study	44 - 93	351	17647	Cancer registry	7.6 years	Questionnaire (nos)	Alcohol intake/binge drinking on last weekend, Fri - Sun, >=4 drinks/day was	drinks/week	Invasive breast cancer incidence		1.0 (continuous)	1	1.04 (1.01, 1.07)			A		C		E	F	G
Morch et al.,2007,BRE80004	Prospective Cohort	Denmark Danish Nurse Cohort Study	44 - 93	457	17647	Cancer registry	7.6 years	Questionnaire (nos)	Weekly alcohol intake (nr of drinks)	drinks/week	Invasive breast cancer incidence		>27 vs. 1-3	7	1.62 (1.04, 2.52)			A		C		F	G	
Morch et al.,2007,BRE80004	Prospective Cohort	Denmark Danish Nurse Cohort Study	44 - 93	457	17647	Cancer registry	7.6 years	Questionnaire (nos)	Alcohol intake/binge drinking on last weekday, Mon to Thurs, intake of +>4	drinks/week	Invasive breast cancer incidence		>7 vs. 1	7	0.92 (0.39, 2.14)			A		C		E	F	G
Morch et al.,2007,BRE80004	Prospective Cohort	Denmark Danish Nurse Cohort Study	44 - 93	457	17647	Cancer registry	7.6 years	Questionnaire (nos)	Alcohol intake/binge drinking on last weekend, Fri - Sun, >=4 drinks/day was	drinks/week	Invasive breast cancer incidence		>21 vs. 1-3	7	0.86 (0.12, 6.26)			A		C		E	F	G

Alcoholic drinks - currency of use

Pre-menopausal

Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	54	97	Through health org. (screening, health insurance)		FFQ (nos)			Invasive breast cancer incidence	Pre-menopausal	Current vs. Never	3	0.9 (0.4, 2.1)				B	C	D		F
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Post-menopausal

Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	222	355	Through health org. (screening, health insurance)		FFQ (nos)			Invasive breast cancer incidence	Post-menopausal	Current vs. Never	3	1.8 (1.2, 2.8)				B	C	D		F
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Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Petri, A.L.,2004,BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	76	5420	Unspecified		Questionnaire (nos)		drinks/week	Breast cancer incidence	Pre-menopausal	>27 vs. 1-6	5	3.49 (1.36, 8.99)			A	C	F	G			

Post-menopausal

Hiatt, R. A.,1988,BRE03888	Case Cohort	Northern California, USA, Multi-ethnic Prepaid Health Plan in Northern California, 1978		226	58347.0	Through health org. (screening, health insurance)	6.0 years	FFQ (nos)	<=4 cases in highest cat.	drinks/day	Breast cancer incidence	Post-menopausal	6+/day Current drinker vs.	6	4.2 (1.5, 11.5)			A	D	G				
Feigelson, H.S.,2001,BRE19514	Prospective Cohort	50 States of America, Columbia and Puerto Rico, Multi-ethnic CPS-II US cohort, 1982-		1054	158536	Through health org. (screening, health insurance)	14.0 years	Questionnaire (nos)		drinks/day	Breast cancer cancer death	Post-menopausal	>=3 vs. None	6	1.3 (1.0, 1.6)	0.16		A	B	C	D	E	F	G
Pike, M. C.,2002,BRE16343	Prospective Cohort	U.S.A., Multi-ethnic, Post-menopausal Hawaii and California, 1993		1757	88712.0	By Mail	6.0 years	Questionnaire (nos)		drinks/day	Breast cancer incidence	Post-menopausal	>=1 vs. never	3	1.39 (null, null)	0.002			C	D	E	F	G	
Petri, A.L.,2004,BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	397	10997	Unspecified		Questionnaire (nos)		drinks/week	Breast cancer incidence	Post-menopausal	>27 vs. 1-6	5	0.57 (0.18, 1.78)			A	C	F	G			

Menopausal status not specified

Hiatt, R. A.,1988,BRE03888	Case Cohort	Northern California, USA, Multi-ethnic Prepaid Health Plan in Northern California, 1978		303	58347.0	Through health org. (screening, health insurance)	6.0 years	FFQ (nos)		drinks/day	Breast cancer incidence		6+/day Current drinker vs.	6	3.3 (1.18, 9.28)			A	D	G				
Hoyer, A. P.,1992,BRE04086	Prospective Cohort	Denmark, Not specified Glostrup Population Studies, 1982	30 - 80		5207.0	Direct contact at home	26.0 years	Questionnaire (nos)		drinks/week	Breast cancer mortality/incidence		>=9 vs. 0	4	0.8 (0.3, 2.0)	>0.20								
Byrne, C.,1996,BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	52	23841	Unspecified	3.9 years / 252	FFQ (nos)		drinks/week	Breast cancer incidence		>7 vs. 0	4	1.4 (0.6, 3.2)			A						
Thun, M. J.,1997,BRE12310	Prospective Cohort	U.S.A., Multi-ethnic CPS-II US cohort, 1982-1998	30 - 104	691	230552	Through social organization (profession, religion)	9.0 years	Questionnaire (nos)		drinks/day	Breast cancer cancer death		>=4 vs. none	5	1.0 (0.7, 1.4)	0.02		A	B	C	D	E	F	G
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488990	By Mail	24.0 years	Questionnaire (nos)			Breast cancer incidence		drinker vs. non drinker	3	0.96 (0.74, 1.23)			A						G
Wu, K.,1999,BRE13618	Nested Case Control	USA, Not specified, Blood donors CLUE I, 1974	18 - 90	133	133	Through network, paper, tv	21.0 years	Questionnaire (nos)		drinks/week	Breast cancer incidence		>=4 vs. <1	4	1.5 (0.62, 3.65)									
Wu, K.,1999,BRE63618	Nested Case Control	USA, Not specified, Blood donors CLUE II, 1989	18 - 90	110	110	Through network, paper, tv	6.0 years	Questionnaire (nos)		drinks/week	Breast cancer incidence		>=4 vs. <1	4	1.83 (0.74, 4.54)									

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Garland, Miriam, 1999, BRE19618	Prospective Cohort	U.S.A., Not specified, Registered nurses NHS II, 1989	25 - 42	403	455270	Through social organization (profession, religion)	6.0 years	Questionnaire (nos)		drinks/week	Invasive breast cancer incidence		>6 vs. none	6	1.32 (0.9, 1.93)		0.07	A	C	D	F	G		

Total alcoholic drinks at 31-40 yrs

Menopausal status not specified

Garland, Miriam, 1999, BRE19618	Prospective Cohort	U.S.A., Not specified, Registered nurses NHS II, 1989	25 - 42	403	455271	Through social organization (profession, religion)	6.0 years	Questionnaire (nos)		drinks/week	Invasive breast cancer incidence		>6 vs. none	6	1.02 (0.66, 1.58)		0.93	A	C	D	F	G
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3.7.1.1

Beers

Pre-menopausal

Petri, A.L., 2004, BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	76	5448	Unspecified		Questionnaire (nos)		drinks/week	Breast cancer incidence	Pre-menopausal	>6 vs. <1	4	0.49 (0.15, 1.61)			A	C		F	G
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Post-menopausal

Feigelson, H.S., 2001, BRE19514	Prospective Cohort	50 States of America, Columbia and Puerto Rico, Multi-ethnic CPS-II US cohort, 1982-		463	76523	Through health org. (screening, health insurance)	14.0 years	Questionnaire (nos)	among women who drink only one kind of alcohol	drinks/day	Breast cancer cancer death	Post-menopausal	>=3 vs. No alcohol	5	1.29 (0.68, 2.45)		0.89	A	B	C	D	E	F	G
Mattisson, I., 2004, BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal	>36.1 vs. <=5.6	4	1.44 (0.75, 2.75)			A	B	C	D	E	F	G
Petri, A.L., 2004, BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	144	5622	Unspecified		Questionnaire (nos)	age >=70 yrs	drinks/week	Breast cancer incidence	Post-menopausal	>6 vs. <1	4	0.62 (0.25, 1.55)			A	C		F	G		

Menopausal status not specified

Hiatt, R. A., 1988, BRE03888	Case Cohort	Northern California, USA, Multi-ethnic Prepaid Health Plan in Northern California, 1978		303	58347.0	Through health org. (screening, health insurance)	6.0 years	FFQ (nos)			Breast cancer incidence		Regular vs. Abstainers lifelong	3	1.37 (0.76, 2.47)			A		D			G	
Goodman, M. T., 1997, BRE03352	Prospective Cohort	Japan, Not specified, Atomic bomb survivors LSS, 1969		120	147419	By Mail	8.31 years	Questionnaire (nos)			Breast cancer incidence		drinker vs. never drinker	2	0.63 (0.36, 1.1)			A					G	
Zhang, Y., 1999, BRE13965	Prospective Cohort	U.S.A., Not specified, Original and Offspring Cohorts Framingham Study, 1948	12 - 62	287	5048.0	General population (survey)	34.3 years	Interview (nos)		drinks/week	Breast cancer incidence		>=3.0 vs. None	4	1.0 (0.5, 2.2)			A	B	C	D	E	F	G
Visvanathan et al., 2007, BRE80020	Nested Case Control	America CLUE II - Washington, 1989	(57)		14624.0			FFQ + Questionnaire	Beer consumption		Breast cancer incidence		Beer drinkers vs. Non beer	2	0.95 (0.56, 1.63)			A					F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)		38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Beer intake	g/day	Invasive & In situ breast cancer incidence		10.0 (continuous)	1	1.15 (1.02, 1.29)			A	C	D	E	F	G	
Tjonneland et al.,2007,BRE80013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70		274688.0	Population cancer registries and other	6.4 years	FFQ + recall	Beer consumption	g/day	Invasive breast cancer incidence		10.0 (continuous)	1	1.05 (0.98, 1.12)							F	G	

3.7.1.2

Red wines

Menopausal status not specified

Hirvonen T.,2006,BRE80105	Prospective Cohort	France, participants of a RCT SU.VI.MAX study, 1994	35 - 60	95	4301	medical records	6.6 years	24h Recall	Red wine	ml/day	Breast cancer incidence		>=150 vs. 0	3	1.24 (0.76, 2.03)		0.39	A	C			F	G
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)		38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Red wine intake	g/day	Invasive & In situ breast cancer incidence		10.0 (continuous)	1	1.02 (0.81, 1.27)			A	C	D	E	F	G

White wines

Menopausal status not specified

Hirvonen T.,2006,BRE80105	Prospective Cohort	France, participants of a RCT SU.VI.MAX study, 1994	35 - 60	95	4301	medical records	6.6 years	24h Recall	White or rose wine	ml/day	Breast cancer incidence		>=150 vs. 0	3	1.09 (0.64, 1.84)		0.88	A	C			F	G
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)		38454.0	Medical notes	10.0 years	FFQ + Questionnaire	White wine intake	g/day	Invasive & In situ breast cancer incidence		10.0 (continuous)	1	1.07 (0.95, 1.21)			A	C	D	E	F	G

Wines

Pre-menopausal

Petri, A.L.,2004,BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	76	5412	Unspecified		Questionnaire (nos)		drinks/week	Breast cancer incidence	Pre-menopausal	>6 vs. <1	4	1.43 (0.67, 3.01)			A	C			F	G
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Post-menopausal

Feigelson, H.S.,2001,BRE19514	Prospective Cohort	50 States of America, Columbia and Puerto Rico, Multi-ethnic CPS-II US cohort, 1982-		573	94941	Through health org. (screening, health insurance)	14.0 years	Questionnaire (nos)	among women who drink only one kind of alcohol	drinks/day	Breast cancer cancer death	Post-menopausal	>=3 vs. No alcohol	5	0.79 (0.39, 1.6)		0.50	A	B	C	D	E	F	G
Mattisson, I.,2004,BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal	>20.8 vs. <=2.9	4	2.11 (1.24, 3.6)			A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Petri, A.L.,2004,BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	144	5639	Unspecified		Questionnaire (nos)	age >=70 yrs	drinks/week	Breast cancer incidence	Post-menopausal	>6 vs. <1	4	0.81 (0.4, 1.65)			A	C	F	G			

Menopausal status not specified

Hiatt, R. A.,1988,BRE03888	Case Cohort	Northern California, USA, Multi-ethnic Prepaid Health Plan in Northern California, 1978		303	58347.0	Through health org. (screening, health insurance)	6.0 years	FFQ (nos)			Breast cancer incidence		Regular vs. Abstainers lifelong	3	1.36 (0.86, 2.17)			A	D	G				
Zhang, Y.,1999,BRE13965	Prospective Cohort	U.S.A., Not specified, Original and Offspring Cohorts Framingham Study, 1948	12 - 62	287	5048.0	General population (survey)	34.3 years	Interview (nos)		drinks/week	Breast cancer incidence		>=3.0 vs. None	4	1.0 (0.7, 1.3)			A	B	C	D	E	F	G
Visvanathan et al.,2007,BRE80020	Nested Case Control	America CLUE II - Washington, 1989	(57)		14624.0			FFQ + Questionnaire	Wine consumption		Breast cancer incidence		Wine drinkers vs. Non wine	2	1.6 (1.01, 2.54)			A					F	
Tjonneland et al.,2007,BRE80013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70		274688.0	Population cancer registries and other	6.4 years	FFQ + recall	Wine consumption	g/day	Invasive breast cancer incidence		10.0 (continuous)	1	1.02 (0.99, 1.05)									

3.7.1.3

Spirits

Pre-menopausal

Petri, A.L.,2004,BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	76	5418	Unspecified		Questionnaire (nos)		drinks/week	Breast cancer incidence	Pre-menopausal	>6 vs. <1	4	1.34 (0.39, 4.55)			A	C	F	G
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Post-menopausal

Feigelson, H.S.,2001,BRE19514	Prospective Cohort	50 States of America, Columbia and Puerto Rico, Multi-ethnic CPS-II US cohort, 1982-		590	92143	Through health org. (screening, health insurance)	14.0 years	Questionnaire (nos)	among women who drink only one kind of alcohol	drinks/day	Breast cancer cancer death	Post-menopausal	>=3 vs. No alcohol	5	1.66 (1.12, 2.46)	0.51		A	B	C	D	E	F	G
Mattisson, I.,2004,BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal	>2.5 vs. 0	4	1.05 (0.54, 2.07)			A	B	C	D	E	F	G
Petri, A.L.,2004,BRE16325	Prospective Cohort	Denmark, Not specified Copenhagen Center for Prospective Population Studies, unknown	20 - 91	144	5622	Unspecified		Questionnaire (nos)	age >=70 yrs	drinks/week	Breast cancer incidence	Post-menopausal	>6 vs. <1	4	2.43 (1.41, 4.2)			A	C	F	G			

Menopausal status not specified

Hiatt, R. A.,1988,BRE03888	Case Cohort	Northern California, USA, Multi-ethnic Prepaid Health Plan in Northern California, 1978		303	58347.0	Through health org. (screening, health insurance)	6.0 years	FFQ (nos)			Breast cancer incidence		Regular vs. Abstainers lifelong	3	1.46 (0.93, 2.29)			A	D	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, Y.,1999,BRE13965	Prospective Cohort	U.S.A., Not specified, Original and Offspring Cohorts Framingham Study, 1948	12 - 62	287	5048.0	General population (survey)	34.3 years	Interview (nos)		drinks/week	Breast cancer incidence		>=3.0 vs. None	4	0.7 (0.5, 1.0)			A	B	C	D	E	F	G
Morch, L.S.,2005,BRE23480	Prospective Cohort	Denmark, Not specified, Registered nurses Danish Nurse Cohort Study	44 -		17647.0	Unspecified	10.0 years	Questionnaire (nos)			Breast cancer incidence		4-7 vs. Quantile 1	2	1.6 (1.1, 2.32)									
Tjonneland et al.,2007,BRE80013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70		274688.0	Population cancer registries and other	6.4 years	FFQ + recall	Spirit consumption	g/day	Invasive breast cancer incidence		10.0 (continuous)	1	1.09 (0.99, 1.21)				B	C	D		F	G

3.7.1.4

Liquor

Menopausal status not specified

Visvanathan et al.,2007,BRE80020	Nested Case Control	America CLUE II - Washington, 1989	(57)		14624.0			FFQ + Questionnaire	Liquor consumption		Breast cancer incidence		Liquor drinkers vs. Non liquor	2	1.1 (0.65, 1.86)			A						F	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)		38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Liquor intake	g/day	Invasive & In situ breast cancer incidence		10.0 (continuous)	1	1.07 (0.96, 1.18)			A		C	D	E	F	G	

Sake

Menopausal status not specified

Goodman, M. T.,1997,BRE03352	Prospective Cohort	Japan, Not specified, Atomic bomb survivors LSS, 1969		115	134942	By Mail	8.31 years	Questionnaire (nos)			Breast cancer incidence		drinker vs. never drinker	2	0.81 (0.41, 1.6)			A							G
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4.1.2.1

1-2-Dichloropropane in drinking water

Menopausal status not specified

O'Leary, E. S.,2004,BRE17886	Nested Case Control	U.S.A., Not specified New York State Cohort, 1980	(61)	83	168	By Mail	12.0 years	FFQ (nos)			Invasive & In situ breast cancer incidence		detected vs. none detected	2	1.1 (0.4, 2.6)				A	B	C				G
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2-4-d-organochlordane in drinking water

Menopausal status not specified

O'Leary, E. S.,2004,BRE17886	Nested Case Control	U.S.A., Not specified New York State Cohort, 1980	(61)	98	191	By Mail	12.0 years	FFQ (nos)			Invasive & In situ breast cancer incidence		detected vs. none detected	2	1.2 (0.6, 2.1)				A	B	C				G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	91.0 - 704.0 vs. 8.0 - 57.9	4	0.5 (0.3, 0.9)		0.002		B	C	E	F	G	
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	91.0 - 704.0 vs. 8.0 - 57.9	4	0.6 (0.4, 1.1)		0.08		B	C	E	F	G	
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	91.0 - 704.0 vs. 8.0 - 57.9	4	0.2 (0.0, 0.6)		0.004		B	C	E	F	G	

Adipose tissue oxychlordane

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	37.0 - 142.0 vs. 6.0 - 20.9	4	0.5 (0.3, 0.9)		0.03		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	37.0 - 142.0 vs. 6.0 - 20.9	4	0.6 (0.3, 1.1)		0.09		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	37.0 - 142.0 vs. 6.0 - 20.9	4	0.1 (0.0, 0.7)		0.04		B	C	E	F	G

Adipose tissue trans-nonachlor

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	50.0 - 172.0 vs. 3.0 - 25.9	4	0.7 (0.5, 1.2)		0.05		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	50.0 - 172.0 vs. 3.0 - 25.9	4	0.9 (0.5, 1.5)		0.29		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	50.0 - 172.0 vs. 3.0 - 25.9	4	0.2 (0.1, 0.9)		0.02		B	C	E	F	G

Beta-hexachlorocyclohexane (HCH)

Menopausal status not specified

Ward, E. M.,2000,BRE13163	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973	18 - 60		25431.0	Other procedure	20.0 years				Breast cancer incidence		1.0 vs. -1.0	4	0.7 (null, null)				C				G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Hoyer, A. P.,1998,BRE15433	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 -	237	469	Unspecified	17.0 years	Questionnaire (nos)		ng/g	Breast cancer incidence		>1.0 vs. >-1.0	4	2.05 (1.17, 3.57)		0.01		B	C	D	E	F	G
Dorgan, J.F.,1999,BRE14890	Nested Case Control	USA, Multi-ethnic, Blood donors Columbia Missouri Breast Cancer Serum Bank, 1977	(57)	105	207	Unspecified	9.5 years			ng/g lipid	Breast cancer incidence		104.0 - 921.0 vs. 0 - 23.0	4	0.7 (0.3, 1.3)		0.44		B	C	D		F	G
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80	116	226	Unspecified	17.0 years			ng/ml	Breast cancer ER+ incidence		>57.11 vs. <12.0	4	1.4 (0.8, 2.5)		0.2	A		C	D		F	
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80	44	92	Unspecified	17.0 years			ng/ml	Breast cancer ER- incidence		>57.11 vs. <12.0	4	7.6 (1.3, 46.1)		0.01	A		C	D		F	
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75	36	72	Through health org. (screening, health insurance)	17.0 years				Breast cancer p53 mutation incidence		>1.0 vs. >-1.0	4	3.53 (0.79, 15.79)		0.12	A		C	D		F	G
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75		7712.0	Through health org. (screening, health insurance)	17.0 years			ng/ml	Breast cancer p53 mutation cancer death		1.0 (continuous)	1	1.0 (null, null)		0.48	A		C	D		F	G
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75	123	244	Through health org. (screening, health insurance)	17.0 years				Breast cancer p53 wild-type incidence		>1.0 vs. >-1.0	4	1.2 (0.56, 2.58)		0.60	A		C	D		F	G
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75		7712.0	Through health org. (screening, health insurance)	17.0 years			ng/ml	Breast cancer p53 wild-type cancer death		1.0 (continuous)	1	1.01 (null, null)		0.01	A		C	D		F	G
Serum Heptachlorepoide																								
<i>Menopausal status not specified</i>																								
Ward, E. M.,2000,BRE13163	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973	18 - 60		25431.0	Other procedure	20.0 years				Breast cancer incidence		1.0 vs. -1.0	4	1.0 (null, null)							C		G
Serum Hexachlorobenzene (HCB)																								
<i>Menopausal status not specified</i>																								
Dorgan, J.F.,1999,BRE14890	Nested Case Control	USA, Multi-ethnic, Blood donors Columbia Missouri Breast Cancer Serum Bank, 1977	(57)	105	208	Unspecified	9.5 years			ng/g lipid	Breast cancer incidence		106.0 - 406.0 vs. 0 - 62.0	4	2.3 (1.0, 5.0)		0.38		B	C	D		F	G
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80	114	222	Unspecified	17.0 years			ng/ml	Breast cancer ER+ incidence		>335.75 vs. <206.49	4	1.2 (0.7, 2.1)		0.20	A		C	D		F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80	44	92	Unspecified	17.0 years			ng/ml	Breast cancer ER-incidence		>335.75 vs. <206.49	4	0.4 (0.1, 1.4)		0.20	A	C	D	F			

Serum Oxychlordane

Menopausal status not specified

Ward, E. M.,2000,BRE13163	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973	18 - 60		25431.0	Other procedure	20.0 years				Breast cancer incidence		1.0 vs. -1.0	4	0.9 (null, null)						C		G
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Serum trans-nonachlor

Menopausal status not specified

Ward, E. M.,2000,BRE13163	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973	18 - 60		25431.0	Other procedure	20.0 years				Breast cancer incidence		1.0 vs. -1.0	4	1.0 (null, null)						C		G
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Trihalomethane in drinking water

Menopausal status not specified

Vinceti, M.,2004,BRE21237	Historical Cohort	Italy, Not specified Guastalla, 1965		35	2698.0		12.0 years				Breast cancer cancer death		exposed vs. unexposed	2	1.3 (0.9, 1.8)								
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4.1.2.2

Adipose tissue DDE

Menopausal status not specified

Cocco, P.,2000,BRE17383	Prospective Cohort	U.S.A., Multi-ethnic USA, 1975			null	Unspecified	19.0 years		white women		Breast cancer cancer death			1	null (null, null)						A		
Cocco, P.,2000,BRE17383	Prospective Cohort	U.S.A., Multi-ethnic USA, 1975			null	Unspecified	19.0 years		african american women		Breast cancer cancer death			1	null (null, null)						A		

Adipose tissue p-p' DDE

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	904.0 - 6693.0 vs. 15.0 - 282.0	4	0.7 (0.5, 1.2)		0.29			B	C	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments					
																		A	B	C	D	E	F
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	904.0 - 6693.0 vs. 15.0 - 282.0	4	1.1 (0.6, 1.8)		0.82		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	904.0 - 6693.0 vs. 15.0 - 282.0	4	0.1 (0.0, 0.5)		0.005		B	C	E	F	G

Adipose tissue p-p' DDT

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	31.0 - 159.0 vs. 6.0 - 13.9	4	0.6 (0.3, 1.0)		0.19		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	31.0 - 159.0 vs. 6.0 - 13.9	4	0.6 (0.3, 1.1)		0.18		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	31.0 - 159.0 vs. 6.0 - 13.9	4	0.5 (0.1, 2.1)		0.85		B	C	E	F	G

DDT

Pre-menopausal

Cohn BA,2007,BRE80163	Nested Case Control	United States, unknown Kaiser Permanent Medical Care Program	(26)	96	96	Hospital Records only			p,p'-DDT at age <14yrs	mcg/L	Breast cancer Mortality/Incidence	Pre-menopausal	>14.0 vs. <8.08	3	5.2 (1.4, 19.1)	0.01								
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Plasma DDE

Post-menopausal

Laden, F.,2001,BRE17732	Nested Case Control	U.S.A., Not specified, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	372	372	By Mail	21.0 years			mcg/g	Invasive & In situ breast cancer incidence	Post-menopausal	1.446 - 6.054 vs. 0.0070 -	5	0.82 (0.49, 1.37)	0.15			C	D	F	G
Laden, F.,2001,BRE17732	Nested Case Control	U.S.A., Not specified, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	195	207	By Mail	21.0 years				Invasive & In situ breast cancer incidence	Post-menopausal & Lean	>1.0 vs. >-1.0	3	1.19 (0.73, 1.94)	0.51						G
Laden, F.,2001,BRE17732	Nested Case Control	U.S.A., Not specified, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	118	109	By Mail	21.0 years		normal BMI		Invasive & In situ breast cancer incidence	Post-menopausal & Other	>1.0 vs. >-1.0	3	0.64 (0.34, 1.21)	0.1						G
Laden, F.,2001,BRE17732	Nested Case Control	U.S.A., Not specified, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	59	56	By Mail	21.0 years				Invasive & In situ breast cancer incidence	Post-menopausal & Overweight	>1.0 vs. >-1.0	3	0.75 (0.3, 1.9)	0.59						G

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Hunter, D.J.,1997,BRE15469	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996		236	236	Unspecified	3.0 years			ppb	Breast cancer incidence		>9.47 vs. <2.78	5	0.72 (0.37, 1.4)		0.47						C			F	G

Serum DDE

Pre-menopausal

Helzlsouer, K. J.,1999,BRE03835	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974			20305.0	Through network, paper, tv	21.0 years		total DDE		Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	0.86 (null, null)		0.68												G
Helzlsouer, K. J.,1999,BRE53835	Nested Case Control	USA, Caucasian, Blood donors CLUE II, 1989			25080.0	Through network, paper, tv	6.0 years		total DDE, 1989		Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	1.42 (null, null)		0.8												G

Post-menopausal

Helzlsouer, K. J.,1999,BRE03835	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974			20305.0	Through network, paper, tv	21.0 years		total DDE		Breast cancer incidence	HRT - Yes	Quantile 3 vs. Quantile 1	3	0.8 (null, null)		0.61												G
Helzlsouer, K. J.,1999,BRE53835	Nested Case Control	USA, Caucasian, Blood donors CLUE II, 1989			25080.0	Through network, paper, tv	6.0 years		total DDE, 1989		Breast cancer incidence	HRT - Yes	Quantile 3 vs. Quantile 1	3	0.59 (null, null)		0.19												G
Helzlsouer, K. J.,1999,BRE03835	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974			20305.0	Through network, paper, tv	21.0 years		total DDE		Breast cancer incidence	Post-menopausal	Quantile 3 vs. Quantile 1	3	0.52 (null, null)		0.003												G
Helzlsouer, K. J.,1999,BRE53835	Nested Case Control	USA, Caucasian, Blood donors CLUE II, 1989			25080.0	Through network, paper, tv	6.0 years		total DDE, 1989		Breast cancer incidence	Post-menopausal	Quantile 3 vs. Quantile 1	3	0.5 (null, null)		0.15												G

Menopausal status not specified

Wolff, M. S.,1993,BRE13545	Nested Case Control	U.S.A. New York Women's Health Study, 1985	35 - 65		14290.0	Hospital/ambulatory Direct Contact	6.0 years			ng/ml	Breast cancer incidence		1.0 (continuous)	1	1.09 (null, null)		0.0037							C			F	G	
Krieger, N.,1994,BRE15739	Nested Case Control	U.S.A., Multi-ethnic North California,1960			57040.0	Unspecified	30.0 years			ppb	Breast cancer incidence		49.7 - 149.5 vs. 5.3 - 29.6	3	1.33 (0.68, 2.62)		0.431							C	D		F		
Helzlsouer, K. J.,1999,BRE03835	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974			20305.0	Through network, paper, tv	21.0 years		total DDE		Breast cancer incidence	HRT - No	Quantile 3 vs. Quantile 1	3	1.67 (null, null)		0.41												G
Helzlsouer, K. J.,1999,BRE53835	Nested Case Control	USA, Caucasian, Blood donors CLUE II, 1989			25080.0	Through network, paper, tv	6.0 years		total DDE, 1989		Breast cancer incidence	HRT - No	Quantile 3 vs. Quantile 1	3	0.17 (null, null)		0.13												G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75		7712.0	Through health org. (screening, health insurance)	17.0 years			ng/ml	Breast cancer p53 wild-type cancer death		100.0 (continuous)	1	0.99 (null, null)		0.65	A	C	D	F	G		

Serum p,p'-DDE

Menopausal status not specified

Hoyer, A. P.,1998,BRE15433	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 -	237	469	Unspecified	17.0 years	Questionnaire (nos)		ng/g	Breast cancer incidence		>1.0 vs. >-1.0	4	0.88 (0.56, 1.37)		0.52		B	C	D	E	F	G
Dorgan, J.F.,1999,BRE14890	Nested Case Control	USA, Multi-ethnic, Blood donors Columbia Missouri Breast Cancer Serum Bank, 1977	(57)	105	207	Unspecified	9.5 years			ng/g lipid	Breast cancer incidence		3501.0 - 20667.0 vs. 31.0 -	4	0.8 (0.4, 1.5)		0.77		B	C	D	F	G	
Ward, E. M.,2000,BRE13163	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973	18 - 60		25431.0	Other procedure	20.0 years				Breast cancer incidence		1.0 vs. -1.0	4	1.2 (null, null)				C				G	
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80	116	226	Unspecified	17.0 years			ng/ml	Breast cancer ER+ incidence		>1688.85 vs. <741.03	4	0.9 (0.6, 1.5)		0.2	A	C	D	F			
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80	44	92	Unspecified	17.0 years			ng/ml	Breast cancer ER- incidence		>1688.85 vs. <741.03	4	0.6 (0.2, 1.7)		0.2	A	C	D	F			
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75	36	72	Through health org. (screening, health insurance)	17.0 years				Breast cancer p53 mutation incidence		>1.0 vs. >-1.0	4	0.81 (0.23, 2.84)		0.61	A	C	D	F	G		
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75		7712.0	Through health org. (screening, health insurance)	17.0 years			ng/ml	Breast cancer p53 mutation cancer death		100.0 (continuous)	1	0.98 (null, null)		0.47	A	C	D	F	G		
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75	123	244	Through health org. (screening, health insurance)	17.0 years				Breast cancer p53 wild-type incidence		>1.0 vs. >-1.0	4	0.86 (0.46, 1.61)		0.38	A	C	D	F	G		
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75		7712.0	Through health org. (screening, health insurance)	17.0 years			ng/ml	Breast cancer p53 wild-type cancer death		100.0 (continuous)	1	0.98 (null, null)		0.19	A	C	D	F	G		

Serum p,p'-DDT

Menopausal status not specified

Hoyer, A. P.,1998,BRE15433	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 -	237	470	Unspecified	17.0 years	Questionnaire (nos)		ng/g	Breast cancer incidence		>1.0 vs. >-1.0	4	1.19 (0.76, 1.87)		0.57		B	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Dorgan, J.F.,1999,BRE14890	Nested Case Control	USA, Multi-ethnic, Blood donors Columbia Missouri Breast Cancer Serum Bank, 1977	(57)	105	207	Unspecified	9.5 years			ng/g lipid	Breast cancer incidence		468.0 - 1724.0 vs. 0 - 180.0	4	0.4 (0.2, 1.0)		0.05			B	C	D	F	G
Ward, E. M.,2000,BRE13163	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973	18 - 60		25431.0	Other procedure	20.0 years				Breast cancer incidence		1.0 vs. -1.0	4	0.3 (null, null)					C				G
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75	36	72	Through health org. (screening, health insurance)	17.0 years				Breast cancer p53 mutation incidence		>1.0 vs. >-1.0	4	0.95 (0.3, 2.98)		0.98	A		C	D	F	G	
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75		7712.0	Through health org. (screening, health insurance)	17.0 years			ng/ml	Breast cancer p53 mutation cancer death		10.0 (continuous)	1	0.99 (null, null)		0.7	A		C	D	F	G	
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75	123	244	Through health org. (screening, health insurance)	17.0 years				Breast cancer p53 wild-type incidence		>1.0 vs. >-1.0	4	1.32 (0.68, 2.59)		0.85	A		C	D	F	G	
Hoyer, A. P.,2002,BRE04087	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 - 75		7712.0	Through health org. (screening, health insurance)	17.0 years			ng/ml	Breast cancer p53 wild-type cancer death		10.0 (continuous)	1	0.99 (null, null)		0.89	A		C	D	F	G	

4.1.2.6.3

Adipose tissue PCB

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	1024.0 - 4357.0 vs. 56.0 - 670.9	4	1.1 (0.7, 1.7)		0.44			B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	1024.0 - 4357.0 vs. 56.0 - 670.9	4	1.4 (0.8, 2.5)		0.5			B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	1024.0 - 4357.0 vs. 56.0 - 670.9	4	0.3 (0.1, 0.9)		0.007			B	C	E	F	G

Adipose tissue PCB congener 99

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	26.7 - 99.4 vs. 5.6 - 14.9	4	1.1 (0.7, 1.9)		0.85			B	C	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	26.7 - 99.4 vs. 5.6 - 14.9	4	1.1 (0.6, 2.1)		0.69		B	C	E	F	G	
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	26.7 - 99.4 vs. 5.6 - 14.9	4	0.3 (0.1, 1.4)		0.14		B	C	E	F	G	

Adipose tissue PCB congener 118

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	51.0 - 200.0 vs. 3.0 - 26.9	4	0.9 (0.6, 1.4)		0.99		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	51.0 - 200.0 vs. 3.0 - 26.9	4	1.0 (0.6, 1.7)		0.37		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	51.0 - 200.0 vs. 3.0 - 26.9	4	0.2 (0.0, 0.8)		0.06		B	C	E	F	G

Adipose tissue PCB congener 138

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	170.0 - 629.0 vs. 6.0 - 96.9	4	1.1 (0.7, 1.7)		0.84		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	170.0 - 629.0 vs. 6.0 - 96.9	4	1.4 (0.8, 2.4)		0.27		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	170.0 - 629.0 vs. 6.0 - 96.9	4	0.3 (0.1, 0.9)		0.008		B	C	E	F	G

Adipose tissue PCB congener 153

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	322.0 - 1294.0 vs. 18.0 - 205.9	4	1.1 (0.7, 1.7)		0.66		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	322.0 - 1294.0 vs. 18.0 - 205.9	4	1.4 (0.8, 2.3)		0.41		B	C	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	322.0 - 1294.0 vs. 18.0 - 205.9	4	0.3 (0.1, 0.9)		0.008		B	C	E	F	G	

Adipose tissue PCB congener 156

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	43.0 - 206.0 vs. 3.0 - 29.9	4	0.9 (0.6, 1.5)		0.26		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	43.0 - 206.0 vs. 3.0 - 29.9	4	1.0 (0.6, 1.7)		0.95		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	43.0 - 206.0 vs. 3.0 - 29.9	4	0.5 (0.1, 1.9)		0.05		B	C	E	F	G

Adipose tissue PCB congener 170

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	98.0 - 502.0 vs. 6.0 - 66.9	4	1.1 (0.7, 1.8)		0.42		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	98.0 - 502.0 vs. 6.0 - 66.9	4	1.3 (0.7, 2.3)		0.47		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	98.0 - 502.0 vs. 6.0 - 66.9	4	0.4 (0.1, 1.6)		0.02		B	C	E	F	G

Adipose tissue PCB congener 180

Post-menopausal

Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer incidence	Post-menopausal	230.0 - 1084.0 vs. 13.0 - 154.9	4	1.1 (0.6, 1.8)		0.32		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER+ incidence	Post-menopausal	230.0 - 1084.0 vs. 13.0 - 154.9	4	1.2 (0.7, 2.2)		0.63		B	C	E	F	G
Raaschou-Nielsen, O.,2005,BRE23819	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	Hospital/ambulatory Direct Contact	5.0 years	Questionnaire (nos)		mcg/Kg	Breast cancer ER- incidence	Post-menopausal	230.0 - 1084.0 vs. 13.0 - 154.9	4	0.3 (0.1, 1.2)		0.02		B	C	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Garland, M.,1996,BRE03132	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	152	184	By Mail	4.0 years			mcg/g	Breast cancer incidence	Post-menopausal	>0.138 vs. <0.0589	5	1.47 (0.67, 3.19)		0.39	A	C	D	E	F	G	

Menopausal status not specified

Garland, M.,1996,BRE03132	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	308	325	By Mail	4.0 years			mcg/g	Breast cancer incidence		>0.138 vs. <0.0589	5	1.12 (0.66, 1.91)		0.78	A	C	D	E	F	G
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4.1.2.8

Nitrate in water

Menopausal status not specified

Weyer, P. J.,2000,BRE13338	Prospective Cohort	USA, Multi-ethnic Iowa Women's Health Study	55 - 69	1024	241314	By Mail	11.0 years	Questionnaire+ Recalled six day - Diary		mg/day	Breast cancer incidence		>27.2 vs. < 11.6	4	0.99 (0.83, 1.19)			A	B	D	E	G
Weyer, P. J.,2000,BRE13338	Prospective Cohort	USA, Multi-ethnic Iowa Women's Health Study	55 - 69	810	192433	By Mail	11.0 years	Questionnaire+ Recalled six day - Diary	Municipal Water supply 1955-1988	mg/liter	Breast cancer incidence		> 2.46 vs. < .36	4	1.03 (0.83, 1.28)			A	B	D	E	G
Weyer, P. J.,2000,BRE13338	Prospective Cohort	USA, Multi-ethnic Iowa Women's Health Study	55 - 69	732	168605	By Mail	11.0 years	Questionnaire+ Recalled six day - Diary	Municipal Water supply 1955-1964	mg/liter	Breast cancer incidence		> 2.22 vs. < .33	4	1.12 (0.89, 1.41)			A	B	D	E	G

4.2

Preserved animal foods

Pre-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative	hot dog, bacon, sausages, salami and bologna	servings/day	Invasive breast cancer incidence	Pre-menopausal	>0.46 vs. <0.1	5	0.86 (0.67, 1.09)		0.25	A	C	D	E	F	G
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Menopausal status not specified

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative	hot dog, bacon, sausages, salami and bologna	servings/day	Invasive breast cancer incidence		>0.46 vs. <0.1	5	0.94 (0.85, 1.05)		0.12	A	C	D	E	F	G
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Preserved vegetables

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	only vegetables	times/year	Breast cancer incidence		>57.0 vs. <5.0	5	0.9 (0.5, 1.7)		0.8					E	
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Hogervorst, J.G. et al.,2007,BRE80145	Case Cohort	Netherlands, Post menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	1350	1796.0	Cancer registry	11.3 years / 0	FFQ	Acrylamide, from fries, crisps, bread, crispy and rye bread, cookies, pastry, rusk, chocolate	mcg/day	Invasive breast cancer incidence		36.8 vs. 9.5	5	0.93 (0.73, 1.19)		0.79	A	B	C	D	E	F	G
Hogervorst, J.G. et al.,2007,BRE80145	Case Cohort	Netherlands, Post menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	767	1796.0	Cancer registry	11.3 years / 0	FFQ	Acrylamide, from fries, crisps, bread, crispy and rye bread, cookies, pastry, rusk, chocolate	mcg/day	Invasive breast cancer incidence	never smokers	36.8 vs. 9.5	5	1.1 (0.8, 1.52)		0.55	A	B	C	D	E	F	G

Menopausal status not specified

Mucci, L. A.,2006,BRE23500	Prospective Cohort	Sweden, Not specified Women's Lifestyle and Health Study	(39)		43404.0	Through health org. (screening, health insurance)	11.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer incidence		highest quintile vs. lowest	2	1.19 (0.91, 1.55)			A	B	C	E	F	G
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4.4.2.1

Steaming, boiling, poaching

Post-menopausal

Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)	boiled fish	g/day	Breast cancer incidence	Post-menopausal	25.0 (continuous)	1	1.09 (0.85, 1.42)			A	B	C	D	E	F	G
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Menopausal status not specified

Vatten, L.,1990,BRE12832	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 51	152	161013	Through health org. (screening, health insurance)	12.0 years	FFQ (nos)	main meal containing poaching fish	times/month	Breast cancer incidence		>=5 vs. <2	3	0.7 (0.4, 1.0)		0.06	A							
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4.4.2.3

Baking, roasting

Menopausal status not specified

Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	402	421	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	roasted red meat	months	Breast cancer incidence		>=1 vs. <1	3	0.9 (0.6, 1.4)					C	D	F	G
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4.4.2.5

Frying

Post-menopausal

Stripp, C.,2003,BRE11883	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	424	23693	By Mail	4.8 years	FFQ (nos)	fried fish	g/day	Breast cancer incidence	Post-menopausal	25.0 (continuous)	1	1.09 (0.95, 1.25)			A	B	C	D	E	F	G
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Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Knekt, P.,1994,BRE04899	Prospective Cohort	Finland, Not specified, Screening Program Finland, 1966	15 - 99		null	Through health org. (screening, health insurance)	24.0 years	Dietary History questionnaire	fried meat		Breast cancer incidence		>1.0 vs. >-1.0	3	1.8 (1.03, 3.16)				A	C	D	E	G		
Jarvinen, R.,1997,BRE04383	Prospective Cohort	Finland Finland, 1966	15 -		4697.0	Unspecified	24.0 years	Dietary History questionnaire	fried meat		Breast cancer incidence		Quantile 3 vs. Quantile 1	2	1.8 (1.03, 3.16)				A	C	D	E	G		
Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	396	413	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	pan-fried red meat	week	Breast cancer incidence		>=1 vs. never	3	1.0 (0.6, 1.5)						C	D	F	G	
Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	396	413	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	pan-fried red meat	week	Breast cancer incidence		>=1 vs. never	3	1.0 (0.6, 1.5)							C	D	F	G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	Ounces*year/day	Breast cancer incidence		4.0 (continuous)	1	1.04 (0.72, 1.49)				A	C	D	E	F	G	
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative	fried foods	times/year	Breast cancer incidence		>123.0 vs. <33.0	5	0.8 (0.4, 1.5)		0.69						E		

4.4.2.6

Barbecued

Menopausal status not specified

Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	398	420	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	barbecued red meat	week	Breast cancer incidence		>=1 vs. never	3	1.0 (0.6, 1.7)							C	D	F	G	
Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	398	420	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	barbecued red meat	week	Breast cancer incidence		>=1 vs. never	3	1.0 (0.6, 1.7)								C	D	F	G

Broiled

Menopausal status not specified

Gertig,D.M.,1999,BRE03215	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(58)	399	415	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative	broiled red meat	week	Breast cancer incidence		>=1 vs. never	3	1.1 (0.7, 1.8)								C	D	F	G
Gallicchio L.,2006,BRE0112	Prospective Cohort	United States, With benign breast disease BBD cohort-CLUE II, 1989		30	426	CLUE II cohort/pathology report/self-reported		Questionnaire (nos)	Ever consumed flame-broiled food		Invasive & In situ breast cancer incidence		Yes vs. No	2	2.62 (1.06, 6.46)				A							

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Pre-menopausal</i>																								
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	852	53891	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	240.0 vs. 159.0	5	0.98 (0.78, 1.23)		0.61	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	527	39403	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal & Lean	240.0 vs. 159.0	5	1.2 (0.89, 1.61)		0.37	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	292	25129	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal & Overweight	240.0 vs. 159.0	5	0.72 (0.48, 1.07)		0.04	A	C	D	E	F	G	
<i>Post-menopausal</i>																								
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2924	76200	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.96 (0.84, 1.09)		0.82	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1343	47051	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal & Lean	>1.0 vs. >-1.0	5	0.95 (0.78, 1.15)		0.65	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1344	46111	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal & Overweight	>1.0 vs. >-1.0	5	0.96 (0.8, 1.17)		0.91	A	C	D	E	F	G	
<i>Menopausal status not specified</i>																								
Howe, G. R.,1991,BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59		56837.0	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire	for 693 cal/day	cal/day	Breast cancer incidence		693.0 (continuous)	1	0.72 (0.52, 0.99)			A			E	G		
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		<240.0 vs. <128.0	5	0.8 (0.5, 1.2)		0.8	A	C	D	E	F	G	
Carbohydrate/Protein																								
<i>Menopausal status not specified</i>																								
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)			Invasive breast cancer incidence		Quantile 5 vs. <2.5	5	1.0 (0.8, 1.2)		1	A	C	D	E	F	G	
Total carbohydrate																								
<i>Pre-menopausal</i>																								
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	gm/day	Breast cancer incidence	Pre-menopausal	359.1 vs. 263.3	5	1.21 (0.89, 1.64)		0.59	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Kushi L. H.,1993,BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130443	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	252.7 vs. 181.0	4	1.16 (0.72, 1.86)		0.51	A	C	D	E	F	G	
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S, White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall		g/day	Breast cancer incidence	Post-menopausal	66.0 (continuous)	1	1.93 (1.18, 3.16)			A	C	D	E			
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	217.6 - 303.4 vs. <190.2	3	0.42 (0.18, 0.95)		0.040		B	C	E	G		
Byrne, C.,2002,BRE01315	Prospective Cohort	U.S, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.88 (0.72, 1.09)		0.53	A	C	D	E	F	G	
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	50.0 (continuous)	1	1.06 (0.97, 1.16)		0.99		B	C	D	E	F	
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	50.0 (continuous)	1	1.02 (0.92, 1.14)		0.99		B	C	D	E	F	
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	50.0 (continuous)	1	1.09 (0.89, 1.34)		0.99		B	C	D	E	F	
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.31 (0.98, 1.75)			A				E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.38 (0.91, 2.09)			A				E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.91 (0.75, 4.86)			A				E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.88 (0.45, 1.71)			A				E	F	G
<i>Menopausal status not specified</i>																								
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.81 (0.55, 1.2)		0.63	A				E		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	262	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>225.0 vs. <197.0	3	0.79 (0.6, 0.79)		0.07	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>225.0 vs. <197.0	3	0.78 (0.44, 1.39)		0.42	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>225.0 vs. <197.0	3	3.82 (0.76, 19.19)		0.10	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>225.0 vs. <197.0	3	0.6 (0.31, 1.14)		0.12	A						E	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	1450	811649	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence		>249.1 vs. <143.0	5	0.93 (0.7, 1.22)		0.86	A		C	D		E	F	G

5.1.2

Cellulose

Menopausal status not specified

Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>6.9 vs. <3.2	5	0.97 (0.83, 1.14)		0.64	A	B	C	D		E	F	G
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Crude fibre

Menopausal status not specified

Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		g/day	Breast cancer incidence		>11.82 vs. <7.58	5	1.3 (0.5, 3.3)		0.69	A								
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Dietary fibre

Pre-menopausal

Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	527	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Pre-menopausal	Quantile 5 vs. Quantile 1	5	1.06 (0.78, 1.45)		0.95	A		C	D		E	F	G
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	24.8 vs. 12.5	5	0.88 (0.67, 1.14)		0.60			C	D		E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	total fiber adolescent diet	gm/day	Breast cancer incidence	Pre-menopausal	27.5 vs. 15.1	5	0.81 (0.58, 1.13)		0.11	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	852	53891	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	24.8 vs. 12.1	5	0.99 (0.75, 1.29)		0.79	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	527	39403	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal & Lean	24.8 vs. 12.1	5	1.1 (0.78, 1.54)		0.62	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	292	25129	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal & Overweight	24.8 vs. 12.1	5	0.85 (0.51, 1.42)		0.94	A	C	D	E	F	G	

Post-menopausal

Kushi L. H.,1992,BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130443	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	27.0 vs. 14.1	4	0.99 (0.69, 1.41)		0.79	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	774	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.96 (0.75, 1.25)		0.98	A	C	D	E	F	G	
Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		g/month	Breast cancer incidence	Post-menopausal	982.0 - 5184.0 vs. 88.0 - 478.0	5	1.07 (0.76, 1.51)			A	B					
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2924	76200	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.96 (0.83, 1.1)		0.35	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1343	47051	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal & Lean	>1.0 vs. >-1.0	5	1.04 (0.84, 1.27)		0.83	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1344	46111	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal & Overweight	>1.0 vs. >-1.0	5	0.85 (0.69, 1.05)		0.11	A	C	D	E	F	G	
Mattisson, I.,2004,BRE16042	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmö Diet and Cancer, 1991	50 -	342	11726	Multiple procedure	11.0 years	7-day Record + Questionnaire		g/day	Invasive & In situ breast cancer incidence	Post-menopausal	25.9 vs. 12.5	5	0.58 (0.4, 0.84)		0.056	A	B	C	D	E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCA, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.08 (0.92, 1.26)			A				E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.36 (1.1, 1.67)			A					E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.61, 1.69)			A					E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.65 (0.43, 0.99)			A					E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	716	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre	g/day	Breast cancer ER+/PR+ incidence		>26.7 vs. <18.4	5	0.85 (0.64, 1.13)		0.35	A	B	C	D	E	F	G	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	609	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR+ incidence	Family History BC - No	Quantile 4 vs. Quantile 1	4	0.85 (0.64, 1.11)		0.25	A	B	C	D	E	F		
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	107	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR+ incidence	Family History BC - Yes	Quantile 4 vs. Quantile 1	4	1.33 (0.68, 2.59)		0.32	A	B	C	D	E	F		
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	171	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR+ incidence	High alcohol intake	Quantile 4 vs. Quantile 1	4	0.81 (0.47, 1.39)		0.26	A	B	C	D	E	F		
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	545	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR+ incidence	Low alcohol intake	Quantile 4 vs. Quantile 1	4	0.91 (0.68, 1.2)		0.67	A	B	C	D	E	F		
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	243	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR+ incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.5 (0.31, 0.8)		0.001	A	B	C	D	E	F		
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	299	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR+ incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	1.1 (0.75, 1.6)		0.46	A	B	C	D	E	F		
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	279	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre	g/day	Breast cancer ER+/PR- incidence		>26.7 vs. <18.4	5	0.83 (0.52, 1.31)		0.25	A	B	C	D	E	F	G	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	250	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR- incidence	Family History BC - No	Quantile 4 vs. Quantile 1	4	0.83 (0.54, 1.28)		0.28	A	B	C	D	E	F		
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	29	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR- incidence	Family History BC - Yes	Quantile 4 vs. Quantile 1	4	1.13 (0.29, 4.45)		0.88	A	B	C	D	E	F		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	91	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR- incidence	High alcohol intake	Quantile 4 vs. Quantile 1	4	0.71 (0.33, 1.51)		0.093	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	188	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR- incidence	Low alcohol intake	Quantile 4 vs. Quantile 1	4	0.78 (0.48, 1.26)		0.4	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	123	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.64 (0.34, 1.22)		0.08	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	102	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER+/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.73 (0.36, 1.47)		0.44	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	143	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre	g/day	Breast cancer ER-/PR- incidence		>26.7 vs. <18.4	5	0.94 (0.49, 1.8)		0.38	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	122	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER-/PR- incidence	Family History BC - No	Quantile 4 vs. Quantile 1	4	0.89 (0.49, 1.62)		0.45	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	21	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER-/PR- incidence	Family History BC - Yes	Quantile 4 vs. Quantile 1	4	2.42 (0.36, 16.3)		0.98	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	34	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER-/PR- incidence	High alcohol intake	Quantile 4 vs. Quantile 1	4	0.93 (0.27, 3.22)		0.73	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	109	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER-/PR- incidence	Low alcohol intake	Quantile 4 vs. Quantile 1	4	0.97 (0.51, 1.85)		0.57	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	34	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER-/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.34 (0.09, 1.26)		0.039	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	66	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Breast cancer ER-/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	1.15 (0.51, 2.58)		0.96	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	1248	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre	g/day	Invasive breast cancer incidence		>26.7 vs. <18.4	5	0.85 (0.69, 1.05)		0.09	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	1109	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Invasive breast cancer incidence	Family History BC - No	Quantile 4 vs. Quantile 1	4	0.83 (0.68, 1.01)		0.053	A	B	C	D	E	F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	175	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Invasive breast cancer incidence	Family History BC - Yes	Quantile 4 vs. Quantile 1	4	1.31 (0.75, 2.27)		0.52	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	319	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Invasive breast cancer incidence	High alcohol intake	Quantile 4 vs. Quantile 1	4	0.76 (0.51, 1.14)		0.045	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	965	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Invasive breast cancer incidence	Low alcohol intake	Quantile 4 vs. Quantile 1	4	0.86 (0.69, 1.06)		0.23	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	446	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Invasive breast cancer incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.5 (0.36, 0.71)		<0.001	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	528	51823.0	Cancer registry	8.3 years	FFQ	Total dietary fibre		Invasive breast cancer incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.99 (0.74, 1.32)		0.87	A	B	C	D	E	F	

Menopausal status not specified

Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692679	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>22.0 vs. <11.9	5	1.02 (0.85, 1.23)		0.62	A		C	D	E	F	G
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.62 (0.41, 0.93)		0.38	A						
Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		56837.0	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		12.0 (continuous)	1	0.85 (0.7, 1.04)				A	B	C	E	F	G
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	339	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER+/PR+ incidence		>21.8 vs. <16.9	3	0.92 (0.7, 1.2)		0.45	A				E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER+/PR- incidence		>21.8 vs. <16.0	3	1.24 (0.71, 2.17)		0.45	A				E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER-/PR+ incidence		>21.8 vs. <16.0	3	1.48 (0.33, 6.66)		0.81	A				E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER-/PR- incidence		>21.8 vs. <16.0	3	0.98 (0.52, 1.84)		0.98	A				E		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Verhoeven, D. T.,1997,BRE12868	Case Cohort	the Netherland, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	519	5866	Through network, paper, tv	4.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		34.5 vs. 16.9	5	0.83 (0.56, 1.24)		0.16	A		C	E	F	G	
Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>25.8 vs. <15.1	5	0.92 (0.78, 1.09)		0.16	A	B	C	D	E	F	G
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		<19.0 vs. <9.0	5	0.9 (0.7, 1.2)		0.3	A		C	D	E	F	G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	g/day	Breast cancer incidence		14.3 vs. 5.6	5	0.78 (null, null)		0.09	A		C	D	E	F	G

Fibre

Post-menopausal

Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmo Diet and Cancer, 1991	45 - 73	152	11726.0	Cancer registry	9.5 years	diet history questionnaire	Dietary fibre intake	g/day	Breast cancer incidence	Post-meno & BMI ≥27	25.9 vs. 12.5	5	1.23 (0.74, 2.05)		0.37	A							G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmo Diet and Cancer, 1991	45 - 73	276	11726.0	Cancer registry	9.5 years	diet history questionnaire	Dietary fibre intake	g/day	Breast cancer incidence	Post-meno & BMI<27	25.9 vs. 12.5	5	0.57 (0.38, 0.85)		0.13	A							G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmo Diet and Cancer, 1991	45 - 73	124	11726.0	Cancer registry	9.5 years	diet history questionnaire	Dietary fibre intake	g/day	Breast cancer incidence	Post-meno, dietary change	25.9 vs. 12.5	5	1.26 (0.63, 2.55)		0.54	A				E		G	
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmo Diet and Cancer, 1991	45 - 73	304	11726.0	Cancer registry	9.5 years	diet history questionnaire	Dietary fibre intake	g/day	Breast cancer incidence	Post-meno, no dietary change	25.9 vs. 12.5	5	0.63 (0.43, 0.93)		0.45	A				E		G	
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmo Diet and Cancer, 1991	45 - 73	428	11726.0	Cancer registry	9.5 years	diet history questionnaire	Dietary fibre intake	g/day	Breast cancer incidence	Post-menopausal	25.9 vs. 12.5	5	0.77 (0.57, 1.05)		0.51	A				E		G	

Insoluble fibre (englyst method)

Pre-menopausal

Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	19.0 vs. 9.5	5	0.81 (0.62, 1.07)		0.14				C	D	E	F	G
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Menopausal status not specified

Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>5.5 vs. <2.7	5	0.89 (0.76, 1.03)		0.13	A	B	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Lignin																								
<i>Menopausal status not specified</i>																								
Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>2.1 vs. <0.9	5	0.89 (0.76, 1.03)		0.06	A	B	C	D	E	F	G
Non-starch polysaccharides/dietary fibre																								
<i>Post-menopausal</i>																								
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	20.1 - 37.4 vs. <16.6	3	0.73 (0.33, 1.59)		0.452		B	C		E		G
Soluble fibre																								
<i>Pre-menopausal</i>																								
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	7.4 vs. 3.8	5	0.87 (0.67, 1.13)		0.50			C	D	E	F	G
<i>Menopausal status not specified</i>																								
Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>7.8 vs. <4.5	5	0.9 (0.75, 1.08)		0.23	A	B	C	D	E	F	G
Total fibre																								
<i>Pre-menopausal</i>																								
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	232	14261	NHS Central Registry	7.5 years	FFQ	Total dietary fibre, Englyst fibre from all foods in FFQ	g/day	Breast cancer incidence	premenopausal women	>30.0 vs. <19.9	5	0.48 (0.24, 0.96)		0.01	A		C	D	E	F	G
<i>Post-menopausal</i>																								
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	286	15067	NHS Central Registry	7.5 years	FFQ	Total dietary fibre, Englyst fibre from all foods in FFQ	g/day	Breast cancer incidence	postmenopausal women	>30.0 vs. <20.9	5	1.18 (0.7, 1.99)		0.97	A		C	D	E	F	G
5.1.2.1																								
Cereal fibre																								
<i>Pre-menopausal</i>																								
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	8.8 vs. 3.0	5	0.91 (0.69, 1.21)		0.21			C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	852	53891	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	8.4 vs. 2.4	5	0.99 (0.78, 1.25)		0.29	A	C	D	E	F	G	
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	232	14261	NHS Central Registry	7.5 years	FFQ	Cereal fibre, Englyst fibre	g/day	Breast cancer incidence	premenopausal women	>13.0 vs. <3.9	5	0.59 (0.32, 1.1)		0.05	A	C	D	E	F	G	

Post-menopausal

Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2924	76200	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	1.08 (0.96, 1.22)		0.09	A	C	D	E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.08 (0.95, 1.23)			A			E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.17 (0.98, 1.39)			A			E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.24 (0.83, 1.86)			A			E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.78 (0.55, 1.11)			A			E	F	G	
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	286	15067	NHS Central Registry	7.5 years	FFQ	Cereal fibre, Englyst fibre	g/day	Breast cancer incidence	postmenopausal women	>13.0 vs. <3.9	5	1.15 (0.68, 1.94)		0.89	A	C	D	E	F	G	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	716	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake	g/day	Breast cancer ER+/PR+ incidence		>19.1 vs. <11.9	5	0.99 (0.77, 1.29)		0.46	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	243	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Breast cancer ER+/PR+ incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.41 (0.25, 0.67)		0.0001	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	299	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Breast cancer ER+/PR+ incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	1.14 (0.8, 1.64)		0.97	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	279	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake	g/day	Breast cancer ER+/PR- incidence		>19.1 vs. <11.9	5	0.86 (0.56, 1.32)		0.26	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	123	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Breast cancer ER+/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.6 (0.3, 1.21)		0.08	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	102	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Breast cancer ER+/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.84 (0.45, 1.55)		0.67	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	143	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake	g/day	Breast cancer ER-/PR- incidence		>19.1 vs. <11.9	5	0.69 (0.39, 1.24)		0.21	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	34	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Breast cancer ER-/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.23 (0.06, 0.89)		0.02	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	66	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Breast cancer ER-/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.87 (0.41, 1.85)		0.69	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	1284	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake	g/day	Invasive breast cancer incidence		>19.1 vs. <11.9	5	0.91 (0.75, 1.11)		0.098	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	446	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Invasive breast cancer incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.44 (0.31, 0.63)		<0.001	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	528	51823.0	Cancer registry	8.3 years	FFQ	Cereal fibre intake		Invasive breast cancer incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	1.03 (0.79, 1.35)		0.82	A	B	C	D	E	F	

Menopausal status not specified

Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>5.6 vs. <2.5	5	0.9 (0.78, 1.04)		0.13	A	B	C	D	E	F	G
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5.1.2.2

Fiber from cruciferous vegetables

Pre-menopausal

Cho, E.,2003,BRE01651	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	1.8 vs. 0.2	5	0.87 (0.68, 1.12)		0.08			C	D	E	F	G
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Fiber from legumes

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments								
																		A	B	C	D	E	F	G		
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	2.0 vs. 0.1	5	0.79 (0.62, 1.02)		0.04					C	D	E	F	G

Post-menopausal

Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	0.97 (0.86, 1.11)				A						E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.86, 1.18)				A						E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.95 (0.61, 1.46)				A						E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.87 (0.6, 1.27)				A						E	F	G

Fibre from potatoes

Post-menopausal

Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	0.97 (0.85, 1.11)				A						E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	0.98 (0.82, 1.18)				A						E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.79 (0.48, 1.32)				A						E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.07 (0.85, 1.36)				A						E	F	G

Vegetable fibre

Pre-menopausal

Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	10.4 vs. 3.3	5	0.97 (0.75, 1.24)		0.52						C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	852	53891	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	10.2 vs. 3.6	5	0.95 (0.72, 1.25)		0.65	A				C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	232	14261	NHS Central Registry	7.5 years	FFQ	Vegetable fibre, Englyst fibre	g/day	Breast cancer incidence	premenopausal women	>7.0 vs. <2.9	5	1.26 (0.73, 2.18)		0.96	A	C	D	E	F	G	

Post-menopausal

Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2924	76200	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.94 (0.82, 1.08)		0.27	A	C	D	E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.07 (0.95, 1.2)			A			E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.13 (0.97, 1.32)			A			E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.14 (0.81, 1.61)			A			E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.83 (0.58, 1.19)			A			E	F	G	
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	286	15067	NHS Central Registry	7.5 years	FFQ	Vegetable fibre, Englyst fibre	g/day	Breast cancer incidence	postmenopausal women	>8.0 vs. <2.9	5	1.2 (0.74, 1.94)		0.4	A	C	D	E	F	G	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	716	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake	g/day	Breast cancer ER+/PR+ incidence		>2.67 vs. <0.93	5	0.85 (0.61, 1.18)		0.23	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	243	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Breast cancer ER+/PR+ incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	1.01 (0.57, 1.78)		0.92	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	299	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Breast cancer ER+/PR+ incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.63 (0.41, 0.99)		0.023	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	279	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake	g/day	Breast cancer ER+/PR- incidence		>2.67 vs. <0.93	5	1.03 (0.59, 1.8)		0.79	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	123	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Breast cancer ER+/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	1.82 (0.71, 4.69)		0.46	A	B	C	D	E	F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	102	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Breast cancer ER+/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.81 (0.36, 1.8)			A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	143	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake	g/day	Breast cancer ER-/PR- incidence		>2.67 vs. <0.93	5	0.84 (0.4, 1.77)			A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	34	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Breast cancer ER-/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	2.15 (0.33, 13.9)			A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	66	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Breast cancer ER-/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.78 (0.3, 2.02)			A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	1248	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake	g/day	Invasive breast cancer incidence		>2.67 vs. <0.93	5	0.92 (0.72, 1.18)			A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	446	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Invasive breast cancer incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	1.39 (0.89, 2.17)			A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	528	51823.0	Cancer registry	8.3 years	FFQ	Vegetable fibre intake		Invasive breast cancer incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.65 (0.46, 0.9)		0.003	A	B	C	D	E	F	

Menopausal status not specified

Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>11.0 vs. <5.3	5	0.9 (0.75, 1.08)			A	B	C	D	E	F	G
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5.1.2.3

Fruit fibre

Pre-menopausal

Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	6.2 vs. 1.1	5	1.13 (0.88, 1.46)					C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	852	53891	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	7.1 vs. 1.3	5	0.86 (0.67, 1.1)			A		C	D	E	F	G
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	232	14261	NHS Central Registry	7.5 years	FFQ	Fruit fibre, Englyst fibre	g/day	Breast cancer incidence	premenopausal women	>6.0 vs. <1.9	5	0.81 (0.44, 1.49)			A		C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2924	76200	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.92 (0.81, 1.04)		0.08	A	C	D	E	F	G	
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.88, 1.13)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.15 (1.0, 1.34)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.82 (0.53, 1.28)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.78 (0.55, 1.11)			A				E	F	G
Cade et al.,2007,BRE20021	Prospective Cohort	UK UK Women's Cohort Study (UKWCS), 1993	35 - 69	286	15067	NHS Central Registry	7.5 years	FFQ	Fruit fibre, Englyst fibre	g/day	Breast cancer incidence	postmenopausal women	>7.0 vs. <1.9	5	1.1 (0.66, 1.84)		0.64	A	C	D	E	F	G	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	716	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake	g/day	Breast cancer ER+/PR+ incidence		>5.2 vs. <1.6	5	0.62 (0.39, 0.97)		0.022	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	243	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Breast cancer ER+/PR+ incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.85 (0.43, 1.68)		0.95	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	299	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Breast cancer ER+/PR+ incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.45 (0.25, 0.81)		0.01	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	279	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake	g/day	Breast cancer ER+/PR- incidence		>5.2 vs. <1.6	5	0.6 (0.29, 1.22)		0.14	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	123	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Breast cancer ER+/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.92 (0.35, 2.39)		0.91	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE80148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	102	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Breast cancer ER+/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.72 (0.26, 2.04)		0.5	A	B	C	D	E	F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	143	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake	g/day	Breast cancer ER-/PR- incidence		>5.2 vs. <1.6	5	0.5 (0.18, 1.39)		0.15	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	34	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Breast cancer ER-/PR- incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.39 (0.06, 2.5)		0.39	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	66	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Breast cancer ER-/PR- incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.88 (0.24, 3.25)		0.83	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	1284	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake	g/day	Invasive breast cancer incidence		>5.2 vs. <1.6	5	0.66 (0.47, 0.93)		0.007	A	B	C	D	E	F	G
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	446	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Invasive breast cancer incidence	PMH - ever users	Quantile 4 vs. Quantile 1	4	0.77 (0.47, 1.28)		0.34	A	B	C	D	E	F	
Suzuki, R. et al.,2008,BRE0148	Prospective Cohort	Sweden, Post menopausal The Swedish Mammography Cohort, 1987	(60)	528	51823.0	Cancer registry	8.3 years	FFQ	Fruit fibre intake		Invasive breast cancer incidence	PMH - never users	Quantile 4 vs. Quantile 1	4	0.57 (0.36, 0.89)		0.016	A	B	C	D	E	F	

Menopausal status not specified

Terry, P.,2002,BRE12199	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59		89835.0	Hospital/ambulatory Direct Contact	16.2 years	FFQ (nos)		g/day	Invasive & In situ breast cancer incidence		>6.6 vs. <1.9	5	1.07 (0.92, 1.25)		0.51	A	B	C	D	E	F	G
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5.1.3

Starch

Post-menopausal

Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	150.0 - 243.0 vs. <126.9	3	2.64 (0.71, 9.83)		0.120		B	C		E		G
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.0 (0.96, 1.04)		0.99		B	C	D	E	F	
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	10.0 (continuous)	1	0.98 (0.94, 1.03)		0.99		B	C	D	E	F	
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	10.0 (continuous)	1	1.06 (0.97, 1.16)		0.99		B	C	D	E	F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.14 (0.95, 1.38)			A					E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/-PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.07 (0.82, 1.41)			A					E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/-PR- incidence	Post-menopausal	1.0 (continuous)	1	1.6 (0.91, 2.84)			A					E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/-PR- incidence	Post-menopausal	1.0 (continuous)	1	0.8 (0.5, 1.28)			A					E	F	G

5.1.4

Glucose

Post-menopausal

Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	50.0 (continuous)	1	1.06 (0.79, 1.42)		0.99			B	C	D	E	F
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	10.0 (continuous)	1	1.05 (0.91, 1.21)		0.99			B	C	D	E	F
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	10.0 (continuous)	1	0.86 (0.64, 1.16)		0.99			B	C	D	E	F

Lactose

Post-menopausal

Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.04 (0.98, 1.1)		0.99			B	C	D	E	F
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	10.0 (continuous)	1	1.04 (0.97, 1.11)		0.99			B	C	D	E	F
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	10.0 (continuous)	1	1.07 (0.95, 1.22)		0.99			B	C	D	E	F

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Jarvinen, R.,1997,BRE04383	Prospective Cohort	Finland Finland, 1966	15 -		4697.0	Unspecified	24.0 years	Dietary History questionnaire			Breast cancer incidence		Quantile 3 vs. Quantile 1	2	0.53 (null, null)		0.008	A									

Maltose

Post-menopausal

Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	2.0 (continuous)	1	1.02 (0.88, 1.18)		0.99		B	C	D	E	F				
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	2.0 (continuous)	1	1.04 (0.9, 1.2)		0.99		B	C	D	E	F				
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	2.0 (continuous)	1	1.03 (0.78, 1.38)		0.99		B	C	D	E	F				

Sucrose

Pre-menopausal

Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	gm/day	Breast cancer incidence	Pre-menopausal	102.4 vs. 50.1	5	0.98 (0.7, 1.39)		0.87	A	C	D	E	F	G				
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Post-menopausal

Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.01 (0.94, 1.08)		0.99		B	C	D	E	F				
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER+ incidence	Post-menopausal	10.0 (continuous)	1	1.01 (0.95, 1.07)		0.99		B	C	D	E	F				
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		g/day	Breast cancer ER- incidence	Post-menopausal	10.0 (continuous)	1	1.05 (0.94, 1.16)		0.99		B	C	D	E	F				

Sugars (as nutrients)

Post-menopausal

Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	72.9 - 141.0 vs. <54.3	3	0.34 (0.11, 1.03)		0.096		B	C		E		G			
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.07 (0.89, 1.28)			A				E	F	G			

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.13 (0.87, 1.46)			A					E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.07 (0.58, 1.95)			A					E	F	G
Giles, G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		sd/day	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.06 (0.69, 1.63)			A					E	F	G

Menopausal status not specified

Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	1450	811649	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence		>103.1 vs. <52.0	5	0.88 (0.7, 1.12)			A		C	D	E	F	G
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5.1.5

Glycemic index

Pre-menopausal

Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Pre-menopausal	82.0 vs. 70.0	5	1.05 (0.83, 1.33)		0.97					C	D	E	F	G
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	422	424644	By Mail	8.0 years	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Pre-menopausal & Lean	Quantile 5 vs. Quantile 1	5	1.04 (0.76, 1.41)		0.94					C	D	E	F	G
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	291	285780	By Mail	8.0 years	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Pre-menopausal & Overweight	Quantile 5 vs. Quantile 1	5	1.05 (0.72, 1.52)		0.98					C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet		Breast cancer incidence	Pre-menopausal	83.5 vs. 73.6	5	1.47 (1.04, 2.08)		0.01	A				C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	852	53891	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit	Breast cancer incidence	Pre-menopausal	81.0 vs. 69.0	5	1.02 (0.82, 1.28)		0.68	A				C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glicemic index		Breast cancer incidence	Pre-menopausal	>92.1 vs. <63.0	4	0.78 (0.52, 1.16)		0.12	A				C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	527	39403	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit	Breast cancer incidence	Pre-menopausal & Lean	81.0 vs. 69.0	5	1.06 (0.79, 1.42)		0.64	A				C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glycemc index		Breast cancer incidence	Pre-menopausal & Lean	>92.1 vs. <63.0	4	0.89 (0.54, 1.45)		0.44	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	292	25129	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit	Breast cancer incidence	Pre-menopausal & Overweight	81.0 vs. 69.0	5	0.83 (0.57, 1.22)		0.48	A	C	D	E	F	G	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glycemc index		Breast cancer incidence	Pre-menopausal & Overweight	>92.1 vs. <63.0	4	0.62 (0.32, 1.23)		0.13	A	C	D	E	F	G	
Sieri, S. et al.,2007,BRE0142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	146	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic Index, energy-adjusted glycemc index		Invasive & In situ breast cancer incidence	Pre-menopausal	>57.6 vs. <53.4	5	1.82 (1.01, 3.27)			B	C	D	E	F	G	

Post-menopausal

Jonas, C. R.,2003,BRE04456	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1442	277264	Unspecified	5.0 years / 7581	FFQ-Semi-quantitative		Bread unit	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	1.03 (0.87, 1.22)		0.706	A	B	C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glycemc index		Breast cancer incidence	HRT - Yes	>92.1 vs. <63.0	4	2.15 (1.16, 4.0)		0.02	A	C	D	E	F	G	
Higginbotham, S.,2004,BRE15353	Prospective Cohort	USA, Not specified, Elderly Women's Health Study, 1993	45 -		38446.0	By Mail	6.8 years	FFQ-Semi-quantitative		Glucose unit	Breast cancer incidence		>1.0 vs. >-1.0	5	1.03 (0.84, 1.28)		0.66	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2924	76200	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	1.15 (1.02, 1.3)		0.02	A	C	D	E	F	G	
Higginbotham, S.,2004,BRE15353	Prospective Cohort	USA, Not specified, Elderly Women's Health Study, 1993	45 -	559	38446.0	By Mail	6.8 years	FFQ-Semi-quantitative		Glucose unit	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.89 (0.67, 1.17)		0.39	A	C	D	E	F	G	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glycemc index		Breast cancer incidence	Post-menopausal	>92.1 vs. <63.0	4	1.87 (1.18, 2.97)		0.01	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1343	47051	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit	Breast cancer incidence	Post-menopausal & Lean	>1.0 vs. >-1.0	5	1.28 (1.08, 1.53)		0.003	A	C	D	E	F	G	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glycemc index		Breast cancer incidence	Post-menopausal & Lean	>92.1 vs. <63.0	4	1.99 (1.06, 9.72)		0.03	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1344	46111	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit	Breast cancer incidence	Post-menopausal & Overweight	>1.0 vs. >-1.0	5	1.05 (0.87, 1.26)		0.46	A	C	D	E	F	G	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glycemc index		Breast cancer incidence	Post-menopausal & Overweight	>92.1 vs. <63.0	4	1.57 (0.78, 3.13)		0.25	A	C	D	E	F	G	
Higginbotham, S.,2004,BRE15353	Prospective Cohort	USA, Not specified, Elderly Women's Health Study, 1993	45 -	338	38446.0	By Mail	6.8 years	FFQ-Semi-quantitative		Glucose unit	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	5	1.29 (0.92, 1.81)		0.06	A	C	D	E	F	G	
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		Unit/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	0.94 (0.8, 1.1)		0.99	B	C	D	E	F		
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		Unit/day	Breast cancer ER+ incidence	Post-menopausal	10.0 (continuous)	1	0.86 (0.71, 1.04)		0.99	B	C	D	E	F		
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		Unit/day	Breast cancer ER- incidence	Post-menopausal	10.0 (continuous)	1	1.46 (1.01, 2.11)		0.99	B	C	D	E	F		
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	0.98 (0.88, 1.1)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	0.91 (0.77, 1.07)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.8 (0.57, 1.12)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.98 (0.74, 1.29)			A				E	F	G
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	128	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic Index, energy-adjusted glycemc index		Invasive & In situ breast cancer incidence	Post-menopausal	>57.6 vs. <53.4	5	1.12 (0.62, 2.02)			B	C	D	E	F	G	

Menopausal status not specified

Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glycemc index		Breast cancer incidence	HRT - No	>92.1 vs. <63.0	4	1.58 (0.79, 3.18)		0.27	A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	1450	811648	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)	overall glicemic index		Breast cancer incidence		>96.1 vs. <60.0	5	0.88 (0.63, 1.22)		0.38	A	C	D	E	F	G	
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	289	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic Index, energy-adjusted glycemic index		Invasive & In situ breast cancer incidence		>57.6 vs. <53.4	5	1.57 (1.04, 2.36)		0.04		B	C	D	E	F	G
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	147	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic Index, energy-adjusted glycemic index		Invasive & In situ breast cancer incidence	BMI < 25	>57.6 vs. <53.4	5	2.22 (1.18, 4.19)				B	C	D	E	F	G
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	142	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic Index, energy-adjusted glycemic index		Invasive & In situ breast cancer incidence	BMI ≥ 25	>57.6 vs. <53.4	5	1.11 (0.64, 1.94)				B	C	D	E	F	G

Glycemic load

Pre-menopausal

Cho, E.,2003,BRE01651	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal	211.0 vs. 138.0	5	1.06 (0.78, 1.45)		0.96			C	D	E	F	G
Cho, E.,2003,BRE01651	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	422	424644	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal & Lean	Quantile 5 vs. Quantile 1	5	0.83 (0.56, 1.24)		0.19			C	D	E	F	G
Cho, E.,2003,BRE01651	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	291	285780	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Pre-menopausal & Overweight	Quantile 5 vs. Quantile 1	5	1.46 (0.89, 2.39)		0.14			C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet		Breast cancer incidence	Pre-menopausal	289.0 vs. 202.0	5	1.23 (0.91, 1.67)		0.14	A		C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	852	53891	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Pre-menopausal	186.0 vs. 116.0	5	0.87 (0.7, 1.12)		0.26	A		C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	Pre-menopausal	>169.1 vs. <125.0	4	0.96 (0.76, 1.22)		0.44	A		C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	527	39403	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Pre-menopausal & Lean	186.0 vs. 116.0	5	1.01 (0.75, 1.35)		0.7	A		C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	Pre-menopausal & Lean	>169.1 vs. <125.0	4	1.01 (0.76, 1.35)		0.70	A		C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	292	25129	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Pre-menopausal & Overweight	186.0 vs. 116.0	5	0.68 (0.45, 1.03)		0.02	A	C	D	E	F	G	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	Pre-menopausal & Overweight	>169.1 vs. <125.0	4	0.85 (0.55, 1.31)		0.46	A	C	D	E	F	G	
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	146	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic load, energy-adjusted glycemic load		Invasive & In situ breast cancer incidence	Pre-menopausal	>133.8 vs. <103.2	5	3.89 (1.81, 8.34)			B	C	D	E	F	G	

Post-menopausal

Jonas, C. R.,2003,BRE04456	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1442	277265	Unspecified	5.0 years / 7581	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.9 (0.76, 1.08)		0.679	A	B	C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	HRT - Yes	>169.1 vs. <125.0	4	1.2 (0.82, 1.76)		0.37	A	C	D	E	F	G	
Higginbotham, S.,2004,BRE15353	Prospective Cohort	USA, Not specified, Elderly Women's Health Study, 1993	45 -		38446.0	By Mail	6.8 years	FFQ-Semi-quantitative		Glucose unit/day	Breast cancer incidence		>1.0 vs. >-1.0	5	1.01 (0.76, 1.35)		0.96	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2924	76200	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	1.03 (0.9, 1.16)		0.51	A	C	D	E	F	G	
Higginbotham, S.,2004,BRE15353	Prospective Cohort	USA, Not specified, Elderly Women's Health Study, 1993	45 -	559	38446.0	By Mail	6.8 years	FFQ-Semi-quantitative		Glucose unit/day	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	5	0.9 (0.63, 1.31)		0.40	A	C	D	E	F	G	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	>169.1 vs. <125.0	4	1.08 (0.82, 1.41)		0.68	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1343	47051	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Post-menopausal & Lean	>1.0 vs. >-1.0	5	1.06 (0.87, 1.28)		0.42	A	C	D	E	F	G	
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal & Lean	>169.1 vs. <125.0	4	0.97 (0.68, 1.39)		0.48	A	C	D	E	F	G	
Holmes, M. D.,2004,BRE04010	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1344	46111	By Mail	18.0 years / 0,04	FFQ-Semi-quantitative		Bread unit/day	Breast cancer incidence	Post-menopausal & Overweight	>1.0 vs. >-1.0	5	0.97 (0.8, 1.18)		0.95	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal & Overweight	>169.1 vs. <125.0	4	1.22 (0.82, 1.82)		0.21	A	C	D	E	F	G	
Higginbotham, S.,2004,BRE15353	Prospective Cohort	USA, Not specified, Elderly Women's Health Study, 1993	45 -	338	38446.0	By Mail	6.8 years	FFQ-Semi-quantitative		Glucose unit/day	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	5	1.27 (0.79, 2.03)		0.27	A	C	D	E	F	G	
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		Unit/day	Breast cancer incidence	Post-menopausal	100.0 (continuous)	1	1.04 (0.9, 1.19)		0.99	B	C	D	E	F		
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		Unit/day	Breast cancer ER+ incidence	Post-menopausal	100.0 (continuous)	1	0.99 (0.84, 1.17)		0.99	B	C	D	E	F		
Nielsen, T. G.,2005,BRE23581	Prospective Cohort	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23870.0	By Mail	6.6 years	FFQ (nos)		Unit/day	Breast cancer ER- incidence	Post-menopausal	100.0 (continuous)	1	1.17 (0.86, 1.59)		0.99	B	C	D	E	F		
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.19 (0.93, 1.52)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer ER+/PR+ incidence	Post-menopausal	1.0 (continuous)	1	1.11 (0.78, 1.59)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer ER+/PR- incidence	Post-menopausal	1.0 (continuous)	1	1.32 (0.6, 2.9)			A				E	F	G
Giles, G. G.,2006,BRE22430	Prospective Cohort	Australia, Post-menopausal MCCS, 1990	40 - 69		12273.0	Unspecified	9.1 years	FFQ (nos)		SD Units	Breast cancer ER-/PR- incidence	Post-menopausal	1.0 (continuous)	1	0.81 (0.46, 1.44)			A				E	F	G
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	128	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic load, energy-adjusted glycemic load		Invasive & In situ breast cancer incidence	Post-menopausal	>133.8 vs. <103.2	5	1.67 (0.8, 3.46)			B	C	D	E	F	G	

Menopausal status not specified

Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		49111.0	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence	HRT - No	>169.1 vs. <125.0	4	0.94 (0.65, 1.38)		0.69	A	C	D	E	F	G
Navarro Silvera S.A.,2004,BRE24119	Prospective Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	1450	811648	Through health org. (screening, health insurance)	16.6 years	FFQ (nos)		g/day	Breast cancer incidence		>175.1 vs. <119.0	5	0.95 (0.79, 1.14)		0.70	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Sieri, S. et al.,2007,BRE0142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	289	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic load, energy-adjusted glycemic load		Invasive & In situ breast cancer incidence		>133.8 vs. <103.2	5	2.53 (1.54, 4.16)		0.001		B	C	D	E	F	G
Sieri, S. et al.,2007,BRE0142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	147	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic load, energy-adjusted glycemic load		Invasive & In situ breast cancer incidence	BMI < 25	>133.8 vs. <103.2	5	5.79 (2.6, 12.9)				B	C	D	E	F	G
Sieri, S. et al.,2007,BRE0142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	142	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Glycemic load, energy-adjusted glycemic load		Invasive & In situ breast cancer incidence	BMI >=25	>133.8 vs. <103.2	5	1.31 (0.66, 2.61)				B	C	D	E	F	G

5.2

Animal fat

Pre-menopausal

Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	g/day	Breast cancer incidence	Pre-menopausal	101.1 vs. 57.5	5	1.12 (0.78, 1.61)		0.38	A	C	D	E	F	G
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Post-menopausal

Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		g/month	Breast cancer incidence	Post-menopausal	1780.0 - 10603.0 vs. 0 - 893.0	5	1.12 (0.78, 1.61)			A	B					
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	36.3 - 75.9 vs. <27.6	3	1.84 (63.0, 5.43)		0.251		B	C	E	G		

Menopausal status not specified

Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>42.0 vs. <33.2	3	1.02 (0.78, 1.33)		0.87	A				E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>42.0 vs. <33.2	3	1.41 (0.76, 2.63)		0.79	A				E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	11	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>42.0 vs. <33.2	3	1.22 (0.27, 5.45)		0.79	A				E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>42.0 vs. <33.2	3	0.79 (0.42, 1.46)		0.47	A				E	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Voorrips, L. E., 2002, BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		71.0 vs. 35.0	5	1.05 (0.79, 1.4)		0.87	A	B	C	D	E	F	G
Frazier L.A., 2003, BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	g/day	Breast cancer incidence		84.7 vs. 25.5	5	1.01 (null, null)		.96	A	C	D	E	F	G	

Cholesterol

Pre-menopausal

Willett, W. C., 1987, BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59		89538.0	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative			Breast cancer incidence	Pre-menopausal	Quantile 5 vs. Quantile 1	5	1.0 (null, null)		0.76	A	C	D	E	F	G
Willett, W. C., 1992, BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	527	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Pre-menopausal	Quantile 5 vs. Quantile 1	5	1.23 (0.93, 1.62)		0.11	A	C	D	E	F	G
Holmes, M. D., 1999, BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative	100mg/1000kcal	mg/1000 kcal/day	Invasive breast cancer incidence	Pre-menopausal	100.0 (continuous)	1	1.09 (0.98, 1.21)			A	C	D	E	F	G
Cho, E., 2003, BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		mg/1000 Kcal	Invasive breast cancer incidence	Pre-menopausal	178.0 vs. 93.0	5	1.16 (0.87, 1.55)		.14	A	C	D	E	F	G

Post-menopausal

Willett, W. C., 1987, BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59		89538.0	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.86 (null, null)		0.62	A	C	D	E	F	G
Kushi L. H., 1992, BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130442	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		mg/day	Breast cancer incidence	Post-menopausal	394.4 vs. 201.8	4	1.24 (0.87, 1.76)		0.2	A	C	D	E	F	G
Willett, W. C., 1992, BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	774	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.92 (0.73, 1.15)		0.67	A	C	D	E	F	G
Holmes, M. D., 1999, BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative	100mg/1000kcal	mg/1000 kcal/day	Invasive breast cancer incidence	Post-menopausal	100.0 (continuous)	1	0.96 (0.88, 1.04)			A	C	D	E	F	G

Menopausal status not specified

Jones, D. Y., 1987, BRE04461	Prospective Cohort	US, Multi-ethnic NHANES I, 1971	25 - 74	86	4902	General population (survey)	10.0 years / 776	24h Recall		mg/day	Breast cancer incidence		>415.0 vs. <129.9	4	0.7 (0.36, 1.37)		0.12	A	B	C	D	F
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Willett, W. C.,1987,BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	601	89538	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.91 (0.7, 1.18)		0.43	A	C	D	E	F	G	
Knekt, P.,1990,BRE04898	Prospective Cohort	Finland, Not specified, Screening Program Mobile Clinic Health Examination Survey, 1973	20 - 69		3988.0	Through health org. (screening, health insurance)	20.0 years	Dietary History questionnaire		mg/day	Breast cancer incidence		>450.0 vs. <315.0	3	2.21 (0.97, 5.02)		0.09	A			E			
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692674	By Mail	8.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer incidence		>408.0 vs. <246.9	5	1.0 (0.85, 1.18)		0.80	A	C	D	E	F	G	
Van den Brandt, P.A.,1993,BRE16919	Prospective Cohort	the Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	437	5187	By Mail	3.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		>1.0 vs. >-1.0	5	1.09 (0.74, 1.61)		0.59	A	B	C	D	E	F	G
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER+/PR+ incidence		>318.0 vs. <243.0	3	1.12 (0.85, 1.45)		0.43	A			E			
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER+/PR- incidence		>318.0 vs. <243.0	3	0.97 (0.55, 1.69)		0.92	A			E			
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER-/PR+ incidence		>318.0 vs. <243.0	3	0.56 (0.13, 2.36)		0.49	A			E			
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		mg/day	Breast cancer ER-/PR- incidence		>318.0 vs. <243.0	3	1.03 (0.52, 2.02)		0.98	A			E			
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		mg/1000 kcal/day	Invasive breast cancer incidence		100.0 (continuous)	1	1.0 (0.94, 1.06)			A	C	D	E	F	G	

Cis unsaturated fatty acids

Menopausal status not specified

Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		45.0 vs. 26.0	5	0.79 (0.54, 1.17)		.04	A	B	C	D	E	F	G
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Erythrocyte 20:4/20:3

Post-menopausal

Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmö Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire		Unit	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.06 (0.97, 1.17)		0.19 2							
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmo Diet and Cancer, 1991	45 - 73	304	11726.0	Cancer registry	9.5 years	diet history questionnaire	Dietary fat intake	g/day	Breast cancer incidence	Post-meno, no dietary change	96.1 vs. 62.5	5	1.22 (0.85, 1.77)		0.14	A					E	G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmo Diet and Cancer, 1991	45 - 73	428	11726.0	Cancer registry	9.5 years	diet history questionnaire	Dietary fat intake	g/day	Breast cancer incidence	Post-menopausal	96.1 vs. 62.5	5	1.21 (0.9, 1.64)		0.14	A					E	G

Fat from fermented milk products

Post-menopausal

Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Energy-adjusted fat intakes from fermented milk products	g/day	Breast cancer incidence	Post-menopausal	High vs. Zero	3	0.63 (0.42, 0.94)		0.006		B	C	D	E	F	G
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Fat from fermented milk products, adjusted for SFA, lowest exposure category	g/day	Breast cancer incidence	Post-menopausal	High vs. Zero	3	0.62 (0.42, 0.93)		0.006		B	C	D	E	F	G
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Fat from fermented milk products, adjusted for MUFA, lowest exposure category	g/day	Breast cancer incidence	Post-menopausal	High vs. Zero	3	0.65 (0.43, 0.97)		0.008		B	C	D	E	F	G
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Fat from fermented milk products, adjusted for omega6PUFA, lowest exposure	g/day	Breast cancer incidence	Post-menopausal	High vs. Zero	3	0.7 (0.46, 1.05)		0.021		B	C	D	E	F	G
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Fat from fermented milk products, adjusted for omega3PUFA, lowest exposure	g/day	Breast cancer incidence	Post-menopausal	High vs. Zero	3	0.64 (0.43, 0.96)		0.009		B	C	D	E	F	G

Fat/Fiber

Menopausal status not specified

Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)			Invasive breast cancer incidence		Quantile 5 vs. <2.5	5	1.1 (0.8, 1.4)		0.7	A		C	D	E	F	G
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n-3/n-6 fatty acids

Post-menopausal

Wirfalt, E.,2002,BRE13504	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	237	673	By Mail	8.0 years	7-day Record + Questionnaire		g/day	Breast cancer incidence	Post-menopausal	0.33 vs. 0.15	5	0.66 (0.41, 1.08)		0.137		B	C	D	E	F	
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire	percent of total fatty acids		Breast cancer incidence	Post-menopausal		1	null (null, null)									

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Willett, W. C.,1991,BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59		89538.0	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.77 (null, null)		0.22	A	C	D	E	F	G	
Howe, G. R.,1991,BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59	287	56837.0	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire		g/day	Breast cancer incidence	Post-menopausal	77.0 (continuous)	1	1.17 (0.79, 1.72)			A			E		G	
Kushi L. H.,1992,BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130443	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	80.7 vs. 56.6	4	1.38 (0.86, 2.21)		0.18	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	774	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.91 (0.73, 1.14)		0.61	A	C	D	E	F	G	
Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		g/month	Breast cancer incidence	Post-menopausal	2344.0 - 13422.0 vs. 0 - 1268.0	5	0.99 (0.69, 1.41)			A	B					
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S, White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall		g/day	Breast cancer incidence	Post-menopausal	28.0 (continuous)	1	2.01 (1.19, 3.41)			A	C	D	E			
Wirfalt, E.,2002,BRE13504	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	237	673	By Mail	8.0 years	7-day Record + Questionnaire		g/day	Breast cancer incidence	Post-menopausal	105.0 vs. 69.0	5	1.51 (0.92, 2.49)		0.019		B	C	D	E	F	
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	62.8 - 146.6 vs. <54.3	3	3.47 (1.43, 8.44)		0.005		B	C		E		G
Byrne, C.,2002,BRE01315	Prospective Cohort	U.S, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.94 (0.77, 1.15)		0.57	A	C	D	E	F	G	
Mattisson, I.,2004,BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years	7-day Record + Questionnaire		g/day	Breast cancer incidence	Post-menopausal	100.0 vs. 65.0	5	1.34 (0.94, 1.9)		0.018	A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Kinlen, L. J.,1982,BRE17702	Historical Cohort	Britain, Not specified, Religious Orders Britain, 1978	- 85	31	2813.0	Through social organization (profession, religion)	66.0 years		estimated in no meat group (1769)	g/week	Breast cancer cancer death		not know vs. low	4	1.33 (null, null)			A						
Jones, D. Y.,1987,BRE04461	Prospective Cohort	US, Multi-ethnic NHANES I, 1971	25 - 74	86	4912	General population (survey)	10.0 years / 776	24h Recall		g/day	Breast cancer incidence		>74.0 vs. <37.9	4	0.34 (0.16, 0.73)		0.03	A	B	C	D		F	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Willett, W. C.,1987,BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	601	89538	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.82 (0.64, 1.05)		0.11	A	C	D	E	F	G	
Knekt, P.,1990,BRE04898	Prospective Cohort	Finland, Not specified, Screening Program Mobile Clinic Health Examination Survey, 1973	20 - 69		3988.0	Through health org. (screening, health insurance)	20.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>97.3 vs. <71.1	3	1.72 (0.61, 4.82)		0.10	A			E			
Howe, G. R.,1991,BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59		56837.0	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		77.0 (continuous)	1	1.35 (1.0, 1.82)			A			E		G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1240	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Family History BC - No	Quantile 5 vs. Quantile 1	5	0.94 (null, null)		0.73	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	199	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Family History BC - Yes	Quantile 5 vs. Quantile 1	5	0.66 (null, null)		0.26	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	203	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Lean	Quantile 5 vs. Quantile 1	5	1.06 (null, null)		0.91	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692676	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>82.0 vs. <57.9	5	0.9 (0.77, 1.07)		0.47	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	980	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Overweight	Quantile 5 vs. Quantile 1	5	0.9 (null, null)		0.56	A	C	D	E	F	G	
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.64 (0.43, 0.96)		0.07	A			E			
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		95000.0	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		100.0 (continuous)	1	1.04 (0.64, 1.68)			A						
Van den Brandt, P.A.,1993,BRE16919	Prospective Cohort	the Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	437	5188	By Mail	3.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		>1.0 vs. >-1.0	5	1.08 (0.73, 1.59)		0.32	A	B	C	D	E	F	G
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		123.0 vs. 28.0	5	1.49 (0.89, 2.48)		0.09							
Gaard.,1995,BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	248	280232	By Mail	10.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>61.0 vs. <49.9	4	1.25 (0.86, 1.81)		0.18	A			D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>72.0 vs. <61.0	3	1.22 (0.94, 1.59)		0.14	A					E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>72.0 vs. <61.0	3	1.05 (0.61, 1.81)		0.86	A					E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>72.0 vs. <61.0	3	0.47 (0.12, 1.91)		0.32	A					E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>72.0 vs. <61.0	3	0.73 (0.38, 1.38)		0.38	A					E		
Byrne, C.,1996,BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	52	23840	Unspecified	3.9 years / 252	FFQ (nos)	fat residual adjusted for total energy		Breast cancer incidence		Quantile 4 vs. Quantile 1	4	0.98 (0.4, 2.2)			A					E		
Wolk, A.,1998,BRE13548	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61147.0	Through health org. (screening, health insurance)	4.2 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>50.21 vs. <40.29	4	1.0 (0.76, 1.32)		.82	A	B	C	D	E	F		
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		4° quartile vs. 1° quartiles	2	1.37 (0.99, 1.89)				A	B	C	D	E	F	G
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	796	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		86.0 vs. 61.0	5	1.16 (0.87, 1.56)		.23	A	B	C	D	E	F	G	
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		<75.0 vs. <34.0	5	0.8 (0.6, 1.2)		0.4	A		C	D	E	F	G	
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	g/day	Breast cancer incidence		107.5 vs. 35.5	5	0.92 (null, null)		0.32	A		C	D	E	F	G	
Bingham, S.A.,2003,BRE14387	Nested Case Control	UK, Not specified EPIC-UK, 1993	45 - 74		13070.0	Contact by GP	7.0 years	7-day Record + Questionnaire	from 7 day diary	g/day	Invasive breast cancer incidence		92.4 vs. 37.14	5	1.79 (0.89, 3.56)		0.051			C	D		F	G	
Bingham, S.A.,2003,BRE14387	Nested Case Control	UK, Not specified EPIC-UK, 1993	45 - 74		13070.0	Contact by GP	7.0 years	7-day Record + Questionnaire	from FFQ	g/day	Invasive breast cancer incidence		113.38 vs. 38.62	5	1.31 (0.65, 2.64)		0.520			C	D		F	G	

Total fatty acids

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		80.0 vs. 56.0	5	1.13 (0.84, 1.52)		0.29	A	B	C	D	E	F	G

Unsaturated fat

Menopausal status not specified

Löf, M. et al.,2007,BRE80144	Prospective Cohort	Sweden Women's Lifestyle and Health Study	30 - 49	974	43595	Cancer registry	13.0 years	FFQ	Unsaturated fat, mono and polyunsaturated fat	g/day	Invasive breast cancer incidence		10.0 (continuous)	1	0.79 (0.62, 1.01)			A	B	C	D	E	F	
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Unsaturated fatty acids

Post-menopausal

Byrne, C.,2002,BRE01315	Prospective Cohort	U.S. Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.16 (0.92, 1.46)		0.30	A		C	D	E	F	G
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Vegetable fat

Pre-menopausal

Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	g/day	Breast cancer incidence	Pre-menopausal	60.9 vs. 30.1	5	0.58 (0.38, 0.86)		0.005	A		C	D	E	F	G
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Post-menopausal

Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		g/month	Breast cancer incidence	Post-menopausal	699.0 - 3108.0 vs. 0 - 380.0	5	1.07 (0.76, 1.5)							A	B		
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	30.0 - 129.9 vs. <22.3	3	0.88 (0.29, 2.66)		0.880			B	C		E	G	

Menopausal status not specified

Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>31.4 vs. <23.9	3	1.11 (0.85, 1.46)		0.50	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>31.4 vs. <23.9	3	0.89 (0.51, 0.54)		0.67	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>31.4 vs. <23.9	3	0.8 (0.21, 2.98)		0.73	A						E	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments							
																		A	B	C	D	E	F	G	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>31.4 vs. <23.9	3	1.05 (0.56, 1.97)		0.90	A						E	
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		38.0 vs. 5.0	5	1.02 (0.75, 1.38)		0.85	A	B	C	D	E	F	G	
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	g/day	Breast cancer incidence		28.3 vs. 5.4	5	0.85 (null, null)		0.05	A		C	D	E	F	G	

5.2.2

Erythrocyte 15:0

Post-menopausal

Pala V.,2001,BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.02 Erythrocyte saturated 15:0		Breast cancer incidence	Post-menopausal	>19.0 vs. <0.15	3	0.93 (0.46, 1.89)		.86									
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire		%	Breast cancer incidence	Post-menopausal	0.1 (continuous)	1	0.93 (0.7, 1.22)		0.612									

Erythrocyte 17:0

Post-menopausal

Pala V.,2001,BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.02 Erythrocyte saturated 17:0		Breast cancer incidence	Post-menopausal	>0.38 vs. <0.32	3	0.77 (0.38, 1.58)		.48									
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire		%	Breast cancer incidence	Post-menopausal	0.1 (continuous)	1	0.98 (0.72, 1.36)		0.947									

Erythrocyte Arachidic acid

Post-menopausal

Pala V.,2001,BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.02 Erythrocyte saturated 20:0		Breast cancer incidence	Post-menopausal	>0.08 vs. <0.06	3	0.66 (0.25, 1.75)		.55									
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Erythrocyte Myristic acid

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kushi L. H.,1992,BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130444	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	29.3 vs. 18.8	4	1.07 (0.68, 1.68)			A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	774	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.91 (0.73, 1.14)			A	C	D	E	F	G	
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S, White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall			Breast cancer incidence	Post-menopausal		1	null (null, null)									
Wirfalt, E.,2002,BRE13504	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	237	673	By Mail	8.0 years	7-day Record + Questionnaire		g/day	Breast cancer incidence	Post-menopausal	53.0 vs. 28.0	5	0.95 (0.57, 1.61)		0.83		B	C	D	E	F	
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	22.2 - 43.9 vs. <18.3	3	1.12 (0.31, 4.04)		0.76		B	C		E	G	
Byrne, C.,2002,BRE01315	Prospective Cohort	U.S, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.88 (0.7, 1.12)		0.05	A	C	D	E	F	G	
Löf, M. et al.,2007,BRE80144	Prospective Cohort	Sweden Women's Lifestyle and Health Study	30 - 49	542	29590	Cancer registry	13.0 years	FFQ	SFA	g/day	Invasive breast cancer incidence	Age >= 50 yrs	37.6 vs. 12.9	5	1.29 (0.66, 2.5)		0.44	A	B	C	D	E	F	

Menopausal status not specified

Jones, D. Y.,1987,BRE04461	Prospective Cohort	US, Multi-ethnic NHANES I, 1971	25 - 74	86	4902	General population (survey)	10.0 years / 776	24h Recall		g/day	Breast cancer incidence		>27.0 vs. <12.9	4	0.29 (0.12, 0.67)		0.04	A	B	C	D		F
Willett, W. C.,1987,BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	601	89543	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.84 (0.66, 1.08)		0.06	A	C	D	E	F	G
Knekt, P.,1990,BRE04898	Prospective Cohort	Finland, Not specified, Screening Program Mobile Clinic Health Examination Survey, 1973	20 - 69		3988.0	Through health org. (screening, health insurance)	20.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>55.4 vs. <39.5	3	1.36 (0.5, 3.73)		0.31	A				E	
Howe, G. R.,1991,BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59	519	1182	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.08 (0.73, 1.59)		.10	A				E	G
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692674	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>34.0 vs. <21.9	5	0.86 (0.73, 1.02)		0.22	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.9 (0.61, 1.34)		0.47	A						E	
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		95000.0	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		45.0 (continuous)	1	1.11 (0.65, 1.9)			A							
Van den Brandt, P.A.,1993,BRE16919	Prospective Cohort	the Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	437	5187	By Mail	3.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		>1.0 vs. >-1.0	5	1.39 (0.94, 2.06)		0.049	A	B	C	D	E	F	G	
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		50.0 vs. 11.0	5	1.47 (0.88, 2.46)		0.09								
Gaard.,1995,BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	248	281925	By Mail	10.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>28.0 vs. <19.9	4	1.01 (0.75, 1.57)		0.74	A			D	E	F	G	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>25.4 vs. <21.5	3	1.18 (0.91, 1.53)		0.20	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>25.4 vs. <21.5	3	1.58 (0.89, 2.81)		0.11	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>25.4 vs. <21.5	3	0.91 (0.23, 3.63)		0.98	A						E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>25.4 vs. <21.5	3	0.74 (0.39, 1.41)		0.38	A						E	
Wolk, A.,1998,BRE13548	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61147.0	Through health org. (screening, health insurance)	4.2 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>21.71 vs. <16.29	4	1.09 (0.83, 1.42)		.83	A	B	C	D	E	F		
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		4° quartile vs. 1° quartiles	2	1.22 (0.91, 1.63)				A	B	C	D	E	F	G
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		38.0 vs. 22.0	5	1.4 (0.97, 2.03)		0.11	A	B	C	D	E	F	G	
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		<25.0 vs. <11.0	6	0.8 (0.6, 1.2)		0.2	A		C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	g/day	Breast cancer incidence		48.4 vs. 14.5	5	0.98 (null, null)		0.82	A	C	D	E	F	G	
Löf, M. et al.,2007,BRE80144	Prospective Cohort	Sweden Women's Lifestyle and Health Study	30 - 49	974	43595	Cancer registry	13.0 years	FFQ	SFA	g/day	Invasive breast cancer incidence		37.9 vs. 12.9	5	1.12 (0.69, 1.81)		0.65	A	B	C	D	E	F	

Serum 15:0

Pre-menopausal

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>0.43 vs. <0.34	3	0.42 (0.1, 1.8)		0.59								
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Post-menopausal

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>0.45 vs. <0.37	3	1.09 (0.36, 3.25)		0.98								
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Menopausal status not specified

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	0.77 (0.33, 1.77)		0.72								
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Serum 17:0

Pre-menopausal

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years				Breast cancer incidence	Pre-menopausal	>0.49 vs. <0.42	3	0.71 (0.17, 2.91)		0.68								
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Post-menopausal

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>0.5 vs. <0.43	3	1.26 (0.41, 3.9)		0.94								
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Menopausal status not specified

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years				Breast cancer incidence		>1.0 vs. >-1.0	3	1.08 (0.45, 2.56)		0.74								
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Serum Myristic acid

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	2.22 (0.78, 6.31)		0.14	A	C	F	G			
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>1.39 vs. <1.07	3	0.74 (0.21, 2.57)		0.73							

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.57 (0.23, 1.41)		0.37	A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>1.79 vs. <1.3	3	1.15 (0.42, 3.17)		0.38				

Menopausal status not specified

Chajes, V.,1999,BRE14597	Nested Case Control	Sweden, Not specified VIP + MONICA + MSP			29708.0	Unspecified	11.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	1.21 (0.56, 1.02)		0.679		C	D	F
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	197	197	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.91 (0.49, 1.67)		0.86	A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	0.96 (0.44, 2.11)		0.60				

Serum Palmitic acid

Pre-menopausal

Vatten, L.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.6 (0.3, 1.2)		0.11				
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.2 (0.45, 3.21)		0.87	A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>25.94 vs. <24.48	3	2.53 (0.79, 8.06)		0.33				

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	2.57 (0.99, 6.61)		0.07	A	C	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Sieri, Sabina, 2002, BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	30.0 - 104.3 vs. <23.5	3	2.96 (0.7, 12.6)		0.139			B	C	E	G	
Löf, M. et al., 2007, BRE80144	Prospective Cohort	Sweden Women's Lifestyle and Health Study	30 - 49	542	29590	Cancer registry	13.0 years	FFQ	MUFA	g/day	Invasive breast cancer incidence	Age >= 50 yrs	26.4 vs. 10.4	5	0.45 (0.25, 0.99)		0.01	A	B	C	D	E	F	

Menopausal status not specified

Jones, D. Y., 1987, BRE04461	Prospective Cohort	US, Multi-ethnic NHANES I, 1971	25 - 74	86	4902	General population (survey)	10.0 years / 776	24h Recall		g/day	Breast cancer incidence		>29.0 vs. <13.9	4	0.59 (0.3, 1.13)		0.14	A	B	C	D	F		
Knekt, P., 1990, BRE04898	Prospective Cohort	Finland, Not specified, Screening Program Mobile Clinic Health Examination Survey, 1973	20 - 69		3988.0	Through health org. (screening, health insurance)	20.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>31.1 vs. <22.6	3	2.7 (0.99, 7.37)		0.05	A				E		
Howe, G. R., 1991, BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59	519	1182	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.23 (0.81, 1.89)		.04	A				E	G	
Willett, W. C., 1992, BRE13438	Prospective Cohort	U.S., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692676	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>34.0 vs. <22.9	5	0.92 (0.78, 1.09)		0.56	A	C	D	E	F	G	
Giovannucci, E., 1993, BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.04 (0.7, 1.55)		0.25	A				E		
Van den Brandt, P.A., 1993, BRE16919	Prospective Cohort	the Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	437	5187	By Mail	3.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		>1.0 vs. >-1.0	5	0.75 (0.5, 1.12)		0.13	A	B	C	D	E	F	G
Gaard., 1995, BRE17516	Prospective Cohort	Norway, Not specified, Screening Program Norway National Health Screening Service, 1974	35 - 49	248	281925	By Mail	10.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>21.0 vs. <15.9	4	1.72 (1.19, 2.49)		0.01	A			D	E	F	G
Kushi, L. H., 1995, BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>26.7 vs. <22.6	3	1.27 (0.97, 1.66)		0.09	A				E		
Kushi, L. H., 1995, BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>26.7 vs. <22.6	3	0.89 (0.5, 1.59)		0.70	A				E		
Kushi, L. H., 1995, BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>26.7 vs. <22.6	3	0.65 (0.18, 2.31)		0.51	A				E		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>26.7 vs. <22.6	3	0.8 (0.44, 1.46)		0.46	A						E	
Wolk, A.,1998,BRE13548	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61147.0	Through health org. (screening, health insurance)	4.2 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>18.41 vs. <14.39	4	0.95 (0.72, 1.24)		.38	A	B	C	D	E	F		
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		4° quartile vs. 1° quartiles	2	1.22 (0.93, 1.59)				A	B	C	D	E	F	G
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		27.0 vs. 18.0	5	0.61 (0.38, 0.96)		.001	A	B	C	D	E	F	G	
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	g/day	Breast cancer incidence		39.8 vs. 13.3	5	0.89 (null, null)		0.28	A		C	D	E	F	G	
Löf, M. et al.,2007,BRE80144	Prospective Cohort	Sweden Women's Lifestyle and Health Study	30 - 49	974	43595	Cancer registry	13.0 years	FFQ	MUFA	g/day	Invasive breast cancer incidence		26.5 vs. 10.4	5	0.88 (0.53, 1.46)		0.65	A	B	C	D	E	F		

Oleic acid

Post-menopausal

Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S. White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall			Breast cancer incidence	Post-menopausal		1	null (null, null)										
Byrne, C.,2002,BRE01315	Prospective Cohort	U.S. Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.13 (0.81, 1.57)		0.67	A		C	D	E	F	G	
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire	percent of total fatty acids		Breast cancer incidence	Post-menopausal		1	null (null, null)										

Menopausal status not specified

Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		42.0 vs. 10.0	5	1.57 (0.9, 2.71)		0.24								
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		21.0 vs. 13.0	5	0.67 (0.44, 1.03)		.001	A	B	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		<29.0 vs. <13.0	5	0.9 (0.6, 1.2)		0.5	A	C	D	E	F	G	

Other 18:1 isomers

Menopausal status not specified

Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		2.3 vs. 0.4	5	0.89 (0.65, 1.21)		.91	A	B	C	D	E	F	G
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Palmitoleic acid

Post-menopausal

Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire	percent of total fatty acids		Breast cancer incidence	Post-menopausal		1	null (null, null)									
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Serum Cis MUFA

Pre-menopausal

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>31.2 vs. <27.71	3	1.67 (0.45, 6.15)		0.73							
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Post-menopausal

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>34.43 vs. <31.54	3	2.26 (0.54, 9.51)		0.32							
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Menopausal status not specified

Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	1.76 (0.7, 4.43)		0.33							
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Serum MUFA

Pre-menopausal

Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.6 (0.3, 1.4)		0.18							
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.13 (0.42, 3.04)		0.82	A	C			F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments										
																		A	B	C	D	E	F	G				
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>26.33 vs. <24.55	3	3.7 (0.84, 15.83)		0.21											

Menopausal status not specified

Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973			170000.0	Through network, paper, tv	18.0 years				Breast cancer incidence			1	null (null, null)																			
Chajes, V.,1999,BRE14597	Nested Case Control	Sweden, Not specified VIP + MONICA + MSP			29708.0	Unspecified	11.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	2.25 (0.98, 1.02)		0.205													C	D	F		
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	1.23 (0.65, 2.32)		0.33														A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	1.91 (0.78, 4.67)		0.25																	

Serum Palmitoleic acid

Pre-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.07 (0.41, 2.79)		0.77															A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>3.25 vs. <2.61	3	1.56 (0.45, 5.39)		0.88																		

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	1.27 (0.54, 3.09)		0.53																A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>4.61 vs. <3.57	3	0.89 (0.28, 2.83)		0.87																			

Menopausal status not specified

Chajes, V.,1999,BRE14597	Nested Case Control	Sweden, Not specified VIP + MONICA + MSP			29708.0	Unspecified	11.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.69 (0.3, 1.56)		0.384																	C	D	F	
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years				Breast cancer incidence		>1.0 vs. >-1.0	4	1.16 (0.62, 2.16)		0.53																	A	C	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kushi L. H.,1992,BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130443	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	15.8 vs. 9.2	4	1.49 (1.01, 2.2)		0.05	A	C	D	E	F	G	
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S, White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall			Breast cancer incidence	Post-menopausal		1	null (null, null)									
Wirfalt, E.,2002,BRE13504	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	237	673	By Mail	8.0 years	7-day Record + Questionnaire		g/day	Breast cancer incidence	Post-menopausal	19.0 vs. 9.3	5	3.02 (1.75, 5.21)		0.0007		B	C	D	E	F	
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	7.7 - 18.0 vs. <6.3	3	2.03 (0.68, 6.03)		0.202		B	C		E	G	
Löf, M. et al.,2007,BRE80144	Prospective Cohort	Sweden Women's Lifestyle and Health Study	30 - 49	542	29590	Cancer registry	13.0 years	FFQ	PUFA	g/day	Invasive breast cancer incidence	Age >= 50 yrs	11.2 vs. 4.3	5	0.54 (0.35, 0.85)		0.08	A	B	C	D	E	F	

Menopausal status not specified

Jones, D. Y.,1987,BRE04461	Prospective Cohort	US, Multi-ethnic NHANES I, 1971	25 - 74	86	4902	General population (survey)	10.0 years / 776	24h Recall		g/day	Breast cancer incidence		>9.0 vs. <2.9	4	0.73 (0.39, 1.36)		0.45	A	B	C	D	F		
Knekt, P.,1990,BRE04898	Prospective Cohort	Finland, Not specified, Screening Program Mobile Clinic Health Examination Survey, 1973	20 - 69		3988.0	Through health org. (screening, health insurance)	20.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		>6.8 vs. <4.5	3	1.23 (0.55, 2.75)		0.28	A				E		
Howe, G. R.,1991,BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59	519	1182	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire		g/day	Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.3 (0.93, 1.82)		.13	A				E	G	
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.83 (0.57, 1.21)		0.43	A				E		
Van den Brandt, P.A.,1993,BRE16919	Prospective Cohort	the Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	437	5187	By Mail	3.3 years / no lost	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		>1.0 vs. >-1.0	5	0.95 (0.64, 1.4)		0.85	A	B	C	D	E	F	G
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>13.1 vs. <10.6	3	0.93 (0.71, 1.22)		0.58	A				E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>13.1 vs. <10.6	3	0.9 (0.52, 1.54)		0.70	A				E		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>13.1 vs. <10.6	3	0.5 (0.12, 1.99)		0.32	A					E		
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>13.1 vs. <10.6	3	1.32 (0.73, 2.4)		0.32	A					E		
Wolk, A.,1998,BRE13548	Prospective Cohort	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 76		61147.0	Through health org. (screening, health insurance)	4.2 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>7.71 vs. <5.29	4	1.01 (0.8, 1.26)		.92	A	B	C	D	E	F		
Thiebaut, A. C.,2001,BRE12244	Prospective Cohort	France, Multi-ethnic, Registered teachers E3N-EPIC, 1990	40 - 65		65879.0	Through social organization (profession, religion)	3.4 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		4° quartile vs. 1° quartiles	2	1.14 (0.91, 1.42)				A	B	C	D	E	F	G
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		24.0 vs. 8.0	5	0.88 (0.65, 1.21)		.39	A	B	C	D	E	F	G	
Löf, M. et al.,2007,BRE80144	Prospective Cohort	Sweden Women's Lifestyle and Health Study	30 - 49	974	43595	Cancer registry	13.0 years	FFQ	PUFA	g/day	Invasive breast cancer incidence		11.2 vs. 4.3	5	0.72 (0.52, 1.0)		0.08	A	B	C	D	E	F		

Serum PUFA

Pre-menopausal

Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.6 (0.3, 1.4)		0.14							
Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.0 (0.4, 2.1)		0.75							
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.6 (0.24, 1.54)		0.39	A		C			F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>34.84 vs. <31.13	3	0.55 (0.15, 1.97)		0.43							

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.42 (0.17, 1.08)		0.09	A		C			F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Wirfalt, E.,2002,BRE13504	Nested Case Control	Sweden, Not specified, Post-menopausal Malmö Diet and Cancer, 1991	50 -	237	673	By Mail	8.0 years	7-day Record + Questionnaire		g/day	Breast cancer incidence	Post-menopausal	3.2 vs. 1.5	5	1.81 (1.09, 2.99)		0.026		B	C	D	E	F	G
Folsom AR,2004,BRE80171	Prospective Cohort	United States, Post menopausal Iowa Women's Health study	55 - 69	1885	41836.0	Cancer registry and death certificates and participant	14.0 years	FFQ	Omega-3 fatty acids from fish	g/day	Breast cancer Incidence		>0.27 vs. <0.05	5	0.91 (0.77, 1.08)		0.19	A	B	C	D	E	F	G

Menopausal status not specified

Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence		Quantile 4 vs. Quantile 1	4	0.87 (0.64, 1.18)		0.40	A	B	C	E	F	G
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n-3 fatty acids from fish

Pre-menopausal

Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	93	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence	Pre-menopausal	Quantile 4 vs. Quantile 1	4	0.9 (0.49, 1.65)		0.93	A	B	C	E	F	G
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Post-menopausal

Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	221	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	0.68 (0.47, 0.97)		0.02	A	B	C	E	F	G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	82	218	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTM1 null-null	2°-4° quartiles vs. 1°quartile	2	0.66 (0.37, 1.16)			A	B	C			G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	34	96	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTM1 null-null & GSTT1 null-	2°-4° quartiles vs. 1°quartile	2	0.62 (0.24, 1.59)			A	B	C			G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	98	248	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTM1 positive	2°-4° quartiles vs. 1°quartile	2	0.83 (0.48, 1.42)			A	B	C			G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	148	387	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTM1 positive or GSTP1 AA	2°-4° quartiles vs. 1°quartile	2	0.86 (0.56, 1.32)			A	B	C			G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	146	370	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTM1 positive or GSTT1	2°-4° quartiles vs. 1°quartile	2	0.84 (0.54, 1.29)			A	B	C			G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	115	304	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTP1 AA	2°-4° quartiles vs. 1°quartile	2	0.94 (0.58, 1.54)			A	B	C			G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	65	162	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTP1 AB/BB	2°-4° quartiles vs. 1°quartile	2	0.49 (0.26, 0.93)			A	B	C				G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	66	204	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTT1 null-null	2°-4° quartiles vs. 1°quartile	2	0.54 (0.29, 1.0)			A	B	C				G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	32	79	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTT1 null-null & GSTP1	2°-4° quartiles vs. 1°quartile	2	0.36 (0.14, 0.94)			A	B	C				G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	25	71	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTT1 null-null & GSTP1	2°-4° quartiles vs. 1°quartile	2	0.26 (0.08, 0.78)			A	B	C				G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	114	262	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTT1 positive	2°-4° quartiles vs. 1°quartile	2	0.95 (0.58, 1.56)			A	B	C				G
Gago-Dominguez, M.,2004,BRE18398	Nested Case Control	China, Asian, Post-menopausal Singapore, 1994	45 - 74	155	395	Through network, paper, tv	9.0 years	FFQ-Semi-quantitative		g/1000 Kcal	Breast cancer incidence	Post-menop & GSTT1 positive or GSTP1 AA	2°-4° quartiles vs. 1°quartile	2	0.88 (0.58, 1.34)			A	B	C				G

Menopausal status not specified

Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence		Quantile 4 vs. Quantile 1	4	0.72 (0.53, 0.98)		0.04	A	B	C				E	F	G
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n-3 fatty acids from other food (no marine)

Menopausal status not specified

Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.0 (0.73, 1.36)		0.97	A	B	C				E	F	G
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Serum 22:5,n-6

Pre-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.52 (0.56, 4.12)		0.37	A		C					F	G
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Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	1.28 (0.53, 3.13)		0.49	A		C						F	G
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Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	1.43 (0.76, 2.69)		0.22	A	C	F	G			

Serum Alpha-Linolenic acid

Pre-menopausal

Vatten, L.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.6 (0.3, 1.4)		0.15										
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.97 (0.41, 2.26)		0.84	A	C	F	G						

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.64 (0.26, 1.57)		0.23	A	C	F	G
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Menopausal status not specified

Vatten, L.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973			170000.0	Through network, paper, tv	18.0 years				Breast cancer incidence			1	null (null, null)													
Chajes, V.,1999,BRE14597	Nested Case Control	Sweden, Not specified VIP + MONICA + MSP			29708.0	Unspecified	11.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	1.36 (0.63, 2.96)		0.424		C	D	F							
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.8 (0.44, 1.46)		0.48	A	C	F	G							

Serum DHA

Pre-menopausal

Vatten, L.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.6 (0.3, 1.3)		0.41											
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.83 (0.27, 2.58)		0.51	A	C	F	G							

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.67 (0.27, 1.7)		0.41	A	C	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
<i>Menopausal status not specified</i>																									
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2097	121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		0.03 (continuous)	1	1.05 (1.0, 1.1)			A	C	D	E	F	G		
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		0.15 vs. 0.05	5	0.99 (0.73, 1.34)	.93		A	B	C	D	E	F	G	
Erythrocyte 20:2,n-6c																									
<i>Post-menopausal</i>																									
Pala V.,2001,BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.04.02 Erythrocyte n-6 fatty acids 20:2,n-6c		Breast cancer incidence	Post-menopausal	>0.27 vs. <0.23	3	0.52 (0.26, 1.02)	.04									
Erythrocyte 22:4,n-6c																									
<i>Post-menopausal</i>																									
Pala V.,2001,BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.04.02 Erythrocyte n-6 fatty acids 22:4,n-6c		Breast cancer incidence	Post-menopausal	>3.09 vs. <2.55	3	0.76 (0.35, 1.63)	.49									
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire		%	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.1 (0.8, 1.5)	0.557									
Erythrocyte 22:5,n-6c																									
<i>Post-menopausal</i>																									
Pala V.,2001,BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.04.02 Erythrocyte n-6 fatty acids 22:5,n-6c		Breast cancer incidence	Post-menopausal	>0.82 vs. <0.7	3	1.65 (0.74, 3.64)	.27									
Erythrocyte Arachidonic acid																									
<i>Post-menopausal</i>																									
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire		%	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.07 (0.93, 1.24)	0.361									
Erythrocyte C20:4																									
<i>Post-menopausal</i>																									
Pala V.,2001,BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.04.02 Erythrocyte n-6 fatty acids 20:4,n-6c		Breast cancer cancer death	Post-menopausal	>17.94 vs. <16.66	3	1.4 (0.64, 3.1)	.42									

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Willett, W. C.,1987,BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59		89538.0	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.9 (null, null)		0.04	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	774	89494.0	By Mail	8.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.91 (0.73, 1.14)		0.66	A	C	D	E	F	G	
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S, White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall			Breast cancer incidence	Post-menopausal		1	null (null, null)									
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	6.18 - 16.3 vs. <5.07	3	1.39 (0.51, 3.8)		0.455	B	C	E	G			
Byrne, C.,2002,BRE01315	Prospective Cohort	U.S, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.93 (0.74, 1.16)		0.75	A	C	D	E	F	G	
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire	percent of total fatty acids		Breast cancer incidence	Post-menopausal		1	null (null, null)									

Menopausal status not specified

Willett, W. C.,1987,BRE13442	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	601	89538	By Mail	4.0 years / 9,235 (10% do not return the FU questionnaire)	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	0.88 (0.69, 1.12)		0.16	A	C	D	E	F	G	
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	690675	By Mail	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>23.0 vs. <11.9	5	0.91 (0.77, 1.07)		0.73	A	C	D	E	F	G	
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		19.0 vs. 4.0	5	1.13 (0.65, 1.98)		0.47							
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2097	121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		1.0 (continuous)	1	0.95 (0.92, 0.98)			A	C	D	E	F	G	
Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		22.0 vs. 7.0	5	0.96 (0.71, 1.31)		.67	A	B	C	D	E	F	G
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		<16.0 vs. <6.0	5	0.9 (0.7, 1.3)		0.9	A	C	D	E	F	G	

n-6 fatty acids

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Wirfalt, E.,2002,BRE13504	Nested Case Control	Sweden, Not specified, Post-menopausal Malmö Diet and Cancer, 1991	50 -	237	673	By Mail	8.0 years	7-day Record + Questionnaire		g/day	Breast cancer incidence	Post-menopausal	16.0 vs. 7.2	5	3.02 (1.78, 5.13)		0.002		B	C	D	E	F	
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	152	11726.0	Cancer registry	9.5 years	diet history questionnaire	Omega-6 fatty acids intake	g/day	Breast cancer incidence	Post-meno & BMI >=27	14.1 vs. 6.6	5	1.07 (0.63, 1.8)		0.59	A						G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	276	11726.0	Cancer registry	9.5 years	diet history questionnaire	Omega-6 fatty acids intake	g/day	Breast cancer incidence	Post-meno & BMI<27	14.1 vs. 6.6	5	1.84 (1.24, 2.71)		0.002	A						G
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	304	11726.0	Cancer registry	9.5 years	diet history questionnaire	Omega-6 fatty acids intake	g/day	Breast cancer incidence	Post-meno, dietary change	14.1 vs. 6.6	5	0.69 (0.39, 1.22)		0.64	A				E	G	
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	304	11726.0	Cancer registry	9.5 years	diet history questionnaire	Omega-6 fatty acids intake	g/day	Breast cancer incidence	Post-meno, no dietary change	14.1 vs. 6.6	5	2.09 (1.42, 3.08)		0.0005	A				E	G	
Sonestedt, E. et al.,2007,BRE80147	Prospective Cohort	Sweden Malmö Diet and Cancer, 1991	45 - 73	428	11726.0	Cancer registry	9.5 years	diet history questionnaire	Omega-6 fatty acids intake	g/day	Breast cancer incidence	Post-menopausal	14.1 vs. 6.6	5	1.54 (1.13, 2.1)		0.004	A				E	G	
<i>Menopausal status not specified</i>																								
Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)			Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.22 (0.89, 1.67)		0.45	A	B	C		E	F	G
Serum 20:2,n-6																								
<i>Pre-menopausal</i>																								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.94 (0.38, 2.35)		0.51	A		C			F	G
<i>Post-menopausal</i>																								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.71 (0.27, 1.87)		0.83	A		C			F	G
<i>Menopausal status not specified</i>																								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.82 (0.43, 1.56)		0.47	A		C			F	G
Serum 22:4,n-6																								

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Pre-menopausal</i>																								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	Quantile 4 vs. >-1.0	4	1.86 (0.57, 6.01)	0.38		A	C	F	G			
<i>Post-menopausal</i>																								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.87 (0.35, 2.17)	0.63		A	C	F	G			
<i>Menopausal status not specified</i>																								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	1.17 (0.59, 2.3)	0.81		A	C	F	G			
Serum Arachidonic acid																								
<i>Pre-menopausal</i>																								
Vatten, L.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.7 (0.3, 1.6)	0.48								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.62 (0.23, 1.69)	0.68		A	C	F	G			
<i>Post-menopausal</i>																								
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.89 (0.4, 1.94)	0.64		A	C	F	G			
<i>Menopausal status not specified</i>																								
Vatten, L.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973			170000.0	Through network, paper, tv	18.0 years				Breast cancer incidence			1	null (null, null)									
Chajes, V.,1999,BRE14597	Nested Case Control	Sweden, Not specified VIP + MONICA + MSP			29708.0	Unspecified	11.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.51 (0.24, 1.09)	0.091			C	D	F			
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.81 (0.45, 1.47)	0.66		A	C	F	G			
Serum DH-Gamma-Linolenic acid																								
<i>Pre-menopausal</i>																								

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments										
																		A	B	C	D	E	F	G				
Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.5 (0.2, 1.1)		0.09											
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.9 (0.77, 4.72)		0.40	A		C					F	G		
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>1.07 vs. <0.82	3	0.66 (0.18, 2.48)		0.71											

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	1.21 (0.48, 3.03)		0.34	A		C					F	G		
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>1.13 vs. <0.91	3	0.79 (0.26, 2.41)		0.81											

Menopausal status not specified

Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973			170000.0	Through network, paper, tv	18.0 years				Breast cancer incidence			1	null (null, null)													
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	1.44 (0.77, 2.66)		0.27	A		C					F	G		
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	0.74 (0.32, 1.72)		0.66											

Serum Gamma-Linolenic acid

Pre-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.65 (0.57, 4.78)		0.39	A		C					F	G		
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>0.2 vs. <0.11	3	0.39 (0.09, 1.72)		0.10											

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	1.46 (0.54, 3.96)		0.79	A		C					F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments					
																		A	B	C	D	E	F
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	1.01 (0.52, 1.95)		0.98	A	C	F	G		
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	0.29 (0.12, 0.73)		0.05						

Serum PUFA n-6

Pre-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.64 (0.22, 1.86)		0.22	A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>32.13 vs. <28.65	3	0.47 (0.13, 1.66)		0.47				

Post-menopausal

Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.69 (0.28, 1.73)		0.49	A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>28.63 vs. <24.06	3	0.24 (0.07, 0.89)		0.03				

Menopausal status not specified

Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973			170000.0	Through network, paper, tv	18.0 years				Breast cancer incidence			1	null (null, null)						
Vatten, L. J.,1993,BRE12821	Nested Case Control	Norway, Not specified Norway Serum Bank, 1973		65	195	Through network, paper, tv	18.0 years			mg/liter	Breast cancer incidence		>1.0 vs. >-1.0	4	0.5 (0.2, 1.0)		0.05				
Chajes, V.,1999,BRE14597	Nested Case Control	Sweden, Not specified VIP + MONICA + MSP			29708.0	Unspecified	11.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.91 (0.4, 2.06)		0.939		C	D	F
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65		null	Through network, paper, tv	4.3 years			%	Breast cancer incidence		>1.0 vs. >-1.0	4	0.7 (0.36, 1.36)		0.20	A	C	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	0.35 (0.14, 0.84)		0.04				

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
5.2.4.3																									
Conjugated linoleic acid																									
<i>Menopausal status not specified</i>																									
Voorrips, L., 2002, BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		0.29 vs. 0.07	5	1.24 (0.91, 1.69)		.02	A	B	C	D	E	F	G	
Serum 18:2 CLA																									
<i>Pre-menopausal</i>																									
Rissanen, H., 2003, BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	27	51	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Pre-menopausal	>0.53 vs. <0.43	3	0.91 (0.22, 3.8)		0.94								
<i>Post-menopausal</i>																									
Rissanen, H., 2003, BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	31	59	Through network, paper, tv	10.0 years			%	Breast cancer incidence	Post-menopausal	>0.59 vs. <0.47	3	1.58 (0.39, 6.43)		0.57								
<i>Menopausal status not specified</i>																									
Rissanen, H., 2003, BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89	58	110	Through network, paper, tv	10.0 years			%	Breast cancer incidence		>1.0 vs. >-1.0	3	1.2 (0.44, 3.27)		0.64								
5.2.5																									
Erythrocyte Elaidic acid																									
<i>Post-menopausal</i>																									
Pala V., 2001, BRE20601	Nested Case Control	Italy, Caucasian ORDET study, 1987	42 - 69	71	141		5.5 years		05.02.03 Erythrocyte mono saturated 18:1,n-9t		Breast cancer incidence	Post-menopausal	>0.24 vs. <0.16	3	0.71 (0.3, 1.64)		.42								
Serum Elaidic acid																									
<i>Pre-menopausal</i>																									
Saadatian-Elahi, M., 2002, BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years				Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	1.02 (0.36, 2.88)		0.80	A		C			F	G	
<i>Post-menopausal</i>																									
Saadatian-Elahi, M., 2002, BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years			%	Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.36 (0.13, 1.03)		0.13	A		C			F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Byrne, C.,2002,BRE1315	Prospective Cohort	U.S, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.91 (0.73, 1.13)		0.33	A	C	D	E	F	G	

Trans Unsaturated Fatty Acids

Menopausal status not specified

Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		3.6 vs. 1.5	5	1.3 (0.93, 1.8)		.01	A	B	C	D	E	F	G
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Trans Vaccenic acid

Menopausal status not specified

Voorrips, L. E.,2002,BRE13011	Case Cohort	The Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	783	62573.0	By Mail	6.3 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		1.2 vs. 0.3	5	1.34 (0.98, 1.82)		.006	A	B	C	D	E	F	G
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5.2.6

Other dietary lipids, cholesterol, plant sterols a

Post-menopausal

Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Cholesterol intake	mg/1000 Kcal	Breast cancer ER+/PR+ incidence		100.0 (continuous)	1	1.0 (0.99, 1.01)			A	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Cholesterol intake	mg/1000 Kcal	Breast cancer ER+/PR- incidence		100.0 (continuous)	1	1.0 (0.98, 1.02)			A	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Cholesterol intake	mg/1000 Kcal	Breast cancer ER-/PR- incidence		100.0 (continuous)	1	1.0 (0.98, 1.01)			A	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Cholesterol intake	mg/1000 Kcal	Breast cancer ER-/PR- incidence		100.0 (continuous)	1	1.01 (0.97, 1.05)			A	C	D	E	F	G

5.3

Protein

Menopausal status not specified

Howe, G. R.,1991,BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59		56837.0	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire	for 693 cal/day	cal/day	Breast cancer incidence		693.0 (continuous)	1	0.86 (0.35, 2.16)			A				E	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		<80.0 vs. <42.0	5	0.9 (0.6, 1.4)		0.6	A	C	D	E	F	G	
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	g/day	Breast cancer incidence		93.5 vs. 34.9	5	0.88 (null, null)		0.27	A	C	D	E	F	G	

5.3.1

Methionine

Pre-menopausal

Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total methionine, from foods and supplements, cumulative average	g/day	Breast cancer ER- incidence	Pre-menopausal	2.5 vs. 1.6	5	0.86 (0.54, 1.36)		0.89	A	C	D	E	F	G
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total methionine, from foods and supplements, cumulative average	g/day	Invasive breast cancer incidence	Pre-menopausal	2.5 vs. 1.6	5	1.1 (0.89, 1.36)		0.47	A	C	D	E	F	G

Post-menopausal

Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S, Not specified CPS-II US cohort, 1982-1998		1303	65258	By Mail	6.0 years / 7592	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>=1.04 vs. <0.64	5	0.92 (0.77, 1.11)				A	B	C	D	E	F	G
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Total protein

Pre-menopausal

Holmes, M.D.,2003,BRE05140	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	>20.7 vs. <16.4	5	1.09 (0.86, 1.37)		0.6	A	C	D	E	F	G
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Post-menopausal

Kushi L. H.,1992,BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130443	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	97.1 vs. 66.0	4	1.0 (0.65, 1.55)		0.83	A	C	D	E	F	G
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S, White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall		g/day	Breast cancer incidence	Post-menopausal	21.0 (continuous)	1	1.55 (0.89, 2.69)			A	C	D	E		
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	71.5 - 111.4 vs. <64.1	3	1.44 (0.7, 2.97)		0.285		B	C	E		G
Byrne, C.,2002,BRE01315	Prospective Cohort	U.S, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.02 (0.84, 1.25)		0.62	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	>20.7 vs. <16.4	5	1.01 (0.9, 1.14)		0.66	A	C	D	E	F	G	

Menopausal status not specified

Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.25 (0.86, 1.84)		0.27	A				E	
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65		14291.0	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence		110.0 vs. 31.0	5	1.13 (0.64, 2.02)		0.51						
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	329	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR+ incidence		>85.0 vs. <72.0	3	0.84 (0.64, 1.1)		0.22	A				E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	75	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER+/PR- incidence		>85.0 vs. <72.0	3	1.31 (0.74, 2.31)		0.38	A				E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	14	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR+ incidence		>85.0 vs. <72.0	3	0.98 (0.24, 3.93)		0.99	A				E	
Kushi, L. H.,1995,BRE05142	Prospective Cohort	US, Multi-ethnic Iowa Women's Health Study	55 - 69	61	34388.0	By Mail	6.0 years	FFQ-Semi-quantitative		g/day	Breast cancer ER-/PR- incidence		>85.0 vs. <72.0	3	1.14 (0.59, 2.2)		0.73	A				E	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		>20.7 vs. <16.4	5	1.05 (0.95, 1.16)		0.37	A	C	D	E	F	G

5.3.2

Plant protein

Pre-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	>5.3 vs. <3.9	5	1.04 (0.82, 1.31)		0.87	A	C	D	E	F	G
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Post-menopausal

Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	24.6 - 37.8 vs. <21.5	3	0.97 (0.31, 3.01)		0.989		B	C		E	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	>5.3 vs. <3.9	5	0.99 (0.87, 1.12)		0.97	A	C	D	E	F	G	

Menopausal status not specified

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		>5.3 vs. <3.9	5	1.02 (0.92, 1.13)		0.82	A	C	D	E	F	G
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5.3.3

Animal protein

Pre-menopausal

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	854	53952	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	>16.2 vs. <11.6	5	1.05 (0.83, 1.33)		0.59	A	C	D	E	F	G
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Post-menopausal

Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	49.8 - 91.3 vs. <40.4	3	3.78 (0.95, 15.0)		0.05		B	C	E	G	
Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2936	76152	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	>16.2 vs. <11.6	5	1.0 (0.88, 1.12)		0.69	A	C	D	E	F	G

Menopausal status not specified

Holmes, M.D.,2003,BRE15400	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		88647.0	Hospital Records only	18.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		>16.2 vs. <11.6	5	1.02 (0.92, 1.13)		0.43	A	C	D	E	F	G
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5.4

Alcohol (as ethanol)

Pre-menopausal

Willett, W. C.,1987,BRE13441	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	298	49693	By Mail	4.0 years	FFQ-Semi-quantitative	controls stay for n. of women	g/day	Breast cancer incidence	Pre-menopausal	>=5.0 vs. none	3	1.5 (null, null)			A					
Schatzkin, A.,1987,BRE18010	Prospective Cohort	U.S.A., Multi-ethnic NHEFS, 1981/82	25 - 74	45	7188.0	General population (survey)	10.0 years	24h Recall			Breast cancer incidence	Pre-menopausal	Any Drinking vs. Nondrinking	2	2.0 (1.0, 3.8)			A					
Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		235	491	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence	Pre-menopausal	>=30 vs. Nondrinkers	5	1.88 (0.96, 3.66)		0.07	A	C	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments								
																		A	B	C	D	E	F	G		
Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	54	97	Through health org. (screening, health insurance)		FFQ (nos)	mean dose	g/day	Invasive breast cancer incidence	Pre-menopausal	>= 2 g/day vs. Never	4	0.8 (0.4, 1.4)						B	C	D	F		
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	76	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer cancer death	Pre-menopausal	10.0 (continuous)	1	1.018 (1.007, 1.029)					A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	598	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer incidence	Pre-menopausal	10.0 (continuous)	1	1.06 (0.97, 1.15)					A	C	E	F	G		
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89		8196.0	Through network, paper, tv	10.0 years				Breast cancer incidence	Pre-menopausal		1	null (null, null)											
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1281	66145.0	By Mail	19.0 years		cumulative ounces	Ounces*year	Breast cancer ER+/PR+ incidence	Pre-menopausal	100.0 (continuous)	1	1.03 (1.01, 1.05)					A	C	D	F	G		
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	318	66145.0	By Mail	19.0 years		cumulative ounces	Ounces*year	Breast cancer ER+/PR- incidence	Pre-menopausal	100.0 (continuous)	1	1.02 (0.99, 1.06)					A	C	D	F	G		
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	80	66145.0	By Mail	19.0 years		cumulative ounces	Ounces*year	Breast cancer ER-/PR+ incidence	Pre-menopausal	100.0 (continuous)	1	1.02 (0.94, 1.09)					A	C	D	F	G		
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		66145.0	By Mail	19.0 years		cumulative ounces	Ounces*year	Breast cancer ER-/PR- incidence	Pre-menopausal	100.0 (continuous)	1	1.0 (0.96, 1.03)					A	C	D	F	G		
Horn-Ross, P.L.,2004,BRE15413	Prospective Cohort	USA, Not specified, Registered teachers California Teachers Study, 1995	- 84	295	172715	Through social organization (profession, religion)	5.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence	Pre-menopausal	>= 20 vs. Nondrinkers	6	1.21 (0.76, 1.92)					A	C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	362	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	Pre-menopausal	10.0 (continuous)	1	1.08 (0.96, 1.22)					A	C	D	E	F	G	

Post-menopausal

Willett, W. C.,1987,BRE13441	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	205	26745	By Mail	4.0 years	FFQ-Semi-quantitative	controls stay for n. of women	g/day	Breast cancer incidence	Post-menopausal	>=5.0 vs. none	3	1.3 (null, null)					A						
Schatzkin, A.,1987,BRE18010	Prospective Cohort	U.S.A., Multi-ethnic NHEFS, 1981/82	25 - 74	76	7188.0	General population (survey)	10.0 years	24h Recall			Breast cancer incidence	Post-menopausal	Any Drinking vs. Nondrinking	2	1.3 (0.8, 2.1)					A						

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
van den Brandt, P. A.,1995,BRE12719	Case Cohort	the Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	422	4318	By Mail	3.3 years	Questionnaire (nos)		g/day	Breast cancer incidence	Post-menopausal	>=30 vs. Nondrinker	5	1.72 (0.9, 3.28)		0.047	A	B	C	D	E	F	G	
van den Brandt, P. A.,1995,BRE12719	Case Cohort	the Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	117	62573.0	By Mail	3.3 years	Questionnaire (nos)	BMI<22	g/day	Breast cancer incidence	Post-menopausal & Lean	>=15 vs. Nondrinker	3	1.57 (null, null)		0.114	A							
van den Brandt, P. A.,1995,BRE12719	Case Cohort	the Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	96	62573.0	By Mail	3.3 years	Questionnaire (nos)	BMI>=27	g/day	Breast cancer incidence	Post-menopausal & Overweight	>=15 vs. Nondrinker	3	1.41 (null, null)		0.064	A							
Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	222	355	Through health org. (screening, health insurance)		FFQ (nos)	mean dose	g/day	Invasive breast cancer incidence	Post-menopausal	>= 2 g/day vs. Never	4	1.8 (1.1, 2.9)				B	C	D		F		
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	39	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer cancer death	HRT - Yes	10.0 (continuous)	1	1.007 (0.993, 1.021)				A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	946	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer incidence	HRT - Yes	10.0 (continuous)	1	1.08 (0.99, 1.19)				A		C		E	F	G
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	98	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers; not pre-menopausal	g/day	Breast cancer cancer death	Post-menopausal	10.0 (continuous)	1	1.006 (0.997, 1.016)				A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	542	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.05 (0.98, 1.11)				A		C		E	F	G
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	12.9 - 52.7 vs. <0.75	3	1.04 (0.46, 2.33)		0.963		B	C		E		G	
Chen, Wendy, Y.,2002,BRE19205	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1722	557984	By Mail	15.6 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Post-menopausal	>=20 vs. none	5	1.33 (1.12, 1.58)		0.001	A		C	D		F	G	
Tjonneland, A.,2003,BRE12350	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		23778.0	By Mail	4.7 years	FFQ (nos)	excluded abstainers and occasional drinkers	g/day	Breast cancer incidence	HRT - Former	10.0 (continuous)	1	1.2 (1.07, 1.36)				A	B	C	D		F	G
Tjonneland, A.,2003,BRE12350	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		23778.0	By Mail	4.7 years	FFQ (nos)	excluded abstainers and occasional drinkers	g/day	Breast cancer incidence	HRT - No	10.0 (continuous)	1	1.07 (0.97, 1.18)				A	B	C	D		F	G
Tjonneland, A.,2003,BRE12350	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		23778.0	By Mail	4.7 years	FFQ (nos)	excluded abstainers and occasional drinkers	g/day	Breast cancer incidence	HRT - Yes	10.0 (continuous)	1	1.07 (1.0, 1.16)				A	B	C	D		F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S, Not specified CPS-II US cohort, 1982-1998		1303	65258	By Mail	6.0 years / 7592	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>=15 vs. none	5	1.26 (1.04, 1.53)		0.01	A	B	C	D	E	F	G	
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89		8196.0	Through network, paper, tv	10.0 years				Breast cancer incidence	Post-menopausal		1	null (null, null)										
Tjonneland, A.,2003,BRE12350	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		23778.0	By Mail	4.7 years	FFQ (nos)	excluded abstainers and occasional drinkers	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.1 (1.04, 1.16)			A	B	C	D		F	G	
Mattisson, I.,2004,BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal	>30 vs. <=15	4	1.68 (0.91, 3.12)			A	B	C	D	E	F	G	
Tjonneland, A.,2004,BRE12349	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23683.0	Direct contact at home	4.7 years	FFQ (nos)	baseline	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.1 (1.03, 1.16)			A	B	C	D		F	G	
Duffy, C.,2004,BRE18359	Prospective Cohort	U.S.A, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79		93724.0	Through health org. (screening, health insurance)	5.0 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	>15 vs. Non-drinkers	4	1.26 (1.07, 1.48)			A	B	C	D		F	G	
Sellers, T. A.,2004,BRE18027	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	1875	33552	By Mail	14.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	Post-menopausal	>4 vs. 0	3	1.11 (0.98, 1.27)		0.09	A	B	C	D	E	F	G	
Stolzenberg-Solomon, R. Z.,2004,BRE18746	Prospective Cohort	, Not specified, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	777	28210	Through health org. (screening, health insurance)	4.94 years	Questionnaire (nos)			Breast cancer incidence	Post-menopausal	5th quintile vs. 1st quintile	2	1.29 (1.02, 1.69)		.08	A	B	C		E	F	G	
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1281	66145.0	By Mail	19.0 years			cumulative ounces	Ounces*year incidence	Breast cancer ER+/PR+	HRT - Yes	100.0 (continuous)	1	1.0 (0.93, 1.07)			A		C	D		F	G
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	318	66145.0	By Mail	19.0 years			cumulative ounces	Ounces*year incidence	Breast cancer ER+/PR-	HRT - Yes	100.0 (continuous)	1	1.09 (1.01, 1.18)			A		C	D		F	G
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	80	66145.0	By Mail	19.0 years			cumulative ounces	Ounces*year incidence	Breast cancer ER-/PR+	HRT - Yes	100.0 (continuous)	1	1.05 (0.83, 1.33)			A		C	D		F	G
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	417	66145.0	By Mail	19.0 years			cumulative ounces	Ounces*year incidence	Breast cancer ER-/PR-	HRT - Yes	100.0 (continuous)	1	0.9 (0.76, 1.08)			A		C	D		F	G
Horn-Ross, P.L.,2004,BRE15413	Prospective Cohort	USA, Not specified, Registered teachers California Teachers Study, 1995	- 84	482	103460.0	Through social organization (profession, religion)	5.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence	HRT - Yes	>=20 vs. Nondrinkers	3	1.51 (1.13, 2.03)			A		C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Lenght of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Horn-Ross, P.L.,2004,BRE15413	Prospective Cohort	USA, Not specified, Registered teachers California Teachers Study, 1995	- 84	973	195223	Through social organization (profession, religion)	5.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence	Post-menopausal	>= 20 vs. Nondrinkers	6	1.32 (1.06, 1.63)			A	C	D	E	F	G	
Horn-Ross, P.L.,2004,BRE15413	Prospective Cohort	USA, Not specified, Registered teachers California Teachers Study, 1995	- 84	698	103460.0	Through social organization (profession, religion)	5.0 years	FFQ (nos)	BMI<27.3	g/day	Invasive breast cancer incidence	Post-menopausal & Lean	>=20 vs. Nondrinkers	3	1.4 (1.09, 1.79)			A	C	D	E	F	G	
Horn-Ross, P.L.,2004,BRE15413	Prospective Cohort	USA, Not specified, Registered teachers California Teachers Study, 1995	- 84	275	103460.0	Through social organization (profession, religion)	5.0 years	FFQ (nos)	BMI>=27.3	g/day	Invasive breast cancer incidence	Post-menopausal & Overweight	>=20 vs. Nondrinkers	3	1.1 (0.71, 1.72)			A	C	D	E	F	G	
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	299	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Breast cancer ER+/PR+ incidence	HRT - No	>=10.0 vs. non drinkers	4	1.2 (0.76, 1.9)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	243	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Breast cancer ER+/PR+ incidence	HRT - Yes	>=10.0 vs. non drinkers	4	1.8 (1.24, 2.6)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	716	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day	g/day	Breast cancer ER+/PR+ incidence	Post-menopausal	>=10.0 vs. non drinkers	4	1.35 (1.02, 1.8)	0.049		A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	102	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Breast cancer ER+/PR- incidence	HRT - No	>=10.0 vs. non drinkers	4	2.54 (1.33, 2.86)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	123	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Breast cancer ER+/PR- incidence	HRT - Yes	>=10.0 vs. non drinkers	4	3.51 (1.98, 6.21)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	279	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day	g/day	Breast cancer ER+/PR- incidence	Post-menopausal	>=10.0 vs. non drinkers	4	2.36 (1.56, 3.56)	0.001		A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	91	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Breast cancer ER- incidence	HRT - No	>=10.0 vs. non drinkers	4	0.79 (0.32, 1.95)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	42	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Breast cancer ER- incidence	HRT - Yes	>=10.0 vs. non drinkers	4	0.21 (0.05, 0.89)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	50	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day	g/day	Breast cancer ER-/PR+ incidence	Post-menopausal	>=10.0 vs. non drinkers	4	0.62 (0.13, 2.9)	0.57		A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	143	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day	g/day	Breast cancer ER-/PR- incidence	Post-menopausal	>=10.0 vs. non drinkers	4	0.8 (0.38, 1.67)	0.45		A	B	C	D	E	F	G

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																		A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	528	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Invasive breast cancer incidence	HRT - No	>=10.0 vs. non drinkers	4	1.31 (0.94, 1.81)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	446	51847.0	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day.	g/day	Invasive breast cancer incidence	HRT - Yes	>=10.0 vs. non drinkers	4	1.72 (1.3, 2.28)			A	B	C	D	E	F	G
Suzuki R.,2005,BRE24245	Prospective Cohort	Sweden, Not specified, Post-menopausal Sweden, 1987	- 70	1284	430583	Through health org. (screening, health insurance)	8.3 years	FFQ (nos)	g of ethanol per day	g/day	Invasive breast cancer incidence	Post-menopausal	>=10.0 vs. non drinkers	4	1.43 (1.16, 1.76)	0.0012		A	B	C	D	E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	633	23155	Cancer registry	6.1 years	FFQ	Alcohol intake	g/day	Breast cancer incidence		12.0 (continuous)	1	1.1 (1.04, 1.16)			A	B	C	E	G		
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	691	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Alcohol consumption	g/day	Breast cancer incidence		>7.63 vs. 0 - 0.01	5	1.37 (1.08, 1.76)	0.02	A	B						
Ravn-Haren, G. et al.,2006,BRE80151	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	377	377	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.1 (1.0, 1.22)				B	C	D	F	G	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74		31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Alcohol consumption	g/day	Breast cancer incidence	total folate <=335.5 microgram/day	>7.63 vs. <0.01	5	1.95 (1.03, 3.72)			A	B		D	E	F	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	115	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Alcohol consumption	g/day	Breast cancer incidence	total folate >335.5 microgram/day	>7.63 vs. <0.01	5	2.1 (1.08, 4.07)	0.004		A	B		D	E	F	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74		31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Alcohol consumption	g/day	Breast cancer incidence	total folate >335.5 microgram/day	>7.63 vs. <0.01	5	1.23 (0.93, 1.62)	0.3		A	B		D	E	F	
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	44	41	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	COX2 T8473C CC	10.0 (continuous)	1	0.85 (0.64, 1.14)				B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	150	165	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	COX2 T8473C CT	10.0 (continuous)	1	1.15 (0.94, 1.4)	0.18			B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	167	155	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	COX2 T8473C TT	10.0 (continuous)	1	1.16 (1.01, 1.33)				B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	86	86	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	IL-6 G-174C CC	10.0 (continuous)	1	1.0 (0.8, 1.25)				B	C	D	F		

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																		A	B	C	D	E	F	G
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	167	177	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	IL-6 G-174C CG	10.0 (continuous)	1	1.2 (1.04, 1.4)		0.25		B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	108	98	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	IL-6 G-174C GG	10.0 (continuous)	1	1.02 (0.84, 1.24)				B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	113	116	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	IL-8 T-251A AA	10.0 (continuous)	1	1.08 (0.9, 1.3)				B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	160	167	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	IL-8 T-251A AT	10.0 (continuous)	1	1.11 (0.96, 1.28)		0.97		B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	88	78	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	IL-8 T-251A TT	10.0 (continuous)	1	1.12 (0.9, 1.38)				B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	361	361	Cancer registry		FFQ	Alcohol consumption	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.08 (0.98, 1.2)				B	C	D	F	G	
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	283	258	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	PPAR-gamma2 ProAla CC	10.0 (continuous)	1	1.2 (1.06, 1.35)				B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	71	93	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	PPAR-gamma2 ProAla CG	10.0 (continuous)	1	0.86 (0.68, 1.08)		0.02		B	C	D	F		
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	7	10	Cancer registry		FFQ	Alcohol intake	g/day	Breast cancer incidence	PPAR-gamma2 ProAla GG	10.0 (continuous)	1	0.48 (0.1, 2.22)				B	C	D	F		
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	545	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	PMH - current users	10.0 (continuous)	1	1.15 (1.05, 1.26)				A	C	D	E	F	G
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	112	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	PMH - past users	10.0 (continuous)	1	0.91 (0.72, 1.16)				A	C	D	E	F	G
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	910	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.07 (0.99, 1.15)				A	C	D	E	F	G
Ericson, U. et al.,2007,BRE80128	Prospective Cohort	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 -	392	11683	Cancer registry	9.5 years	Dietary History questionnaire	Alcohol consumption	g/day	Invasive breast cancer incidence	Post-menopausal	>30 vs. None	4	2.52 (1.33, 4.77)		0.06	A						

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																		A	B	C	D	E	F	G				
Holmberg, L.,1995,BRE15392	Nested Case Control	Sweden, Not specified, Screening Program The Swedish Mammography Cohort, 1987	40 - 74	276	452	Through health org. (screening, health insurance)		FFQ (nos)	mean dose	g/day	Invasive breast cancer incidence		>= 2 g/day vs. Never	4	1.6 (1.0, 2.4)							B	C	D	F			
Goodman, M. T.,1997,BRE03352	Prospective Cohort	Japan, Not specified, Atomic bomb survivors LSS, 1969		127	152764	By Mail	8.31 years	Questionnaire (nos)		ml/week	Breast cancer incidence		>=55 vs. never	4	0.68 (0.32, 1.46)		0.27	A									G	
Zhang, Y.,1999,BRE13965	Prospective Cohort	U.S.A., Not specified, Original and Offspring Cohorts Framingham Study, 1948	12 - 62	287	5048.0	General population (survey)	34.3 years	Interview (nos)		g/day	Breast cancer incidence		>=15.0 vs. Nondrinker	4	0.7 (0.5, 1.1)							A	B	C	D	F	G	
Garland, Miriam,1999,BRE19618	Prospective Cohort	U.S.A., Not specified, Registered nurses NHS II, 1989	25 - 42	400	569657	Through social organization (profession, religion)	6.0 years	Questionnaire (nos)		g/day	Invasive breast cancer incidence		>20 vs. none	6	1.23 (0.68, 2.21)		0.85	A				C	D		F	G		
Hines, L.M.,2000,BRE15364	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	149	206	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	ADH3 genotype Fast	>=10 vs. none	3	0.8 (0.4, 1.5)		0.83					C	D	E	F	G		
Hines, L.M.,2000,BRE15364	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	290	357	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	ADH3 genotype intermediate	>=10 vs. none genotype fast	4	0.8 (0.4, 1.4)		0.91					C	D	E	F	G		
Hines, L.M.,2000,BRE15364	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	126	171	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence	ADH3 genotype Slow	>=10 vs. abstain fast	4	1.1 (0.5, 2.4)		0.21					C	D	E	F	G		
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	110	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer cancer death	Family History BC - No	10.0 (continuous)	1	1.015 (null, null)							A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	1093	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer incidence	Family History BC - No	10.0 (continuous)	1	1.05 (1.0, 1.1)							A		C		E	F	G
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	64	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer cancer death	Family History BC - Yes	10.0 (continuous)	1	1.002 (0.984, 1.016)							A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	243	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer incidence	Family History BC - Yes	10.0 (continuous)	1	1.08 (0.93, 1.26)							A		C		E	F	G
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	135	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer cancer death	HRT - No	10.0 (continuous)	1	1.012 (1.003, 1.021)							A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	373	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers	g/day	Breast cancer incidence	HRT - No	10.0 (continuous)	1	1.05 (0.99, 1.11)							A		C		E	F	G

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																		A	B	C	D	E	F	G
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	54	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers; BMI<22.9	g/day	Breast cancer cancer death	Lean	10.0 (continuous)	1	1.013 (0.998, 1.028)			A	B	C	E	F	G	
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	263	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers; BMI<21.6	g/day	Breast cancer incidence	Lean	10.0 (continuous)	1	1.0 (0.9, 1.1)			A	C	E	F	G		
Hines, L.M.,2000,BRE15364	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	455	612	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>=10 vs. none	3	1.1 (0.7, 1.6)	0.94			C	D	E	F	G	
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	223	521621	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	controls stay for person-yr	g/day	Breast cancer cancer death		10.0 (continuous)	1	1.012 (1.005, 1.019)			A	B	C	D	E	F	G
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	60	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative	only drinkers; BMI>27.8	g/day	Breast cancer cancer death	Overweight	10.0 (continuous)	1	1.025 (1.009, 1.041)			A	B	C	E	F	G	
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	262	56837.0	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative	only drinkers; BMI>=27.5	g/day	Breast cancer incidence	Overweight	10.0 (continuous)	1	1.13 (0.92, 1.42)			A	C	E	F	G		
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	1336	566190	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative		g/day	Invasive breast cancer incidence		>50 vs. 0	7	1.7 (0.97, 2.98)	0.35		A	C	E	F	G		
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103	681	111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>=20 vs. non drinkers	6	1.5 (1.2, 2.0)	0.01		A	C	D	E	F	G	
Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S, Not specified CPS-II US cohort, 1982-1998		327	66561.0	By Mail	6.0 years / 7592	FFQ-Semi-quantitative	by high levels of dietary folate (first quartile)	g/day	Breast cancer incidence	H nutr/food intake & Post-menopausal	>=15 vs. none	5	0.93 (0.56, 1.54)			A	B	C	D	E	F	G
Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S, Not specified CPS-II US cohort, 1982-1998		348	66561.0	By Mail	6.0 years / 7592	FFQ-Semi-quantitative	by high levels of dietary+supplements folate (first quartile)	g/day	Breast cancer incidence	H nutr/food intake & Post-menopausal	>=15 vs. none	5	1.5 (1.02, 2.22)			A	B	C	D	E	F	G
Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S, Not specified CPS-II US cohort, 1982-1998		297	66561.0	By Mail	6.0 years / 7592	FFQ-Semi-quantitative	by low levels of dietary folate (first quartile)	g/day	Breast cancer incidence	L nutr/food intake & Post-menopausal	>=15 vs. none	5	1.4 (1.0, 1.99)			A	B	C	D	E	F	G
Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S, Not specified CPS-II US cohort, 1982-1998		307	66561.0	By Mail	6.0 years / 7592	FFQ-Semi-quantitative	by low levels of dietary+supplements folate (first quartile)	g/day	Breast cancer incidence	L nutr/food intake & Post-menopausal	>=15 vs. none	5	1.33 (0.94, 1.88)			A	B	C	D	E	F	G
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89		8196.0	Through network, paper, tv	10.0 years				Breast cancer incidence			1	null (null, null)									

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	125	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Breast cancer ER+/PR- incidence		>=30 vs. non drinkers	6	0.69 (0.17, 2.88)		0.97	A	C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	125	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Breast cancer ER+/PR- incidence		10.0 (continuous)	1	1.0 (0.81, 1.24)				C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	167	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Breast cancer ER-/PR- incidence	ER-/PR-	>=30 vs. non drinkers	6	1.15 (0.41, 3.19)		0.79	A	C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	167	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Breast cancer ER-/PR- incidence		10.0 (continuous)	1	0.99 (0.82, 1.2)				C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	822	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	BMI < 25	10.0 (continuous)	1	1.08 (1.01, 1.17)			A	C	E	F	G		
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	643	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	BMI >= 25	10.0 (continuous)	1	1.04 (0.94, 1.15)			A	C	E	F	G		
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	1371	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	Family History BC - No	10.0 (continuous)	1	1.05 (0.99, 1.12)			A	C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	113	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	Family History BC - Yes	10.0 (continuous)	1	1.23 (1.05, 1.44)			A	C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	1484	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence		>=30 vs. non drinkers	6	1.32 (0.96, 1.82)		0.02	A	C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	1484	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence		10.0 (continuous)	1	1.07 (1.01, 1.14)			A	C	D	E	F	G	
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	251	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive & In situ breast cancer incidence	PMH - never users	10.0 (continuous)	1	0.99 (0.86, 1.15)			A	C	D	E	F	G	
Tjonneland et al.,2007,BRE80013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70	711	53264	Population cancer registries and other	6.4 years	FFQ + recall	Average alcohol intake	g/day	Invasive breast cancer incidence	folate intake <=200mcg/day	10.0 (continuous)	1	1.02 (0.97, 1.08)				B	C	D	E	F	G
Tjonneland et al.,2007,BRE80013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70	876	49184	Population cancer registries and other	6.4 years	FFQ + recall	Average alcohol intake	g/day	Invasive breast cancer incidence	folate intake >200- <=300mcg/day	10.0 (continuous)	1	1.05 (1.01, 1.11)				B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments								
																		A	B	C	D	E	F	G		
Tjonneland et al.,2007,BRE0013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70	944	49184	Population cancer registries and other	6.4 years	FFQ + recall	Average alcohol intake	g/day	Invasive breast cancer incidence	folate intake >300-<=400mcg/day	10.0 (continuous)	1	1.04 (1.0, 1.09)						B	C	D	E	F	G
Tjonneland et al.,2007,BRE0013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70	957	43506	Population cancer registries and other	6.4 years	FFQ + recall	Average alcohol intake	g/day	Invasive breast cancer incidence	folate intake >400mcg/day	10.0 (continuous)	1	1.02 (0.97, 1.06)						B	C	D	E	F	G
Tjonneland et al.,2007,BRE0013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70	1466	87146	Population cancer registries and other	6.4 years	FFQ + recall	Baseline average alcohol intake, quartiles for women drinking >=19g/day vs. 0.1-1.5	g/day	Invasive breast cancer incidence	High alcohol intake	>37.2 vs. 0.1 - 1.5	5	1.09 (0.93, 1.28)						B	C	D		F	G
Tjonneland et al.,2007,BRE0013	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK, Multi-ethnic	35 - 70	4291	274688	Population cancer registries and other	6.4 years	FFQ + recall	Baseline average alcohol intake	g/day	Invasive breast cancer incidence		>19 vs. >0-1.5	6	1.13 (1.01, 1.25)						B	C	D		F	G
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	1190	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive breast cancer incidence		>=30 vs. non drinkers	6	1.43 (1.02, 2.02)		0.01	A		C	D	E	F	G		
Zhang et al.,2007,BRE20023	Prospective Cohort	America Women's Health Study,1993	(55)	1190	38454.0	Medical notes	10.0 years	FFQ + Questionnaire	Alcohol intake	g/day	Invasive breast cancer incidence		10.0 (continuous)	1	1.09 (1.02, 1.16)			A		C	D	E	F	G		

Alcohol (as ethanol) at Thirties

Post-menopausal

Tjonneland, A.,2004,BRE12349	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23683.0	Direct contact at home	4.7 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.05 (0.96, 1.14)						A	B	C	D		F	G
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Alcohol (as ethanol) at Twenties

Post-menopausal

Tjonneland, A.,2004,BRE12349	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23683.0	Direct contact at home	4.7 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.06 (0.93, 1.2)							A	B	C	D		F	G
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Alcohol (as ethanol) - Cumulative intake

Post-menopausal

Tjonneland, A.,2004,BRE12349	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23683.0	Direct contact at home	4.7 years	FFQ (nos)		g/day/year	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.02 (0.99, 1.05)							A	B	C	D		F	G
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Alcohol (as ethanol) - Most recent consumption

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Horn-Ross, P.L.,2004,BRE15413	Prospective Cohort	USA, Not specified, Registered teachers California Teachers Study, 1995	- 84	906	182539	Through social organization (profession, religion)	5.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence	Post-menopausal	>= 20 vs. Nondrinkers	6	1.2 (0.93, 1.55)			A	C	D	E	F	G	

Alcohol (as ethanol) at Fifties

Post-menopausal

Tjonneland, A.,2004,BRE12349	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23683.0	Direct contact at home	4.7 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.12 (1.05, 1.19)			A	B	C	D	F	G
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Alcohol (as ethanol) at Forties

Post-menopausal

Tjonneland, A.,2004,BRE12349	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 65		23683.0	Direct contact at home	4.7 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.08 (1.01, 1.15)			A	B	C	D	F	G
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Ethanol from beer

Pre-menopausal

Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		235	491	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence	Pre-menopausal	>=10 vs. Nondrinkers of specified	3	2.06 (0.91, 4.68)			A	C	E	F	G
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Post-menopausal

Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		284	691	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	>=10 vs. Nondrinkers of specified	3	0.58 (0.23, 1.46)			A	C	E	F	G		
van den Brandt, P. A.,1995,BRE12719	Case Cohort	the Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	422	62573.0	By Mail	3.3 years	Questionnaire (nos)		g/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	0.93 (0.82, 1.05)			A	B	C	D	E	F	G
Tjonneland, A.,2003,BRE12350	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		23778.0	By Mail	4.7 years	FFQ (nos)	excluded abstainers and occasional drinkers	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.01 (0.87, 1.17)			A	B	C	D	F	G	

Menopausal status not specified

Willett, W. C.,1987,BRE13441	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	327	47536	By Mail	4.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>=5.0 vs. none	3	1.5 (1.2, 2.0)			A						
Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		519	1182	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence		>=10 vs. Nondrinkers of specified	3	1.12 (0.62, 2.02)			A	C	E	F	G		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	223	49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative		g/day	Breast cancer cancer death		10.0 (continuous)	1	1.015 (0.992, 1.038)			A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	1336	566190	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative		g/day	Breast cancer incidence		>20 vs. 0	4	0.76 (0.37, 1.58)	0.88		A		C		E	F	G
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103	681	111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>=5 vs. non drinkers	3	0.9 (0.5, 1.6)	0.2		A		C	D	E	F	G

Ethanol from hard liquor

Pre-menopausal

Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		235	491	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence	Pre-menopausal	>=10 vs. Nondrinkers of specified	3	1.21 (0.75, 1.96)				A		C		E	F	G
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Post-menopausal

Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		284	691	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	>=10 vs. Nondrinkers of specified	3	1.0 (0.64, 1.56)				A		C		E	F	G
van den Brandt, P. A.,1995,BRE12719	Case Cohort	the Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	422	62573.0	By Mail	3.3 years	Questionnaire (nos)		g/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.02 (0.99, 1.04)				A	B	C	D	E	F	G
Tjonneland, A.,2003,BRE12350	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		23778.0	By Mail	4.7 years	FFQ (nos)	excluded abstainers and occasional drinkers	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.15 (0.92, 1.43)				A	B	C	D		F	G

Menopausal status not specified

Willett, W. C.,1987,BRE13441	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	447	66936	By Mail	4.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>=5.0 vs. none	3	1.5 (1.2, 1.9)				A							
Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		519	1182	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence		>=10 vs. Nondrinkers of specified	3	1.1 (0.79, 1.52)				A		C		E	F	G	
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59		49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative		g/day	Breast cancer cancer death		10.0 (continuous)	1	0.984 (0.973, 0.996)				A	B	C	D	E	F	G	
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	1336	566190	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative		g/day	Breast cancer incidence		>20 vs. 0	4	1.42 (0.96, 2.11)	0.03			A		C		E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103	681	111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>=20 vs. non drinkers	4	1.7 (1.0, 2.8)		0.002	A	C	D	E	F	G	

Ethanol from wine

Pre-menopausal

Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		235	491	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence	Pre-menopausal	>=10 vs. Nondrinkers of specified	3	1.99 (1.15, 3.43)			A	C	E	F	G
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Post-menopausal

Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		284	691	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence	Post-menopausal	>=10 vs. Nondrinkers of specified	3	1.1 (0.62, 1.94)			A	C	E	F	G		
van den Brandt, P. A.,1995,BRE12719	Case Cohort	the Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	422	62573.0	By Mail	3.3 years	Questionnaire (nos)		g/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.99, 1.02)			A	B	C	D	E	F	G
Tjonneland, A.,2003,BRE12350	Prospective Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		23778.0	By Mail	4.7 years	FFQ (nos)	excluded abstainers and occasional drinkers	g/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.14 (1.06, 1.22)			A	B	C	D	F	G	

Menopausal status not specified

Willett, W. C.,1987,BRE13441	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	34 - 59	496	77605	By Mail	4.0 years	FFQ-Semi-quantitative		g/day	Breast cancer incidence		>=5.0 vs. none	3	1.4 (1.1, 1.8)			A						
Friedenreich, C. M.,1993,BRE17508	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980		519	1182	Through health org. (screening, health insurance)	5.5 years	FFQ (nos)		g/day	Breast cancer incidence		>=10 vs. Nondrinkers of specified	3	1.46 (0.99, 2.14)			A	C	E	F	G		
Jain, M.G.,2000,BRE17653	Prospective Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59		49165.0	Through health org. (screening, health insurance)	10.3 years	FFQ-Quantitative		g/day	Breast cancer cancer death		10.0 (continuous)	1	1.042 (1.031, 1.052)			A	B	C	D	E	F	G
Rohan, T.E.,2000,BRE16489	Case Cohort	Canada, Not specified, Screening Program NBSS, 1980	40 - 59	1336	566191	Through health org. (screening, health insurance)	10.0 years	FFQ-Quantitative		g/day	Breast cancer incidence		>20 vs. 0	4	0.79 (0.53, 1.19)	0.78		A	C	E	F	G		
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103	681	111383.0	By Mail	2.0 years	FFQ (nos)		g/day	Invasive breast cancer incidence		>=20 vs. non drinkers	4	1.7 (1.2, 2.4)		0.002	A	C	D	E	F	G	

5.5

Vitamin B

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total vitamin B6, from foods and supplements, cumulative averaged	mg/day	Breast cancer ER-incidence	Pre-menopausal	13.3 vs. 1.7	5	1.18 (0.78, 1.78)		0.26	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Vitamin B6 from foods only, cumulative averaged energy-adjusted	mg/day	Breast cancer ER-incidence	Pre-menopausal	2.7 vs. 1.6	5	0.93 (0.6, 1.44)		0.56	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total vitamin B12, from foods and supplements, cumulative averaged	mcg/day	Breast cancer ER-incidence	Pre-menopausal	18.0 vs. 4.0	5	1.05 (0.7, 1.58)		0.71	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Vitamin B12 from foods only, cumulative averaged energy-adjusted	mcg/day	Breast cancer ER-incidence	Pre-menopausal	9.0 vs. 4.0	5	1.24 (0.78, 1.98)		0.39	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total choline, from foods and supplements, cumulative averaged	mg/day	Breast cancer ER-incidence	Pre-menopausal	397.0 vs. 263.0	5	0.86 (0.57, 1.3)		0.67	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total betaine, from foods and supplements, cumulative averaged	mg/day	Breast cancer ER-incidence	Pre-menopausal	305.0 vs. 114.0	5	0.85 (0.54, 1.33)		0.55	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total vitamin B6, from foods and supplements, cumulative averaged	mg/day	Invasive breast cancer incidence	Pre-menopausal	13.3 vs. 1.7	5	1.11 (0.91, 1.35)		0.53	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Vitamin B6 from foods only, cumulative averaged energy-adjusted	mg/day	Invasive breast cancer incidence	Pre-menopausal	2.7 vs. 1.6	5	1.18 (0.96, 1.44)		0.38	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total vitamin B12, from foods and supplements, cumulative averaged	mcg/day	Invasive breast cancer incidence	Pre-menopausal	18.0 vs. 4.0	5	0.92 (0.76, 1.12)		0.37	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Vitamin B12, from foods only, cumulative averaged energy-adjusted	mcg/day	Invasive breast cancer incidence	Pre-menopausal	9.0 vs. 4.0	5	0.96 (0.78, 1.19)		0.61	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total choline, from foods and supplements, cumulative averaged	mg/day	Invasive breast cancer incidence	Pre-menopausal	397.0 vs. 263.0	5	0.88 (0.72, 1.07)		0.26	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total betaine, from foods and supplements, cumulative averaged	mg/day	Invasive breast cancer incidence	Pre-menopausal	305.0 vs. 114.0	5	0.99 (0.79, 1.22)		0.88	A	C	D	E	F	G	

Vitamins supplement

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Stolzenberg-Solomon, R.Z.,2006,BRE0113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	691	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Multivitamin use		Breast cancer incidence		Ever vs. Never	2	1.18 (0.95, 1.48)			A	B				E	F

5.5.1

Serum Vitamin A

Menopausal status not specified

Russell, M. J.,1988,BRE17990	Nested Case Control	UK, Not specified Guernsey G2 and G3	28 - 66		5086.0	Through health org. (screening, health insurance)	9.0 years				Breast cancer incidence			1	null (null, null)										
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Vitamin A

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Pre-menopausal	17073.0 vs. 5293.0	5	0.82 (0.65, 1.04)		0.02	A		C	D	E	F	G
Cho, E.,2003,BRE01652	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Pre-menopausal	17801.0 vs. 4895.0	5	0.92 (0.72, 1.17)		0.74			C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	I.U./day	Breast cancer incidence	Pre-menopausal	21059.0 vs. 5905.0	5	1.17 (0.85, 1.62)		0.72	A		C	D	E	F	G

Post-menopausal

Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		IU * 1000/month	Breast cancer incidence	Post-menopausal	513.0 - 3333.0 vs. 0 - 174.0	5	0.96 (0.68, 1.34)				A	B					
Kushi, L. H.,1996,BRE05143	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	599	22776	By Mail	7.0 years / 1370	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>16776.0 vs. <6188.0	5	1.15 (0.85, 1.56)		0.08	A	B	C	D	E	F	G	
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Post-menopausal	17073.0 vs. 5293.0	5	1.03 (0.89, 1.19)		0.59	A		C	D	E	F	G	
Nissen, Stine, B.,2003,BRE20535	Case Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	By Mail		FFQ (nos)		mcg/day	Breast cancer incidence	Post-menopausal	1000.0 (continuous)	1	1.08 (0.94, 1.25)					B	C	D	E	F	G

Menopausal status not specified

Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.33 (0.85, 2.08)		0.35	A							
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		56837.0	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		I.U./day	Breast cancer incidence		8003.0 (continuous)	1	0.83 (0.7, 0.98)			A	B	C	E	F	G	
Hunter, D. J.,1993,BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692675	By Mail	8.0 years / 4%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence		>17640.0 vs. <6629.0	5	0.84 (0.71, 0.98)	0.001	A	C	D	E	F	G		
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	17073.0 vs. 5293.0	5	0.92 (0.72, 1.17)	0.23	A	C	D	E	F	G		
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	17073.0 vs. 5293.0	5	0.38 (0.19, 0.77)	0.0099	A	C	D	E	F	G		
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	I.U./day	Breast cancer incidence		11437.0 vs. 2063.0	5	1.02 (null, null)	0.63	A	C	D	E	F	G		

Vitamin A diet+supplement

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Pre-menopausal	21379.0 vs. 5873.0	5	0.87 (0.7, 1.09)	0.07	A	C	D	E	F	G
Cho, E.,2003,BRE01652	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Pre-menopausal	21916.0 vs. 5639.0	5	0.97 (0.76, 1.23)	0.97	C	D	E	F	G	

Post-menopausal

Kushi, L. H.,1996,BRE05143	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	879	34387	By Mail	7.0 years / 1370	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>20343.0 vs. <7253.0	5	0.88 (0.68, 1.14)	0.96	A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Post-menopausal	21379.0 vs. 5873.0	5	1.03 (0.89, 1.2)	0.98	A	C	D	E	F	G	
Nissen, Stine, B.,2003,BRE20535	Case Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	By Mail		FFQ (nos)		mcg/day	Breast cancer incidence	Post-menopausal	1000.0 (continuous)	1	1.06 (0.96, 1.18)		B	C	D	E	F	G	

Menopausal status not specified

Hunter, D. J.,1993,BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692675	By Mail	8.0 years / 4%	FFQ-Semi-quantitative	Preformed vitamin A+supplements	I.U./day	Invasive breast cancer incidence		>7460.0 vs. <1530.0	5	0.8 (0.68, 0.95)	0.003	A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	21379.0 vs. 5873.0	5	0.96 (0.76, 1.22)		0.34	A	C	D	E	F	G	
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	21379.0 vs. 5873.0	5	0.41 (0.2, 0.84)		0.01	A	C	D	E	F	G	

Vitamin A supplement

Post-menopausal

Kushi, L. H.,1996,BRE05143	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	879	34387	By Mail	7.0 years / 1370	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>10001.0 vs. <0.0	4	0.71 (0.47, 1.06)		0.35	A	B	C	D	E	F	G
Nissen, Stine, B.,2003,BRE20535	Case Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	By Mail		FFQ (nos)		mcg/day	Breast cancer incidence	Post-menopausal	1000.0 (continuous)	1	1.16 (0.87, 1.55)				B	C	D	E	F	G

Menopausal status not specified

Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	519	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		I.U./day	Breast cancer incidence		>5000.1 vs. 0	3	0.7 (0.42, 1.15)		0.42	A	B	C	E	F	G
Hunter, D. J.,1993,BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		89494.0	By Mail	8.0 years / 4%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence		>=23000 vs. No use	5	0.44 (0.14, 1.38)		0.76	A	C	D	E	F	G
Hunter, D. J.,1993,BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		89494.0	By Mail	8.0 years / 4%	FFQ-Semi-quantitative	supplement duration	Years/life	Invasive breast cancer incidence		>=10 vs. no use	5	1.16 (0.64, 2.1)		0.85	A	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	2523	77925	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence		>=23000 vs. never user	5	0.49 (0.2, 1.18)			A	C	D	E	F	G

5.5.1.1

Plasma Retinol

Pre-menopausal

Hulten,2001,BRE04155	Nested Case Control	sweden VIP + MONICA + MSP		57	93	Unspecified					Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.8 (0.2, 3.3)		0.98					D		
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Post-menopausal

Hulten,2001,BRE04155	Nested Case Control	sweden VIP + MONICA + MSP		67	109	Unspecified					Breast sarcoma incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.6 (0.2, 1.2)		0.31					D		
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Post-menopausal	4391.0 vs. 800.0	5	1.05 (0.91, 1.21)		0.63	A	C	D	E	F	G	

Menopausal status not specified

Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.25 (0.82, 1.91)		0.14	A						
Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		56837.0	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		I.U./day	Breast cancer incidence		3273.0 (continuous)	1	0.89 (0.77, 1.03)			A	B	C	E	F	G	
Verhoeven, D. T.,1997,BRE12868	Case Cohort	the Netherland, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	519	5866	Through network, paper, tv	4.3 years / no lost	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		0.766 vs. 0.229	5	1.24 (0.83, 1.83)		0.38	A	C	E	F	G		
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	4391.0 vs. 800.0	5	0.92 (0.72, 1.17)		0.63	A	C	D	E	F	G	
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	4391.0 vs. 800.0	5	0.62 (0.31, 1.23)		0.19	A	C	D	E	F	G	
Michels, K. B.,2001,BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76	717	59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence	Lean	1.51 vs. 0.52	5	1.05 (0.83, 1.33)		0.59	A	B	C	D	E	F	
Michels, K. B.,2001,BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76		59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		1.51 vs. 0.52	5	1.0 (0.83, 1.2)		0.96	A	B	C	D	E	F	
Michels, K. B.,2001,BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76	554	59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence	Overweight	1.51 vs. 0.52	5	0.93 (0.69, 1.24)		0.49	A	B	C	D	E	F	
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	I.U./day	Breast cancer incidence		5542.0 vs. 612.0	5	1.05 (null, null)		0.59	A	C	D	E	F	G	

Retinol diet+supplement

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Pre-menopausal	9366.0 vs. 1021.0	5	0.78 (0.62, 0.99)		0.44	A	C	D	E	F	G
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Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kushi, L. H.,1996,BRE05143	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	879	34387	By Mail	7.0 years / 1370	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>7492.0 vs. <1232.0	5	1.01 (0.81, 1.26)		0.79	A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Post-menopausal	9366.0 vs. 1021.0	5	0.95 (0.83, 1.1)		0.40	A		C	D	E	F	G

Menopausal status not specified

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	9366.0 vs. 1021.0	5	0.82 (0.64, 1.04)		0.67	A		C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	9366.0 vs. 1021.0	5	0.59 (0.29, 1.21)		0.38	A		C	D	E	F	G

Retinol supplement

Post-menopausal

Kushi, L. H.,1996,BRE05143	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	879	34387	By Mail	7.0 years / 1370	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>10001.0 vs. <0.0	4	0.77 (0.49, 1.21)		0.38	A	B	C	D	E	F	G
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Serum Retinol

Menopausal status not specified

Dorgan, J.F.,1998,BRE14889	Nested Case Control	U S, Not specified Columbia Missouri Breast Cancer Serum Bank, 1977	41 - 73	105	209	Through network, paper, tv	9.5 years			mcmol/L	Invasive breast cancer incidence		2.31 - 3.32 vs. <1.67	4	0.9 (0.4, 2.0)		0.99					D	G	
Toniolo, P.,2001,BRE12399	Nested Case Control	US, Not specified New York Women's Health Study, 1985	35 - 65		14275.0	Through health org. (screening, health insurance)				mcg/dL	Breast cancer incidence		Quantile 4 vs. Quantile 4	4	1.0 (null, null)		0.50			C			F	G
Sato, Reiko,2002,BRE20839	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974	(51)	244	244	Through network, paper, tv	20.0 years			mcg/dL	Breast cancer incidence		>73.0 vs. <46.1	5	0.97 (0.53, 1.8)		.83							

Serum Retinol Binding Protein

Menopausal status not specified

Russell, M. J.,1988,BRE17990	Nested Case Control	UK, Not specified Guernsey G2 and G3	28 - 66		5086.0	Through health org. (screening, health insurance)	9.0 years				Breast cancer incidence			1	null (null, null)									
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Serum Retinyl Palmitate

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments										
																		A	B	C	D	E	F	G				
Sato, Reiko, 2002, BRE20839	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974	(51)	220	232	Through network, paper, tv	20.0 years			mcg/dL	Breast cancer incidence		>12.3 vs. <3.3	5	0.78 (0.4, 1.51)		.39											

5.5.1.2

Alpha-carotene

Pre-menopausal

Zhang, S., 1999, BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	1453.0 vs. 220.0	5	0.84 (0.67, 1.06)		0.14	A	C	D	E	F	G	
Terry, P., 2002, BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		672	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.01 (0.89, 1.14)			A	B	C	D	E	F	G
Cho, E., 2003, BRE01652	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	1537.0 vs. 183.0	5	0.85 (0.67, 1.08)		0.35		C	D	E	F	G	

Post-menopausal

Zhang, S., 1999, BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Post-menopausal	1453.0 vs. 220.0	5	0.98 (0.85, 1.13)		0.48	A	C	D	E	F	G	
Terry, P., 2002, BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		575	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.02 (0.91, 1.14)			A	B	C	D	E	F	G

Menopausal status not specified

Zhang, S., 1999, BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	1453.0 vs. 220.0	5	0.89 (0.7, 1.14)		0.46	A	C	D	E	F	G	
Zhang, S., 1999, BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	1453.0 vs. 220.0	5	0.47 (0.23, 0.98)		0.01	A	C	D	E	F	G	
Terry, P., 2002, BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1184	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - No	1.0 (continuous)	1	0.98 (0.91, 1.06)			A	B	C	D	E	F	G
Terry, P., 2002, BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		268	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - Yes	1.0 (continuous)	1	1.07 (0.88, 1.32)			A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		492	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Lean	1.0 (continuous)	1	0.9 (0.79, 1.05)			A	B	C	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1431	63278	Through network, paper, tv		FFQ-Quantitative		mcg/day	Breast cancer incidence		2441.0 vs. 344.0	5	1.01 (0.8, 1.25)	0.95		A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		542	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Overweight	1.0 (continuous)	1	1.04 (0.91, 1.18)			A	B	C	E	F	G	
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		<766.0 vs. <157.0	5	1.2 (0.9, 1.5)	0.03	A	C	D	E	F	G		

Beta-carotene

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	7609.0 vs. 1677.0	5	0.84 (0.67, 1.05)	0.07		A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		672	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.01 (0.89, 1.15)			A	B	C	D	E	F	G
Cho, E.,2003,BRE01652	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	7701.0 vs. 1675.0	5	0.96 (0.75, 1.22)	0.97		C	D	E	F	G		

Post-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Post-menopausal	7609.0 vs. 1677.0	5	0.94 (0.81, 1.09)	0.42		A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		575	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.89, 1.15)			A	B	C	D	E	F	G

Menopausal status not specified

Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.0 (0.68, 1.48)	0.65		A						
Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		56837.0	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		I.U./day	Breast cancer incidence		4995.0 (continuous)	1	0.85 (0.72, 1.0)			A	B	C	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Verhoeven, D. T.,1997,BRE12868	Case Cohort	the Netherland, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	519	5866	Through network, paper, tv	4.3 years / no lost	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		0.719 vs. 0.197	5	1.01 (0.72, 1.42)		0.96	A	C	E	F	G		
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	7609.0 vs. 1677.0	5	0.93 (0.73, 1.18)		0.48	A	C	D	E	F	G	
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	7609.0 vs. 1677.0	5	0.38 (0.19, 0.77)	0.0099	A	C	D	E	F	G		
Michels, K. B.,2001,BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76	717	59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence	Lean	5.1 vs. 0.97	5	1.14 (0.89, 1.47)		0.21	A	B	C	D	E	F	
Michels, K. B.,2001,BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76		59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		5.1 vs. 0.97	5	1.01 (0.84, 1.22)		0.53	A	B	C	D	E	F	
Michels, K. B.,2001,BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76	554	59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence	Overweight	5.1 vs. 0.97	5	0.86 (0.65, 1.14)	0.60	A	B	C	D	E	F		
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1184	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - No	1.0 (continuous)	1	0.96 (0.88, 1.05)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		268	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - Yes	1.0 (continuous)	1	1.22 (0.95, 1.58)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		492	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Lean	1.0 (continuous)	1	0.88 (0.77, 1.04)			A	B	C	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1452	63277	Through network, paper, tv		FFQ-Quantitative		mcg/day	Breast cancer incidence		9832.0 vs. 2205.0	5	1.01 (0.7, 1.33)	0.98	A	B	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		542	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Overweight	1.0 (continuous)	1	1.05 (0.92, 1.2)			A	B	C	E	F	G	
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		<4652.0 vs. <1465.0	5	1.1 (0.9, 1.4)	0.2	A	C	D	E	F	G		

Beta-carotene diet+supplement

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	7694.0 vs. 1683.0	5	0.83 (0.66, 1.04)		0.04	A	C	D	E	F	G	

Post-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Post-menopausal	7694.0 vs. 1683.0	5	0.94 (0.81, 1.09)		0.42	A	C	D	E	F	G
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Menopausal status not specified

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	7694.0 vs. 1683.0	5	0.91 (0.71, 1.16)		0.33	A	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	7694.0 vs. 1683.0	5	0.42 (0.21, 0.83)		0.002	A	C	D	E	F	G

Beta-carotene

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	175.0 vs. 20.0	5	0.89 (0.7, 1.13)		0.34	A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		672	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	0.93 (0.82, 1.05)			A	B	C	D	E	F	G
Cho, E.,2003,BRE01652	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	104.0 vs. 8.0	5	1.2 (0.94, 1.54)		0.11		C	D	E	F	G	

Post-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Post-menopausal	175.0 vs. 20.0	5	0.97 (0.84, 1.12)		0.91	A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		575	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.08 (0.95, 1.23)			A	B	C	D	E	F	G

Menopausal status not specified

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	175.0 vs. 20.0	5	0.94 (0.73, 1.22)		0.71	A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	175.0 vs. 20.0	5	0.57 (0.28, 1.15)		0.09	A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1184	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - No	1.0 (continuous)	1	0.94 (0.87, 1.03)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		268	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - Yes	1.0 (continuous)	1	1.45 (1.08, 1.95)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		492	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Lean	1.0 (continuous)	1	0.94 (0.81, 1.11)			A	B	C	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1448	63061	Through network, paper, tv		FFQ-Quantitative		mcg/day	Breast cancer incidence		246.0 vs. 26.0	5	0.88 (0.6, 1.13)		0.59	A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		542	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Overweight	1.0 (continuous)	1	1.06 (0.91, 1.23)			A	B	C	E	F	G	

Carotene

Post-menopausal

Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		IU * 1000/month	Breast cancer incidence	Post-menopausal	347.0 - 2030.0 vs. 0 - 115.0	5	0.89 (0.63, 1.26)			A	B						
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Cryptoxanthin

Menopausal status not specified

Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		<154.0 vs. <27.0	5	1.0 (0.8, 1.3)		0.7	A	C	D	E	F	G
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Plasma Alpha-carotene

Pre-menopausal

Hulten,2001,BRE04155	Nested Case Control	sweden VIP + MONICA + MSP		57	93	Unspecified					Breast cancer incidence	Pre-menopausal	>1.0 vs. >-1.0	4	0.7 (0.2, 2.4)		0.59				D			
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Post-menopausal

Hulten,2001,BRE04155	Nested Case Control	sweden VIP + MONICA + MSP		67	109	Unspecified					Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.5 (0.2, 1.4)		0.17				D			
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments									
																		A	B	C	D	E	F	G			
Sato, Reiko,2002,BRE20839	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974	(51)	243	244	Through network, paper, tv	20.0 years			mcg/dL	Breast cancer incidence		>22.2 vs. <7.2	5	0.41 (0.22, 0.79)		0.007										

Serum beta-cryptoxanthin

Menopausal status not specified

Dorgan, J.F.,1998,BRE14889	Nested Case Control	U S, Not specified Columbia Missouri Breast Cancer Serum Bank, 1977	41 - 73	105	209	Through network, paper, tv	9.5 years			mcmol/L	Invasive breast cancer incidence		0.28 - 1.07 vs. <0.1	4	0.6 (0.3, 1.2)		0.41										D	G	
Toniolo, P.,2001,BRE12399	Nested Case Control	US, Not specified New York Women's Health Study, 1985	35 - 65		14275.0	Through health org. (screening, health insurance)				mcg/dL	Breast cancer incidence		Quantile 4 vs. Quantile 4	4	1.0 (null, null)		0.05										C	F	G
Sato, Reiko,2002,BRE20839	Nested Case Control	USA, Caucasian, Blood donors CLUE I, 1974	(51)	244	244	Through network, paper, tv	20.0 years			mcg/dL	Breast cancer incidence		>15.8 vs. <4.4	5	0.98 (0.55, 1.75)		.67												

5.5.10

Blood 1,25-dihydroxyvitamin D

Menopausal status not specified

Bertone-Johnson, E. R.,2005,BRE21759	Nested Case Control	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	701	701	By Mail	6.0 years			ng/ml	Breast cancer incidence		>38.2 vs. <28.5	5	0.76 (0.52, 1.11)		0.39											C	D	E	F	G
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Blood 25-hydroxyvitamin D

Menopausal status not specified

Bertone-Johnson, E. R.,2005,BRE21759	Nested Case Control	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	701	701	By Mail	6.0 years				Breast cancer incidence		>1.0 vs. >-1.0	5	0.73 (0.49, 1.07)		0.06												C	D	E	F	G
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Dietary Vitamin D

Pre-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		I.U./day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	5	0.88 (0.79, 0.98)													A	C	D	E	F	G
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Dietary vitamin D

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	276	31487.0	medical records	10.0 years	FFQ	Vitamin D from diet	IU/day	Invasive breast cancer incidence	Pre-menopausal	>319.0 vs. <141.9	6	1.02 (0.69, 1.53)	0.4		A	C	D	E	F	G	

Dietary Vitamin D

Post-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		I.U./day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.94, 1.06)			A	C	D	E	F	G
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Dietary vitamin D

Post-menopausal

Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	2440	34321.0	State health registry		FFQ	Dietary vitamin D intake	I.U./day	Invasive breast cancer incidence		>=800 vs. <400	3	0.55 (0.24, 1.22)	0.14		A	B	C	D	E	F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	743	31487.0	medical records	10.0 years	FFQ	Vitamin D from diet	IU/day	Invasive breast cancer incidence	Post-menopausal	>319.0 vs. <141.9	6	1.22 (0.95, 1.55)	0.09		A						G

Dietary Vitamin D

Menopausal status not specified

Simard, A.,1991,BRE18039	Nested Case Control	Canada, Not specified, Screening Program NBSS, 1980	40 - 59		9089.0	Through health org. (screening, health insurance)		24h Recall + FFQ-Semi-quantitative			Breast cancer incidence			1	null (null, null)									
John, E. M.,1999,BRE04433	Prospective Cohort	USA, White NHANES I, 1971	25 - 74	177	4747.0	Unspecified	17.3 years	24h Recall		I.U./day	Breast cancer mortality/incidence		>=200 vs. <100	3	0.85 (0.59, 1.24)	0.48		A	B	C	D	E		G

Total vitamin D

Pre-menopausal

Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	206	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer ER+ incidence	Pre-menopausal	>548.0 vs. <161.9	6	0.53 (0.31, 0.88)	0.03		A							G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	59	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer ER- incidence	Pre-menopausal	>548.0 vs. <161.9	6	1.3 (0.53, 3.15)	0.62		A	C	D	E			G	
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	186	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer PR+ incidence	Pre-menopausal	>548.0 vs. <161.9	6	0.55 (0.32, 0.94)	0.04		A	C	D	E			G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	74	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer PR- incidence	Pre-menopausal	>548.0 vs. <161.9	6	1.08 (0.48, 2.42)		0.79	A	C	D	E	F	G	
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	276	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Invasive breast cancer incidence	Pre-menopausal	>548.0 vs. <161.9	6	0.65 (0.42, 1.0)		0.07	A	C	D	E	F	G	
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	72	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Well differentiated breast cancer incidence	Pre-menopausal	>548.0 vs. <161.9	6	0.44 (0.19, 1.03)		0.14					E	G	

Post-menopausal

McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	227	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative	Total vitamin D (dietary plus multivitamins)	I.U./day	Breast cancer ER- incidence	Post-menopausal	>700 vs. <=100	8	1.35 (0.79, 2.23)		0.82	A	B	C	D	E	F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	602	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer ER+ incidence	Post-menopausal	>548.0 vs. <161.9	6	1.28 (0.93, 1.76)		0.57	A	C				F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	109	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer ER- incidence	Post-menopausal	>548.0 vs. <161.9	6	1.47 (0.66, 3.3)		0.6	A	C				F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	522	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer PR+ incidence	Post-menopausal	>548.0 vs. <161.9	6	1.23 (0.88, 1.72)		0.58	A	C				F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	179	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Breast cancer PR- incidence	Post-menopausal	>548.0 vs. <161.9	6	1.48 (0.76, 2.88)		0.87	A	C				F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	743	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Invasive breast cancer incidence	Post-menopausal	>548.0 vs. <161.9	6	1.3 (0.97, 1.73)		0.52	A						G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	164	31487.0	medical records	10.0 years	FFQ	Total vitamin D	IU/day	Well differentiated breast cancer incidence	Post-menopausal	>548.0 vs. <161.9	6	1.34 (0.72, 2.47)		0.77	A	C				F	G

Vitamin D and calcium

Pre-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		I.U./day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.94 (0.9, 0.99)			A	C	D	E	F	G
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Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		I.U./day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	0.98 (0.96, 1.01)			A	C	D	E	F	G	
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative	Total vitamin D (dietary plus multivitamins)	I.U./day	Breast cancer incidence	Post-menopausal	>700 vs. <=100	8	0.95 (0.81, 1.13)	0.98	A	B	C	D	E	F	G	
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1283	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative	Total vitamin D (dietary plus multivitamins)	I.U./day	Breast cancer ER+ incidence	Post-menopausal	>700 vs. <=100	8	0.84 (0.65, 1.09)	0.57	A	B	C	D	E	F	G	

Menopausal status not specified

John, E. M.,1999,BRE04433	Prospective Cohort	USA, White NHANES I, 1971	25 - 74	177	4747.0	Unspecified	17.3 years	24h Recall	from food or supplements	I.U./day	Breast cancer mortality/incidence		>=200 or daily supplements vs.	3	0.86 (0.61, 1.2)	0.37	A	B	C	D	E	G
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Vitamin D from foods and supplements

Post-menopausal

Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	1221	34321.0	State health registry		FFQ	Total vitamin D intake, diet and supplements combined	I.U./day	Breast cancer ER+/PR+ incidence		>=800 vs. <400	3	0.96 (0.78, 1.18)	0.69	A	B	C	D	E	F	G
Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	230	34321.0	State health registry		FFQ	Total vitamin D intake, diet and supplements combined	I.U./day	Breast cancer ER+/PR- incidence		>=800 vs. <400	3	0.85 (0.53, 1.36)	0.5	A	B	C	D	E	F	G
Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	224	34321.0	State health registry		FFQ	Total vitamin D intake, diet and supplements combined	I.U./day	Breast cancer ER-/PR- incidence		>=800 vs. <400	3	0.77 (0.48, 1.25)	0.29	A	B	C	D	E	F	G
Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	280	34321.0	State health registry		FFQ	Total vitamin D intake, diet and supplements combined	I.U./day	In situ breast cancer incidence		>=800 vs. <400	3	0.61 (0.37, 0.99)	0.05	A	B	C	D	E	F	G
Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	2440	34321.0	State health registry		FFQ	Total vitamin D intake, diet and supplements combined	I.U./day	Invasive breast cancer incidence		>=800 vs. <400	3	0.89 (0.77, 1.03)	0.12	A	B	C	D	E	F	G
Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	1317	34321.0	State health registry		FFQ	Total vitamin D intake, diet and supplements combined	I.U./day	Localized breast cancer incidence		>=800 vs. <400	3	0.91 (0.75, 1.11)	0.35	A	B	C	D	E	F	G
Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	466	34321.0	State health registry		FFQ	Total vitamin D intake, diet and supplements combined	I.U./day	Regional and distant breast cancer incidence		>=800 vs. <400	3	0.9 (0.65, 1.25)	0.53	A	B	C	D	E	F	G

Vitamin D supplement

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	276	31487.0	medical records	10.0 years	FFQ	Vitamin D from supplements	IU/day	Invasive breast cancer incidence	Pre-menopausal	>400.0 vs. 0	4	0.76 (0.5, 1.17)		0.41	A	C	D	E	F	G	

Post-menopausal

Robien, K. et al.,2007,BRE80130	Prospective Cohort	United States, 99% white, Post menopausal Iowa Women's Health study	55 - 69	2440	34321.0	State health registry		FFQ	Vitamin D supplement use	I.U./day	Invasive breast cancer incidence		>=800 vs. non users	4	0.89 (0.74, 1.08)		0.33	A	B	C	D	E	F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	743	31487.0	medical records	10.0 years	FFQ	Vitamin D from supplements	IU/day	Invasive breast cancer incidence	Post-menopausal	>400.0 vs. 0	4	0.87 (0.68, 1.12)		0.31	A						

Menopausal status not specified

John, E. M.,1999,BRE04433	Prospective Cohort	USA, White NHANES I, 1971	25 - 74	177	4747.0	Unspecified	17.3 years	24h Recall			Breast cancer mortality/incidence		daily vs. never	3	0.89 (0.6, 1.32)		0.52	A	B	C	D	E	G
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5.5.11

Alpha-tocopherol

Menopausal status not specified

Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		56837.0	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		mg/day	Breast cancer incidence		4.0 (continuous)	1	0.96 (0.76, 1.21)			A	B	C	E	F	G
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Alpha-tocopherol supplement

Menopausal status not specified

Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	519	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		mg/day	Breast cancer incidence		>3.1 vs. 0	3	1.2 (0.83, 1.75)		0.655	A	B	C	E	F	G
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Plasma Alpha-tocopherol

Menopausal status not specified

Sato, Reiko,2002,BRE70839	Nested Case Control	USA, Caucasian, Blood donors CLUE II, 1989	(60)	115	115	Through network, paper, tv	3.0 years			mg/dL	Breast cancer incidence		>1.65 vs. <0.98	5	0.67 (0.28, 1.62)		0.54							
Tamimi, R. M.,2004,BRE12084	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	254	225	Through social organization (profession, religion)	8.0 years				Breast cancer incidence	Val/Val (MnSOD)	>1.0 vs. >-1.0	3	0.98 (0.62, 1.55)				C	D	E	F	G	
Tamimi, R. M.,2005,BRE24274	Nested Case Control	U.S.A., Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 70		121700.0	Direct contact at home	22.0 years	Questionnaire (nos)		mcmol/L	Invasive & In situ breast cancer incidence		>1.0 vs. >-1.0	5	0.79 (0.57, 1.08)		0.14		C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
<i>Pre-menopausal</i>																									
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Pre-menopausal	10.0 vs. 5.0	5	0.81 (0.64, 1.02)		0.29	A	C	D	E	F	G		
Cho, E.,2003,BRE01652	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence	Pre-menopausal	59.0 vs. 7.0	5	1.17 (0.92, 1.5)		0.34		C	D	E	F	G		
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	mg/day	Breast cancer incidence	Pre-menopausal	15.6 vs. 9.8	5	0.61 (0.42, 0.89)		0.003	A	C	D	E	F	G		
<i>Post-menopausal</i>																									
Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		mg/month	Breast cancer incidence	Post-menopausal	278.0 - 2036.0 vs. 30.0 - 130.0	5	0.86 (0.61, 1.21)			A	B						
Kushi, L. H.,1996,BRE05143	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	570	21782	By Mail	7.0 years / 1370	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>9.65 vs. <4.89	5	1.08 (0.74, 1.58)		0.32	A	B	C	D	E	F	G	
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Post-menopausal	10.0 vs. 5.0	5	0.96 (0.83, 1.11)		0.55	A	C	D	E	F	G		
Nissen, Stine, B.,2003,BRE20535	Case Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	By Mail		FFQ (nos)		mg/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.13 (0.61, 2.1)				B	C	D	E	F	G	
<i>Menopausal status not specified</i>																									
Rohan, T. E.,1993,BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59		56837.0	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		mg/day	Breast cancer incidence		13.0 (continuous)	1	1.02 (0.87, 1.19)				A	B	C		E	F	G
Verhoeven, D. T.,1997,BRE12868	Case Cohort	the Netherland, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	519	5866	Through network, paper, tv	4.3 years / no lost	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		19.82 vs. 5.96	5	1.25 (0.85, 1.85)		0.37	A	C		E	F	G		
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	10.0 vs. 5.0	5	0.84 (0.66, 1.07)		0.43	A	C	D	E	F	G		
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	10.0 vs. 5.0	5	0.57 (0.28, 1.15)		0.27	A	C	D	E	F	G		
Michels, K. B.,2001,BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76	717	59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence	Lean	9.3 vs. 3.8	5	0.86 (0.56, 1.32)		0.73	A	B	C	D	E	F		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Michels, K. B., 2001, BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76		59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		9.3 vs. 3.8	5	0.83 (0.6, 1.14)		0.38	A	B	C	D	E	F	G
Michels, K. B., 2001, BRE17830	Prospective Cohort	Sweden, Not specified, Screening Program Valencia, 1997	40 - 76	554	59039.0	By Mail	130.0 months	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence	Overweight	9.3 vs. 3.8	5	0.74 (0.45, 1.19)		0.27	A	B	C	D	E	F	G
Horn-Ross, P.L., 2002, BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		Alpha-TE (tocopherol equivalent)	Invasive breast cancer incidence		<204.0 vs. <8.0	5	1.1 (0.9, 1.4)		0.4	A	C	D	E	F	G	
Frazier L.A., 2003, BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	I.U./day	Breast cancer incidence		8.1 vs. 2.2	5	0.87 (null, null)		0.18	A	C	D	E	F	G	
Li, W., 2005, BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		Alpha-TE (tocopherol equivalent)	Breast cancer incidence		>22.9 vs. <13.8	5	0.6 (0.3, 1.3)		0.23	A						

Vitamin E from supplements

Post-menopausal

Kushi, L. H., 1996, BRE05143	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	879	34387	By Mail	7.0 years / 1370	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>251.0 vs. <0.0	5	0.96 (0.76, 1.23)		0.97	A	B	C	D	E	F	G
Nissen, Stine, B., 2003, BRE20535	Case Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	By Mail		FFQ (nos)		mg/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.0 (0.96, 1.03)				B	C	D	E	F	G

Menopausal status not specified

Rohan, T. E., 1993, BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	519	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		mg/day	Breast cancer incidence		>4.1 vs. 0	3	1.0 (0.65, 1.54)		0.708	A	B	C		E	F	G
Hunter, D. J., 1993, BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		89494.0	By Mail	8.0 years / 4%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence		>=600 vs. No use	5	1.01 (0.69, 1.49)		0.43	A	C	D	E	F	G	
Hunter, D. J., 1993, BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		89494.0	By Mail	8.0 years / 4%	FFQ-Semi-quantitative	supplement duration	Years/life	Invasive breast cancer incidence		>=10 vs. no use	5	1.19 (0.85, 1.66)		0.17	A	C	D	E	F	G	
Zhang, S., 1999, BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	2523	77925	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence		>=600 vs. never user	5	0.92 (0.7, 1.21)			A	C	D	E	F	G	

5.5.13

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Antioxidant indices																								
<i>Menopausal status not specified</i>																								
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)	from fruits and vegetables		Invasive breast cancer incidence		Quantile 5 vs. <8.3	5	1.0 (0.7, 1.2)		0.8	A	C	D	E	F	G	
Multivitamin supplement																								
<i>Post-menopausal</i>																								
Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S. Not specified CPS-II US cohort, 1982-1998		1303	65258	By Mail	6.0 years / 7592	FFQ-Semi-quantitative		dichotomous	Breast cancer incidence	Post-menopausal	any use in 1982 and 1992 vs.	4	1.02 (0.89, 1.17)			A	B	C	D	E	F	G
Wilfart, E et al.,2005,BRE11111	Nested Case Control	Sweden, Post menopausal Malmö Diet and Cancer, 1991	50 - (59)	237	673	Cancer registry		7-day Record + Questionnaire	Dietary supplements use		Breast cancer incidence	Post-menopausal	yes vs. no	2	0.8 (0.57, 1.12)			A						
<i>Menopausal status not specified</i>																								
Hunter, D. J.,1993,BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		89494.0	By Mail	8.0 years / 4%	FFQ-Semi-quantitative	supplement duration	Years/life	Invasive breast cancer incidence		>=10 vs. no use	5	1.0 (0.83, 1.2)		0.99	A	C	D	E	F	G	
Wu, K.,1999,BRE13618	Nested Case Control	USA, Not specified, Blood donors CLUE I, 1974	18 - 90	133	133	Through network, paper, tv	21.0 years	Questionnaire (nos)		dichotomous	Breast cancer incidence		ever vs. never	3	1.25 (0.67, 2.36)									
Wu, K.,1999,BRE63618	Nested Case Control	USA, Not specified, Blood donors CLUE II, 1989	18 - 90	110	110	Through network, paper, tv	6.0 years	Questionnaire (nos)		dichotomous	Breast cancer incidence		ever vs. never	3	0.77 (0.42, 1.43)									
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	2523	77925	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		Years/life	Invasive breast cancer incidence		current user, >=10 vs. never user	6	0.96 (0.85, 1.09)			A	C	D	E	F	G	
Other vitamins (including multivitamins)																								
<i>Menopausal status not specified</i>																								
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	serving/day	Breast cancer incidence		1.0 (continuous)	1	1.04 (0.84, 1.28)			A	C	D	E	F	G	
Vitamin B supplement																								
<i>Menopausal status not specified</i>																								
Wu, K.,1999,BRE13618	Nested Case Control	USA, Not specified, Blood donors CLUE I, 1974	18 - 90	133	133	Through network, paper, tv	21.0 years	Questionnaire (nos)		dichotomous	Breast cancer incidence		ever vs. never	3	1.06 (0.47, 2.38)									

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	8796.0 vs. 1376.0	5	0.88 (0.69, 1.12)		0.32	A	C	D	E	F	G	
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	8796.0 vs. 1376.0	5	0.38 (0.18, 0.81)		0.004	A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1184	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - No	1.0 (continuous)	1	0.99 (0.92, 1.07)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		268	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - Yes	1.0 (continuous)	1	1.24 (0.87, 1.75)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		492	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Lean	1.0 (continuous)	1	1.0 (0.9, 1.11)			A	B	C	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1452	63278	Through network, paper, tv		FFQ-Quantitative		mcg/day	Breast cancer incidence		6838.0 vs. 1219.0	5	1.17 (0.9, 1.53)		0.14	A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		542	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Overweight	1.0 (continuous)	1	0.99 (0.89, 1.13)			A	B	C	E	F	G	

Lycopene

Pre-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	784	53938	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	12688.0 vs. 1520.0	5	1.1 (0.87, 1.38)		0.34	A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		672	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	0.99 (0.88, 1.11)			A	B	C	D	E	F	G
Cho, E.,2003,BRE01652	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	15745.0 vs. 3570.0	5	1.17 (0.92, 1.49)		0.06		C	D	E	F	G	

Post-menopausal

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	1913	29296	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Post-menopausal	12688.0 vs. 1520.0	5	1.02 (0.88, 1.18)		0.97	A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		575	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.02 (0.9, 1.16)			A	B	C	D	E	F	G

Menopausal status not specified

Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	689	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	12688.0 vs. 1520.0	5	1.05 (0.82, 1.34)		0.43	A	C	D	E	F	G	
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	12688.0 vs. 1520.0	5	1.42 (0.7, 2.88)		0.75	A	C	D	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1184	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - No	1.0 (continuous)	1	0.99 (0.91, 1.06)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		268	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Family History BC - Yes	1.0 (continuous)	1	1.23 (0.98, 1.53)			A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		492	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Lean	1.0 (continuous)	1	0.9 (0.77, 1.09)			A	B	C	E	F	G	
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		1451	63152	Through network, paper, tv		FFQ-Quantitative		mcg/day	Breast cancer incidence		23748.0 vs. 2283.0	5	1.14 (0.9, 1.41)		0.85	A	B	C	D	E	F	G
Terry, P.,2002,BRE12200	Case Cohort	Canada, Not specified, Screening Program Canadian National Breast Screening Study		542	56837.0	Through network, paper, tv		FFQ-Quantitative		SD Units/day	Breast cancer incidence	Overweight	1.0 (continuous)	1	1.01 (0.89, 1.14)			A	B	C	E	F	G	
Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		<2777.0 vs. <910.0	5	0.9 (0.7, 1.1)		0.5	A	C	D	E	F	G	
Sesso H. D.,2005,BRE74061	Prospective Cohort	USA, Not specified, Health professionals Women's Health Study, 1993		1076	38447.0	Through health org. (screening, health insurance)	9.9 years	FFQ-Semi-quantitative	median lycopene intake	mcg/day	Breast cancer incidence		16741.0 vs. 3326.0	5	1.0 (0.8, 1.25)		0.71	A	C	D	E	F	G	
Sesso H. D.,2005,BRE74061	Prospective Cohort	USA, Not specified, Health professionals Women's Health Study, 1993		719	38447.0	Through health org. (screening, health insurance)	9.9 years	FFQ-Semi-quantitative	median lycopene intake	mcg/day	Breast cancer ER+/PR+		16741.0 vs. 3326.0	5	1.12 (0.85, 1.47)		0.16	A	C	D	E	F	G	

Plasma Carotenoids (total)

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang, S.,1999,BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	90	83234.0	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		I.U./day	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	4680.0 vs. 1037.0	5	0.38 (0.19, 0.77)		0.001	A	C	D	E	F	G	
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	I.U./day	Breast cancer incidence		9253.0 vs. 1053.0	5	1.1 (null, null)		0.65	A	C	D	E	F	G	
Li, W.,2005,BRE23123	Nested Case Control	China, Asian Shanghai BSE		130	1070	Through social organization (profession, religion)		FFQ-Semi-quantitative		mcg/day	Breast cancer incidence		>1450.6 vs. <873.9	5	0.7 (0.3, 1.9)		0.56	A						

5.5.3

Dietary folate

Post-menopausal

Tjonneland A.,2006,BRE80104	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	388	388	Cancer registry		FFQ	Dietary folate	micro g/day	Breast cancer incidence		>400 vs. <=250	5	0.8 (0.37, 1.69)				B	C	D	E	G	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	691	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Natural folate from foods that were not fortified	micro g/day	Breast cancer incidence		>337.1 vs. <233.6	5	0.98 (0.78, 1.24)		0.63	A	B			E	F	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	700	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Folate from foods, included natural folate and added folic acid	micro g/day	Breast cancer incidence		>412.0 vs. <261.3	5	1.04 (0.83, 1.31)		0.56	A	B			E	F	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	91	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Natural folate from foods that were not fortified	micro g/day	Breast cancer incidence	non-vitamins users	>322.1 vs. <221.0	5	1.01 (0.54, 1.89)		0.81	A	B			E	F	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	91	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Folate from foods, included natural folate and added folic acid	micro g/day	Breast cancer incidence	non-vitamins users	>395.1 vs. <244.0	5	1.2 (0.66, 2.19)		0.23	A	B			E	F	
Lajous, M. et al.,2006,BRE80135	Prospective Cohort	France, Post menopausal E3N-EPIC, 1990		1812	62739.0	patient records/direct contact/health insurance	9.0 years / 0.01	FFQ	Dietary folate intake	mcg/day	Invasive & In situ breast cancer incidence		522.0 vs. 296.0	5	0.78 (0.67, 0.9)		0.001	A	B	C	D	E	F	G
Lajous, M. et al.,2006,BRE80135	Prospective Cohort	France, Post menopausal E3N-EPIC, 1990		596	62739.0	patient records/direct contact/health insurance	9.0 years / 0.01	FFQ	Dietary folate intake	mcg/day	Invasive & In situ breast cancer incidence	Vit B-12 intake 11.6mcg/day	522.0 vs. 296.0	5	0.62 (0.47, 0.81)		0.02	A	B	C	D	E	F	G
Lajous, M. et al.,2006,BRE80135	Prospective Cohort	France, Post menopausal E3N-EPIC, 1990		601	62739.0	patient records/direct contact/health insurance	9.0 years / 0.01	FFQ	Dietary folate intake	mcg/day	Invasive & In situ breast cancer incidence	Vit B-12 intake 4.2mcg/day	522.0 vs. 296.0	5	0.92 (0.7, 1.2)		0.44	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Lajous, M. et al.,2006,BRE0135	Prospective Cohort	France, Post menopausal E3N-EPIC, 1990		615	62739.0	patient records/direct contact/health insurance	9.0 years / 0.01	FFQ	Dietary folate intake	mcg/day	Invasive & In situ breast cancer incidence	Vit B-12 intake 6.7mcg/day	522.0 vs. 296.0	5	0.73 (0.56, 0.97)		0.01	A	B	C	D	E	F	G

Menopausal status not specified

Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2812	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer ER+ incidence		>332.1 vs. <205.9	5	1.15 (1.01, 1.3)		0.05	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	438	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup:alcohol >=15 g/d	mcg/day	Breast cancer ER+ incidence	Other	>332.1 vs. <205.9	5	1.06 (0.77, 1.47)		0.74	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2374	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup:alcohol <15 g/d	mcg/day	Breast cancer ER+ incidence	Other	>332.1 vs. <205.9	5	1.16 (1.02, 1.33)		0.04	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	985	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer ER- incidence		>332.1 vs. <205.9	5	0.97 (0.79, 1.18)		0.34	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	129	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup:alcohol >=15 g/d	mcg/day	Breast cancer ER- incidence	Other	>332.1 vs. <205.9	5	0.66 (0.36, 1.21)		0.06	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	856	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup:alcohol <15 g/d	mcg/day	Breast cancer ER- incidence	Other	>332.1 vs. <205.9	5	1.04 (0.83, 1.28)		0.85	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2256	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer PR+ incidence		>332.1 vs. <205.9	5	1.09 (0.95, 1.26)		0.55	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	344	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol>=15 g/d	mcg/day	Breast cancer PR+ incidence	Other	>332.1 vs. <205.9	5	0.98 (0.69, 1.4)		0.63	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1912	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol<15 g/d	mcg/day	Breast cancer PR+ incidence	Other	>332.1 vs. <205.9	5	1.12 (0.97, 1.3)		0.37	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1361	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer PR- incidence		>332.1 vs. <205.9	5	1.08 (0.91, 1.29)		0.42	A	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	188	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol>=15 g/d	mcg/day	Breast cancer PR- incidence	Other	>332.1 vs. <205.9	5	0.76 (0.45, 1.27)		0.29	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1173	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol<15 g/d	mcg/day	Breast cancer PR-incidence	Other	>332.1 vs. <205.9	5	1.14 (0.95, 1.38)		0.16	A	C	D	E	F	G	

Folate

Post-menopausal

Ericson, U. et al.,2007,BRE80128	Prospective Cohort	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 -	392	11699.0	Cancer registry	9.5 years	Dietary History questionnaire	Dietary folate equivalents, food folate + 1.7 x folic acid from supplements	mcg/day	Invasive breast cancer incidence	50 years and older	582.0 vs. 160.0	5	0.59 (0.36, 0.97)		0.01	A	B	C	D	E	F	G
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Folate diet+supplement

Pre-menopausal

Cho, E.,2003,BRE01652	Prospective Cohort	U.S. Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		mcg/day	Invasive breast cancer incidence	Pre-menopausal	826.0 vs. 228.0	5	1.03 (0.81, 1.32)		0.96			C	D	E	F	G
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Post-menopausal

Feigelson, H. S.,2003,BRE02720	Prospective Cohort	U.S. Not specified CPS-II US cohort, 1982-1998		1303	65258	By Mail	6.0 years / 7592	FFQ-Semi-quantitative		mcg/day	Breast cancer incidence	Post-menopausal	>603.7 vs. <209.7	4	1.1 (0.94, 1.29)				A	B	C	D	E	F	G
Stolzenberg-Solomon, R. Z.,2004,BRE18746	Prospective Cohort	, Not specified, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	777	28210	Through health org. (screening, health insurance)	4.94 years	Questionnaire (nos)			Breast cancer incidence	Post-menopausal	5th quintile vs. 1st quintile	2	1.18 (0.9, 1.55)		.14		A	B	C		E	F	G
Tjonneland A.,2006,BRE80104	Nested Case Control	Denmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 64	388	388	Cancer registry		FFQ	Total folate intake	micro g/day	Breast cancer incidence		>400 vs. <=300	5	0.6 (0.35, 1.06)				B	C	D	E		G	
Stolzenberg-Solomon, R.Z.,2006,BRE80113	Prospective Cohort	United States, Post-menopausal PLCO Cancer Screening Trial cohort, 1993	55 - 74	691	31411.0	Cancer screening programme	4.94 years	FFQ (nos)	Total folate, foods and supplements combined	micro g/day	Breast cancer incidence		>853.1 vs. <335.5	5	1.32 (1.04, 1.68)		0.03	A	B		D	E	F		
Ericson, U. et al.,2007,BRE80128	Prospective Cohort	Sweden, Post menopausal Malmo Diet and Cancer, 1991	50 -	392	11699.0	Cancer registry	9.5 years	Dietary History questionnaire	Total folate intake, including supplement	mcg/day	Invasive breast cancer incidence	50 years and older	456.0 vs. 160.0	5	0.56 (0.34, 0.91)		0.006	A	B	C	D	E	F	G	

Menopausal status not specified

Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2812	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer ER+ incidence		>534.0 vs. <228.0	5	1.0 (0.89, 1.14)		0.83	A		C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	438	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol>=15 g/d	mcg/day	Breast cancer ER+ incidence	Other	>534.0 vs. <228.0	5	1.0 (0.73, 1.37)		0.81	A		C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2374	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcoho<15 g/d	mcg/day	Breast cancer ER+ incidence	Other	>534.0 vs. <228.0	5	1.01 (0.88, 1.15)		0.94	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	985	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer ER- incidence		>534.0 vs. <228.0	5	0.81 (0.66, 0.99)		0.03	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	129	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol>=15 g/d	mcg/day	Breast cancer ER- incidence	Other	>534.0 vs. <228.0	5	0.46 (0.25, 0.86)		0.03	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	856	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcoho<15 g/d	mcg/day	Breast cancer ER- incidence	Other	>534.0 vs. <228.0	5	0.88 (0.71, 1.1)		0.15	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2256	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer PR+ incidence		>534.0 vs. <228.0	5	0.95 (0.83, 1.09)		0.24	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	344	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol>=15 g/d	mcg/day	Breast cancer PR+ incidence	Other	>534.0 vs. <228.0	5	0.9 (0.63, 1.27)		0.56	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1912	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol<15 g/d	mcg/day	Breast cancer PR+ incidence	Other	>534.0 vs. <228.0	5	0.97 (0.83, 1.12)		0.33	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1361	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative		mcg/day	Breast cancer PR- incidence		>534.0 vs. <228.0	5	0.97 (0.82, 1.16)		0.79	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	188	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol>=15 g/d	mcg/day	Breast cancer PR- incidence	Other	>534.0 vs. <228.0	5	0.81 (0.51, 1.31)		0.31	A	C	D	E	F	G	
Zhang S.M.,2005,BRE24752	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1173	88744.0	Through social organization (profession, religion)	20.0 years	FFQ-Semi-quantitative	subgroup: alcohol<15 g/d	mcg/day	Breast cancer PR- incidence	Other	>534.0 vs. <228.0	5	1.01 (0.83, 1.21)		0.85	A	C	D	E	F	G	

folate from foods and supplements

Pre-menopausal

Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total folate, from foods and supplementns, cumulative averaged energy-adjusted	mcg/day	Breast cancer ER- incidence	Pre-menopausal	822.0 vs. 237.0	5	1.08 (0.7, 1.66)		0.85	A	C	D	E	F	G
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Total folate, cumulative averaged energy-adjusted	mcg/day	Invasive breast cancer incidence	Pre-menopausal	822.0 vs. 237.0	5	1.09 (0.88, 1.34)		0.31	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Zhang, S.,1999,BRE13954	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	530	167706	By Mail	16.0 years	FFQ-Semi-quantitative	subgroup alcohol lmore than 15g/day		Breast cancer incidence	H nutr/food intake	>=600 vs. 150-299	5	0.55 (0.39, 0.76)	0.001		A	C	D	E	F	G	
Zhang, S.,1999,BRE13954	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2953	1160275	By Mail	16.0 years	FFQ-Semi-quantitative	subgroup alcohol less 15g/day		Breast cancer incidence	L nutr/food intake	>=600 vs. 150-299	5	0.98 (0.88, 1.1)	0.74		A	C	D	E	F	G	
Zhang, S.,1999,BRE13954	Prospective Cohort	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	3483	1327981	By Mail	16.0 years	FFQ-Semi-quantitative			Breast cancer incidence		>=600 vs. 150-299	5	0.91 (0.82, 1.01)	.11		A	C	D	E	F	G	
Rohan, T. E.,2000,BRE17968	Case Cohort	Canada, Not specified Canadian National Breast Screening Study		298	110322	Unspecified	13.0 years	FFQ-Quantitative	alcohol intake >14 g/day	mcg/day	Invasive breast cancer incidence	H nutr/food intake	>354.28 vs. <224.77	5	0.34 (0.18, 0.61)	0.004		A	C	E	F	G		
Rohan, T. E.,2000,BRE17968	Case Cohort	Canada, Not specified Canadian National Breast Screening Study		178	81649	Unspecified	13.0 years	FFQ-Quantitative	alcohol intake >14 g/day	mcg/day	Invasive breast cancer incidence	H nutr/food intake & Post-menopausal	>354.28 vs. <224.77	5	0.28 (0.14, 0.55)	0.003		A	C	E	F	G		
Rohan, T. E.,2000,BRE17968	Case Cohort	Canada, Not specified Canadian National Breast Screening Study		69	6403	Unspecified	13.0 years	FFQ-Quantitative	alcohol intake >14 g/day	mcg/day	Invasive breast cancer incidence	H nutr/food intake & Pre-menopausal	>354.28 vs. <224.77	5	0.47 (0.04, 6.01)	0.65		A	C	E	F	G		
Rohan, T. E.,2000,BRE17968	Case Cohort	Canada, Not specified Canadian National Breast Screening Study		1038	455869	Unspecified	13.0 years	FFQ-Quantitative	alcohol intake <=14 g/day	mcg/day	Invasive breast cancer incidence	L nutr/food intake	>354.28 vs. <224.77	5	1.22 (0.94, 1.58)	0.34		A	C	E	F	G		
Rohan, T. E.,2000,BRE17968	Case Cohort	Canada, Not specified Canadian National Breast Screening Study		639	351848	Unspecified	13.0 years	FFQ-Quantitative	alcohol intake <=14 g/day	mcg/day	Invasive breast cancer incidence	L nutr/food intake & Post-menopausal	>354.28 vs. <224.77	5	1.15 (0.86, 1.54)	0.57		A	C	E	F	G		
Rohan, T. E.,2000,BRE17968	Case Cohort	Canada, Not specified Canadian National Breast Screening Study		218	43743	Unspecified	13.0 years	FFQ-Quantitative	alcohol intake<=14 g/day	mcg/day	Invasive breast cancer incidence	L nutr/food intake & Pre-menopausal	>354.28 vs. <224.77	5	1.31 (0.7, 2.47)	0.88		A	C	E	F	G		
Rohan, T. E.,2000,BRE17968	Case Cohort	Canada, Not specified Canadian National Breast Screening Study		1336	566191	Unspecified	13.0 years	FFQ-Quantitative		mcg/day	Invasive breast cancer incidence		>354.28 vs. <224.77	5	0.99 (0.79, 1.25)	0.88		A	C	E	F	G		
Frazier L.A.,2003,BRE02941	Nested Case Control	USA, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	40 - 65		121700.0	Through health org. (screening, health insurance)	10.0 years	FFQ (nos)	adolescent	mcg/day	Breast cancer incidence		238.0 vs. 81.9	5	0.86 (null, null)	0.21		A	C	D	E	F	G	

Folates, dietary only

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	221	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Folate from foods only, cumulative averaged energy-adjusted	mcg/day	Breast cancer ER-incidence	Pre-menopausal	436.0 vs. 217.0	5	1.16 (0.73, 1.85)		0.53	A	C	D	E	F	G	
Cho, E. et al.,2007,BRE80152	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	26 - 46	1032	90663.0	Self report verified by medical record	12.0 years	semi-quantitative ffq	Folate from foods only, cumulative averaged energy-adjusted	mcg/day	Invasive breast cancer incidence	Pre-menopausal	436.0 vs. 217.0	5	1.08 (0.86, 1.35)		0.77	A	C	D	E	F	G	

Post-menopausal

Ericson, U. et al.,2007,BRE80128	Prospective Cohort	Sweden, Post menopausal Malmö Diet and Cancer, 1991	50 -	392	11699.0	Cancer registry	9.5 years	Dietary History questionnaire	Dietary folate intake	mcg/day	Invasive breast cancer incidence	50 years and older	302.0 vs. 153.0	5	0.56 (0.35, 0.9)		0.02	A	B	C	D	E	F	G
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Plasma Cystein

Pre-menopausal

Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	149	155	By Mail	8.0 years / 0.01			nanomol/ml	Breast cancer incidence	Pre-menopausal	125.0 (continuous)	1	0.33 (0.13, 0.83)							C	D	E	F	G
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Post-menopausal

Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	487	484	By Mail	8.0 years / 0.01			nanomol/ml	Breast cancer incidence	Post-menopausal	125.0 (continuous)	1	0.72 (0.47, 1.12)								C	D	E	F	G
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Menopausal status not specified

Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	593	637	By Mail	8.0 years / 0.01			nanomol/ml	Breast cancer incidence	Family History BC - No	125.0 (continuous)	1	0.67 (0.45, 1.0)								C	D	E	F	G
Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	119	75	By Mail	8.0 years / 0.01			nanomol/ml	Breast cancer incidence	Family History BC - Yes	125.0 (continuous)	1	0.53 (0.24, 1.14)								C	D	E	F	G
Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	387	401	By Mail	8.0 years / 0.01			nanomol/ml	Breast cancer incidence	Lean	125.0 (continuous)	1	0.52 (0.33, 0.81)								C	D	E	F	G
Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	325	311	By Mail	8.0 years / 0.01			nanomol/ml	Breast cancer incidence	Overweight	125.0 (continuous)	1	0.88 (0.56, 1.4)								C	D	E	F	G
Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	712	712	By Mail	8.0 years / 0.01			nanomol/ml	Invasive & In situ breast cancer incidence		>352.0 vs. <258.0	5	0.44 (0.26, 0.74)		0.002						C	D	E	F	G
Zhang, S. M.,2003,BRE13959	Nested Case Control	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69	600	600	By Mail	8.0 years / 0.01			nanomol/ml	Invasive breast cancer incidence		>352.0 vs. <258.0	5	0.38 (0.19, 0.76)		0.01						C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments								
																		A	B	C	D	E	F	G		
Nissen, Stine, B., 2003, BRE20535	Case Cohort	Denmark, Not specified, Post-menopausal Diet, Cancer and Health, 1993	50 - 64		29875.0	By Mail		FFQ (nos)		mg/day	Breast cancer incidence	Post-menopausal	100.0 (continuous)	1	1.06 (1.01, 1.13)						B	C	D	E	F	G

Menopausal status not specified

Rohan, T. E., 1993, BRE17965	Nested Case Control	Canada, Not specified, Screening Program Canadian National Breast Screening Study	40 - 59	519	1182	Through health org. (screening, health insurance)	6.0 years	Dietary History questionnaire		mg/day	Breast cancer incidence		>250.1 vs. 0	3	1.46 (1.05, 2.01)		0.051			A	B	C		E	F	G
Hunter, D. J., 1993, BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		89494.0	By Mail	8.0 years / 4%	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		>=1300 vs. No use	5	1.12 (0.75, 1.69)		0.98		A		C	D	E	F	G	
Hunter, D. J., 1993, BRE04168	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		89494.0	By Mail	8.0 years / 4%	FFQ-Semi-quantitative	supplement duration	Years/life	Invasive breast cancer incidence		>=10 vs. no use	5	1.12 (0.87, 1.43)		0.58		A		C	D	E	F	G	
Verhoeven, D. T., 1997, BRE12868	Case Cohort	the Netherland, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	517	5862	Through network, paper, tv	4.3 years / no lost	FFQ-Semi-quantitative		dichotomous	Invasive breast cancer incidence		yes vs. no	2	1.06 (0.79, 1.43)				A		C		E	F	G	
Zhang, S., 1999, BRE13953	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	33 - 60	2523	77925	By Mail	14.0 years / 39%	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		>=1300 vs. never user	5	1.04 (0.77, 1.42)				A		C	D	E	F	G	

5.6.2

Heme iron

Pre-menopausal

Kabat GC, Miller AB, Jain M, Rohan TE, 2007, BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	1171	48662.0	Cancer registry	16.4 years	FFQ	Heme iron intake, 69% heme iron for beef 39% for pork ham veal etc 26% chicken fish 21%	mg/day	Breast cancer incidence	Pre-menopausal	>2.95 vs. <1.57	5	1.03 (0.84, 1.25)		0.56			A	B	C	D	E	F	G
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Post-menopausal

Kabat GC, Miller AB, Jain M, Rohan TE, 2007, BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	660	48662.0	Cancer registry	16.4 years	FFQ	Heme iron intake, 69% heme iron for beef 39% for pork ham veal etc 26% chicken fish 21%	mg/day	Breast cancer incidence	HRT ever	>2.95 vs. <1.57	5	0.96 (0.73, 1.25)		0.92			A	B	C	D	E	F	G
Kabat GC, Miller AB, Jain M, Rohan TE, 2007, BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	993	48662.0	Cancer registry	16.4 years	FFQ	Heme iron intake, 69% heme iron for beef 39% for pork ham veal etc 26% chicken fish 21%	mg/day	Breast cancer incidence	Post-menopausal	>2.95 vs. <1.57	5	0.97 (0.78, 1.2)		0.71			A	B	C	D	E	F	G

Menopausal status not specified

Kabat GC, Miller AB, Jain M, Rohan TE, 2007, BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	2491	46170	Cancer registry	16.4 years	FFQ	Heme iron intake, 69% heme iron for beef 39% for pork ham veal etc 26% chicken fish 21%	mg/day	Breast cancer incidence		>2.95 vs. <1.57	5	1.03 (0.9, 1.18)		0.25			A	B	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	193	48662.0	Cancer registry	16.4 years	FFQ	Heme iron intake, 69% heme iron for beef 39% for pork ham veal etc 26% chicken fish 21%	mg/day	Breast cancer incidence	Alcohol intake >30g/day	>2.95 vs. <1.57	5	0.8 (0.45, 1.43)			A	B	C	D	E	F	G
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	1831	48662.0	Cancer registry	16.4 years	FFQ	Heme iron intake, 69% heme iron for beef 39% for pork ham veal etc 26% chicken fish 21%	mg/day	Breast cancer incidence	HRT never	>2.95 vs. <1.57	5	1.06 (0.91, 1.24)			A	B	C	D	E	F	G

Iron

Pre-menopausal

Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	1171	46171	Cancer registry	16.4 years	FFQ	Dietary iron only	mg/ day > 5 years	Breast cancer incidence	Pre-menopausal	>14.99 vs. <11.89	5	1.07 (0.89, 1.3)			A	B	C	D	E	F	G
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	1171	48662.0	Cancer registry	16.4 years	FFQ	Iron from meat, from 22 meat items and 2 mixed dishes	mg/day	Breast cancer incidence	Pre-menopausal	>6.11 vs. <3.3	5	1.13 (0.93, 1.37)			A	B	C	D	E	F	G

Post-menopausal

Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	993	46171	Cancer registry	16.4 years	FFQ	Dietary iron only	mg/ day > 5 years	Breast cancer incidence	Post-menopausal	>14.99 vs. <11.89	5	0.87 (0.71, 1.06)			A	B	C	D	E	F	G
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	993	48662.0	Cancer registry	16.4 years	FFQ	Iron from meat, from 22 meat items and 2 mixed dishesmeat	mg/day	Breast cancer incidence	Post-menopausal	>6.11 vs. <3.3	5	1.03 (0.83, 1.27)			A	B	C	D	E	F	G

Menopausal status not specified

Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	2491	46171	Cancer registry	16.4 years	FFQ	Dietary iron only	mg/ day > 5 years	Breast cancer incidence		>14.99 vs. <11.89	5	0.97 (0.85, 1.1)			A	B	C	D	E	F	G
Kabat GC, Miller AB, Jain M, Rohan TE,2007,BRE80138	Prospective Cohort	Canada, Screening Program Canadian National Breast Screening Study	40 - 59	2491	46170	Cancer registry	16.4 years	FFQ	Iron from meat, from 22 meat items and 2 mixed dishes	mg/day	Breast cancer incidence		>6.11 vs. <3.3	5	1.09 (0.96, 1.24)			A	B	C	D	E	F	G

Iron from tissue sample

Post-menopausal

Cui, Y. et al.,2007,BRE80149	Nested Case Control	United States, High Risk population Kaiser Permanente Northwest, 1970			9315.0	Cancer registry		Breast tissue	Iron in breast tissue		Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	2.77 (1.25, 6.13)		0.008	A		C	D		F	G
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Menopausal status not specified

Cui, Y. et al.,2007,BRE80149	Nested Case Control	United States, High Risk population Kaiser Permanente Northwest, 1970		248	248	Cancer registry		Breast tissue	Iron in breast tissue		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.56 (1.01, 2.41)		0.08	A		C	D		F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G

5.6.3

Calcium

Pre-menopausal

Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	44	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Calcium, energy adjusted using residuals	mg/day	Breast cancer incidence	premenopausal women	>1145.0 vs. <806.0	4	0.26 (0.1, 0.71)		0.01		B	C	D	E	F	G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	44	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Dairy calcium, energy adjusted using residuals	mg/day	Breast cancer incidence	premenopausal women	>734.0 vs. <421.0	4	0.32 (0.12, 0.82)		0.05		B	C	D	E	F	G

Post-menopausal

Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Calcium, energy adjusted using residuals	mg/day	Breast cancer incidence	postmenopausal women	>1145.0 vs. <806.0	4	0.76 (0.34, 1.7)		0.64		B	C	D	E	F	G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Dairy calcium, energy adjusted using residuals	mg/day	Breast cancer incidence	postmenopausal women	>734.0 vs. <421.0	4	0.87 (0.4, 1.92)		0.99		B	C	D	E	F	G

Menopausal status not specified

Cui, Y. et al., 2007, BRE80149	Nested Case Control	United States, High Risk population Kaiser Permanente Northwest, 1970		248	248	Cancer registry			Calcium in breast tissue		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.44 (0.96, 2.14)		0.15	A		C	D		F	G
van der Pols JC, et al., 2007, BRE80154	Historical Cohort	United Kingdom The Boyd Orr Cohort	(8)	98	4374.0	National Health Records	57.0 years / 0.123	7-day food records	Total childhood calcium intake	mg/day	Breast cancer incidence + mortality		743.0 vs. 406.0	4	null (null, null)	>0.05		A			E		G	
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	92	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Calcium, energy adjusted using residuals	mg/day	Breast cancer incidence		>1145.0 vs. <806.0	4	0.5 (0.27, 0.91)		0.04		B	C	D	E	F	G
Kesse-Guyot et al., 2007, BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	92	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Dairy calcium, energy adjusted using residuals	mg/day	Breast cancer incidence		>734.0 vs. <421.0	4	0.58 (0.32, 1.04)		0.21		B	C	D	E	F	G

Calcium (and Vitamin D)

Pre-menopausal

Shin, M.-H., 2002, BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.97 (0.94, 1.0)			A		C	D	E	F	G
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Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.99, 1.0)			A	C	D	E	F	G	

Calcium from food and supplements

Pre-menopausal

Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	206	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer ER+ incidence	Pre-menopausal	>1366.0 vs. <616.9	6	0.64 (0.4, 1.03)		0.14	A	C	D	E	G	
Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	58	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer ER- incidence	Pre-menopausal	>1366.0 vs. <616.9	6	0.68 (0.26, 1.77)		0.41	A	C	D	E	G	
Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	186	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer PR+ incidence	Pre-menopausal	>1366.0 vs. <616.9	6	0.62 (0.38, 1.02)		0.09	A	C	D	E	G	
Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	74	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer PR- incidence	Pre-menopausal	>1366.0 vs. <616.9	6	0.83 (0.36, 1.92)		0.81	A	C	D	E	G	
Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	276	31487.0	medical records	10.0 years	FFQ	Total calcium	mg/day	Invasive breast cancer incidence	Pre-menopausal	>1366.0 vs. <616.9	6	0.61 (0.4, 0.92)		0.04	A	C	D	E	F	G
Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	72	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Well differentiated breast cancer incidence	Pre-menopausal	>1366.0 vs. <616.9	6	1.27 (0.6, 2.72)		0.66	A	C	D	E	G	

Post-menopausal

McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative	plus multivitamin pills	mg/day	Breast cancer incidence	Post-menopausal	>1750 vs. <=500	7	0.91 (0.79, 1.06)		0.07	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative		I.U./day	Breast cancer incidence	Post-menopausal	>300 vs. <=100	4	0.89 (0.76, 1.03)		0.21	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1283	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative	plus multivitamin pills	mg/day	Breast cancer ER+ incidence	Post-menopausal	>1750 vs. <=500	7	0.87 (0.7, 1.09)		0.13	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1283	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		I.U./day	Breast cancer ER+ incidence	Post-menopausal	>300 vs. <=100	4	0.74 (0.59, 0.93)		0.006	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	227	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative	plus multivitamin pills	mg/day	Breast cancer ER-incidence	Post-menopausal	>1750 vs. <=500	7	1.14 (0.68, 1.92)		0.78	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	227	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative		I.U./day	Breast cancer ER-incidence	Post-menopausal	>300 vs. <=100	4	1.03 (0.61, 1.73)		0.84	A	B	C	D	E	F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	602	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer ER+ incidence	Post-menopausal	>1366.0 vs. <616.9	6	1.23 (0.94, 1.61)		0.17	A						G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	109	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer ER-incidence	Post-menopausal	>1366.0 vs. <616.9	6	0.94 (0.45, 1.98)		0.78		C				F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	522	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer PR+ incidence	Post-menopausal	>1366.0 vs. <616.9	6	1.17 (0.89, 1.56)		0.30	A		C			F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	179	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Breast cancer PR-incidence	Post-menopausal	>1366.0 vs. <616.9	6	1.22 (0.69, 2.15)		0.64			C			F	G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	743	31487.0	medical records	10.0 years	FFQ	Total calcium	mg/day	Invasive breast cancer incidence	Post-menopausal	>1366.0 vs. <616.9	6	1.17 (0.92, 1.5)		0.35	A						G
Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	164	31487.0	medical records	10.0 years	FFQ	total calcium	mg/day	Well differentiated breast cancer incidence	Post-menopausal	>1366.0 vs. <616.9	6	1.6 (0.95, 2.69)		0.11	A						G

Calcium supplement

Pre-menopausal

Lin J,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	276	31487.0	medical records	10.0 years	FFQ	Calcium supplements	mg/day	Invasive breast cancer incidence	Pre-menopausal	>500.0 vs. 0	4	0.71 (0.47, 1.07)		0.11	A		C	D	E	F	G
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Post-menopausal

McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	2855	68567	By Mail	9.0 years	FFQ-Semi-quantitative			Breast cancer incidence	Post-menopausal	1000+ vs. none	5	0.98 (0.86, 1.12)		0.23	A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1283	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative			Breast cancer ER+ incidence	Post-menopausal	1000+ vs. none	5	1.06 (0.87, 1.28)		0.82	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
McCullough M.L.,2005,BRE23368	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	227	68567.0	By Mail	9.0 years	FFQ-Semi-quantitative			Breast cancer ER-incidence	Post-menopausal	1000+ vs. none	5	0.85 (0.52, 1.39)		0.63	A	B	C	D	E	F	G
Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	743	31487.0	medical records	10.0 years	FFQ	Calcium supplements	mg/day	Invasive breast cancer incidence	Post-menopausal	>500.0 vs. 0	4	1.05 (0.86, 1.3)		0.63	A						G

Calcium, serum

Pre-menopausal

Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	182	2882	Cancer registry	17.8 years	Questionnaire (nos)	Serum Calcium levels	mmol/liter	Invasive & In situ breast cancer incidence	premenopausal women	>2.41 vs. <2.28	4	0.56 (0.32, 0.99)		0.25	A	B	C	D	E	F	G
Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	118	1865	Cancer registry	17.8 years	Questionnaire (nos)	Serum calcium intake	mmol/liter	Invasive & In situ breast cancer incidence	premenopausal, BMI<25	>2.41 vs. <2.28	4	0.68 (0.34, 1.35)		>0.05	A	B	C		E	F	G
Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	64	999	Cancer registry	17.8 years	Questionnaire (nos)	Serum calcium intake	mmol/liter	Invasive & In situ breast cancer incidence	premenopausal, BMI>=25	>2.41 vs. <2.28	4	0.44 (0.16, 1.15)		>0.05	A	B	C		E	F	G

Menopausal status not specified

Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	261	4711	Cancer registry	17.8 years	Questionnaire (nos)	Serum calcium intake	mmol/liter	Invasive & In situ breast cancer incidence	BMI < 25	>2.41 vs. <2.28	4	0.82 (0.56, 1.19)		>0.05	A	B	C		E	F	G
Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	176	3133	Cancer registry	17.8 years	Questionnaire (nos)	Serum calcium intake	mmol/liter	Invasive & In situ breast cancer incidence	BMI >= 25	>2.41 vs. <2.28	4	1.09 (0.68, 1.74)		>0.05	A	B	C		E	F	G
Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	437	7521	Cancer registry	17.8 years	Questionnaire (nos)	Serum Calcium levels	mmol/liter	Invasive & In situ breast cancer incidence		>2.41 vs. <2.28	4	0.89 (0.67, 1.19)			A	B	C	D	E	F	G
Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	255	4983	Cancer registry	17.8 years	Questionnaire (nos)	Serum Calcium levels	mmol/liter	Invasive & In situ breast cancer incidence	peri/postmenopausal	>2.41 vs. <2.28	4	1.26 (0.84, 1.89)		0.45	A	B	C	D	E	F	G
Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	143	2846	Cancer registry	17.8 years	Questionnaire (nos)	Serum calcium intake	mmol/liter	Invasive & In situ breast cancer incidence	peri/postmenopausal, BMI<25	>2.41 vs. <2.28	4	0.88 (0.54, 1.44)		>0.05	A	B	C		E	F	G
Almquist et al.,2007,BRE80007	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(50)	112	2134	Cancer registry	17.8 years	Questionnaire (nos)	Serum calcium intake	mmol/liter	Invasive & In situ breast cancer incidence	peri/postmenopausal, BMI>=25	>2.41 vs. <2.28	4	2.72 (1.24, 5.94)		>0.05	A	B	C		E	F	G

Dairy Calcium

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.95 (0.92, 0.99)			A	C	D	E	F	G	

Post-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.97, 1.02)			A	C	D	E	F	G
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Dietary Calcium

Pre-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	0.95 (0.92, 0.99)			A	C	D	E	F	G
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Dietary calcium

Pre-menopausal

Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	276	31487.0	medical records	10.0 years	FFQ	Calcium from diet	mg/day	Invasive breast cancer incidence	Pre-menopausal	>998.0 vs. <556.9	6	0.84 (0.57, 1.22)	0.24	A	C	D	E	F	G
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Dietary Calcium

Post-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	0.99 (0.97, 1.02)			A	C	D	E	F	G
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Dietary calcium

Post-menopausal

Lin J.,2007,BRE80165	Prospective Cohort	US, not stated Women's Health Study	54 - 56	743	31487.0	medical records	10.0 years	FFQ	Calcium from diet	mg/day	Invasive breast cancer incidence	Post-menopausal	>998.0 vs. <556.9	6	1.1 (0.86, 1.39)	0.56	A						G
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Dietary Calcium

Menopausal status not specified

Jarvinen, R.,1997,BRE04383	Prospective Cohort	Finland Finland, 1966	15 -		4697.0	Unspecified	24.0 years	Dietary History questionnaire			Breast cancer incidence		Quantile 3 vs. Quantile 1	2	0.44 (null, null)	0.09	A						
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Non-dairy calcium

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	827	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Pre-menopausal	1.0 (continuous)	1	1.02 (0.93, 1.02)			A	C	D	E	F	G	
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	44	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Non-dairy calcium, energy adjusted using residuals	mg/day	Breast cancer incidence	premenopausal women	>452.0 vs. <307.0	4	0.76 (0.34, 1.67)	0.11		B	C	D	E	F	G	

Post-menopausal

Shin, M.-H.,2002,BRE16658	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	(47)	2345	85519	By Mail	16.0 years	FFQ (nos)		dg/day	Invasive breast cancer mortality/incidence	Post-menopausal	1.0 (continuous)	1	0.99 (0.96, 1.01)			A	C	D	E	F	G
Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	48	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Non-dairy calcium, energy adjusted using residuals	mg/day	Breast cancer incidence	postmenopausal women	>452.0 vs. <307.0	4	0.84 (0.35, 1.98)	0.31		B	C	D	E	F	G

Menopausal status not specified

Kesse-Guyot et al.,2007,BRE11112	Prospective Cohort	France, SU.VI.MAX participants SU.VI.MAX study, 1994	35 - 60	92	3535	medical records	7.7 years / 14 subjects losses during dietary assessment	24h Recall	Non-dairy calcium, energy adjusted using residuals	mg/day	Breast cancer incidence		>452.0 vs. <307.0	4	0.76 (0.42, 1.36)	0.06		B	C	D	E	F	G
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5.6.4

Selenium

Post-menopausal

Ravn-Haren, G. et al.,2006,BRE80151	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	377	377	Cancer registry		FFQ	Selenium intake	mcg/day	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.01 (0.97, 1.06)			B	C	D	E	F	G
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Selenium, other biomarkers

Menopausal status not specified

Cui, Y. et al.,2007,BRE80149	Nested Case Control	United States, High Risk population Kaiser Permanente Northwest, 1970		248	248	Cancer registry		Breast tissue	Selenium in breast tissue		Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.06 (0.7, 1.62)	0.72	A	C	D	F	G
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Selenium, plasma

Menopausal status not specified

Criqui, M. H.,1991,BRE01946	Nested Case Control	US, Not specified Lipid Research Clinics Program Prevalence Study (LRC)	30 -		8825.0	Through health org. (screening, health insurance)	8.5 years				Breast cancer cancer death			1	null (null, null)								
Overvad,1991,BRE17893	Case Cohort	Guernsey, Not specified Guernsey, 1967	35 -	46	135	Multiple procedure	11.0 years				Breast cancer incidence		<84.9 vs. >115.0	4	0.8 (0.29, 2.19)			A	C	D			

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kaempferol																								
<i>Menopausal status not specified</i>																								
Adebamowo, C. A., 2005, BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46		90638.0	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		12.9 vs. 0.8	5	1.01 (0.8, 1.27)		0.91	A	C	D	E	F	G	
5.7.1																								
Allium compounds																								
<i>Menopausal status not specified</i>																								
Dorant, E., 1995, BRE02383	Case Cohort	Netherlands, Not specified The Netherlands Cohort Study on diet and cancer, 1986-1993	55 - 69	305	3583	Unspecified	3.3 years / 0,05	FFQ-Semi-quantitative	garlic supplement		Breast cancer incidence		garlic supplement vs. no	2	0.87 (0.58, 1.31)			A	B	C	D	E	F	G
5.7.5																								
Biochanin A																								
<i>Menopausal status not specified</i>																								
Horn-Ross, P.L., 2002, BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		Quantile 5 vs. <9.0	5	1.0 (0.8, 1.3)		0.7	A	C	D	E	F	G	
Coumestrol																								
<i>Pre-menopausal</i>																								
Touillaud M.S., 2006, BRE80111	Prospective Cohort	France, Pre-menopausal E3N-EPIC, 1990	(47)	402	74524.0	patient records/direct contact/health insurance	4.2 years	FFQ	Coumestrol	micro g/day	Invasive breast cancer incidence	Pre-menopausal	0.06 - 0.6 vs. 0	4	1.22 (0.89, 1.66)		0.68		B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Horn-Ross, P.L., 2002, BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		Quantile 5 vs. <64.0	5	1.1 (0.9, 1.5)		0.7	A	C	D	E	F	G	
Daidzein																								
<i>Menopausal status not specified</i>																								
Horn-Ross, P.L., 2002, BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		Quantile 5 vs. <301.0	5	0.9 (0.7, 1.2)		0.6	A	C	D	E	F	G	
Enterodiol																								
<i>Post-menopausal</i>																								

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterodiol	micro g/day	Breast cancer ER+/PR+ incidence		339.0 - 918.0 vs. <239.0	4	0.79 (0.63, 0.99)			A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterodiol	micro g/day	Breast cancer ER+/PR- incidence		339.0 - 918.0 vs. <239.0	4	0.86 (0.61, 1.21)			A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterodiol	micro g/day	Breast cancer ER-/PR+ incidence		339.0 - 918.0 vs. <239.0	4	0.86 (0.34, 2.15)			A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterodiol	micro g/day	Breast cancer ER-/PR- incidence		339.0 - 918.0 vs. <239.0	4	1.06 (0.71, 1.59)			A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterodiol	micro g/day	Invasive breast cancer incidence		339.0 - 918.0 vs. <239.0	4	0.9 (0.77, 1.04)			A	C	D	E	F	G	

Enterolactone

Post-menopausal

Olsen A,2004,BRE80170	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	381	381	Cancer registry	4.3 year	FFQ	Serum enterolactone	nmol/litre	Breast cancer Incidence		20.0 (continuous)	1	0.93 (0.86, 1.01)				B	C	D	E	F	G
Olsen A,2004,BRE80170	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	381	381	Cancer registry	4.3 year	FFQ	Serum enterolactone	nmol/litre	Breast cancer Incidence		48.0 - 454.6 vs. 14.5 - 28.1	4	0.55 (0.36, 0.85)			A					F	
Olsen A,2004,BRE80170	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	273	273	Cancer registry	4.3 year	FFQ	Serum enterolactone	nmol/litre	Breast cancer ER+ Incidence		20.0 (continuous)	1	0.97 (0.88, 1.06)			A	B	C	D	E	F	G
Olsen A,2004,BRE80170	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	273	273	Cancer registry	4.3 year	FFQ	Serum enterolactone	nmol/litre	Breast cancer ER+ Incidence		48.0 - 454.6 vs. 14.5 - 28.1	4	0.67 (0.41, 1.08)			A					F	
Olsen A,2004,BRE80170	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	80	80	Cancer registry	4.3 year	FFQ	Serum enterolactone	nmol/litre	Breast cancer ER- Incidence		20.0 (continuous)	1	0.71 (0.53, 0.94)			A	B	C	D	E	F	G
Olsen A,2004,BRE80170	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	80	80	Cancer registry	4.3 year	FFQ	Serum enterolactone	nmol/litre	Breast cancer ER- Incidence		48.0 - 454.6 vs. 14.5 - 28.1	4	0.26 (0.09, 0.77)			A					F	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterolactone	micro g/day	Breast cancer ER+/PR+ incidence		560.0 - 1646.0 vs. <406.0	4	0.8 (0.65, 0.99)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterolactone	micro g/day	Breast cancer ER+/PR- incidence		560.0 - 1646.0 vs. <406.0	4	0.85 (0.6, 1.2)		0.32	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterolactone	micro g/day	Breast cancer ER-/PR+ incidence		560.0 - 1646.0 vs. <406.0	4	0.63 (0.24, 1.66)		0.39	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterolactone	micro g/day	Breast cancer ER-/PR- incidence		560.0 - 1646.0 vs. <406.0	4	0.95 (0.64, 1.4)		0.97	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Enterolactone	micro g/day	Invasive breast cancer incidence		560.0 - 1646.0 vs. <406.0	4	0.88 (0.76, 1.02)		0.08	A	C	D	E	F	G	

Formononetin

Menopausal status not specified

Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		Quantile 5 vs. <5.0	5	1.1 (0.8, 1.4)		0.4	A	C	D	E	F	G
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Genistein

Menopausal status not specified

Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		Quantile 5 vs. <290.0	5	1.0 (0.7, 1.3)		0.9	A	C	D	E	F	G
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Lignans

Pre-menopausal

Touillaud M.S.,2006,BRE80111	Prospective Cohort	France, Pre-menopausal E3N-EPIC, 1990	(47)	402	74524.0	patient records/direct contact/health insurance	4.2 years	FFQ	Total plant lignans, sum of individual plant lignans, pinoresinol, lariciresinol,	micro g/day	Invasive breast cancer incidence	Pre-menopausal	1357.0 - 4611.0 vs. 41.0 - 843.0	4	1.07 (0.81, 1.41)		0.8		B	C	D	E	F	G
Touillaud M.S.,2006,BRE80111	Prospective Cohort	France, Pre-menopausal E3N-EPIC, 1990	(47)	402	74524.0	patient records/direct contact/health insurance	4.2 years	FFQ	Enterolignans, lignans metabolites, sum of enterodiol, enterolactone	micro g/day	Invasive breast cancer incidence	Pre-menopausal	1289.0 - 3361.0 vs. 168.0 -	4	0.94 (0.71, 1.24)		0.53		B	C	D	E	F	G

Post-menopausal

Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total plant lignans	micro g/day	Breast cancer ER+/PR+ incidence		1395.0 - 5701.0 vs. <877.0	4	0.72 (0.58, 0.88)		0.01	A	C	D	E	F	G
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total enterolignans	micro g/day	Breast cancer ER+/PR+ incidence		896.0 - 2538.0 vs. <652.0	4	0.77 (0.62, 0.95)		0.009	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total plant lignans	micro g/day	Breast cancer ER+/PR- incidence		1395.0 - 5701.0 vs. <877.0	4	0.87 (0.61, 1.23)		0.46	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total enterolignans	micro g/day	Breast cancer ER+/PR- incidence		896.0 - 2538.0 vs. <652.0	4	0.89 (0.63, 1.25)		0.48	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total plant lignans	micro g/day	Breast cancer ER-/PR+ incidence		1395.0 - 5701.0 vs. <877.0	4	0.99 (0.39, 2.47)		0.89	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total enterolignans	micro g/day	Breast cancer ER-/PR+ incidence		896.0 - 2538.0 vs. <652.0	4	0.99 (0.36, 2.67)		0.79	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total plant lignans	micro g/day	Breast cancer ER-/PR- incidence		1395.0 - 5701.0 vs. <877.0	4	1.11 (0.74, 1.67)		0.87	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total enterolignans	micro g/day	Breast cancer ER-/PR- incidence		896.0 - 2538.0 vs. <652.0	4	0.96 (0.65, 1.43)		0.95	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total plant lignans	micro g/day	Invasive breast cancer incidence		1395.0 - 5701.0 vs. <877.0	4	0.83 (0.71, 0.96)		0.02	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Total enterolignans	micro g/day	Invasive breast cancer incidence		896.0 - 2538.0 vs. <652.0	4	0.89 (0.77, 1.03)		0.06	A	C	D	E	F	G	

Menopausal status not specified

Keinan-Boker, L.,2004,BRE04713	Prospective Cohort	Netherlands, Not specified, Screening Program European Prospective Investigation into Cancer and	50 - 69	280	15275	Through health org. (screening, health insurance)	5.2 years	FFQ (nos)		mg/day	Breast cancer incidence		0.77 vs. 0.59	4	0.7 (0.46, 1.09)		0.06	A	B	C	D	E	F	G
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Matairesinol

Menopausal status not specified

Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		Quantile 5 vs. <12.0	5	1.1 (0.8, 1.4)		0.2	A	C	D	E	F	G
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Phytoestrogen eg genistein

Post-menopausal

Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Pinoresinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR+ incidence		549.0 - 2390.0 vs. <311.0	4	0.81 (0.66, 0.99)		0.15	A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Lariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR+ incidence		628.0 - 2581.0 vs. <393.0	4	0.7 (0.57, 0.87)		0.005	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Secoisolariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR+ incidence		215.0 - 750.0 vs. <136.0	4	0.86 (0.68, 1.09)		0.19	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	695	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Matairesinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR+ incidence		17.0 - 95.0 vs. <6.0	4	1.04 (0.8, 1.35)		0.62	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Pinoresinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR- incidence		549.0 - 2390.0 vs. <311.0	4	0.78 (0.55, 1.12)		0.27	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Lariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR- incidence		628.0 - 2581.0 vs. <393.0	4	0.71 (0.49, 1.02)		0.09	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Secoisolariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR- incidence		215.0 - 750.0 vs. <136.0	4	0.93 (0.63, 1.38)		0.87	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	250	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Matairesinol intake, phytoestrogen	micro g/day	Breast cancer ER+/PR- incidence		17.0 - 95.0 vs. <6.0	4	1.13 (0.7, 1.81)		0.88	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Pinoresinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR+ incidence		549.0 - 2390.0 vs. <311.0	4	1.02 (0.34, 3.08)		0.95	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Lariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR+ incidence		628.0 - 2581.0 vs. <393.0	4	0.91 (0.34, 2.46)		0.73	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Secoisolariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR+ incidence		215.0 - 750.0 vs. <136.0	4	0.94 (0.36, 2.46)		0.95	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	37	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Matairesinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR+ incidence		17.0 - 95.0 vs. <6.0	4	1.24 (0.36, 4.24)		0.8	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Pinoresinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR- incidence		549.0 - 2390.0 vs. <311.0	4	1.21 (0.81, 1.82)		0.63	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Lariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR- incidence		628.0 - 2581.0 vs. <393.0	4	1.07 (0.71, 1.61)		0.97	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Touillaud et al.,2007,BRE00015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Secoisolariciresinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR- incidence		215.0 - 750.0 vs. <136.0	4	0.97 (0.62, 1.53)		0.98	A	C	D	E	F	G	
Touillaud et al.,2007,BRE00015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	198	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Matairesinol intake, phytoestrogen	micro g/day	Breast cancer ER-/PR- incidence		17.0 - 95.0 vs. <6.0	4	0.94 (0.56, 1.56)		0.51	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Pinoresinol intake, phytoestrogen	micro g/day	Invasive breast cancer incidence		549.0 - 2390.0 vs. <311.0	4	0.87 (0.76, 1.01)		0.12	A	C	D	E	F	G	
Touillaud et al.,2007,BRE00015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Lariciresinol intake, phytoestrogen	micro g/day	Invasive breast cancer incidence		628.0 - 2581.0 vs. <393.0	4	0.82 (0.71, 0.95)		0.01	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Secoisolariciresinol intake, phytoestrogen	micro g/day	Invasive breast cancer incidence		215.0 - 750.0 vs. <136.0	4	0.93 (0.79, 1.09)		0.34	A	C	D	E	F	G	
Touillaud et al.,2007,BRE80015	Prospective Cohort	France, Post-menopausal E3N-EPIC, 1990	41 - 72	1469	58049.0	patient records/direct contact/health insurance	7.7 years	FFQ	Matairesinol intake, phytoestrogen	micro g/day	Invasive breast cancer incidence		17.0 - 95.0 vs. <6.0	4	1.05 (0.87, 1.27)			A	C	D	E	F	G	

Plasma Enterolactone

Menopausal status not specified

Hulten, K.,2002,BRE04156	Nested Case Control	Sweden, Not specified VIP + MONICA + MSP		248	492	Unspecified	15.0 years				Breast cancer incidence		87.5-100 vs. 25-75 percentile	5	1.8 (1.4, 4.3)							D	F	G
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Secoisolariciresinol

Menopausal status not specified

Horn-Ross, P.L.,2002,BRE15412	Prospective Cohort	USA, Multi-ethnic, Registered teachers California Teachers Study, 1995	21 - 103		111383.0	By Mail	2.0 years	FFQ (nos)		mcg/day	Invasive breast cancer incidence		Quantile 5 vs. <48.0	5	1.4 (1.0, 1.8)		0.02	A	C	D	E	F	G
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Serum Daidzein

Post-menopausal

Verheus et al.,2000,BRE20024	Nested Case Control	Netherlands Prospect-EPIC Utrecht	(56)	296	296	national cancer registers	6.5 years	blood	Plasma daidzein, phytoestrogen		Breast cancer incidence	postmenopausal women	Quantile 3 vs. Quantile 1	3	0.88 (0.59, 1.32)		0.59								
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Menopausal status not specified

Grace, P. B.,2004,BRE19680	Nested Case Control	United Kingdom, Not specified EPIC-Norfolk	41 - 76		16744.0	Unspecified	8.0 years	Urine & Serum		mcg/mmol	Breast cancer incidence		1.0 (continuous)	1	0.85 (0.7, 1.03)		0.044					C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments										
																		A	B	C	D	E	F	G				
Verheus et al.,2007,BRE20024	Nested Case Control	Netherlands Prospect-EPIC Utrecht	(56)	296	296	national cancer registers	6.5 years	blood	Plasma enterolactone, phytoestrogen		Breast cancer incidence	postmenopausal women	Quantile 3 vs. Quantile 1	3	0.97 (0.63, 1.48)		0.77											

Menopausal status not specified

Boccardo, F.,2004,BRE05549	Historical Cohort	Italy, Not specified, Women with palpable cysts Genoa, 1985	25 - 79	18	2390	Hospital/ambulatory Direct Contact	6.5 years	Serum		nanomol/L	Breast cancer incidence		>8 vs. <=8	2	0.36 (0.14, 0.925)		0.03	A										F	G
Grace, P. B.,2004,BRE19680	Nested Case Control	United Kingdom, Not specified EPIC-Norfolk	41 - 76		16744.0	Unspecified	8.0 years	Urine & Serum		mcg/mmol	Breast cancer incidence		1.0 (continuous)	1	0.69 (0.57, 0.83)		0.963				C	D	E	F	G				
Kilkinen, A.,2004,BRE17698	Nested Case Control	Finland Helsinki and Oulu, 1982	25 - 74		15497.0	Unspecified	15.0 years	Serum		nanomol/L	Breast cancer incidence		45.4 vs. 5.3	4	1.3 (0.73, 2.31)		0.48	A											G
Verheus et al.,2007,BRE20024	Nested Case Control	Netherlands Prospect-EPIC Utrecht	(56)	388	388	national cancer registers	6.5 years	blood	Plasma enterolactone, phytoestrogen		Breast cancer incidence		Quantile 3 vs. Quantile 1	3	1.1 (0.76, 1.57)		0.67												
Verheus et al.,2007,BRE20024	Nested Case Control	Netherlands Prospect-EPIC Utrecht	(56)	87	87	national cancer registers	6.5 years	blood	Plasma enterolactone, phytoestrogen		Breast cancer incidence	pre-/perimenopausal women	Quantile 3 vs. Quantile 1	3	1.72 (0.8, 3.71)		0.13				C							F	

Serum Equol

Post-menopausal

Verheus et al.,2007,BRE20024	Nested Case Control	Netherlands Prospect-EPIC Utrecht	(56)	296	296	national cancer registers	6.5 years	blood	Plasma equol, phytoestrogen		Breast cancer incidence	postmenopausal women	Quantile 2 vs. Quantile 1	2	0.91 (0.63, 1.33)															
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Menopausal status not specified

Grace, P. B.,2004,BRE19680	Nested Case Control	United Kingdom, Not specified EPIC-Norfolk	41 - 76		16744.0	Unspecified	8.0 years	Urine & Serum		mcg/mmol	Breast cancer incidence		1.0 (continuous)	1	1.01 (0.73, 1.4)		0.024					C	D	E	F	G				
Verheus et al.,2007,BRE20024	Nested Case Control	Netherlands Prospect-EPIC Utrecht	(56)	388	388	national cancer registers	6.5 years	blood	Plasma equol, phytoestrogen		Breast cancer incidence		Quantile 2 vs. Quantile 1	2	0.87 (0.63, 1.21)															
Verheus et al.,2007,BRE20024	Nested Case Control	Netherlands Prospect-EPIC Utrecht	(56)	87	87	national cancer registers	6.5 years	blood	Plasma equol, phytoestrogen		Breast cancer incidence	pre-/perimenopausal women	Quantile 2 vs. Quantile 1	2	0.81 (0.39, 1.69)															

Serum Genistein

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Michels, K. B., 2002, BRE20406	Prospective Cohort	Sweden, Not specified The Swedish Mammography Cohort, 1987	40 - 76		59036.0	By Mail	9.5 years	FFQ-Semi-quantitative		g/day	Invasive breast cancer incidence	Overweight	304.4 vs. 79.4	5	1.04 (0.79, 1.37)		0.57	A	B	C	D	E	F	G
Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	5272	85987.0	questionnaire/medical records/death record	22.0 years	FFQ		mg/day	Breast cancer incidence		>693.0 vs. 0 - 139.0	5	0.93 (0.85, 1.01)		0.06	A		C	D	E	F	G
Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2402	85987.0	questionnaire/medical records/death record	22.0 years	FFQ		mg/day	Breast cancer ER+/PR+ incidence	ER+/PR+	>693.0 vs. 0 - 139.0	5	0.88 (0.77, 1.0)		0.01	A		C	D	E	F	G
Ganmaa, D. et al., 2008, BRE80158	Prospective Cohort	U.S. Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	731	85987.0	questionnaire/medical records/death record	22.0 years	FFQ		mg/day	Breast cancer ER-/PR+ incidence	ER-/PR+	>693.0 vs. 0 - 139.0	5	0.88 (0.69, 1.12)		0.33	A		C	D	E	F	G

5.8

Isoflavones

Pre-menopausal

Yamamoto, S., 2003, BRE17122	Prospective Cohort	Japan, Not specified Japan, 1990	40 - 59	89	93628	Unspecified	9.0 years / 0.001	Questionnaire (nos)		mg/day	Breast cancer incidence	Pre-menopausal	25.0 vs. 6.9	4	0.66 (0.25, 1.7)		0.97	A	B	C		E	F	G
Touillaud M.S., 2006, BRE80111	Prospective Cohort	France, Pre-menopausal E3N-EPIC, 1990	(47)	402	74524.0	patient records/direct contact/health insurance	4.2 years	FFQ	Total isoflavones, genistein, daidzein, formononetin, biochanin-A	micro g/day	Invasive breast cancer incidence	Pre-menopausal	36.0 - 112.0 vs. 1.0 - 21.0	4	1.0 (0.76, 1.31)		0.48		B	C	D	E	F	G
Travis, R.C. et al., 2007, BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	196	36489.0	National Health Records	7.4 years / 0.07	FFQ	Isoflavone intake, from soy foods and milk or other dairy products	mg/day	Invasive & In situ breast cancer incidence	Pre-menopausal	10+ vs. <10	2	1.31 (0.95, 1.81)			A		C	D	E	F	G

Post-menopausal

Yamamoto, S., 2003, BRE17122	Prospective Cohort	Japan, Not specified Japan, 1990	40 - 59	87	111637	Unspecified	9.0 years / 0.001	Questionnaire (nos)		mg/day	Breast cancer incidence	Post-menopausal	25.0 vs. 6.9	4	0.32 (0.14, 0.71)		0.006	A	B	C		E	F	G
Travis, R.C. et al., 2007, BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	290	36489.0	National Health Records	7.4 years / 0.07	FFQ	Isoflavone intake, from soy foods and milk or other dairy products	mg/day	Invasive & In situ breast cancer incidence	Post-menopausal	10+ vs. <10	2	0.95 (0.66, 1.38)			A		C	D	E	F	G

Menopausal status not specified

Yamamoto, S., 2003, BRE17122	Prospective Cohort	Japan, Not specified Japan, 1990	40 - 59	179	209354	Unspecified	9.0 years / 0.001	Questionnaire (nos)		mg/day	Breast cancer incidence		25.0 vs. 6.9	4	0.46 (0.25, 0.84)		0.043	A	B	C		E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Keinan-Boker, L.,2004,BRE04713	Prospective Cohort	Netherlands, Not specified, Screening Program European Prospective Investigation into Cancer and	50 - 69	280	15273	Through health org. (screening, health insurance)	5.2 years	FFQ (nos)		mg/day	Breast cancer incidence		0.77 vs. 0.19	4	0.98 (0.65, 1.48)		0.92	A	B	C	D	E	F	G
Travis, R.C. et al.,2007,BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	585	36489.0	National Health Records	7.4 years / 0.07	FFQ	Isoflavoune intake, from soy foods and milk or other dairy products	mg/day	Invasive & In situ breast cancer incidence		20+ vs. <10	3	1.17 (0.79, 1.71)		0.36	A		C	D	E	F	G
Travis, R.C. et al.,2007,BRE80141	Prospective Cohort	United Kingdom EPIC Oxford	20 - 89	433	36489.0	National Health Records	7.4 years / 0.07	FFQ	Isoflavoune intake, from soy foods and milk or other dairy products	mg/day	Invasive & In situ breast cancer incidence	HRT - No	10+ vs. <10	2	1.16 (0.92, 1.48)			A		C	D	E	F	G

Myricetin

Menopausal status not specified

Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46		90638.0	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		2.62 vs. 0.09	5	0.99 (0.78, 1.26)		0.35	A		C	D	E	F	G
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Quercetin

Menopausal status not specified

Adebamowo, C. A.,2005,BRE21537	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	25 - 46		90638.0	Through social organization (profession, religion)	8.0 years	FFQ-Semi-quantitative		mg/day	Invasive breast cancer incidence		30.1 vs. 5.3	5	1.05 (0.83, 1.33)		0.81	A		C	D	E	F	G
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6.1

Physical activity

Pre-menopausal

Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	856	218169.0	Population cancer registries and other	6.4 years	Questionnaire	Combined recreational and household activities	MET-hour/week	Invasive breast cancer incidence	premenopausal women	>127.0 vs. <54.0	4	0.82 (0.66, 1.03)		0.107	A	B	C	D	E	F	G
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Post-menopausal

Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	2548	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer incidence		High vs. Low	3	0.91 (0.82, 1.01)		0.13	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	1643	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer ER+ incidence		High vs. Low	3	0.87 (0.77, 1.0)		0.06	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	1323	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer ER+/PR+ incidence		High vs. Low	3	0.94 (0.81, 1.08)		0.37	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	252	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer ER+/PR- incidence		High vs. Low	3	0.66 (0.46, 0.94)		0.04	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	298	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer ER- incidence		High vs. Low	3	0.92 (0.67, 1.25)		0.78	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	42	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer ER-/PR+ incidence		High vs. Low	3	1.42 (0.67, 3.01)		0.41	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	244	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer ER-/PR- incidence		High vs. Low	3	0.8 (0.56, 1.15)		0.4	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	1366	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer PR+ incidence		High vs. Low	3	0.95 (0.82, 1.09)		0.45	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	497	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer PR- incidence		High vs. Low	3	0.73 (0.65, 0.94)		0.04	A	B	C	D	E	F	G
Bardia et al.,2007,BRE20028	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	687	41836.0	State health registry	18.0 years	Questionnaire	Physical activity index, high is defined as vigorous activity >=2 times/week or		Breast cancer Unknown ER/PR status incidence	Unknown ER/PR status	High vs. Low	3	0.96 (0.79, 1.18)		0.87	A	B	C	D	E	F	G
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	2547	218169.0	Population cancer registries and other	6.4 years	Questionnaire	Combined recreational and household activities	MET-hour/week	Invasive breast cancer incidence	postmenopausal women	>127.0 vs. <54.0	4	0.83 (0.73, 0.95)		0.002	A	B	C	D	E	F	G

Menopausal status not specified

Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	305	110599.0	Cancer registry	6.6 years	Questionnaire	Annual moderate long-term physical activity	hours/week	Breast cancer ER+/PR- incidence		>5 vs. <=0.5	5	0.95 (0.62, 1.47)		0.86			C	D	E	F	G
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physical activity index

Pre-menopausal

Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	820	218169.0	Population cancer registries and other	6.4 years	Questionnaire	Total activity index, combined: occupational, recreational, and		Invasive breast cancer incidence	premenopausal women	Active vs. Inactive	4	1.02 (0.77, 1.36)		0.267	A	B	C	D	E	F	G
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Post-menopausal

Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	2476	218169.0	Population cancer registries and other	6.4 years	Questionnaire	Total activity index, combined: occupational, recreational, and		Invasive breast cancer incidence	postmenopausal women	Active vs. Inactive	4	0.92 (0.76, 1.12)		0.06	A	B	C	D	E	F	G
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Total physical activity (overall summary)

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Pre-menopausal</i>																								
Lee, S. Y., 2003, BRE17745	Prospective Cohort	Korea, Asian, Pre-menopausal Korean Women's Cohort (KWC), 1994/1995	20 - (35)	348	101196	Through health org. (screening, health insurance)	6.0 years				Breast cancer incidence	Pre-menopausal	yes vs. no	2	1.0 (0.8, 1.5)	0.56 67		A	C	D	F	G		
Colditz, G. A., 2003, BRE01782	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42	849	934100	By Mail	10.0 years / 849			MET-hour/week	Invasive breast cancer incidence	Pre-menopausal	>=27 vs. <3	5	1.04 (0.82, 1.33)	0.86		A	C	D	E	F	G	
Colditz, G. A., 2003, BRE01782	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42	524	578000	By Mail	10.0 years / 849			MET-hour/week	Invasive breast cancer incidence	Pre-menopausal & Lean	>=27 vs. <3	5	1.04 (0.72, 1.36)	0.89		A	C	D	E	F	G	
Colditz, G. A., 2003, BRE01782	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42	134	145600	By Mail	10.0 years / 849			MET-hour/week	Invasive breast cancer incidence	Pre-menopausal & Overweight	>=27 vs. <3	5	1.53 (0.89, 2.63)	0.04		A	C	D	E	F	G	

Post-menopausal

Cerhan, J.R., 1998, BRE14588	Prospective Cohort	USA, Not specified, Elderly Iowa 65+ Rural Health Study, 1973	65 - 102	43	14811	Direct contact at home	11.0 years				Breast cancer incidence		high active vs. inactive	4	0.2 (0.05, 1.0)	.008		A	B	C	D	E	F	G
Cerhan, J.R., 1998, BRE14588	Prospective Cohort	USA, Not specified, Elderly Iowa 65+ Rural Health Study, 1973	65 - 102	34	16791	Direct contact at home	11.0 years				In situ breast cancer incidence		high active vs. inactive	4	0.3 (0.06, 1.2)	.03		A	B	C	D	E	F	G
Wyrwich, K. W., 2000, BRE13664	Prospective Cohort	usa, Not specified, Elderly LSOA, 1984	70 - 96	77	21980	Unspecified	7.0 years				Breast cancer incidence		highly active vs. inactive	4	0.43 (0.19, 0.96)			A	B	D				G
Wyrwich, K. W., 2000, BRE13664	Prospective Cohort	usa, Not specified, Elderly LSOA, 1984	70 - 96	52	21876	Unspecified	7.0 years				Localized breast cancer incidence		highly active vs. inactive	4	0.66 (0.29, 1.53)			A						G

Menopausal status not specified

Dorgan, J. F., 1994, BRE02385	Prospective Cohort	USA Framingham Study, 1954	35 - 68	2298	53099	General population (survey)	28.0 years				Breast cancer incidence		>1.0 vs. >-1.0	4	1.6 (0.9, 2.9)	0.13		A	B	C	E	F	G	
Hoyer, A. P., 1998, BRE15433	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 -	198	393	Unspecified	17.0 years	Questionnaire (nos)			Breast cancer incidence		heavy vs. passive	3	0.72 (0.44, 1.19)	0.2			B	C	D	E	F	G
Tehard B., 2006, BRE80108	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	2284	98995.0	patient records/direct contact/health insurance	11.4 years / 0.14		Total physical activity, multiplied MET of all PA variables by frequency and	MET-hour/week	Breast cancer incidence		>57.8 vs. <28.2	4	0.9 (0.8, 1.02)	<0.05		A	C	D		F	G	

6.1.1.1

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments																				
																		A	B	C	D	E	F	G														
Low physical activity job																																						
<i>Menopausal status not specified</i>																																						
Pukkala,1993,BRE24790	Prospective Cohort	Finland, Registered teachers Finnish Female Teachers Cohort, 1967-1991	20 - 74	322	10118.0	Through social organization (profession, religion)	7.0 years		to be a language teacher		Breast cancer incidence		language teachers vs. general	2	1.48 (1.25, 1.69)			A																				
Occupational physical activity																																						
<i>Pre-menopausal</i>																																						
Albanes,1989,BRE00236	Prospective Cohort	USA, Multi-ethnic NHANES I, 1971	25 - 74	46	7413.0	Unspecified	10.0 years		non recreational ; very active excluded		Breast cancer incidence	Pre-menopausal	inactive vs. moder active	2	0.4 (0.1, 1.8)			A																				
Thune, I.,1997,BRE12313	Prospective Cohort	Norway, Not specified Norway National Health Screening Service, 1974	20 - 49	98	25624.0	By Mail	13.7 years / 83				Breast cancer incidence	Pre-menopausal	Lifting or heavy manual labor vs.	3	0.48 (0.24, 0.95)	0.03		A		C	D																G	
Moradi, T.,1999,BRE16127	Prospective Cohort	Sweden, Sweden, 1971	50 - 59	1597	1480551	Other procedure	18.0 years		age <50		Invasive breast cancer incidence	Pre-menopausal	sedentary vs. high	4	1.0 (0.8, 1.4)	>0.5																						
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	659	218169.0	Population cancer registries and other	6.4 years	FFQ	Occupational activity, nonworking category and missing values excluded, manual and		Invasive breast cancer incidence	premenopausal women	Manual and heavy manual vs.	3	1.04 (0.78, 1.38)		0.771	A	B	C	D	E	F	G														
<i>Post-menopausal</i>																																						
Albanes,1989,BRE00236	Prospective Cohort	USA, Multi-ethnic NHANES I, 1971	25 - 74		7413.0	Unspecified	10.0 years		non recreational ; very active excluded		Breast cancer incidence	Post-menopausal	inactive vs. moder active	2	1.5 (0.7, 2.8)			A																				
Thune, I.,1997,BRE12313	Prospective Cohort	Norway, Not specified Norway National Health Screening Service, 1974	20 - 49	247	25624.0	By Mail	13.7 years / 83				Breast cancer incidence	Post-menopausal	Lifting or heavy manual labor vs.	3	0.78 (0.52, 1.18)	0.24		A		C	D																	G
Moradi, T.,1999,BRE16127	Prospective Cohort	Sweden, Sweden, 1971	50 - 59	2367	1224905	Other procedure	18.0 years		lifelong (census 60-70 with same PAL level)		Invasive breast cancer incidence	Post-menopausal	sedentary vs. high	4	1.3 (1.1, 1.7)	0.005																						
Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	755	7104		7.3 years		life-long	KJ/minute	Breast cancer incidence	Post-menopausal	>12 vs. <8	3	0.83 (0.51, 1.34)	0.69		A	B	C	D	E	F	G														
Mertens, A. J.,2005,BRE23405	Prospective Cohort	USA, African-American and Caucasian Atherosclerosis Risk in Communities (ARIC) Study,	45 - 64		7994.0	Unspecified	13.1 years				Breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	0.85 (0.57, 1.28)	0.25		A		C																	F	G
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	1225	218169.0	Population cancer registries and other	6.4 years	FFQ	Occupational activity, nonworking category and missing values excluded, manual and		Invasive breast cancer incidence	postmenopausal women	Manual and heavy manual vs.	3	1.08 (0.91, 1.29)		0.743	A	B	C	D	E	F	G														

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Margolis, K. L., 2005, BRE23306	Prospective Cohort	Norway and Sweden, Non Hispanic White, Young women Women's Lifestyle and	30 - 49	1147	869711	Random extraction	9.1 years		age 14 to enrollment		Invasive breast cancer incidence		active-no change vs. inactive-no	4	1.2 (0.85, 1.71)			A	B	C	D	E	F	G

Change in recreational p.a., from adolescent to

Pre-menopausal

Margolis, K. L., 2005, BRE23306	Prospective Cohort	Norway and Sweden, Non Hispanic White, Young women Women's Lifestyle and	30 - 49	1150	886938	Random extraction	9.1 years		age 14 to 30		Invasive breast cancer incidence		active-no change vs. inactive-no	4	1.1 (0.81, 1.49)			A	B	C	D	E	F	G
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Change in recreational p.a., from young adult to

Pre-menopausal

Margolis, K. L., 2005, BRE23306	Prospective Cohort	Norway and Sweden, Non Hispanic White, Young women Women's Lifestyle and	30 - 49	1148	871738	Random extraction	9.1 years		age 30 to enrollment		Invasive breast cancer incidence		active-no change vs. inactive-no	4	0.98 (0.78, 1.22)			A	B	C	D	E	F	G
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Exercise

Menopausal status not specified

Fraser, G. E., 1997, BRE02940	Prospective Cohort	USA, White, Adventist AHS, 1974	24 -		20341.0	Through social organization (profession, religion)	6.0 years / 610				Invasive breast cancer incidence		low level vs. not low level	2	1.46 (1.11, 1.92)							C	D	F
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Flexibility activity

Menopausal status not specified

Drake, D. A., 2001, BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
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Golfing

Menopausal status not specified

Drake, D. A., 2001, BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
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Jogging

Menopausal status not specified

Drake, D. A., 2001, BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
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Leisure physical activity

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69		41837.0	By Mail	10.0 years / 11%	Questionnaire	positive family history of bc		Breast cancer incidence	Family History BC - Yes	High vs. Low	3	0.88 (0.63, 1.25)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69		41837.0	By Mail	10.0 years / 11%	Questionnaire			Breast cancer incidence	HRT - Former	High vs. Low	3	0.97 (0.76, 1.26)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69		41837.0	By Mail	10.0 years / 11%	Questionnaire			Breast cancer incidence	HRT - No	High vs. Low	3	0.89 (0.74, 1.06)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69		41837.0	By Mail	10.0 years / 11%	Questionnaire			Breast cancer incidence	HRT - Yes	High vs. Low	3	0.88 (0.61, 1.28)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69		41837.0	By Mail	10.0 years / 11%	Questionnaire			Breast cancer incidence	Lean	High vs. Low	3	1.01 (0.75, 1.35)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	1362	41837.0	By Mail	10.0 years / 11%	Questionnaire			Breast cancer incidence		High vs. Low	3	0.95 (0.83, 1.1)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	1371	41837.0	By Mail	10.0 years / 11%	Questionnaire	moderate physical activity		Breast cancer incidence		>4 times/week vs. rarely or	4	0.92 (0.77, 1.1)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	1365	41837.0	By Mail	10.0 years / 11%	Questionnaire	vigorous physical activity		Breast cancer incidence		>4 times/week vs. rarely or	4	0.05 (0.72, 1.52)			A	B	C	D	F		
Moore, D. B.,2000,BRE16124	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69		41837.0	By Mail	10.0 years / 11%	Questionnaire			Breast cancer incidence	Overweight	High vs. Low	3	1.02 (0.78, 1.33)			A	B	C	D	F		
Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	941	9423		7.3 years	Questionnaire		min/day	Breast cancer incidence	Post-menopausal	>90 vs. <30	4	0.76 (0.58, 0.99)	0.003		A	B	C	D	E	F	G
Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	488	5221		7.3 years	Questionnaire		min/day	Breast cancer incidence	Post-menopausal & Lean	>90 vs. <30	4	0.74 (0.52, 1.08)	0.05		A	B	C	D	E	F	G
Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	367	3328		7.3 years	Questionnaire		min/day	Breast cancer incidence	Post-menopausal & Overweight	>90 vs. <30	4	0.67 (0.42, 1.08)	0.01		A	B	C	D	E	F	G
Lee, I.-M.,2001,BRE15848	Prospective Cohort	USA + Puerterico, Not specified, Registered nurses Women's Health Study, 1993	45 -	157	39322.0	Through health org. (screening, health insurance)	48.0 months / <0.01	Questionnaire	recreational and stair climbing	KJ/week	Breast cancer ER+/PR+ incidence	Post-menopausal	>=6300 vs. <840	4	0.76 (0.43, 1.34)	0.26			C	D	E	F		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Chang S.C.,2006,BRE80110	Prospective Cohort	United States, participants of a RCT PLCO Cancer Screening Trial cohort, 1993	55 - 74	764	38660.0	Cancer screening programme	9.3 years		Recreational physical activity	hours/week	Breast cancer incidence	Post-menopausal	>=4 vs. 0	6	0.78 (0.61, 0.99)		0.153			B	C	D	F	G
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany, Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	2547	218169.0	Population cancer registries and other	6.4 years	Questionnaire	Recreational activity	MET-hour/week	Invasive breast cancer cancer death	postmenopausal women	>43.0 vs. <13.0	4	0.96 (0.85, 1.08)		0.176	A	B	C	D	E	F	G

Menopausal status not specified

Albanes,1989,BRE00236	Prospective Cohort	USA, Multi-ethnic NHANES I, 1971	25 - 74		7413.0	Unspecified	10.0 years	Interview			Breast cancer incidence		lite/no exercise vs. much	3	1.0 (0.6, 1.6)		0.98	A							
Thune, I.,1997,BRE12313	Prospective Cohort	Norway, Not specified Norway National Health Screening Service, 1974	20 - 49	346	25624.0	By Mail	13.7 years / 83	Questionnaire			Breast cancer incidence		Regular exercise vs. Sedentary	3	0.63 (0.42, 0.95)		0.04	A		C	D			G	
Sesso, H.D.,1998,BRE16626	Prospective Cohort	usa, Not specified, College alumnae College Alumni Health Study	37 - 69	58	18541	By Mail	31.0 years / 33% do not return f-up questionnaire	Questionnaire	bmi<22	Kcal/week	Breast cancer incidence	Lean	>1000 vs. <500	3	0.77 (0.41, 1.45)		0.41	A			D				
Sesso, H.D.,1998,BRE16626	Prospective Cohort	usa, Not specified, College alumnae College Alumni Health Study	37 - 69	109	35365	By Mail	31.0 years / 33% do not return f-up questionnaire	Questionnaire		Kcal/week	Breast cancer incidence		>1000 vs. <500	3	0.73 (0.46, 1.14)		0.17	A			D				
Sesso, H.D.,1998,BRE16626	Prospective Cohort	usa, Not specified, College alumnae College Alumni Health Study	37 - 69	51	16824	By Mail	31.0 years / 33% do not return f-up questionnaire	Questionnaire	BMI 22+	Kcal/week	Breast cancer incidence	Overweight	>1000 vs. <500	3	0.72 (0.38, 1.37)		0.28	A			D				
Drake, D. A.,2001,BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years	Questionnaire	Other recreat activities		Breast cancer incidence			1	null (null, null)										
Lee, I.-M.,2001,BRE15848	Prospective Cohort	USA + Puertorico, Not specified, Registered nurses Women's Health Study, 1993	45 -	222	39322	Through health org. (screening, health insurance)	48.0 months / <0.01	Questionnaire		KJ/week	Breast cancer ER+/PR+ incidence		>=6300 vs. <840	4	0.92 (0.58, 1.45)		0.50			C	D	E	F		
Lee, I.-M.,2001,BRE15848	Prospective Cohort	USA + Puertorico, Not specified, Registered nurses Women's Health Study, 1993	45 -	411	39322	Through health org. (screening, health insurance)	48.0 months / <0.01	Questionnaire	recreational and stair climbing	KJ/week	Invasive & In situ breast cancer incidence		>=6300 vs. <840	4	0.8 (0.58, 1.12)		0.11			C	D	E	F		
Mertens, A. J.,2005,BRE23405	Prospective Cohort	USA, African-American and Caucasian Atherosclerosis Risk in Communities (ARIC) Study,	45 - 64		7980	Unspecified	13.1 years	Questionnaire	leisure		Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.0 (0.64, 1.54)		0.83	A		C			F	G	
Tehard B.,2006,BRE80108	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	2637	98995.0	patient records/direct contact/health insurance	11.4 years / 0.14	Questionnaire	Total recreational activity, multiplied MET of walking (3MET), moderate (6MET) and	MET-hour/week	Breast cancer incidence		>=33.8 vs. Inactive	5	0.81 (0.72, 0.92)		<0.01	A		C	D		F	G	

Recreational activity, as adult

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Patel, A.V.,2003,BRE16299	Prospective Cohort	usa, Post-menopausal CPS-II US cohort, 1982-1998	(63)	1503	311316	Unspecified	5.0 years		at age 40 06.01.01.02- Recreational activity, temp richiesto as adult		Breast cancer incidence	Post-menopausal	>42 vs. >0-7.0	6	0.79 (0.61, 1.03)		0.31	A	B	C	D	E	F	G
Recreational activity, at adolescence																								
<i>Pre-menopausal</i>																								
Margolis, K. L.,2005,BRE23306	Prospective Cohort	Norway and Sweden, Non Hispanic White, Young women Women's Lifestyle and	30 - 49	1155	891684	Random extraction	9.1 years		at age 14		Invasive breast cancer incidence		vigorous vs. none	5	1.05 (0.72, 1.54)		0.14	A	B	C	D	E	F	G
Recreational activity, at different age																								
<i>Pre-menopausal</i>																								
Margolis, K. L.,2005,BRE23306	Prospective Cohort	Norway and Sweden, Non Hispanic White, Young women Women's Lifestyle and	30 - 49	1155	892829	Random extraction	9.1 years		age 30		Invasive breast cancer incidence		vigorous vs. none	5	1.2 (0.77, 1.95)		0.6	A	B	C	D	E	F	G
Recreational activity, lifelong																								
<i>Pre-menopausal</i>																								
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75	42	22520	General population (survey)	9.2 years / 285				Breast cancer incidence	Pre-menopausal	Consistently high vs. Consistently	3	1.19 (0.43, 3.3)		0.73 2	A	B		D			G
<i>Post-menopausal</i>																								
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75	96	28264	General population (survey)	9.2 years / 285				Breast cancer incidence	Post-menopausal	Consistently high vs. Consistently	3	0.33 (0.14, 0.82)		0.02 6	A	B		D			G
<i>Menopausal status not specified</i>																								
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75		6160.0	General population (survey)	9.2 years / 285		BMI<25,1		Breast cancer incidence	Lean	Consistently high vs. Consistently	3	0.4 (0.13, 1.28)		0.15 8	A	B					G
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75	138	50781	General population (survey)	9.2 years / 285				Breast cancer incidence		Consistently high vs. Consistently	3	0.58 (0.31, 1.07)		0.10 7	A	B		D			G
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75		6160.0	General population (survey)	9.2 years / 285		difference between 25 y-o and 1982-1984- lost weight/gained up to 4.9 kg		Breast cancer incidence	Other	Consistently high vs. Consistently	3	0.43 (0.08, 2.28)		0.28 4	A	B					G
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75		6160.0	General population (survey)	9.2 years / 285		difference between 25 y-o and 1982-1984- gained more than 20 kg		Breast cancer incidence	Other	Consistently high vs. Consistently	3	0.32 (0.04, 2.5)		0.15 8	A	B					G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75		6160.0	General population (survey)	9.2 years / 285		BMI >=25.1		Breast cancer incidence	Overweight	Consistently high vs. Consistently	3	0.26 (0.06, 1.13)		0.085	A	B						G

Sports

Pre-menopausal

Wyshak, G.,2000,BRE13666	Prospective Cohort	USA, College alumnae USA, 1981	21 - 80	12	3940.0	Through social organization (profession, religion)	15.0 years / 480				Breast cancer incidence	Pre-menopausal	athletes vs. non-athletes	2	0.16 (0.04, 0.64)	0.0089		A		C	D		F	G
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Post-menopausal

Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	943	9444		7.3 years			hours/week	Breast cancer incidence	Post-menopausal	>2 vs. no sport activity	4	0.98 (0.68, 1.42)		0.37	A	B	C	D	E	F	G	
Mertens, A. J.,2005,BRE23405	Prospective Cohort	USA, African-American and Caucasian Atherosclerosis Risk in Communities (ARIC) Study,	45 - 64		7994.0	Unspecified	13.1 years				Breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.22 (0.77, 1.93)		0.30	A		C				F	G

Menopausal status not specified

Wyshak, G.,2000,BRE13666	Prospective Cohort	USA, College alumnae USA, 1981	21 - 80	175	3908	Through social organization (profession, religion)	15.0 years / 480				Breast cancer incidence		athletes vs. non-athletes	2	0.6 (0.4, 0.8)	0.0023		A		C	D		F	G	
Mertens, A. J.,2005,BRE23405	Prospective Cohort	USA, African-American and Caucasian Atherosclerosis Risk in Communities (ARIC) Study,	45 - 64		7957	Unspecified	13.1 years				Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.31 (0.87, 1.96)		0.18	A		C				F	G

Sports, lifelong

Post-menopausal

Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	445	4187		7.3 years			lifelong 06.01.01.02-Sporting, lifelong	hours/week	Breast cancer incidence	Post-menopausal	>5 vs. <1	5	0.87 (0.57, 1.32)		0.14	A	B	C	D	E	F	G
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Stair climbing

Menopausal status not specified

Drake, D. A.,2001,BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years	Questionnaire			Breast cancer incidence			1	null (null, null)										
Tehard B.,2006,BRE80108	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	3373	98995.0	patient records/direct contact/health insurance	11.4 years / 0.14	Questionnaire	Number of flight of stairs	number/day	Breast cancer incidence		>=5 vs. 0	3	1.0 (0.9, 1.12)	0.84		A		C	D		F	G	

Stationary biking

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
6.1.1.3																									
Gardening																									
<i>Post-menopausal</i>																									
Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	943	9445		7.3 years		gardening/doing odd jobs	hours/week	Breast cancer incidence	Post-menopausal	>2 vs. no gardening/o	4	0.93 (0.73, 1.17)	0.23		A	B	C	D	E	F	G	
<i>Menopausal status not specified</i>																									
Drake, D. A.,2001,BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)										
Household activity																									
<i>Pre-menopausal</i>																									
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	856	218169.0	Population cancer registries and other	6.4 years	Questionnaire	Household activity	MET-hour/week	Invasive breast cancer incidence	premenopausal women	>91.0 vs. <27.0	4	0.71 (0.55, 0.9)	0.003		A	B	C	D	E	F	G	
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80		218169.0	Population cancer registries and other	6.4 years	Questionnaire	Household activity, pooled analysis from all cohorts	met-hour/week	Invasive breast cancer incidence	premenopausal women	20.0 (continuous)	1	0.96 (0.92, 1.0)			A	B	C	D	E	F	G	
<i>Post-menopausal</i>																									
Ericson, U. et al.,2007,BRE80128	Prospective Cohort	Sweden, Post menopausal Malmö Diet and Cancer, 1991	50 -	382	11464	Cancer registry	9.5 years	Questionnaire	Household activities	hours/week	Invasive breast cancer incidence	Post-menopausal	>=30 vs. 0-9	4	0.6 (0.41, 0.87)	0.01		A							
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80	2547	218169.0	Population cancer registries and other	6.4 years	Questionnaire	Household activity	MET-hour/week	Invasive breast cancer incidence	postmenopausal women	>91.0 vs. <27.0	4	0.81 (0.7, 0.93)	0.001		A	B	C	D	E	F	G	
Lahmann et al.,2007,BRE20026	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Spain,Sweden and UK	20 - 80		218169.0	Population cancer registries and other	6.4 years	Questionnaire	Household activity, pooled analysis from all cohorts	met-hour/week	Invasive breast cancer incidence	postmenopausal women	20.0 (continuous)	1	0.97 (0.94, 0.99)			A	B	C	D	E	F	G	
<i>Menopausal status not specified</i>																									
Drake, D. A.,2001,BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years	Questionnaire			Breast cancer incidence			1	null (null, null)										
Tehard B.,2006,BRE80108	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	3181	98995.0	patient records/direct contact/health insurance	11.4 years / 0.14	Questionnaire	Light household activity	hours/week	Breast cancer incidence		>=14 vs. 0	4	0.82 (0.61, 1.11)	<0.05		A		C	D		F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Tehard B.,2006,BRE80108	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	2875	98995.0	patient records/direct contact/health insurance	11.4 years / 0.14	Questionnaire	Heavy household activity	hours/week	Breast cancer incidence		>=5 vs. 0	4	0.97 (0.81, 1.15)		0.47	A	C	D	F	G		

6.1.3

Intensity of physical activity

Post-menopausal

Dirx, M. J.,2001,BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	306	3260		7.3 years		how intense was the sport practiced (in terms of MET)	MET score	Breast cancer incidence	Post-menopausal	>6 vs. <4	3	0.84 (0.55, 1.29)		0.43	A	B	C	D	E	F	G
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Moderate physical activity

Menopausal status not specified

Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1879	110599.0	Cancer registry	6.6 years		Annual moderate long-term physical activity	hours/week	Breast cancer ER+ incidence		>5 vs. <=0.5	5	0.98 (0.82, 1.16)		0.53		C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1452	110599.0	Cancer registry	6.6 years		Annual moderate long-term physical activity	hours/week	Breast cancer ER+/PR+ incidence		>5 vs. <=0.5	5	1.02 (0.84, 1.24)		0.73		C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	345	110599.0	Cancer registry	6.6 years		Annual moderate long-term physical activity	hours/week	Breast cancer ER- incidence		>5 vs. <=0.5	5	0.53 (0.33, 0.85)		0.003		C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	309	110599.0	Cancer registry	6.6 years		Annual moderate long-term physical activity	hours/week	Breast cancer ER-/PR- incidence		>5 vs. <=0.5	5	0.5 (0.3, 0.83)		0.003		C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	593	110599.0	Cancer registry	6.6 years		Moderate lifetime physical activity	hours/week	In situ breast cancer incidence		>5 vs. <=0.5	5	0.78 (0.57, 1.06)		0.11	A	C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	593	110599.0	Cancer registry	6.6 years		Moderate physical activity in past 3 years	hours/week	In situ breast cancer incidence		>5 vs. <=0.5	5	0.8 (0.57, 1.14)		0.6	A	C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	2649	110599.0	Cancer registry	6.6 years		Moderate lifetime physical activity	hours/week	Invasive breast cancer incidence		>5 vs. <=0.5	5	0.94 (0.81, 1.08)		0.29	A	C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	2649	110599.0	Cancer registry	6.6 years		Moderate physical activity in past 3 years	hours/week	Invasive breast cancer incidence		>5 vs. <=0.5	5	1.03 (0.88, 1.19)		0.8	A	C	D	E	F	G

Total light physical activity

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Dorgan, J. F., 1994, BRE02385	Prospective Cohort	USA Framingham Study, 1954	35 - 68		2307.0	General population (survey)	28.0 years			hours/day	Breast cancer incidence		1.0 (continuous)	1	1.0 (0.9, 1.2)		0.63	A	B	C	E	F	G	
Total vigorous physical activity																								
<i>Menopausal status not specified</i>																								
Dorgan, J. F., 1994, BRE02385	Prospective Cohort	USA Framingham Study, 1954	35 - 68		2307.0	General population (survey)	28.0 years			hours/day	Breast cancer incidence		1.0 (continuous)	1	1.1 (0.9, 1.3)		0.22	A	B	C	E	F	G	
Chang, S. C., 2003, BRE18295	Prospective Cohort	USA, Not specified, Screening Program BCDDP, 1973	55 - 74		27534.0	Through health org. (screening, health insurance)	7.0 years	Questionnaire (nos)		hours/week	Breast cancer incidence		>=4 hrs/wk vs. <4 hrs/wk	2	0.83 (0.69, 1.0)									
Vigorous physical activity																								
<i>Post-menopausal</i>																								
Dallal et al., 2007, BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1587	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	Age >= 55 years	>5 vs. <=0.5	5	0.9 (0.74, 1.1)		0.27			C	D	E	F	G
<i>Menopausal status not specified</i>																								
Dallal et al., 2007, BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1879	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Breast cancer ER+ incidence		>5 vs. <=0.5	5	0.89 (0.74, 1.06)		0.23			C	D	E	F	G
Dallal et al., 2007, BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1452	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Breast cancer ER+/PR+ incidence		>5 vs. <=0.5	5	0.94 (0.77, 1.16)		0.67			C	D	E	F	G
Dallal et al., 2007, BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	305	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Breast cancer ER+/PR- incidence		>5 vs. <=0.5	5	0.75 (0.47, 1.18)		0.31			C	D	E	F	G
Dallal et al., 2007, BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	345	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Breast cancer ER- incidence		>5 vs. <=0.5	5	0.45 (0.27, 0.76)		0.003			C	D	E	F	G
Dallal et al., 2007, BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	309	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Breast cancer ER-/PR- incidence		>5 vs. <=0.5	5	0.35 (0.19, 0.65)		0.001			C	D	E	F	G
Dallal et al., 2007, BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	593	110599.0	Cancer registry	6.6 years		Strenuous lifetime physical activity	hours/week	In situ breast cancer incidence		>5 vs. <=0.5	5	0.69 (0.48, 0.98)		0.04	A		C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	593	110599.0	Cancer registry	6.6 years		Strenuous physical activity in past three years	hours/week	In situ breast cancer incidence		>5 vs. <=0.5	5	0.57 (0.33, 0.99)		0.17	A	C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1062	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	Age < 55 years	>5 vs. <=0.5	5	0.68 (0.53, 0.87)		0.02		C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1455	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	BMI <25	>5 vs. <=0.5	5	0.74 (0.6, 0.91)		0.03		C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	1094	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	BMI=>25	>5 vs. <=0.5	5	0.85 (0.67, 1.09)		0.12		C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	2067	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	Family History BC - No	>5 vs. <=0.5	5	0.74 (0.62, 0.89)		0.01		C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	491	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	Family History BC - Yes	>5 vs. <=0.5	5	1.02 (0.73, 1.43)		0.72		C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	2649	110599.0	Cancer registry	6.6 years		Strenuous lifetime physical activity	hours/week	Invasive breast cancer incidence		>5 vs. <=0.5	5	0.8 (0.69, 0.94)		0.02	A	C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	2649	110599.0	Cancer registry	6.6 years		Strenuous physical activity in past three years	hours/week	Invasive breast cancer incidence		>5 vs. <=0.5	5	0.99 (0.81, 1.21)		0.56	A	C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	618	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	Parity no	>5 vs. <=0.5	5	1.01 (0.77, 1.33)		0.43		C	D	E	F	G	
Dallal et al.,2007,BRE80016	Prospective Cohort	USA California Teachers Study, 1995	27 - 86	2016	110599.0	Cancer registry	6.6 years		Annual long-term strenuous physical activity	hours/week	Invasive breast cancer incidence	Parity yes	>5 vs. <=0.5	5	0.73 (0.6, 0.89)		0.002		C	D	E	F	G	

6.1.3.1

High physical activity job

Menopausal status not specified

Pukkala,1993,BRE24790	Prospective Cohort	Finland, Registered teachers Finnish Female Teachers Cohort, 1967-1991	20 - 74	63	10118.0	Through social organization (profession, religion)	7.0 years		to be a PA teacher		Breast cancer incidence		physical education teachers vs.	2	1.35 (0.95, 1.87)			A						
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Medium physical activity job

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
McTiernan, A.,2003,BRE17819	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	1747	70126	Through health org. (screening, health insurance)	4.7 years / 0.06				Invasive & In situ breast cancer incidence	Post-menopausal	yes vs. no	2	0.92 (0.83, 1.01)		0.08	A	B	C	D	E	F	G

High recreational activity, at age 30

Post-menopausal

McTiernan, A.,2003,BRE17819	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	1719	69582	Through health org. (screening, health insurance)	4.7 years / 0.06				Invasive & In situ breast cancer incidence	Post-menopausal	yes vs. no	2	0.86 (0.78, 0.95)		0.003	A	B	C	D	E	F	G
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High Recreational activity, in teens

Post-menopausal

McTiernan, A.,2003,BRE17819	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	1709	69351	Through health org. (screening, health insurance)	4.7 years / 0.06				Invasive & In situ breast cancer incidence	Post-menopausal	yes vs. no	2	0.94 (0.85, 1.04)		0.21	A	B	C	D	E	F	G
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Menopausal status not specified

Frisch, R. E.,1985,BRE02992	Historical Cohort	usa, College alumnae USA, 1981		36	7559.0	By Mail			other=parous women		Breast cancer incidence	Other	former athletes vs. non-athletes	2	2.02 (1.03, 3.94)			A		C	D		F	G
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Jogging intensity

Menopausal status not specified

Drake, D. A.,2001,BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
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Moderate/high recreational activity

Post-menopausal

McTiernan, A.,2003,BRE17819	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	1768	71602	Through health org. (screening, health insurance)	4.7 years / 0.06			hours/week	Invasive & In situ breast cancer incidence	Post-menopausal	>7 vs. None	7	0.79 (0.63, 0.99)		0.12	A	B	C	D	E	F	G
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Menopausal status not specified

Dorgan, J. F.,1994,BRE02385	Prospective Cohort	USA Framingham Study, 1954	35 - 68		2307.0	General population (survey)	28.0 years			hours/day	Breast cancer incidence		1.0 (continuous)	1	1.2 (1.0, 1.06)		0.06	A	B	C		E	F	G
Tehard B.,2006,BRE80108	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	3047	98995.0	patient records/direct contact/health insurance	11.4 years / 0.14		Moderate recreational activity	hours/week	Breast cancer incidence		>=14 vs. inactive	5	0.89 (0.65, 1.24)		<0.01	A		C	D		F	G

Moderate/high recreational activity, in teens

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Lenght of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Frisch, R. E., 1987, BRE02995	Historical Cohort	USA TEMP		69	5398	Through social organization (profession, religion)	56.0 years		to be athlete or not in college		Breast cancer cancer prevalence		not athlete vs. athlete	2	1.86 (1.0, 3.47)				A	C	D	F	G	
Slight recreational physical activity																								
<i>Menopausal status not specified</i>																								
Dorgan, J. F., 1994, BRE02385	Prospective Cohort	USA Framingham Study, 1954	35 - 68		2307.0	General population (survey)	28.0 years			hours/day	Breast cancer incidence		1.0 (continuous)	1	1.1 (0.9, 1.3)	0.47		A	B	C	E	F	G	
Swimming intensity																								
<i>Menopausal status not specified</i>																								
Drake, D. A., 2001, BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
Treadmill intensity																								
<i>Menopausal status not specified</i>																								
Drake, D. A., 2001, BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
Vigorous racquet sports																								
<i>Menopausal status not specified</i>																								
Drake, D. A., 2001, BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
Vigorous recreational activity																								
<i>Pre-menopausal</i>																								
Silvera, S. A., 2005, BRE24118	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59	818	327994	Through health org. (screening, health insurance)	16.4 years	FFQ-Semi-quantitative		min/day	Breast cancer incidence	Pre-menopausal	>61.0 vs. 0 - 30.0	4	0.87 (0.68, 1.09)		0.23	A	C	D	E	F	G	
Silvera, S. A. N., 2005, BRE24118	Prospective Cohort	Canada NBSS, 1980	40 - 59	818	327994	Through health org. (screening, health insurance)	16.4 years	FFQ (nos)		min/day	Breast cancer incidence	Pre-menopausal	>60 vs. none	4	0.87 (0.68, 1.09)		0.23	A	C	D	E	F	G	
<i>Post-menopausal</i>																								

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Margolis, K. L., 2005, BRE23306	Prospective Cohort	Norway and Sweden, Non Hispanic White, Young women Women's Lifestyle and	30 - 49	1099	857536	Random extraction	9.1 years		duration of competitive physical activity	Years/life	Invasive breast cancer incidence		5+ y vs. none	3	0.95 (0.75, 1.19)		0.96	A	B	C	D	E	F	G

6.1.4.2

Duration of recreational activity

Post-menopausal

Dirx, M. J., 2001, BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	426	3936		7.3 years		years of sporting	Years/life	Breast cancer incidence	Post-menopausal	>40 vs. 1-10	5	0.99 (0.58, 1.67)		0.28	A	B	C	D	E	F	G
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6.2

Sitting-time index (during working hours)

Post-menopausal

Dirx, M. J., 2001, BRE02326	Case Cohort	Netherlands, Not specified, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	755	7107		7.3 years		life-long	hours/day	Breast cancer incidence	Post-menopausal	<2 vs. 6-8	3	1.21 (0.94, 1.56)		0.54	A	B	C	D	E	F	G
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Menopausal status not specified

Zheng, W., 1993, BRE13994	Historical Cohort	Shangay TEMP		516	null	Cancer registry				%	Breast cancer incidence		> 80% working vs. general pop	2	1.27 (null, null)	0.01		A						
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6.3

Sweating

Menopausal status not specified

Drake, D. A., 2001, BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)									
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7.1

Energy Intake

Pre-menopausal

Holmes, M. D., 1999, BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		Kcal/day	Invasive breast cancer incidence	Pre-menopausal	100.0 (continuous)	1	0.99 (0.98, 1.01)			A		C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Frazier L.A.,2004,BRE02942	Historical Cohort	USA, Multi-ethnic, Registered nurses Nurses' Health study II	34 - 51	361	47517	Through health org. (screening, health insurance)	9.0 years	FFQ (nos)	adolescent diet	Kcal/day	Breast cancer incidence	Pre-menopausal	3833.0 vs. 1782.0	5	1.39 (0.99, 1.96)		0.01	A	C	D	E	F	G	
Silvera, S. A.,2005,BRE24118	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59	818	327994	Through health org. (screening, health insurance)	16.4 years	FFQ-Semi-quantitative		Kcal/day	Breast cancer incidence	Pre-menopausal	>2406.0 vs. <1629.0	4	1.45 (1.13, 1.85)		0.001	A	C	D	E	F	G	
Silvera, S. A. N.,2005,BRE24118	Prospective Cohort	Canada NBSS, 1980	40 - 59	818	827994	Through health org. (screening, health insurance)	16.4 years	FFQ (nos)		Kcal/day	Breast cancer incidence	Pre-menopausal	>2406 vs. <1630	4	1.45 (1.13, 1.85)		0.001	A	C	D	E	F	G	

Post-menopausal

Kushi L. H.,1992,BRE05141	Prospective Cohort	US, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	459	130443	By Mail	4.0 years / 1086	FFQ-Semi-quantitative		Kcal/day	Breast cancer incidence	Post-menopausal	2264.0 vs. 1168.0	4	1.06 (0.8, 1.39)		0.82	A	C	D	E	F	G	
Graham, S.,1992,BRE03424	Prospective Cohort	USA, White, Post-menopausal New York State Cohort, 1980	50 - 107	344	17401	By Mail	8.0 years	FFQ (nos)		Kcal *1000/month	Breast cancer incidence	Post-menopausal	62.0 - 318.0 vs. 7.0 - 35.0	5	0.91 (0.64, 1.27)			A	B					
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S, White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	24h Recall		Kcal/day	Breast cancer incidence	Post-menopausal	500.0 (continuous)	1	2.72 (1.51, 4.89)			A	C	D	E			
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		Kcal/day	Invasive breast cancer incidence	Post-menopausal	100.0 (continuous)	1	0.99 (0.98, 1.0)			A	C	D	E	F	G	
Velie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		KJ/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.94 (0.77, 1.16)		.39		B	C	D	E	F	G
Sieri, Sabina,2002,BRE20941	Nested Case Control	Italy, Not specified, Post-menopausal ORDET study, 1987	41 - 70	56	214	Through network, paper, tv	5.5 years	FFQ-Semi-quantitative		Kcal/day	Breast cancer incidence	Post-menopausal	1786.4 - 3474.4 vs. <1410.6	3	1.02 (0.48, 2.16)		0.959		B	C				G
Byrne, C.,2002,BRE01315	Prospective Cohort	U.S, Multi-ethnic, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-1996	(57)	1071	44697	By Mail	14.0 years	FFQ-Semi-quantitative		Kcal/day	Invasive breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.81 (0.67, 0.99)		0.03	A	C	D	E	F		
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)									
Silvera, S. A.,2005,BRE24118	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59	662	2244616	Through health org. (screening, health insurance)	16.4 years	FFQ-Semi-quantitative		Kcal/day	Breast cancer incidence	Post-menopausal	>2406.0 vs. <1629.0	4	0.94 (0.72, 1.23)		0.86	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Silvera, S. A. N.,2005,BRE24118	Prospective Cohort	Canada NBSS, 1980	40 - 59	662	2244616	Through health org. (screening, health insurance)	16.4 years	FFQ (nos)		Kcal/day	Breast cancer incidence	Post-menopausal	>2406 vs. <1630	4	0.94 (0.72, 1.23)		0.86	A	C	D	E	F	G	
Chang S.C.,2006,BRE80110	Prospective Cohort	United States, participants of a RCT PLCO Cancer Screening Trial cohort, 1993	55 - 74	764	38660.0	Cancer screening programme	9.3 years	FFQ (nos)	Energy intake	Kcal/day	Breast cancer incidence	Post-menopausal	>2084.0 vs. <1315.0	4	1.25 (1.02, 1.53)		0.064		B	C	D	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Total energy intake	Kcal	Breast cancer ER+/PR+ incidence		500.0 (continuous)	1	1.0 (0.94, 1.06)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Total energy intake	Kcal	Breast cancer ER+/PR- incidence		500.0 (continuous)	1	0.97 (0.87, 1.08)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Total energy intake	Kcal	Breast cancer ER-/PR- incidence		500.0 (continuous)	1	1.07 (0.97, 1.18)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Total energy intake	Kcal	Breast cancer ER-/PR- incidence		500.0 (continuous)	1	1.16 (0.91, 1.48)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Total energy intake	Kcal	Invasive breast cancer incidence		500.0 (continuous)	1	1.01 (0.97, 1.04)			A	C	D	E	F	G	

Menopausal status not specified

Jones, D. Y.,1987,BRE04461	Prospective Cohort	US, Multi-ethnic NHANES I, 1971	25 - 74	86	4912	General population (survey)	10.0 years / 776	24h Recall		Kcal/day	Breast cancer incidence		>1776.0 vs. <1029.9	4	0.7 (0.36, 1.4)		0.22	A	B	C	D	F	
Knekt, P.,1990,BRE04898	Prospective Cohort	Finland, Not specified, Screening Program Mobile Clinic Health Examination Survey, 1973	20 - 69		3988.0	Through health org. (screening, health insurance)	20.0 years	Dietary History questionnaire		Kcal/day	Breast cancer incidence		>2335.0 vs. <1791.0	3	0.58 (0.29, 1.18)		0.15	A			E		
Howe, G. R.,1991,BRE17622	Nested Case Control	Canada, Multi-ethnic, Screening Program NBSS, 1980	40 - 59	519	1182	Through health org. (screening, health insurance)	5.0 years	Dietary History questionnaire		Kcal/day	Breast cancer incidence		Quantile 4 vs. Quantile 1	4	0.95 (0.71, 1.26)		.51	A					G
Willett, W. C.,1992,BRE13438	Prospective Cohort	U.S, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1439	692674	By Mail	8.0 years	FFQ-Semi-quantitative		KJ/day	Breast cancer incidence		>8230.0 vs. <4745.9	5	1.0 (0.85, 1.18)		0.83	A	C	D	E	F	G
Giovannucci, E.,1993,BRE03262	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	392	786	By Mail	2.0 years	FFQ-Semi-quantitative		Kcal/day	Breast cancer incidence		Quantile 5 vs. Quantile 1	5	1.01 (0.65, 1.56)		0.50	A					

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Silvera, S. A. N.,2005,BRE24118	Prospective Cohort	Canada NBSS, 1980	40 - 59	1671	670113	Through health org. (screening, health insurance)	16.4 years	FFQ (nos)		Kcal/day	Breast cancer incidence		>2406 vs. <1630	4	1.19 (0.99, 1.42)		0.01	A	C	D	E	F	G	

7.1.0.1

Energy from linoleic acid

Post-menopausal

Vellie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		%/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.05 (0.82, 1.34)		.44		B	C	D	E	F	G
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from n-6 fatty acids		Breast cancer incidence	Post-menopausal	>4.8 vs. <3.45	4	1.68 (0.85, 3.35)		0.15	A	B	C	D	E	F	G

Menopausal status not specified

Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from n-6 fatty acids		Breast cancer incidence		>4.78 vs. <3.45	4	1.02 (0.59, 1.74)		0.96	A	B	C	D	E	F	G
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Energy from monounsaturated fatty acids

Pre-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	1.02 (0.91, 1.15)			A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		%/day	Invasive breast cancer incidence	Pre-menopausal	15.0 vs. 9.0	5	1.26 (0.99, 1.6)		.06	A	C	D	E	F	G

Post-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	0.91 (0.84, 0.99)			A	C	D	E	F	G	
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from monounsaturated fatty acids		Breast cancer incidence	Post-menopausal	>7.48 vs. <5.46	4	0.96 (0.45, 2.05)		0.82	A	B	C	D	E	F	G

Menopausal status not specified

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.94 (0.88, 1.0)			A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	1.03 (0.89, 1.18)			A	C	D	E	F	G	
Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)		%/day	Breast cancer incidence		9.2 vs. 7.9	4	1.02 (0.73, 1.43)	0.90		A	B	C	E	F	G	
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from monounsaturated fatty acids		Breast cancer incidence		>7.55 vs. <5.49	4	0.62 (0.36, 1.09)	0.19		A	B	C	D	E	F	G

Energy from n-3 fatty acids

Pre-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	0.1 (continuous)	1	1.1 (0.96, 1.26)			A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		%	Invasive breast cancer incidence	Pre-menopausal	0.19 vs. 0.03	5	1.01 (0.78, 1.31)	.50		A	C	D	E	F	G

Post-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	0.1 (continuous)	1	1.09 (1.02, 1.17)			A	C	D	E	F	G	
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from n-3 fatty acids		Breast cancer incidence	Post-menopausal	>1.34 vs. <0.86	4	0.94 (0.46, 1.91)	0.87		A	B	C	D	E	F	G

Menopausal status not specified

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		0.1 (continuous)	1	1.09 (1.03, 1.16)			A	C	D	E	F	G	
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from n-3 fatty acids		Breast cancer incidence		>1.32 vs. <0.85	4	0.69 (0.4, 1.18)	0.26		A	B	C	D	E	F	G

Energy from oleic acid

Post-menopausal

Velie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		%/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.88 (0.62, 1.25)	.92		B	C	D	E	F	G
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Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2097	121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.86 (0.77, 0.96)			A	C	D	E	F	G	

Energy from polyunsaturated fatty acids

Pre-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	0.99 (0.77, 1.27)			A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		%/day	Invasive breast cancer incidence	Pre-menopausal	7.0 vs. 4.0	5	1.06 (0.84, 1.35)	.20		A	C	D	E	F	G

Post-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	0.88 (0.74, 1.04)			A	C	D	E	F	G	
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from polyunsaturated fatty acids		Breast cancer incidence	Post-menopausal	>6.06 vs. <4.4	4	1.98 (0.94, 4.18)	0.07	1	A	B	C	D	E	F	G

Menopausal status not specified

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.91 (0.79, 1.04)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.97 (0.81, 1.16)			A	C	D	E	F	G	
Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)		%/day	Breast cancer incidence		5.8 vs. 4.8	4	1.27 (0.92, 1.74)	0.46		A	B	C	D	E	F	G
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from polyunsaturated fatty acids		Breast cancer incidence		>6.03 vs. <4.38	4	1.1 (0.63, 1.9)	0.83		A	B	C	D	E	F	G

Energy from saturated fatty acids

Pre-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	0.98 (0.87, 1.11)			A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		%/day	Invasive breast cancer incidence	Pre-menopausal	14.0 vs. 8.0	5	1.17 (0.91, 1.5)		.02	A	C	D	E	F	G	

Post-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	0.93 (0.85, 1.02)			A	C	D	E	F	G	
Velie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		%/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.12 (0.87, 1.45)		.67		B	C	D	E	F	G
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from saturated fatty acids		Breast cancer incidence	Post-menopausal	>7.34 vs. <5.19	4	0.64 (0.34, 1.22)		0.09	A	B	C	D	E	F	G

Menopausal status not specified

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.94 (0.88, 1.01)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.93 (0.82, 1.05)			A	C	D	E	F	G	
Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)		%/day	Breast cancer incidence		9.4 vs. 8.4	4	0.92 (0.67, 1.26)		0.59	A	B	C	E	F	G	
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from saturated fatty acids		Breast cancer incidence		>7.45 vs. <5.24	4	0.68 (0.4, 1.15)		0.066	A	B	C	D	E	F	G

Energy from trans fatty acids

Pre-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.0 (0.88, 1.13)			A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative	unsaturated trans fa	%	Invasive breast cancer incidence	Pre-menopausal	2.3 vs. 0.9	5	1.15 (0.9, 1.47)		.54	A	C	D	E	F	G

Post-menopausal

Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	1.0 (continuous)	1	0.91 (0.84, 0.99)			A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		1.0 (continuous)	1	0.92 (0.86, 0.98)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		1.0 (continuous)	1	0.93 (0.85, 1.02)			A	C	D	E	F	G	

Energy from unsaturated fat

Post-menopausal

Velie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		%/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.13 (0.88, 1.45)		.35		B	C	D	E	F	G
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Percent of energy from fat

Post-menopausal

Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)			Breast cancer incidence	Post-menopausal	>24.36 vs. <18.37	4	0.99 (0.5, 1.95)		0.9	A	B	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from total fat	%	Breast cancer ER+/PR+ incidence		5.0 (continuous)	1	0.98 (0.94, 1.03)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from animal fat	%	Breast cancer ER+/PR+ incidence		5.0 (continuous)	1	0.98 (0.94, 1.03)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from vegetable fat	%	Breast cancer ER+/PR+ incidence		5.0 (continuous)	1	0.98 (0.92, 1.06)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from monounsaturated fat	%	Breast cancer ER+/PR+ incidence		5.0 (continuous)	1	0.95 (0.86, 1.06)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from trans-unsaturated fat	%	Breast cancer ER+/PR+ incidence		1.0 (continuous)	1	0.95 (0.86, 1.05)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from alpha-linolenic acid	%	Breast cancer ER+/PR+ incidence		0.1 (continuous)	1	1.0 (0.99, 1.0)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Percentage energy from total fat	%	Breast cancer ER+/PR- incidence		5.0 (continuous)	1	0.98 (0.9, 1.07)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Percentage energy from animal fat	%	Breast cancer ER+/PR- incidence		5.0 (continuous)	1	0.98 (0.9, 1.07)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Percentage energy from vegetable fat	%	Breast cancer ER+/PR- incidence		5.0 (continuous)	1	1.01 (0.9, 1.14)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Percentage energy from monounsaturated fat	%	Breast cancer ER+/PR- incidence		5.0 (continuous)	1	0.98 (0.81, 1.17)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Percentage energy from trans-unsaturated fat	%	Breast cancer ER+/PR- incidence		1.0 (continuous)	1	0.91 (0.76, 1.09)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.95 (0.88, 1.03)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from animal fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.97 (0.9, 1.06)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from vegetable fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.96 (0.85, 1.07)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from monounsaturated fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.89 (0.75, 1.06)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from trans-unsaturated fat	%	Breast cancer ER-/PR- incidence		1.0 (continuous)	1	1.02 (0.86, 1.2)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from alpha-linolenic acide	%	Breast cancer ER-/PR- incidence		0.1 (continuous)	1	1.0 (0.99, 1.01)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from total fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.98 (0.8, 1.2)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from animal fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.99 (0.8, 1.22)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from vegetable fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.99 (0.74, 1.32)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from monounsaturated fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	1.01 (0.65, 1.58)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from trans-unsaturated fat	%	Breast cancer ER-/PR- incidence		1.0 (continuous)	1	1.15 (0.65, 2.02)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from alpha-linolenic acid	%	Breast cancer ER-/PR- incidence		0.1 (continuous)	1	0.99 (0.97, 1.01)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1655	121701.0	medical records	20.0 years	FFQ	Percentage energy from fat, subgroup analysis by waist circumference <	%	Invasive breast cancer incidence	<35" waist	>45.1 vs. 30.1-35	6	1.13 (0.81, 1.57)	0.45	A	C	D	E	F	G		
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		453	121701.0	medical records	20.0 years	FFQ	Percentage energy from fat, subgroup analysis by waist circumference >=	%	Invasive breast cancer incidence	>=35" waist	>45.1 vs. <25	6	0.79 (0.44, 1.4)	0.04	A	C	D	E	F	G		
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1096	121701.0	medical records	20.0 years	FFQ	Percentage energy from fat, subgroup analysis by BMI in 1980-2000	%	Invasive breast cancer incidence	BMI = 25.0-29.9	>45.1 vs. 30.1-35	6	1.08 (0.77, 1.49)	0.64	A	C	D	E	F	G		
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		565	121701.0	medical records	20.0 years	FFQ	Percentage energy from fat, subgroup analysis by BMI in 1980-2000	%	Invasive breast cancer incidence	BMI >=30.0	>45.1 vs. 30.1-35	6	0.9 (0.52, 1.55)	0.95	A	C	D	E	F	G		
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1607	121701.0	medical records	20.0 years	FFQ	Percentage energy from fat, subgroup analysis by BMI in 1980-2000	%	Invasive breast cancer incidence	BMI<25.0	>45.1 vs. 30.1-35	6	0.87 (0.66, 1.16)	0.2	A	C	D	E	F	G		
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from fat	%	Invasive breast cancer incidence		>50 vs. 30.1-35	8	1.01 (0.74, 1.38)	0.11	A	C	D	E	F	G		
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from total fat	%	Invasive breast cancer incidence		5.0 (continuous)	1	0.98 (0.95, 1.0)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from animal fat	%	Invasive breast cancer incidence		5.0 (continuous)	1	0.98 (0.95, 1.01)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from vegetable fat	%	Invasive breast cancer incidence		5.0 (continuous)	1	0.99 (0.95, 1.04)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from monounsaturated fat	%	Invasive breast cancer incidence		5.0 (continuous)	1	0.94 (0.88, 1.01)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from trans-unsaturated fat	%	Invasive breast cancer incidence		1.0 (continuous)	1	0.96 (0.9, 1.03)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from alpha-linolenic acid	%	Invasive breast cancer incidence		0.1 (continuous)	1	1.0 (0.99, 1.0)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Cholesterol intake	mg/1000 Kcal	Invasive breast cancer incidence		100.0 (continuous)	1	1.0 (0.99, 1.0)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal fat intake	%	Invasive breast cancer incidence		5.0 (continuous)	1	1.03 (0.96, 1.1)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal vegetable fat intake	%	Invasive breast cancer incidence		5.0 (continuous)	1	1.03 (0.96, 1.1)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal animal fat intake	%	Invasive breast cancer incidence		5.0 (continuous)	1	1.0 (0.94, 1.07)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal monounsaturated fat intake	%	Invasive breast cancer incidence		5.0 (continuous)	1	1.04 (0.97, 1.11)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal trans-unsaturated fat intake	%	Invasive breast cancer incidence		1.0 (continuous)	1	1.08 (1.01, 1.15)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal alpha-linolenic acid intake	%	Invasive breast cancer incidence		0.1 (continuous)	1	0.99 (0.93, 1.06)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Premenopausal cholesterol intake	mg/1000 Kcal	Invasive breast cancer incidence		100.0 (continuous)	1	1.0 (0.93, 1.07)			A	C	D	E	F	G	
Thiébaud et al.,2007,BRE80012	Prospective Cohort	USA, Post-menopausal NIH- AARP Diet and Health Study	50 - 71	3501	188736.0	Cancer registry	4.4 years	24h Recall + FFQ	Percent energy from monounsaturated fat intake, density model, fat and energy intakes	%energy	Invasive breast cancer incidence		15.2 vs. 7.2	5	1.12 (1.0, 1.24)	0.028			C	D	E	F	G	
Thiébaud et al.,2007,BRE80012	Prospective Cohort	USA, Post-menopausal NIH- AARP Diet and Health Study	50 - 71	3501	188736.0	Cancer registry	4.4 years	24h Recall + FFQ	Percent energy from total fat, standard model(log- transformed total fat intake and log-	%energy	Invasive breast cancer incidence		90.5 vs. 24.2	5	1.22 (1.03, 1.45)	0.013			C	D	E	F	G	
Thiébaud et al.,2007,BRE80012	Prospective Cohort	USA, Post-menopausal NIH- AARP Diet and Health Study	50 - 71	3501	188736.0	Cancer registry	4.4 years	24h Recall + FFQ	Percent energy from total fat, standard model, twofold increase in fat intake	%	Invasive breast cancer incidence		20.0 (continuous)	1	1.15 (1.05, 1.26)				C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from long-chain omega-3 fatty acids	%	Invasive breast cancer incidence		0.1 (continuous)	1	1.0 (1.0, 1.01)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal long-chain omega-3 fatty acids intake	%	Invasive breast cancer incidence		0.1 (continuous)	1	0.95 (0.89, 1.02)			A	C	D	E	F	G	

Menopausal status not specified

Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)			Breast cancer incidence		>0.61 vs. <0.28	4	0.5 (0.3, 0.85)		0.024	A	B	C	D	E	F	G
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Percent of energy from n3/n6 ratio

Post-menopausal

Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)			Breast cancer incidence	Post-menopausal	>4.59 vs. <3.2	4	1.3 (0.66, 2.58)		0.28	A	B	C	D	E	F	G
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Menopausal status not specified

Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)			Breast cancer incidence		>4.61 vs. <3.24	4	1.31 (0.78, 2.19)		0.13	A	B	C	D	E	F	G
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Percent of energy from polyunsaturated fat

Post-menopausal

Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from polyunsaturated fat	%	Breast cancer ER+/PR+ incidence		5.0 (continuous)	1	0.95 (0.77, 1.16)			A	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Percentage energy from polyunsaturated fat	%	Breast cancer ER+/PR- incidence		5.0 (continuous)	1	1.02 (0.7, 1.47)			A	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from polyunsaturated fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.89 (0.62, 1.28)			A	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from polyunsaturated fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.93 (0.38, 2.23)			A	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from polyunsaturated fat	%	Invasive breast cancer incidence		5.0 (continuous)	1	0.94 (0.82, 1.08)			A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal polyunsaturated fat intake	%	Invasive breast cancer incidence		5.0 (continuous)	1	1.03 (0.96, 1.09)			A	C	D	E	F	G	
Thiébaud et al.,2007,BRE80012	Prospective Cohort	USA, Post-menopausal NIH- AARP Diet and Health Study	50 - 71	3501	188736.0	Cancer registry	4.4 years	24h Recall + FFQ	Percent energy from polyunsaturated fat intake, density model, fat and energy intakes	%energy	Invasive breast cancer incidence		10.3 vs. 4.5	5	1.12 (1.01, 1.25)		0.04			C	D	E	F	G
Thiébaud et al.,2007,BRE80012	Prospective Cohort	USA, Post-menopausal NIH- AARP Diet and Health Study	50 - 71	3501	188736.0	Cancer registry	4.4 years	24h Recall + FFQ	Percent energy from polyunsaturated fat, twofold increase in fat intake	%	Invasive breast cancer incidence		20.0 (continuous)	1	1.1 (1.01, 1.2)					C	D	E	F	G

Percent of energy from saturated fat

Post-menopausal

Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		1653	121701.0	medical records	20.0 years	FFQ	Percentage energy from saturated fat	%	Breast cancer ER+/PR+ incidence		5.0 (continuous)	1	0.94 (0.85, 1.04)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		477	121701.0	medical records	20.0 years	FFQ	Percentage energy from saturated fat	%	Breast cancer ER+/PR- incidence		5.0 (continuous)	1	0.95 (0.79, 1.14)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		517	121701.0	medical records	20.0 years	FFQ	Percentage energy from saturated fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.93 (0.78, 1.11)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		83	121701.0	medical records	20.0 years	FFQ	Percentage energy from saturated fat	%	Breast cancer ER-/PR- incidence		5.0 (continuous)	1	0.89 (0.57, 1.41)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		3537	121701.0	medical records	20.0 years	FFQ	Percentage energy from saturated fat	%	Invasive breast cancer incidence		5.0 (continuous)	1	0.93 (0.87, 1.0)			A	C	D	E	F	G	
Kim, E.H.J.,2006,BRE80115	Prospective Cohort	United States, Post-menopausal nurses' Health Study (NHS) Cohort 1976-2000		497	121701.0	medical records	20.0 years	FFQ	Percentage energy from premenopausal saturated fat intake	%	Invasive breast cancer incidence		5.0 (continuous)	1	1.02 (0.95, 1.09)			A	C	D	E	F	G	
Thiébaud et al.,2007,BRE80012	Prospective Cohort	USA, Post-menopausal NIH- AARP Diet and Health Study	50 - 71	3501	188736.0	Cancer registry	4.4 years	24h Recall + FFQ	Percent energy from saturated fat intake, density model, fat and energy intakes were	%energy	Invasive breast cancer incidence		13.2 vs. 5.8	5	1.18 (1.06, 1.31)		0.004			C	D	E	F	G
Thiébaud et al.,2007,BRE80012	Prospective Cohort	USA, Post-menopausal NIH- AARP Diet and Health Study	50 - 71	3529	188736.0	Cancer registry	4.4 years	24h Recall + FFQ	Percent energy from saturated fat, twofold increase in fat intake	%	Invasive breast cancer incidence		20.0 (continuous)	1	1.13 (1.05, 1.22)					C	D	E	F	G

7.1.0.2

Energy from protein

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Velie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		%/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.91 (0.74, 1.13)		.28		B	C	D	E	F	G
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)									

Percent of energy from available carbohydrate

Menopausal status not specified

Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	289	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Percent of energy from total carbohydrates	%	Invasive & In situ breast cancer incidence		5.0 (continuous)	1	1.25 (0.94, 1.66)				B	C	D	E	F	G
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	289	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Percent of energy from carbohydrates from high-GI foods	%	Invasive & In situ breast cancer incidence		5.0 (continuous)	1	1.55 (1.07, 2.26)				B	C	D	E	F	G
Sieri, S. et al.,2007,BRE80142	Prospective Cohort	Italy ORDET study, 1987	34 - 70	289	8926.0	Cancer registry	11.5 years / 0.004	semi-quantitative ffq	Percent of energy from carbohydrates from low-GI foods	%	Invasive & In situ breast cancer incidence		5.0 (continuous)	1	0.86 (0.55, 1.34)				B	C	D	E	F	G

7.1.0.3

Energy from carbohydrates

Pre-menopausal

Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy/day	Breast cancer incidence	Pre-menopausal	59.4 vs. 41.2	5	0.89 (0.63, 1.26)		0.42			C	D	E	F	G
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	422	424644	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy/day	Breast cancer incidence	Pre-menopausal & Lean	Quantile 5 vs. Quantile 1	5	0.62 (0.4, 0.97)		0.02			C	D	E	F	G
Cho, E.,2003,BRE01651	Prospective Cohort	U.S, Multi-ethnic, Registered nurses Nurses' Health study II	26 - 46	291	285780	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy/day	Breast cancer incidence	Pre-menopausal & Overweight	Quantile 5 vs. Quantile 1	5	1.47 (0.84, 2.59)		0.14			C	D	E	F	G

Post-menopausal

Velie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		%/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	0.91 (0.73, 1.12)		0.53		B	C	D	E	F	G
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)									

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G

7.1.0.5

Energy from vegetables

Pre-menopausal

Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	388	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER+ incidence	Pre-menopausal	5.0 (continuous)	1	1.02 (0.88, 1.18)				A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	323	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER+/PR+ incidence	Pre-menopausal	5.0 (continuous)	1	1.06 (0.9, 1.24)				A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	182	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER- incidence	Pre-menopausal	5.0 (continuous)	1	0.92 (0.75, 1.14)				A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	134	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER-/PR- incidence	Pre-menopausal	5.0 (continuous)	1	0.88 (0.69, 1.14)				A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	364	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer PR+ incidence	Pre-menopausal	5.0 (continuous)	1	1.08 (0.93, 1.25)				A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	194	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer PR- incidence	Pre-menopausal	5.0 (continuous)	1	0.86 (0.7, 1.06)				A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative	vegetable fat	%/day	Invasive breast cancer incidence	Pre-menopausal	19.0 vs. 9.0	5	1.0 (0.78, 1.28)		.56		A	C	D	E	F	G
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	1.01 (0.9, 1.12)				A	C	D	E	F	G

7.1.1

Energy density of diet

Menopausal status not specified

Fraser, G. E.,1997,BRE02940	Prospective Cohort	USA, White, Adventist AHS, 1974	24 -		20341.0	Through social organization (profession, religion)	6.0 years / 610			g/day	Invasive breast cancer incidence		>73.5 vs. <=73.5	2	1.09 (0.81, 1.45)										
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Energy from animal fat

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	1.01 (0.96, 1.06)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	388	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER+ incidence	Pre-menopausal	5.0 (continuous)	1	1.2 (1.07, 1.35)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	323	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER+/PR+ incidence	Pre-menopausal	5.0 (continuous)	1	1.18 (1.04, 1.35)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	182	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER- incidence	Pre-menopausal	5.0 (continuous)	1	1.08 (0.9, 1.28)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	134	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer ER-/PR- incidence	Pre-menopausal	5.0 (continuous)	1	1.04 (0.85, 1.28)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	364	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer PR+ incidence	Pre-menopausal	5.0 (continuous)	1	1.17 (1.03, 1.32)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	194	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Breast cancer PR- incidence	Pre-menopausal	5.0 (continuous)	1	1.11 (0.94, 1.32)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	576	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		%	Invasive breast cancer incidence	Family History BC - No & Pre-menopausal	5.0 (continuous)	1	1.09 (0.98, 1.2)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	138	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		%	Invasive breast cancer incidence	Family History BC - Yes & Pre-menopausal	5.0 (continuous)	1	1.28 (1.04, 1.58)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	422	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		%	Invasive breast cancer incidence	Lean	5.0 (continuous)	1	1.17 (1.04, 1.31)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	291	90655.0	By Mail	8.0 years	FFQ-Semi-quantitative		%	Invasive breast cancer incidence	Overweight	5.0 (continuous)	1	1.06 (0.92, 1.22)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		%/day	Invasive breast cancer incidence	Pre-menopausal	23.0 vs. 12.0	5	1.32 (1.01, 1.71)		.002	A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		% of total energy	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	1.12 (1.03, 1.22)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	0.98 (0.94, 1.02)			A	C	D	E	F	G	
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from animal fat		Breast cancer incidence	Post-menopausal	>11.55 vs. <7.25	4	0.85 (0.44, 1.67)	0.74		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	193	101810	By Mail	6.0 years / 1%	FFQ (nos)			Breast cancer incidence		>1.0 vs. >-1.0	4	1.21 (0.81, 1.81)	0.29		A	B	C	D	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.98 (0.96, 1.01)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.96 (0.93, 1.0)			A	C	D	E	F	G	
Energy from fat																								
<i>Pre-menopausal</i>																								
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	784	437613	By Mail	14.0 years	FFQ-Semi-quantitative		%	Invasive breast cancer incidence	Pre-menopausal	>50 vs. 30.1-35	8	1.03 (0.7, 1.51)	0.77		A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	0.99 (0.93, 1.05)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	0.99 (0.91, 1.07)			A	C	D	E	F	G	
Cho, E.,2003,BRE17370	Prospective Cohort	US, Multi-ethnic, Pre-menopausal NHS II, 1989	25 - 42	714	90655	By Mail	8.0 years	FFQ-Semi-quantitative		%/day	Invasive breast cancer incidence	Pre-menopausal	38.0 vs. 24.0	5	1.25 (0.98, 1.59)	.06		A	C	D	E	F	G	
<i>Post-menopausal</i>																								
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1913	620329	By Mail	14.0 years	FFQ-Semi-quantitative		%	Invasive breast cancer incidence	Post-menopausal	>50 vs. 30.1-35	8	1.01 (0.72, 1.41)	0.06		A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	0.96 (0.93, 1.0)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	0.96 (0.91, 1.02)			A	C	D	E	F	G	
Velie, E.,2000,BRE12851	Prospective Cohort	US, Not specified, Screening Program BCDDP, 1973		996	40022	Through health org. (screening, health insurance)	5.3 years / 4674	FFQ (nos)		%/day	Breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	1.07 (0.86, 1.32)	.51		B	C	D	E	F	G	
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)									
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	76	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from vegetable fat		Breast cancer incidence	Post-menopausal	>10.95 vs. <7.85	4	2.08 (1.05, 4.13)	0.043		A	B	C	D	E	F	G

Menopausal status not specified

Jones, D. Y.,1987,BRE04461	Prospective Cohort	US, Multi-ethnic NHANES I, 1971	25 - 74	86	4912	General population (survey)	10.0 years / 776	24h Recall		%/day	Breast cancer incidence		>42.0 vs. <29.9	4	0.66 (0.33, 1.31)	0.06		A	B	C	D	F		
Byrne, C.,1996,BRE05719	Prospective Cohort	USA, Black and White NHEFS, 1981/82	25 - 74	52	23840	Unspecified	3.9 years / 252	FFQ (nos)		% of total energy	Breast cancer incidence		>36.6 vs. <29.4	4	0.98 (0.5, 2.1)			A						
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	2956	1172027	By Mail	14.0 years	FFQ-Semi-quantitative			Invasive breast cancer incidence		>50 vs. 30.1-35	8	0.96 (0.76, 1.23)	0.03		A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.97 (0.94, 1.0)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.97 (0.93, 1.02)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.96 (0.93, 0.99)			A	C	D	E	F	G	
Holmes, M. D.,1999,BRE04008	Prospective Cohort	US, Multi-ethnic, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		121700.0	By Mail	14.0 years	FFQ-Semi-quantitative		% of total energy/day	Invasive breast cancer incidence		5.0 (continuous)	1	0.95 (0.91, 1.0)			A	C	D	E	F	G	
Gago-Dominguez, M.,2003,BRE17518	Prospective Cohort	China, Asian The Singapore Chinese Health Study, 1993	45 - 74	314	63257.0	Direct contact at home	5.3 years	FFQ (nos)		%/day	Breast cancer incidence		27.4 vs. 23.5	4	0.94 (0.68, 1.31)	0.95		A	B	C	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Wakai K.,2005,BRE24482	Prospective Cohort	japan, Asian, Previous study JACC study, 1988	40 - 79	129	26291.0	General population (survey)	7.6 days	FFQ (nos)	percent of energy from vegetable fat		Breast cancer incidence		>10.92 vs. <7.82	4	1.21 (0.72, 2.02)		0.49	A	B	C	D	E	F	G

7.2

Resting metabolic rate (RMR)

Pre-menopausal

Freni, S. C.,1996,BRE02960	Prospective Cohort	U.S.A., Not specified NHANES I, 1971	25 - 74	70	3793	Unspecified	155.0 months			Kcal/day	Breast cancer incidence	Pre-menopausal	>1750.0 vs. 1397.0 - 1499.9	5	1.8 (0.8, 4.3)		>0.10	A	B	C			F	
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Post-menopausal

Freni, S. C.,1996,BRE02960	Prospective Cohort	U.S.A., Not specified NHANES I, 1971	25 - 74	112	3829	Unspecified	155.0 months			Kcal/day	Breast cancer incidence	Post-menopausal	>1750.0 vs. 1397.0 - 1499.9	5	2.0 (1.0, 4.1)		0.07	A	B	C			F	
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8.1.1

BMI

Pre-menopausal

Tornberg, S. A.,1988,BRE12418	Prospective Cohort	sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years		<50 yrs. of age	Unit	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	0.95 (0.91, 1.0)			A						G
Le Marchand, L.,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		101	444	Area residency lists					Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	0.45 (0.23, 0.86)		0.016		B	D				
Le Marchand, L.,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		39	172	Area residency lists					Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	0.72 (0.24, 2.19)		0.99		B	D				
Vatten, L. J.,1990,BRE12826	Prospective Cohort	Norway Norway National Health Screening Service, 1974	35 - 51	137	185545	Through health org. (screening, health insurance)	11.9 years			Kg/m*m	Breast cancer incidence	Pre-menopausal	>2.68 vs. <2.19	4	0.36 (0.2, 0.65)		0.001		A					
Vatten, L. J.,1992,BRE12828	Prospective Cohort	Norway, Not specified, Screening Program Norway, 1974	26 - 49	164	205935	Through health org. (screening, health insurance)	14.0 years		<=50 yrs.	Kg/m*m	Breast cancer incidence	Pre-menopausal	>28.0 vs. <21.0	4	0.63 (0.48, 0.82)		0.001		A	C				G
De Stavola, B. L.,1993,BRE02122	Prospective Cohort	United Kingdom, Not specified Guernsey G2 and G3		73	4528.0	Through network, paper, tv	15.0 years / 0			Kg/m*m	Breast cancer incidence	Pre-menopausal	>26.5 vs. <21.9	4	1.1 (0.6, 2.1)		1		A					

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Weiderpass, E.,2004,BRE18151	Prospective Cohort	Sweden+Norway, Not specified, Pre-menopausal Assembled cohort (Sweden + Norway)	30 - 49		99717.0	By Mail	8.0 years / 789 women		at cohort enrollment	Kg/m*m	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	0.96 (0.94, 0.99)			A	C	F	G			
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years			Kg/m*m	Breast cancer incidence	Pre-menopausal	>28.8 vs. <21.5	5	0.82 (0.59, 1.14)	0.10		A	B	C	E	F	G	
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years			unit	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	0.98 (0.96, 1.0)			A	B	C	E	F	G	
Tehard, B.,2004,BRE12173	Prospective Cohort	France, Registered teachers E3N-EPIC, 1990	40 - 65	692	283543	Through social organization (profession, religion)	9.7 years			Kg/m*m	Invasive breast cancer incidence	Pre-menopausal	>23.5 vs. <20.2	4	0.78 (0.64, 0.94)			B	C	E	F	G		
Silvera, S. A.,2005,BRE24118	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59	818	327994	Through health org. (screening, health insurance)	16.4 years	FFQ-Semi-quantitative		Kg/m*m	Breast cancer incidence	Pre-menopausal	>30.0 vs. <24.0	4	1.01 (0.74, 1.37)	0.82		A	C	E	F	G		
Kuriyama, S.,2005,BRE22995	Prospective Cohort	Japan Miyagi, 1993	40 -	33	15054.0	General population (survey)	9.0 years	Questionnaire (nos)		Kg/m*m	Breast cancer incidence	Pre-menopausal	27.5-29.9 vs. 18.5-24.9	3	0.84 (0.24, 2.88)	0.7		A	C	E	G			
Silvera, S. A. N.,2005,BRE24118	Prospective Cohort	Canada NBSS, 1980	40 - 59	818	827994	Through health org. (screening, health insurance)	16.4 years	FFQ (nos)		Kg/m*m	Breast cancer incidence	Pre-menopausal	>30 vs. <25	3	1.01 (0.74, 1.37)	0.82		A	C	E	F	G		
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42		116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence	age < 40 yrs	5.0 (continuous)	1	0.94 (0.84, 1.06)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42		116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence	age >= 40 yrs	5.0 (continuous)	1	0.91 (0.85, 0.97)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42		116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence	current OC users	5.0 (continuous)	1	0.99 (0.79, 1.21)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42		116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence	menstrual cycle < 32 d	5.0 (continuous)	1	0.95 (0.89, 1.01)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42		116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence	menstrual cycle >= 32 d	5.0 (continuous)	1	0.84 (0.75, 0.95)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42		116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence	never OC users	5.0 (continuous)	1	0.84 (0.73, 0.98)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1398	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	Kg/m*m	Breast cancer incidence		>=30 vs. 20-22.4	6	0.78 (0.66, 0.93)		0.001	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1398	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	Kg/m*m	Breast cancer incidence		27.5-29.9 vs. 20-22.4	6	0.97 (0.79, 1.19)		0.002	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1398	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	Kg/m*m	Breast cancer incidence		>=30 vs. 20-22.4	7	0.81 (0.68, 0.97)		0.003	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1398	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence		5.0 (continuous)	1	0.9 (0.85, 0.96)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1398	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence		5.0 (continuous)	1	0.92 (0.87, 0.97)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1398	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence		5.0 (continuous)	1	0.92 (0.86, 0.97)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42		116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer incidence	past OC users	5.0 (continuous)	1	0.93 (0.87, 0.99)			A	C	D	E	F	G	
Lukanova A.,2006,BRE80100	Prospective Cohort	Sweden, White Northern Sweden Health and Disease Cohort, 1985	29 - 61	92	74207.0	medical records	8.2 years / 0.03		BMI, baseline BMI		Breast cancer incidence	Pre-menopausal	>26.0 vs. 18.5 - 21.5	4	0.58 (0.29, 1.11)		0.04	A					G	
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	212	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI		Breast cancer incidence	Pre-menopausal	>24.4 vs. <20.6	4	0.61 (0.42, 0.89)		<=0.05	A	B	C		E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	212	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI, WHO criteria		Breast cancer incidence	Pre-menopausal	>30.0 vs. 18.5 - 24.9	4	0.26 (0.06, 1.0)		<=0.05	A	B	C		E	F	G
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	669	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	Kg/m*m	Breast cancer ER+ incidence		>=30 vs. 20-22.4	6	0.76 (0.59, 0.97)		0.02	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	669	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer ER+ incidence		5.0 (continuous)	1	0.91 (0.84, 0.99)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	285	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	Kg/m*m	Breast cancer ER- incidence		>=30.0 vs. 20-22.4	6	1.1 (0.76, 1.58)		0.52	A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	285	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer ER- incidence		5.0 (continuous)	1	1.03 (0.91, 1.15)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	636	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	Kg/m*m	Breast cancer PR+ incidence		>=30 vs. 20-22.4	6	0.81 (0.63, 1.05)	0.12		A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	636	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer PR+ incidence		5.0 (continuous)	1	0.94 (0.86, 1.02)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	300	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	units	Breast cancer PR- incidence		5.0 (continuous)	1	0.98 (0.86, 1.1)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	300	116609.0	Self report verified by medical record	14.0 years	FFQ	Current BMI, using weight reported preceding cancer diagnosis	Kg/m*m	Breast cancer PR- incidence		>=30 vs. 20-22.4	6	1.01 (0.71, 1.45)	0.87		A	C	D	E	F	G	
Lundqvist et al.,2007,BRE80002	Prospective Cohort	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	5	36490.0	Cancer registry	25.2 years		Baseline BMI, cohort analysis, Swedish and Finnish twin registries	Kg/m*m	Breast cancer incidence	Pre-menopausal	>=30.0 vs. 18.5-<25.0	4	0.5 (0.2, 1.2)			A	B				G	
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	5	36490.0				Baseline BMI, co-twin control analysis, Finland & Sweden	Kg/m*m	Breast cancer incidence	Pre-menopausal	>=30 vs. 18.5- <25	4	0.8 (0.2, 2.5)				B	C			G	
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	495	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Current BMI		Breast cancer incidence	Pre-menopausal	>=35 vs. <25	4	0.87 (0.62, 1.21)			A	B	C	D	F	G	
Reeves, G.K. et al.,2007,BRE80146	Prospective Cohort	United Kingdom The Million Women Study, 1996	50 - 64	1179	1222630.0	National Health Records	5.4 years		BMI		Breast cancer incidence	Pre-menopausal	>30.0 vs. 22.5 - 24.9	5	0.79 (0.68, 0.92)			A	B	C		E	G	
Reeves, G.K. et al.,2007,BRE80146	Prospective Cohort	United Kingdom The Million Women Study, 1996	50 - 64	83	1222630.0	National Health Records	5.4 years		BMI		Breast cancer cancer death	Pre-menopausal	>30.0 vs. 22.5 - 24.9	5	0.64 (0.34, 1.21)			A	B	C		E	G	
Reeves, G.K. et al.,2007,BRE80146	Prospective Cohort	United Kingdom The Million Women Study, 1996	50 - 64	636	1222630.0	National Health Records	5.4 years		BMI	units	Breast cancer incidence	Pre-menopausal never smokers	10.0 (continuous)	1	0.84 (0.68, 1.04)			A	B	C		E	G	
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	201	53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer incidence	premenopausal women	30+ vs. <19	7	1.35 (0.53, 3.47)	0.19		A	C	D	E			
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	436	436				Baseline BMI, co-twin control analyses for dizygotic twins, Finland & Sweden	Kg/m*m	Breast cancer incidence	younger (mean age 31/29 yrs), Dizygotic	>=30 vs. 18.5-24	4	0.5 (0.2, 1.4)				B	C			G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments								
																		A	B	C	D	E	F	G		
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	227	227				Baseline BMI, co-twin control analyses for monozygotic twins, Finland & Sweden	Kg/m*m	Breast cancer incidence	younger (mean age 31/29 yrs), Monozygotic	>=30 vs. 18.5-24	4	0.9 (0.2, 5.9)					B	C					G
Lundqvist et al.,2007,BRE80002	Prospective Cohort	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	881	42447	Cancer registry	25.2 years		Baseline BMI, cohort analysis, Swedish and Finnish twin registries	Kg/m*m	Breast cancer incidence	younger subjects	>=30.0 vs. 18.5-<25.0	4	0.8 (0.4, 1.3)				A	B						G
Lundqvist et al.,2007,BRE80002	Prospective Cohort	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	881	42447	Cancer registry	25.2 years		Baseline BMI, cohort analysis, Swedish and Finnish twin registries	Kg/m*m	Breast cancer incidence	younger subjects	1.0 (continuous)	1	0.99 (0.96, 1.01)	0.33			A	B						G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	667	667				Baseline BMI, co-twin control analysis, Finland & Sweden	Kg/m*m	Breast cancer incidence	younger subjects	>=30 vs. 18.5-<25	4	0.6 (0.3, 1.5)					B	C					G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	667	667				Baseline BMI, co-twin analysis, Finland & Sweden	Kg/m*m	Breast cancer incidence	younger subjects	1.0 (continuous)	1	0.95 (0.9, 1.0)	0.05				B	C					G
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	62	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer ER+ incidence	premenopausal women	1.0 (continuous)	1	1.04 (0.98, 1.11)				A		C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	41	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer ER- incidence	premenopausal women	1.0 (continuous)	1	1.02 (0.93, 1.13)				A		C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	53	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer PR+ incidence	premenopausal women	1.0 (continuous)	1	1.06 (0.99, 1.13)				A		C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	42	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer PR- incidence	premenopausal women	1.0 (continuous)	1	0.99 (0.89, 1.1)				A		C	D	E			
Reinier et al.,2007,BRE80038	Prospective Cohort	USA Vermont Mammography Cohort, 1996		104	61844.0	screening examinations	3.1 years		BMI	Kg/m*m	In situ breast cancer incidence	premenopausal women	30 vs. <22	5	1.0 (0.5, 1.9)				A		C			F	G	
Reinier et al.,2007,BRE80038	Prospective Cohort	USA Vermont Mammography Cohort, 1996		231	61844.0	screening examinations	3.1 years		BMI	Kg/m*m	Invasive breast cancer incidence	premenopausal women	30 vs. <22	5	0.9 (0.6, 1.3)				A		C			F	G	

Post-menopausal

Tornberg, S. A.,1988,BRE12418	Prospective Cohort	sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years		>=50 yrs. of age	Unit	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.02 (1.0, 1.04)				A								G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	315	85917.0	Through network, paper, tv	34.8 months / 0.037		at baseline	Kg/m*m	Breast cancer incidence	HRT - No	>31.11 vs. <22.6	5	2.52 (1.62, 3.93)		0.001	A	B	C	E	F	G		
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	704	85917.0	Through network, paper, tv	34.8 months / 0.037		at baseline	Kg/m*m	Breast cancer incidence	HRT - Yes	>31.11 vs. <22.6	5	0.96 (0.73, 1.27)		0.75	A	B	C	E	F	G		
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years				Breast cancer incidence	Post-menopausal		1	null (null, null)										
Wirfalt, E.,2002,BRE13504	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	237	673	By Mail	8.0 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)										
Petrelli, Jennifer, M.,2002,BRE20653	Prospective Cohort	U.S.A. CPS-II US cohort, 1982-1998	30 - (56)	2852	5589552	Direct contact at home	14.0 years / 15298			Kg/m*m	Breast cancer cancer death	Post-menopausal	>=40 vs. 18.5-20.49	12	3.08 (2.09, 4.51)		<0.001	A	B	C	D	E	F	G	
Petrelli, Jennifer, M.,2002,BRE20653	Prospective Cohort	U.S.A. CPS-II US cohort, 1982-1998	30 - (56)	2852	5589551	Direct contact at home	14.0 years / 15298		who categories	Kg/m*m	Breast cancer cancer death	Post-menopausal	>=30 vs. <25	3	1.6 (1.42, 1.79)		<0.001	A	B	C	D	E	F	G	
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	1043	37105.0	By Mail	13.0 years			Kg/m*m	Breast cancer ER+ incidence	Post-menopausal	>30.7 vs. <22.89	5	2.0 (1.58, 2.53)				B	C	D	E	F	G	
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	232	37105.0	By Mail	13.0 years			Kg/m*m	Breast cancer ER- incidence	Post-menopausal	>30.7 vs. <22.89	5	1.38 (0.78, 2.43)				B	C	D	E	F	G	
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	993	37105.0	By Mail	13.0 years			Kg/m*m	Breast cancer PR+ incidence	Family History BC - No & Post-menopausal	>30.7 vs. <22.89	5	2.24 (1.72, 2.91)				B	C	D	E	F	G	
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	362	37105.0	By Mail	13.0 years			Kg/m*m	Breast cancer PR- incidence	Post-menopausal	>30.7 vs. <22.89	5	0.96 (0.62, 1.49)				B	C	D	E	F	G	
Rissanen, H.,2003,BRE17954	Nested Case Control	Finland, Not specified Mobile Clinic Health Examination Survey, 1973	18 - 89		8196.0	Through network, paper, tv	10.0 years				Breast cancer incidence	Post-menopausal		1	null (null, null)										
Calle, E. E.,2003,BRE01340	Prospective Cohort	USA, Not specified, Post-menopausal CPS-II US cohort, 1982-1998	30 - (57)	2755	495477.0	Through health org. (screening, health insurance)	16.0 years			Kg/m*m	Breast cancer cancer death	Post-menopausal	>=40 vs. 18.5-24.9	5	2.12 (1.41, 3.19)		0.001	A	B			E	F	G	
Patel, A.V.,2003,BRE16299	Prospective Cohort	usa, Post-menopausal CPS-II US cohort, 1982-1998	(63)	780	72608.0	Unspecified	5.0 years			MET-hour/week	Breast cancer incidence	Post-menopausal & Lean	>31.5 vs. 0-7	5	0.75 (0.55, 1.03)				A	B	C	D	E	F	G

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																		A	B	C	D	E	F	G
Patel, A.V.,2003,BRE16299	Prospective Cohort	usa, Post-menopausal CPS-II US cohort, 1982-1998	(63)	453	72608.0	Unspecified	5.0 years			MET-hour/week	Breast cancer incidence	Post-menopausal & Overweight	>31.5 vs. 0-7	5	0.9 (0.57, 1.4)			A	B	C	D	E	F	G
Lahmann, Petra, H.,2003,BRE20119	Prospective Cohort	Sweden, White, Post-menopausal Malmo Diet and Cancer, 1991	50 - 73	236	12159.0	By Mail	5.7 years			Kg/m*m	Invasive & In situ breast cancer incidence		>28.6 vs. <21.9	5	1.54 (1.01, 2.35)	0.023		A	C	D	E	F	G	
Feigelson, H. S.,2004,BRE02721	Prospective Cohort	usa, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1182	62756.0	By Mail	9.0 years / 0.9		post-menopausal	Kg/m*m	Breast cancer incidence	HRT - No	>=35 vs. <22	6	1.61 (1.22, 2.18)	0.0001		A	B	C	D	E	F	G
Feigelson, H. S.,2004,BRE02721	Prospective Cohort	usa, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	752	62756.0	By Mail	9.0 years / 0.9		post-menopausal	Kg/m*m	Breast cancer incidence	HRT - Yes	>=35 vs. <22	6	1.09 (0.7, 1.69)	0.12		A	B	C	D	E	F	G
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years			Kg/m*m	Breast cancer incidence	HRT - Yes	>28.8 vs. <21.5	5	0.71 (0.5, 1.01)	0.073		A	B	C	E	G		
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years			Kg/m*m	Breast cancer incidence	HRT - Yes	>30 vs. <25	3	0.66 (0.45, 0.98)	0.064		A	B	C	E	G		
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years			unit	Breast cancer incidence	HRT - Yes	1.0 (continuous)	1	0.99 (0.96, 1.01)			A	B	C	E	G		
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)									
Tehard, B.,2004,BRE12173	Prospective Cohort	France, Registered teachers E3N-EPIC, 1990	40 - 65	680	217093	Through social organization (profession, religion)	9.7 years				Invasive breast cancer incidence	HRT - Yes	Quantile null vs. Quantile null	4	null (null, null)				B	C	E	F	G	
Tehard, B.,2004,BRE12173	Prospective Cohort	France, Registered teachers E3N-EPIC, 1990	40 - 65	1311	455107	Through social organization (profession, religion)	9.7 years			Kg/m*m	Invasive breast cancer incidence	Post-menopausal	quartile 4-b vs. quartile 1	5	1.15 (1.0, 1.34)				B	C	E	F	G	
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			BMI, WHO categories		Invasive breast cancer incidence	Post-menopausal	>30.0 vs. <24.0	3	1.4 (1.0, 1.9)			A	B			F	G	
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			BMI	Kg/m*m	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	1.14 (1.02, 1.27)	0.02		A	B			F	G	
Silvera, S. A.,2005,BRE24118	Prospective Cohort	Canada, Not specified Canadian National Breast Screening Study	40 - 59	662	2244616	Through health org. (screening, health insurance)	16.4 years	FFQ-Semi-quantitative		Kg/m*m	Breast cancer incidence	Post-menopausal	>30.0 vs. <24.0	4	1.26 (0.95, 1.67)	0.08		A	C	E	F	G		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Kuriyama, S.,2005,BRE22995	Prospective Cohort	Japan Miyagi, 1993	40 -	65	15054.0	General population (survey)	9.0 years	Questionnaire (nos)		Kg/m*m	Breast cancer incidence	Post-menopausal	>30 vs. 18.5-24.9	4	2.67 (1.03, 6.92)		0.01	A	C	E	G			
Silvera, S. A. N.,2005,BRE24118	Prospective Cohort	Canada NBSS, 1980	40 - 59	662	2244616	Through health org. (screening, health insurance)	16.4 years	FFQ (nos)		Kg/m*m	Breast cancer incidence	Post-menopausal	>30 vs. <25	3	1.26 (0.95, 1.67)		0.08	A	C	E	F	G		
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	FFQ	BMI	Kg/m*m	Breast cancer incidence	HRT ever	30 vs. 18.5- <25	4	0.94 (0.67, 1.31)			A	B	C	E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	FFQ	BMI	Kg/m*m	Breast cancer incidence	HRT ever	4.0 (continuous)	1	0.98 (0.89, 1.09)		0.74	A	B	C	E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	FFQ	BMI	Kg/m*m	Breast cancer incidence	HRT never	>=30 vs. 18.5 - <25	4	1.17 (0.79, 1.73)			A	B	C	E	G		
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	FFQ	BMI	Kg/m*m	Breast cancer incidence	HRT never	4.0 (continuous)	1	1.06 (0.95, 1.19)		0.28	A	B	C	E	G		
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	271	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI		Breast cancer incidence	Post-menop & HRT nonusers	>25.1 vs. <19.9	4	1.07 (0.8, 1.43)		>0.05	A	B	C	E	F	G	
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	271	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI, WHO criteria		Breast cancer incidence	Post-menop & HRT nonusers	>30.0 vs. 18.5 - 24.9	4	1.4 (0.91, 2.17)		>0.05	A	B	C	E	F	G	
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	472	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI		Breast cancer incidence	Post-menop & HRT users	>25.0 vs. <19.9	4	1.16 (0.9, 1.49)		>0.05	A	B	C	E	F	G	
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	472	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI, WHO criteria		Breast cancer incidence	Post-menop & HRT users	>30.0 vs. 18.5 - 24.9	4	1.45 (0.9, 2.33)		>0.05	A	B	C	E	F	G	
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	147	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI		Breast cancer incidence	Post-menop & transdermal HRT users	>25.1 vs. <19.9	4	1.16 (0.71, 1.78)		>0.05	A	B	C	E	F	G	
Lukanova A.,2006,BRE80100	Prospective Cohort	Sweden, White Northern Sweden Health and Disease Cohort, 1985	29 - 61	422	74207.0	medical records	8.2 years / 0.03		BMI, baseline BMI		Breast cancer incidence	Post-menopausal	>27.9 vs. 18.5 - 22.7	4	1.04 (0.8, 1.36)		0.83	A					G	
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1037	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI		Breast cancer incidence	Post-menopausal	>25.1 vs. <19.9	4	1.21 (0.96, 1.52)		>0.05	A	B	C	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1037	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	BMI, WHO criteria		Breast cancer incidence	Post-menopausal	>30.0 vs. 18.5 - 24.9	4	1.44 (1.04, 1.99)		>0.05	A	B	C	E	F	G	
Chang S.C.,2006,BRE80110	Prospective Cohort	United States, participants of a RCT PLCO Cancer Screening Trial cohort, 1993	55 - 74	764	38660.0	Cancer screening programme	9.3 years	FFQ (nos)	BMI		Breast cancer incidence	Post-menopausal	>=30.0 vs. <=22.4	5	1.35 (1.06, 1.7)		0.014		B	C	D	F	G	
Ravn-Haren, G. et al.,2006,BRE80151	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	377	377	Cancer registry		FFQ	BMI	Kg/m²	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.02 (0.99, 1.06)				B	C	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	609	90303.0	Cancer registry			BMI		Breast cancer ER+/PR+ incidence	Family History BC - No	Obese vs. Underweight /normal	3	1.82 (1.45, 2.29)		<0.001	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	107	90303.0	Cancer registry			BMI		Breast cancer ER+/PR+ incidence	Family History BC - Yes	Obese vs. Underweight /normal	3	0.87 (0.43, 1.78)		0.88	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	299	90303.0	Cancer registry			BMI		Breast cancer ER+/PR+ incidence	Post-menop & HRT nonusers	Obese vs. Underweight /normal	3	1.9 (1.38, 2.61)		<0.001	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	243	90303.0	Cancer registry			BMI		Breast cancer ER+/PR+ incidence	Post-menop & HRT users	Obese vs. Underweight /normal	3	1.18 (0.78, 1.81)		0.32	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	716	90303.0	Cancer registry			BMI		Breast cancer ER+/PR+ incidence	Post-menopausal	Obese vs. Normal weight	4	1.67 (1.34, 2.07)		<0.001	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	250	90303.0	Cancer registry			BMI		Breast cancer ER+/PR- incidence	Family History BC - No	Obese vs. Underweight /normal	3	0.8 (0.51, 1.25)		0.16	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	29	90303.0	Cancer registry			BMI		Breast cancer ER+/PR- incidence	Family History BC - Yes	Obese vs. Underweight /normal	3	0.26 (0.03, 1.95)		0.14	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	102	90303.0	Cancer registry			BMI		Breast cancer ER+/PR- incidence	Post-menop & HRT nonusers	Obese vs. Underweight /normal	3	0.92 (0.5, 1.69)		0.61	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	123	90303.0	Cancer registry			BMI		Breast cancer ER+/PR- incidence	Post-menop & HRT users	Obese vs. Underweight /normal	3	0.59 (0.27, 1.29)		0.14	A	B	C	D	E	F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	279	90303.0	Cancer registry			BMI		Breast cancer ER+/PR- incidence	Post-menopausal	Obese vs. Normal weight	4	0.76 (0.49, 1.17)		.096	A	B	C	D	E	F	G

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																		A	B	C	D	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	122	90303.0	Cancer registry			BMI		Breast cancer ER-/PR- incidence	Family History BC - No	Obese vs. Underweight /normal	3	0.33 (0.13, 0.82)		0.04	A	B	C	D	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	21	90303.0	Cancer registry			BMI		Breast cancer ER-/PR- incidence	Family History BC - Yes	Obese vs. Underweight /normal	3	1.87 (0.55, 6.32)		0.42	A	B	C	D	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	66	90303.0	Cancer registry			BMI		Breast cancer ER-/PR- incidence	Post-menop & HRT nonusers	Obese vs. Underweight /normal	3	0.43 (0.15, 1.23)		0.15	A	B	C	D	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	34	90303.0	Cancer registry			BMI		Breast cancer ER-/PR- incidence	Post-menop & HRT users	Obese vs. Underweight /normal	3	0.84 (0.24, 2.87)		0.77	A	B	C	D	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	143	90303.0	Cancer registry			BMI		Breast cancer ER-/PR- incidence	Post-menopausal	Obese vs. Normal weight	4	0.52 (0.26, 1.04)		0.099	A	B	C	D	E	F	G	
Rinaldi S.,2006,BRE80101	Nested Case Control	The Netherlands, UK, Germany, Spain, Italy, Greece, France, Post-menopausal		613	1139	Population cancer registries and other			BMI	Kg/m ² m	Invasive & In situ breast cancer incidence	Post-menopausal	5.0 (continuous)	1	1.11 (0.99, 1.25)					C					
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)		9704.0	Self report verified by medical record	11.3 years / 0.23	FFQ	BMI		Invasive breast cancer incidence	age >=70 years	>29.0 vs. <23.0	4	1.33 (0.9, 1.98)				A	B	C	D		F	G
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	1109	90303.0	Cancer registry			BMI		Invasive breast cancer incidence	Family History BC - No	Obese vs. Underweight /normal	3	1.33 (1.11, 1.6)		0.002	A	B	C	D	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	175	90303.0	Cancer registry			BMI		Invasive breast cancer incidence	Family History BC - Yes	Obese vs. Underweight /normal	3	0.88 (0.51, 1.51)		0.87	A	B	C	D	E	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	528	90303.0	Cancer registry			BMI		Invasive breast cancer incidence	Post-menop & HRT nonusers	Obese vs. Underweight /normal	3	1.38 (1.07, 1.77)		0.009	A	B	C	D	E	F	G	
Modugno, F. et al.,2006,BRE80137	Nested Case Control	United States, Multi-ethnic, Post menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	94	94	Self report verified by medical record	7.0 years	FFQ	BMI		Invasive breast cancer incidence	Post-menop & HRT nonusers	Quantile 3 vs. Quantile 1	3	3.27 (1.4, 8.4)		0.006	A	B			E		G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	446	90303.0	Cancer registry			BMI		Invasive breast cancer incidence	Post-menop & HRT users	Obese vs. Underweight /normal	3	1.04 (0.75, 1.45)		0.55	A	B	C	D	E	F	G	
Modugno, F. et al.,2006,BRE80137	Nested Case Control	United States, Multi-ethnic, Post menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	96	96	Self report verified by medical record	7.0 years	FFQ	BMI		Invasive breast cancer incidence	Post-menop & HRT users	Quantile 3 vs. Quantile 1	3	1.47 (0.67, 3.22)		0.36	A		C					G

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																		A	B	C	D	E	F	G
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)	350	9704.0	Self report verified by medical record	11.3 years / 0.23	FFQ	BMI		Invasive breast cancer incidence	Post-menopausal	>29.0 vs. <23.0	4	1.29 (0.92, 1.81)			A	B	C	D	F	G	
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)	350	9704.0	Self report verified by medical record	11.3 years / 0.23	FFQ	BMI, clinical cutpoints		Invasive breast cancer incidence	Post-menopausal	obese vs. non-overweight	3	1.55 (1.13, 2.13)			A	B	C	D	F	G	
Suzuki, R.,2006,BRE80116	Prospective Cohort	Sweden, Post-menopausal The Swedish Mammography Cohort, 1987	- 70 (60)	1284	90303.0	Cancer registry			BMI		Invasive breast cancer incidence	Post-menopausal	Obese vs. Normal weight	4	1.28 (1.07, 1.52)	0.0046		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	1162	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer incidence	Current MHT users	>=40.0 vs. 18.5-22.4	8	1.1 (0.64, 1.88)	0.22		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	420	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer incidence	MHT nonusers & age at menarche	>=35.0 vs. <25.0	4	1.52 (1.07, 2.15)	<0.001		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	382	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer incidence	MHT nonusers & age at menarche	>=35.0 vs. <25.0	4	1.97 (1.33, 2.91)	<0.001		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	57	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer incidence	MHT nonusers & age at menarche	>=35.0 vs. <25.0	4	1.43 (0.57, 3.58)	0.83		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	75	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer incidence	MHT nonusers & age at menarche	>=35.0 vs. <25.0	4	3.25 (1.44, 7.36)	<0.001		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer incidence	non MHT users	>=40.0 vs. 18.5-22.4	8	2.08 (1.44, 2.99)	<0.001		A	B	C	D	E	F	G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	172	172				Baseline BMI, co-twin control analyses for monozygotic twins, Finland & Sweden	Kg/m*m	Breast cancer incidence	older (mean age :57/58 yrs), Monozygotic	>=30 vs. 18.5-<25	4	1.7 (0.5, 5.1)				B	C				G
Lundqvist et al.,2007,BRE80002	Prospective Cohort	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	756	24065	Cancer registry	25.2 years		Baseline BMI, cohort analysis, Swedish and Finnish twin registries	Kg/m*m	Breast cancer incidence	older subjects	>=30 vs. 18.5 -<25	4	1.3 (1.0, 1.7)			A	B					G
Lundqvist et al.,2007,BRE80002	Prospective Cohort	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	756	24065	Cancer registry	25.2 years		Baseline BMI, cohort analysis, Swedish and Finnish twin registries	Kg/m*m	Breast cancer incidence	older subjects	1.0 (continuous)	1	1.03 (1.01, 1.05)	0.007		A	B	C				G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	503	503				Baseline BMI, co-twin control analysis, Finland & Sweden	Kg/m*m	Breast cancer incidence	older subjects	>=30 vs. 18.5- <25	4	2.5 (1.3, 4.5)				B	C				G

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																		A	B	C	D	E	F	G			
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	503	503				Baseline BMI, co-twin analysis, Finland & Sweden	Kg/m*m	Breast cancer incidence	older subjects	1.0 (continuous)	1	1.09 (1.04, 1.15)						B	C					G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	320	320				Baseline BMI, co-twin control analyses for dizygotic twins, Finland & Sweden	Kg/m*m	Breast cancer incidence	older(mean age :57/58 yrs), Dizygotic	>=30 vs. 18.5-24	4	2.7 (1.2, 5.7)							B	C				G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	165	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Current BMI		Breast cancer incidence	Post-menop & HRT nonusers	>=35 vs. <25	4	1.12 (0.66, 1.9)						A	B	C	D		F	G
Reeves, G.K. et al.,2007,BRE80146	Prospective Cohort	United Kingdom The Million Women Study, 1996	50 - 64	5629	1222630.0	National Health Records	5.4 years		BMI		Breast cancer incidence	Post-menop & HRT nonusers	>30.0 vs. 22.5 - 24.9	5	1.29 (1.22, 1.36)						A	B	C		E		G
Reeves, G.K. et al.,2007,BRE80146	Prospective Cohort	United Kingdom The Million Women Study, 1996	50 - 64	637	1222630.0	National Health Records	5.4 years		BMI		Breast cancer cancer death	Post-menop & HRT nonusers	>30.0 vs. 22.5 - 24.9	5	1.49 (1.27, 1.75)						A	B	C		E		G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	454	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Current BMI		Breast cancer incidence	Post-menopausal	>=35 vs. <25	4	0.99 (0.72, 1.36)						A	B	C	D		F	G
Vogel, U. et al.,2007,BRE80150	Nested Case Control	Denmark, Post menopausal Diet, Cancer and Health, 1993	50 - 64	361	361	Cancer registry		FFQ	BMI	Kg/m*m	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.01 (0.97, 1.05)							B	C		E	F	G
Reeves, G.K. et al.,2007,BRE80146	Prospective Cohort	United Kingdom The Million Women Study, 1996	50 - 64	2855	1222630.0	National Health Records	5.4 years		BMI	units	Breast cancer incidence	Postmenopausal never smokers	10.0 (continuous)	1	1.41 (1.28, 1.55)						A	B	C		E		G
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	229	53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer incidence	postmenopausal women	30+ vs. <19	7	2.28 (0.94, 5.53)			0.08			A		C	D	E		
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	65	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer ER+ incidence	postmenopausal women	1.0 (continuous)	1	1.08 (1.01, 1.15)						A		C	D	E		
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	201	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer ER+/PR+ incidence	non MHT users	>=35.0 vs. <25.0	4	2.69 (1.62, 4.46)			<0.001			A	B	C	D	E	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	84	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Current BMI		Breast cancer ER+/PR+ incidence	Post-menopausal	>=30 vs. <25	3	1.66 (0.86, 3.21)						A	B	C	D		F	G
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69		53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer ER+/PR+ incidence	postmenopausal women	1.0 (continuous)	1	1.1 (1.01, 1.18)						A		C	D	E		

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																		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	44	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer ER+/PR- incidence	non MHT users	>=35.0 vs. <25.0	4	0.75 (0.2, 2.75)		0.39	A	B	C	D	E	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	36	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Current BMI		Breast cancer ER+/PR- or ER-/PR+ incidence	Post-menopausal	>=30 vs. <25	3	0.39 (0.14, 1.07)			A	B	C	D		F	G
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	41	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer ER- incidence	postmenopausal women	1.0 (continuous)	1	0.95 (0.84, 1.06)			A		C	D	E		
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	53	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer ER-/PR- incidence	non MHT users	>=35.0 vs. <25.0	4	0.33 (0.09, 1.19)		0.06	A	B	C	D	E	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	52	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Current BMI		Breast cancer ER-/PR- incidence	Post-menopausal	>=30 vs. <25	3	0.88 (0.39, 1.97)			A	B	C	D		F	G
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69		53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer ER-/PR- incidence	postmenopausal women	1.0 (continuous)	1	0.98 (0.87, 1.1)			A		C	D	E		
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	46	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer PR+ incidence	postmenopausal women	1.0 (continuous)	1	1.07 (0.98, 1.16)			A		C	D	E		
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	55	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	BMI	Kg/m*m	Breast cancer PR- incidence	postmenopausal women	1.0 (continuous)	1	1.01 (0.93, 1.1)			A		C	D	E		
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	189	99039.0	Cancer registry	4.0 4 years		Current BMI		Breast cancer Unknown ER/PR status incidence	non MHT users	>=35.0 vs. <25.0	4	2.08 (1.25, 3.45)		0.003	A	B	C	D	E	F	G
Reinier et al.,2007,BRE80038	Prospective Cohort	USA Vermont Mammography Cohort, 1996		176	61844.0	screening examinations	3.1 years		BMI	Kg/m*m	In situ breast cancer incidence	postmenopausal women	30 vs. <22	5	0.8 (0.5, 1.4)			A		C			F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	700	99039.0	Cancer registry	4.0 4 years		Current BMI		In situ or localised breast cancer incidence	non MHT users	>=35.0 vs. <25.0	4	1.44 (1.09, 1.91)		0.002	A	B	C	D	E	F	G
Gallicchio et al.,2007,BRE80006	Prospective Cohort	America, Caucasian, Post-menopausal BBD cohort-CLUE II, 1989	(59)	14	276	CLUE II cohort/pathology report/self-reported	14.0 years		BMI		Invasive & In situ breast cancer incidence	LEPR Gln233Arg AA	>=25 vs. <25	2	1.0 (0.34, 2.94)			A						
Gallicchio et al.,2007,BRE80006	Prospective Cohort	America, Caucasian, Post-menopausal BBD cohort-CLUE II, 1989	(59)	39	594	CLUE II cohort/pathology report/self-reported	14.0 years		BMI		Invasive & In situ breast cancer incidence	LEPR Gln233Arg AG/GG	>=25 vs. <25	2	1.73 (0.88, 3.39)			A						

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																		A	B	C	D	E	F	G			
Ericson, U. et al.,2007,BRE0128	Prospective Cohort	Sweden, Post menopausal Malmö Diet and Cancer, 1991	50 -	392	11677	Cancer registry	9.5 years	Dietary History questionnaire	BMI		Invasive breast cancer incidence	Post-menopausal	>30 vs. <=25	3	1.19 (0.89, 1.59)		0.41	A									
Reinier et al.,2007,BRE80038	Prospective Cohort	USA Vermont Mammography Cohort, 1996		572	61844.0	screening examinations	3.1 years		BMI	Kg/m*m	Invasive breast cancer incidence	postmenopausal women	30 vs. <22	5	1.9 (1.4, 2.5)			A		C					F	G	
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	248	99039.0	Cancer registry	4.0 4 years		Current BMI		Regional or distant metastases incidence	non MHT users	>=35.0 vs. <25.0	4	3.05 (1.97, 4.71)		<0.001	A	B	C	D	E	F	G			

Menopausal status not specified

Tornberg, S. A.,1988,BRE12418	Prospective Cohort	Sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years			Unit	Breast cancer incidence		1.0 (continuous)	1	1.01 (0.99, 1.03)			A											G
Schatzkin, A.,1989,BRE18013	Prospective Cohort	U.S.A., Not specified Framingham Study, 1948	31 - 64	143	2636.0	General population (survey)	26.0 years / 86.2	Interview (nos)		Kg/m*m	Breast cancer incidence		>=28.8 vs. <=21.7	5	0.6 (0.4, 1.1)				A	B	C	D	E	F	G				
Mills, P. K.,1989,BRE17837	Prospective Cohort	USA, White, Adventist California Seventh-day Adventists Cohort, 1976	25 - 99	189	97255	By Mail	6.0 years / 1%	FFQ (nos)		Kg/m*m	Breast cancer incidence		>=25.2 vs. <=21.7	3	1.56 (1.07, 2.27)		0.03	A											
Vatten, L. J.,1990,BRE12833	Prospective Cohort	Norway Norway National Health Screening Service, 1974			14593.0	Through health org. (screening, health insurance)	12.0 years / 152	FFQ + recall	BMI at interview	Kg/m*m	Breast cancer incidence		>24.0 vs. <23.9	2	0.7 (null, null)	0.03		A											
Vatten, L. J.,1990,BRE12826	Prospective Cohort	Norway Norway National Health Screening Service, 1974	35 - 51	236	282181	Through health org. (screening, health insurance)	11.9 years			g/cm*cm	Breast cancer incidence		>2.68 vs. <2.19	4	0.52 (0.34, 0.77)		0.001	A											
Overvad,1991,BRE17893	Case Cohort	Guernsey, Not specified Guernsey, 1967	35 -		5162.0	Multiple procedure	11.0 years				Breast cancer incidence			1	null (null, null)														
Hoyer, A. P.,1992,BRE04086	Prospective Cohort	Denmark, Not specified Glostrup Population Studies, 1982	30 - 80		5207.0	Direct contact at home	26.0 years	Questionnaire (nos)		Kg/m*m	Breast cancer mortality/incidence		>=33 vs. <26	4	2.5 (0.8, 7.2)		0.03												
Vatten, L. J.,1992,BRE12828	Prospective Cohort	Norway, Not specified, Screening Program Norway, 1974	26 - 49	291	366675	Through health org. (screening, health insurance)	14.0 years			Kg/m*m	Breast cancer incidence		>28.0 vs. <21.0	4	0.78 (0.65, 0.94)		0.002	A		C								G	
Van den Brandt, P.A.,1993,BRE16919	Prospective Cohort	the Netherlands, Not specified, Post-menopausal women The Netherlands Cohort	55 - 69	448	5363	By Mail	3.3 years / no lost	FFQ-Semi-quantitative		Kg/m*m	Invasive breast cancer incidence		>=27 vs. <=22	4	0.9 (0.67, 1.2)		0.44	A											

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Silvera, S. A. N.,2005,BRE24118	Prospective Cohort	Canada NBSS, 1980	40 - 59	1671	660113	Through health org. (screening, health insurance)	16.4 years	FFQ (nos)		Kg/m*m	Breast cancer incidence		>30 vs. <25	3	1.14 (0.92, 1.39)		0.34	A	C	E	F	G		
Rapp K.,2005,BRE23858	Prospective Cohort	Austria, Not specified, Screening Program VHM&PP, unknown	35 - 54	1045	7618	Through health org. (screening, health insurance)	9.9 years		at enrollment	Kg/m*m	Breast cancer incidence		>=35 vs. 18.5-24.9	4	1.01 (0.72, 1.42)		0.8	A				G		
Chun, J. et al.,2006,BRE80134	Prospective Cohort	United States, Multi-ethnic, High Risk population Women at Risk Cohort, New York	(47)	62	933	Cancer registry	5.0 years		BMI		Breast cancer incidence		Obese vs. Normal	4	2.22 (1.14, 4.35)	0.02		A				G		
Wu, M. H.,2006,BRE24628	Prospective Cohort	China, Asian, Screening Program Taiwan 1990	(47)	104	11830	Through health org. (screening, health insurance)	10.3 years			Kg/m*m	Breast cancer incidence		>26.3 vs. <21.6	4	1.6 (0.5, 5.1)				C	D				
Lukanova A.,2006,BRE80100	Prospective Cohort	Sweden, White Northern Sweden Health and Disease Cohort, 1985	29 - 61	514	74207.0	medical records	8.2 years / 0.03		BMI, baseline BMI		Breast cancer incidence		>27.1 vs. 18.5 - 22.1	4	0.95 (0.74, 1.23)		0.36	A				G		
Visvanathan et al.,2007,BRE80020	Nested Case Control	America CLUE II - Washington, 1989	(57)	100	100			FFQ + Questionnaire	Baseline BMI		Breast cancer incidence		>=30 vs. <25	3	1.6 (1.04, 2.45)		0.02							

BMI (after menopause)

Menopausal status not specified

Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1281	66145.0	By Mail	19.0 years			Year*(Kg/m*m)	Breast cancer ER+/PR+ incidence	HRT - No	35.0 (continuous)	1	1.17 (1.11, 1.23)			A	C	D	E	F	G
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	318	66145.0	By Mail	19.0 years			Year*(Kg/m*m)	Breast cancer ER-/PR- incidence	HRT - No	35.0 (continuous)	1	1.05 (0.94, 1.17)			A	C	D	E	F	G
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	80	66145.0	By Mail	19.0 years			Year*(Kg/m*m)	Breast cancer ER-/PR+ incidence	HRT - No	35.0 (continuous)	1	1.39 (1.14, 1.7)			A	C	D	E	F	G
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	417	66145.0	By Mail	19.0 years			Year*(Kg/m*m)	Breast cancer ER-/PR- incidence	HRT - No	35.0 (continuous)	1	1.02 (0.91, 1.13)			A	C	D	E	F	G

BMI (long life)

Post-menopausal

Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1281	66145.0	By Mail	19.0 years			Year*(Kg/m*m)	Breast cancer ER+/PR+ incidence	HRT - Yes	35.0 (continuous)	1	0.97 (0.95, 0.99)			A	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1379	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yrs	Kg/m*m	Breast cancer incidence		>=27.5 vs. 20-22.4	6	0.61 (0.42, 0.87)		0.01	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	1379	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yrs	units	Breast cancer incidence		5.0 (continuous)	1	0.83 (0.74, 0.94)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	663	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yr	Kg/m*m	Breast cancer ER+ incidence		>=25 vs. 20-22.4	5	0.76 (0.56, 1.03)		0.07	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	663	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yrs	units	Breast cancer ER+ incidence		5.0 (continuous)	1	0.87 (0.75, 1.0)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	282	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at 18 yrs	Kg/m*m	Breast cancer ER- incidence		>=25 vs. <18	5	0.94 (0.6, 1.49)		0.97	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	282	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yrs	units	Breast cancer ER- incidence		5.0 (continuous)	1	0.93 (0.75, 1.15)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	630	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yrs	Kg/m*m	Breast cancer PR+ incidence		>=25 vs. 20-22.4	5	0.84 (0.62, 1.14)		0.12	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	630	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at 18 yrs	units	Breast cancer PR+ incidence		5.0 (continuous)	1	0.87 (0.75, 1.0)			A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	298	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yrs	Kg/m*m	Breast cancer PR- incidence		>=25 vs. 20-22.4	5	0.76 (0.48, 1.21)		0.55	A	C	D	E	F	G	
Michels et al.,2006,BRE80033	Prospective Cohort	USA, Pre-menopausal NHS II, 1989	25 - 42	298	116609.0	Self report verified by medical record	14.0 years	FFQ	BMI at age 18 yrs	units	Breast cancer PR- incidence		5.0 (continuous)	1	0.9 (0.73, 1.11)			A	C	D	E	F	G	
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	491	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	BMI at age 18 y		Breast cancer incidence	Pre-menopausal	>=25 vs. <20	3	0.68 (0.46, 0.98)			A	B	C	D	F	G	

Post-menopausal

Gapstur, S. M.,1992,BRE03101	Prospective Cohort	U.S.A., Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	493	140680	By Mail	4.0 years	FFQ-Semi-quantitative		Kg/m*m	Breast cancer incidence	Post-menopausal	>24.6 vs. <19.34	5	0.68 (0.48, 0.95)		0.003	A						
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	420	99039.0	Cancer registry	4.0 4 years		BMI at age 18y		Breast cancer incidence	MHT nonusers & age at menarche	>=25.0 vs. 18.5-22.4	4	0.75 (0.52, 1.08)		0.21	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	382	99039.0	Cancer registry	4.0 4 years		BMI at age 18y		Breast cancer incidence	MHT nonusers & age at menarche	>=25.0 vs. 18.5-22.4	4	0.61 (0.38, 0.97)		0.006	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	75	99039.0	Cancer registry	4.0 4 years		BMI at age 18y		Breast cancer incidence	MHT nonusers & age at menarche	>=25.0 vs. 18.5-22.4	4	0.38 (0.11, 1.27)		0.08	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	57	99039.0	Cancer registry	4.0 4 years		BMI at age 18y		Breast cancer incidence	MHT nonusers & age at menarche	>=25.0 vs. 18.5-22.4	4	1.0 (0.46, 2.16)		0.59	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		BMI at age 18y		Breast cancer incidence	non MHT users	>=30.0 vs. 18.5-22.4	6	0.48 (0.27, 0.86)		<0.001	A	B	C	D	E	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	160	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	BMI at age 18 y		Breast cancer incidence	Post-menop & HRT nonusers	>=25 vs. <20	3	0.63 (0.34, 1.16)			A	B	C	D		F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	442	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	BMI at age 18 y		Breast cancer incidence	Post-menopausal	>=25 vs. <20	3	0.53 (0.35, 0.81)			A	B	C	D		F	G

Menopausal status not specified

Zhang, S. M.,2003,BRE13958	Nested Case Control	US, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	43 - 69		32826.0	By Mail	40.0 months	FFQ-Semi-quantitative			Breast cancer incidence			1	null (null, null)										
Cerhan, J. R.,2004,BRE01495	Prospective Cohort	USA, Not specified Minesota, 1944		54	67828	Through health org. (screening, health insurance)	5.0 years / 20 families			Kg/m*m	Breast cancer incidence	Family History BC - No	>21.9 vs. <19.6	3	0.86 (0.43, 1.74)		0.66	A			D			G	
Cerhan, J. R.,2004,BRE01495	Prospective Cohort	USA, Not specified Minesota, 1944		31	12411	Through health org. (screening, health insurance)	5.0 years / 20 families			Kg/m*m	Breast cancer incidence	Family History BC - Yes	>21.9 vs. <19.6	3	1.6 (0.65, 3.91)		0.31	A			D			G	

BMI at 2 yrs

Menopausal status not specified

De Stavola, B. L.,2004,BRE02123	Prospective Cohort	United Kingdom, Not specified Medical Research Council National Survey of Health		50	1705	Other procedure	29.0 years / 0			BMI at age 2 years	SD Units	Breast cancer		1.0 (continuous)	1	0.93 (0.69, 1.25)									
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BMI at 20 yrs

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
van den Brandt, P. A.,1997,BRE12717	Case Cohort	The Netherlands, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69		null	Unspecified	4.3 years / 0		BMI at age 20	Kg/m*m	Invasive breast cancer incidence	Post-menopausal	8.0 (continuous)	1	0.79 (0.58, 1.08)			A	C	E							

BMI at 30 yrs

Menopausal status not specified

Okasha, M.,2001,BRE17887	Prospective Cohort	UK, Not specified, College alumnae Glasgow cohort, 1948	(20)		2528.0	School health records	53.0 years		in young adulthood	Kg/m*m	Breast cancer incidence		1.0 (continuous)	1	1.0 (0.92, 1.08)		.99	A											
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BMI at 4 yrs

Menopausal status not specified

De Stavola, B. L.,2004,BRE02123	Prospective Cohort	United Kingdom, Not specified Medical Research Council National Survey of Health	55		1903	Other procedure	29.0 years / 0		BMI at age 4 years	SD Units	Breast cancer		1.0 (continuous)	1	0.88 (0.67, 1.16)														
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BMI at 7 yrs

Menopausal status not specified

Hilakivi-Clarke, L.,2001,BRE03903	Historical Cohort	Finland, Not specified Helsinki newborn, 1924	177		3447	Other procedure			BMI at age 7		Breast cancer incidence		<=14.3 vs. >16.2	5	1.9 (1.2, 3.1)		0.009												
De Stavola, B. L.,2004,BRE02123	Prospective Cohort	United Kingdom, Not specified Medical Research Council National Survey of Health	52		1853	Other procedure	29.0 years / 0		BMI at age 7 years	SD Units	Breast cancer		1.0 (continuous)	1	0.89 (0.66, 1.19)														

BMI at age 50

Post-menopausal

Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	1162	99039.0	Cancer registry	4.0 4 years		BMI at age 50y		Breast cancer incidence	Current MHT users	>=40 vs. 18.5-22.4	8	0.92 (0.4, 2.1)		0.02	A	B	C	D	E	F	G				
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		BMI at age 50y		Breast cancer incidence	non MHT users	>=40.0 vs. 18.5-22.4	8	2.0 (1.23, 3.26)		<0.001	A	B	C	D	E	F	G				

BMI, at different age

Pre-menopausal

Ahlgren, M.,2004,BRE14201	Historical Cohort	Denmark, Not specified Danish Cohort, 1930	14 - 71		117415.0	School health records	33.0 years		age 14 yrs	Kg/m*m	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	0.96 (0.94, 0.99)														D
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Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	316	85917.0	Through network, paper, tv	34.8 months / 0.037		at age 50	Kg/m*m	Breast cancer incidence	HRT - No	>31.11 vs. <22.6	5	2.07 (1.32, 3.25)		0.001	A	B	C	E	F	G	
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	702	85917.0	Through network, paper, tv	34.8 months / 0.037		at age 50	Kg/m*m	Breast cancer incidence	HRT - Yes	>31.11 vs. <22.6	5	0.9 (0.62, 1.31)		0.34	A	B	C	E	F	G	
Ahlgren, M.,2004,BRE14201	Historical Cohort	Denmark, Not specified Danish Cohort, 1930	14 - 71		117415.0	School health records	33.0 years		age 14 yrs	Kg/m*m	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	0.94 (0.92, 0.97)					D				
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	1162	99039.0	Cancer registry	4.0 4 years		BMI at age 35y		Breast cancer incidence	Current MHT users	>=30.0 vs. 18.5-22.4	6	0.75 (0.47, 1.2)		0.38	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		BMI at age 35y		Breast cancer incidence	non MHT users	>=30.0 vs. 18.5-22.4	6	1.17 (0.82, 1.67)		0.06	A	B	C	D	E	F	G

Menopausal status not specified

Jonsson, F.,2003,BRE04482	Prospective Cohort	Sweden, Not specified, Twins Swedish twin cohort, 1969	44 - 83	421	11598.0	School health records	29.0 years		at age 25	Kg	Breast cancer incidence		>=25 vs. 18.50-24.99	3	0.5 (0.3, 0.8)			A		D				
Jonsson, F.,2003,BRE04482	Prospective Cohort	Sweden, Not specified, Twins Swedish twin cohort, 1969	44 - 83	462	11598.0	School health records	29.0 years		at age 40	Kg	Breast cancer incidence		>=30 vs. 18.50-24.99	4	0.6 (0.3, 1.1)			A		D				
Must, A.,2003,BRE18607	Prospective Cohort	USA, Not specified HGSM III	33 - 46		858.0	School health records	32.0 years		at mid-life		Breast cancer cancer death		ever over weight vs. never over	2	2.4 (1.1, 5.0)	0.03								
Ahlgren, M.,2004,BRE14201	Historical Cohort	Denmark, Not specified Danish Cohort, 1930	14 - 71		117415.0	School health records	33.0 years		age 14	Kg/m*m	Breast cancer incidence		1.0 (continuous)	1	0.95 (0.93, 0.97)					D				

BMI, at different stage

Post-menopausal

Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	311	85917.0	Through network, paper, tv	34.8 months / 0.037		BMI change (baseline age 18)	Kg/m*m	Breast cancer incidence	HRT - No	>9.71 vs. <0.0	5	1.92 (1.07, 3.43)		0.001	A	B	C	E	F	G
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	314	85917.0	Through network, paper, tv	34.8 months / 0.037		BMI change (baseline age 50)	Kg/m*m	Breast cancer incidence	HRT - No	>4.01 vs. <0.0	5	1.45 (0.98, 2.15)		0.02	A	B	C	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	692	85917.0	Through network, paper, tv	34.8 months / 0.037		BMI change (baseline age 18)	Kg/m*m	Breast cancer incidence	HRT - Yes	>9.71 vs. <0.0	5	1.36 (0.94, 1.97)		0.27	A	B	C	E	F	G	
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	699	85917.0	Through network, paper, tv	34.8 months / 0.037		BMI change (baseline age 50)	Kg/m*m	Breast cancer incidence	HRT - Yes	>4.01 vs. <0.0	5	0.9 (0.68, 1.17)		0.36	A	B	C	E	F	G	

Maximal BMI, in adult life

Post-menopausal

Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	314	85917.0	Through network, paper, tv	34.8 months / 0.037			Kg/m*m	Breast cancer incidence	HRT - No	>31.11 vs. <22.6	5	2.24 (1.31, 3.84)		0.001	A	B	C	E	F	G
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	700	85917.0	Through network, paper, tv	34.8 months / 0.037			Kg/m*m	Breast cancer incidence	HRT - Yes	>31.11 vs. <22.6	5	0.83 (0.62, 1.11)		0.28	A	B	C	E	F	G

8.1.2

Body surface

Pre-menopausal

Le Marchand, L.,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		101	444	Area residency lists					Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	0.73 (0.33, 1.64)		0.99	B	D				
Le Marchand, L.,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		39	172	Area residency lists					Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	1.04 (0.29, 3.65)		0.99	B	D				
Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	91	11580.0	Unspecified	27.0 years / 0.6%			m*m	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.35 (0.32, 5.66)			A					

Post-menopausal

Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	343	11580.0	Unspecified	27.0 years / 0.6%			m*m	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	2.78 (1.37, 5.65)			A					
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Menopausal status not specified

Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59		11580.0	Unspecified	27.0 years / 0.6%			m*m	Breast cancer incidence		1.0 (continuous)	1	2.73 (1.46, 5.13)			A					
Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59		11580.0	Unspecified	27.0 years / 0.6%			Kg	Breast cancer incidence		1.0 (continuous)	1	1.03 (1.01, 1.053)			A					

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments															
																		A	B	C	D	E	F	G									
Clinical obesity																																	
<i>Pre-menopausal</i>																																	
Wolk, A.,2001,BRE13549	Historical Cohort	sweden, Obese Swedish obese cohort	18 - (47)	89	19964.0	Hospital Records only	10.6 years		<50 yrs		Breast cancer incidence	Pre-menopausal	obese cohort vs. general pop	2	0.7 (0.5, 0.9)			A															
<i>Post-menopausal</i>																																	
Wolk, A.,2001,BRE13549	Historical Cohort	sweden, Obese Swedish obese cohort	18 - (47)	192	19964.0	Hospital Records only	10.6 years		60-69 yrs		Breast cancer incidence	Post-menopausal	obese cohort vs. general pop	2	1.3 (1.1, 1.6)			A															
<i>Menopausal status not specified</i>																																	
Moller H,1994,BRE17842	Prospective Cohort	Danemark Danish Record-linkage Study, 1987		231	null	Hospital Records only	4.8 years		hospital discharge with diagnosis of obesity		Breast cancer incidence		obese vs. Danish population	2	1.0 (0.9, 1.2)			A														G	
Wolk, A.,2001,BRE13549	Historical Cohort	sweden, Obese Swedish obese cohort	18 - (47)	309	205970	Hospital Records only	10.6 years				Breast cancer incidence		obese cohort vs. general popul	2	1.1 (0.9, 1.2)			A															
Cole's index																																	
<i>Pre-menopausal</i>																																	
Le Marchand, L,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		101	444	Area residency lists			cole index		Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	0.4 (0.21, 0.75)	0.004			B		D												
Le Marchand, L,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		39	172	Area residency lists			cole index		Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	0.66 (0.24, 1.86)	0.99			B		D												
Other weight adjusted for height measures																																	
<i>Menopausal status not specified</i>																																	
Swanson, C. A.,1988,BRE11981	Prospective Cohort	usa, Black and White NHANES I, 1971	25 - 74	121	7149	Unspecified	10.0 years		wt/stature	Kg/m	Breast cancer mortality/incidence		42.0 vs. 25.0	4	1.3 (0.8, 2.1)	0.54		A	B	C		E	F										
Ponderal index																																	
<i>Pre-menopausal</i>																																	
McCormack, V.A.,2003,BRE20357	Historical Cohort	Sweden, Not specified Upsala birth cohort	36 - 82	63	5358	General population (survey)	38.0 years / 0,3		kg/m3	TEMP	Breast cancer incidence	Pre-menopausal	>=28.5 vs. <24.4	5	1.42 (0.61, 3.32)	0.37		A	B													G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	P value	P trend	adjustments								
																		A	B	C	D	E	F	G		
Cerhan, J. R., 2004, BRE1495	Prospective Cohort	USA, Not specified Minnesota, 1944		30	13252	Through health org. (screening, health insurance)	5.0 years / 20 families		at age 12		Breast cancer incidence	Family History BC - Yes	above average vs. average	3	4.25 (1.71, 1.05)		0.29		A		D					G

8.1.3

Weight

Pre-menopausal

Tornberg, S. A., 1988, BRE12418	Prospective Cohort	Sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years		<50 yrs. of age	Kg	Breast cancer incidence	Pre-menopausal	10.0 (continuous)	1	0.91 (0.78, 1.07)				A							G
Le Marchand, L., 1988, BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		101	444	Area residency lists					Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	0.59 (0.27, 1.28)		0.99			B	D					
De Stavola, B. L., 1993, BRE02122	Prospective Cohort	United Kingdom, Not specified Guernsey G2 and G3		73	4528.0	Through network, paper, tv	15.0 years / 0			Kg	Breast cancer incidence	Pre-menopausal	>70.0 vs. <57.9	4	1.1 (0.6, 2.3)		0.92		A		D			F		
Toniolo, P., 1994, BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65	79	366	Through health org. (screening, health insurance)	7.0 years	FFQ-Semi-quantitative		Kg	Invasive breast cancer incidence	Pre-menopausal	>73.0 vs. <57.9	4	1.07 (0.54, 2.09)		0.99									
Freni, S. C., 1996, BRE02960	Prospective Cohort	U.S.A., Not specified NHANES I, 1971	25 - 74	70	3793	Unspecified	155.0 months			Kg	Breast cancer incidence	Pre-menopausal	>77.0 vs. 55.0 - 60.9	5	0.9 (0.5, 1.9)		>0.10		A	B	C			F		
Tulinius, H., 1997, BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	91	11580.0	Unspecified	27.0 years / 0.6%			Kg	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	0.995 (0.977, 1.014)				A							
Kaaks, R., 1998, BRE04522	Prospective Cohort	The Netherlands DOM-project Utrecht, 1974/1984	39 - 73	147	56646	Through health org. (screening, health insurance)	7.1 years			Kg	Breast cancer incidence	Pre-menopausal	>74.1 vs. <61.0	4	1.0 (0.63, 1.58)		0.97		A		C			F		
Manjer, J., 2001, BRE17790	Prospective Cohort	Sweden Malmö Preventive Project (MPP), 1974	(55)	112	58078	Through health org. (screening, health insurance)	13.1 years			Kg	Invasive breast cancer incidence	Pre-menopausal	>62.6 vs. <55.0	4	0.93 (0.54, 1.6)		0.87		A							
Saadatian-Elahi, M., 2002, BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years				Breast cancer incidence	Pre-menopausal		1	null (null, null)											
Tryggvadottir, L., 2002, BRE12507	Nested Case Control	Iceland, Not specified Iceland, 1979	20 - 81	97	970	Through health org. (screening, health insurance)	17.0 years			Kg	Breast cancer incidence	Pre-menopausal	10.0 (continuous)	1	1.05 (0.84, 1.31)		0.648				C	D		F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years			Kg	Breast cancer incidence	Pre-menopausal	>75.0 vs. <56.7	5	0.83 (0.61, 1.13)		0.459	A	B	C	E	F	G	
Tehard, B.,2004,BRE12173	Prospective Cohort	France, Registered teachers E3N-EPIC, 1990	40 - 65	692	283543	Through social organization (profession, religion)	9.7 years			Kg	Invasive breast cancer incidence	Pre-menopausal	>63.1 vs. <52.0	4	0.75 (0.61, 0.93)				B	C	E	F	G	
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	212	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	Weight	Kg	Breast cancer incidence	Pre-menopausal	>65.0 vs. <54.0	4	0.57 (0.42, 0.98)		<=0.05	A	B	C	E	F	G	
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	201	53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	Kg	Breast cancer incidence	premenopausal women	65+ vs. <50	5	1.57 (0.96, 2.54)		0.13	A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	62	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer ER+ incidence	premenopausal women	1.0 (continuous)	1	1.02 (0.99, 1.05)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	41	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer ER- incidence	premenopausal women	1.0 (continuous)	1	1.01 (0.97, 1.05)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	53	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer PR+ incidence	premenopausal women	1.0 (continuous)	1	1.03 (0.996, 1.05)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	42	20871	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer PR- incidence	premenopausal women	1.0 (continuous)	1	1.0 (0.95, 1.04)			A	C	D	E			

Post-menopausal

Tornberg, S. A.,1988,BRE12418	Prospective Cohort	sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years		>=50 yrs. of age	Kg	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.11 (1.05, 1.18)			A						G
Le Marchand, L.,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		39	172	Area residency lists					Breast cancer incidence	Post-menopausal	Quantile 3 vs. Quantile 1	3	1.37 (0.3, 4.88)	0.99			B	D				
Folsom, AR,1990,BRE02836	Nested Case Control	USA, Post-menopausal Iowa Women's Health Study	55 - 69	226	1809	By Mail	2.0 years			Kg	Breast cancer incidence	Post-menopausal	>72.5 vs. <61.9	3	1.22 (0.87, 1.73)	0.27		A						
den Tonkelaar, I.,1992,BRE02222	Prospective Cohort	the Neederlands, Not specified, Post-menopausal DOM-project Utrecht, 1974/1984	49 - 66		9746.0	Through health org. (screening, health insurance)	12.5 years / 4%			Kg	Breast cancer incidence	Post-menopausal	>75.0 vs. <61.0	4	1.27 (0.91, 1.77)	0.99		A						

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	705	85917.0	Through network, paper, tv	34.8 months / 0.037			Kg	Breast cancer incidence	HRT - Yes	>82.3 vs. <58.7	5	0.91 (0.68, 1.21)		0.73	A	B	C	E	F	G		
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	106	106	Through network, paper, tv	4.3 years				Breast cancer incidence	Post-menopausal		1	null (null, null)										
Tryggvadottir, L.,2002,BRE12507	Nested Case Control	Iceland, Not specified Iceland, 1979	20 - 81	589	5299	Through health org. (screening, health insurance)	17.0 years			Kg	Breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.07 (0.99, 1.16)		0.078			C	D	F	G		
Pike, M. C.,2002,BRE16343	Prospective Cohort	U.S.A., Multi-ethnic, Post-menopausal Hawaii and California, 1993		1757	88712.0	By Mail	6.0 years	Questionnaire (nos)		Kg	Breast cancer incidence	Post-menopausal	>77.0 vs. <57	4	1.34 (null, null)		0.03			C	D	E	F	G	
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	1043	37105.0	By Mail	13.0 years			lbs	Breast cancer ER+ incidence	Post-menopausal	>175.0 vs. <128.0	5	2.03 (1.59, 2.59)					B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	232	37105.0	By Mail	13.0 years			lbs	Breast cancer ER- incidence	Post-menopausal	>175.0 vs. <128.0	5	1.22 (0.68, 2.19)					B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	993	37105.0	By Mail	13.0 years			lbs	Breast cancer PR+ incidence	Post-menopausal	>175.0 vs. <128.0	5	2.31 (1.76, 3.05)					B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	362	37105.0	By Mail	13.0 years			lbs	Breast cancer PR- incidence	Post-menopausal	>175.0 vs. <128.0	5	0.99 (0.63, 1.54)					B	C	D	E	F	G
Lahmann, Petra, H.,2003,BRE20119	Prospective Cohort	Sweden, White, Post-menopausal Malmo Diet and Cancer, 1991	50 - 73	236	12159.0	By Mail	5.7 years			Kg	Invasive & In situ breast cancer incidence		>77.1 vs. <58.9	5	1.53 (0.97, 2.41)		0.014	A		C	D	E	F	G	
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years			Kg	Breast cancer incidence	HRT - Yes	>75.0 vs. <56.7	5	0.92 (0.66, 1.28)		0.529	A	B	C		E		G	
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years	7-day Record + Questionnaire			Breast cancer incidence	Post-menopausal		1	null (null, null)										
Tehard, B.,2004,BRE12173	Prospective Cohort	France, Registered teachers E3N-EPIC, 1990	40 - 65	680	217093	Through social organization (profession, religion)	9.7 years			Kg	Invasive breast cancer incidence	HRT - Yes	>64.1 vs. <53.0	4	1.19 (0.97, 1.48)					B	C		E	F	G
Tehard, B.,2004,BRE12173	Prospective Cohort	France, Registered teachers E3N-EPIC, 1990	40 - 65	1311	455106	Through social organization (profession, religion)	9.7 years			Kg	Invasive breast cancer incidence	Post-menopausal	quartile 4-b vs. quartile 1	5	1.1 (0.93, 1.29)					B	C		E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, south European (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			Weight		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.7 (1.2, 2.3)			A	B				F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, south European (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			Weight	kg	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.15 (1.06, 1.25)	0.001		A	B				F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	FFQ	Weight	Kg	Breast cancer incidence	HRT ever	>75.5 vs. <62.5	4	1.07 (0.82, 1.39)			A	B	C		E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	FFQ	Weight	Kg	Breast cancer incidence	HRT ever	10.0 (continuous)	1	1.02 (0.94, 1.11)	0.66		A	B	C		E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	FFQ	Weight	Kg	Breast cancer incidence	HRT never	>75.5 vs. <62.5	4	1.32 (0.9, 1.92)			A	B	C		E		G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	FFQ	Weight	Kg	Breast cancer incidence	HRT never	10.0 (continuous)	1	1.07 (0.97, 1.19)	0.17		A	B	C		E		G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	271	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	Weight	Kg	Breast cancer incidence	Post-menop & HRT nonusers	>66.0 vs. <53.9	4	1.22 (0.92, 1.63)		>0.05	A	B	C		E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	472	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	Weight	Kg	Breast cancer incidence	Post-menop & HRT users	>66.0 vs. <53.9	4	1.09 (0.84, 1.42)		>0.05	A	B	C		E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	147	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	Weight		Breast cancer incidence	Post-menop & transdermal HRT users	>66.0 vs. <53.9	4	1.43 (0.88, 2.32)		>0.05	A	B	C		E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1073	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	FFQ	Weight	Kg	Breast cancer incidence	Post-menopausal	>66.0 vs. <53.9	4	1.23 (0.97, 1.57)		>0.05	A	B	C		E	F	G
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)		9704.0	Self report verified by medical record	11.3 years / 0.23	FFQ	Weight	Kg	Invasive breast cancer incidence	age >=70 years	>73.4 vs. <57.9	4	1.52 (1.01, 2.29)			A	B	C	D		F	G
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)	350	9704.0	Self report verified by medical record	11.3 years / 0.23	FFQ	Weight	Kg	Invasive breast cancer incidence	Post-menopausal	>73.4 vs. <57.9	4	1.49 (1.05, 2.1)	0.004		A	B	C	D		F	G
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	229	53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	Kg	Breast cancer incidence	postmenopausal women	65+ vs. <50	5	1.4 (0.87, 2.26)		0.053	A		C	D	E		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	65	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer ER+ incidence	postmenopausal women	1.0 (continuous)	1	1.04 (1.01, 1.07)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69		53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer ER+/PR+ incidence	postmenopausal women	1.0 (continuous)	1	1.04 (1.01, 1.08)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	41	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer ER- incidence	postmenopausal women	1.0 (continuous)	1	0.98 (0.93, 1.03)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69		53857.0	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer ER-/PR- incidence	postmenopausal women	1.0 (continuous)	1	0.99 (0.94, 1.04)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	46	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer PR+ incidence	postmenopausal women	1.0 (continuous)	1	1.03 (0.995, 1.07)			A	C	D	E			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	55	29168	Cancer registry	9.9 years / 0.05	Questionnaire (nos)	Weight	kg	Breast cancer PR- incidence	postmenopausal women	1.0 (continuous)	1	1.01 (0.97, 1.04)			A	C	D	E			

Menopausal status not specified

Swanson, C. A.,1988,BRE11981	Prospective Cohort	usa, Black and White NHANES I, 1971	25 - 74	121	7149	Unspecified	10.0 years			Kg	Breast cancer mortality/incidence		87.0 vs. 51.0	4	1.2 (0.7, 1.9)	0.45		A	B	C	E	F	
Tornberg, S. A.,1988,BRE12418	Prospective Cohort	sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years			Kg	Breast cancer incidence		10.0 (continuous)	1	1.08 (1.02, 1.14)			A					G
Overvad,1991,BRE17893	Case Cohort	Guernsey, Not specified Guernsey, 1967	35 -		5162.0	Multiple procedure	11.0 years				Breast cancer incidence			1	null (null, null)								
Hoyer, A. P.,1992,BRE04086	Prospective Cohort	Denmark, Not specified Glostrup Population Studies, 1982	30 - 80		5207.0	Direct contact at home	26.0 years	Questionnaire (nos)		Kg	Breast cancer mortality/incidence		>=76 vs. <56	4	1.9 (0.8, 4.6)	0.10-0.20							
Key, T.J.A.,1996,BRE15654	Prospective Cohort	United Kingdom, Not specified, Vegetarian and health conscious people UK Cohort of Vegetarians	16 - 79		6435.0	From groups with high vegetarian likelihood	16.8 years	Questionnaire (nos)		Kg	Breast cancer cancer death		>60.5 vs. <54.0	3	0.94 (0.52, 1.71)			A					G
Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59		11580.0	Unspecified	27.0 years / 0.6%			Kg	Breast cancer incidence		1.0 (continuous)	1	1.01 (1.002, 1.018)			A					

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments								
																		A	B	C	D	E	F	G		
Goodman, M. T.,1997,BRE03352	Prospective Cohort	Japan, Not specified, Atomic bomb survivors LSS, 1969		154	175475	By Mail	8.31 years	Questionnaire (nos)		Kg	Breast cancer incidence		>=59 vs. <47	4	1.39 (0.87, 2.2)		0.16	A								G
Hoyer, A. P.,1998,BRE15433	Nested Case Control	Denmark, Not specified CopenhagenCHS	20 -	240	477	Unspecified	17.0 years	Questionnaire (nos)		Kg	Breast cancer incidence		>70.5 vs. <56.19	4	1.89 (1.13, 3.15)		0.04		B	C	D	E	F	G		
Key, T. J.,1999,BRE04758	Prospective Cohort	Japan, Not specified LSS, 1969		427	488990	By Mail	24.0 years	Questionnaire (nos)		Kg	Breast cancer incidence		>=55 vs. <45	5	1.25 (0.93, 1.67)		0.068	A								G
Drake, D. A.,2001,BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years				Breast cancer incidence			1	null (null, null)											
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80		10317.0	Unspecified	17.0 years			Kg	Breast cancer ER+ incidence		>71.0 vs. <57.9	4	1.2 (0.7, 1.9)		0.2	A								
Hoyer, A. P.,2001,BRE15437	Nested Case Control	Denmark, Not specified CopenhagenCHS	25 - 80		10317.0	Unspecified	17.0 years			Kg	Breast cancer ER- incidence		>71.0 vs. <57.9	4	2.1 (0.8, 5.9)		0.1	A								
Tryggvadottir, L.,2002,BRE12507	Nested Case Control	Iceland, Not specified Iceland, 1979	20 - 81		80219.0	Through health org. (screening, health insurance)	17.0 years			Kg	Breast cancer incidence		10.0 (continuous)	1	1.03 (0.97, 1.09)		0.275			C	D		F	G		
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	911	78119	Other procedure	4.7 years			Kg	Breast cancer incidence	HRT - No	>75.0 vs. <56.7	5	1.65 (1.32, 2.08)		<0.0001	A	B	C		E			G	
Kilkinen, A.,2004,BRE17698	Nested Case Control	Finland Helsinki and Oulu, 1982	25 - 74		15497.0	Unspecified	15.0 years	Questionnaire (nos)			Breast cancer incidence			1	null (null, null)			A								G
Tehard, B.,2004,BRE12173	Prospective Cohort	France, Registered teachers E3N-EPIC, 1990	40 - 65	631	238010	Through social organization (profession, religion)	9.7 years			Kg	Invasive breast cancer incidence	HRT - No	>64.1 vs. <53.0	4	0.94 (0.78, 1.15)				B	C		E	F	G		
Wu, M. H.,2006,BRE24628	Prospective Cohort	China, Asian, Screening Program Taiwan 1990	(47)	104	11834	Through health org. (screening, health insurance)	10.3 years			Kg	Breast cancer incidence		>63 vs. <=50	4	2.0 (1.1, 3.8)		0.0567	A			D					

Weight at 20 yrs

Post-menopausal

van den Brandt, P. A.,1997,BRE12717	Case Cohort	The Netherlands, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69		null	Unspecified	4.3 years / 0		weight at age 20	Kg	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	0.94 (0.82, 1.09)			A		C	D	E				
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G

Weight at age 18 years

Post-menopausal

Ahn, J. et al., 2007, BRE0139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		Weight change in total adulthood, age 18y to the current age	kg	Breast cancer incidence	non MHT users	>=50.0 vs. <-1.9-1.9	9	2.15 (1.35, 3.42)		<0.001	A	B	C	D	E	F	G
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Weight in teens

Post-menopausal

Folsom, AR, 1990, BRE02836	Nested Case Control	USA, Post-menopausal Iowa Women's Health Study	55 - 69	225	1808	By Mail	2.0 years		weight at age 18	Kg	Breast cancer incidence	Post-menopausal	>57.31 vs. <52.29	3	0.81 (0.57, 1.14)		0.23	A							
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Menopausal status not specified

Cerhan, J. R., 2004, BRE01495	Prospective Cohort	USA, Not specified Minnesota, 1944		54	67828	Through health org. (screening, health insurance)	5.0 years / 20 families		at 18	Kg	Breast cancer incidence	Family History BC - No	>56.9 vs. <52.2	3	0.54 (0.24, 1.2)		0.08	A		D				G
Cerhan, J. R., 2004, BRE01495	Prospective Cohort	USA, Not specified Minnesota, 1944		31	12411	Through health org. (screening, health insurance)	5.0 years / 20 families		at 18	Kg	Breast cancer incidence	Family History BC - Yes	>56.9 vs. <52.2	3	1.09 (0.45, 2.62)		0.88	A		D				G

Weight, at different age

Post-menopausal

Lahmann, Petra, H., 2003, BRE20119	Prospective Cohort	Sweden, White, Post-menopausal Malmo Diet and Cancer, 1991	50 - 73	191	12159.0	By Mail	5.7 years		weight change since age 20	Kg	Invasive & In situ breast cancer incidence		>21.1 vs. <4.9	5	1.75 (1.11, 2.77)		0.028	A		C	D	E	F	G
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Menopausal status not specified

Colditz, G. A., 2000, BRE19251	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55		58520.0	By Mail	14.0 years	Questionnaire (nos)	weight average over life	Kg	Invasive breast cancer incidence		consistently obese vs. average	5	1.06 (0.95, 1.17)							C	D	E	F	G
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8.1.4

Skinfold measurements

Pre-menopausal

Freni, S. C., 1996, BRE02960	Prospective Cohort	U.S.A., Not specified NHANES I, 1971	25 - 74	70	3793	Unspecified	155.0 months		subscapular+ triceps	mm	Breast cancer incidence	Pre-menopausal	>59.0 vs. <27.9	5	0.9 (0.4, 2.0)		>0.10	A	B	C				F	
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Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments							
																		A	B	C	D	E	F	G	
Freni, S. C.,1996,BRE02960	Prospective Cohort	U.S.A., Not specified NHANES I, 1971	25 - 74	112	3829	Unspecified	155.0 months			mm	Breast cancer incidence	Post-menopausal	>59.0 vs. <27.9	5	2.0 (1.0, 4.0)		0.08	A	B	C				F	

Subscapular skinfold

Post-menopausal

den Tonkelaar, I.,1992,BRE02222	Prospective Cohort	the Neederlands, Not specified, Post-menopausal DOM-project Utrecht, 1974/1984	49 - 66		9746.0	Through health org. (screening, health insurance)	12.5 years / 4%			mm	Breast cancer incidence	Post-menopausal	>38.5 vs. <22.2	4	1.16 (0.82, 1.65)		0.99	A								
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Menopausal status not specified

Swanson, C. A.,1988,BRE11981	Prospective Cohort	usa, Black and White NHANES I, 1971	25 - 74	121	7132	Unspecified	10.0 years		08.01.04-Subscapular Skinfold	mm	Breast cancer mortality/incidence		34.6 vs. 8.2	4	1.1 (0.7, 1.8)		0.79	A	B	C		E	F		
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Triceps skinfold

Post-menopausal

den Tonkelaar, I.,1992,BRE02222	Prospective Cohort	the Neederlands, Not specified, Post-menopausal DOM-project Utrecht, 1974/1984	49 - 66		9746.0	Through health org. (screening, health insurance)	12.5 years / 4%			mm	Breast cancer incidence	Post-menopausal	>29.4 vs. <18.1	4	1.15 (0.81, 1.64)		0.99	A								
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Menopausal status not specified

Swanson, C. A.,1988,BRE11981	Prospective Cohort	usa, Black and White NHANES I, 1971	25 - 74	121	7143	Unspecified	10.0 years			mm	Breast cancer mortality/incidence		35.0 vs. 14.0	4	1.6 (0.9, 2.8)		0.19	A	B	C		E	F		
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8.1.5

Body fat

Pre-menopausal

Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	91	11580.0	Unspecified	27.0 years / 0.6%			Kg	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.001 (0.988, 1.014)			A								
Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	91	11580.0	Unspecified	27.0 years / 0.6%			Kg	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.009 (0.965, 1.055)			A								
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	806	465279	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	body fat at 5 years of age		Breast cancer incidence	Pre-menopausal	fatter vs. thinnest	6	0.9 (null, null)		0,67 5	A	B	C	D	E	F	G		
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	806	465279	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	body fat at 10 years of age		Breast cancer incidence	Pre-menopausal	fatter vs. thinnest	6	0.6 (null, null)		0,06 4	A	B	C	D	E	F	G		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	806	465279	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	body fat at 20 years of age		Breast cancer incidence	Pre-menopausal	fatter vs. thinnest	6	0.72 (null, null)		0,118	A	B	C	D	E	F	G

Post-menopausal

Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	343	11580.0	Unspecified	27.0 years / 0.6%			Kg	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.004 (0.998, 1.01)			A							
Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	343	11580.0	Unspecified	27.0 years / 0.6%			Kg	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.032 (1.009, 1.054)			A							
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1485	561104	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	body fat at 5 years of age		Breast cancer incidence	Post-menopausal	fatter vs. thinnest	6	1.13 (null, null)		0,826	A	B	C	D	E	F	G	
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1485	561104	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	body fat at 10 years of age		Breast cancer incidence	Post-menopausal	fatter vs. thinnest	6	0.72 (null, null)		0,043	A	B	C	D	E	F	G	
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1485	561104	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	body fat at 20 years of age		Breast cancer incidence	Post-menopausal	fatter vs. thinnest	6	0.76 (null, null)		0,205	A	B	C	D	E	F	G	
Lahmann, Petra, H.,2003,BRE20119	Prospective Cohort	Sweden, White, Post-menopausal Malmo Diet and Cancer, 1991	50 - 73	234	12159.0	By Mail	5.7 years		percent of total weight	%	Invasive & In situ breast cancer incidence		>36.1 vs. <26.9	5	2.01 (1.26, 3.21)		0,01	A	C	D	E	F	G		
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years				Breast cancer incidence	Post-menopausal		1	null (null, null)										
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	414	11534	Cancer registry	6.1 years	Recorded by trained technician. height measured	BFMI, body fat mass index	Kg/m*m	Breast cancer incidence	HRT ever	<6.8 vs. >10.8	4	0.98 (0.71, 1.34)			A	B	C	D	E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	414	11534	Cancer registry	6.1 years	Recorded by trained technician. height measured	BFMI, body fat mass index	Kg/m*m	Breast cancer incidence	HRT ever	1.0 (continuous)	1	1.0 (0.96, 1.04)		0,79	A	B	C	D	E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	414	11534	Cancer registry	6.1 years	Recorded by trained technician. height measured	Body fat percentage	%	Breast cancer incidence	HRT ever	<30.0 vs. >39.3	4	0.97 (0.73, 1.3)			A	B	C		E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	414	11534	Cancer registry	6.1 years	Recorded by trained technician. height measured	Body fat percentage	%	Breast cancer incidence	HRT ever	10.0 (continuous)	1	0.97 (0.83, 1.13)		0,67	A	B	C		E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11358	Cancer registry	6.1 years	Recorded by trained technician. height measured	BFMI, body fat mass index	Kg/m*m	Breast cancer incidence	HRT never	<6.8 vs. >10.8	4	1.25 (0.8, 1.96)			A	B	C	D		G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11358	Cancer registry	6.1 years	Recorded by trained technician. height measured	BFMI, body fat mass index	Kg/m*m	Breast cancer incidence	HRT never	1.0 (continuous)	1	0.98 (0.93, 1.03)	0.43		A	B	C	D	E	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11358	Cancer registry	6.1 years	Recorded by trained technician. height measured	Body fat percentage	%	Breast cancer incidence	HRT never	<30.0 vs. >39.3	4	0.95 (0.64, 1.42)			A	B	C		G		
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11358	Cancer registry	6.1 years	Recorded by trained technician. height measured	Body fat percentage	%	Breast cancer incidence	HRT never	10.0 (continuous)	1	1.08 (0.88, 1.33)	0.45			B	C		E	G	
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)	350	9704.0	Self report verified by medical record	11.3 years / 0.23	Self reported and measured	Percentage body fat	%	Invasive breast cancer incidence	Post-menopausal	>43.5 vs. <35.4	4	1.58 (1.11, 2.23)	0.001		A	B	C	D		F	G

Body fat percentage

Post-menopausal

Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			Percent fat		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.7 (1.2, 2.3)			A	B				F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			Percent fat	%	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.21 (1.03, 1.42)	0.02		A	B				F	G

Fat free mass

Post-menopausal

Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			FFM		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.6 (1.2, 2.3)			A	B				F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			FFM	kg	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.45 (1.16, 1.82)	0.001		A	B				F	G

Fat mass

Post-menopausal

Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			Fat mass		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.7 (1.3, 2.4)			A	B				F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, south European (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records			Fat mass	kg	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.18 (1.06, 1.31)		0.003	A	B				F	G

Lean body mass

Post-menopausal

Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	414	11534	Cancer registry	6.1 years	FFQ	FFMI, fat free mass index	Kg/m*m	Breast cancer incidence	HRT ever	>17.3 vs. <15.6	4	1.02 (0.73, 1.42)			A	B	C	D	E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	414	11534	Cancer registry	6.1 years	FFQ	FFMI, fat free mass index	Kg/m*m	Breast cancer incidence	HRT ever	1.0 (continuous)	1	1.0 (0.91, 1.09)	0.94		A	B	C	D	E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11358	Cancer registry	6.1 years	FFQ	FFMI, fat free mass index	Kg/m*m	Breast cancer incidence	HRT never	>17.3 vs. <15.6	4	1.52 (0.98, 2.37)			A	B	C	D	E	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11358	Cancer registry	6.1 years	FFQ	FFMI, fat free mass index	Kg/m*m	Breast cancer incidence	HRT never	1.0 (continuous)	1	1.12 (1.0, 1.26)	0.06		A	B	C	D	E	G	

Other (DEXA, bio-impedance etc)

Post-menopausal

Zhang, Y.,1997,BRE17164	Prospective Cohort	USA, Post-menopausal Framingham Study, 1948	47 - 80	91	1373.0		22.1 years / 0		Bone Mass		Breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	3.5 (1.8, 6.8)	<0.001			B	C	D	E	F	G
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Menopausal status not specified

Drake, D. A.,2001,BRE02418	Prospective Cohort	USA, Multi-ethnic, Fitness centre members ACLS, 1970	21 - 86		4520.0	Through social organization (profession, religion)	25.0 years		hydrostatic percent of body fat		Breast cancer incidence			1	null (null, null)									
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8.1.6

BMI change

Pre-menopausal

Weiderpass, E.,2004,BRE18151	Prospective Cohort	Sweden+Norway, Not specified, Pre-menopausal Assembled cohort (Sweden + Norway)	30 - 49	680	91365	By Mail	8.0 years / 789 women		between 18 and recruitment		Breast cancer incidence	Pre-menopausal	increased >4 vs. increased 0-1.4	4	0.95 (0.72, 1.25)	0.37		A	C			F	G
Hilakivi-Clarke, R.,2005,BRE22603	Nested Case Control	Finland, Not specified, Pre-menopausal Finland, 1990	(41)	98	392	By Mail	6.0 years			Kg/m*m	Breast cancer incidence	Pre-menopausal	>7 vs. <3,49	3	0.6 (0.32, 1.11)				B	C	D	F	

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments								
																		A	B	C	D	E	F	G		
van den Brandt, P. A.,1997,BRE12717	Case Cohort	The Netherlands, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	500	5709	Unspecified	4.3 years / 0		between age 20 and baseline	Kg/m ² /20 yrs	Invasive breast cancer incidence	Post-menopausal	>=10 vs. 0 ÷ 1.9	7	1.42 (0.83, 2.43)		0.09	A	C	E						

Menopausal status not specified

Ballard-Barbash, R.,190,BRE00514	Prospective Cohort	U.S.A. NHEFS, 1981/82	25 - 74	101	5599	Random extraction	10.0 years				Breast cancer incidence		>1.0 vs. >-1.0	3	2.5 (1.2, 5.4)				A	B	C	D	E	F	G
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Weight change

Pre-menopausal

Huang, Z.,1997,BRE04117	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	35 - 55	1000	653004	By Mail	16.0 years / 0.05			Kg	Invasive breast cancer mortality/incidence	Pre-menopausal	gain 25.0 vs. Loss or gain of 2.0	8	0.74 (0.54, 1.03)		0.07	A	C	D	F					
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75	41	22158	General population (survey)	9.2 years / 285		weight change from 25yrs to interview in 1982-84	Kg	Breast cancer incidence	Pre-menopausal	gained 20 + vs. lost/gained 4.9 kg	5	1.88 (0.73, 4.88)		0.116	A	B	D	G					
Lahmann PH,2005,BRE23014	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK., Not	25 - 70	254	98352.0		5.8 years			Kg	Invasive breast cancer incidence	Pre-menopausal	> 20 kg vs. +/- 2 Kg	7	0.87 (0.51, 1.49)		0.185	A	B	C	D	E	F	G		

Post-menopausal

Folsom, AR,1990,BRE02836	Nested Case Control	USA, Post-menopausal Iowa Women's Health Study	55 - 69	225	1804	By Mail	2.0 years		current weight minus weight at age 18	Kg	Breast cancer incidence	Post-menopausal	>17.31 vs. <8.19	3	1.6 (1.13, 2.27)		0.01	A								
Barnes-Josiah, D.,1995,BRE00566	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	623	172003	By Mail	6.0 years		from 18yrs and by bmi at 18	Kg	Breast cancer incidence	Post-menopausal	bmi<20 & high gain vs. bmi>20 &	6	1.92 (1.45, 2.53)		0.0004	A	B	C	E	F	G			
French, S. A.,1997,BRE02957	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	658	31625	Through social organization (profession, religion)	7.0 years / 0.17		08.01.06-Weight variability weight variability in adulthood :root mean square		Breast cancer incidence	Post-menopausal	>1.0 vs. >-1.0	4	0.88 (0.7, 1.12)		0.12	A	B	D	E	F	G			
Huang, Z.,1997,BRE04117	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	35 - 55		95256.0	By Mail	16.0 years / 0.05				Invasive breast cancer mortality/incidence	HRT - Former	gain 20.0 vs. No HRT-Loss or gain	6	1.3 (null, null)			A	C	D	F					
Huang, Z.,1997,BRE04117	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	35 - 55		95256.0	By Mail	16.0 years / 0.05			Kg	Invasive breast cancer mortality/incidence	HRT - Yes	gain 20.0 vs. No HRT-Loss or gain	6	1.7 (null, null)			A	C	D	F					
Huang, Z.,1997,BRE04117	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	35 - 55	1517	550494	By Mail	16.0 years / 0.05			Kg	Invasive breast cancer mortality/incidence	Post-menopausal	gain 25.0 vs. Loss or gain of 2.0	8	1.41 (1.12, 1.78)		0.006	A	C	D	F					

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75	94	26858	General population (survey)	9.2 years / 285		weight change from 25yrs to interview in 1982-84	Kg	Breast cancer incidence	Post-menopausal	gained 20 + vs. lost/gained 4.9 kg	5	1.74 (0.91, 3.3)			A	B	D	G			
Feigelson, H. S.,2004,BRE02721	Prospective Cohort	usa, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	1182	62756.0	By Mail	9.0 years / 0.9		from 18 to 1992	Kg	Breast cancer incidence	HRT - No	71+ vs. -5 to 5	9	2.08 (1.59, 2.73)	0.0001		A	B	C	D	E	F	G
Lahmann, P.,2004,BRE18516	Prospective Cohort	, Post-menopausal European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	39 - 80	732	56470		4.6 years	FFQ		Kg	Breast cancer incidence	HRT - No	increase >20 vs. stable weight	3	1.52 (1.02, 2.27)	<0.002		A	B	C	E	F	G	
Feigelson, H. S.,2004,BRE02721	Prospective Cohort	usa, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	752	62756.0	By Mail	9.0 years / 0.9		from 18 to 1992	Kg	Breast cancer incidence	HRT - Yes	71+ vs. -5 to 5	9	1.11 (0.75, 1.64)	0.35		A	B	C	D	E	F	G
Lahmann PH,2005,BRE23014	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK., Not	25 - 70	626	98352.0		5.8 years		women were postmenopausal women and non-HRT users.	Kg	Invasive breast cancer incidence	Post-menopausal & Other	> 20 kg vs. +/- 2 Kg	7	1.52 (1.08, 2.13)	0.0002		A	B	C	D	E	G	
Lahmann PH,2005,BRE23014	Prospective Cohort	Denmark,France,Germany,Greece,Italy,The Netherlands,Norway,Spain,Sweden and UK., Not	25 - 70	456	98352.0		5.8 years		women were postmenopausal women and HRT users.	Kg	Invasive breast cancer incidence	Post-menopausal & Other	> 20 kg vs. +/- 2 Kg	7	0.95 (0.65, 1.38)	0.866		A	B	C	D	E	G	
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)		9704.0	Self report verified by medical record	11.3 years / 0.23	FFQ	Percentage weight change since age 25 years	%	Invasive breast cancer incidence	age >=70 years	>29.8 vs. <5.1	4	1.94 (1.28, 2.94)			A	B	C	D	F	G	
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)	350	9704.0	Self report verified by medical record	11.3 years / 0.23	FFQ	Percentage weight gain since age 25 years	%	Invasive breast cancer incidence	Post-menopausal	>29.8 vs. <5.1	4	1.64 (1.15, 2.34)	0.002		A	B	C	D	F	G	
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	903	99039.0	Cancer registry	4.0 4 years		Weight change pattern, cut off point BMI >=25		Breast cancer incidence	non MHT users	overweight or obese at age 50y vs.	6	1.36 (0.83, 2.21)			A	B	C	D	E	F	G

Menopausal status not specified

Huang, Z.,1997,BRE04117	Prospective Cohort	USA, Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	35 - 55		95256.0	By Mail	16.0 years / 0.05			Kg	Invasive breast cancer mortality/incidence	HRT - No	gain 20.0 vs. Loss or gain of 2.0	5	2.0 (null, null)			A	C	D	F		
Breslow, R. A.,2001,BRE01123	Prospective Cohort	USA, Not specified NHEFS, 1981/82	24 - 75	135	49287	General population (survey)	9.2 years / 285		weight change from 25yrs to interview in 1982-84	Kg	Breast cancer incidence		gained 20 + vs. lost/gained 4.9 kg	5	1.72 (0.94, 2.89)	0.015		A	B	D	G		
Jonsson, F.,2003,BRE04482	Prospective Cohort	Sweden, Not specified, Twins Swedish twin cohort, 1969	44 - 83	421	11598.0	School health records	29.0 years		Weight change between age 25 and baseline	Kg	Breast cancer incidence		>=21 vs. 0-5	5	2.1 (1.3, 3.3)			A					

Weight change from 18 to 30 yrs

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	1162	99039.0	Cancer registry	4.0 4 years		Weight change in the early reproductive years, age 18-35y	kg	Breast cancer incidence	Current MHT users	>=30.0 vs. -1.9-1.9	7	1.12 (0.52, 2.41)		0.53	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		Weight change in the early reproductive years, age 18-35y	kg	Breast cancer incidence	non MHT users	>=30.0 vs. -1.9-1.9	7	1.89 (1.11, 3.22)		0.06	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		Weight change from ages 18 to 35y	kg	Breast cancer incidence	non MHT users	>=30.0 vs. -1.9-1.9	7	1.65 (0.99, 2.91)			A	B	C	D	E	F	G

Weight change from menopause

Post-menopausal

Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	876	121700.0	medical records	26.0 years	Self-reported	Weight change since menopause, weight change as of current questionnaire cycle,	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers	gain >=10 vs. loss or gain <2	7	1.19 (0.94, 1.5)		0.00 2	A	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	522	121700.0	medical records	26.0 years	Self-reported	Stable weight change since menopause, excludes women who switched between gain,	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers	gain >=10 vs. loss or gain <2	7	1.13 (0.86, 1.5)		0.00 2	A	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	809	121700.0	medical records	26.0 years	Self-reported	Increase in weight since menopause, PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers	5.0 (continuous)	1	1.07 (1.01, 1.13)			A	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	421	121700.0	medical records	26.0 years	Self-reported	Increase in weight since menopause, lighter PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers & BMI <21 at	5.0 (continuous)	1	1.11 (1.01, 1.21)			A	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	398	121700.0	medical records	26.0 years	Self-reported	Increase in weight since menopause, lighter PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers & BMI <25 at	5.0 (continuous)	1	1.17 (1.06, 1.3)			A	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	388	121700.0	medical records	26.0 years	Self-reported	Increase in weight since menopause, heavier PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers & BMI >=21 at	5.0 (continuous)	1	1.05 (0.97, 1.14)			A	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	411	121700.0	medical records	26.0 years	Self-reported	Increase in weight since menopause, heavier PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers & BMI >=25 at	5.0 (continuous)	1	1.02 (0.95, 1.09)			A	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	1379	121700.0	medical records	26.0 years	Self-reported	Weight change since menopause, weight change as of current questionnaire cycle,	Kg	Invasive breast cancer incidence	Post-menop & HRT users	gain >=10 vs. loss or gain <2	7	1.15 (0.96, 1.38)		0.22	A	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	939	121700.0	medical records	26.0 years	Self-reported	Stable weight change since menopause, excludes women who switched between gain,	Kg	Invasive breast cancer incidence	Post-menop & HRT users	gain >=10 vs. loss or gain <2	7	1.05 (0.86, 1.29)		0.18	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	1264	121700.0	medical records	26.0 years	Self-reported	Increase in weight since menopause, PMH ever users	Kg	Invasive breast cancer incidence	Post-menop & HRT users	5.0 (continuous)	1	1.04 (0.99, 1.09)			A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	2376	121700.0	medical records	26.0 years	Self-reported	Weight change since menopause, weight change as of current questionnaire cycle	Kg	Invasive breast cancer incidence	Post-menopausal	gain >=10 vs. loss or gain <2	7	1.18 (1.03, 1.35)		0.002	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	1554	121700.0	medical records	26.0 years	Self-reported	Stable weight change since menopause, excludes women who switched between gain,	Kg	Invasive breast cancer incidence	Post-menopausal	gain >=10 vs. loss or gain <2	7	1.12 (0.96, 1.32)		0.001	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	2173	121700.0	medical records	26.0 years	Self-reported	Increase in weight since menopause	Kg	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	1.06 (1.02, 1.09)			A	C	D	E	F	G	
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 50y to the current age	kg	Breast cancer incidence	non MHT users	>=30.0 vs. -1.9-1.9	7	1.94 (1.23, 3.06)			A	B	C	D	E	F	G

Menopausal status not specified

Radimer, K.L.,2004,BRE16401	Prospective Cohort	usa Framingham Study, 1948	28 - 62	156	48500	Contact by GP	48.0 years	physician administered measurements	from age 56	Kg	Late onset breast cancer incidence		>5 vs. >-2 to 2	6	1.1 (0.6, 1.9)		0.562	A	C	D	E	F	G
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Weight change perimenopausal

Post-menopausal

Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	1162	99039.0	Cancer registry	4.0 4 years		Weight change in the perimenopausal and postmenopausal years, age 50y to the current	kg	Breast cancer incidence	Current MHT users	>=30.0 vs. -1.9-1.9	7	0.99 (0.49, 2.01)		0.66	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		Weight change in the perimenopausal and postmenopausal years, age 50y to the current	kg	Breast cancer incidence	non MHT users	>=30.0 vs. -1.9-1.9	7	1.89 (1.2, 2.97)		<0.001	A	B	C	D	E	F	G

Menopausal status not specified

Radimer, K.L.,2004,BRE16401	Prospective Cohort	usa Framingham Study, 1948	28 - 62	108	31468	Contact by GP	48.0 years		from age 45-55 perimenop	Kg	Late onset breast cancer incidence		> 5 vs. > -1to 1	5	1.0 (0.6, 1.8)		0.921	A	C	D	E	F	G
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Weight change since 18 yrs

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Harvie M.,2005,BRE22559	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	1981	441749	By Mail	15.0 years	waist and hips circumferences were measured.	weight change was considered from 18 years to 30 years and then from 30 years to		Breast cancer incidence	Post-menopausal	no change/loss +loss vs.	6	0.35 (0.21, 0.59)			A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	445	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Breast cancer ER+/PR+ incidence		>=61 vs. >5-20	4	2.42 (1.82, 3.23)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	108	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Breast cancer ER+/PR- or ER-/PR+ incidence		>=61 vs. >5-20	4	1.32 (0.7, 2.49)	0.52		A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	98	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Breast cancer ER-/PR- incidence		>=61 vs. >5-20	4	1.78 (0.98, 3.23)	0.09		A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	865	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Ductal carcinomas incidence		>=61 vs. >5-20	4	1.89 (1.53, 2.34)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	184	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Grade 1 breast cancer incidence		>=61 vs. >5-20	4	2.17 (1.37, 3.44)	0.006		A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	387	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Grade 2 breast cancer incidence		>=61 vs. >5-20	4	1.67 (1.22, 2.29)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	328	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Grade 3 breast cancer incidence		>=61 vs. >5-20	4	2.84 (1.99, 4.06)		<0.001	A	B	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	1394	121700.0	medical records	26.0 years	Self-reported	Weight change since age 18 y, weight change as of current questionnaire cycle,	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers	gain >=25 vs. loss or gain <2	9	1.98 (1.55, 2.53)		<0.001	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	1268	121700.0	medical records	26.0 years	Self-reported	Stable weight change since age 18 y, excludes women who switched between gain,	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers	gain >=25 vs. loss or gain <2	9	1.93 (1.41, 2.63)		<0.001	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	809	121700.0	medical records	26.0 years	Self-reported	Increase in weight from age 18 to menopause, PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers	5.0 (continuous)	1	1.12 (1.08, 1.16)			A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	421	121700.0	medical records	26.0 years	Self-reported	Increase in weight from age 18 to menopause, lighter PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers & BMI <21 at	5.0 (continuous)	1	1.18 (1.12, 1.24)			A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	388	121700.0	medical records	26.0 years	Self-reported	Increase in weight since age 18 to menopause, heavier PMH never users	Kg	Invasive breast cancer incidence	Post-menop & HRT nonusers & BMI >=21 at	5.0 (continuous)	1	1.08 (1.03, 1.13)			A	C	D	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	2687	121700.0	medical records	26.0 years	Self-reported	Weight change since age 18 y, weight change as of current questionnaire cycle,	Kg	Invasive breast cancer incidence	Post-menop & HRT users	gain >=25 vs. loss or gain <2	9	1.2 (1.01, 1.43)		0.05	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	2432	121700.0	medical records	26.0 years	Self-reported	Stable weight change since age 18 y, excludes women who switched between gain,	Kg	Invasive breast cancer incidence	Post-menop & HRT users	gain >=25 vs. loss or gain <2	9	1.19 (0.97, 1.46)		0.82	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	1264	121700.0	medical records	26.0 years	Self-reported	Increase in weight from age 18 to menopause, PMH ever users	Kg	Invasive breast cancer incidence	Post-menop & HRT users	5.0 (continuous)	1	0.97 (0.94, 1.01)			A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	4393	121700.0	medical records	26.0 years	Self-reported	Weight change since age 18 y, weight change as of current questionnaire cycle	Kg	Invasive breast cancer incidence	Post-menopausal	gain >=25 vs. loss or gain <2	9	1.45 (1.27, 1.66)		<0.001	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	3975	121700.0	medical records	26.0 years	Self-reported	Stable weight change since age 18 y, excludes women who switched between gain,	Kg	Invasive breast cancer incidence	Post-menopausal	gain >=25 vs. loss or gain <2	9	1.43 (1.22, 1.68)		0.001	A	C	D	E	F	G	
Eliassen, A.H.,2006,BRE80114	Prospective Cohort	United States, Post-menopausal Nurses' Health Study (NHS) Cohort 1976-2002	30 - 55	2173	121700.0	medical records	26.0 years	Self-reported	Increase in weight from age 18 to menopause	Kg	Invasive breast cancer incidence	Post-menopausal	5.0 (continuous)	1	1.04 (1.01, 1.06)			A	C	D	E	F	G	
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	208	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Lobular and mixed lobular/ductal carcinomas incidence		>=61 vs. >5-20	4	1.54 (1.01, 2.33)		0.06	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	621	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Localized breast cancer incidence	mammographic screening	>=61 vs. >5-20	4	1.64 (1.27, 2.11)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	877	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Localized breast cancer incidence		>=61 vs. >5-20	4	1.68 (1.36, 2.08)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	127	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Non ductal, lobular, or mixed breast carcinomas incidence		>=61 vs. >5-20	4	4.67 (2.72, 8.01)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	183	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Regional and distant breast cancer incidence	mammographic screening	>=61 vs. >5-20	4	3.92 (2.49, 6.17)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	296	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Regional and distant breast cancer incidence		>=61 vs. >5-20	4	3.15 (2.21, 4.48)		<0.001	A	B	C	D	E	F	G
Feigelson, H.S.,2006,BRE80117	Prospective Cohort	United States, White, Post-menopausal CPS-II US cohort, 1982-1998	50 - 74	549	97786.0	Cancer registries and patients records	/ 0.04	Self-reported	Weight gain from age 18	lbs	Unknown ER/PR status incidence		>=61 vs. >5-20	4	1.91 (1.47, 2.48)		<0.001	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	1162	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change in total adulthood, age 18y to the current age	kg	Breast cancer incidence	Current MHT users	>=50.0 vs. -1.9-1.9	9	0.83 (0.43, 1.62)		0.32	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	420	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to current age	kg	Breast cancer incidence	MHT nonusers & age at menarche	>=30.0 vs. -2.0-9.9	5	1.51 (1.11, 2.06)		0.002	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	382	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to current age	kg	Breast cancer incidence	MHT nonusers & age at menarche	>=30.0 vs. -2.0-9.9	5	1.91 (1.38, 2.65)		<0.001	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	57	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to current age	kg	Breast cancer incidence	MHT nonusers & age at menarche	>=30.0 vs. -2.0-9.9	5	0.93 (0.45, 1.92)		0.49	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	75	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to current age	kg	Breast cancer incidence	MHT nonusers & age at menarche	>=30.0 vs. -2.0-9.9	5	4.2 (2.05, 8.64)		<0.001	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	202	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to the current age	kg	Breast cancer ER+/PR+ incidence	non MHT users	>=30.0 vs. -2.0-9.9	5	2.69 (1.74, 4.17)		<0.001	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	44	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to the current age	kg	Breast cancer ER+/PR- incidence	non MHT users	>=30.0 vs. -2.0-9.9	5	1.28 (0.47, 3.48)		0.95	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	53	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to the current age	kg	Breast cancer ER-/PR- incidence	non MHT users	>=30.0 vs. -2.0-9.9	5	0.61 (0.21, 1.82)		0.06	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	189	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to the current age	kg	Breast cancer Unknown ER/PR status incidence	non MHT users	>=30.0 vs. -2.0-9.9	5	1.91 (1.21, 3.02)		<0.001	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	700	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to the current age	kg	In situ or localised breast cancer incidence	non MHT users	>=30.0 vs. -2.0-9.9	5	1.59 (1.25, 2.02)		<0.001	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	250	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Weight change from age 18y to the current age	kg	Regional or distant metastases incidence	non MHT users	>=30.0 vs. -2.0-9.9	5	2.28 (1.53, 3.39)		<0.001	A	B	C	D	E	F	G

Weight change since 30 yrs

Post-menopausal

Harvie M.,2005,BRE22559	Prospective Cohort	USA, Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	1987	442892	By Mail	15.0 years	waist and hips circumferences were measured.	weight change was considered from 30 years to menopause and then from		Breast cancer incidence	Post-menopausal	no change/loss +loss vs.	6	0.46 (0.34, 0.64)			A	B	C	D	E	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G

Weight change, at different age

Post-menopausal

Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	1162	99039.0	Cancer registry	4.0 4 years		Weight change in the late reproductive years, age 35-50y	kg	Breast cancer incidence	Current MHT users	>=30.0 vs. -1.9-1.9	7	1.08 (0.59, 2.01)		0.49	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		Weight change in the late reproductive years, age 35-50y	kg	Breast cancer incidence	non MHT users	>=30.0 vs. -1.9-1.9	7	2.29 (1.51, 3.46)		<0.001	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	948	99039.0	Cancer registry	4.0 4 years		Weight change from ages 35 to 50y	kg	Breast cancer incidence	non MHT users	>=30.0 vs. -1.9-1.9	7	2.23 (1.46, 3.41)			A	B	C	D	E	F	G

Weight change, from 24 to 44 yrs

Menopausal status not specified

Radimer, K.L.,2004,BRE16401	Prospective Cohort	usa Framingham Study, 1948	28 - 62	107	31589	Contact by GP	48.0 years		from age 25-44	Kg	Late onset breast cancer incidence		>15 vs. > -2 to 2	6	0.8 (0.4, 1.6)		0.620	A	C	D	E	F	G
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Weight change, from age 20

Post-menopausal

French, S. A.,1997,BRE02957	Prospective Cohort	USA, Post-menopausal Iowa Women's Health Study	55 - 69	660	31677	Through social organization (profession, religion)	7.0 years / 0.17		at least one gain/lost between 18-62 yrs	%	Breast cancer incidence	Post-menopausal	>10% ++ large gain vs. < 5% +/- no	4	1.29 (1.02, 1.63)			A	B	D	E	F	G	
van den Brandt, P. A.,1997,BRE12717	Case Cohort	The Netherlands, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	500	5711	Unspecified	4.3 years / 0		between age 20 and baseline		Invasive breast cancer incidence	Post-menopausal	>=25 vs. 0 ÷ 4.9	7	1.57 (0.99, 2.47)		0.13	A	C	D	E			
Radimer, K.L.,2004,BRE16401	Prospective Cohort	usa Framingham Study, 1948	28 - 62	50	16486	Contact by GP	48.0 years		from age 25	Kg	Late onset breast cancer incidence	HRT - Yes	>25 vs. >-2 to 2	8	2.6 (0.7, 9.0)		0.071	A						

Menopausal status not specified

Radimer, K.L.,2004,BRE16401	Prospective Cohort	usa Framingham Study, 1948	28 - 62	119	35131	Contact by GP	48.0 years		from age 25	Kg	Late onset breast cancer incidence	HRT - No	>25 vs. >-2 to 2	8	0.8 (0.3, 2.3)		0.478	A						
Radimer, K.L.,2004,BRE16401	Prospective Cohort	usa Framingham Study, 1948	28 - 62	165	51218	Contact by GP	48.0 years		from age 25	Kg	Late onset breast cancer incidence		>25 vs. >-2 to 2	9	1.2 (0.5, 2.7)		0.048	A	C	D	E	F	G	

Weight gain

Pre-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	490	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Weight gain since age 18 y to last followup	kg	Breast cancer incidence	Pre-menopausal	>=25 vs. <10	5	1.17 (0.9, 1.52)			A	B	C	D	F	G	

Post-menopausal

Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	160	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Weight gain since age 18 y to last followup	kg	Breast cancer incidence	Post-menop & HRT nonusers	>=25 vs. <10	5	1.4 (0.84, 2.32)			A	B	C	D	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	443	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Weight gain since age 18 y to last followup	kg	Breast cancer incidence	Post-menopausal	>=25 vs. <10	5	1.09 (0.81, 1.48)			A	B	C	D	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	82	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Weight gain since age 18 y to last followup	kg	Breast cancer ER+/PR+	Post-menopausal	>=25 vs. <15	3	1.29 (0.73, 2.28)			A	B	C	D	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	36	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Weight gain since age 18 y to last followup	kg	Breast cancer ER+/PR- or ER-/PR+	Post-menopausal	>=25 vs. <15	3	0.31 (0.13, 0.77)			A	B	C	D	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	52	59000.0	death certificate / patient records / self report	10.0 years / 0.2	FFQ	Weight gain since age 18 y to last followup	kg	Breast cancer ER-/PR-	Post-menopausal	>=25 vs. <15	3	1.03 (0.52, 2.05)			A	B	C	D	F	G

8.2.1

Waist circumference

Pre-menopausal

Kaaks, R.,1998,BRE04522	Prospective Cohort	The Netherlands DOM-project Utrecht, 1974/1984	39 - 73	147	56645	Through health org. (screening, health insurance)	7.1 years			cm	Breast cancer incidence	Pre-menopausal	>83.51 vs. <71.0	4	0.92 (0.57, 1.5)	0.45		A	C	F				
Huang, Z.,1999,BRE04118	Prospective Cohort	USA, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	197	86341	By Mail		self measured - validated method		inc	Breast cancer incidence	Pre-menopausal	36.0-55.0 vs. 15.0-27.9	5	1.74 (0.74, 4.07)	0.15		A	C	D	F	G		
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	Pre-menopausal	>89.3 vs. <70.9	5	1.81 (1.11, 2.97)	0.16	1	A	B	C	D	E	F	G
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.01 (0.99, 1.03)			A	B	C	D	E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	217	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Waist circumference	cm	Breast cancer incidence	Pre-menopausal	>79.0 vs. <68.9	4	0.58 (0.38, 0.88)	<=0.05		A	B	C	E	F	G	

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments								
																		A	B	C	D	E	F	G		
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	993	37105.0	By Mail	13.0 years	Reported height and weight. Measured waist and hip		inc	Breast cancer PR+ incidence	Post-menopausal	>39.1 vs. <29.75	5	1.1 (0.78, 1.57)						B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	362	37105.0	By Mail	13.0 years	Reported height and weight. Measured waist and hip		inc	Breast cancer PR- incidence	Post-menopausal	>39.1 vs. <29.75	5	0.98 (0.56, 1.72)						B	C	D	E	F	G
Lahmann, Petra, H.,2003,BRE20119	Prospective Cohort	Sweden, White, Post-menopausal Malmo Diet and Cancer, 1991	50 - 73	236	12159.0	By Mail	5.7 years			cm	Invasive & In situ breast cancer incidence		>86.1 vs. <69.9	5	1.14 (0.62, 2.12)	0.88	1			A	C	D	E	F	G	
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	HRT - Yes	>89.3 vs. <70.9	5	0.68 (0.41, 1.12)	0.16	9			A	B	C	D	E	G	
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	HRT - Yes	1.0 (continuous)	1	1.0 (0.97, 1.03)						A	B	C	D	E	G
Mattisson, I.,2004,BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years				Breast cancer incidence	Post-menopausal		1	null (null, null)											
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years				Breast cancer incidence	Post-menopausal		1	null (null, null)											
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, South European (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	Waist circumference		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.5 (1.1, 2.1)					A	B				F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, South European (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	Waist circumference	cm	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.13 (1.03, 1.24)	0.00	7			A	B				F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	Recorded by trained technician. height measured	Waist circumference	cm	Breast cancer incidence	HRT ever	>89.0 vs. 74.0 - 80.9	4	0.94 (0.71, 1.24)					A	B	C	E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	Recorded by trained technician. height measured	Waist circumference	cm	Breast cancer incidence	HRT ever	5.0 (continuous)	1	0.98 (0.93, 1.03)	0.39				A	B	C	E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	Recorded by trained technician. height measured	Waist circumference	cm	Breast cancer incidence	HRT never	>89.0 vs. 74.0 - 80.9	4	0.97 (0.66, 1.41)					A	B	C	E	G		
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	Recorded by trained technician. height measured	Waist circumference	cm	Breast cancer incidence	HRT never	5.0 (continuous)	1	1.01 (0.95, 1.06)	0.88				A	B	C	E	G		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1072	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Waist circumference	cm	Breast cancer incidence	Post-menopausal	>81.0 vs. <69.9	4	1.21 (0.95, 1.54)		<=0.05	A	B	C	E	F	G	
Rinaldi S.,2006,BRE80101	Nested Case Control	The Netherlands, UK, Germany, Spain, Italy, Greece, France, Post-menopausal		613	1139	Population cancer registries and other		Measured and self-report	Waist circumference	cm	Invasive & In situ breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.12 (1.02, 1.24)				C					
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)	350	9704.0	Self report verified by medical record	11.3 years / 0.23	Self reported and measured	Waist circumference	cm	Invasive breast cancer incidence	Post-menopausal	>91.3 vs. <75.7	4	1.4 (0.98, 1.98)	0.03		A	B	C	D	F	G	
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	830	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Waist circumference	cm	Breast cancer incidence	Current MHT users	>103 vs. <=75	6	1.07 (0.8, 1.43)	0.71		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	618	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Waist circumference	cm	Breast cancer incidence	non MHT users	>103 vs. <=75	6	1.55 (1.16, 2.06)	<0.001		A	B	C	D	E	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	142	59000.0	death certificate / patient records / self report	10.0 years / 0.2	Self-reported	Waist circumference	inches	Breast cancer incidence	Post-menop & HRT nonusers	>=37 vs. <28	5	0.98 (0.53, 1.83)			A	B	C		F	G	
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	393	59000.0	death certificate / patient records / self report	10.0 years / 0.2	Self-reported	Waist circumference	inches	Breast cancer incidence	Post-menopausal	>=37 vs. <28	5	0.93 (0.65, 1.33)			A	B	C		F	G	

Menopausal status not specified

Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	911	78119	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	HRT - No	>89.3 vs. <70.9	5	1.21 (0.87, 1.67)	0.192		A	B	C	D	E	G
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	911	78119	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	HRT - No	1.0 (continuous)	1	1.01 (1.0, 1.02)			A	B	C	D	E	G
Wu, M. H.,2006,BRE24628	Prospective Cohort	China, Asian, Screening Program Taiwan 1990	(47)	104	11828	Through health org. (screening, health insurance)	10.3 years	at baseline		cm	Breast cancer incidence		>83 vs. <71	4	0.7 (0.2, 2.5)				C	D		G	

8.2.2

Hips circumference

Pre-menopausal

Kaaks, R.,1998,BRE04522	Prospective Cohort	The Netherlands DOM-project Utrecht, 1974/1984	39 - 73	147	56645	Through health org. (screening, health insurance)	7.1 years			cm	Breast cancer incidence	Pre-menopausal	>106.1 vs. <96.0	4	0.69 (0.43, 1.12)	0.28		A		C		F	
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Huang, Z,1999,BRE04118	Prospective Cohort	USA, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	197	86341	By Mail		self measured - validated method		inc	Breast cancer incidence	Pre-menopausal	43.0-65.0 vs. 20.0-36.9	5	0.56 (0.26, 1.21)		0.05	A	C	D	F	G		
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	Pre-menopausal	>108.0 vs. <93.9	5	1.7 (1.05, 2.77)		0.030	A	B	C	D	E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	218	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Hip circumference	cm	Breast cancer incidence	Pre-menopausal	>100.0 vs. <89.9	4	0.88 (0.43, 1.31)		>0.05	A	B	C	E	F	G	

Post-menopausal

den Tonkelaar, I.,1995,BRE02224	Prospective Cohort	netherlands, Screening Program DOM-project Utrecht, 1974/1984	40 - 73	38	3530	Through health org. (screening, health insurance)	4.0 years / 5%	measurements performed by trained personnel		cm	Breast cancer incidence	Post-menopausal	>106.0 vs. <99.29	3	1.51 (0.68, 3.36)		0.21	A							
Kaaks, R.,1998,BRE04522	Prospective Cohort	The Netherlands DOM-project Utrecht, 1974/1984	39 - 73	76	34361	Through health org. (screening, health insurance)	7.1 years			cm	Breast cancer incidence	Post-menopausal	>106.1 vs. <96.0	4	1.17 (0.58, 2.35)		0.68	A	C		F				
Huang, Z,1999,BRE04118	Prospective Cohort	USA, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	840	246756	By Mail		self measured - validated method		inc	Breast cancer incidence	Post-menopausal	43.0-65.0 vs. 20.0-36.9	5	1.07 (0.76, 1.51)		.71	A	C	D	F	G			
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	319	85917.0	Through network, paper, tv	34.8 months / 0.037	measurements performed by clinical staff		cm	Breast cancer incidence	HRT - No	>113.1 vs. <95.5	5	2.43 (1.58, 3.73)		0.001	A	B	C	E	F	G		
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	708	85917.0	Through network, paper, tv	34.8 months / 0.037	measurements performed by clinical staff		cm	Breast cancer incidence	HRT - Yes	>113.1 vs. <95.5	5	0.82 (0.63, 1.08)		0.30	A	B	C	E	F	G		
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	HRT - Yes	>108.1 vs. <93.9	5	1.02 (0.61, 1.69)		0.873	A	B	C	D	E	G		
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	Hip circumference		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.5 (1.1, 2.1)			A	B		F	G			
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, australian, south european (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	Hip circumference	cm	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.16 (1.05, 1.28)		0.005	A	B		F	G			
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	Recorded by trained technician. height measured	Hip circumference	cm	Breast cancer incidence	HRT ever	>107.0 vs. 97.0 - 101.9	4	1.06 (0.8, 1.4)			A	B	C	E	F	G		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	Recorded by trained technician. height measured	Hip circumference	cm	Breast cancer incidence	HRT ever	5.0 (continuous)	1	1.03 (0.97, 1.09)		0.33	A	B	C	E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	Recorded by trained technician. height measured	Hip circumference	cm	Breast cancer incidence	HRT never	>107.0 vs. 97.0 - 101.9	4	1.07 (0.74, 1.53)			A	B	C	E	G		
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	Recorded by trained technician. height measured	Hip circumference	cm	Breast cancer incidence	HRT never	5.0 (continuous)	1	1.05 (0.98, 1.13)	1.05		A	B	C	E	G		
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1071	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Hip circumference	cm	Breast cancer incidence	Post-menopausal	>102.0 vs. <91.9	4	1.2 (0.96, 1.5)	>0.05		A	B	C	E	F	G	
Rinaldi S.,2006,BRE80101	Nested Case Control	The Netherlands, UK, Germany, Spain, Italy, Greece, France, Post-menopausal		613	1139	Population cancer registries and other		Measured and self-report	Hip circumference	cm	Invasive & In situ breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.14 (1.02, 1.27)				C					
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	830	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Hip circumference	cm	Breast cancer incidence	Current MHT users	>130 vs. <=90	6	0.97 (0.55, 1.71)	0.5		A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	618	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Hip circumference	cm	Breast cancer incidence	non MHT users	>130 vs. <=90	6	1.49 (0.89, 2.48)	<0.001		A	B	C	D	E	F	G

Menopausal status not specified

Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	911	78119	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	HRT - No	>108.1 vs. <93.9	5	1.56 (1.12, 2.17)	0.002		A	B	C	D	E	G
Wu, M. H.,2006,BRE24628	Prospective Cohort	China, Asian, Screening Program Taiwan 1990	(47)	104	11827	Through health org. (screening, health insurance)	10.3 years	at baseline		cm	Breast cancer incidence		>100 vs. <90	4	2.8 (1.1, 9.4)					C	D		

8.2.3

Waist to hip ratio

Pre-menopausal

Kaaks, R.,1998,BRE04522	Prospective Cohort	The Netherlands DOM-project Utrecht, 1974/1984	39 - 73	147	56646	Through health org. (screening, health insurance)	7.1 years				Breast cancer incidence	Pre-menopausal	>0.801 vs. <0.73	4	0.96 (0.6, 1.54)	0.97		A		C			F
Sonnenschein, E.,1999,BRE11604	Prospective Cohort	USA, Multi-ethnic New York Women's Health Study, 1985	35 - 65	109	4366	Through health org. (screening, health insurance)	6.6 years	measurments			Breast cancer incidence	Pre-menopausal	>0.779 vs. <0.697	4	1.72 (0.96, 3.08)			A		C		F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Huang, Z,1999,BRE04118	Prospective Cohort	USA, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	197	86341	By Mail		self measured - validated method			Breast cancer incidence	Pre-menopausal	>=0.84 vs. <0.73	5	1.43 (0.86, 2.37)		0.13	A	C	D	F	G			
Sonnenschein, E.,1999,BRE11604	Prospective Cohort	USA, Multi-ethnic New York Women's Health Study, 1985	35 - 65	60	2192	Through health org. (screening, health insurance)	6.6 years	measurements			Breast cancer incidence	Pre-menopausal & Lean	>0.779 vs. <0.697	4	1.15 (0.4, 3.0)			A	C		F	G			
Sonnenschein, E.,1999,BRE11604	Prospective Cohort	USA, Multi-ethnic New York Women's Health Study, 1985	35 - 65	49	2174	Through health org. (screening, health insurance)	6.6 years	measurements			Breast cancer incidence	Pre-menopausal & Overweight	>0.779 vs. <0.697	4	2.42 (0.8, 7.0)			A	C		F	G			
Muti P,2000,BRE80180	Nested Case Control	Italy	35 - 69	70	277	Cancer registry	5.5 years / 0.09	Measured by nurses based on a standard protocol	Waist/hip ratio		Invasive breast cancer incidence	Pre-menopausal	>0.8 vs. <0.75	3	2.2 (1.0, 4.8)		0.03	A		D		G			
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years	measurements performed by trained personnel			Breast cancer incidence	Pre-menopausal	>0.847 vs. <0.736	5	1.05 (0.74, 1.5)		0.657	A	B	C	D	E	F	G	
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years	measurements performed by trained personnel		unit	Breast cancer incidence	Pre-menopausal	0.01 (continuous)	1	0.99 (0.98, 1.01)				A	B	C	D	E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	217	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Waist-hip-ratio		Breast cancer incidence	Pre-menopausal	>0.82 vs. <0.73	4	0.6 (0.39, 0.91)		>0.05	A	B	C		E	F	G	
Palmer, J.R. et al.,2007,BRE0122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	429	59000.0	death certificate / patient records / self report	10.0 years / 0.2	Self-reported	Waist to hip ratio		Breast cancer incidence	Pre-menopausal	>=0.87 vs. <0.71	5	1.16 (0.85, 1.59)			A	B	C		F	G		
Kirsh VA,2007,PRO99982	Nested Case Control			70	277				Waist/hip ratio		Breast cancer Incidence	Pre-menopausal	>0.8 vs. <0.74	3	2.2 (1.0, 4.8)		0.03								

Post-menopausal

Folsom, AR,1990,BRE02836	Nested Case Control	USA, Post-menopausal Iowa Women's Health Study	55 - 69	224	1806	By Mail	2.0 years	self measured; reliability and accuracy of measurements			Breast cancer incidence	Post-menopausal	>0.8732 vs. <0.7939	3	1.39 (0.99, 1.96)		0.06	A							
Gapstur, S. M.,1992,BRE03101	Prospective Cohort	U.S.A., Not specified, Post-menopausal Iowa Women's Health Study	55 - 69	489	140091	By Mail	4.0 years	self-report of the current height and weight and self-			Breast cancer incidence	Post-menopausal	>0.91 vs. <0.76	5	1.5 (1.13, 2.0)		0.005	A							
den Tonkelaar, I.,1995,BRE02224	Prospective Cohort	netherlands, Screening Program DOM-project Utrecht, 1974/1984	40 - 73	38	3530	Through health org. (screening, health insurance)	4.0 years / 5%	measurements performed by trained personnel			Breast cancer incidence	Post-menopausal	>0.8 vs. <0.759	3	1.89 (0.8, 4.48)		0.11	A							

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	1043	37105.0	By Mail	13.0 years	Reported height and weight. Measured waist and hip			Breast cancer ER+ incidence	Post-menopausal	>0.91 vs. <0.76	5	1.01 (0.82, 1.26)					B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	232	37105.0	By Mail	13.0 years	Reported height and weight. Measured waist and hip			Breast cancer ER- incidence	Post-menopausal	>0.91 vs. <0.76	5	0.81 (0.5, 1.31)					B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	993	37105.0	By Mail	13.0 years	Reported height and weight. Measured waist and hip			Breast cancer PR+ incidence	Post-menopausal	>0.91 vs. <0.76	5	1.05 (0.83, 1.34)					B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	362	37105.0	By Mail	13.0 years	Reported height and weight. Measured waist and hip			Breast cancer PR- incidence	Post-menopausal	>0.91 vs. <0.76	5	0.88 (0.6, 1.3)					B	C	D	E	F	G
Lahmann, Petra, H.,2003,BRE20119	Prospective Cohort	Sweden, White, Post-menopausal Malmo Diet and Cancer, 1991	50 - 73	236	12159.0	By Mail	5.7 years				Invasive & In situ breast cancer incidence		>0.838 vs. <0.749	5	1.23 (0.79, 1.92)	0.25	2	A		C	D	E	F	G	
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years	measurements performed by trained personnel			Breast cancer incidence	HRT - Yes	>0.847 vs. <0.736	5	0.85 (0.6, 1.2)	0.25		A	B	C	D	E		G	
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	494	23820	Other procedure	4.7 years	measurements performed by trained personnel		unit	Breast cancer incidence	HRT - Yes	0.01 (continuous)	1	1.0 (0.97, 1.03)				A	B	C	D	E		G
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years				Breast cancer incidence	Post-menopausal		1	null (null, null)										
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, South European (Greek, Italian), Post menopaual Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	WHR		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.2 (0.8, 1.6)				A	B				F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, South European (Greek, Italian), Post menopaual Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	WHR	unit	Invasive breast cancer incidence	Post-menopausal	0.1 (continuous)	1	1.1 (0.94, 1.29)	0.23		A	B					F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	Recorded by trained technician. height measured	WHR		Breast cancer incidence	HRT ever	>0.85 vs. 0.79 - 0.84	4	0.89 (0.68, 1.17)				A	B	C		E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	416	11576	Cancer registry	6.1 years	Recorded by trained technician. height measured	WHR		Breast cancer incidence	HRT ever	0.05 (continuous)	1	0.92 (0.86, 0.99)	0.03		A	B	C		E	F	G	
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	Recorded by trained technician. height measured	WHR		Breast cancer incidence	HRT never	>0.85 vs. 0.79 - 0.84	4	1.08 (0.75, 1.55)				A	B	C		E		G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Mellemkjoer et al.,2006,BRE80039	Prospective Cohort	Danmark, Post-menopausal Diet, Cancer and Health, 1993	50 - 65	217	11579	Cancer registry	6.1 years	Recorded by trained technician. height measured	WHR		Breast cancer incidence	HRT never	0.05 (continuous)	1	0.95 (0.86, 1.04)		0.24	A	B	C	E	G		
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1071	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Waist-hip-ratio		Breast cancer incidence	Post-menopausal	>0.82 vs. <0.74	4	1.03 (0.83, 1.28)		>0.05	A	B	C	E	F	G	
Rinaldi S.,2006,BRE80101	Nested Case Control	The Netherlands, UK, Germany, Spain, Italy, Greece, France, Post-menopausal		613	1139	Population cancer registries and other		Measured and self-report	Waist-hip-ratio		Invasive & In situ breast cancer incidence	Post-menopausal	Quantile 5 vs. Quantile 1	5	null (null, null)		>0.05			C				
Krebs E.E.,2006,BRE80106	Prospective Cohort	United States, White, Post-menopausal Study of Osteoporotic Fractures, 1986	65 - (74)	350	9704.0	Self report verified by medical record	11.3 years / 0.23	Self reported and measured	Waist-hip-ratio		Invasive breast cancer incidence	Post-menopausal	>0.89 vs. <0.78	4	1.37 (0.98, 1.92)		0.12	A	B	C	D	F	G	
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	790	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Waist to hip ratio		Breast cancer incidence	Current MHT users	>0.94 vs. <=0.7	6	1.0 (0.66, 1.51)		0.18	A	B	C	D	E	F	G
Ahn, J. et al.,2007,BRE80139	Prospective Cohort	United States, Multi-ethnic, Post menopausal NIH- AARP Diet and Health Study	50 - (63)	618	99039.0	Cancer registry	4.0 4 years	Self-reported in questionnaire	Waist to hip ratio		Breast cancer incidence	non MHT users	>0.94 vs. <=0.7	6	1.88 (1.1, 3.23)		<0.001	A	B	C	D	E	F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	136	59000.0	death certificate / patient records / self report	10.0 years / 0.2	Self-reported	Waist to hip ratio		Breast cancer incidence	Post-menop & HRT nonusers	>=0.87 vs. <0.71	5	1.17 (0.7, 1.97)				A	B	C		F	G
Palmer, J.R. et al.,2007,BRE80122	Prospective Cohort	United States, Black Black Women's Health Study, 1995	21 - 69	382	59000.0	death certificate / patient records / self report	10.0 years / 0.2	Self-reported	Waist to hip ratio		Breast cancer incidence	Post-menopausal	>=0.87 vs. <0.71	5	1.01 (0.74, 1.4)				A	B	C		F	G
Kirsh VA,2007,PRO99982	Nested Case Control			64	253				Waist/hip ratio		Breast cancer Incidence	Post-menopausal	>0.8 vs. <0.74	3	1.1 (0.6, 2.2)		0.9				D			

Menopausal status not specified

Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	911	78119	Other procedure	4.7 years	measurements performed by trained personnel			Breast cancer incidence	HRT - No	>0.847 vs. <0.736	5	0.94 (0.74, 1.21)		0.740	A	B	C	D	E	G
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	911	78119	Other procedure	4.7 years	measurements performed by trained personnel		unit	Breast cancer incidence	HRT - No	0.01 (continuous)	1	0.99 (0.98, 1.01)			A	B	C	D	E	G
Wu, M. H.,2006,BRE24628	Prospective Cohort	China, Asian, Screening Program Taiwan 1990	(47)	104	11826	Through health org. (screening, health insurance)	10.3 years	at baseline			Breast cancer incidence		>0.85 vs. <0.77	4	0.6 (0.3, 1.2)		0.3065	A		D			

8.2.4

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G

Skinfold ratio

Pre-menopausal

Ballard-Barbash, R.,1990,BRE00515	Prospective Cohort	USA Framingham Study, 1948	(50)	47	821		28.0 years / 0.03		sum of trunkal skinfolds (chest, subscapular and abdominal) divided by the sum of		Breast cancer incidence	Pre-menopausal	>1.61 vs. <1.39	4	1.2 (0.6, 2.4)		ns	A	B	C	D						
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Post-menopausal

Ballard-Barbash, R.,1990,BRE00515	Prospective Cohort	USA Framingham Study, 1948	(50)	55	1267		28.0 years / 0.03		sum of trunkal skinfolds (chest, subscapular and abdominal) divided by the sum of		Breast cancer incidence	Post-menopausal	>1.61 vs. <1.39	4	2.1 (1.0, 4.6)		ns	A	B	C	D						
den Tonkelaar, I.,1992,BRE02222	Prospective Cohort	the Neederlands, Not specified, Post-menopausal DOM-project Utrecht, 1974/1984	49 - 66	260	121773	Through health org. (screening, health insurance)	12.5 years / 4%		combination of subscapular and triceps measures		Breast cancer incidence	Post-menopausal	truncal obesity vs. reference	5	1.11 (0.74, 1.67)			A		C					F		

Menopausal status not specified

Ballard-Barbash, R.,1990,BRE00515	Prospective Cohort	USA Framingham Study, 1948	(50)	103	2201		28.0 years / 0.03		sum of trunkal skinfolds (chest, subscapular and abdominal) divided by the sum of		Breast cancer incidence		>1.61 vs. <1.39	4	1.6 (0.9, 2.6)	0.14		A	B	C	D						
Ballard-Barbash, R.,1990,BRE00515	Prospective Cohort	USA Framingham Study, 1948	(50)	67	1457		28.0 years / 0.03		sum of trunkal skinfolds (chest, subscapular and abdominal) divided by the sum of		Breast cancer incidence	Overweight	>1.61 vs. <1.39	4	1.7 (0.9, 3.4)		ns	A	B	C	D						

8.2.5

Bra cup size

Pre-menopausal

Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	218	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Breast circumference	cm	Breast cancer incidence	Pre-menopausal	>96.0 vs. <86.9	4	0.68 (0.45, 1.03)		<=0.05	A	B	C		E	F	G		
Kusano A. S.,2006,BRE23001	Prospective Cohort	USA, Registered nurses NHS II, 1989	29 - 47	803	622732	Through social organization (profession, religion)	8.0 years	reported in a mailed questionnaire	at 20		Invasive breast cancer incidence	Pre-menopausal	D vs. A	4	1.27 (0.9, 1.78)					C	D	E	F	G		
Kusano A. S.,2006,BRE23001	Prospective Cohort	USA, Registered nurses NHS II, 1989	29 - 47	460	351370	Through social organization (profession, religion)	8.0 years	reported in a mailed questionnaire			Invasive breast cancer incidence	Pre-menopausal & Lean	D vs. A	4	1.8 (1.13, 2.88)					C	D	E	F	G		
Kusano A. S.,2006,BRE23001	Prospective Cohort	USA, Registered nurses NHS II, 1989	29 - 47	343	271361	Through social organization (profession, religion)	8.0 years	reported in a mailed questionnaire			Invasive breast cancer incidence	Pre-menopausal & Overweight	D vs. A	4	0.84 (0.51, 1.37)					C	D	E	F	G		

Post-menopausal

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1053	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Breast circumference	cm	Breast cancer incidence	Post-menopausal	>98.0 vs. <87.9	4	1.16 (0.93, 1.45)		>0.05	A	B	C	E	F	G	

Somatotype around menarche

Pre-menopausal

Tehard, B.,2005,BRE24298	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	884	308904	By Mail	11.4 years				Breast cancer incidence	Pre-menopausal	>5 vs. 1	5	0.79 (0.51, 1.22)		0.05		B	C	D	F	G
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Post-menopausal

Tehard, B.,2005,BRE24298	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	2372	637858	By Mail	11.4 years				Breast cancer incidence	Post-menopausal	>5 vs. 1	5	0.84 (0.66, 1.08)		0.001		B	C	D	F	G
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Somatotype at 18 yrs

Pre-menopausal

Tehard, B.,2005,BRE24298	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	896	317681	By Mail	11.4 years				Breast cancer incidence	Pre-menopausal	>5 vs. 1	5	0.97 (0.54, 1.76)		0.99		B	C	D	F	G
Baer H.J.,2005,BRE21666	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42	1318	1044691	Through social organization (profession, religion)	12.0 years				Breast cancer incidence	Pre-menopausal	somat>=5 vs. somatot.1	5	0.7 (0.52, 0.94)		0.0001	A	C	D	E	F	G

Post-menopausal

Tehard, B.,2005,BRE24298	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	2446	667131	By Mail	11.4 years				Breast cancer incidence	Post-menopausal	>5 vs. 1	5	0.93 (0.68, 1.25)		0.99		B	C	D	F	G
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Somatotype at 7 yrs

Pre-menopausal

Tehard, B.,2005,BRE24298	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	868	303682	By Mail	11.4 years				Breast cancer incidence	Pre-menopausal	>5 vs. 1	5	0.82 (0.46, 1.47)		0.05		B	C	D	F	G
Baer H.J.,2005,BRE21666	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42		109267.0	Through social organization (profession, religion)	12.0 years				Breast cancer incidence	Pre-menopausal	somat>=5 vs. somat 1	5	0.47 (0.34, 0.64)		0.0001	A	C	D	E	F	G

Post-menopausal

Tehard, B.,2005,BRE24298	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	2328	627346	By Mail	11.4 years				Breast cancer incidence	Post-menopausal	>5 vs. 1	5	0.69 (0.48, 1.01)		0.01		B	C	D	F	G
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Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G

Somatotype change from age 10 to 20

Pre-menopausal

Baer H.J.,2005,BRE21666	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42	1318	1044691	Through social organization (profession, religion)	12.0 years				Breast cancer incidence	Pre-menopausal	increased 2 or more level vs. no change	4	0.92 (0.76, 1.1)			A	C	D	E	F	G
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Somatotype change from age 5 to 10

Pre-menopausal

Baer H.J.,2005,BRE21666	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42	1318	1044692	Through social organization (profession, religion)	12.0 years				Breast cancer incidence	Pre-menopausal	increased 2 or more level vs. no change	4	0.79 (0.62, 1.0)			A	C	D	E	F	G
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Somatotype change from age 5 to 20

Pre-menopausal

Baer H.J.,2005,BRE21666	Prospective Cohort	USA, Not specified, Registered nurses NHS II, 1989	25 - 42	1318	1044691	Through social organization (profession, religion)	12.0 years				Breast cancer incidence	Pre-menopausal	increased 2 or more level vs. no change	4	0.86 (0.74, 1.02)			A	C	D	E	F	G
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8.3.1

Current Height

Pre-menopausal

Tornberg, S. A.,1988,BRE12418	Prospective Cohort	Sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years	measured height and weight	women<50 yrs. of age	cm	Breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	1.11 (0.98, 1.27)			A					G
Vatten, L. J.,1992,BRE12828	Prospective Cohort	Norway, Not specified, Screening Program Norway, 1974	26 - 49	164	211077	Through health org. (screening, health insurance)	14.0 years	Measured	<=50 yrs.	cm	Breast cancer incidence	Pre-menopausal	>167.0 vs. <158.9	4	1.62 (1.23, 2.14)	0.001		A	C				G
De Stavola, B. L.,1993,BRE02122	Prospective Cohort	United Kingdom, Not specified Guernsey G2 and G3		73	4528.0	Through network, paper, tv	15.0 years / 0	measurements performed by trained personnel		cm	Breast cancer incidence	Pre-menopausal	>166.0 vs. <157.9	4	1.3 (0.7, 2.5)	0.36		A	D	F			
Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	91	11580.0	Unspecified	27.0 years / 0.6%			cm	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.036 (0.998, 1.076)			A					
Kaaks, R.,1998,BRE04522	Prospective Cohort	The Netherlands DOM-project Utrecht, 1974/1984	39 - 73	147	56646	Through health org. (screening, health insurance)	7.1 years			cm	Breast cancer incidence	Pre-menopausal	>169.1 vs. <160.8	4	1.28 (0.78, 2.11)	0.25		A	C		F		

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	806	465279	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	adult	inc	Breast cancer incidence	Pre-menopausal	>67.0 vs. <62.0	6	1.11 (null, null)		.56	A	B	C	D	E	F	G
Saadatian-Elahi, M.,2002,BRE21486	Nested Case Control	US, Not specified New York Women's Health Study, 1985	34 - 65	91	91	Through network, paper, tv	4.3 years				Breast cancer incidence	Pre-menopausal		1	null (null, null)									
Weiderpass, E.,2004,BRE18151	Prospective Cohort	Sweden+Norway, Not specified, Pre-menopausal Assembled cohort (Sweden + Norway)	30 - 49	728	97717	By Mail	8.0 years / 789 women	self reported in a questionnaire	adult		Breast cancer incidence	Pre-menopausal	>=175 vs. 165-169	5	0.91 (0.67, 1.23)		0.03	A		C			F	G

Post-menopausal

Tornberg, S. A.,1988,BRE12418	Prospective Cohort	sweden, Not specified, Screening Program Swedish cohort, 1963	17 - 74		46570.0	Through health org. (screening, health insurance)	20.0 years	measured height and weight	>=50 yrs. of age	cm	Breast cancer incidence	Post-menopausal	5.0 (continuous)	1	1.1 (1.07, 1.13)			A						G
den Tonkelaar, I.,1992,BRE02222	Prospective Cohort	the Neederlands, Not specified, Post-menopausal DOM-project Utrecht, 1974/1984	49 - 66		9746.0	Through health org. (screening, health insurance)	12.5 years / 4%	direct measures by trained assistants		cm	Breast cancer incidence	Post-menopausal	>166.0 vs. <157.0	4	1.0 (0.7, 1.43)		0.99	A						
De Stavola, B. L.,1993,BRE02122	Prospective Cohort	United Kingdom, Not specified Guernsey G2 and G3		95	4528.0	Through network, paper, tv	15.0 years / 0	measurements performed by trained personnel		cm	Breast cancer incidence	Post-menopausal	>166.0 vs. <157.9	4	1.9 (1.1, 3.3)		0.02	A		D		F		
Tulinus, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59	343	11580.0	Unspecified	27.0 years / 0.6%			cm	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.025 (1.005, 1.045)			A						
van den Brandt, P. A.,1997,BRE12717	Case Cohort	The Netherlands, Post-menopausal The Netherlands Cohort Study on diet and cancer,	55 - 69	553	6283	Unspecified	4.3 years / 0	self-administered questionnaire		cm	Invasive breast cancer incidence	Post-menopausal	>=175 vs. <=155	6	2.06 (1.17, 3.63)		<0.001	A		C		E		
Kaaks, R.,1998,BRE04522	Prospective Cohort	The Netherlands DOM-project Utrecht, 1974/1984	39 - 73	76	34362	Through health org. (screening, health insurance)	7.1 years			cm	Breast cancer incidence	Post-menopausal	>169.1 vs. <160.8	4	0.96 (0.46, 1.98)		0.53	A		C		F		
Berkey, C. S.,1999,BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1485	561104	Through health org. (screening, health insurance)	16.0 years	self administered questionnaire. The analysis	adult	inc	Breast cancer incidence	Post-menopausal	>67.0 vs. <62.0	6	1.29 (null, null)		0.005	A	B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	1368	28599	By Mail	13.0 years	Reported height and weight. Measured waist and hip		inc	Breast cancer incidence	Family History BC - No & Post-menopausal	>66.1 vs. <62.0	5	1.02 (0.85, 1.22)		0.55		B	C	D	E	F	G
Sellers, Thomas, A.,2002,BRE20892	Prospective Cohort	USA, Multi-ethnic, Post-menopausal Iowa Women's Health Study	55 - 69	282	3950	By Mail	13.0 years	Reported height and weight. Measured waist and hip		inc	Breast cancer incidence	Family History BC - Yes & Post-menopausal	>66.1 vs. <62.0	5	1.18 (0.82, 1.69)		0.46		B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	P value	P trend	adjustments									
																		A	B	C	D	E	F	G			
Tulinius, H.,1997,BRE12565	Prospective Cohort	Iceland Reykjavik Study, 1968	45 - 59		11580.0	Unspecified	27.0 years / 0.6%			cm	Breast cancer incidence		1.0 (continuous)	1	1.029 (1.012, 1.047)			A									
Cerhan, J. R.,2004,BRE01495	Prospective Cohort	USA, Not specified Minnesota, 1944		61	72775	Through health org. (screening, health insurance)	5.0 years / 20 families	self reported by telephone interview and mailed		m	Breast cancer incidence	Family History BC - No	>1.66 vs. <1.59	3	0.63 (0.31, 1.28)		0.23	A									G
Cerhan, J. R.,2004,BRE01495	Prospective Cohort	USA, Not specified Minnesota, 1944		33	13473	Through health org. (screening, health insurance)	5.0 years / 20 families	self reported by telephone interview and mailed		m	Breast cancer incidence	Family History BC - Yes	>1.66 vs. <1.59	3	1.41 (0.59, 3.34)		0.43	A									G
Wu, M. H.,2006,BRE24628	Prospective Cohort	China, Asian, Screening Program Taiwan 1990	(47)	104	11833	Through health org. (screening, health insurance)	10.3 years	at baseline		cm	Breast cancer incidence		>=160 vs. <=150	4	1.0 (0.6, 1.8)		0.79 63	A				D					

Height

Pre-menopausal

Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	201	53857.0	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer incidence	premenopausal women	160+ vs. <148	5	1.48 (0.79, 2.74)		0.08	A		C		E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	62	20871	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer ER+ incidence	premenopausal women	1.0 (continuous)	1	1.03 (0.99, 1.07)			A		C		E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	41	20871	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer ER- incidence	premenopausal women	1.0 (continuous)	1	1.03 (0.97, 1.09)			A		C		E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	53	20871	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer PR+ incidence	premenopausal women	1.0 (continuous)	1	1.03 (0.98, 1.07)			A		C		E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	42	20871	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer PR- incidence	premenopausal women	1.0 (continuous)	1	1.04 (0.99, 1.09)			A		C		E						

Post-menopausal

Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, South European (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	Height		Invasive breast cancer incidence	Post-menopausal	Quantile 4 vs. Quantile 1	4	1.6 (1.1, 2.2)			A	B							F	G
Macinnis, R.J et al.,2004,BRE80159	Prospective Cohort	Australia, Australian, South European (Greek, Italian), Post menopausal Melbourne Collaborative			0.0	medical records		Direct anthropometric measurements	Height	cm	Invasive breast cancer incidence	Post-menopausal	10.0 (continuous)	1	1.27 (1.07, 1.52)		0.00 8	A	B							F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	229	53857.0	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer incidence	postmenopausal women	160+ vs. <148	5	2.39 (1.43, 3.98)		0.003		A	C	E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	65	29168	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer ER+ incidence	postmenopausal women	1.0 (continuous)	1	1.0 (0.95, 1.05)				A	C	E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	41	29168	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer ER- incidence	postmenopausal women	1.0 (continuous)	1	1.06 (1.02, 1.12)				A	C	E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	46	29168	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer PR+ incidence	postmenopausal women	1.0 (continuous)	1	1.02 (0.96, 1.07)				A	C	E						
Iwasaki et al.,2007,BRE20027	Prospective Cohort	Japan JPHC, 1990	40 - 69	55	29168	Cancer registry	9.9 years / 0.05	self-reported	Height	cm	Breast cancer PR- incidence	postmenopausal women	1.0 (continuous)	1	1.03 (0.98, 1.08)				A	C	E						

Menopausal status not specified

Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	764	764			Measured	Baseline height, co-twin control analyses of dizygotic twins, Finland & Sweden, Quartiles:		Breast cancer incidence	Dizygotic twins	Quantile 4 vs. Quantile 1	4	1.9 (1.3, 2.8)					B	C						G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	402	402			Measured	Baseline height, co-twin control analyses of Monozygotic twins, Finland & Sweden,		Breast cancer incidence	monozygotic twins	Quantile 4 vs. Quantile 1	4	1.9 (0.7, 5.1)					B	C						G
Lundqvist et al.,2007,BRE80002	Prospective Cohort	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	1644	66731	Cancer registry	25.2 years	Measured	Baseline height, cohort analysis, Swedish and Finnish twin registries		Breast cancer incidence		Quantile 4 vs. Quantile 1	4	1.6 (1.4, 1.8)				A	B	C						G
Lundqvist et al.,2007,BRE80002	Prospective Cohort	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	1644	66731	Cancer registry	25.2 years	Measured	Baseline height, cohort analysis, Swedish and Finnish twin registries	standard deviation	Breast cancer incidence		1.0 (continuous)	1	1.17 (1.12, 1.24)		<0.001		A	B	C						G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	1181	1181			Measured	Baseline height, co-twin control analysis, Sedish & Finnish	standard deviation	Breast cancer incidence		1.0 (continuous)	1	1.26 (1.09, 1.45)		0.001			B	C						G
Lundqvist et al.,2007,BRE80003	Nested Case Control	Sweden/Finland Sweden,Finland Co-twin study,1975	(44)	1181	1181			Measured	Analyses for Mono- and Dizygotic twins and unknown Zygosity, Finland/Sweden;		Breast cancer incidence	older/younger (Sweden), Finland	Quantile 4 vs. Quantile 1	4	1.8 (1.3, 2.7)					B	C						G

Height (after menopause)

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments						
																		A	B	C	D	E	F	G
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1281	66145.0	By Mail	19.0 years			Year*in	Breast cancer ER+/PR+ incidence	HRT - No	35.0 (continuous)	1	0.99 (0.89, 1.12)			A	C	D	E	F	G	
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	318	66145.0	By Mail	19.0 years			Year*in	Breast cancer ER+/PR- incidence	HRT - No	35.0 (continuous)	1	1.02 (0.83, 1.25)			A	C	D	E	F	G	
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	80	66145.0	By Mail	19.0 years			Year*in	Breast cancer ER-/PR+ incidence	HRT - No	35.0 (continuous)	1	0.64 (0.37, 1.11)			A	C	D	E	F	G	
Colditz, G. A.,2004,BRE01783	Prospective Cohort	U.S.A., Not specified, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	417	66145.0	By Mail	19.0 years			Year*in	Breast cancer ER-/PR- incidence	HRT - No	35.0 (continuous)	1	1.03 (0.83, 1.27)			A	C	D	E	F	G	

Height (and proxy measures)

Pre-menopausal

Le Marchand, L.,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		101	444	Area residency lists		drive licence			Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	1.41 (0.68, 2.91)	0.99			B	D				
Le Marchand, L.,1988,BRE15836	Nested Case Control	U.S.A., Multi-ethnic Hawaii 1942, 1960, 1972		39	172	Area residency lists		drive licence			Breast cancer incidence	Pre-menopausal	Quantile 3 vs. Quantile 1	3	1.18 (0.34, 4.06)	0.99			B	D				
Vatten, L.J.,1990,BRE12827	Prospective Cohort	Norway, Not specified, Screening Program Norway, 1974	35 - 51	137	185261	Through health org. (screening, health insurance)	12.5 years	Measured		cm	Breast cancer incidence	Pre-menopausal	>167.0 vs. <158.9	4	2.63 (1.48, 4.68)	0.001		A						
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65	79	366	Through health org. (screening, health insurance)	7.0 years	questionnaire self-reported		cm	Invasive breast cancer incidence	Pre-menopausal	>168.0 vs. <157.9	4	0.65 (0.33, 1.3)	0.99								
Freni, S. C.,1996,BRE02960	Prospective Cohort	U.S.A., Not specified NHANES I, 1971	25 - 74	70	3793	Unspecified	155.0 months	Not specified		cm	Breast cancer incidence	Pre-menopausal	>167.0 vs. <155.9	5	1.6 (0.6, 3.8)	>0.10		A	B	C		F		
Galanis, D.J.,1998,BRE03058	Prospective Cohort	hawaii, Multi-ethnic Hawaii State Department of Health, 1975	(43)	86	11374	By Mail	14.9 years / 0	self reported questionnaire	height at interview	cm	Breast cancer incidence	Pre-menopausal	>160.1 vs. <154.9	3	1.1 (0.6, 1.9)	0.9		A	B		E		G	
Sonnenschein, E.,1999,BRE11604	Prospective Cohort	USA, Multi-ethnic New York Women's Health Study, 1985	35 - 65	109	4366	Through health org. (screening, health insurance)	6.6 years	measurments		cm	Breast cancer incidence	Pre-menopausal	>170.1 vs. <160.9	4	0.96 (0.55, 1.66)			A		C		F	G	
Palmer, Julie, R.,2001,BRE20603	Nested Case Control	U.S.A., Black Black Women's Health Study, 1995	21 - 69	433	1712	Driving license/Private Health Care List	2.0 years	self-administered questionnaire	black women	inc	Invasive & In situ breast cancer Cancer incidence + prevalence	Pre-menopausal	>=70 vs. <=61	6	2.1 (1.2, 3.6)	0.0003		A	B	C				

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No. cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Manjer, J.2001,BRE17790	Prospective Cohort	Sweden Malmö Preventive Project (MPP), 1974	(55)	112	58079	Through health org. (screening, health insurance)	13.1 years	measured by trained personnel		cm	Invasive breast cancer incidence	Pre-menopausal	>169.1 vs. <159.0	4	1.0 (0.59, 1.7)		0.89	A									
Tryggvadottir, L.,2002,BRE12507	Nested Case Control	Iceland, Not specified Iceland, 1979	20 - 81	97	970	Through health org. (screening, health insurance)	17.0 years			cm	Breast cancer incidence	Pre-menopausal	5.0 (continuous)	1	0.99 (0.79, 1.22)		0.908				C	D		F	G		
Lahmann PH.2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	474	73168	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	Pre-menopausal	>167.7 vs. <155.9	5	1.33 (0.96, 1.84)		0.134	A	B	C		E	F	G			
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	275	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Height	cm	Breast cancer incidence	Pre-menopausal	>166.0 vs. <158.0	4	1.26 (0.8, 1.98)		>0.05	A	B	C		E	F	G			
Baer, H.J.,2006,BRE80118	Prospective Cohort	United States, Pre-menopausal NHS II, 1989	25 - 42	1041	116671.0	Self report verified by medical record	12.0 years / 0.07	Self-reported	Adult height	meters	Invasive breast cancer incidence	Pre-menopausal	>=1.75 vs. <1.6	5	1.57 (1.23, 2.01)		<0.001	A		C	D	E	F	G			

Post-menopausal

Vatten, L.J.,1990,BRE12827	Prospective Cohort	Norway, Not specified, Screening Program Norway, 1974	35 - 51	279	97329	Through health org. (screening, health insurance)	12.5 years	Measured		cm	Breast cancer incidence	Post-menopausal	>167.0 vs. <158.9	4	1.62 (0.93, 2.81)		0.06	A										
Barrett-Connor, E.,1993,BRE00581	Prospective Cohort	U.S. White Rancho Bernardo, 1972	40 - 79	15	575	Through social organization (profession, religion)	15.0 years	height and weight measured with subjects in light			Breast cancer mortality/incidence	Post-menopausal		1	null (null, null)			A										
Toniolo, P.,1994,BRE12398	Nested Case Control	U.S.A., Not specified New York Women's Health Study, 1985	35 - 65	101	465	Through health org. (screening, health insurance)	7.0 years	questionnaire self-reported		cm	Invasive breast cancer incidence	Post-menopausal	>168.0 vs. <157.9	4	1.9 (0.96, 3.78)		0.07											
den Tonkelaar, I.,1995,BRE02224	Prospective Cohort	netherlands, Screening Program DOM-project Utrecht, 1974/1984	40 - 73	38	3568	Through health org. (screening, health insurance)	4.0 years / 5%	measurements performed by trained personnel		m	Breast cancer incidence	Post-menopausal	>1.66 vs. <1.609	3	1.51 (0.69, 3.42)		0.18	A										
Freni, S. C.,1996,BRE02960	Prospective Cohort	U.S.A., Not specified NHANES I, 1971	25 - 74	112	3829	Unspecified	155.0 months	Not specified		cm	Breast cancer incidence	Post-menopausal	>167.0 vs. <155.9	5	2.0 (1.0, 3.8)		0.04	A	B	C			F					
Galanis, D.J.,1998,BRE03058	Prospective Cohort	hawaii, Multi-ethnic Hawaii State Department of Health, 1975	(43)	292	11052	By Mail	14.9 years / 0	self reported questionnaire	height at interview	cm	Breast cancer incidence	Post-menopausal	>160.1 vs. <154.9	3	1.5 (1.1, 2.1)		0.008	A	B			E		G				
Sonnenschein, E.,1999,BRE11604	Prospective Cohort	USA, Multi-ethnic New York Women's Health Study, 1985	35 - 65	150	3791	Through health org. (screening, health insurance)	6.6 years	measurements		cm	Breast cancer incidence	Post-menopausal	>166.1 vs. <154.9	4	1.28 (0.75, 2.18)			A		C			F	G				

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments									
																		A	B	C	D	E	F	G			
Palmer, Julie, R.,2001,BRE20603	Nested Case Control	U.S.A., Black Black Women's Health Study, 1995	21 - 69	175	1659	Driving license/Private Health Care List	2.0 years	self-administered questionnaire	black women	inc	Invasive & In situ breast cancer Cancer incidence + prevalence	Post-menopausal	>=70 vs. <=61	6	1.3 (0.6, 2.5)		0.29	A	B	C							
Manjer, J.,2001,BRE17790	Prospective Cohort	Sweden Malmo Preventive Project (MPP), 1974	(55)	157	60845	Through health org. (screening, health insurance)	13.1 years	measured by trained personnel		cm	Invasive breast cancer incidence	Post-menopausal	>168.1 vs. <160.0	4	1.78 (1.14, 2.77)		0.008	A									
Petrelli, Jennifer, M.,2002,BRE20653	Prospective Cohort	U.S.A. CPS-II US cohort, 1982-1998	30 - (56)	2852	5589548	Direct contact at home	14.0 years / 15298	self administered questionnaire		inc	Breast cancer cancer death	Post-menopausal	>=69 vs. <60	11	1.66 (1.19, 2.3)		<0.0001	A	B	C	D	E	F	G			
Petrelli, Jennifer, M.,2002,BRE20653	Prospective Cohort	U.S.A. CPS-II US cohort, 1982-1998	30 - (56)	2852	5589552	Direct contact at home	14.0 years / 15298	self administered questionnaire		inc	Breast cancer cancer death	Post-menopausal	>=66 vs. <=61	3	1.36 (1.2, 1.55)		<0.0001	A	B	C	D	E	F	G			
Tryggvadottir, L.,2002,BRE12507	Nested Case Control	Iceland, Not specified Iceland, 1979	20 - 81	589	5299	Through health org. (screening, health insurance)	17.0 years			cm	Breast cancer incidence	Post-menopausal	5.0 (continuous)	1	1.12 (1.03, 1.22)		0.011				C	D		F	G		
Morimoto, Libby, M.,2002,BRE20457	Prospective Cohort	, Multi-ethnic, Post-menopausal Women's Health Initiative (WHI) Observational Study,	50 - 79	1024	85917.0	Through network, paper, tv	34.8 months / 0.037	measurements performed by clinical staff		cm	Breast cancer incidence	Post-menopausal	>167.1 vs. <156.4	5	1.27 (1.0, 1.62)		0.09	A	B	C		E	F	G			
Lahmann, Petra, H.,2003,BRE20119	Prospective Cohort	Sweden, White, Post-menopausal Malmo Diet and Cancer, 1991	50 - 73	236	12159.0	By Mail	5.7 years			cm	Invasive & In situ breast cancer incidence		>169.1 vs. <158.9	5	1.41 (0.92, 2.17)		0.009	A		C	D	E	F	G			
Mattisson, I.,2004,BRE17807	Prospective Cohort	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -	342	11328	Through health org. (screening, health insurance)	7.6 years				Breast cancer incidence	Post-menopausal		1	null (null, null)												
Wirfalt, E.,2004,BRE17083	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	50 -		12803.0	By Mail	8.0 years				Breast cancer incidence	Post-menopausal		1	null (null, null)												
Lahmann PH,2004,BRE15804	Prospective Cohort	EUROPE European Prospective Investigation into Cancer and Nutrition (EPIC) 1993-1998	18 - 80	1402	102942	Other procedure	4.7 years	measurements performed by trained personnel		cm	Breast cancer incidence	Post-menopausal	>167.7 vs. <155.9	5	1.4 (1.16, 1.69)		<0.001	A	B	C		E	F	G			
Tehard B.,2006,BRE80103	Prospective Cohort	France E3N-EPIC, 1990	40 - 65	1468	98997.0	patient records/direct contact/health insurance	4.2 years / 0.33	Self-reported in questionnaire	Height	cm	Breast cancer incidence	Post-menopausal	>165.0 vs. <157.9	4	1.06 (0.83, 1.34)		>0.05	A	B	C		E	F	G			
Chang S.C.,2006,BRE80110	Prospective Cohort	United States, participants of a RCT PLCO Cancer Screening Trial cohort, 1993	55 - 74	764	38660.0	Cancer screening programme	9.3 years	self-reported in questionnaire	Height	meters	Breast cancer incidence	Post-menopausal	>=1.68 vs. <1.58	4	1.33 (1.06, 1.68)		0.011		B	C	D		F	G			

Menopausal status not specified

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments						
																		A	B	C	D	E	F	G
<i>Menopausal status not specified</i>																								
Swanson, C. A., 1988, BRE11981	Prospective Cohort	usa, Black and White NHANES I, 1971	25 - 74	121	7143	Unspecified	10.0 years		Sittig height / stature	%	Breast cancer mortality/incidence		>1.0 vs. >-1.0	4	0.9 (0.5, 1.4)		0.38	A	B	C	E	F		
8.4																								
BMI velocity 11-15 yrs																								
<i>Menopausal status not specified</i>																								
De Stavola, B. L., 2004, BRE02123	Prospective Cohort	United Kingdom, Not specified Medical Research Council National Survey of Health		42	1559	Other procedure	29.0 years / 0		BMI velocity at age 11-15 years	SD Units	Breast cancer		1.0 (continuous)	1	0.95 (0.72, 1.24)						D			
BMI velocity 2-4 yrs																								
<i>Menopausal status not specified</i>																								
De Stavola, B. L., 2004, BRE02123	Prospective Cohort	United Kingdom, Not specified Medical Research Council National Survey of Health		47	1562	Other procedure	29.0 years / 0		BMI velocity at age 2-4 years	SD Units	Breast cancer		1.0 (continuous)	1	0.63 (0.48, 0.83)						D			
BMI velocity 4-7 yrs																								
<i>Menopausal status not specified</i>																								
De Stavola, B. L., 2004, BRE02123	Prospective Cohort	United Kingdom, Not specified Medical Research Council National Survey of Health		51	1651	Other procedure	29.0 years / 0		BMI velocity at age 4-7 years	SD Units	Breast cancer		1.0 (continuous)	1	1.0 (0.77, 1.31)						D			
BMI velocity 7-11 yrs																								
<i>Menopausal status not specified</i>																								
De Stavola, B. L., 2004, BRE02123	Prospective Cohort	United Kingdom, Not specified Medical Research Council National Survey of Health		58	1673	Other procedure	29.0 years / 0		BMI velocity at age 7-11 years	SD Units	Breast cancer		1.0 (continuous)	1	0.93 (0.7, 1.23)						D			
Growth in fetal life, infancy or childhood																								
<i>Pre-menopausal</i>																								
Berkey, C. S., 1999, BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	806	465279	Through health org. (screening, health insurance)	16.0 years		peak height velocity	cm/year	Breast cancer incidence	Pre-menopausal	>9.0 vs. <7.6	6	1.31 (null, null)		0.001	A	B	C	D	E	F	G
<i>Post-menopausal</i>																								
Berkey, C. S., 1999, BRE00743	Prospective Cohort	USA, White, Registered nurses Nurses' Health Study (NHS) Cohort 1976-1996	30 - 55	1485	561104	Through health org. (screening, health insurance)	16.0 years		peak height velocity	cm/year	Breast cancer incidence	Post-menopausal	>9.0 vs. <7.6	6	1.4 (null, null)		0.001	A	B	C	D	E	F	G

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	P value	P trend	adjustments										
																		A	B	C	D	E	F	G				
Kajiser, M.,2003,BRE04537	Historical Cohort	Sweden, Not specified Upsala birth cohort		7	1483.0	Hospital Records only	30.0 years	reported in the birth records		Kg	Breast cancer incidence	Pre-menopausal	2-2,99 vs. general population	2	0.72 (0.29, 1.49)			A										
Kajiser, M.,2003,BRE04537	Historical Cohort	Sweden, Not specified Upsala birth cohort		3	1483.0	Hospital Records only	30.0 years	reported in the birth records		Kg	Breast cancer incidence	Pre-menopausal	>=3 vs. general population	2	2.46 (0.51, 7.19)			A										
McCormack, V.A.,2003,BRE20357	Historical Cohort	Sweden, Not specified Upsala birth cohort	36 - 82	63	5358	General population (survey)	38.0 years / 0,3	reported after measurement in the birth records.		g	Breast cancer incidence	Pre-menopausal	>=4000 vs. <3000	4	3.48 (1.29, 9.38)	0,006		A	B								G	
Silva I.S.,2004,BRE02399	Prospective Cohort	Great Britain, Not specified, Legitimate live births NSHD (British cohort)	45 - 52	11	680	Hospital Records only	25.0 years / 176	Measured using a standardized method except birth weight		Kg	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.94 (0.74, 5.14)			A				D						
Ahlgren, M.,2004,BRE14201	Historical Cohort	Denmark, Not specified Danish Cohort, 1930	14 - 71		117415.0	School health records	33.0 years	measured and registered in the school health records.	age <50 yr	Kg	Breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.14 (1.04, 1.28)							D						
Vatten, L. J.,2005,BRE24432	Prospective Cohort	Norway, Not specified, Screening Program Norway, 1974	(49)		16016.0	Hospital Records only	40.0 years	Measured and reported in the birth records		g	Breast cancer incidence	Pre-menopausal	>3840.0 vs. <3039.0	5	1.1 (0.5, 2.4)							B	C	D			G	
McCormack V.A.,2005,BRE23366	Prospective Cohort	Sweden, Not specified Upsala birth cohort			5346.0	Hospital Records only	37.2 years	At the Uppsala Academic Hospital		SD Units	Invasive breast cancer incidence	Pre-menopausal	1.0 (continuous)	1	1.4 (1.08, 1.81)	0,012						B					G	
McCormack V.A.,2005,BRE23366	Prospective Cohort	Sweden, Not specified Upsala birth cohort			5346.0	Hospital Records only	37.2 years	At the Uppsala Academic Hospital		g	Invasive breast cancer incidence	Pre-menopausal	>=4000 vs. <3000	4	4.0 (1.49, 10.72)							B					G	
Michels, K.B.,2006,BRE80120	Prospective Cohort	United States Nurses' Health Study (NHS) Cohort 1976-1996 & NHS II, 1989	30 - 55	828	null	medical records	/ 0.01	Self-reported	Birthweight	lbs	Invasive breast cancer incidence	Pre-menopausal	<5.5 vs. >8.4	4	0.73 (0.51, 1.03)		0.06	A		C	D	E	F			G		

Post-menopausal

McCormack, V.A.,2003,BRE20357	Historical Cohort	Sweden, Not specified Upsala birth cohort	36 - 82	296	5173	General population (survey)	38.0 years / 0,3	reported after measurement in the birth records.		g	Breast cancer incidence	Post-menopausal	>=4000 vs. <3000	4	0.87 (0.56, 1.36)	0.87		A	B									G
Rich-Edwards, J. W.,2003,BRE18665	Prospective Cohort	USA, Multi-ethnic, Registered nurses NHS II, 1989	25 - 42		null	Through health org. (screening, health insurance)		self-reported		Kg	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.29 (null, null)							D					G	
Ahlgren, M.,2004,BRE14201	Historical Cohort	Denmark, Not specified Danish Cohort, 1930	14 - 71		117415.0	School health records	33.0 years	measured and registered in the school health records.	age>=50 yr	Kg	Breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.05 (0.91, 1.21)							D						

Author, Year, WCRF Code	Type of study	Country, Ethnicity, Special characteristics	Age	Cases n	Non-Cases n	Case ascertainment	Length of follow-up / loss	Assessment detail	Additional details	Unit	Outcome	Subgroup	Contrast	No cat.	OR (95% CI)	p value	p trend	adjustments							
																		A	B	C	D	E	F	G	
Lahmann, P. H.,2004,BRE18517	Nested Case Control	Sweden, Not specified, Post-menopausal Malmo Diet and Cancer, 1991	55 -	88	null	Hospital Records only		birth records		g	Breast cancer incidence	Post-menopausal	100.0 (continuous)	1	1.06 (1.0, 1.12)		0.04	A	B	C	D				
Lahmann P.,2005,BRE23013	Nested Case Control	Sweden, Post-menopausal Malmo Diet and Cancer, 1991			null	Hospital Records only		birth records		g	Breast cancer incidence	Post-menopausal	100.0 (continuous)	1	1.06 (1.0, 1.12)		0.04	A		C					
Vatten, L. J.,2005,BRE24432	Prospective Cohort	Norway, Not specified, Screening Program Norway, 1974	(49)		16016.0	Hospital Records only	40.0 years	Measured and reported in the birth records		g	Breast cancer incidence	Post-menopausal	>3840.0 vs. <3039.0	5	1.1 (0.5, 2.5)				B	C	D			G	
McCormack V.A.,2005,BRE23366	Prospective Cohort	Sweden, Not specified Upsala birth cohort			5346.0	Hospital Records only	37.2 years	At the Uppsala Academic Hospital		SD Units	Invasive breast cancer incidence	Post-menopausal	1.0 (continuous)	1	1.0 (0.88, 1.13)		0.99		B					G	
McCormack V.A.,2005,BRE23366	Prospective Cohort	Sweden, Not specified Upsala birth cohort			5346.0	Hospital Records only	37.2 years	At the Uppsala Academic Hospital		g	Invasive breast cancer incidence	Post-menopausal	>=4000 vs. <3000	4	0.91 (0.57, 1.46)				B					G	
Michels, K.B.,2006,BRE80120	Prospective Cohort	United States Nurses' Health Study (NHS) Cohort 1976-1996 & NHS II, 1989	30 - 55	2312	null	medical records	/ 0.01	Self-reported	Birthweight	lbs	Invasive breast cancer incidence	Post-menopausal	<=5.5 vs. >8.5	4	1.02 (0.84, 1.23)		0.89	A		C	D	E	F	G	

Menopausal status not specified

Ekbohm, A.,1992,BRE02554	Nested Case Control	Sweden, Not specified Upsala birth cohort			2463.0	Hospital Records only	32.0 years	reported using Standardized chart administered by		g	Breast cancer incidence		>4000.0 vs. 2500.0 - 2999.0	5	1.23 (0.75, 2.0)		0.25	A	B	C				G
Ekbohm A.,1997,BRE80172	Nested Case Control	Sweden Upsala birth cohort	(49)	1068	2726	Cancer registry		From birth record	Birth weight	g	Breast cancer Incidence		>=4000 vs. 2500-2999	5	1.04 (0.77, 1.41)		0.56			D				G
Mogren I.,1999,BRE80173	Historical Cohort	Sweden SWAN		12	248701.0	Cancer registry	39.0 years	from birth record	Birthweight		Breast cancer Incidence	null	Expected vs. Observed	2	null (null, null)									G
Mogren I.,1999,BRE80173	Historical Cohort	Sweden SWAN		10	248701.0	Cancer registry	39.0 years	from birth record	Birthweight		Breast cancer Incidence	Birth weight=2500-3999g	Expected vs. Observed	2	null (null, null)									
Mogren I.,1999,BRE80173	Historical Cohort	Sweden SWAN		1	248701.0	Cancer registry	39.0 years	from birth record	Birthweight		Breast cancer Incidence	Birth weight=4000-4499g	Expected vs. Observed	2	null (null, null)									
Mogren I.,1999,BRE80173	Historical Cohort	Sweden SWAN		1	248701.0	Cancer registry	39.0 years	from birth record	Birthweight		Breast cancer Incidence	Birth weight=>=4500g	Expected vs. Observed	2	null (null, null)									

