



**Organización
Panamericana
de la Salud**

*Oficina Regional de la
Organización Mundial de la Salud*



International Agency for Research on Cancer



**World Health
Organization**

Curso International: Introducción a los Registros de Cáncer de Base Poblacional y su Aplicación a la Epidemiología de Cáncer

Guayaquil, Ecuador

12-16 de Abril del 2010

Auspiciado por:

IARC-OPS /OMS

12 – ABRIL – 2010

REGISTRO DE LA INFORMACION EN CANCER Y SU APLICACIÓN A LA EPIDEMIOLOGIA

TNM:

CERVIX, PROSTATA, ESTOMAGO, COLON Y RECTO

DR.FABIAN CORRAL C.

REGISTRO DE LA INFORMACION EN CANCER Y SU APLICACIÓN A LA EPIDEMIOLOGIA

HISTORIA DEL SISTEMA TNM

Fue desarrollado por Pierre Denoix (Francia) entre 1943 y 1952

- **1950** La UICC, nombra un comité para desarrollar el sistema
- **1954** La UICC establece una comisión para que investigue la aplicación de la clasificación clínica y extiende su aplicación a muchos tumores.
- **1958** Se pone a prueba con el análisis de resultados de Mama y Laringe.
- **1960 – 67** La UICC, recomienda la aplicación de la clasificación durante 5 años y su evaluación.
- **1968** Se publica un primer libro de bolsillo
- **1974 – 78** Segunda y tercera ediciones
- **1982** Se realiza una revisión y corrección de las reglas de algunos sitios.
- **1987** Cuarta edición
- **2001** Quinta edición
- **2006** Sexta edición
- **2009** Séptima edición

REGISTRO DE LA INFORMACION EN CANCER Y SU APLICACIÓN A LA EPIDEMIOLOGIA

OBJETIVOS DEL SISTEMA TNM

1. Ayuda al clínico para la planificación del tratamiento.
2. Establecimiento del pronóstico
3. Evaluación de los resultados del tratamiento.
4. Para facilitar el intercambio de información entre los centros de tratamiento.
5. Contribuir a la investigación de cáncer.
6. Contribuir para el control de las actividades relacionadas con el cáncer.

REGISTRO DE LA INFORMACION EN CANCER Y SU APLICACIÓN A LA EPIDEMIOLOGIA

REGLAS DEL SISTEMA TNM

Se utiliza para describir la extensión anatómica de la enfermedad.

T - Extensión del tumor primario

N - Presencia o ausencia del tumor en los ganglios regionales.

M – Presencia o ausencia de metástasis distantes.

T0, T1, T2, T3, T4

No, N1, N2, N3

M0, M1

REGISTRO DE LA INFORMACION EN CANCER Y SU APLICACIÓN A LA EPIDEMIOLOGIA

NORMAS PRINCIPALES PARA LA PUBLICACION DEL SISTEMA TNM

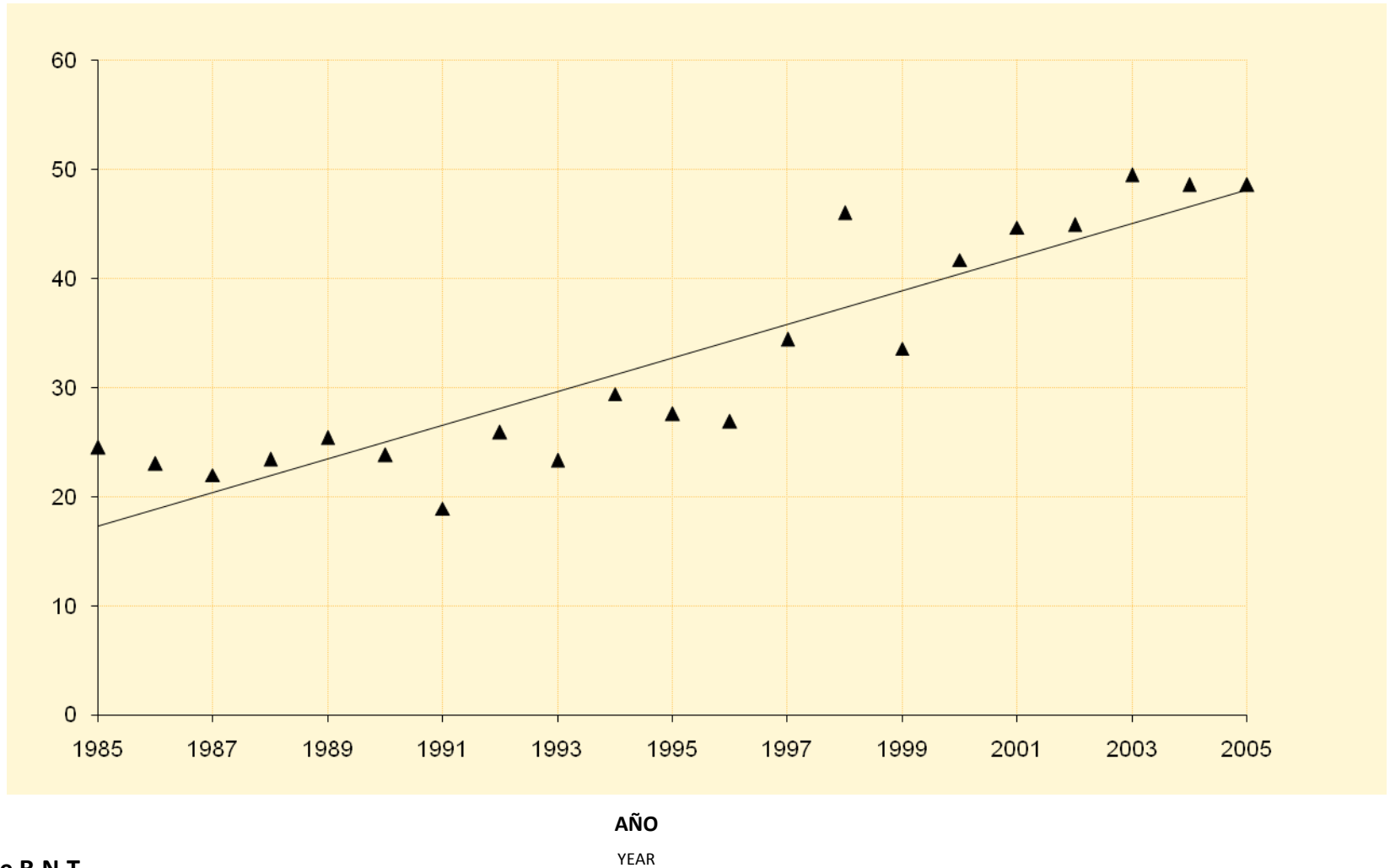
1. Todos los casos deben tener confirmación microscópica.
2. La clasificación patológica se basa en el estudio de los especímenes quirúrgicos pTNM
3. Tanto el TNM clínico, como el (pTNM) patológico pueden agruparse en estadios. Cuando se establece el estadio, en un caso debe permanecer en la H. Clínica sin variaciones.
4. Si hay duda en la aplicación del TNM en un caso, debe escogerse la categoría menos grave, dentro del grupo.
5. Tumores Múltiples, se escogerá el tumor más grande y se pondrá el número de tumores entre paréntesis T2(4)

GRÁFICO / FIGURE 93
PRÓSTATA. TENDENCIA DE LA INCIDENCIA
RESIDENTES EN QUITO 1985-2005

PROSTATE GLAND. INCIDENCE TREND. QUITO RESIDENTS. 1985-2005

TASAS ESTANDARIZADAS

A.S.R. WORLD



Fuente R.N.T.
Source N.T.R.

PROSTATA

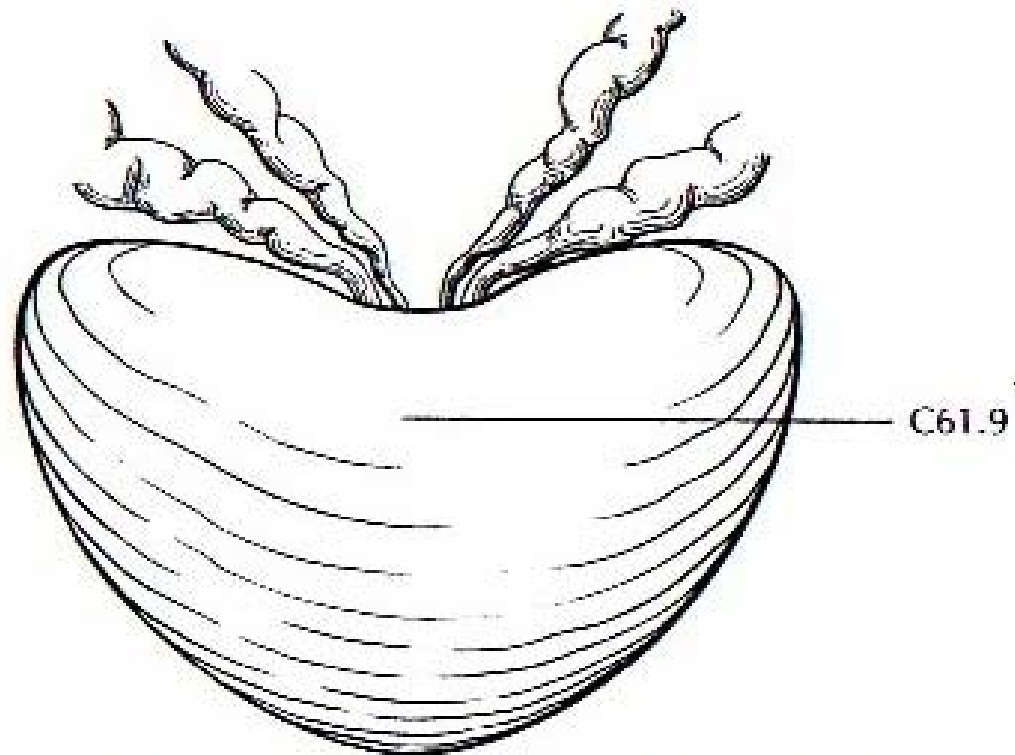


FIGURE 34.1. Anatomy of the prostate.

PROSTATA

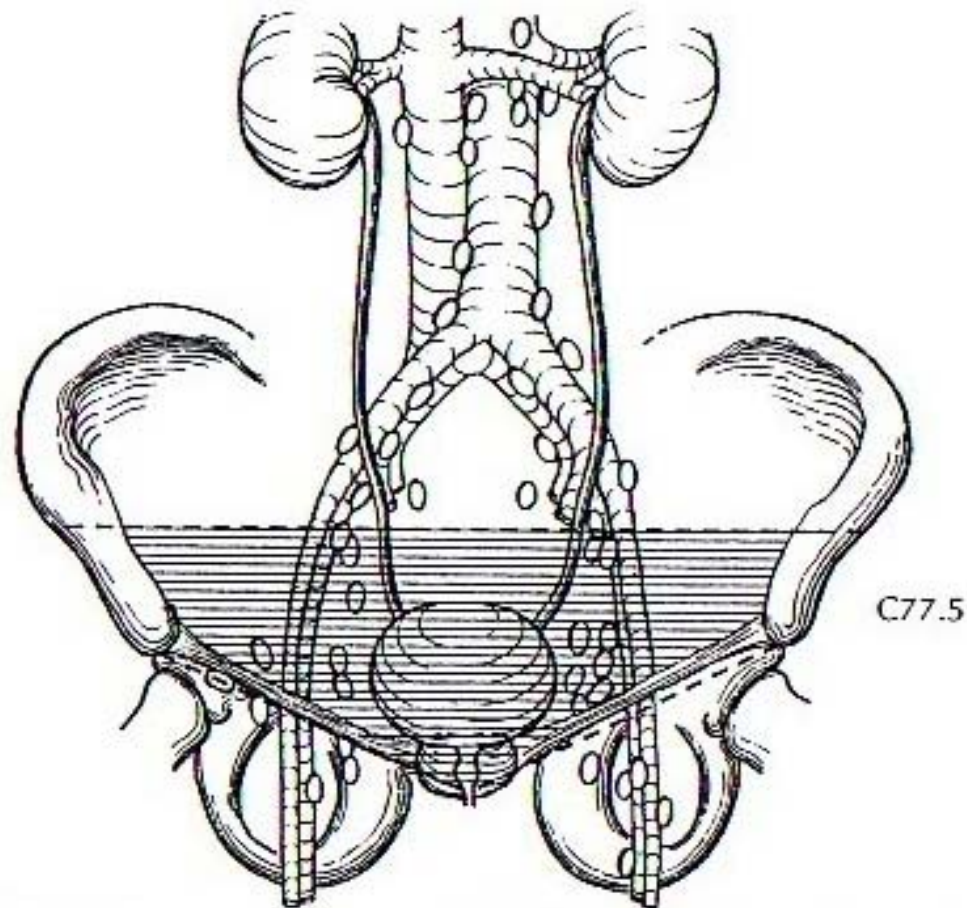


FIGURE 34.2. Shaded area represents regional distribution of lymph nodes. Nonshaded area indicates nodes outside of regional distribution.

DEFINITIONS

Primary Tumor (T)

Clinical

- TX Primary tumor cannot be assessed
- T0 No evidence of primary tumor
- T1 Clinically inapparent tumor neither palpable nor visible by imaging
- T1a Tumor incidental histologic finding in 5% or less of tissue resected (Figure 34.3)

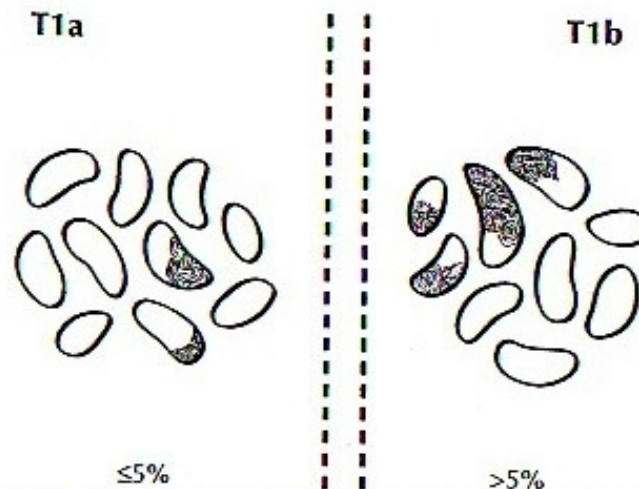


FIGURE 34.3. T1a (left) shows tumor incidental histologic finding in 5% or less of tissue resected. T1b (right) shows tumor incidental histologic finding in more than 5% of tissue resected.

PROSTATA

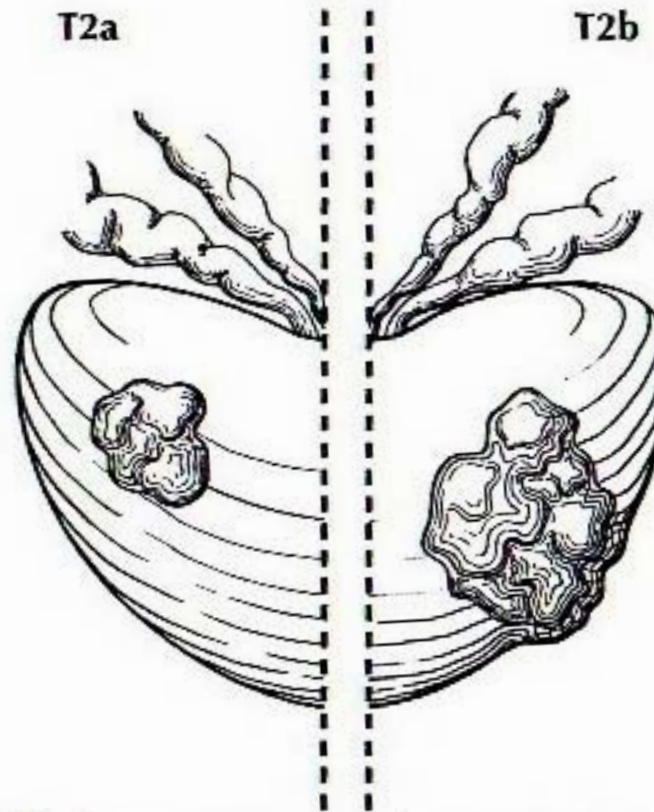


FIGURE 34.4. T2a (left) shows tumor involving one-half of one lobe or less whereas T2b (right) shows tumor involving more than one-half of one lobe but not both lobes.

PROSTATA

T2c

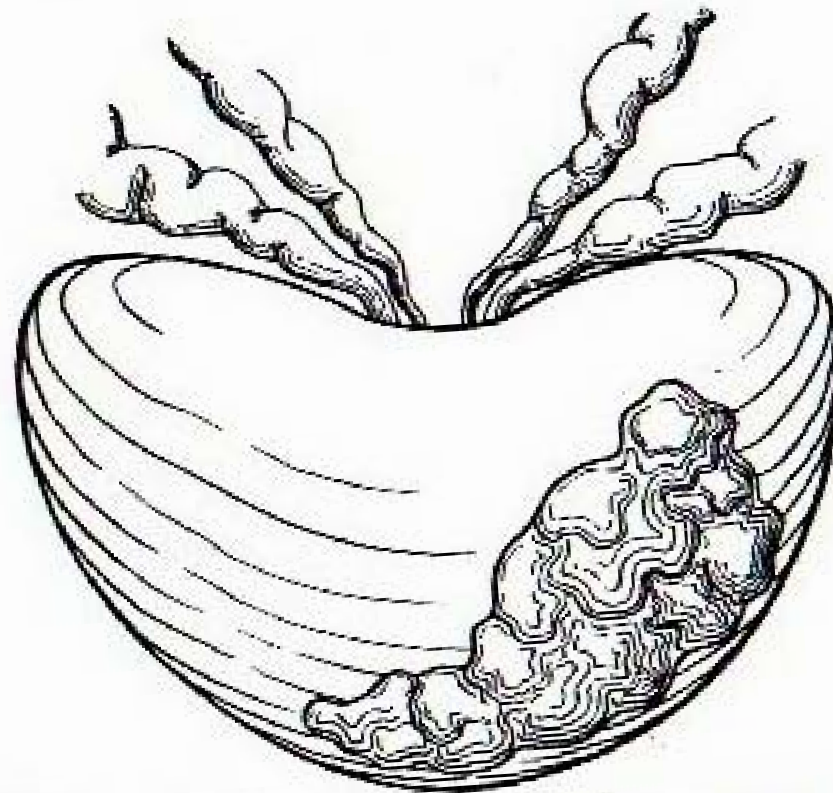
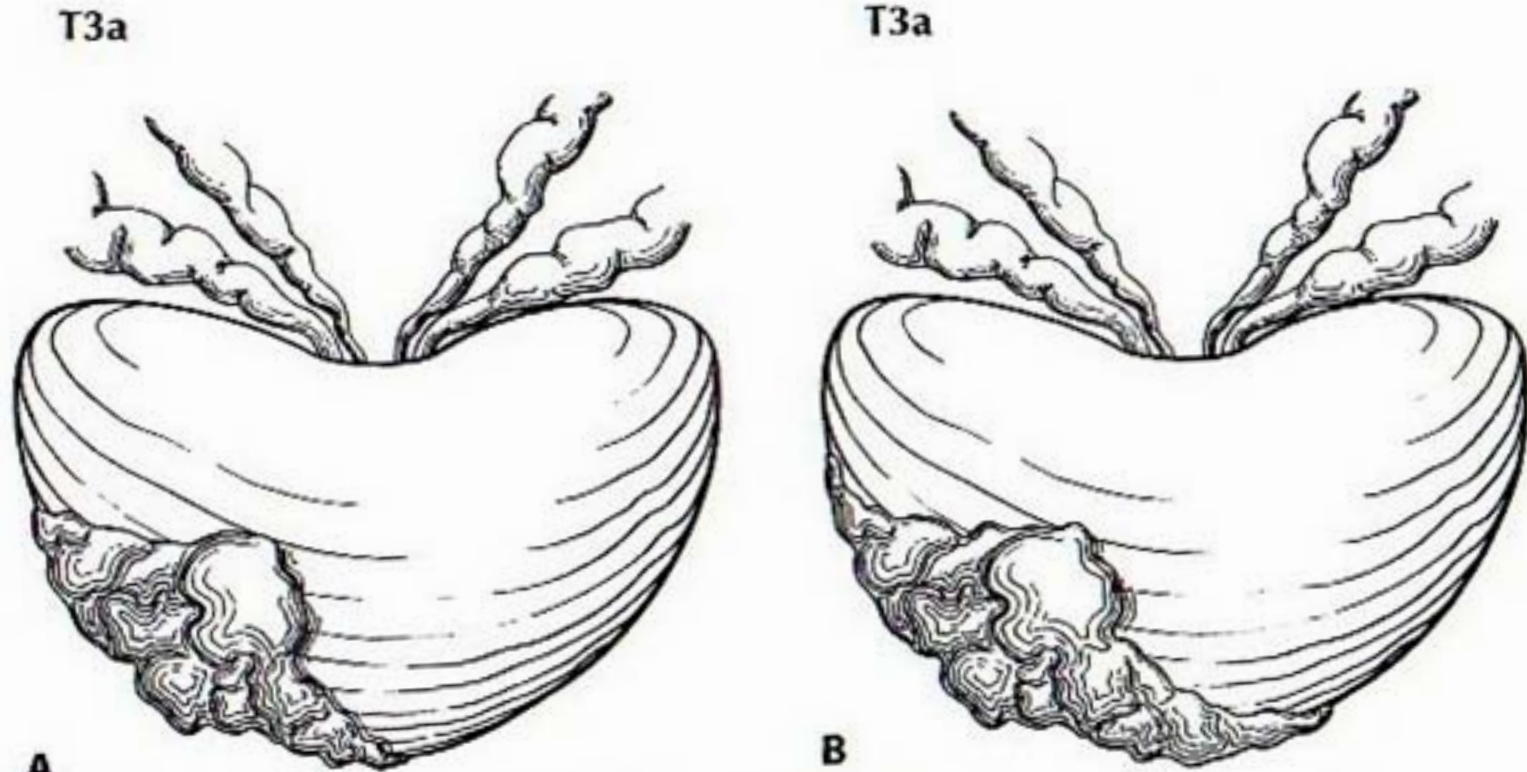


FIGURE 34.5. T2c tumor involving both lobes

PROSTATA



A
FIGURE 34.6. A,B. T3a is defined as a tumor with unilateral extracapsular extension, as shown in **A**, or with bilateral extracapsular extension, as shown in **B**.

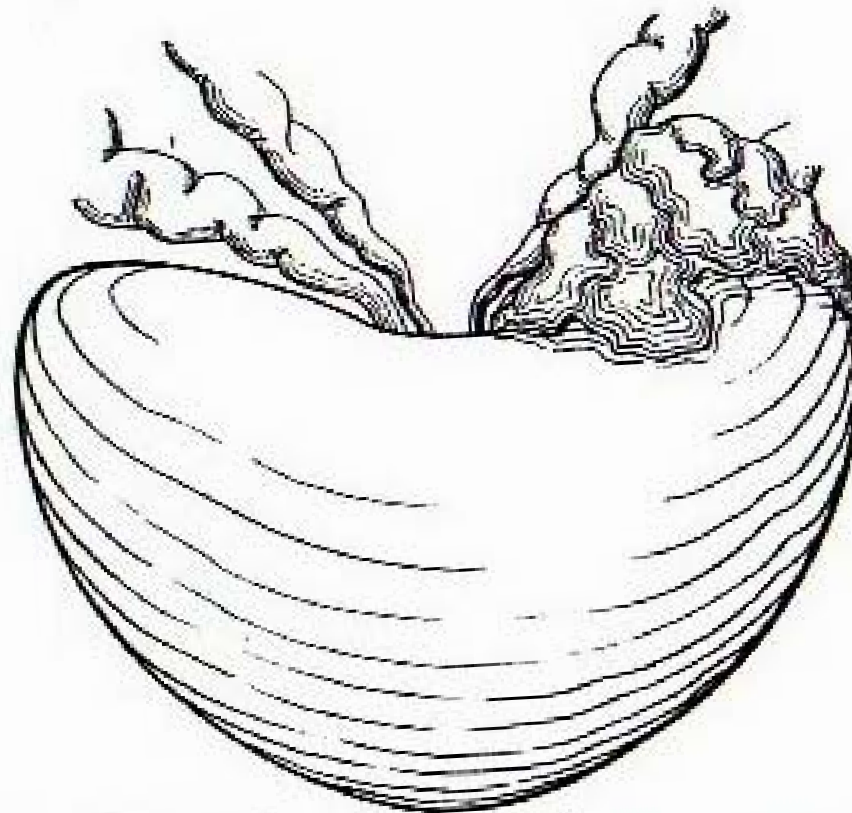
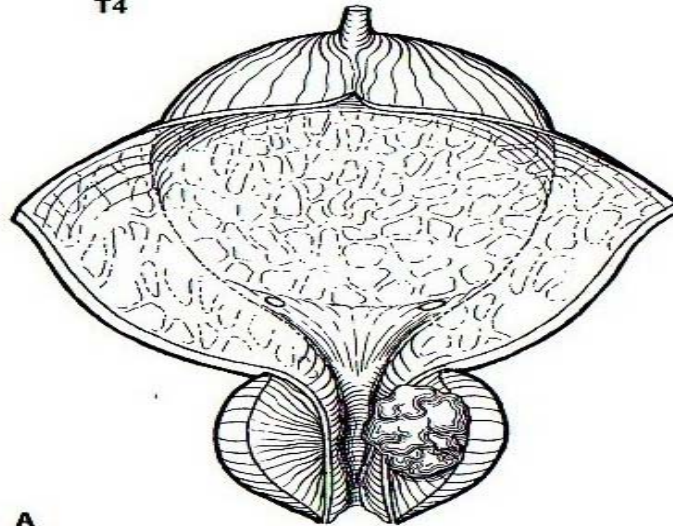
T3b

FIGURE 34.7. T3b tumor invading seminal vesicle(s).

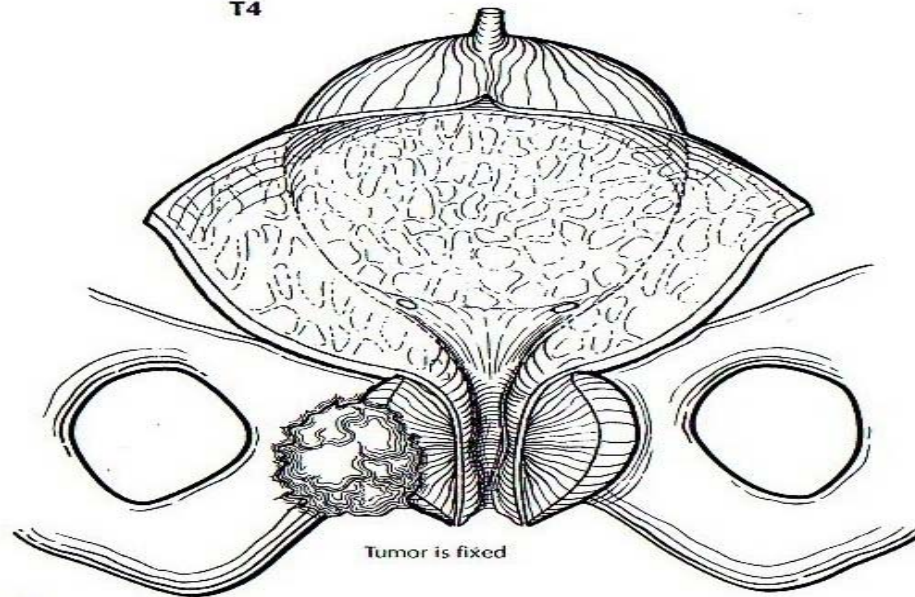
PROSTATA

T4



A

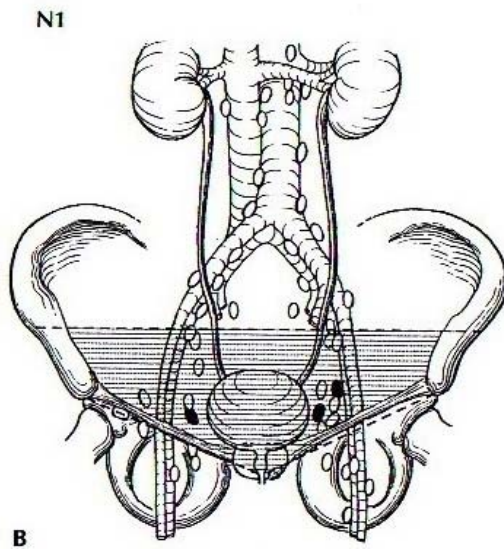
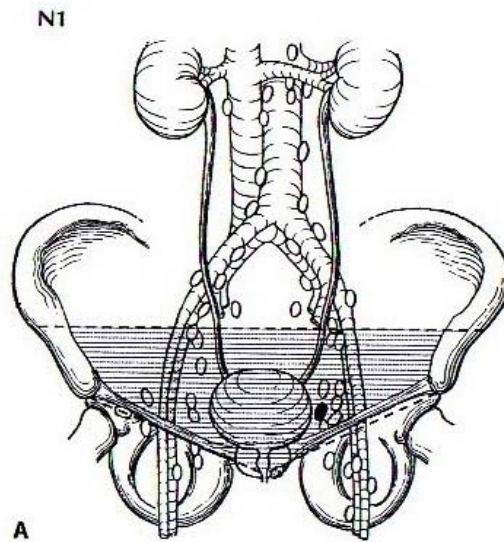
T4



Tumor is fixed

B

PROSTATA



ESTADIOS CLINICOS

PROSTATA

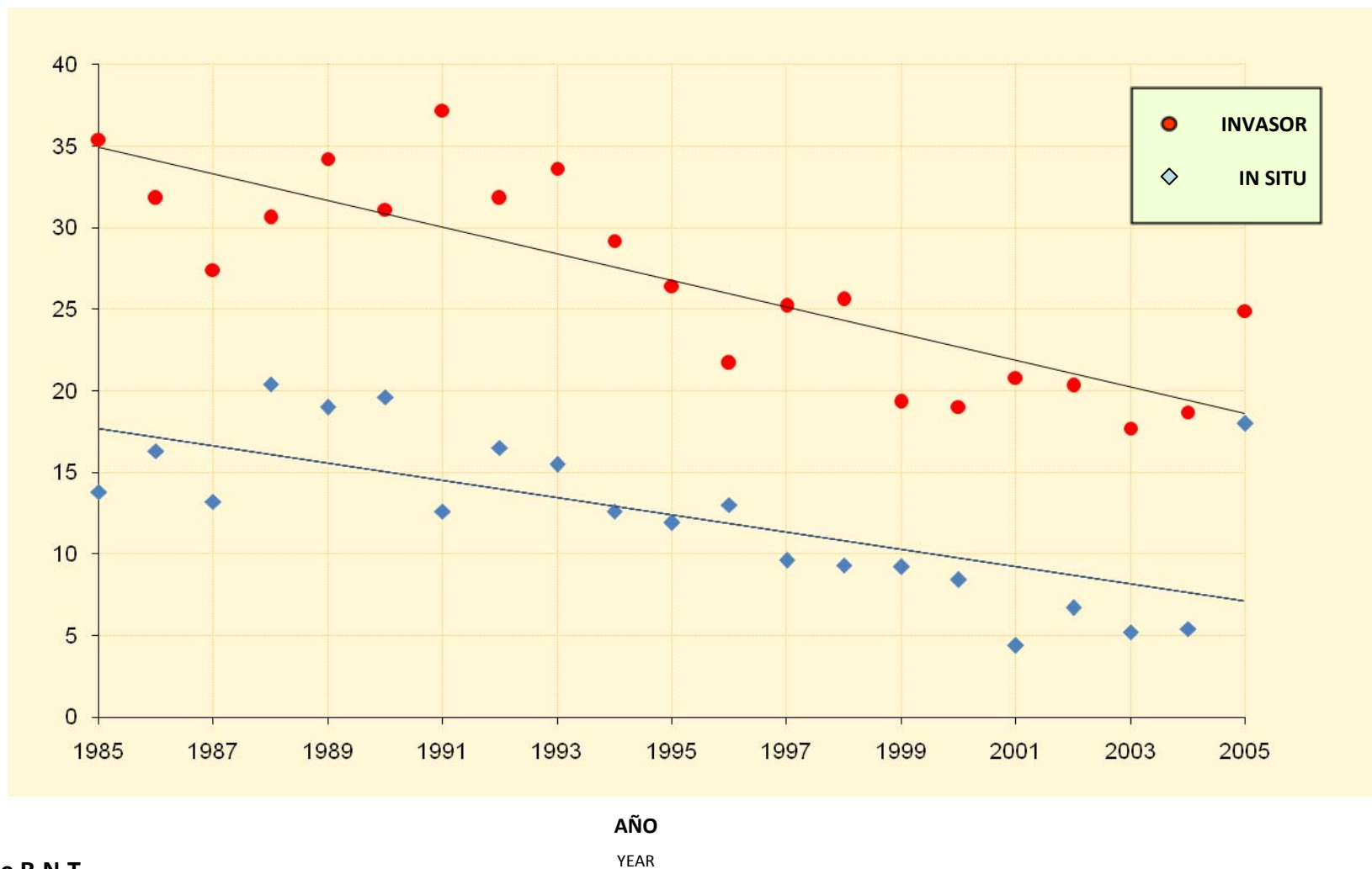
STAGE GROUPING

I	T1a	N0	M0	G1
II	T1a	N0	M0	G2,3-4
	T1b	N0	M0	Any G
	T1c	N0	M0	Any G
	T1	N0	M0	Any G
	T2	N0	M0	Any G
III	T3	N0	M0	Any G
IV	T4	N0	M0	Any G
	Any T	N1	M0	Any G
	Any T	Any N	M1	Any G

GRÁFICO / FIGURE 80
CUELLO UTERINO. TENDENCIA DE LA INCIDENCIA
RESIDENTES EN QUITO 1985-2005
 CERVIX UTERI. INCIDENCE TREND. QUITO RESIDENTS 1985-2005

TASAS ESTANDARIZADAS

A.S.R. WORLD



Fuente R.N.T.
 Source N.T.R.

CERVIX

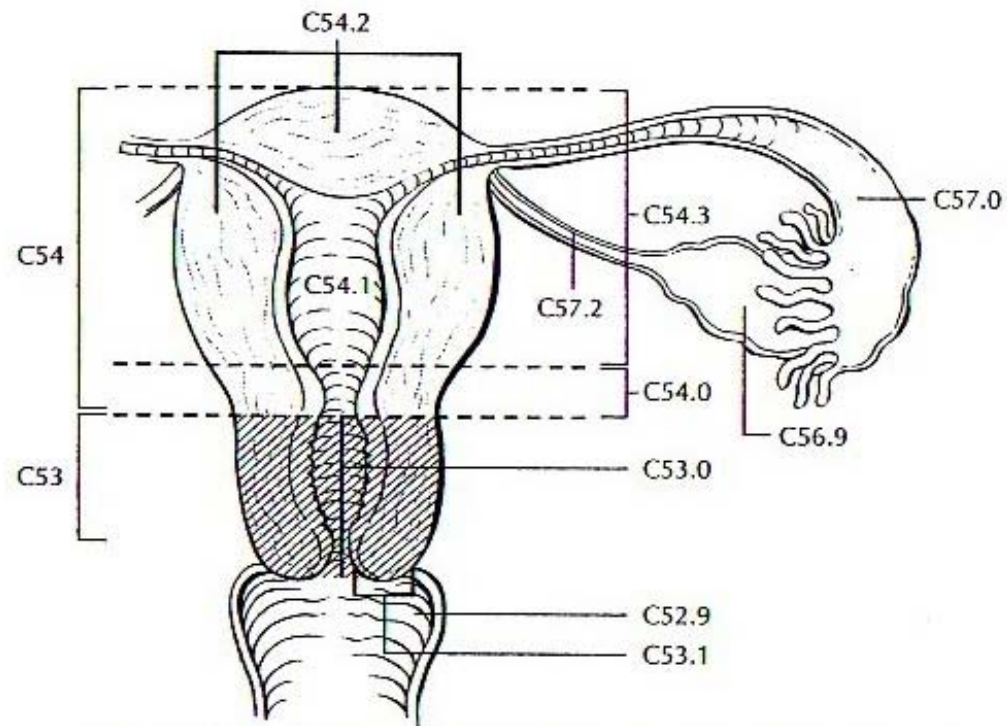
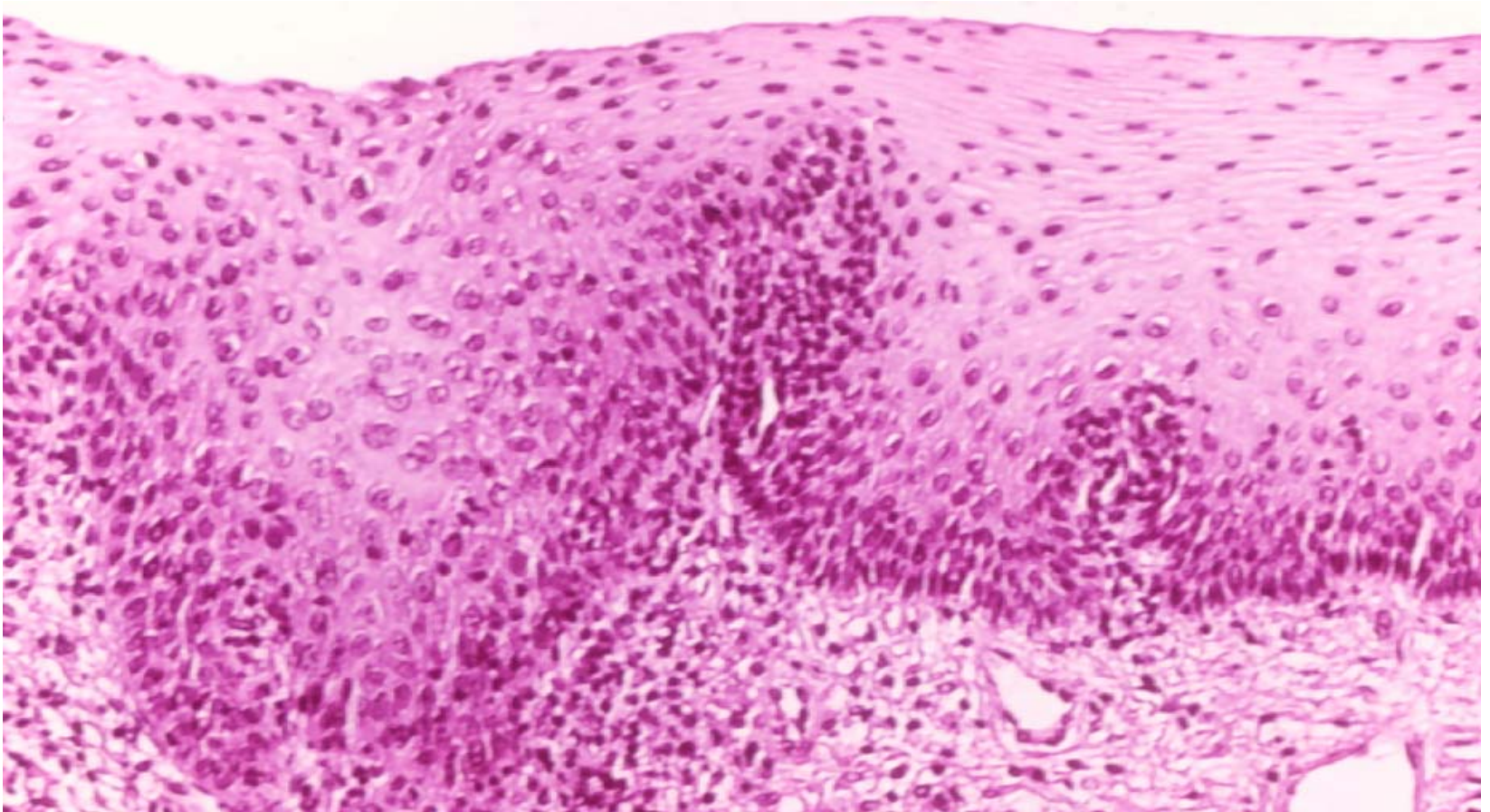
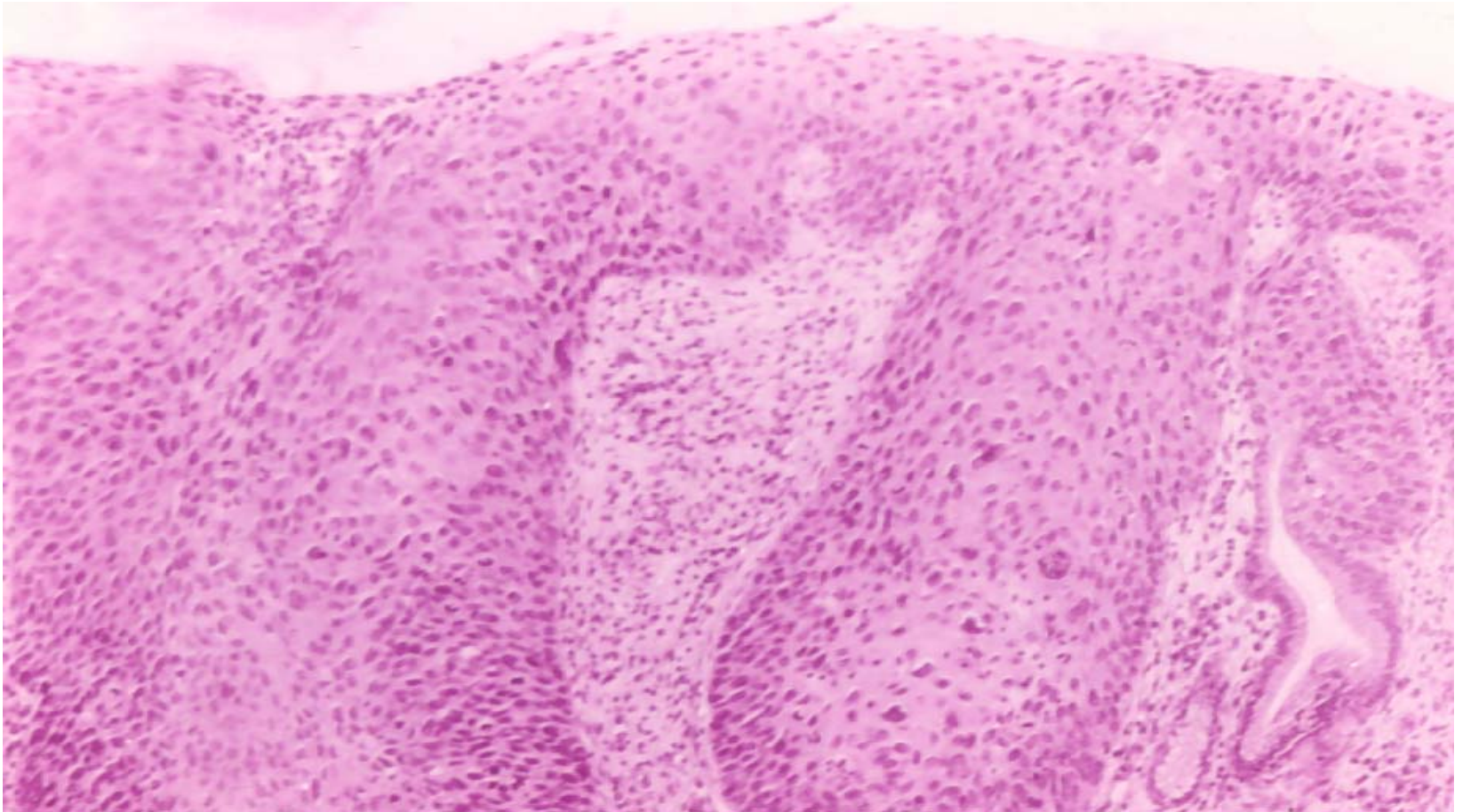


FIGURE 28.1. Anatomic sites and subsites of the cervix uteri.

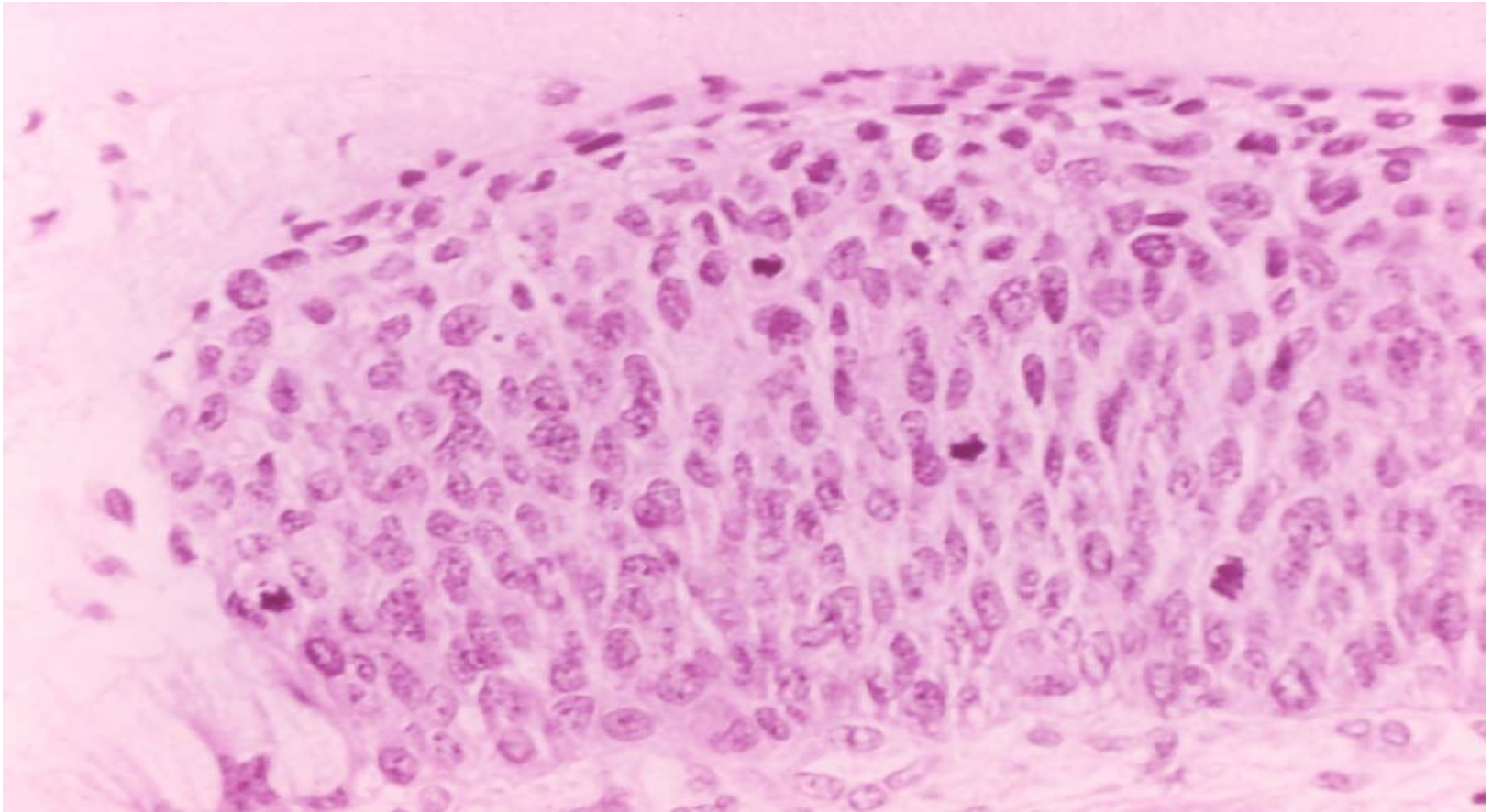
DISPLASIA LEVE



DISPLASIA SEVERA



CA. IN SITU



CERVIX

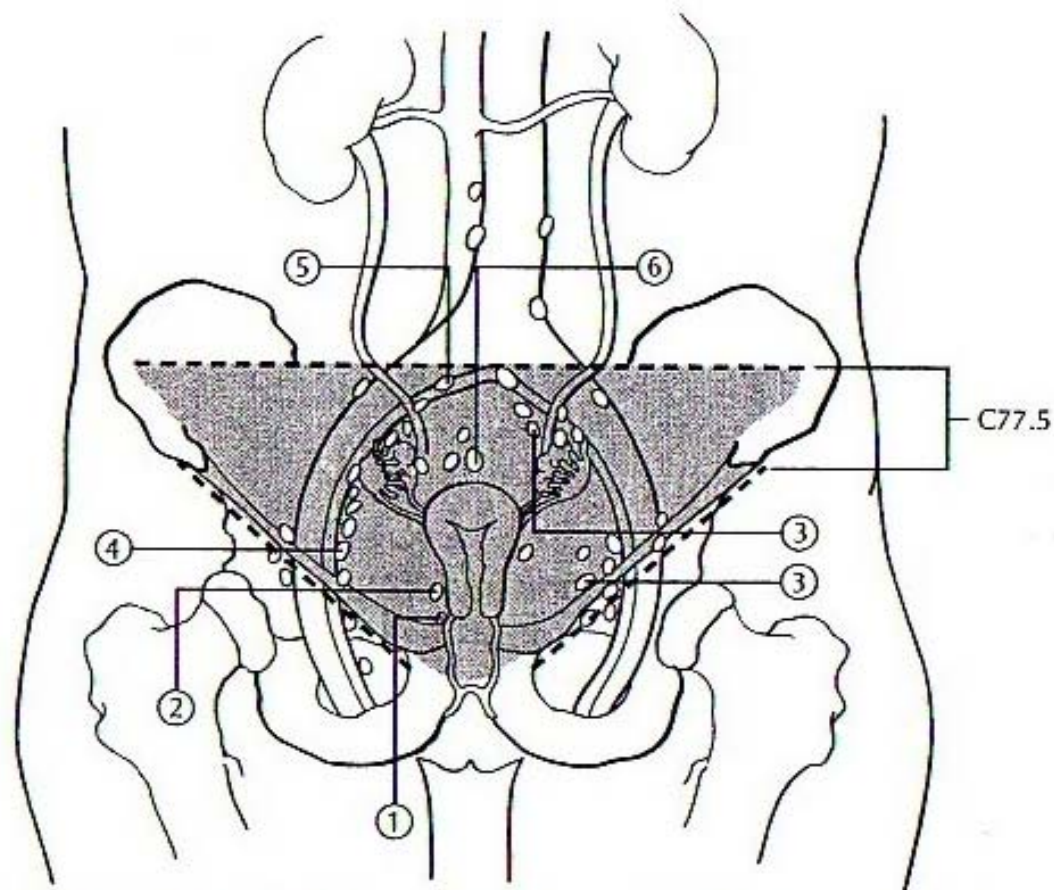


FIGURE 28.2. Regional lymph nodes of the cervix: (1) paracervical; (2) parametrial; (3) hypogastric (internal iliac) including obturator; (4) external iliac; (5) common iliac; (6) presacral.

CERVIX

TNM: **T1a1**
FIGO: **IA1**

Invasive carcinoma diagnosed only by microscopy

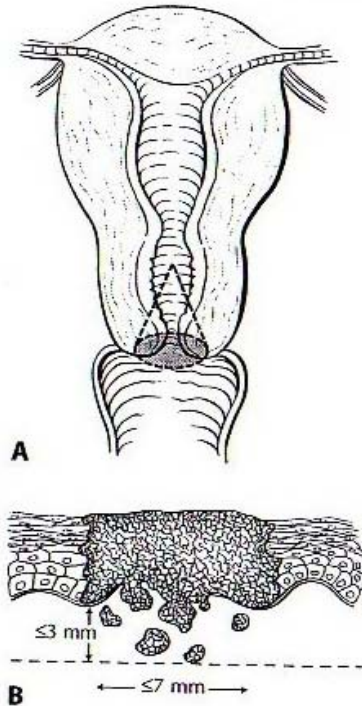


FIGURE 28.4. T1a1 is defined as invasive carcinoma diagnosed only by microscopy with measured stromal invasion 3.0 mm or less in depth and 7.0 mm or less in horizontal spread **B**.

TNM: **T1a2**
FIGO: **IA2**

Invasive carcinoma diagnosed only by microscopy

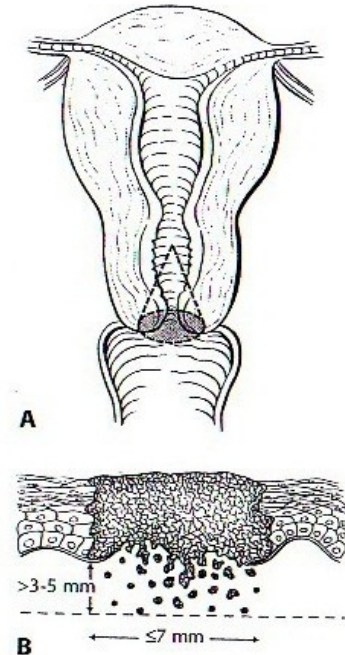


FIGURE 28.5. T1a2 is defined as invasive carcinoma diagnosed only by microscopy with measured stromal invasion more than 3.0 mm and not more than 5.0 mm with horizontal spread 7.0 mm or less **B**.

CERVIX

TNM: **T1b**

FIGO: **IB**

Microscopic lesion $>T1a/IA2$

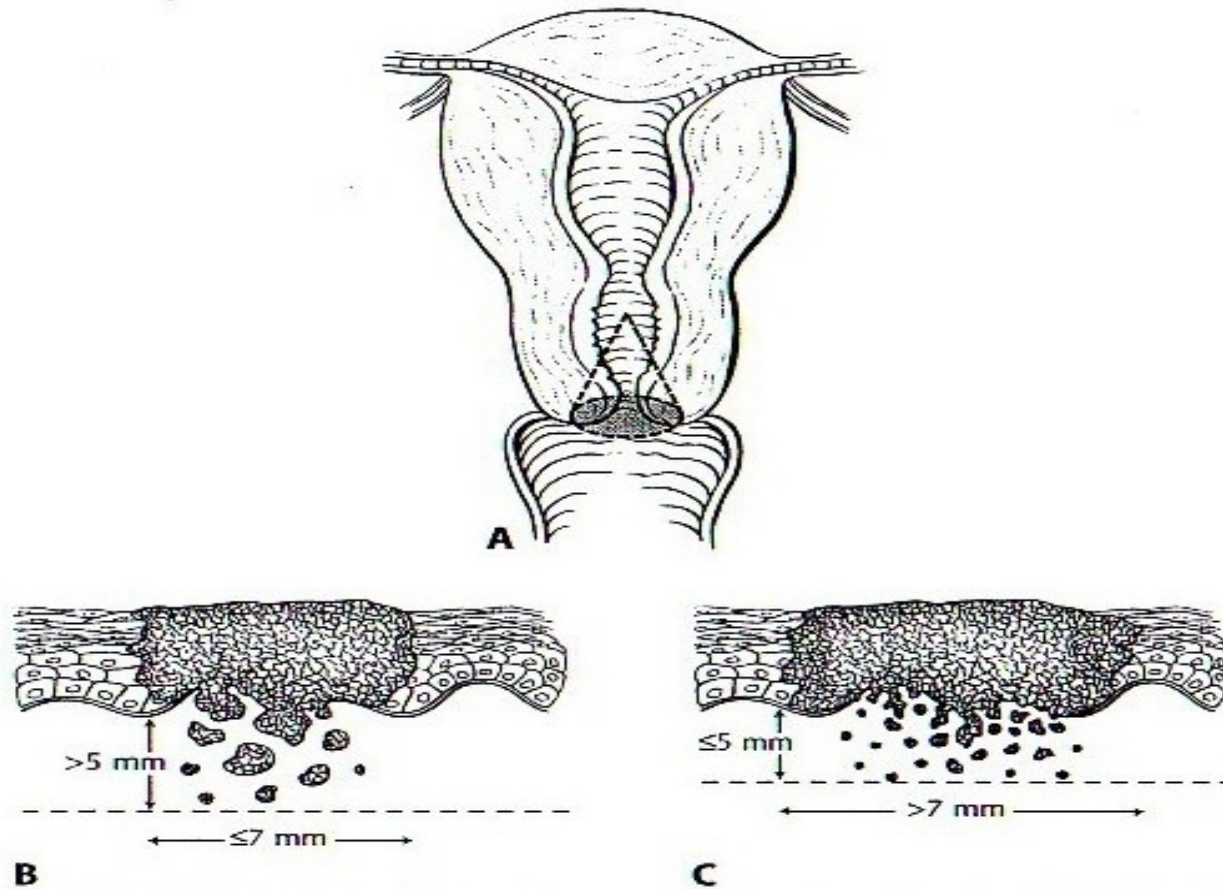


FIGURE 28.6. T1b is defined as a microscopic lesion greater than T1a2/IA2, i.e., stromal invasion greater than 5.0 mm and/or horizontal spread greater than 7.0 mm **B** and **C** or a clinically visible lesion confined to the cervix.

TNM: **T1b1**
FIGO: **IB1**

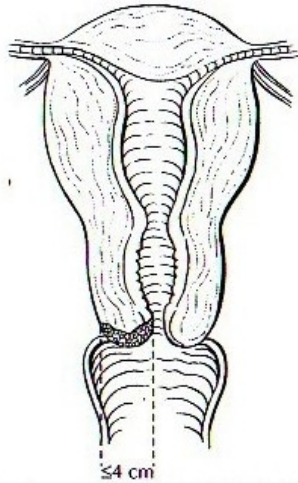


FIGURE 28.7. T1b1 is defined as a clinically visible lesion 4.0 cm or less in greatest dimension.

CERVIX

TNM: **T1b2**
FIGO: **IB2**

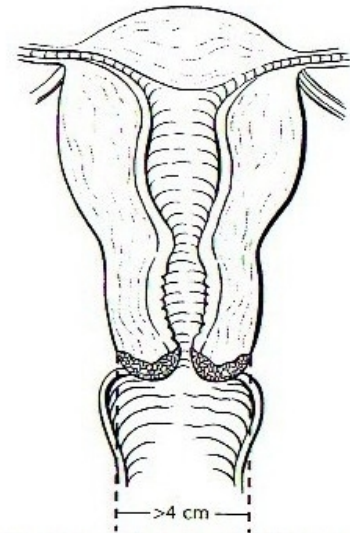


FIGURE 28.8. T1b2 is defined as a clinically visible lesion more than 4.0 cm in greatest dimension.

CERVIX

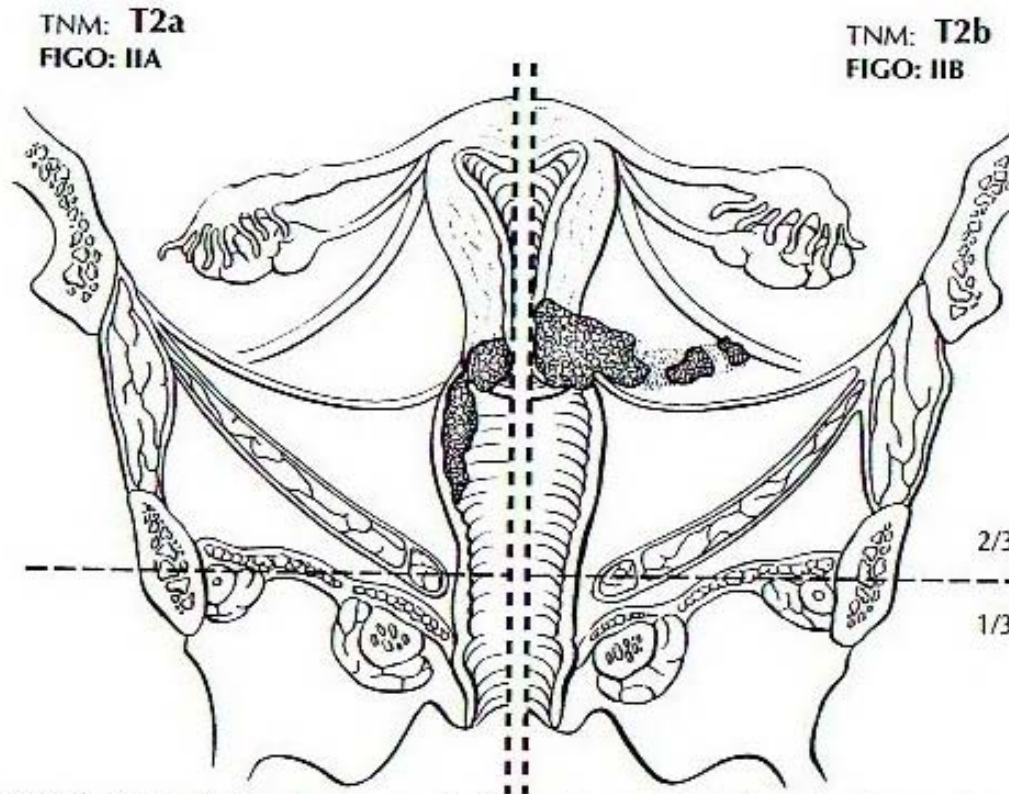


FIGURE 28.9. T2 is defined as a cervical carcinoma that invades beyond uterus but not to pelvic wall or to lower third of vagina. T2a (left of the vertical dotted line) is T2 tumor without parametrial invasion. T2b (right of the vertical dotted line) is T2 tumor with parametrial invasion.

CERVIX

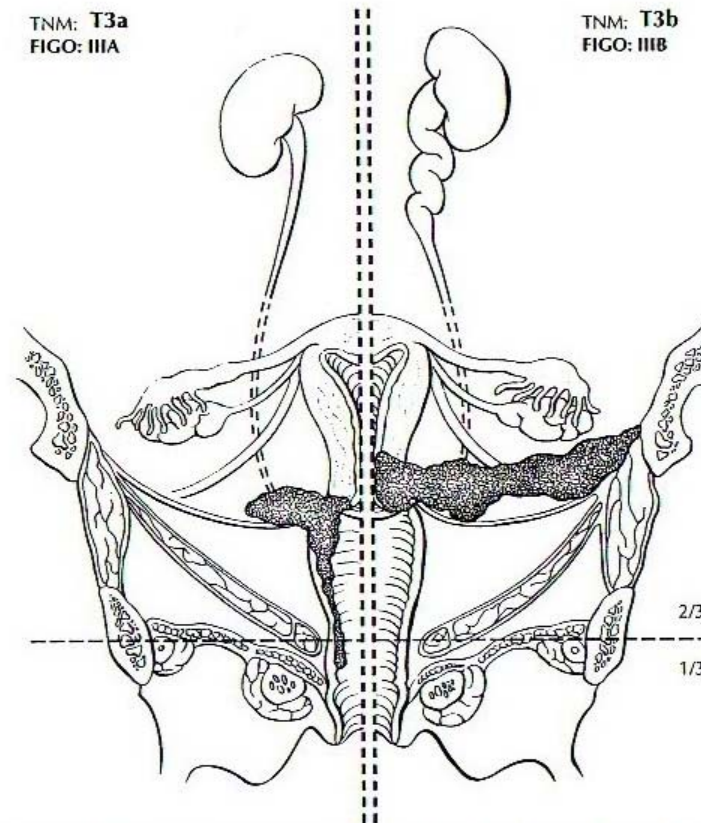
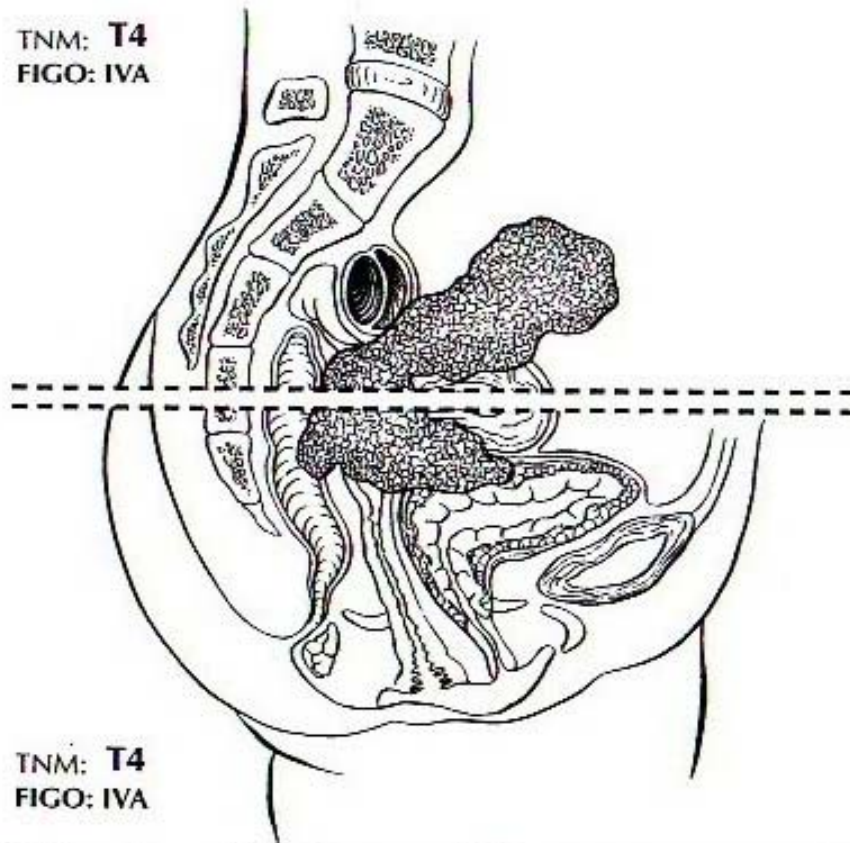


FIGURE 28.10. T3 tumor extends to pelvic wall and/or involves lower third of vagina and/or causes hydronephrosis or nonfunctioning kidney. T3a (left of vertical dotted line) involves lower third of vagina with no extension to pelvic wall. T3b (right of vertical dotted line) extends to pelvic wall and/or causes hydronephrosis or nonfunctioning kidney.

CERVIX

TNM: **T4**
FIGO: **IVA**



TNM: **T4**
FIGO: **IVA**

FIGURE 28.11. Two views of T4. Bottom of illustration (below dotted line), tumor invades mucosa of bladder or rectum. Top of illustration (above dotted line), tumor extends beyond true pelvis.

CERVIX

N1

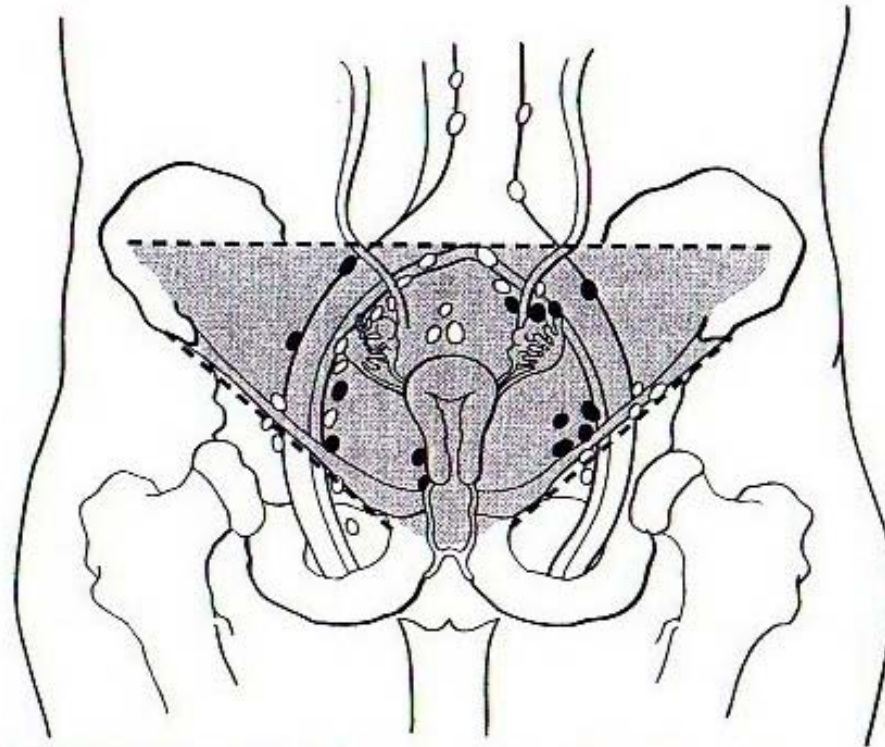


FIGURE 28.12. N1 is defined as regional lymph node metastasis.

ESTADIOS CLINICOS

CERVIX

STAGE GROUPING (AJCC/UICC/FIGO)

0	Tis	N0	M0
I	T1	N0	M0
IA	T1a	N0	M0
IA1	T1a1	N0	M0
IA2	T1a2	N0	M0
IB	T1b	N0	M0
IB1	T1b1	N0	M0
IB2	T1b2	N0	M0
II	T2	N0	M0
IIA	T2a	N0	M0
IIB	T2b	N0	M0
III	T3	N0	M0
IIIA	T3a	N0	M0
IIIB	T1	N1	M0
	T2	N1	M0
	T3a	N1	M0
	T3b	Any N	M0
IVA	T4	Any N	M0
IVB	Any T	Any N	M1

T. N. M.

Los gráficos son tomados del Atlas del “American Joint Committee on Cancer”, publicado en el año 2006.

Este comité esta encargado por varias Organizaciones Internacionales de Lucha contra el Cancer para difundir a nivel mundial el sistema T.N.M.

La séptima y ultima edición fue editada en el año 2009 y contiene ligeros cambios en algunas localizaciones.

R. N. T.

T. N. M.

ESTOMAGO: Cambios

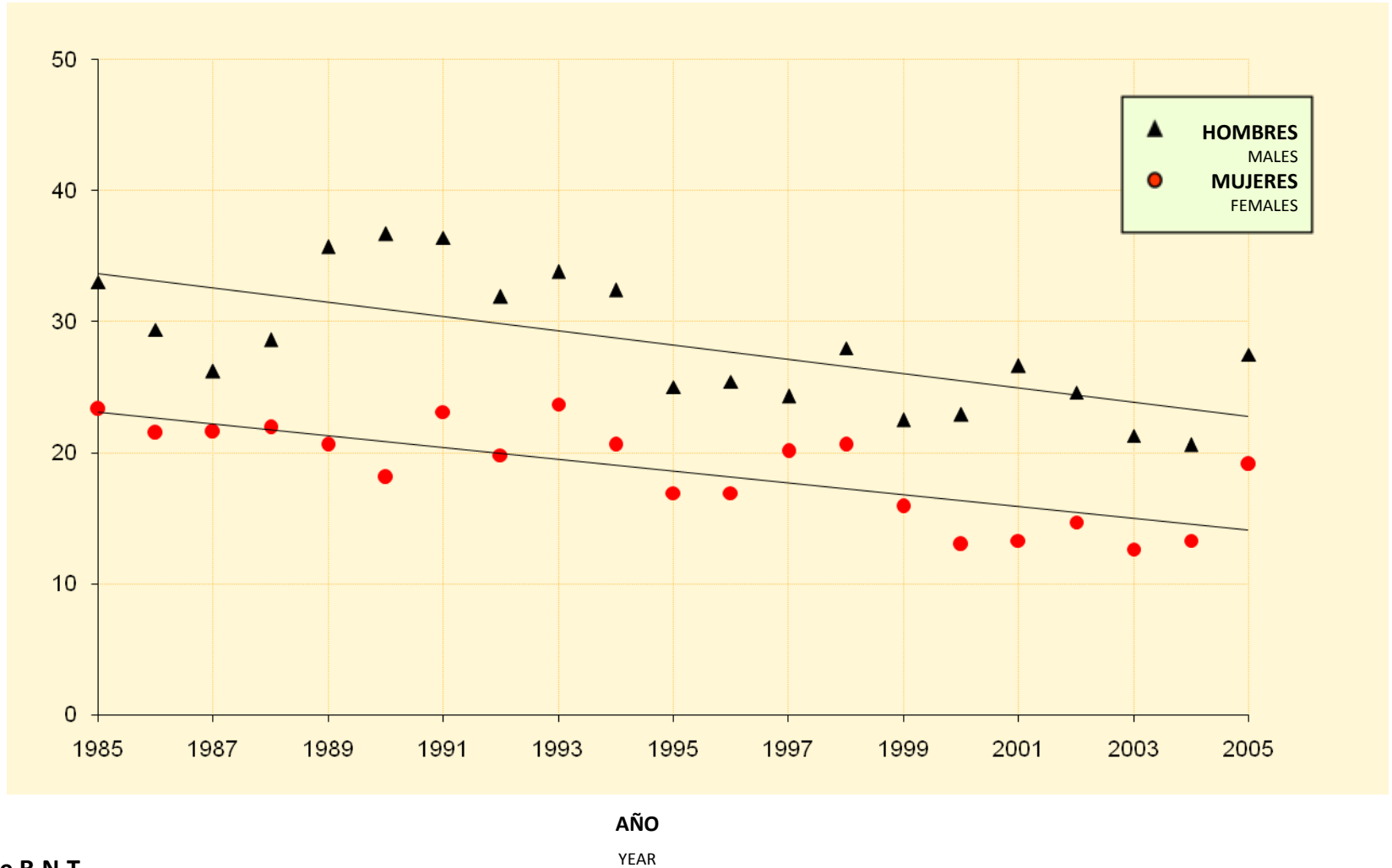
El T2 se divide en T2a y T2b

R. N. T.

GRÁFICO / FIGURE 20
ESTÓMAGO.TENDENCIA DE LA INCIDENCIA POR SEXO
RESIDENTES EN QUITO 1985-2005
STOMACH. INCIDENCE TREND BY SEX. QUITO RESIDENTS 1985-2005

TASAS ESTANDARIZADAS

A.S.R. WORLD



Fuente R.N.T.
Source N.T.R.

T. N. M.

ESTOMAGO : Cambios

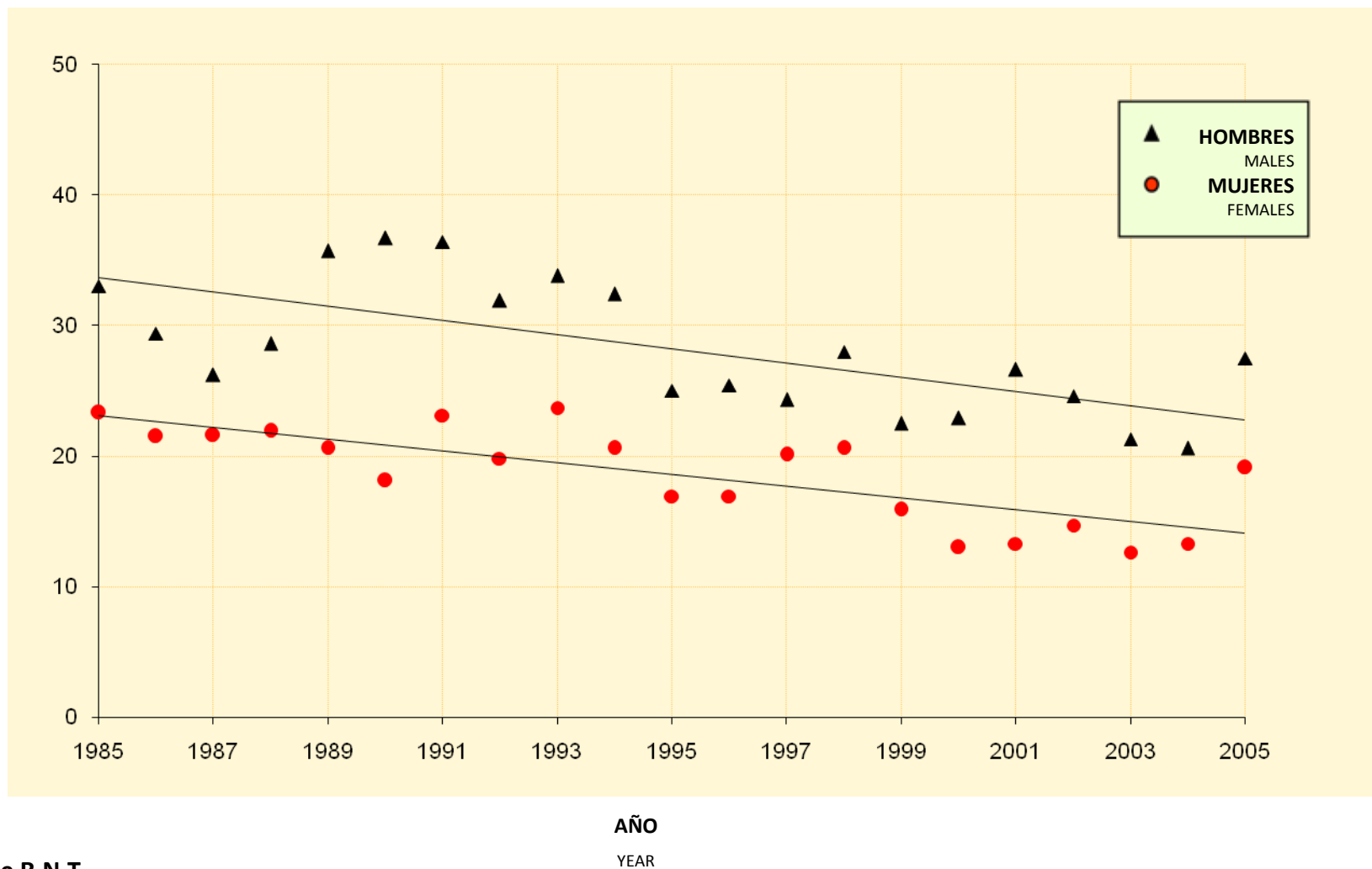
El T2 se divide en T2a y T2b

R. N. T.

GRÁFICO / FIGURE 20
ESTÓMAGO.TENDENCIA DE LA INCIDENCIA POR SEXO
RESIDENTES EN QUITO 1985-2005
 STOMACH. INCIDENCE TREND BY SEX. QUITO RESIDENTS 1985-2005

TASAS ESTANDARIZADAS

A.S.R. WORLD



Fuente R.N.T.
 Source N.T.R.

T. N. M.

ESTOMAGO

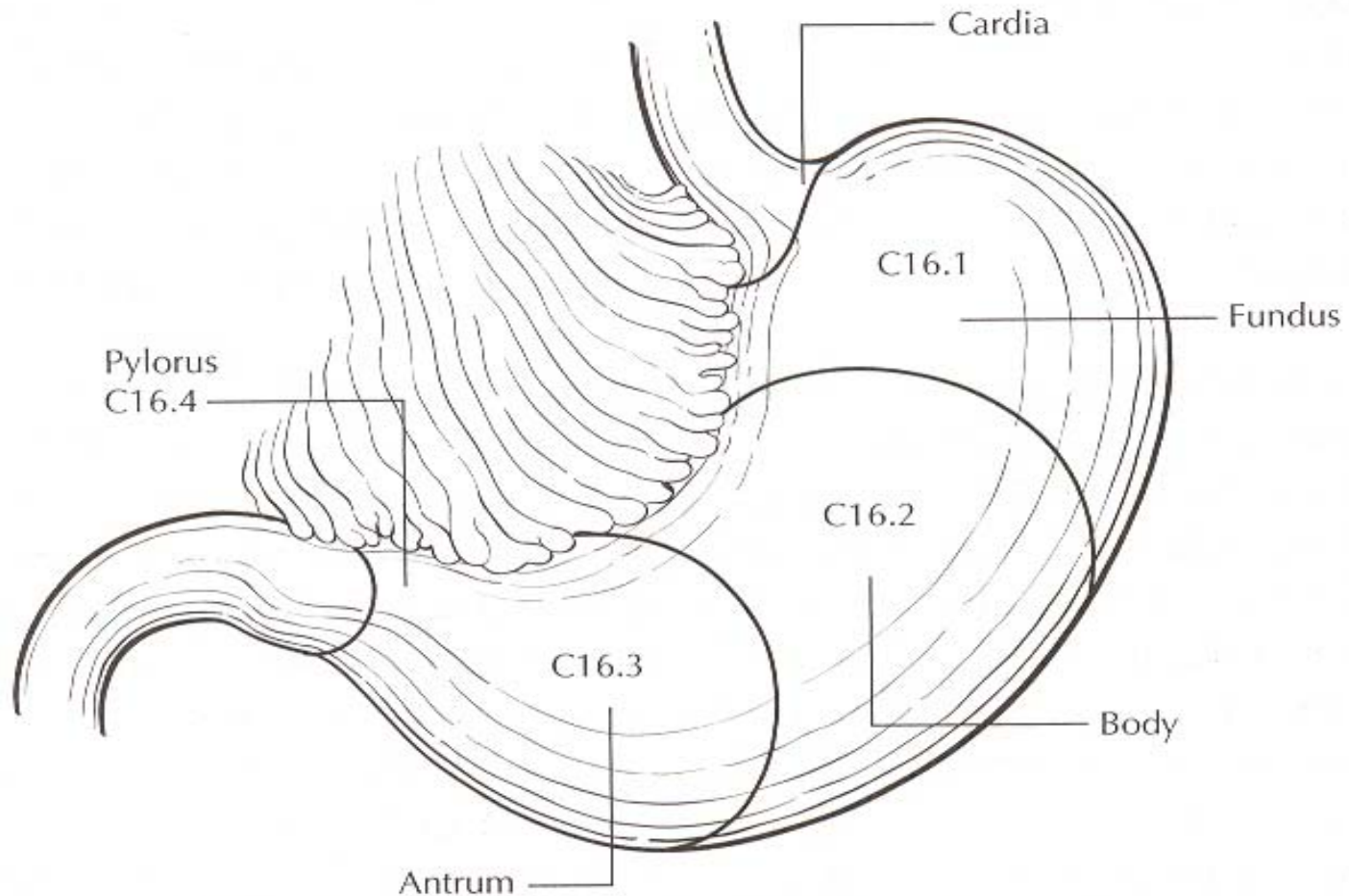
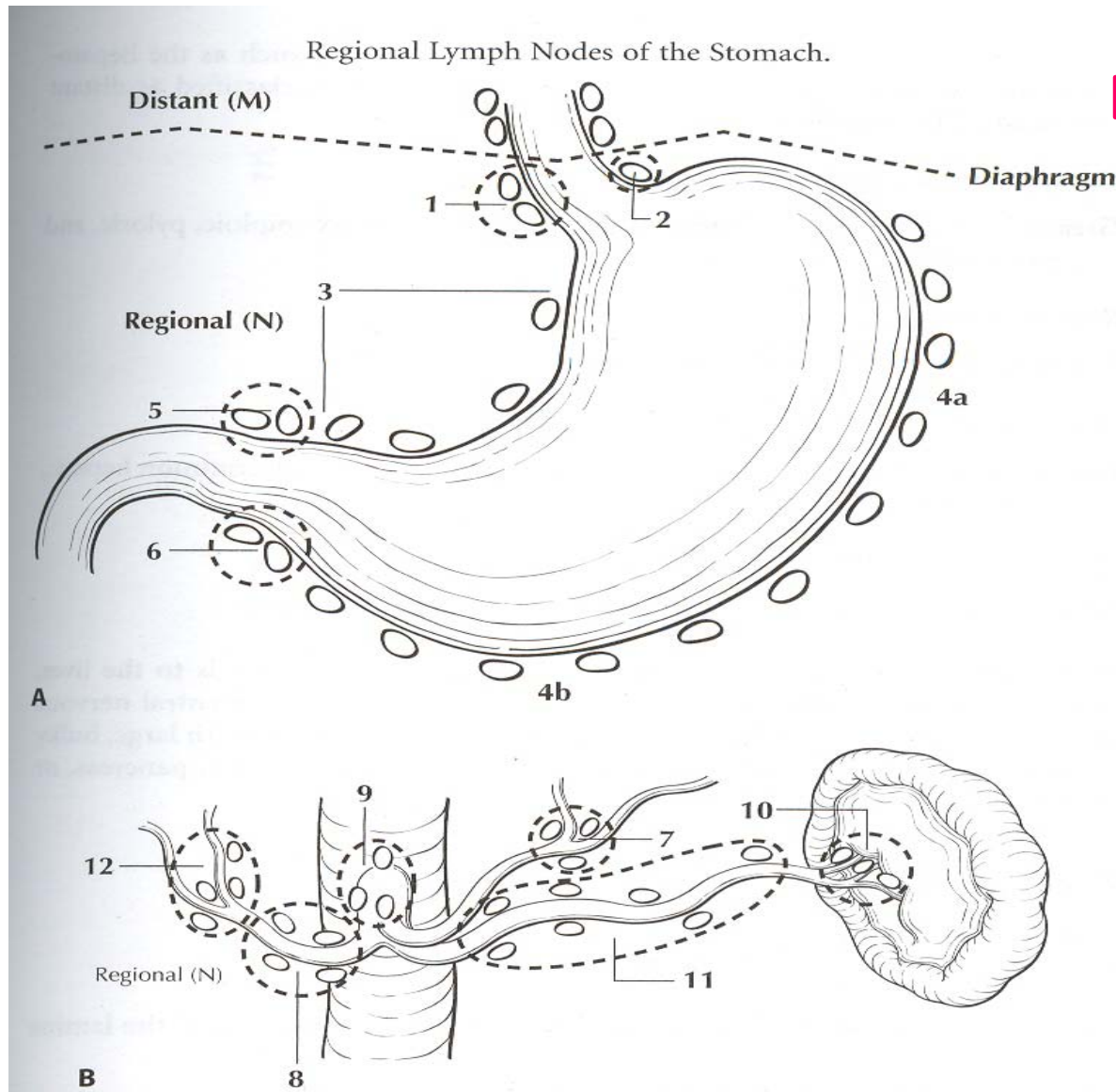


FIGURE 10.1. Anatomical subsites of the stomach.

R. N. T.

T. N. M.

ESTOMAGO



R. N. T.

T. N. M.

ESTOMAGO

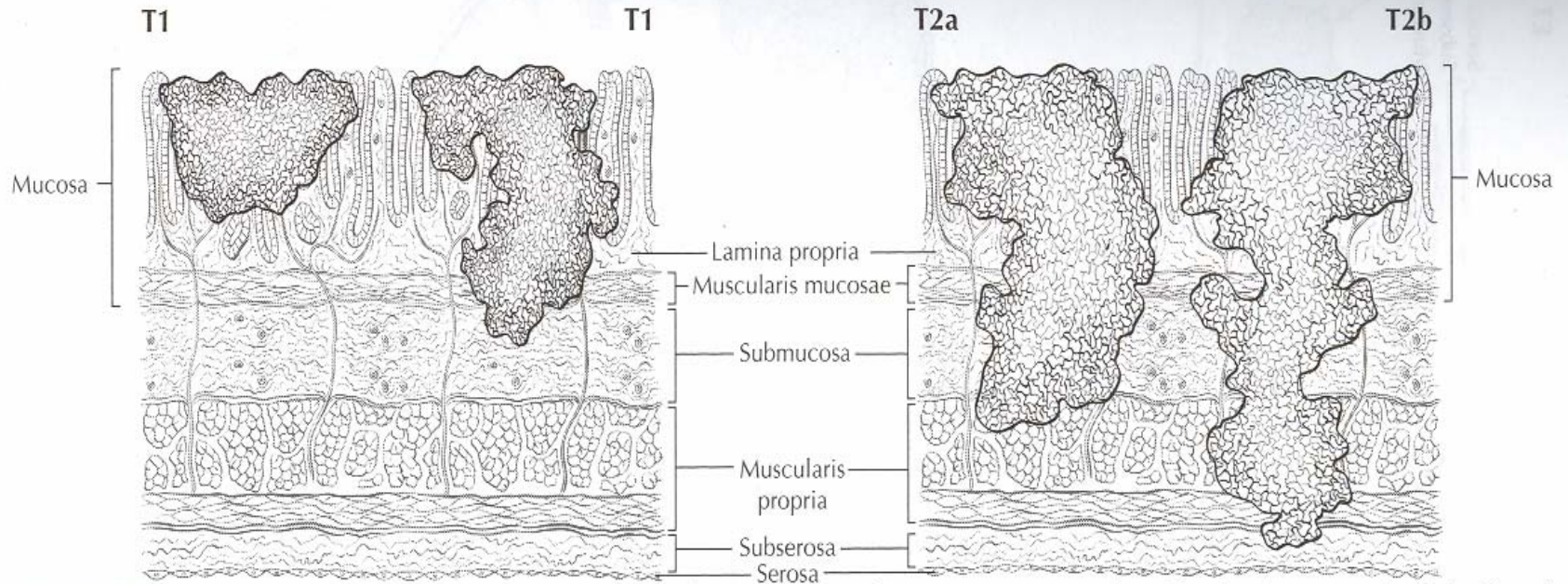


FIGURE 10.3. Illustrated definitions of T1, T2a, and T2b. Two views of T1 tumor: tumor invading lamina propria (left side of T1 illustration) and submucosa (right side of T1 illustration). T2a tumor invades muscularis propria whereas T2b tumor invades subserosa.

R. N. T.

T. N. M. ESTOMAGO

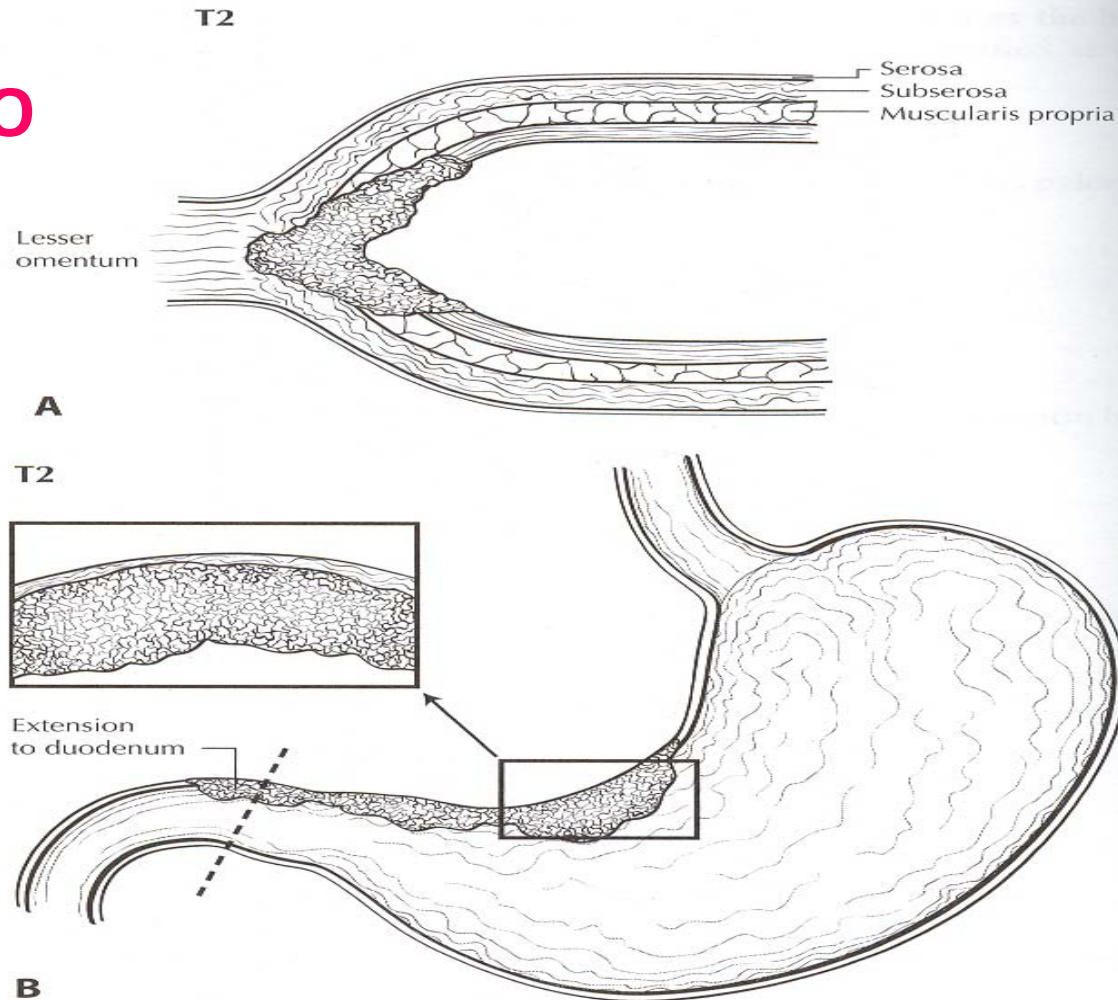


Figure 10.4. A. T2 is defined as tumor that invades muscularis propria or subserosa. **B.** T2 is defined as tumor that invades muscularis propria or subserosa. Distal extension to duodenum does not affect T category.

R. N. T.

T. N. M.
ESTOMAGO

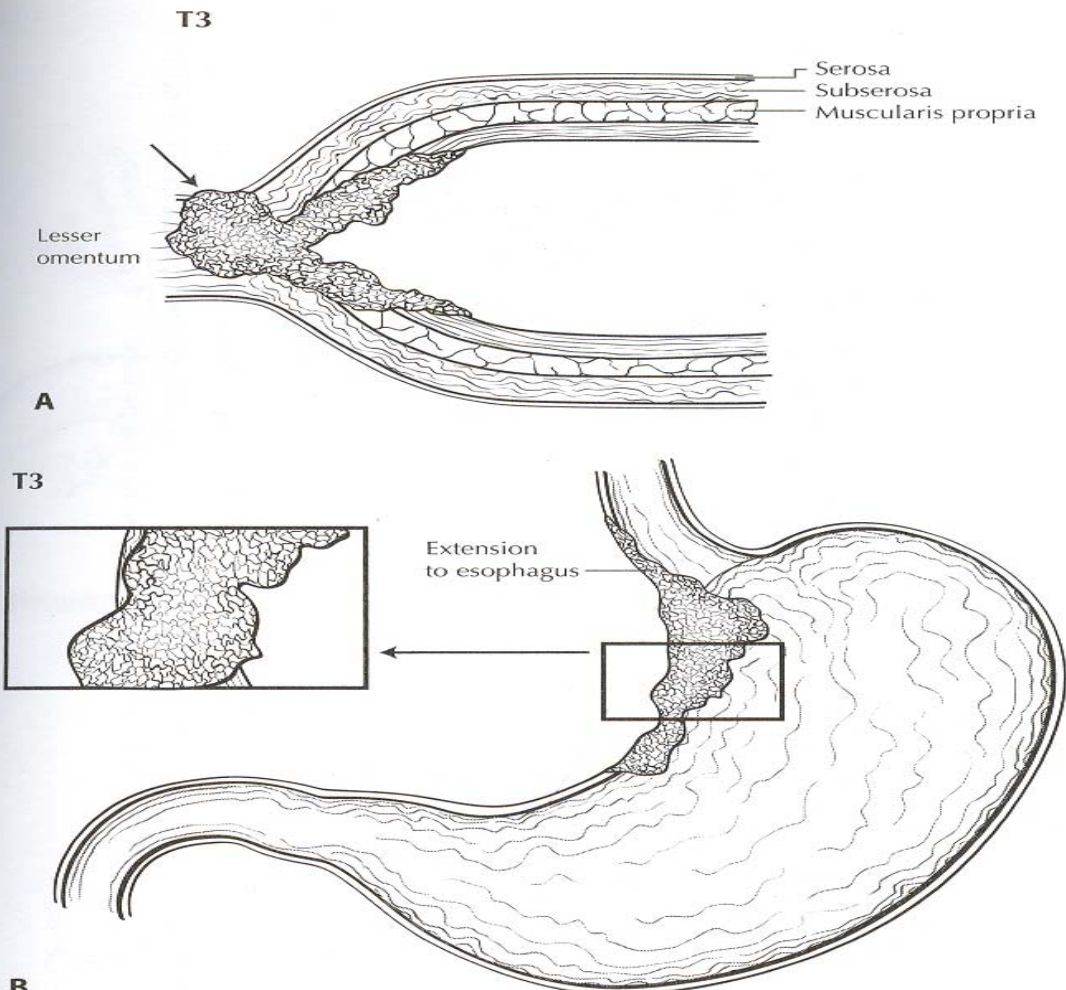


FIGURE 10.5. A. T3 tumor penetrates serosa (visceral peritoneum) without invasion of adjacent structures. **B.** T3 tumor penetrates serosa (visceral peritoneum) without invasion of adjacent structures. Proximal extension to esophagus does not affect T category.

R. N. T.

T. N. M.

ESTOMAGO

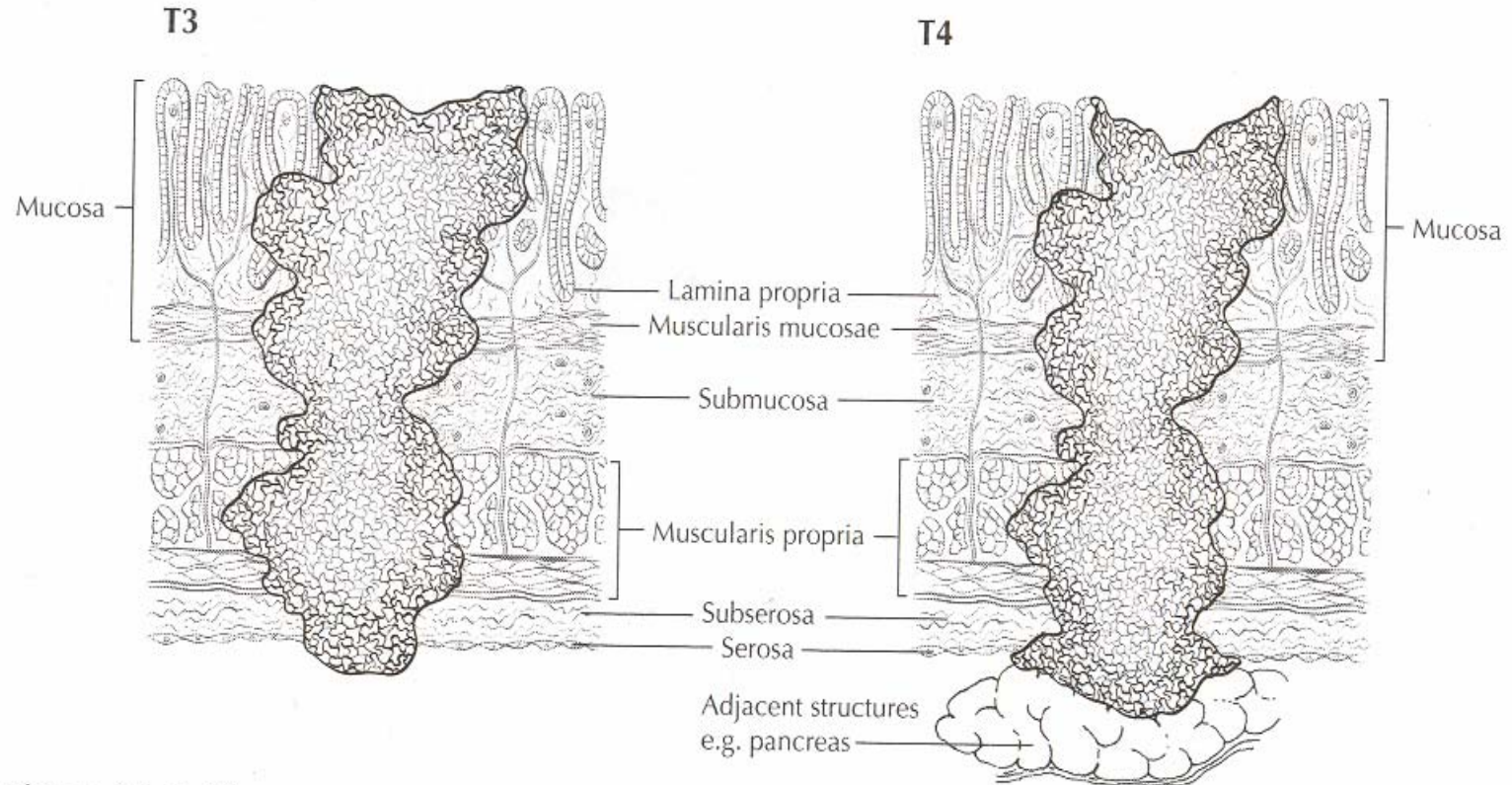


Figure 10.6. T3 tumor penetrates serosa (visceral peritoneum) without invasion of adjacent structures whereas T4 tumor radially invades adjacent structures, here the pancreas.

R. N. T.

T. N. M. ESTOMAGO

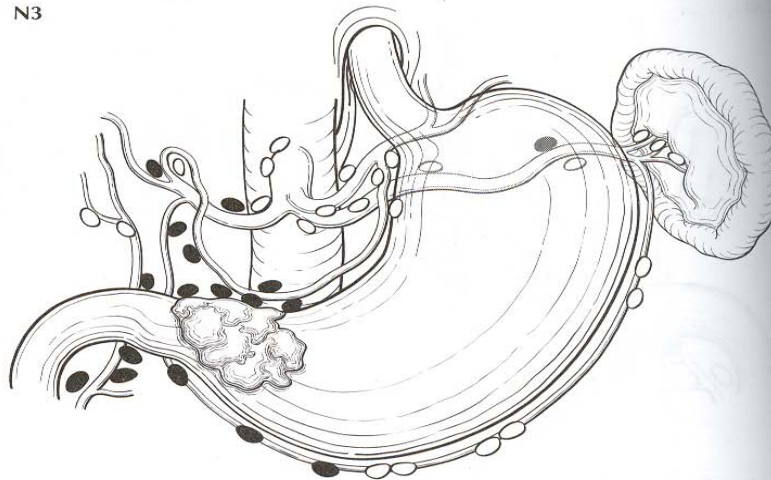


FIGURE 10.9. N3 is defined as metastasis in more than 15 regional lymph nodes.

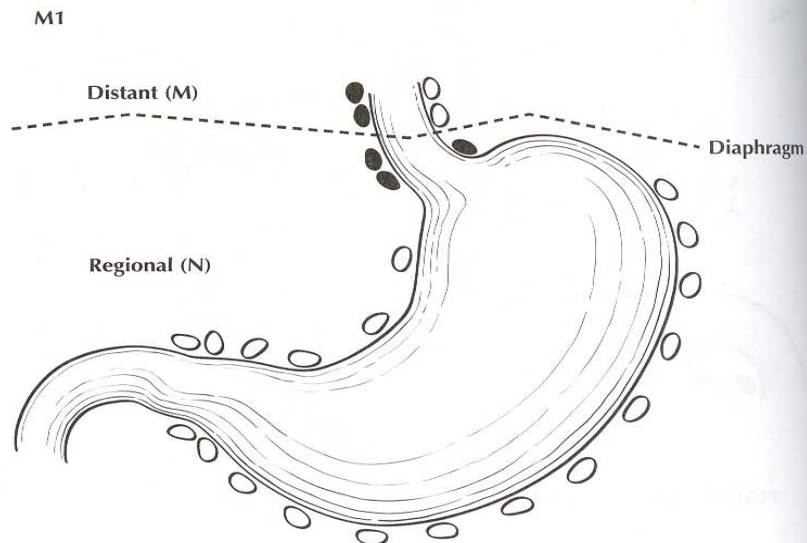


FIGURE 10.10. Involvement of nodes above the diaphragm is defined as distant metastasis or M1.

R. N. T.

ESTADIOS CLINICOS

R. N. T.

STAGE GROUPING

0	Tis	N0	M0
IA	T1	N0	M0
IB	T1	N1	M0
	T2a/b	N0	M0
II	T1	N2	M0
	T2a/b	N1	M0
	T3	N0	M0
IIIA	T2a/b	N2	M0
	T3	N1	M0
	T4	N0	M0
IIIB	T3	N2	M0
IV	T4	N1-3	M0
	T1-3	N3	M0
	Any T	Any N	M1

ESTOMAGO

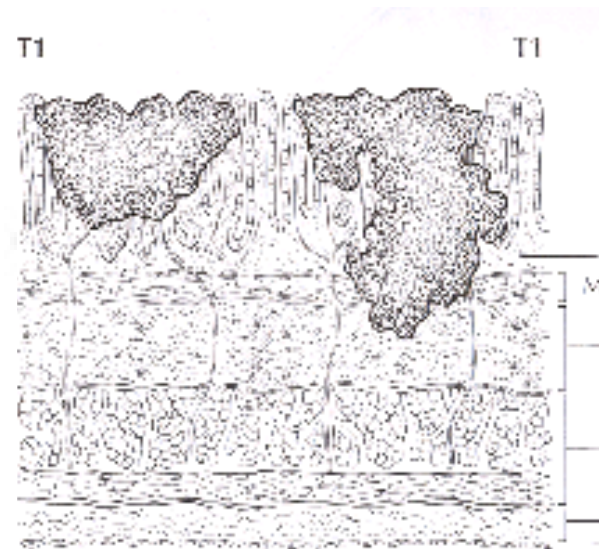
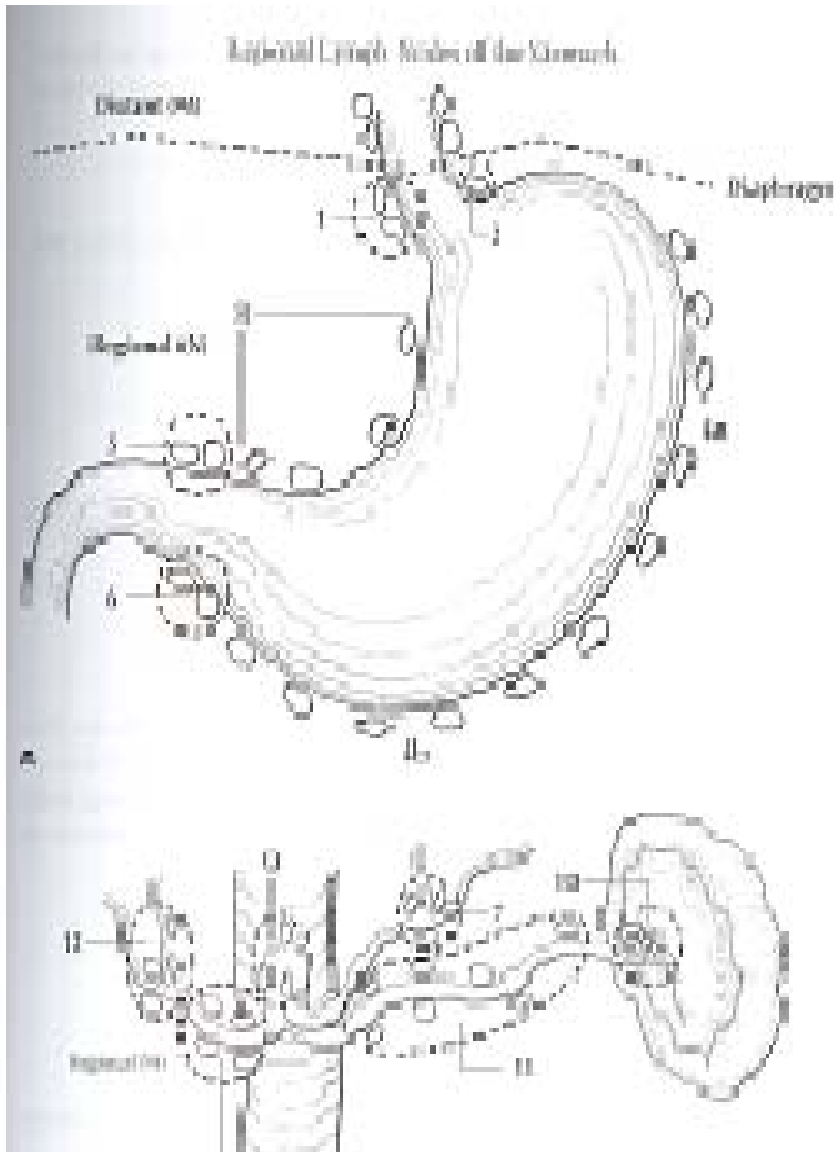
R. N. T.

T. N. M.

1

ESTADIO Ia

T1 – N0 – M0



ESTOMAGO

R. N. T.

T. N. M.

ESTADIO Ib

2

T1 – N1 – M0

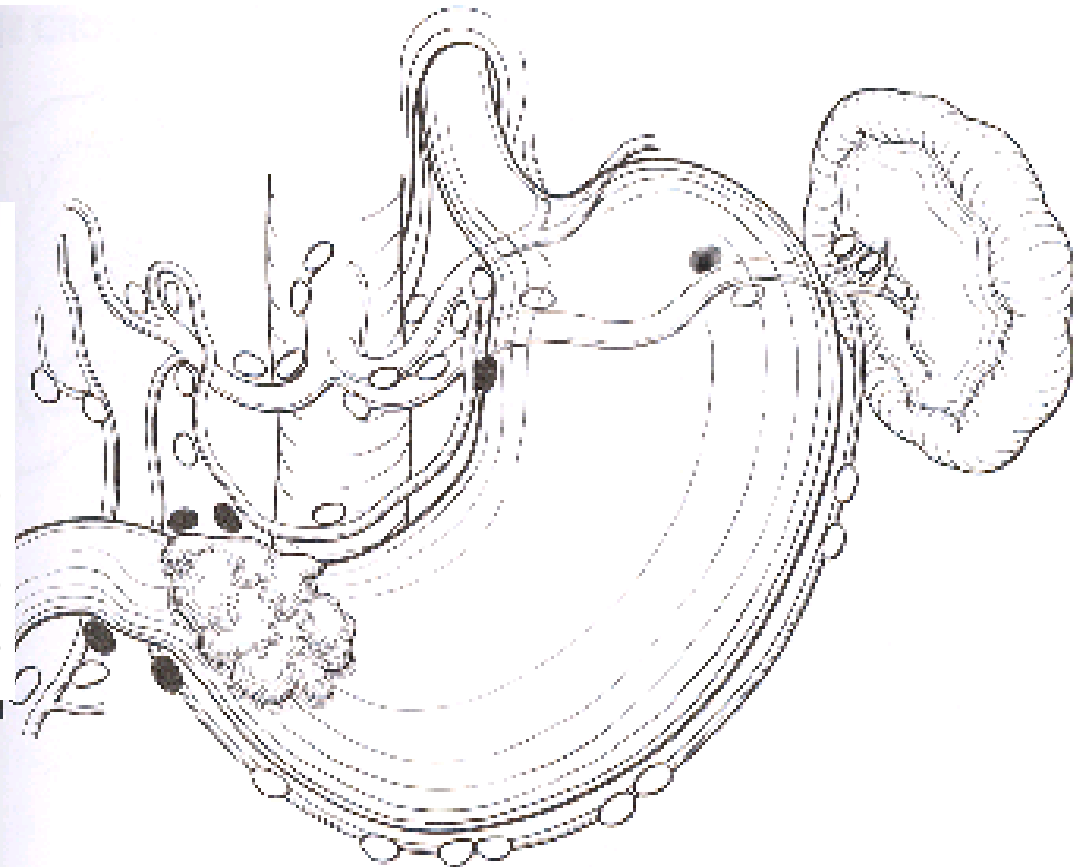
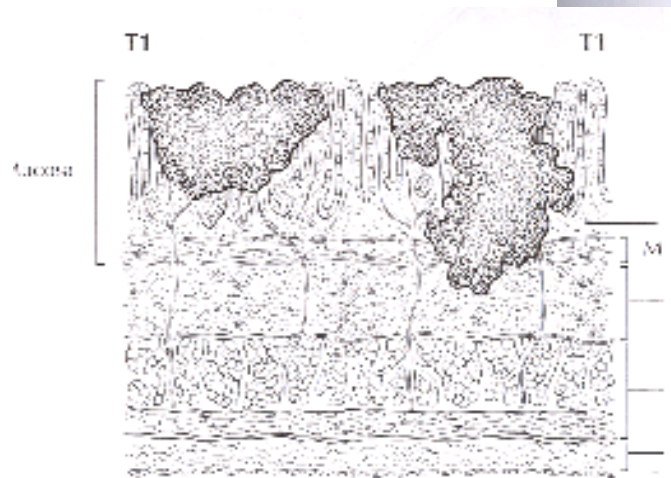
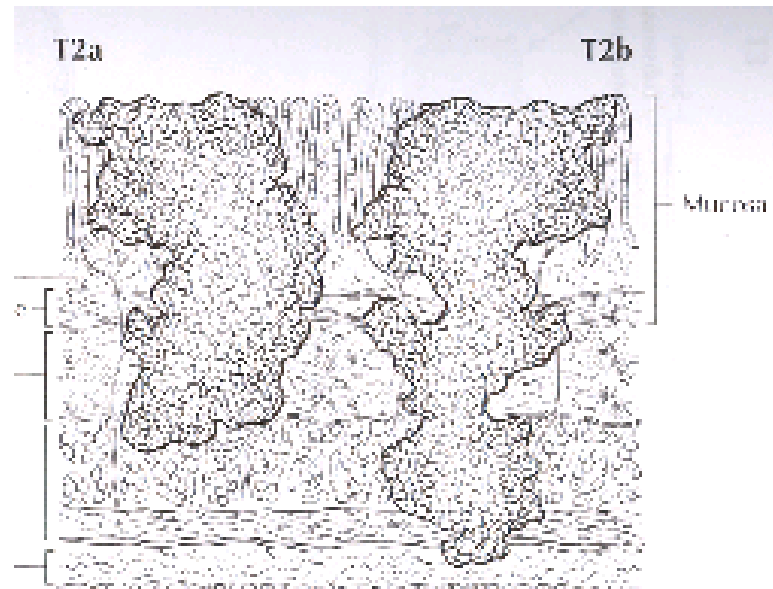


FIGURE 10.7. N1 is defined as metastasis in 1 to 6 regional lymph nodes.

ESTOMAGO



ESTOMAGO

T. N. M.
ESTADIO II

T1 – N2 – M0

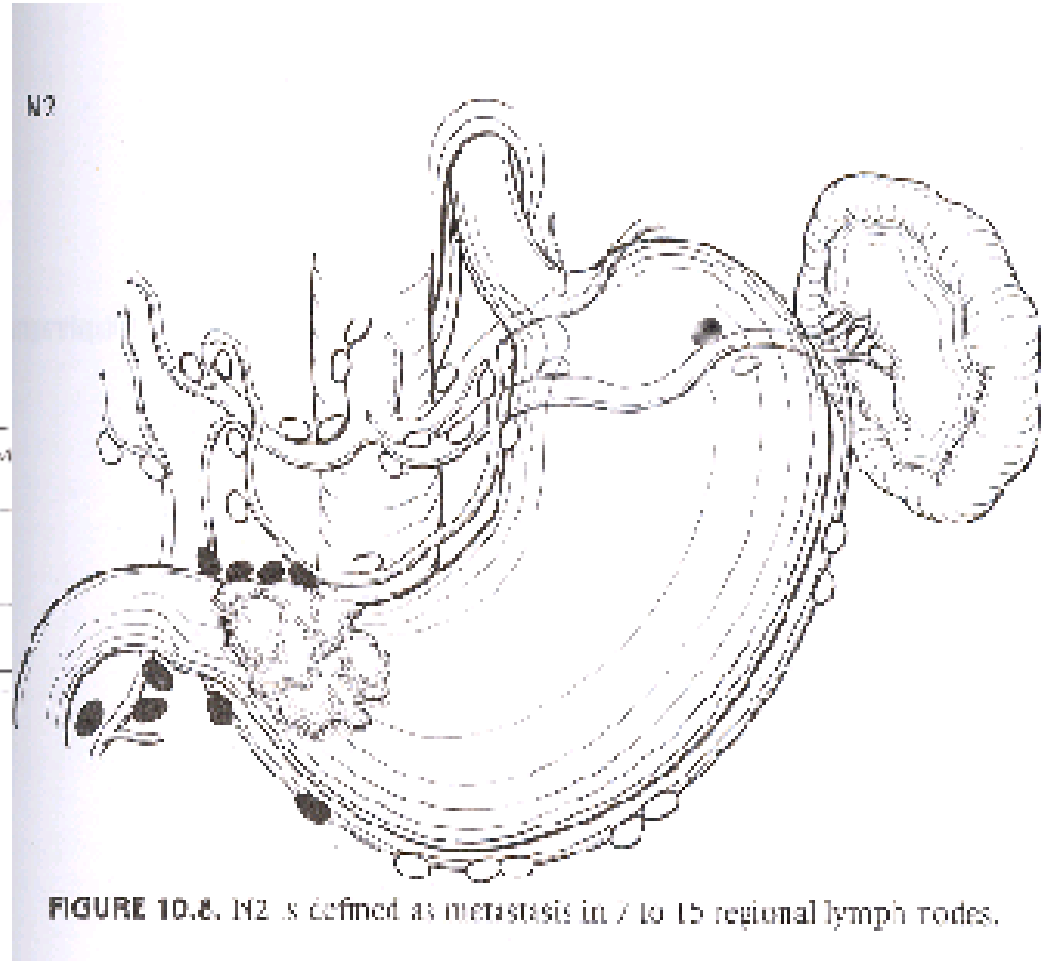
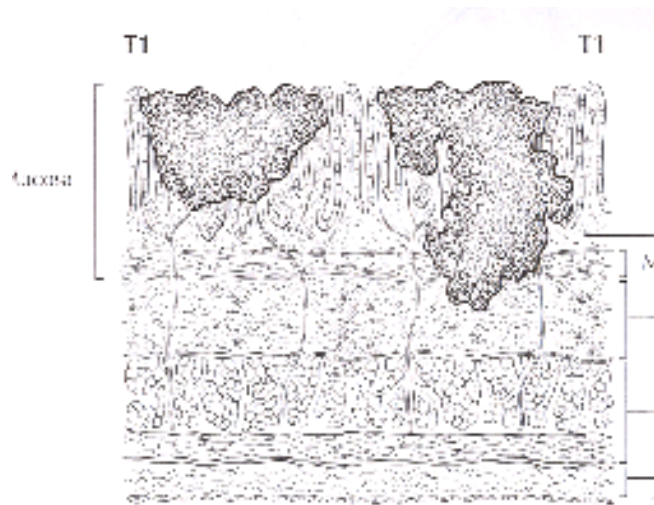


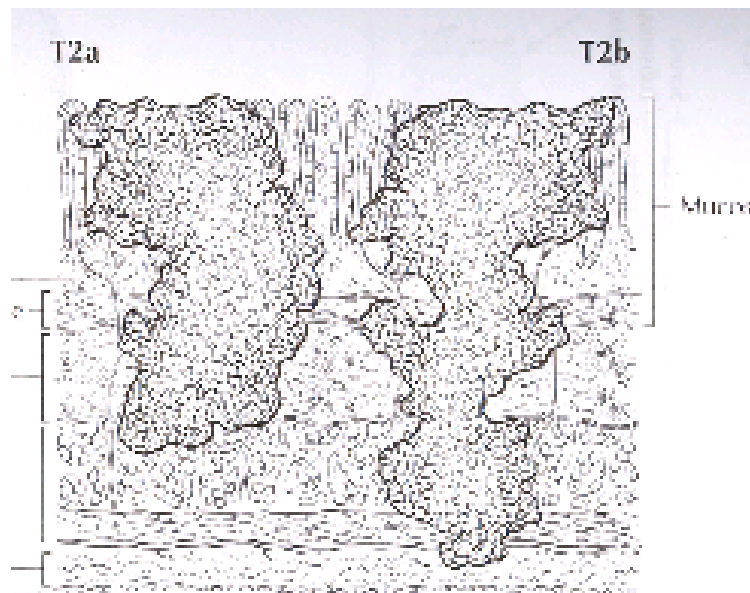
FIGURE 10.8. N2 is defined as metastasis in 7 to 15 regional lymph nodes.

ESTOMAGO

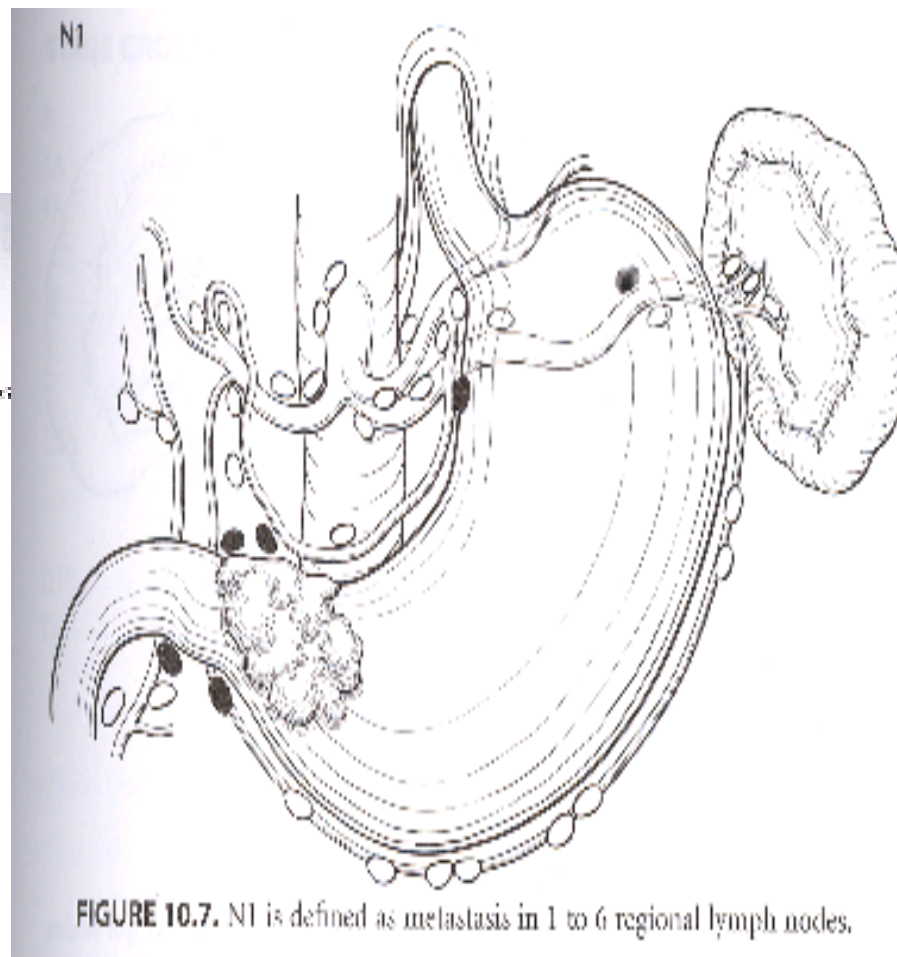
R. N. T.

T. N. M.
ESTADIO II

T2a/b – N1 – M0

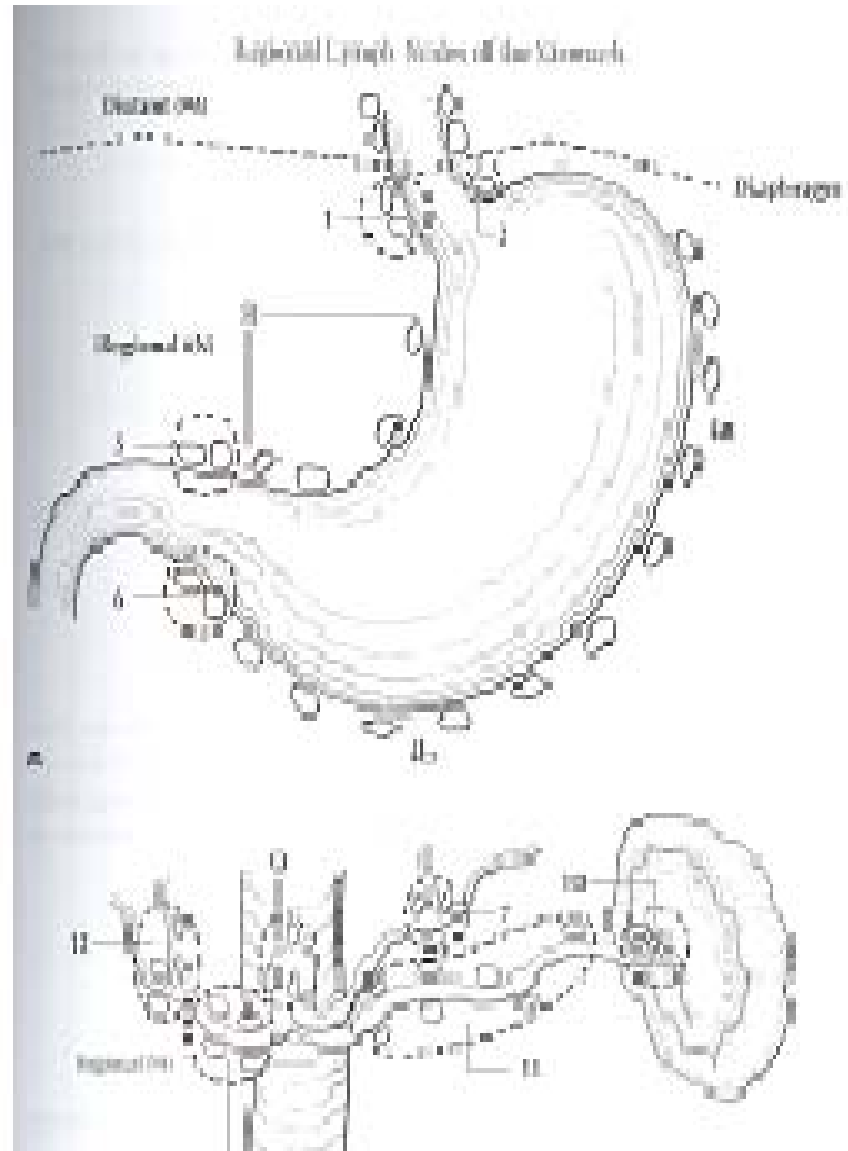
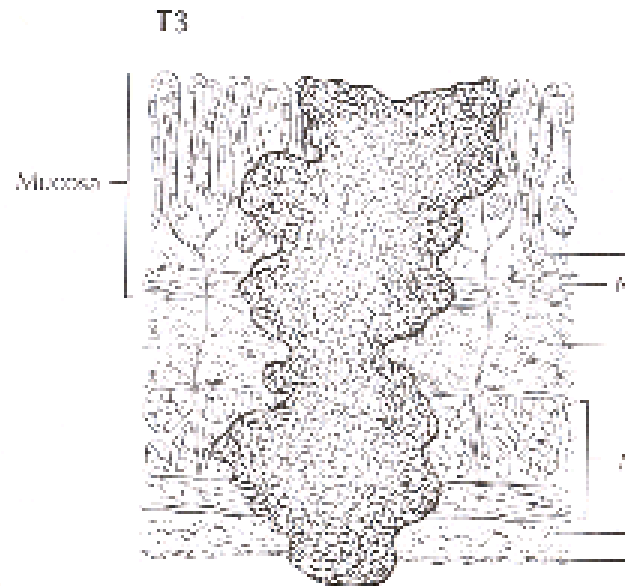


ESTOMAGO



T. N. M.
ESTADIO II

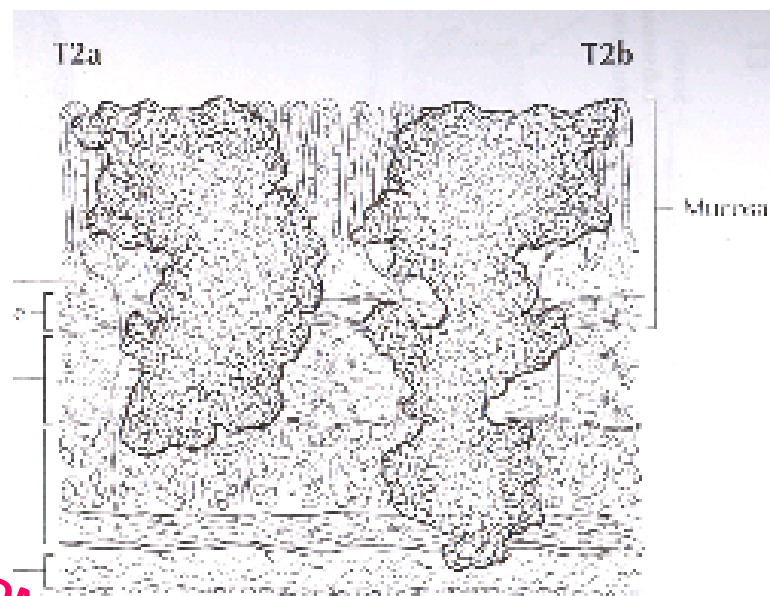
T3 – N0 – M0



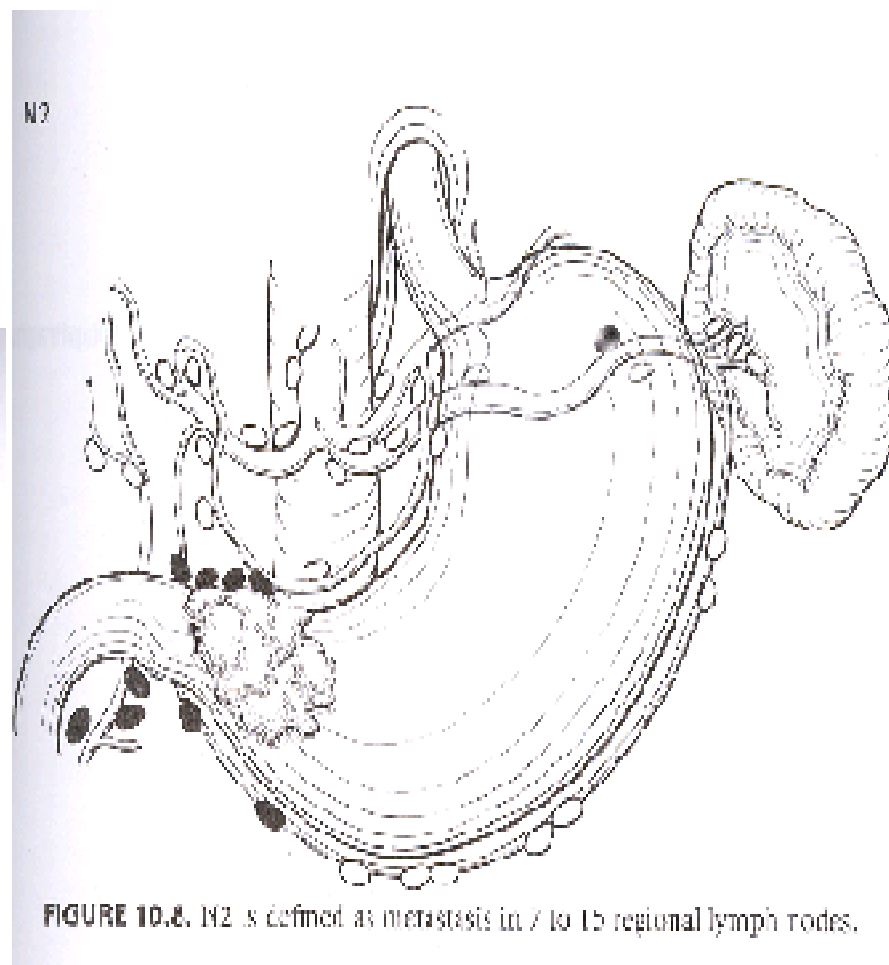
ESTOMAGO

T. N. M.
ESTADIO IIIa

T2a/b – N2 – M0



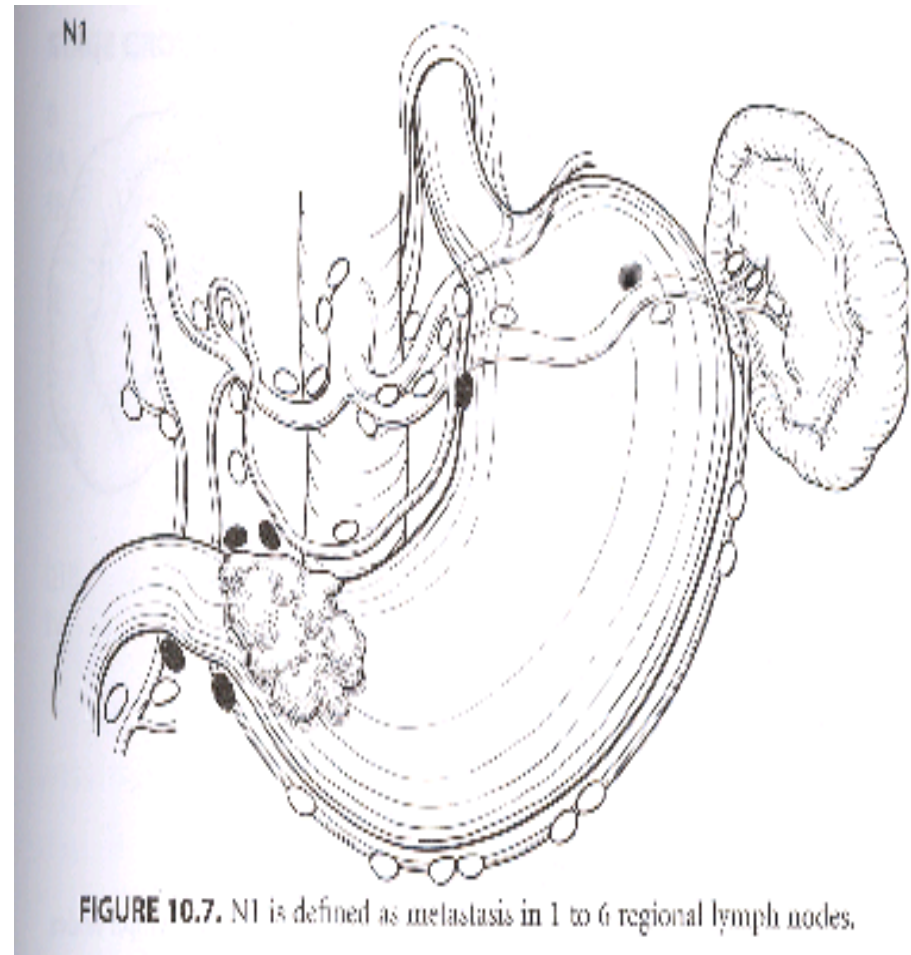
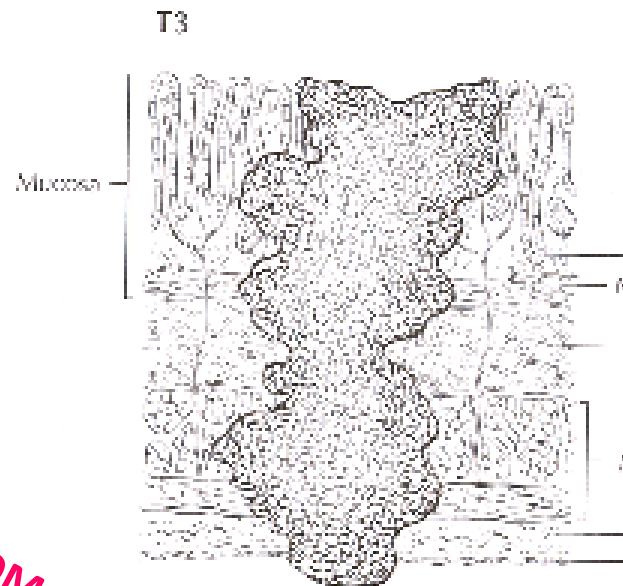
ESTOMAGO



R. N. T.

T. N. M.
ESTADIO IIIa

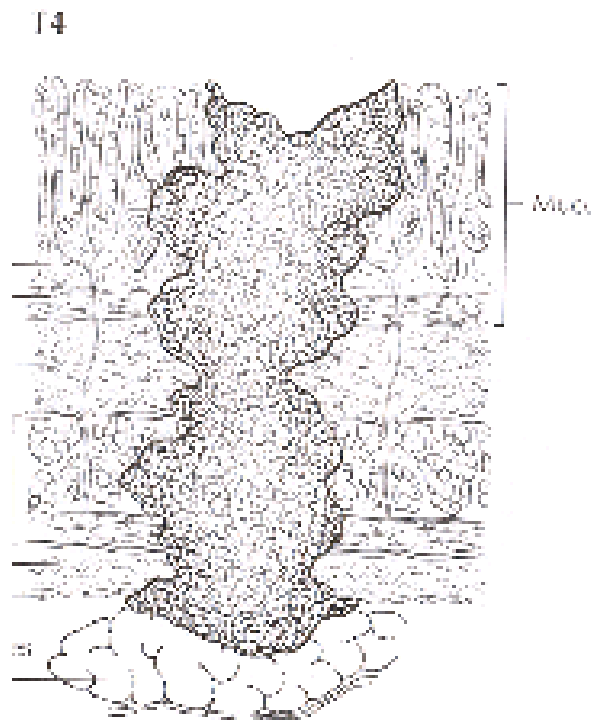
T3 – N1 – M0



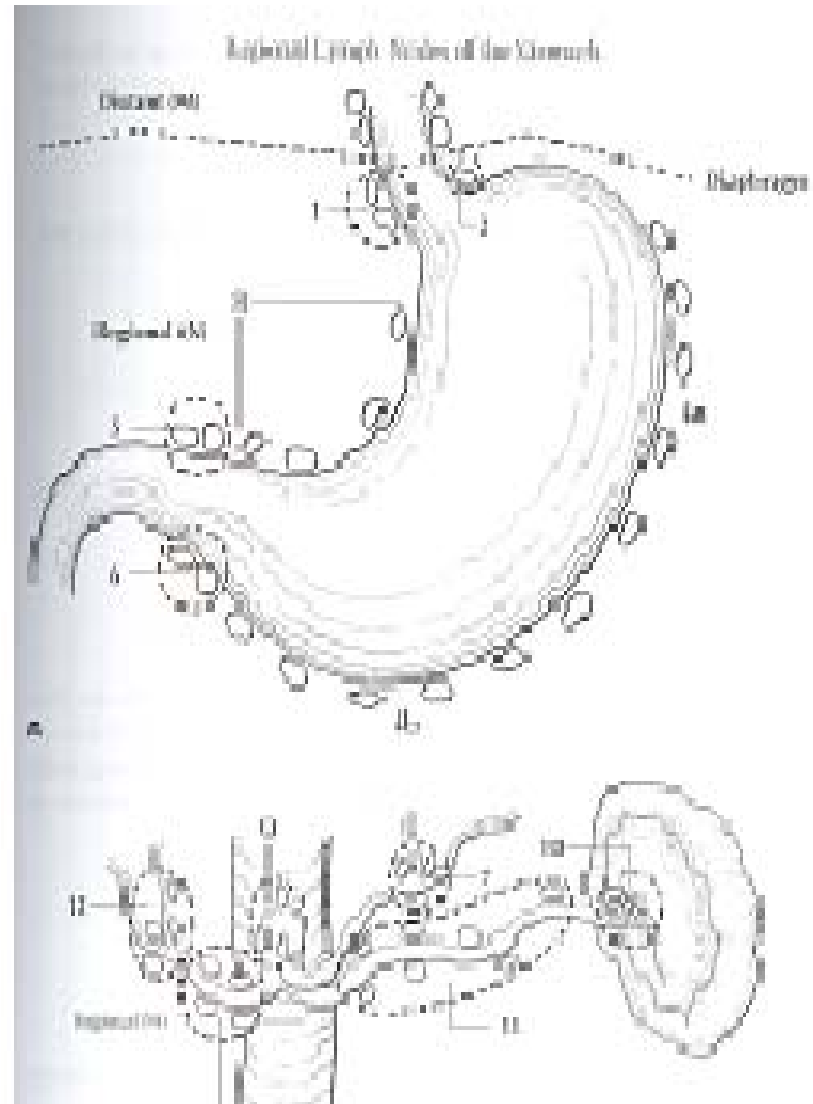
ESTOMAGO

T. N. M.
ESTADIO IIIa

T4 – N0 – M0



ESTOMAGO



T. N. M.
ESTADIO IIIb

T3 – N2 – M0

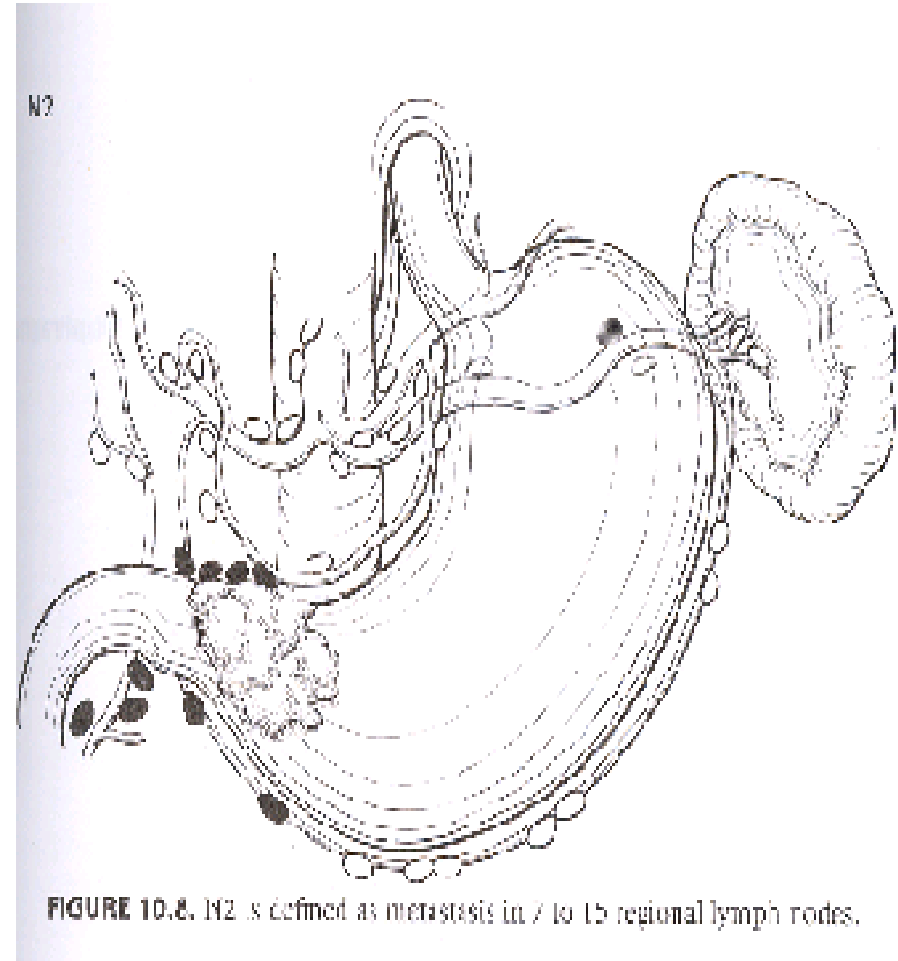
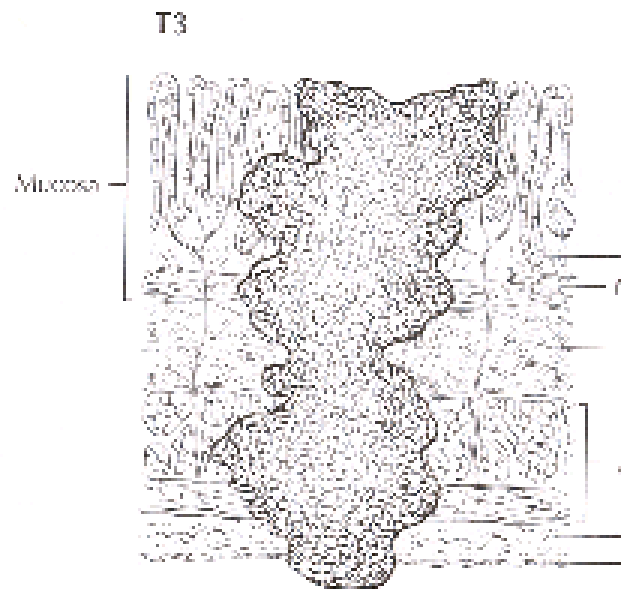


FIGURE 10.8. N2 is defined as metastasis in 7 to 15 regional lymph nodes.

ESTOMAGO

R. N. T.

T. N. M.
ESTADIO IV

T4 **GANGLIOS REGIONALES** **+** **M0**

T1 – T3 **MAS DE 15 GANGLIOS REGIONALES** **M0**
(N 3)

CUALQUIER T **CUALQUIER N** **M1**

ESTOMAGO

T. N. M.

COLON Y RECTO : Cambios

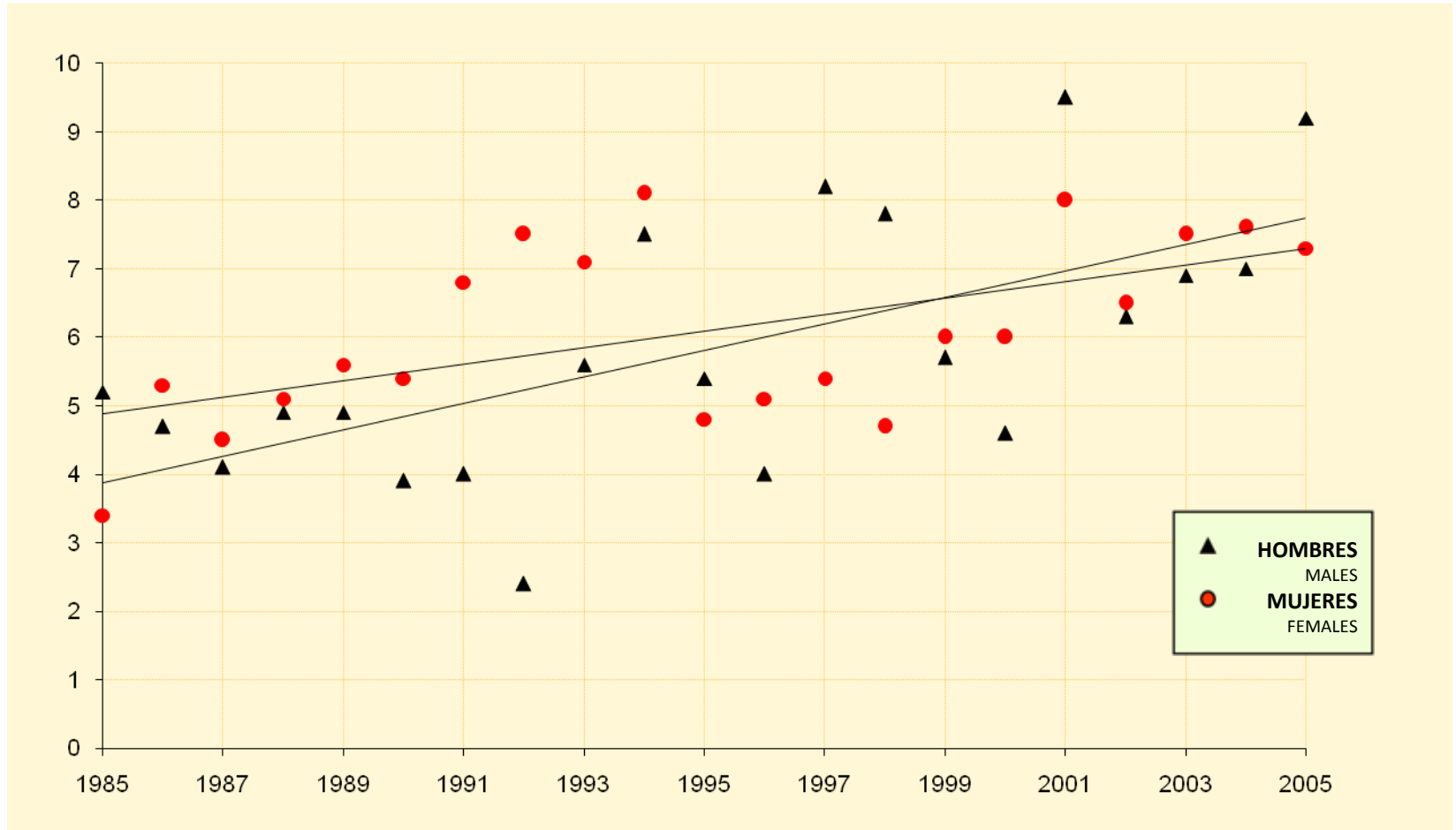
- Se delimitan mejor las regiones de colon, recto y canal anal.
- Los carcinomas del apéndice se clasifican como los de colon pero se los agrupa separadamente. Los del ano y canal anal tienen su propia estadificación.
- El estadio II se divide en IIa y IIb.
- El estadio III se divide en IIIa, IIIb y IIIc.

R.N.T.

GRÁFICO / FIGURE 29
COLON. TENDENCIA DE LA INCIDENCIA POR SEXO
RESIDENTES EN QUITO 1985-2005
 COLON. INCIDENCE TREND BY SEX. QUITO RESIDENTS 1985-2005

TASAS ESTANDARIZADAS

A.S.R. WORLD



Fuente R.N.T.

Source N.T.R.

T. N. M.

COLON Y RECTO

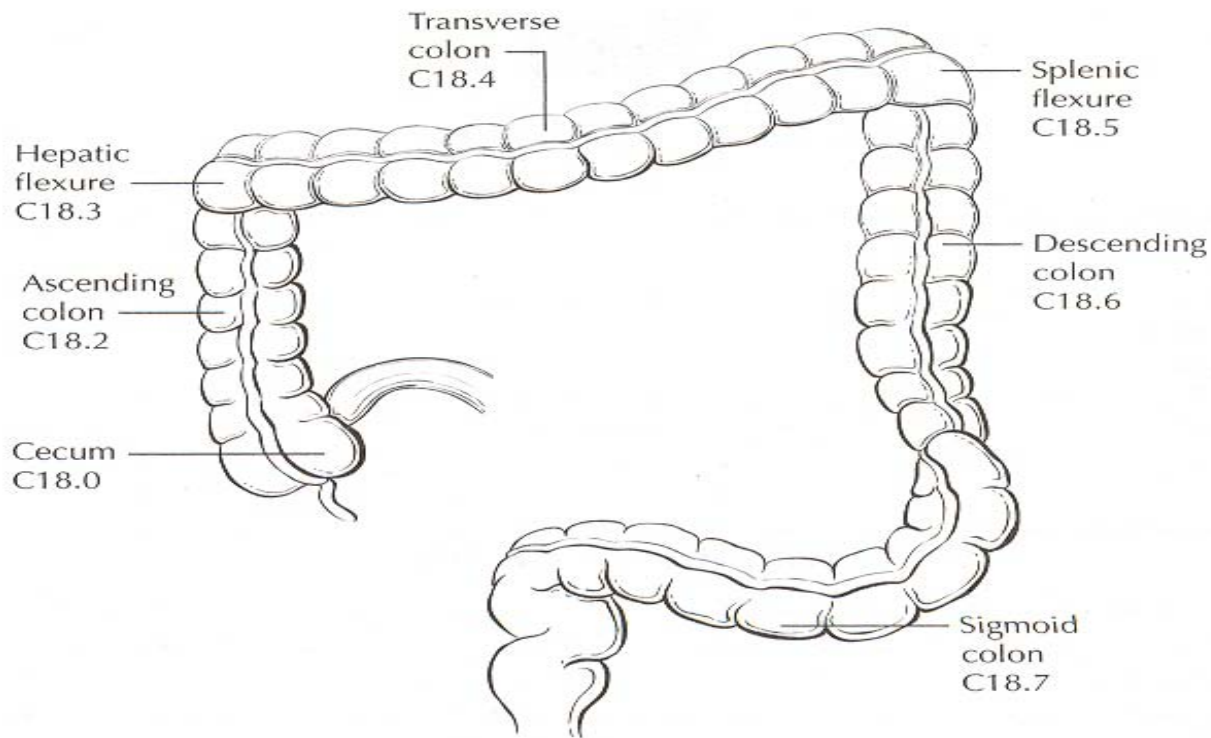


FIGURE 12.1. Anatomic subsites of the colon.

R.N.T.

T. N. M.

COLON Y RECTO

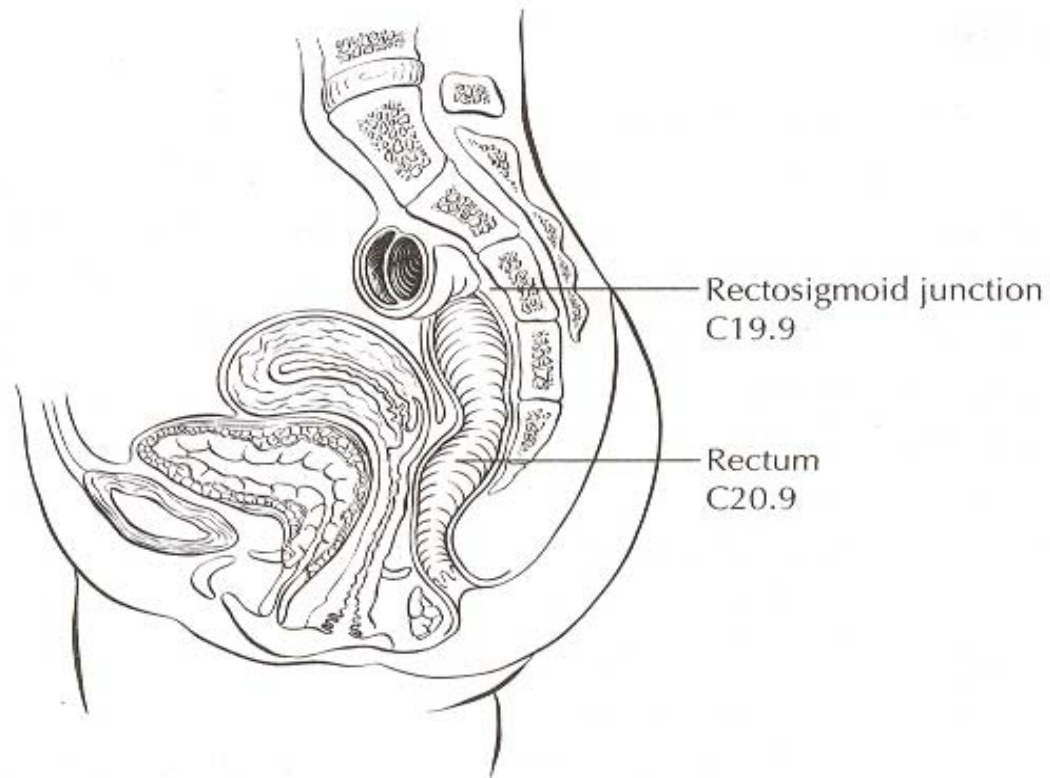


FIGURE 12.2. Anatomic subsites of the rectum.

R.N.T.

COLON Y RECTO

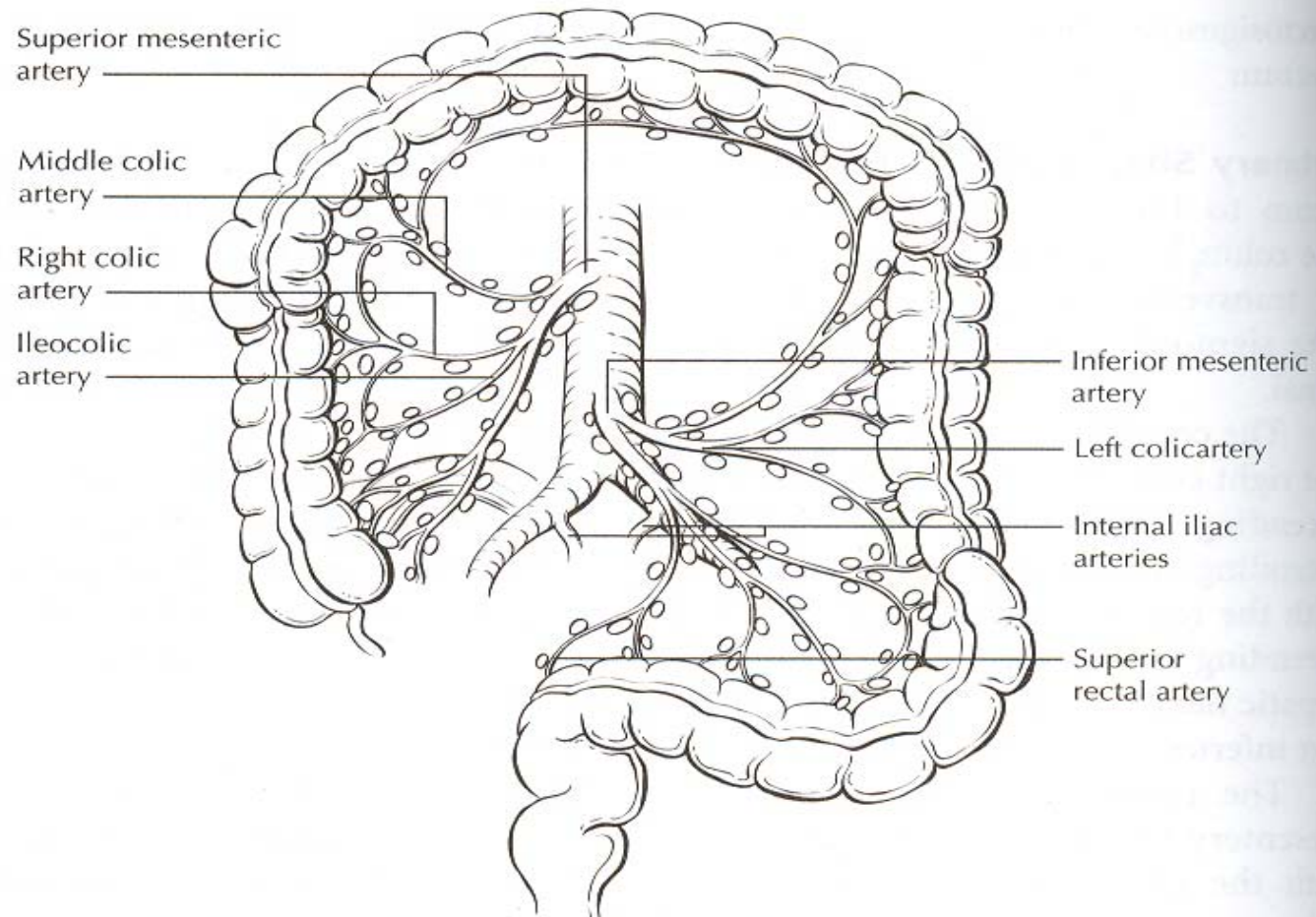
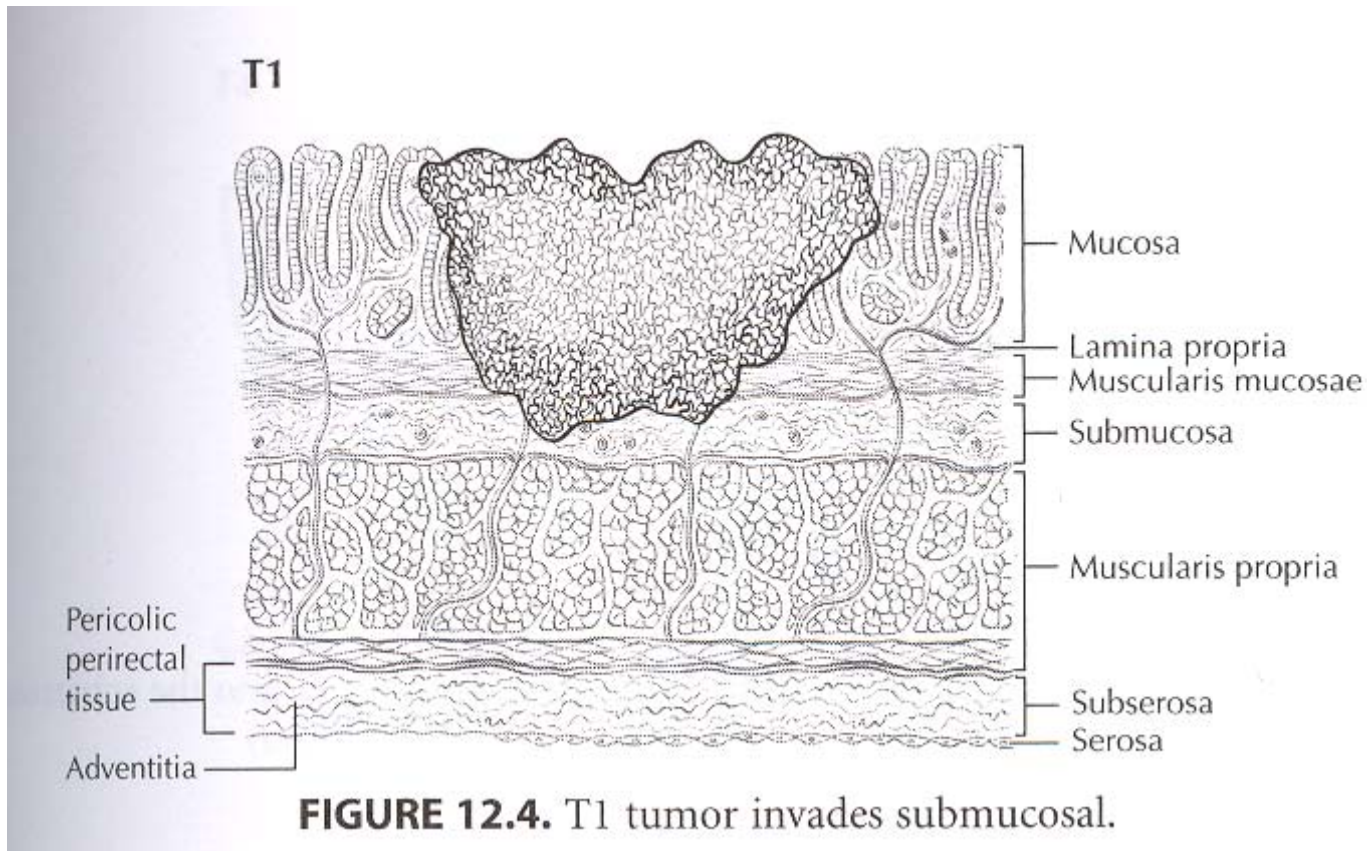


FIGURE 12.3. The regional lymph nodes of the colon and rectum.

T. N. M.

COLON Y RECTO



R.N.T.

T. N. M.

COLON Y RECTO

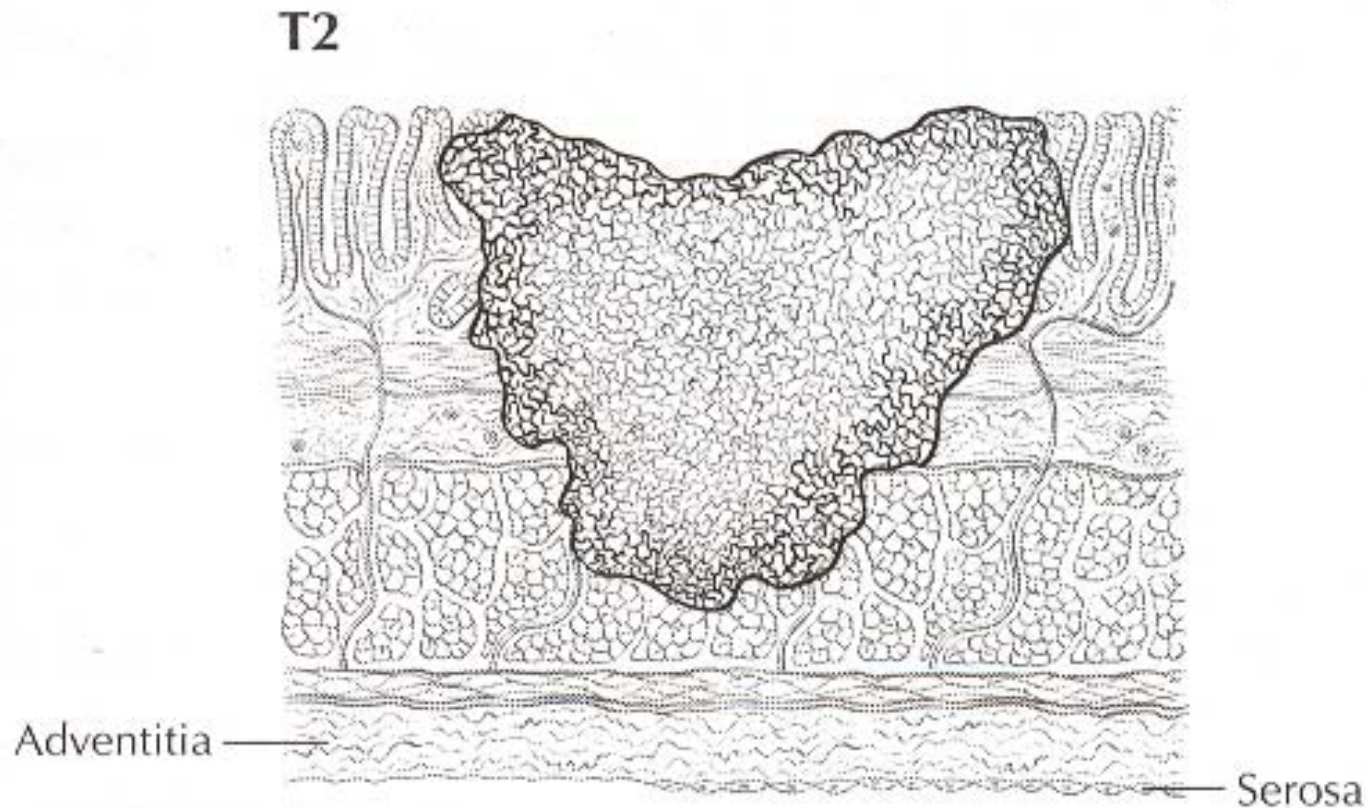


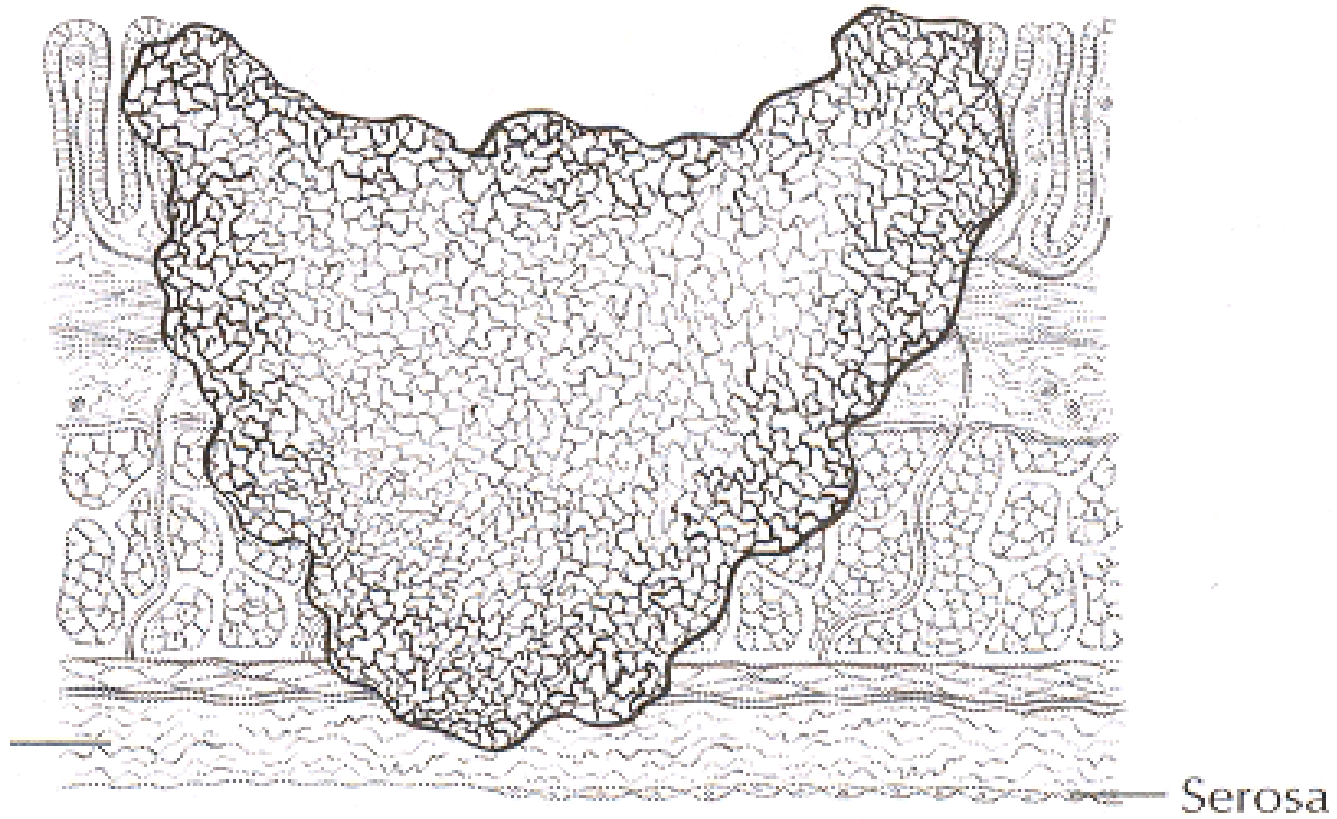
FIGURE 12.5. T2 tumor invades muscularis propria.

R.N.T.

T. N. M.

COLON Y RECTO

T3

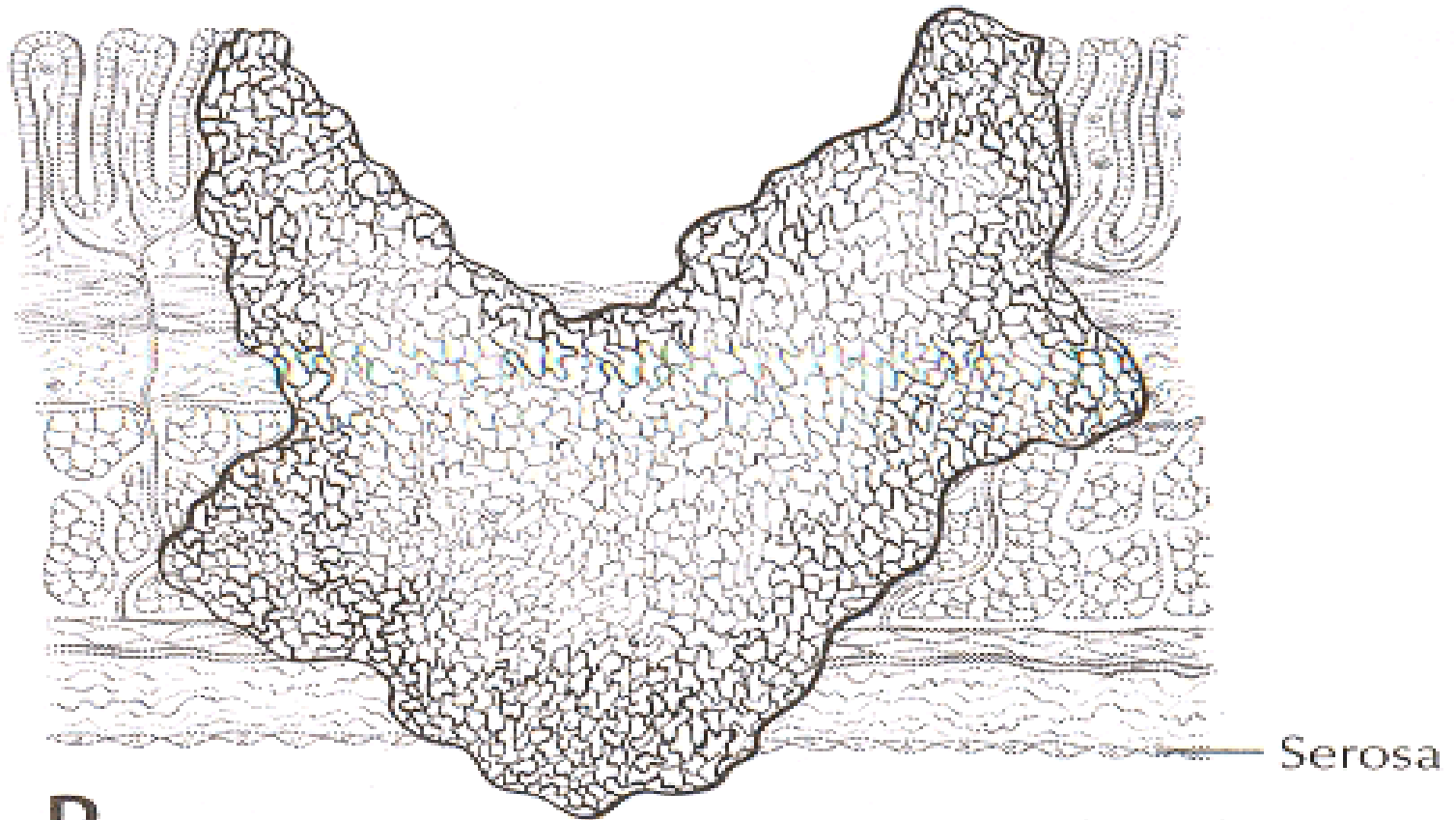


R.N.T.

T. N. M.

COLON Y RECTO

T4

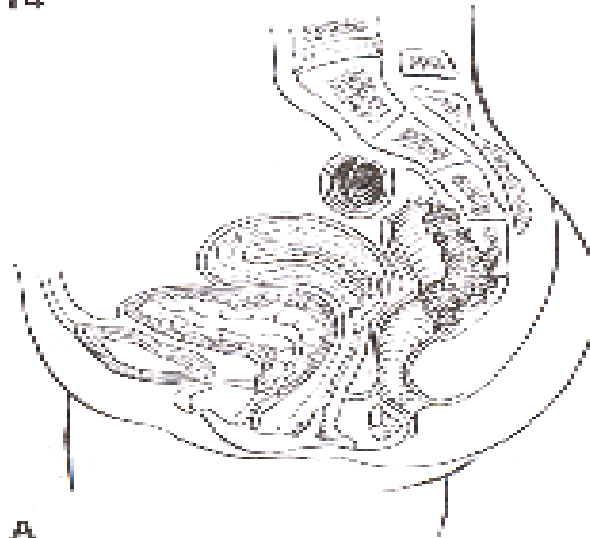


R.N.T.

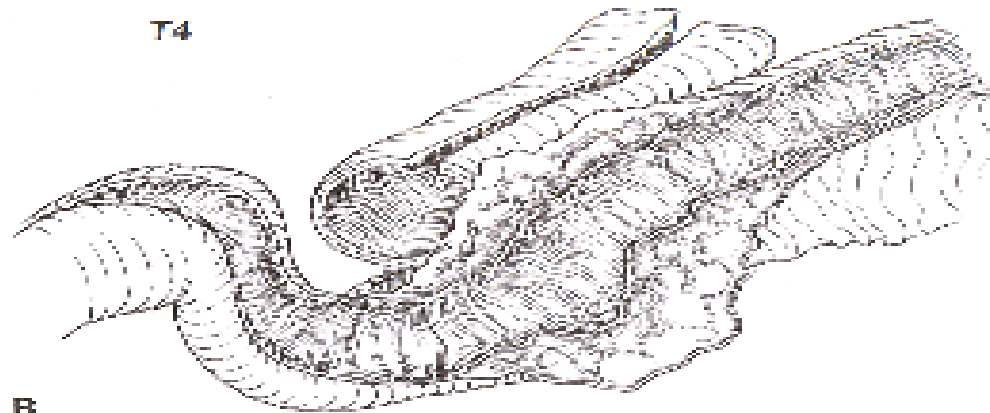
T. N. M.

COLON Y RECTO

T4



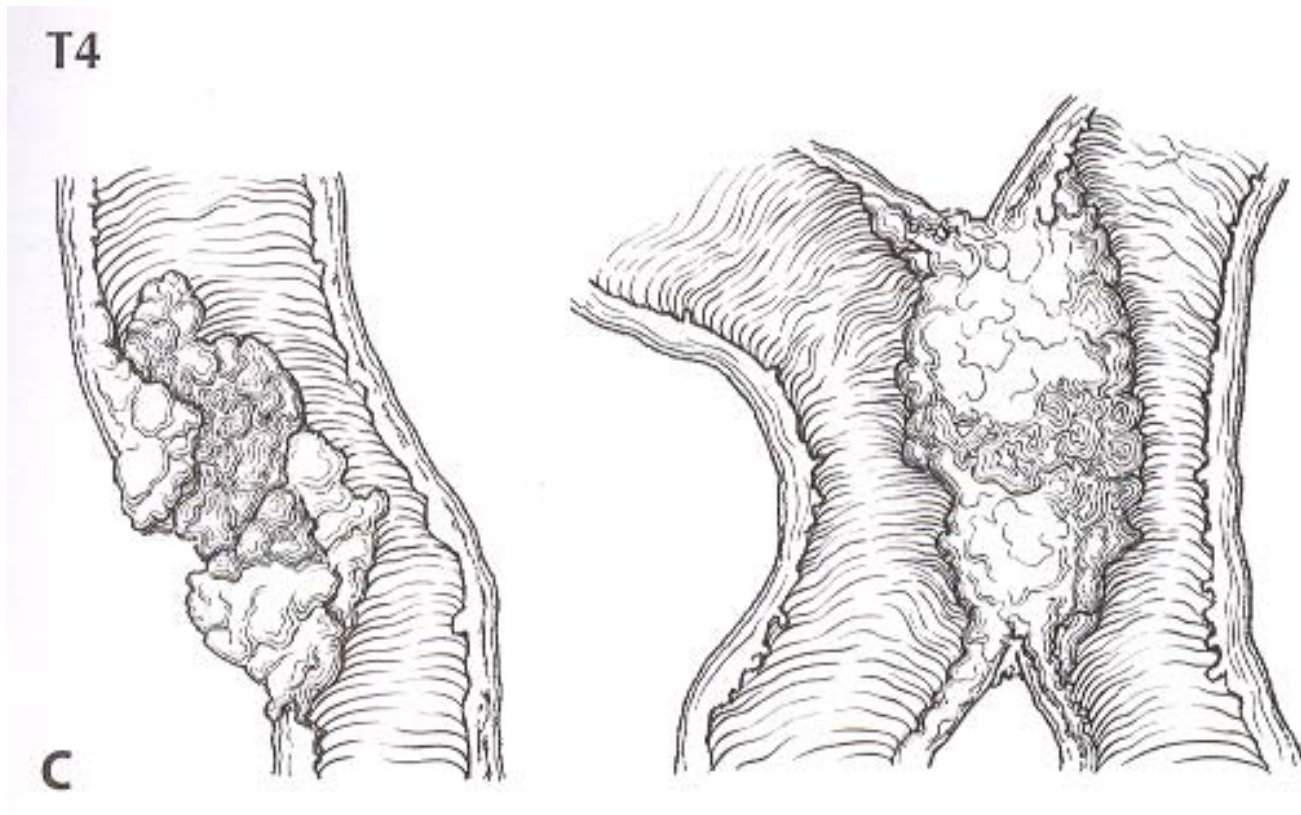
T4



R.N.T.

T. N. M.

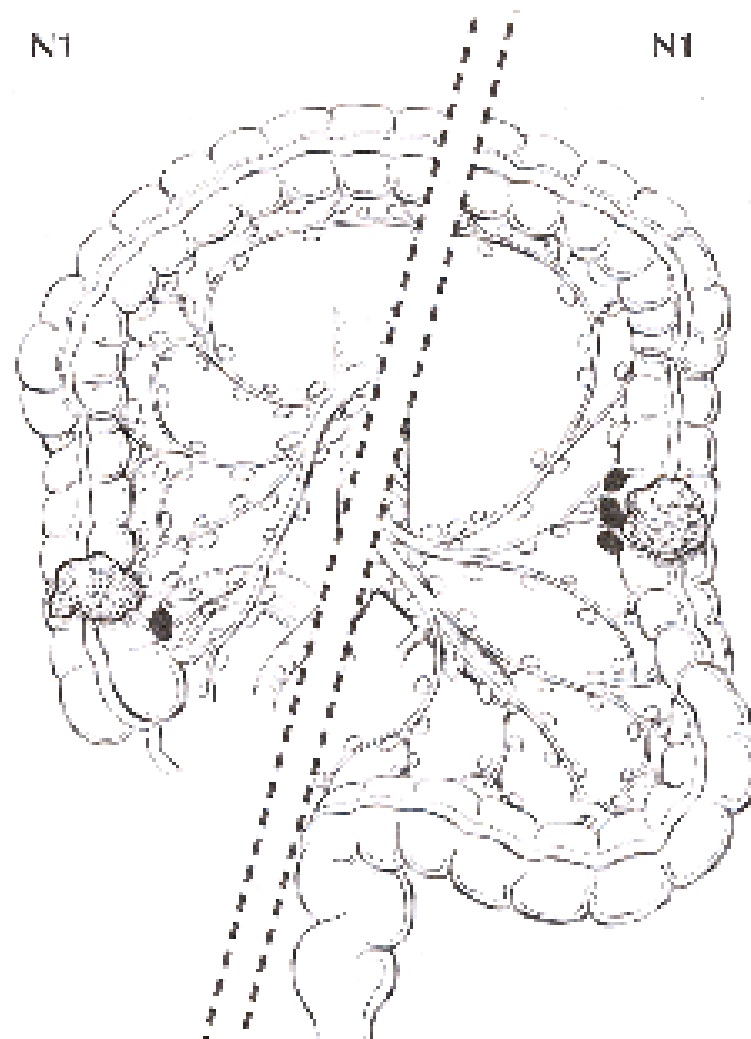
COLON Y RECTO



R.N.T.

T. N. M.

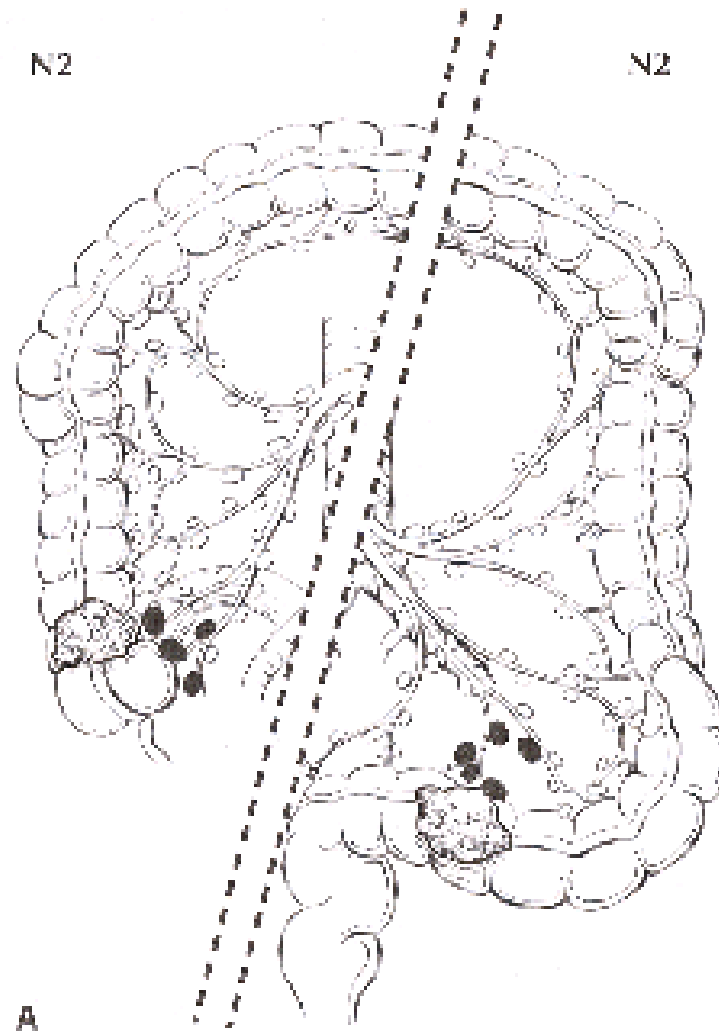
COLON Y RECTO



R.N.T.

T. N. M.

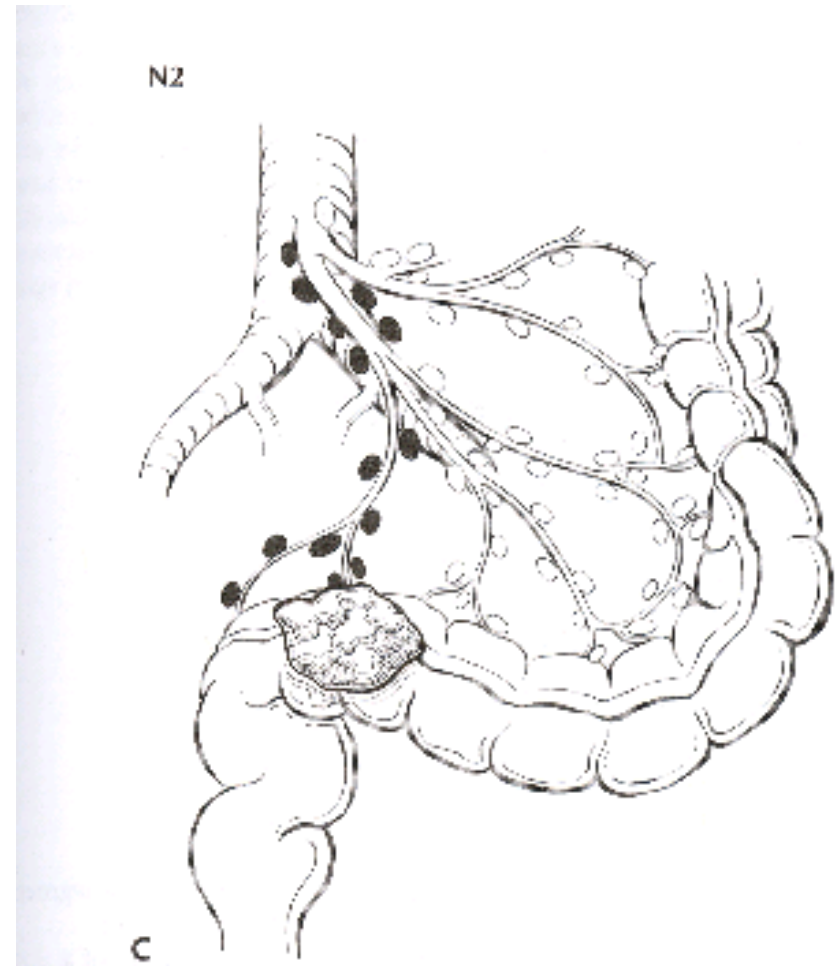
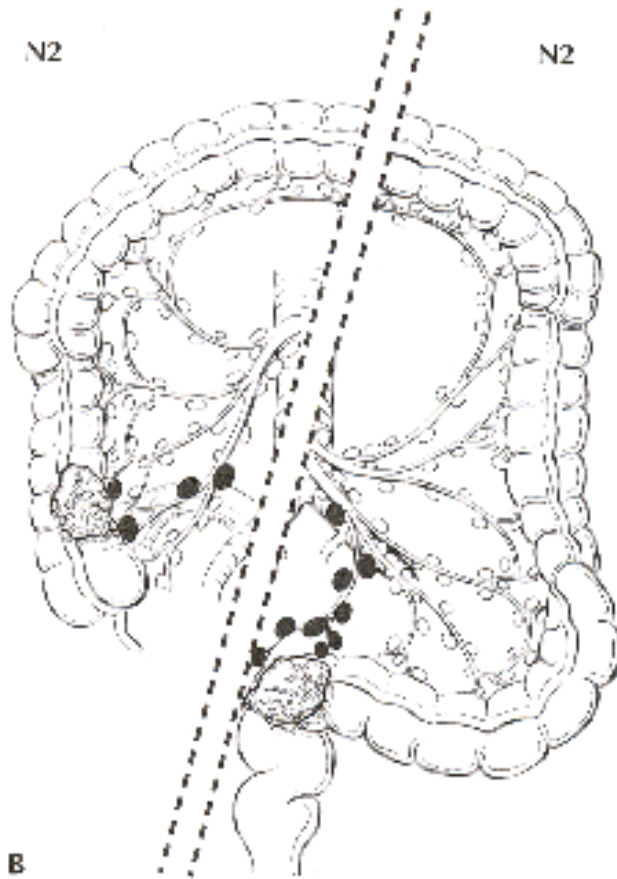
COLON Y RECTO



R.N.T.

T. N. M.

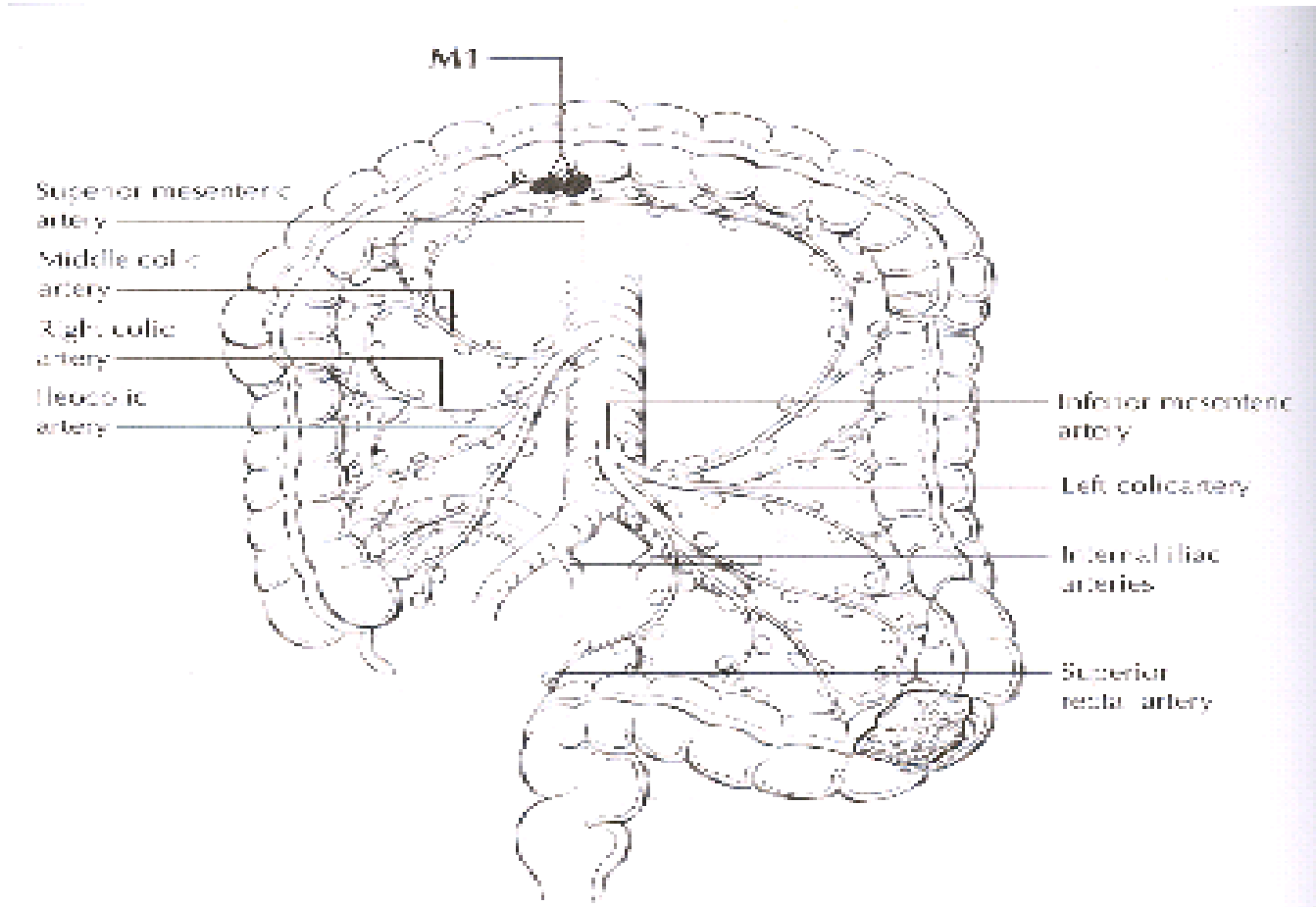
COLON Y RECTO



R.N.T.

T. N. M.

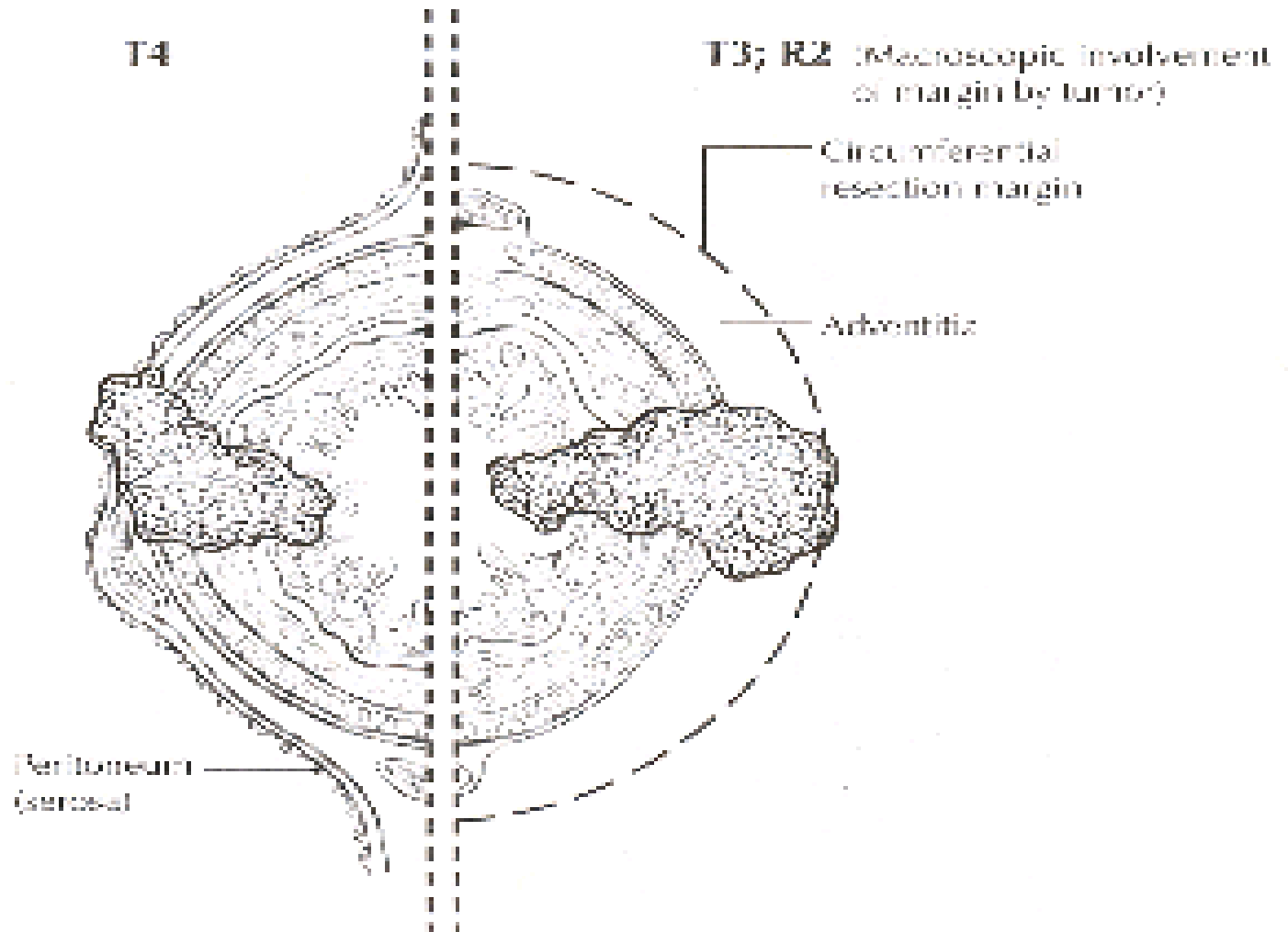
COLON Y RECTO



R.N.T.

T. N. M.

COLON Y RECTO



R.N.T.

ESTADIOS CLINICOS

COLON Y RECTO

STAGE GROUPING

Stage	T	N	M	Dukes	MAC
0	Tis	N0	M0	—	—
I	T1	N0	M0	A	A
	T2	N0	M0	A	B1
IIA	T3	N0	M0	B	B2
IIB	T4	N0	M0	B	B3
IIIA	T1–T3	N1	M0	C	C1
IIIB	T3–T4	N1	M0	C	C2/C3
IIIC	Any T	N2	M0	C	C1/C2/C3
IV	Any T	Any N	M1	—	D

R.N.T.

T. N. M.

ESTADIO I

COLON Y RECTO

DUKES A

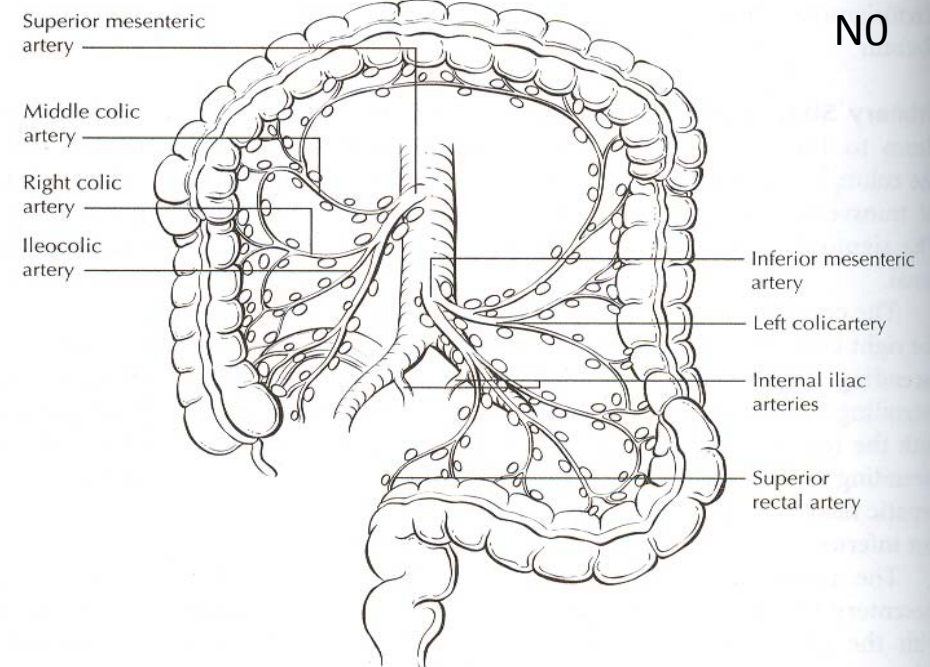
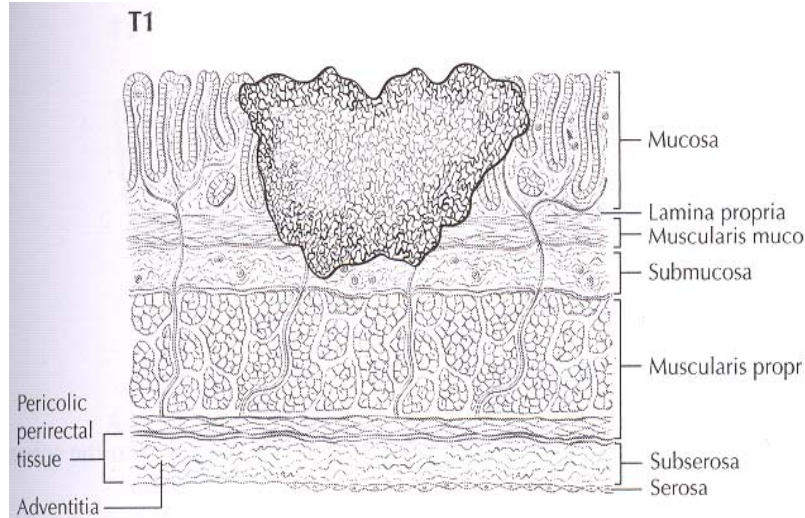


FIGURE 12.3. The regional lymph nodes of the colon and rectum.

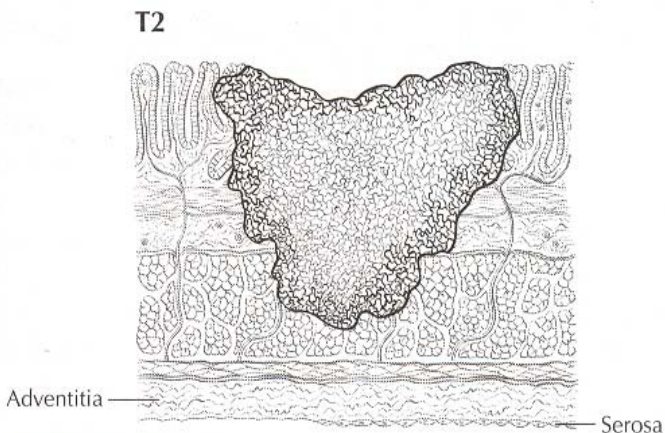


FIGURE 12.5. T2 tumor invades muscularis propria.

T1 – N0 – M0

T2 – N0 - M0

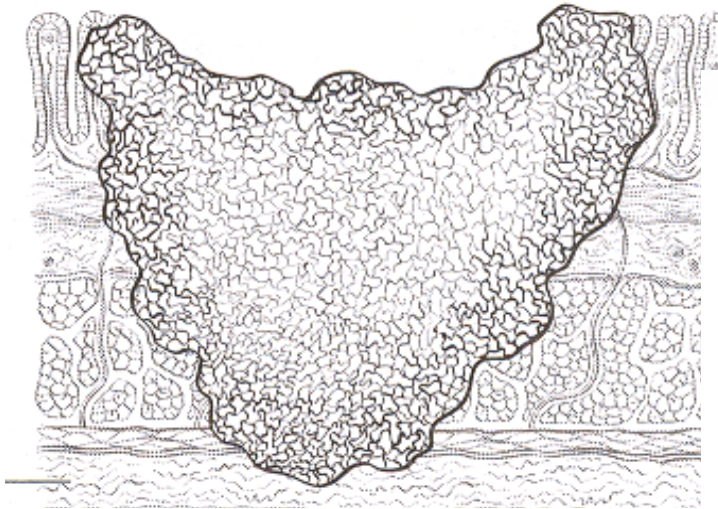
R.N.T.

COLON Y RECTO

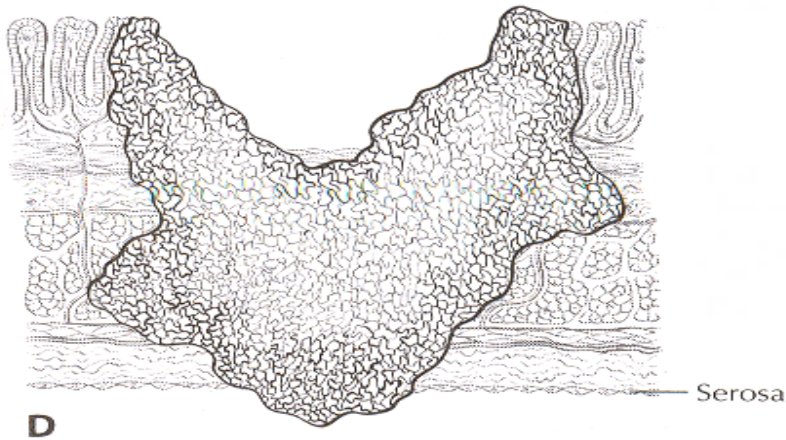
T. N. M.

ESTADIO IIa - IIb

T3



T4



D

DUKES B

N0

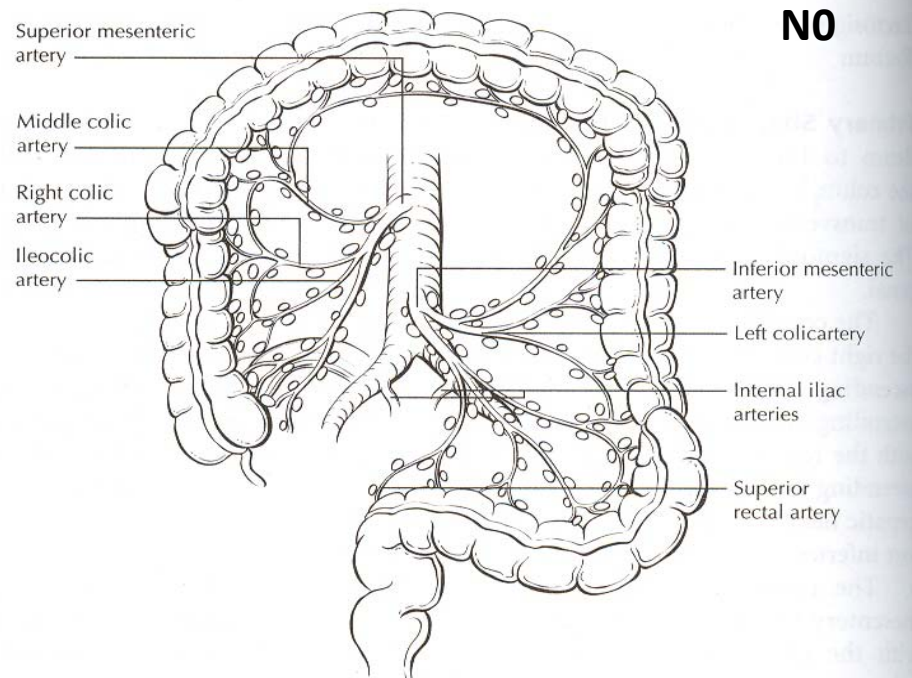


FIGURE 12.3. The regional lymph nodes of the colon and rectum.

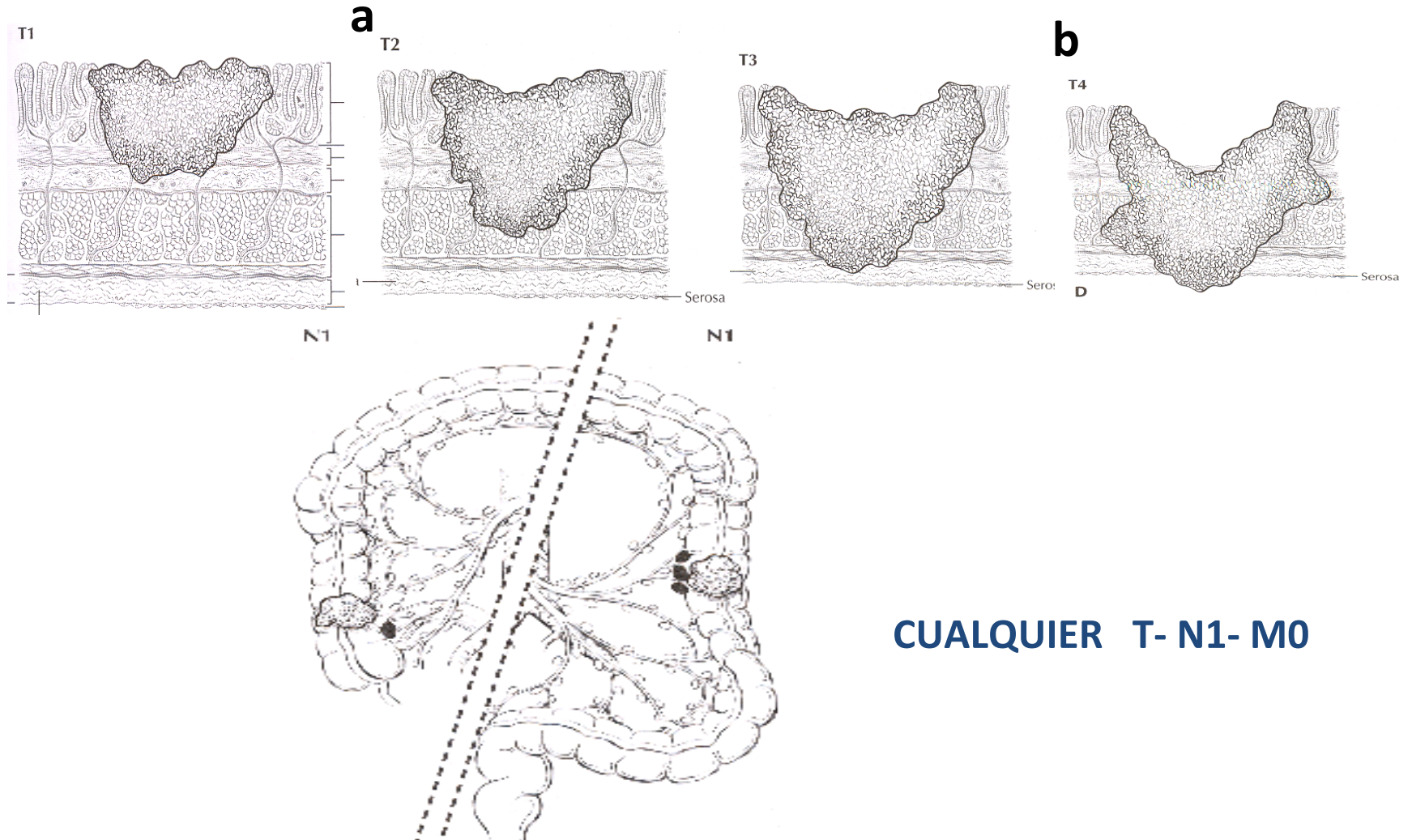
T3 – N0 – M0

T4 – N0 – M0

COLON Y RECTO

T. N. M. ESTADIO IIIa – IIIb

DUKES C



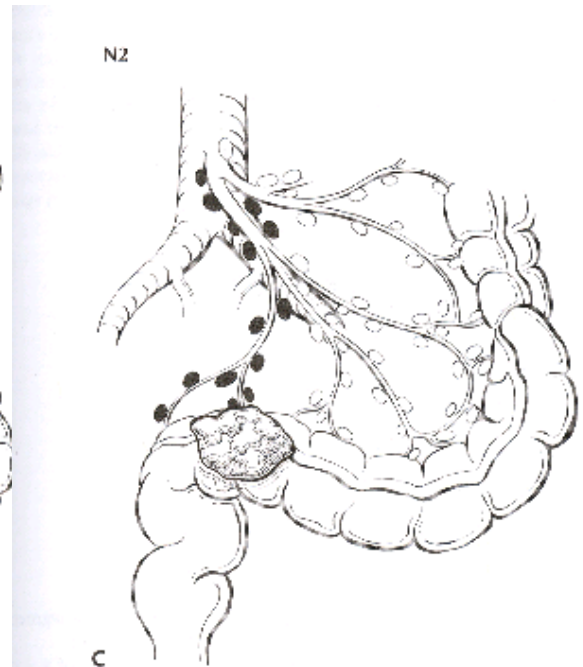
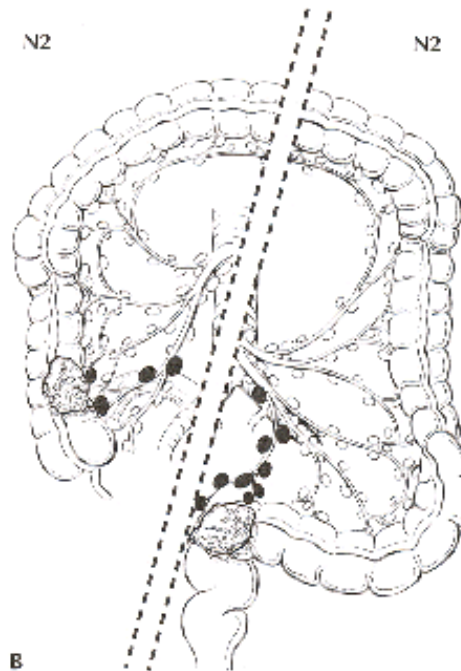
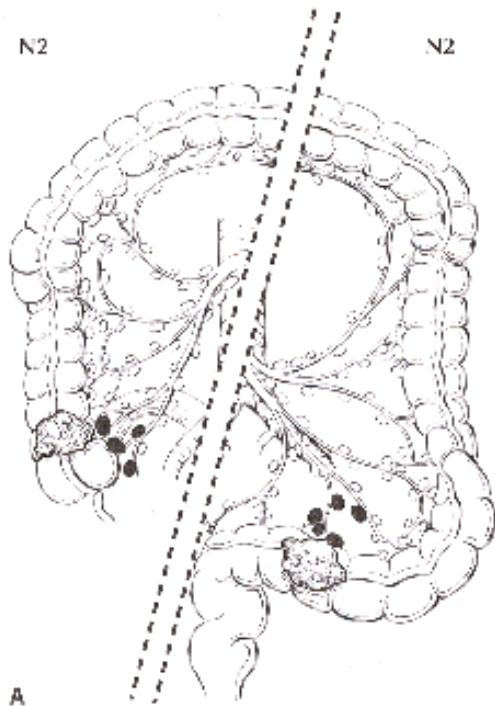
CUALQUIER T- N1- M0

R.N.T.

COLON Y RECTO

T. N. M.
ESTADIO IIIc
CUALQUIER T – N2 – M0

DUKES C



R.N.T.

COLON Y RECTO

T. N. M. ESTADIO IV

DUKES D

CUALQUIER

T

CUALQUIER

N

METASTASIS A DISTACIA

M1

R.N.T.