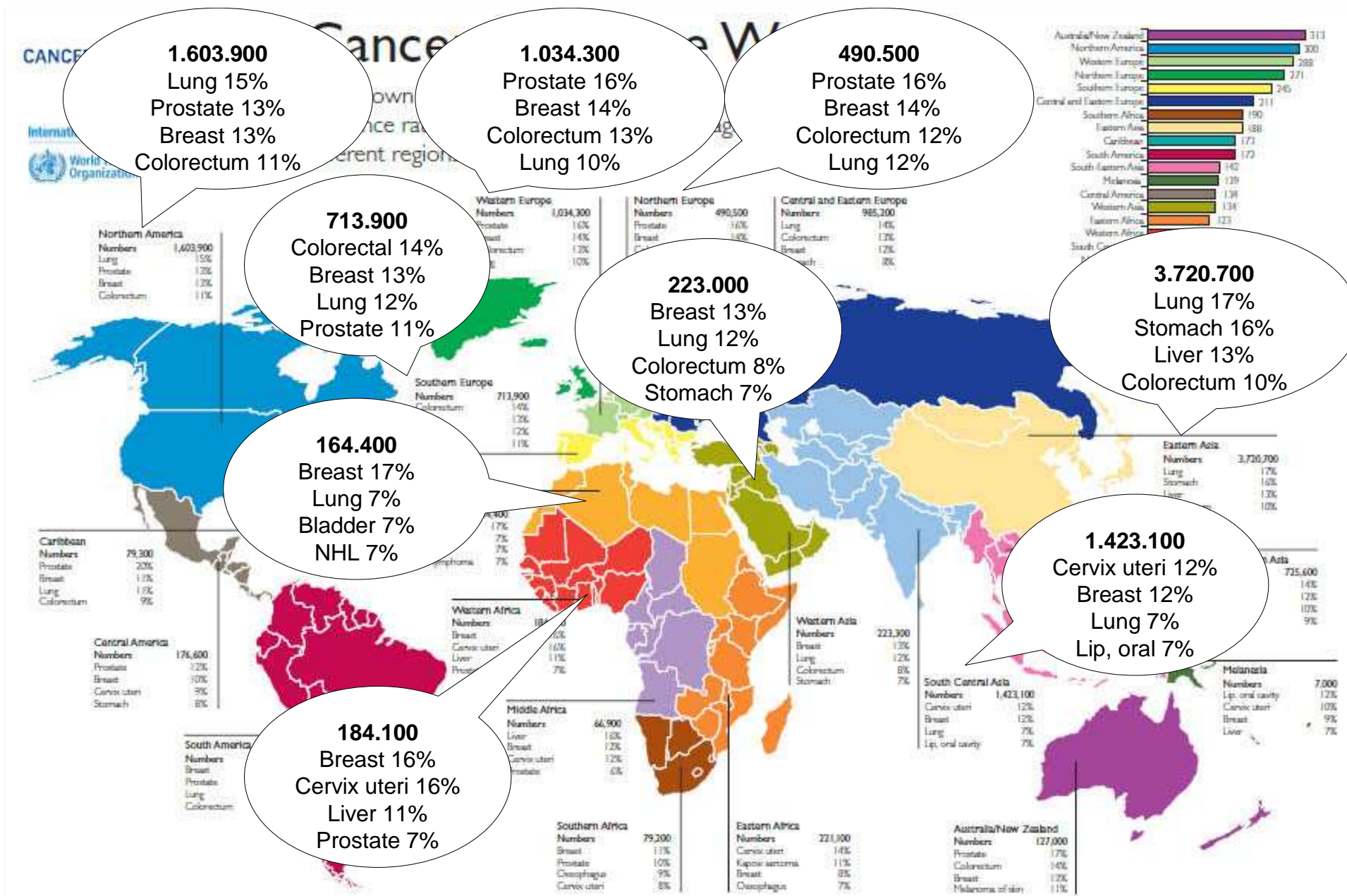


A DAGANATOK PATOLÓGIÁJA V.

Diagnózis, Grade,
Stage, Prognózis,
Kezelési lehetőségek

Dr. Kulka Janina



Source: GLOBOCAN 2008, Cancer Incidence and Mortality Worldwide. IARC, 2010 (<http://globocan.iarc.fr>)

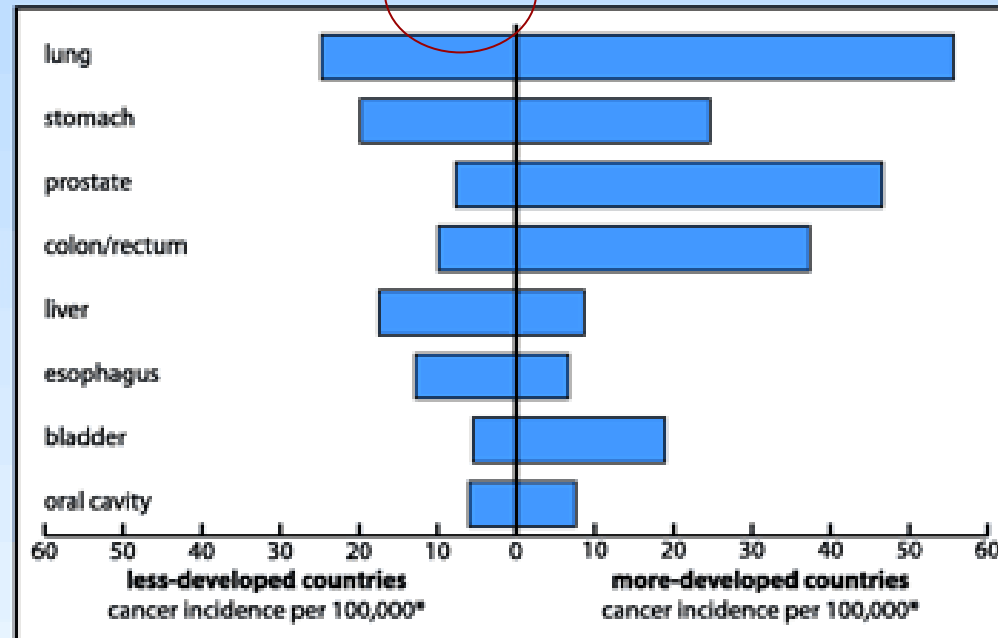
<http://info.cancerresearchuk.org/cancerstats/>

© Cancer Research UK
Registered Charity no. 1099494

Incidence of Selected Cancers in the Developed and Developing World

Patterns of cancer incidence across populations are largely a reflection of lifestyle factors and exposures to carcinogens and infectious agents. Changing patterns of disease incidence have raised questions about how developed nations can best help the developing world, where cancer rates have increased (see related story, p. 1651).

Incidence of selected cancers among males in more- and less-developed countries, 2000:



*Incidence is age-adjusted to the world standard population.

Source: GLOBOCAN 2000: Cancer Incidence, Mortality, and Prevalence Worldwide, Version 1.0. IARC CancerBase No. 5, Lyon, France, IARC Press, 2001; access at <http://www-dep.iarc.fr/globocan/globocan.html>

Preoperatív (kezelés előtti) diagnózis

- **Tünetek**
- **Labor:** We, Hb-Htcr, vérkép, májfunkciós próbák, CEA, PSA, egyéb tumor markerek
- **Képalkotók:** rtg, izotóp, UH, CT, MRI, PET....
- **Endoscopia:** laryngo-, gastro-, colono-, irrigo-, recto-, cysto-, mediastino-, pleuro-....
- **Cytológia:**
 - Testüregi folyadék*
 - Exfoliatív* (cervix, bronchus)
 - Aspirációs* (felszínes és mély elváltozások)
- **Core biopszia:** emlő, máj, prostata
- **Endoscopos biopszia**

Paraneoplasztikus szindrómák

Cachexia

Endocrinopátiák- ektópiás hormontermelés

ACTH, PTHrP, etc.

Neuromyopathiák

polymyopathia, myastenia gravis szerű tünetek

Dobverőújj

Thrombosis

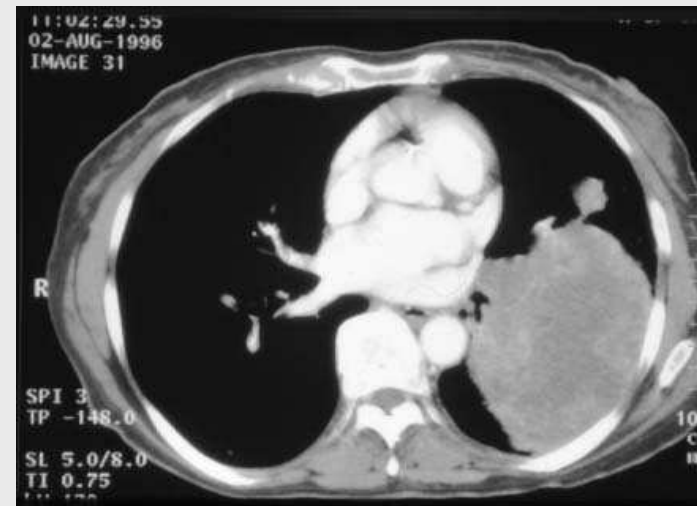
Trousseau tünet, abacterialis endocarditis

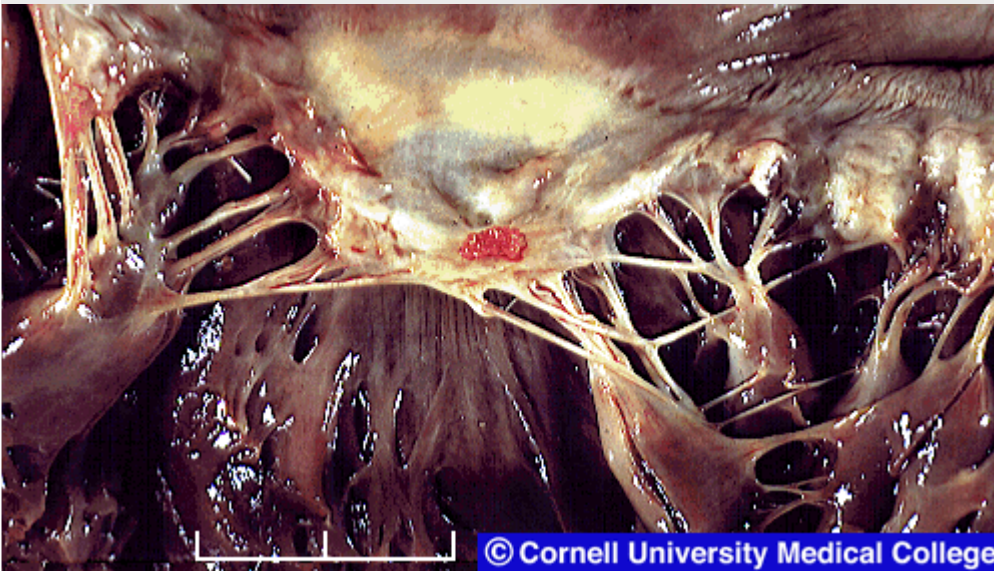
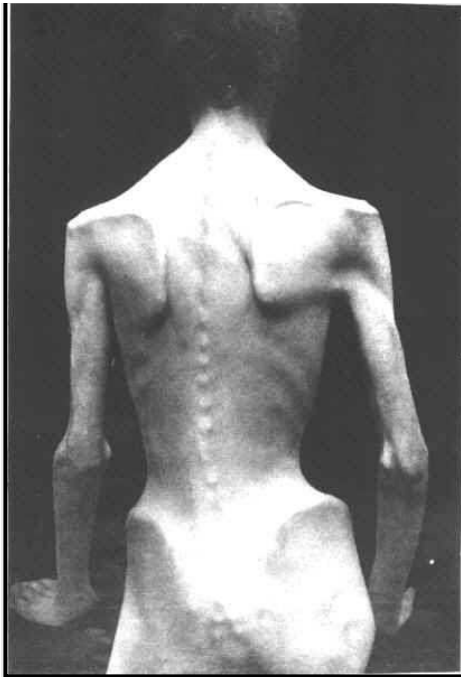
Acanthosis nigricans

Multiplex seborrhoeás keratosis (Leser-Trelat szindróma)



Because of the patient's history of bone pain, evidence of digital clubbing, and radiographic finding of a lung mass, the diagnosis of hypertrophic pulmonary osteoarthropathy was entertained. Hypertrophic pulmonary osteoarthropathy consists of the clinical triad of digital clubbing, active synovitis, and periostitis of the tubular long bones. It is most frequently associated with intrathoracic malignancies, in particular, large squamous cell carcinomas. Although the exact mechanism is unclear, the periostitis is believed to result from increased periosteal blood flow and new bone formation.





© Cornell University Medical College

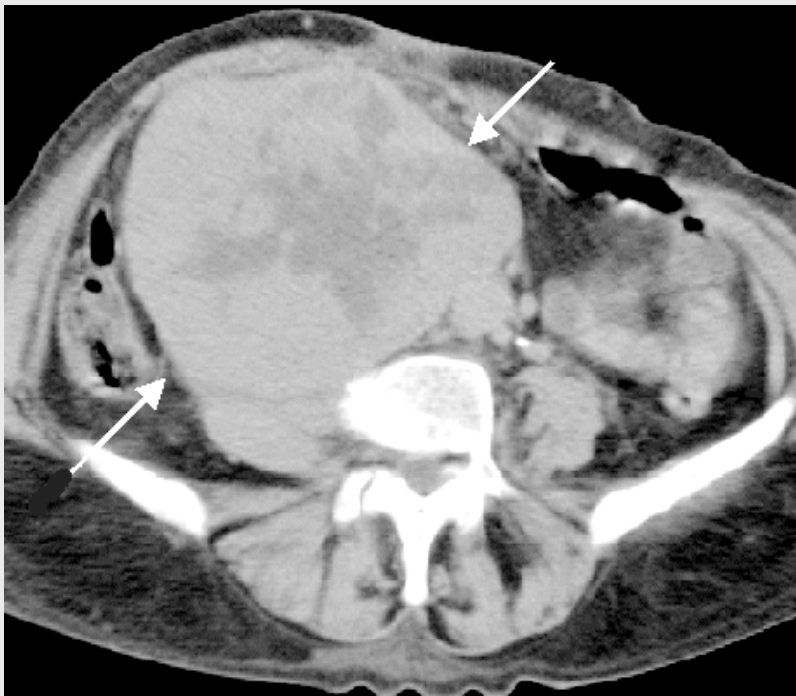
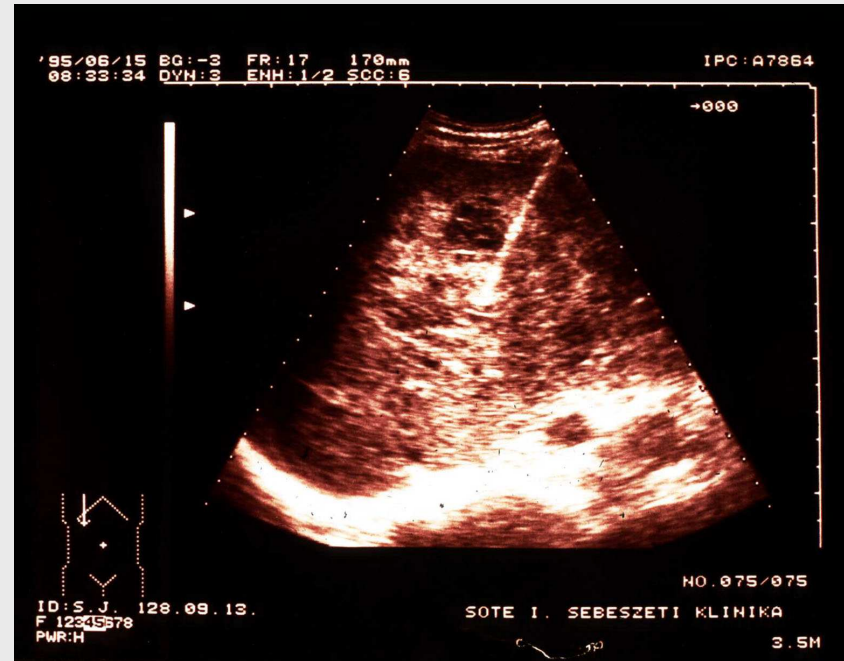
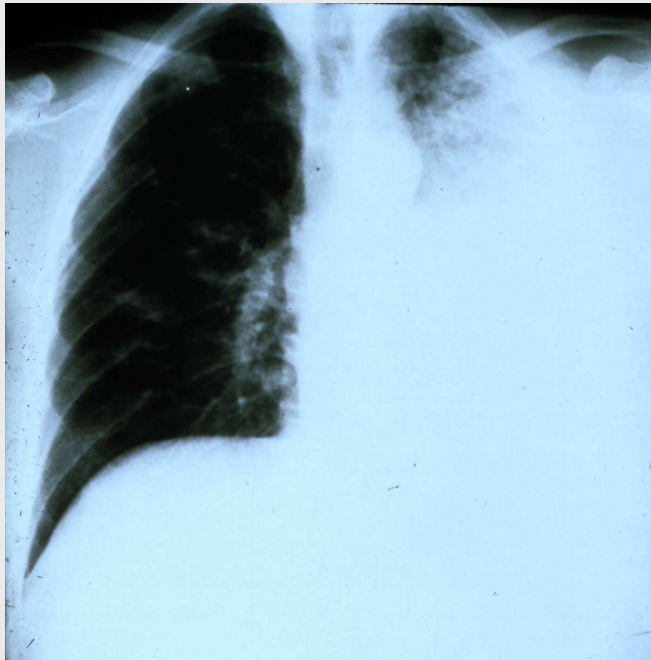


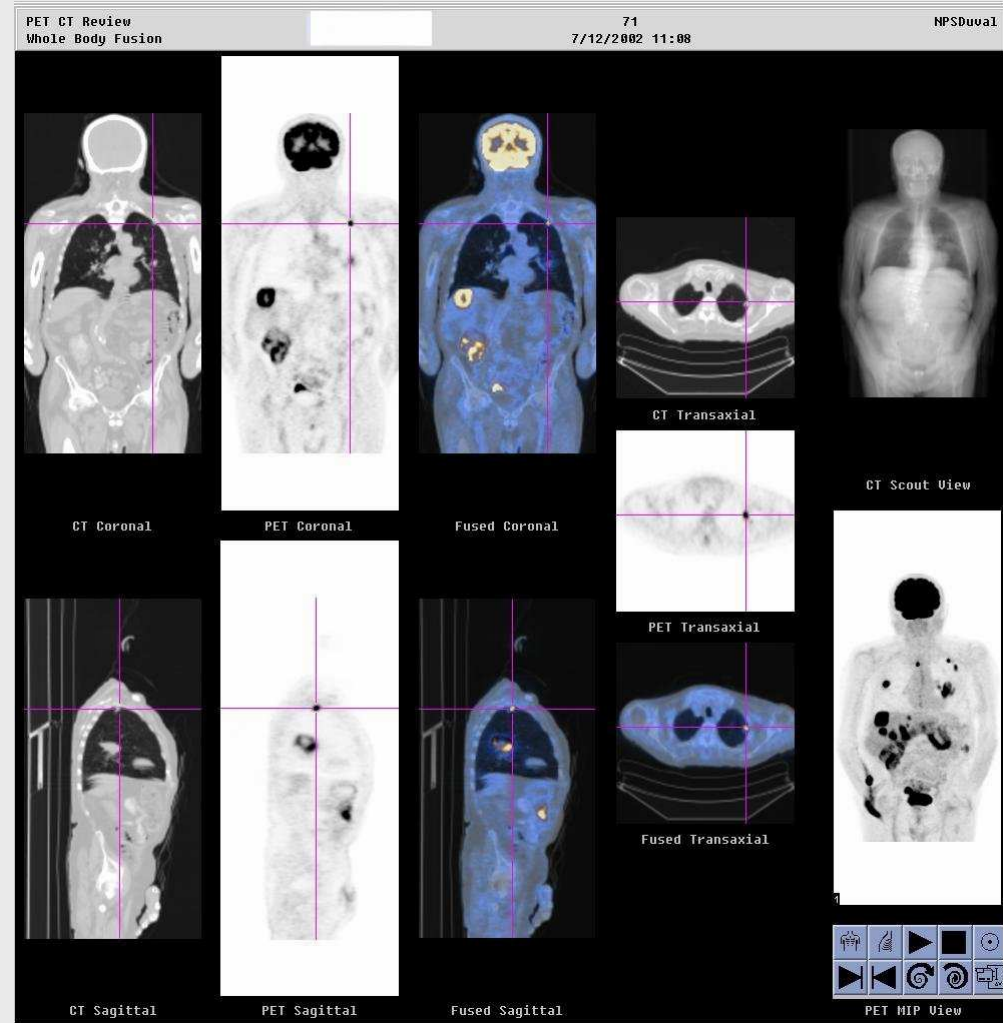
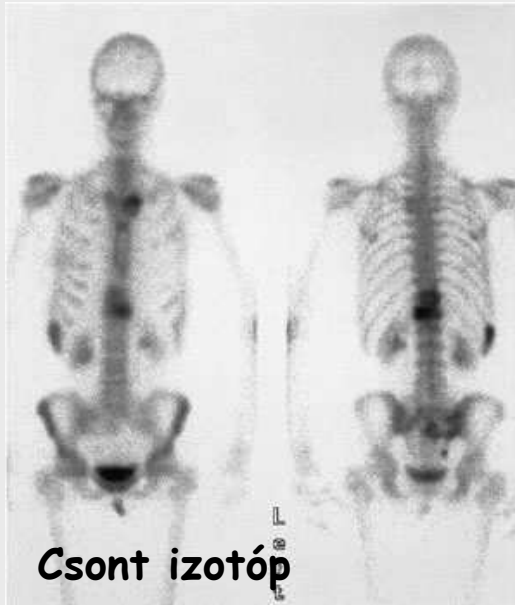
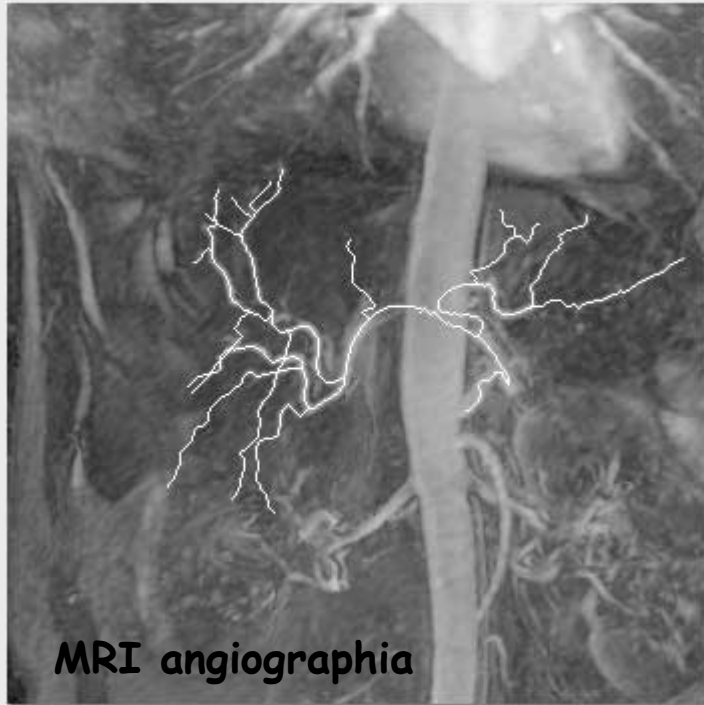
Paraneoplasticus szindromák

Tumor markerek

- CA125 Ovarium, uterus
- CA15-3 emlő, ovarium, pancreas
- CA19-9 Pancreas, GI
- CA549 emlő
- CA50 Pancreas, GI, ovarium, emlő
- CA195 GI
- AFP máj, germinális sejt
- PSA Prostata
- β -HCG Choriocarcinoma
- ACTH kissejtes tüdőrák

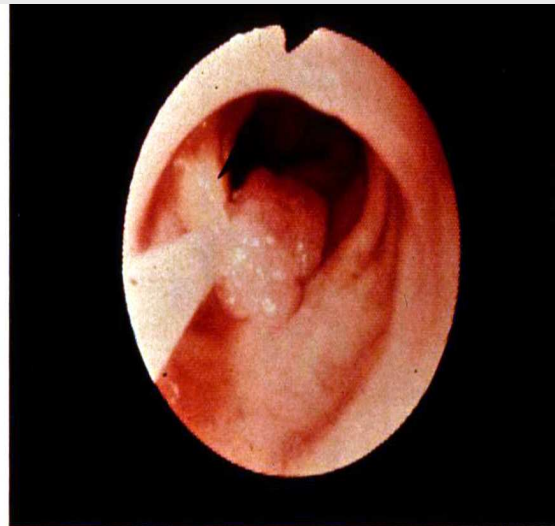
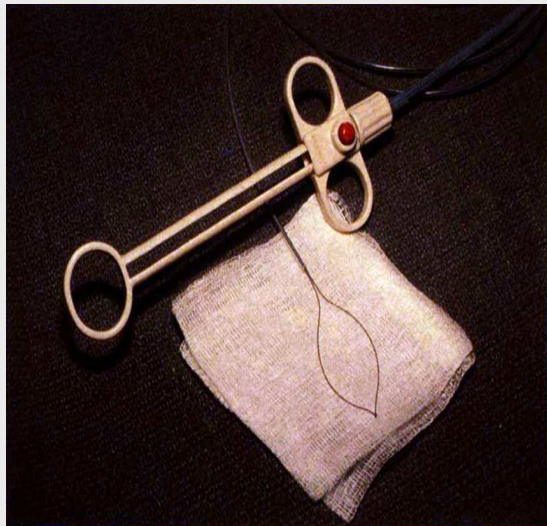
KÉPALKÖTŐK





PET CT

Aspiráció cytológia



Core biopszia



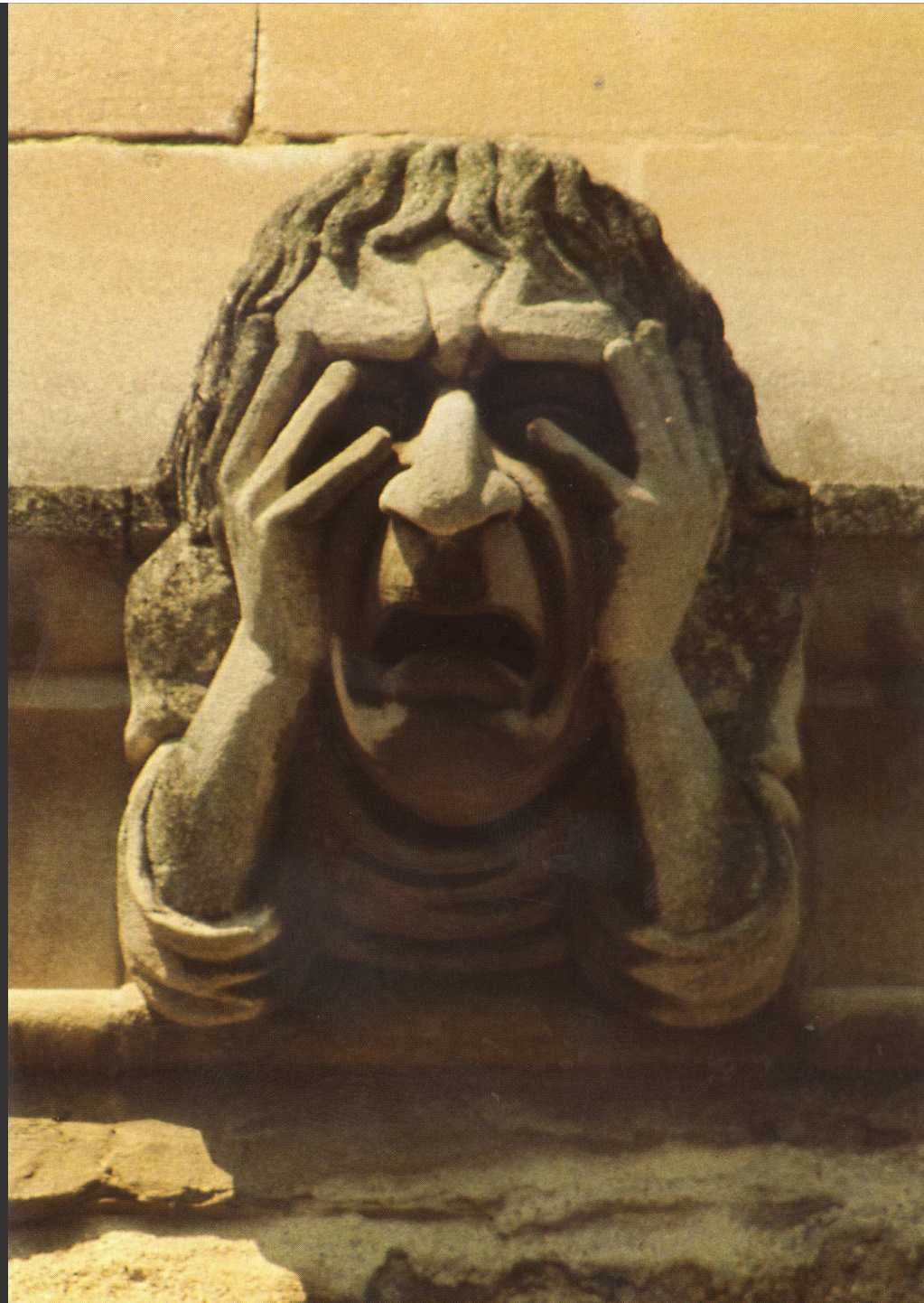
Figure 1-2.

Electrocautery snare used for polypectomy. (A). The device is attached to an electrocautery unit. The handle is used to extend and retract the snare. (B). Snare tightened around the stalk of a polyp. Some stalk is intentionally left behind (arrow) to avoid cauterizing too close to the wall.



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TISSUE OF ORIGIN	BENIGN	MALIGNANT
I. Composed of One Parenchymal Cell Type		
A. Mesenchymal tumors		
1. Connective tissue and derivatives	Fibroma Lipoma Chondroma Osteoma	Fibrosarcoma Liposarcoma Chondrosarcoma Osteogenic sarcoma
2. Endothelial and related tissues		
Blood vessels	Hemangioma	Angiosarcoma
Lymph vessels	Lymphangioma	Lymphangiosarcoma
Synovium		Synovial sarcoma
Mesothelium		Mesothelioma
Brain coverings	Meningioma	Invasive meningioma
3. Blood cells and related cells		
Hematopoietic cells		Leukemias
Lymphoid tissue		Malignant lymphomas
4. Muscle		
Smooth	Leiomyoma	Leiomyosarcoma
Striated	Rhabdomyoma	Rhabdomyosarcoma
B. Epithelial tumors		
1. Stratified squamous	Squamous cell papilloma	Squamous cell or epidermoid carcinoma
2. Basal cells of skin or adnexa		Basal cell carcinoma
3. Epithelial lining		
Glands or ducts	Adenoma Papilloma Cystadenoma	Adenocarcinoma Papillary carcinoma Cystadenocarcinoma Bronchogenic carcinoma Bronchial "adenoma" (carcinoid)
4. Respiratory passages		Malignant melanoma
5. Neuroectoderm	Nevus	Renal cell carcinoma
6. Renal epithelium	Renal tubular adenoma	Hepatocellular carcinoma
7. Liver cells	Liver cell adenoma	Transitional cell carcinoma
8. Urinary tract epithelium (transitional)	Transitional cell papilloma	Choriocarcinoma
9. Placental epithelium (trophoblast)	Hydatidiform mole	Seminoma
10. Testicular epithelium (germ cells)		Embryonal carcinoma
II. More Than One Neoplastic Cell Type—Mixed Tumors		
1. Salivary glands	Pleomorphic adenoma (mixed tumor of salivary origin) Fibroadenoma	Malignant mixed tumor of salivary gland origin Malignant cystosarcoma phyllodes Wilms' tumor
2. Breast		
3. Renal anlage		
III. More Than One Neoplastic Cell Type Derived From More Than One Germ Layer—Teratogenous		
1. Totipotential cells in gonads or in embryonic rests	Mature teratoma, dermoid cyst	Immature teratoma, teratocarcinoma

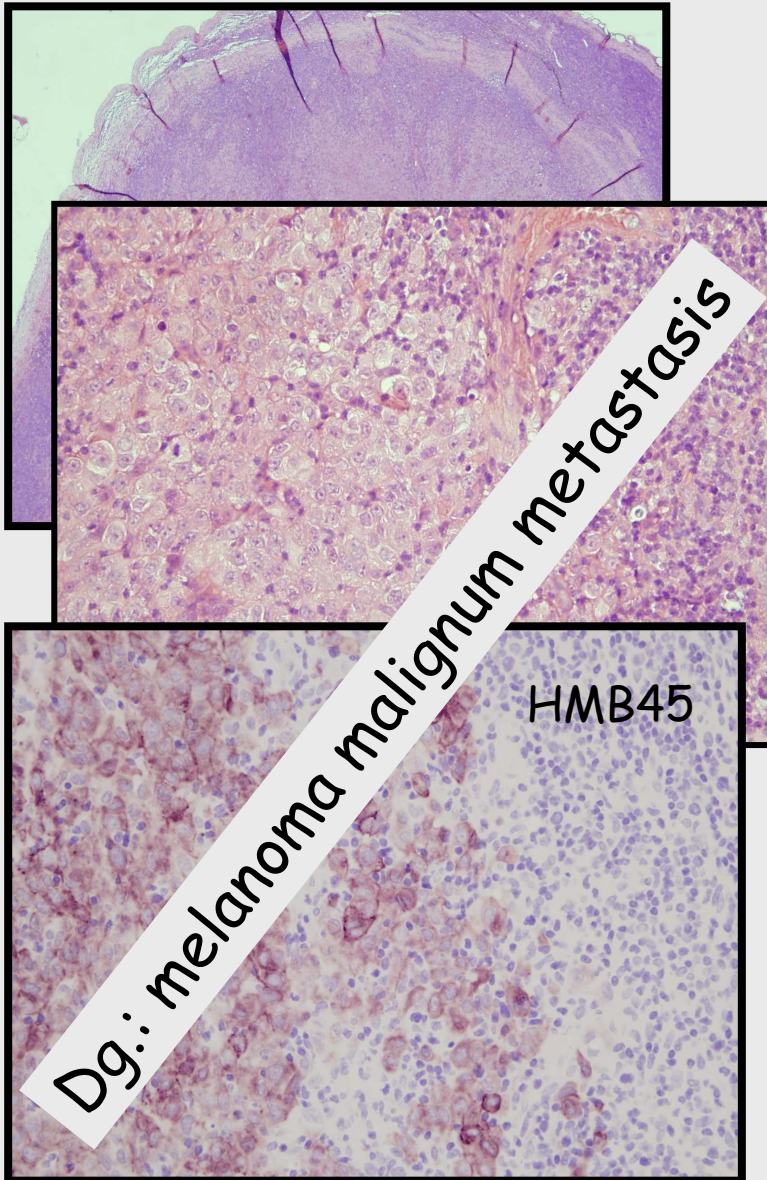


Immunhisztokémiai markerek

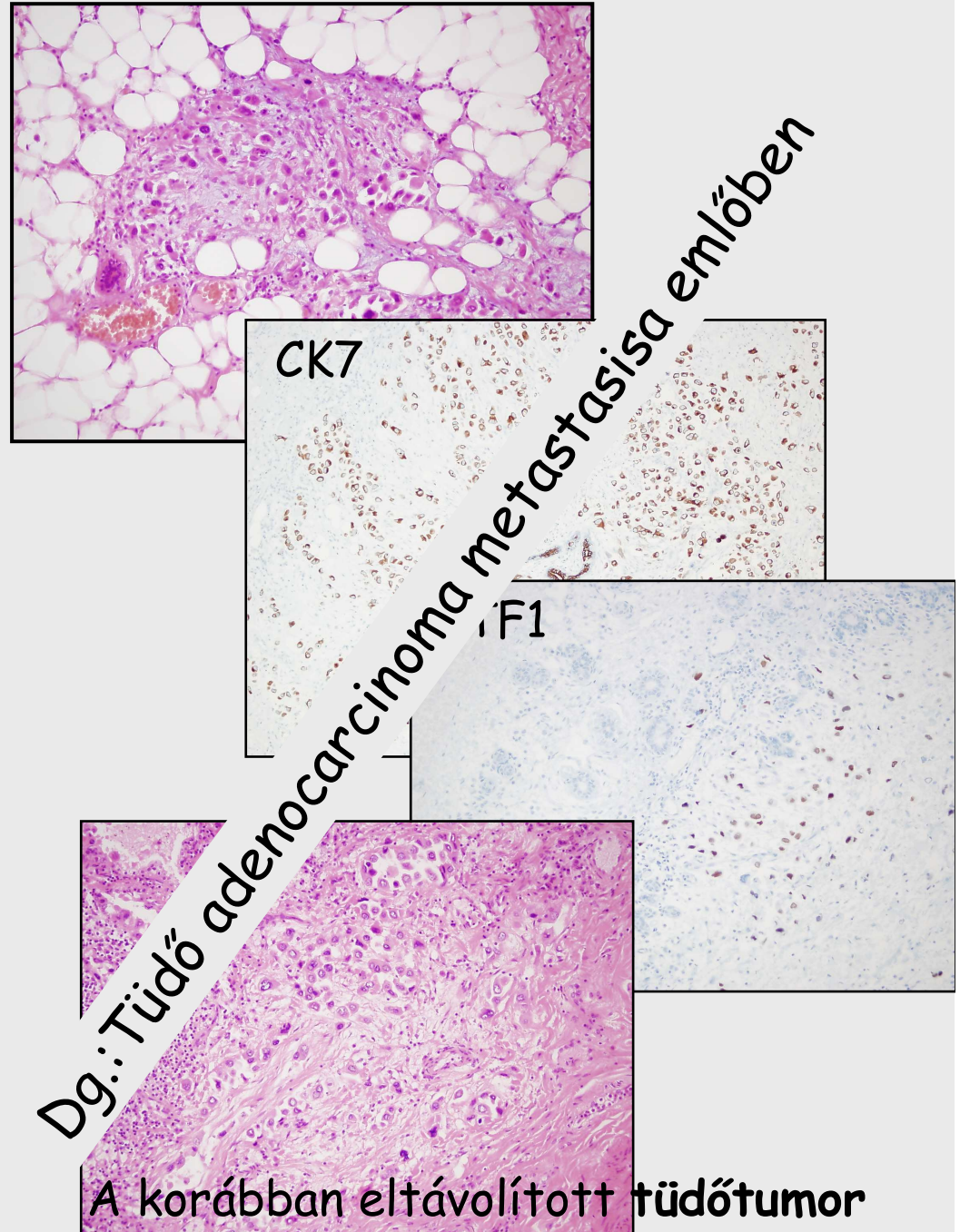
Cytokeratin	Hám
(különböző CK-k)	(különböző tumorok)
Vimentin	Mesenchymalis szövetek
Leukocyta Common Antigen (LCA)	Lymphoid szövet/lymphoma
Desmin	Harántcsíkolt izom
Simaizom actin	Simaizom
Neuron Specifikus Enoláz, Synaptophysin, Chromogranin	Neuroendocrin sejtek
S100	Melanoma, Schwann sejtek
HMB45, MelanA	Melanoma
TTF1	Tüdő, pajzsmirigy

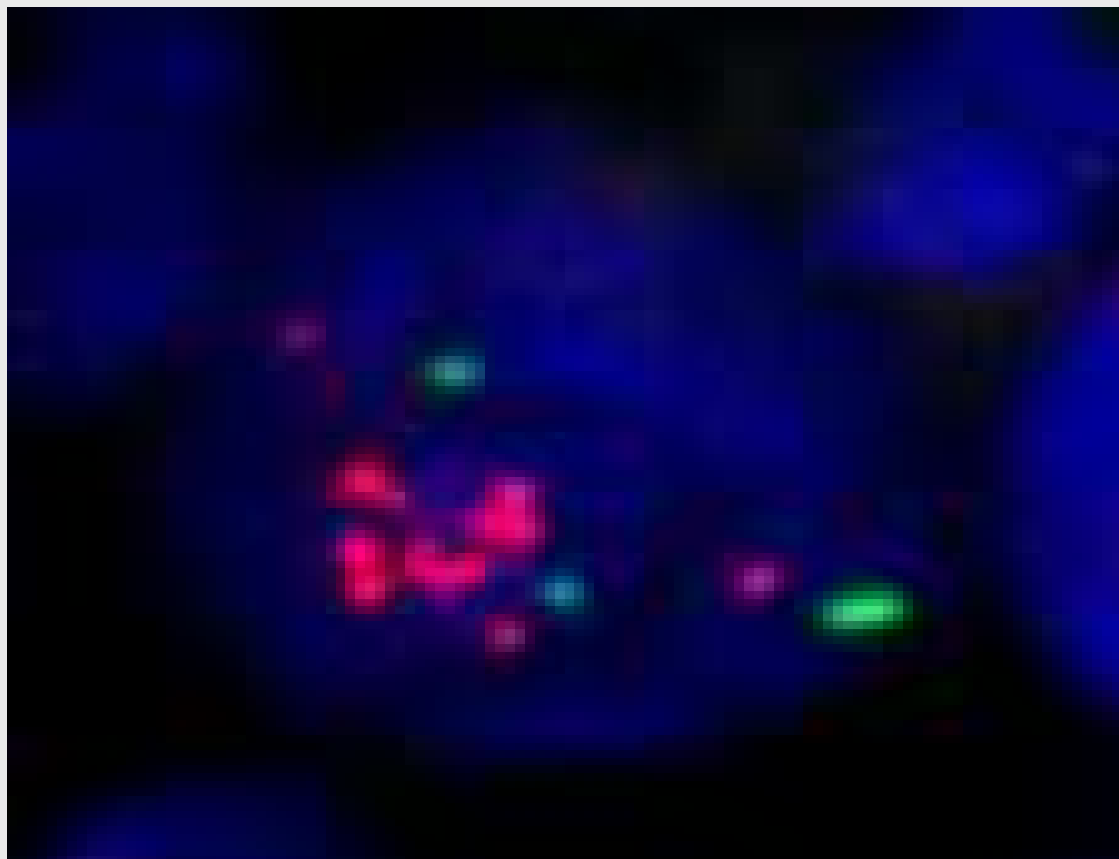
stb.....

33 éves férfi.
Nyaki nyirokcsomó. Metasztázis



54 éves nő. Bal emlő tumor



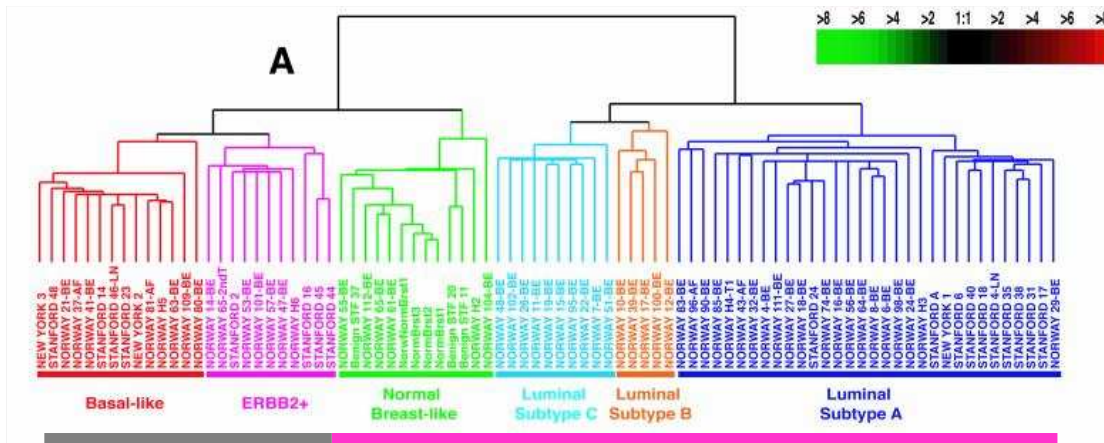


FISH: génamplifikáció
kóros gének



Molekularis genetika

DNS "chip": genetikai profil



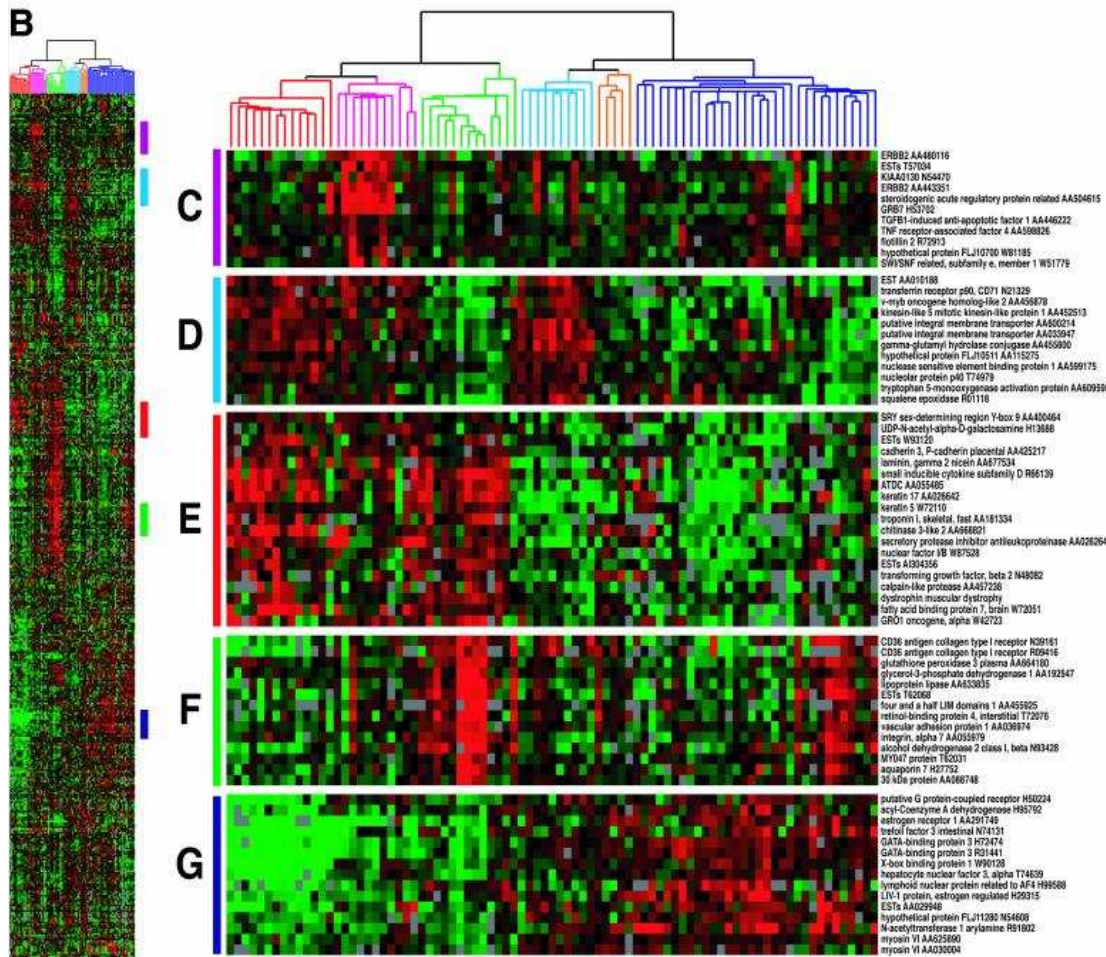
Az emlőtumorok osztályozása a genetikai profil alapján

M. Perou et al.

Ösztrogén receptor pozitív
Luminal type

- A
- B

Ösztrogén receptor negatív
Basal type
Her2/neu positive
Normal breast-like



GRADE - általában

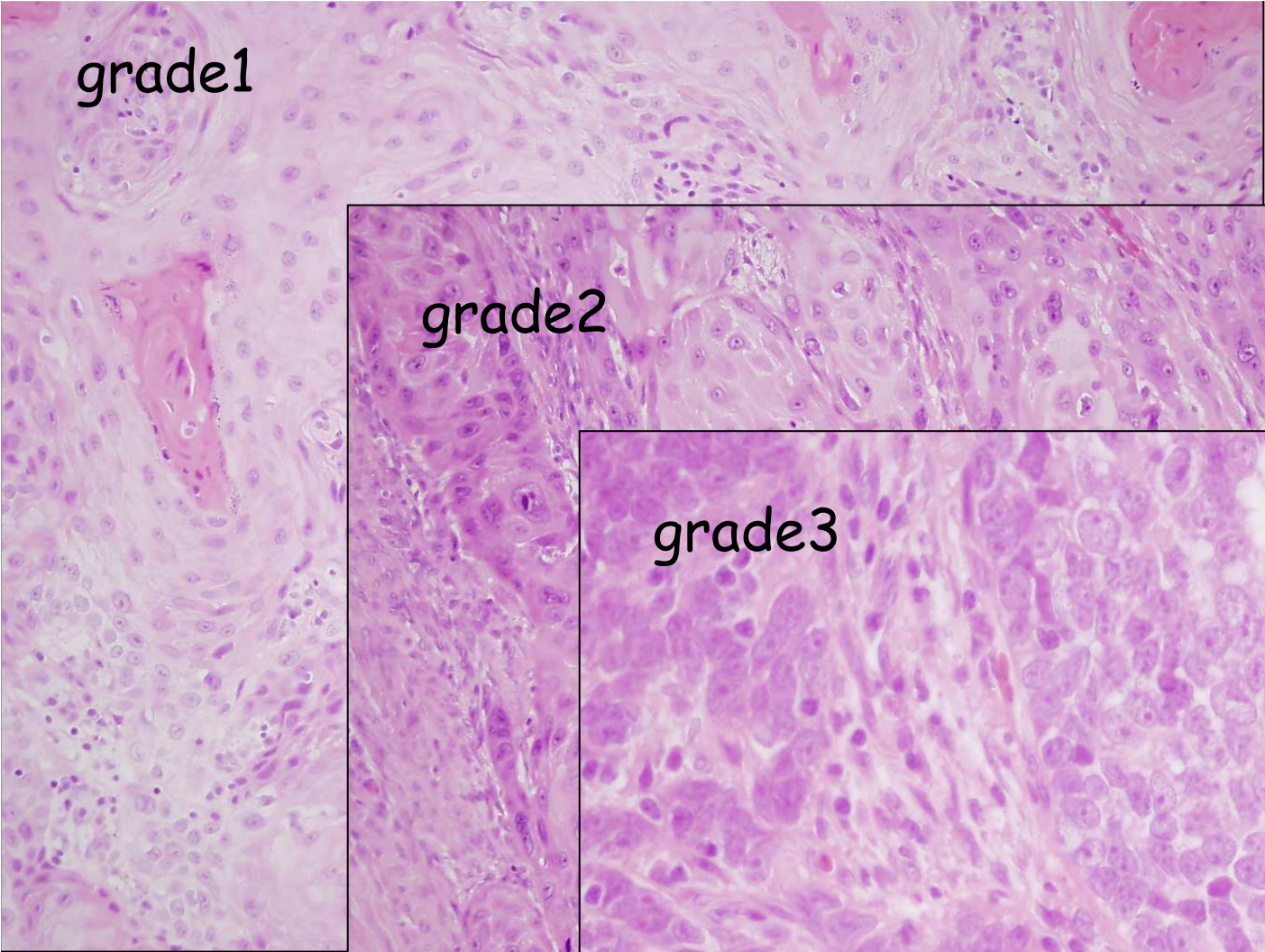
A **DIFFERENCIÁCIÓ** mértékét jelzi

Jól differenciált: Grade 1

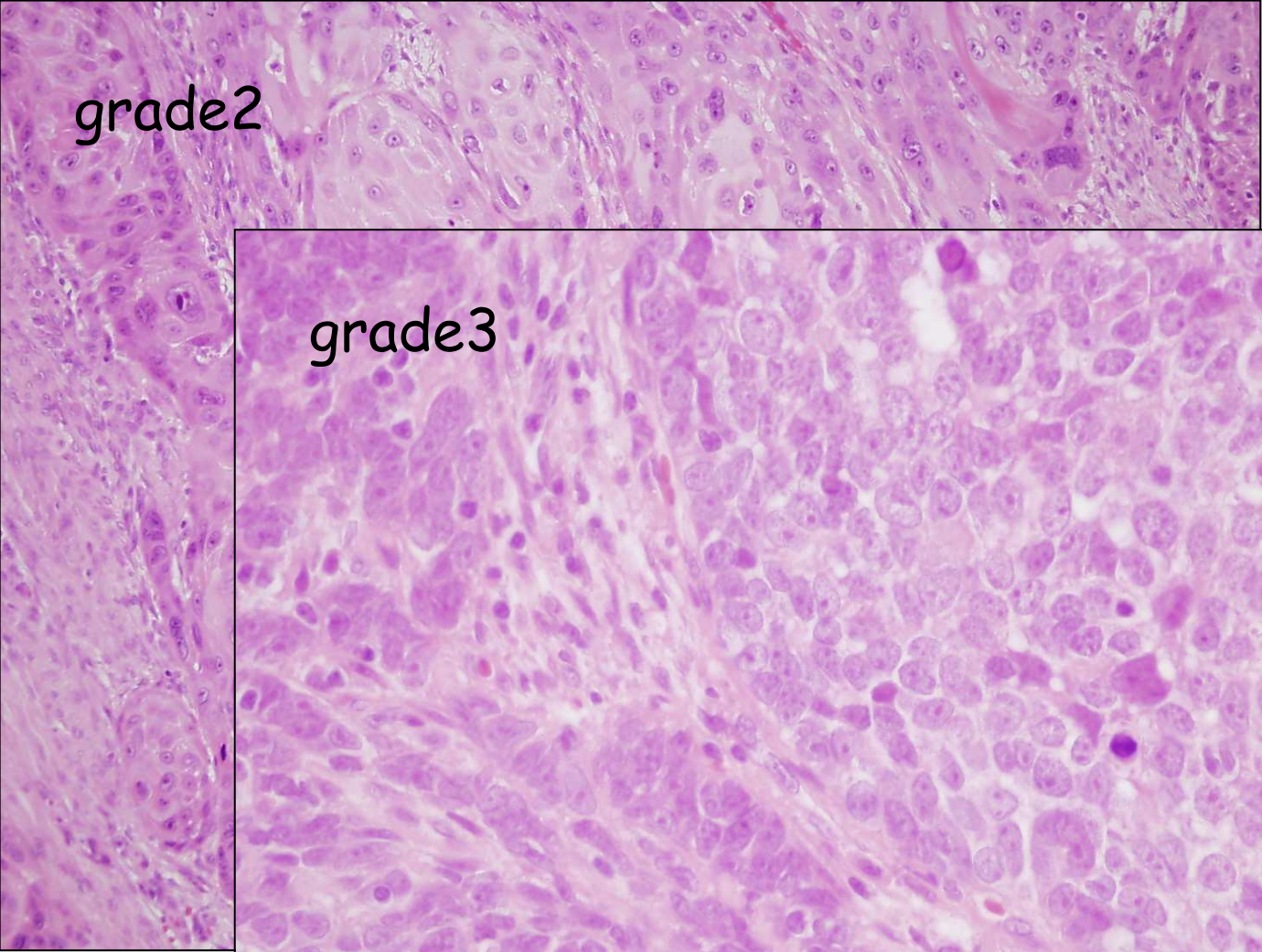
Közepesen differenciált: Grade 2

Alacsonyan differenciált: Grade 3

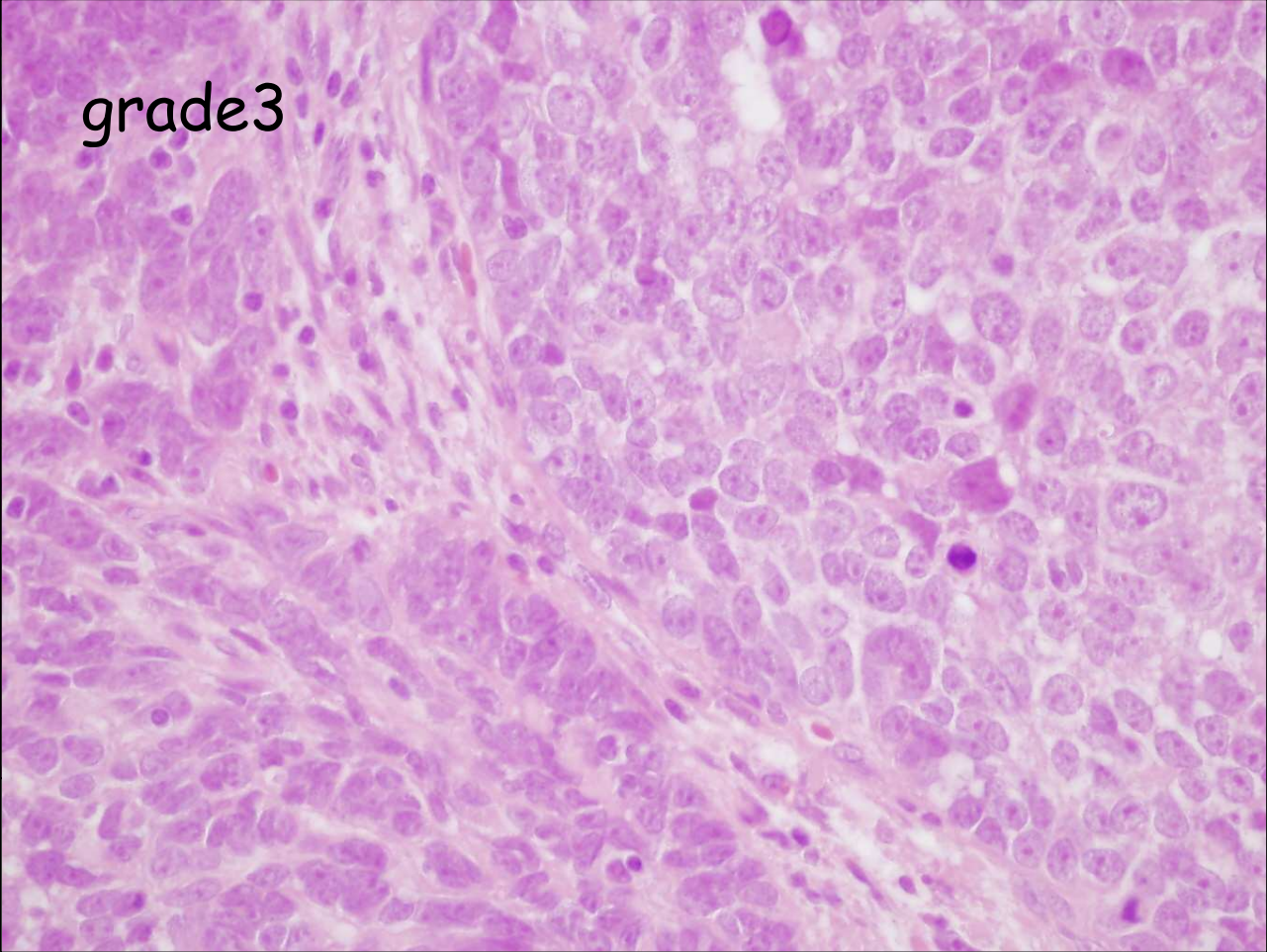
grade1



grade2



grade3



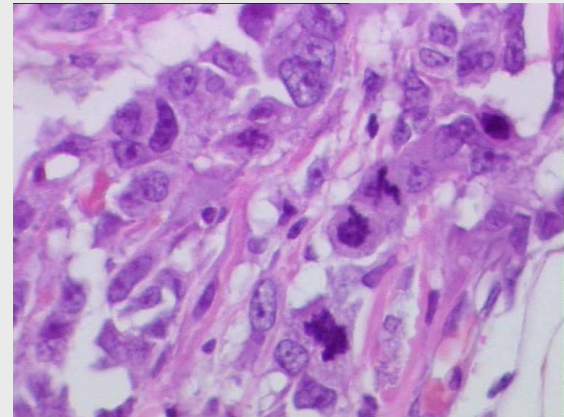
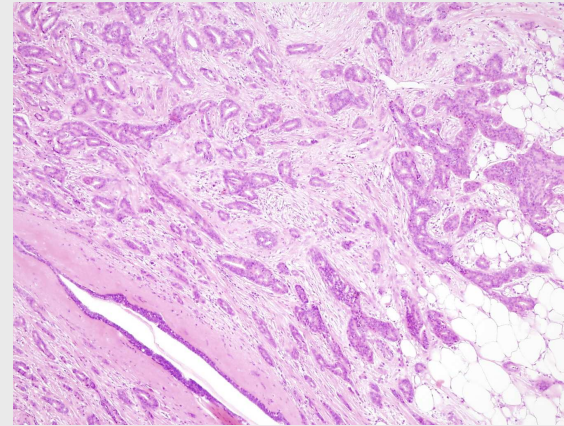
GRADE - speciális

- *Emlő carcinoma:*
 - Nottingham grade:
 - pleiomorphismus
 - Tubulus képzés
 - Mitosisok száma
- *Prostata carcinoma*
 - Gleason grade és score
- *Vesesejtes carcinoma*
 - Fuhrman grade

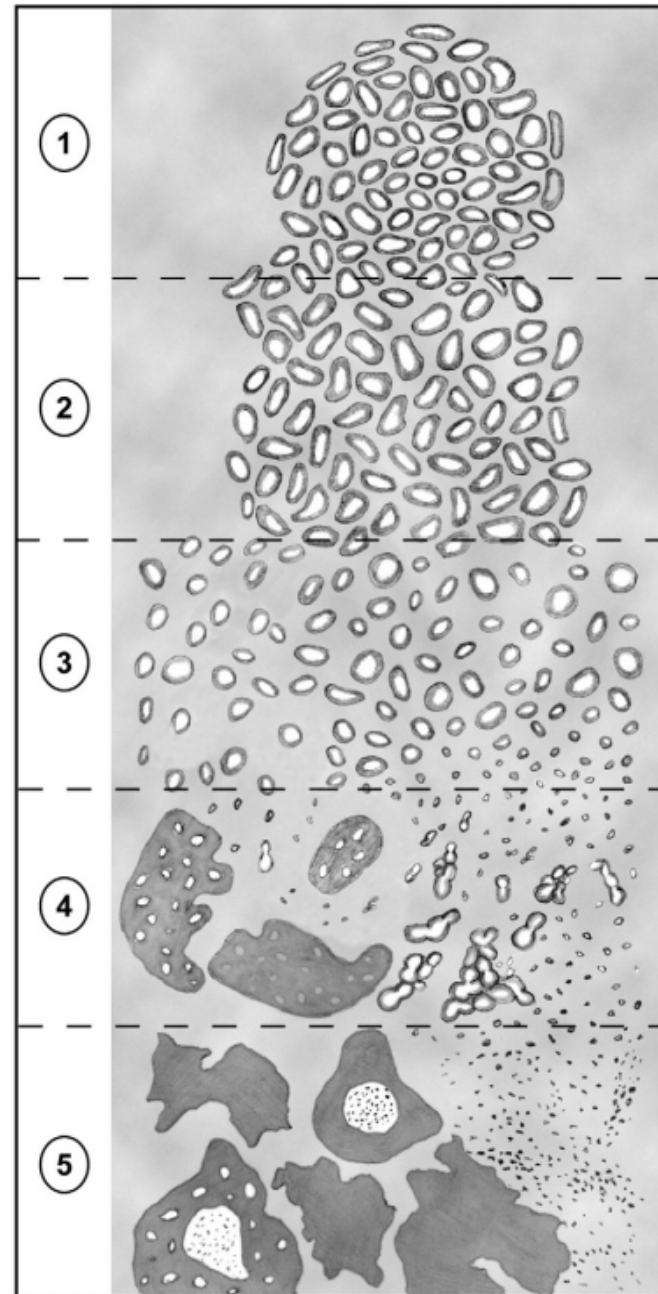
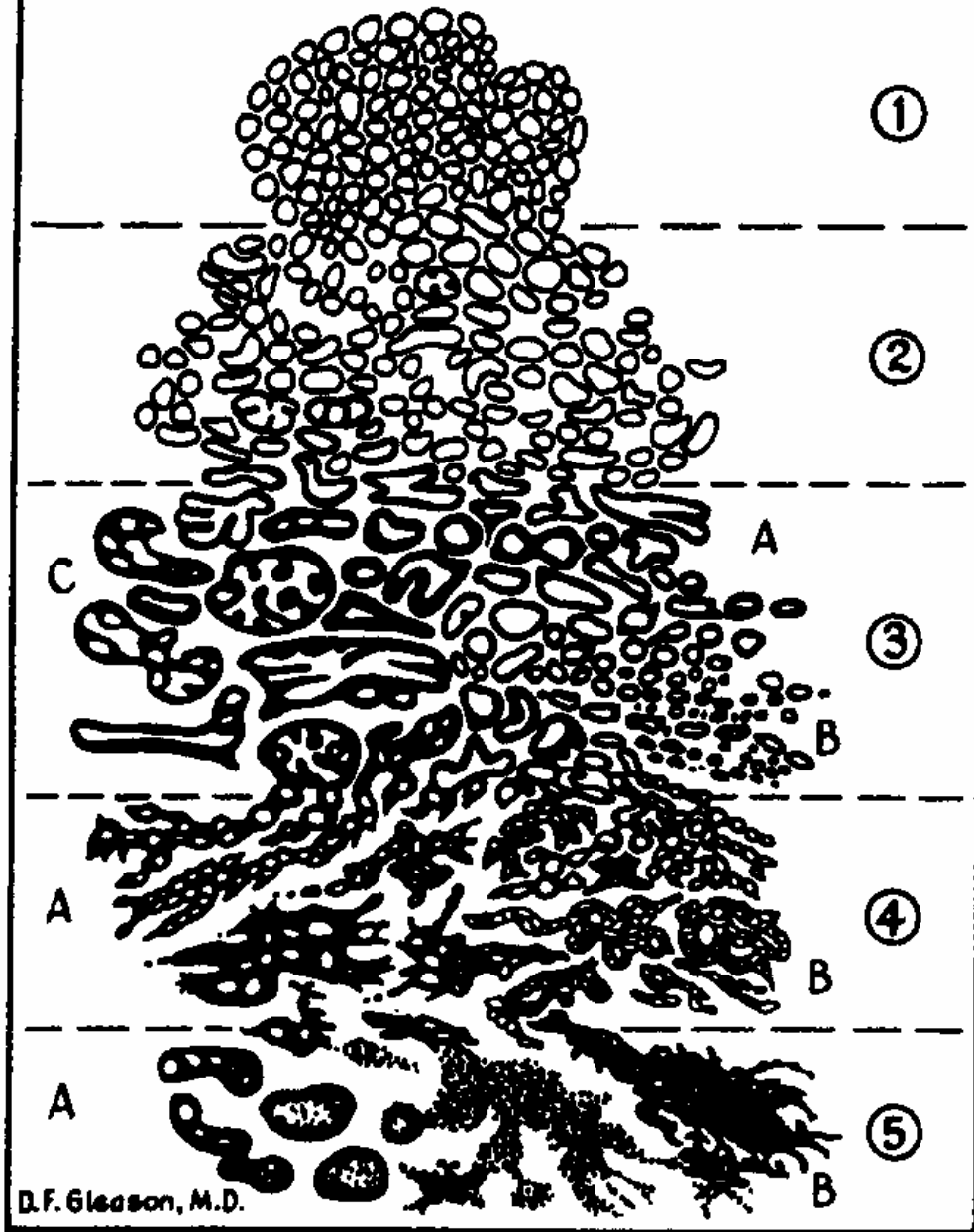
Emlő carcinoma grade

Nottingham grade

- Tubulus képzés
0-10% 10-70% >70%
- Polymorphismus
slight- moderate- marked
- Mitosisok száma
/10 high power field

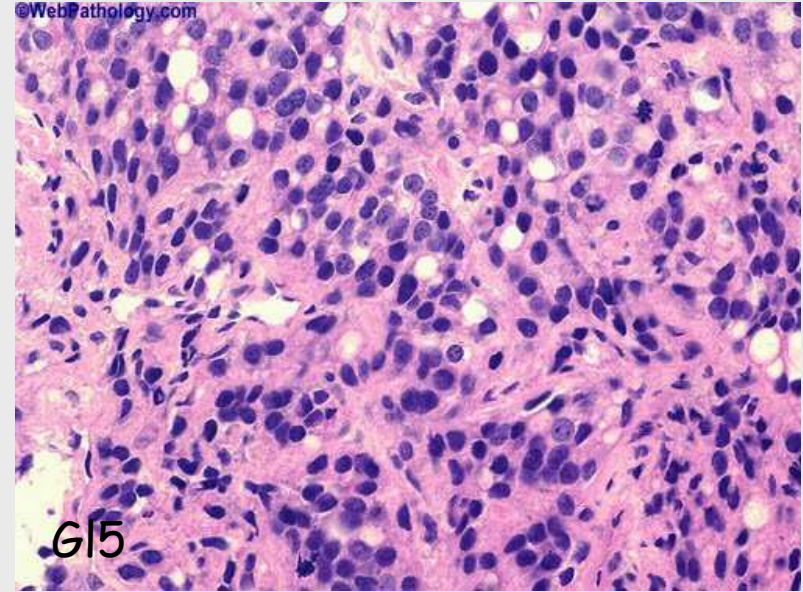
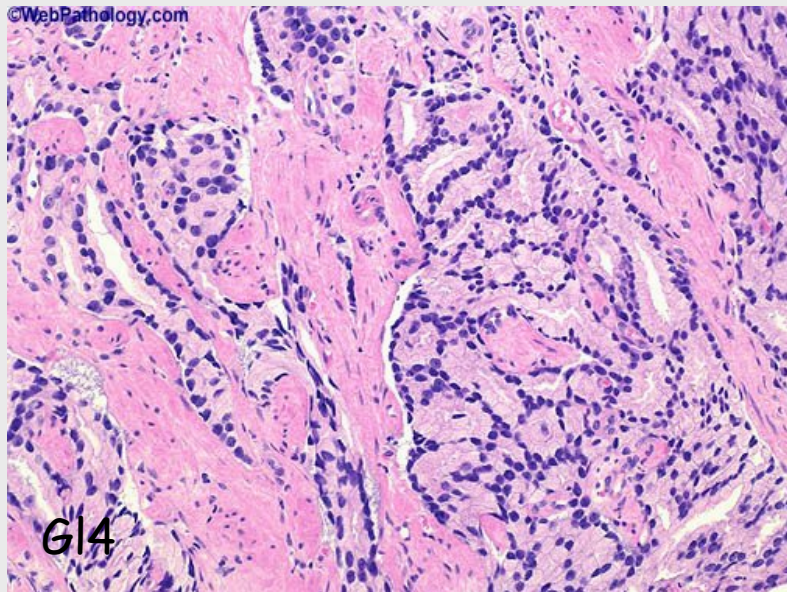
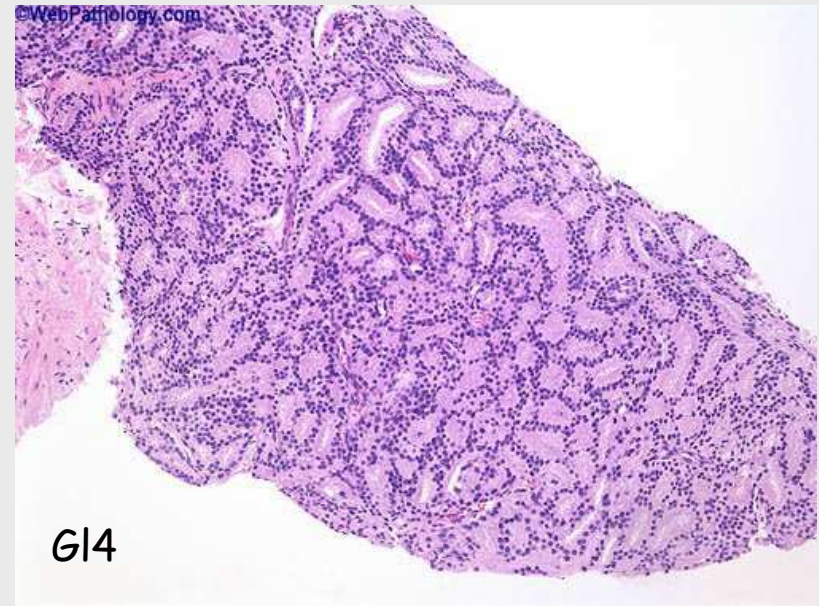
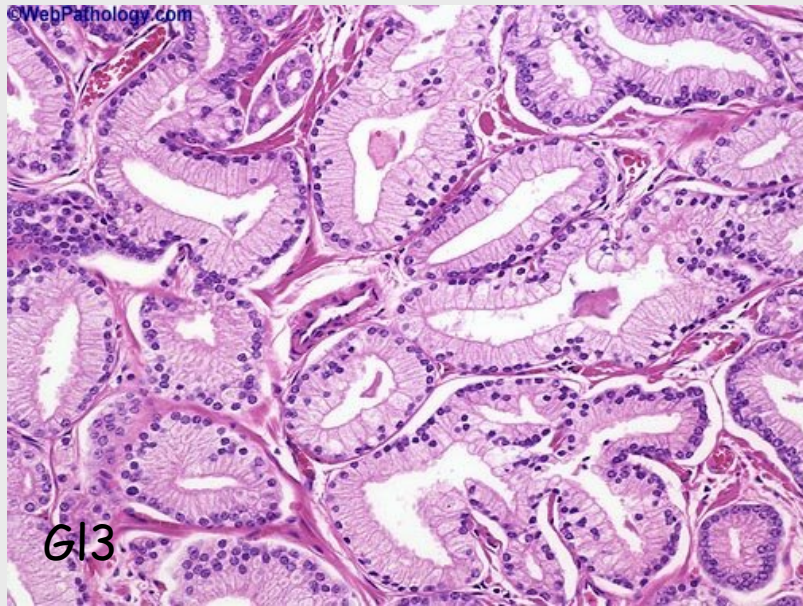


PROSTATIC ADENOCARCINOMA (Histologic Grades)



Brunbaugh

Epstein
2010



T - N - M

Tumor - Node - távoli Metastasis

A daganat vagy a daganatos betegség **KITERJEDÉSÉNEK** meghatározására szolgál

T: A primer tumor mérete/kiterjedése

N: Regionalis nyirokcsomó metastasis

M: Távoli metastasis



International Union Against Cancer

TNM

Classification of Malignant Tumours

SEVENTH EDITION

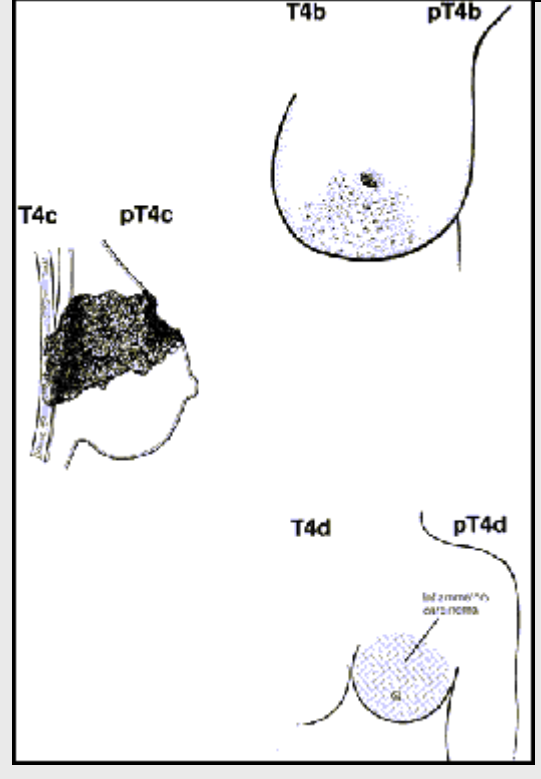
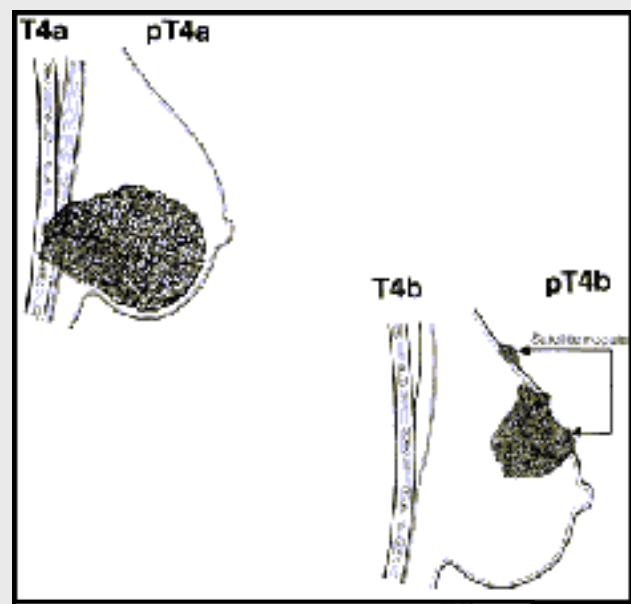
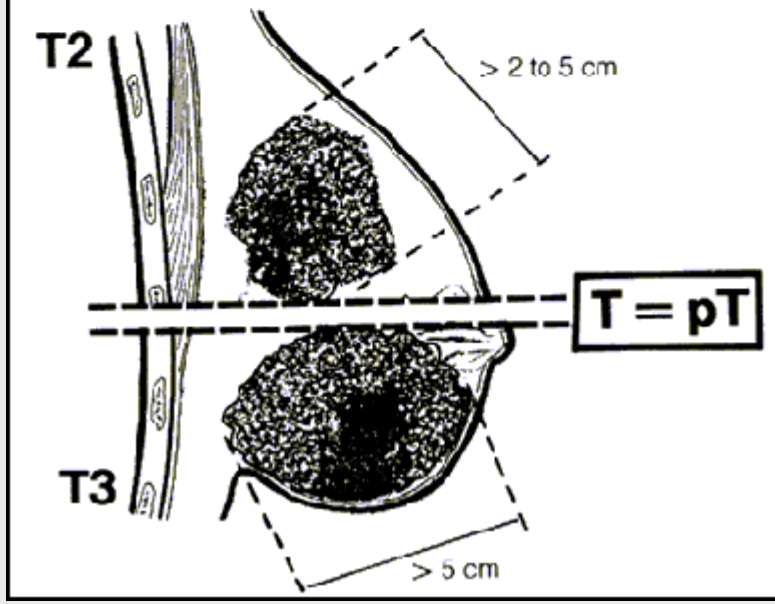
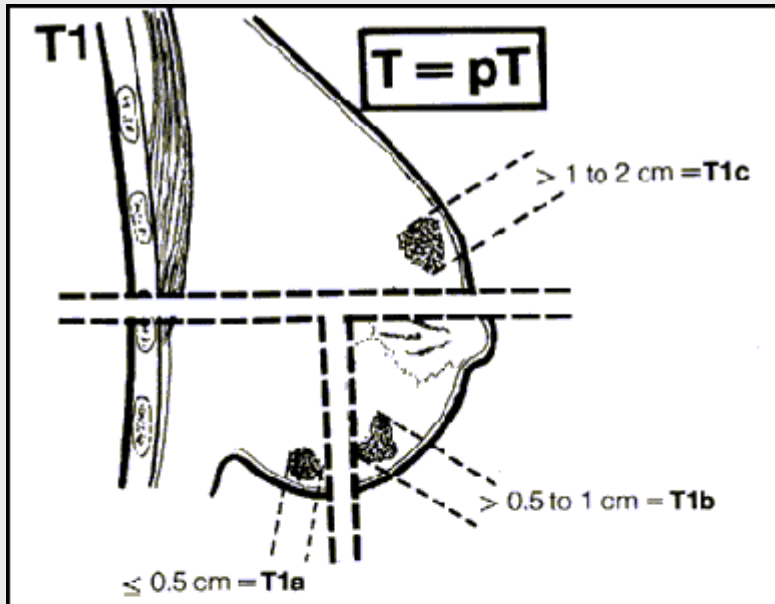
EDITED BY

LESLIE SOBIN | MARY GOSPODAROWICZ | CHRISTIAN WITTEKIND

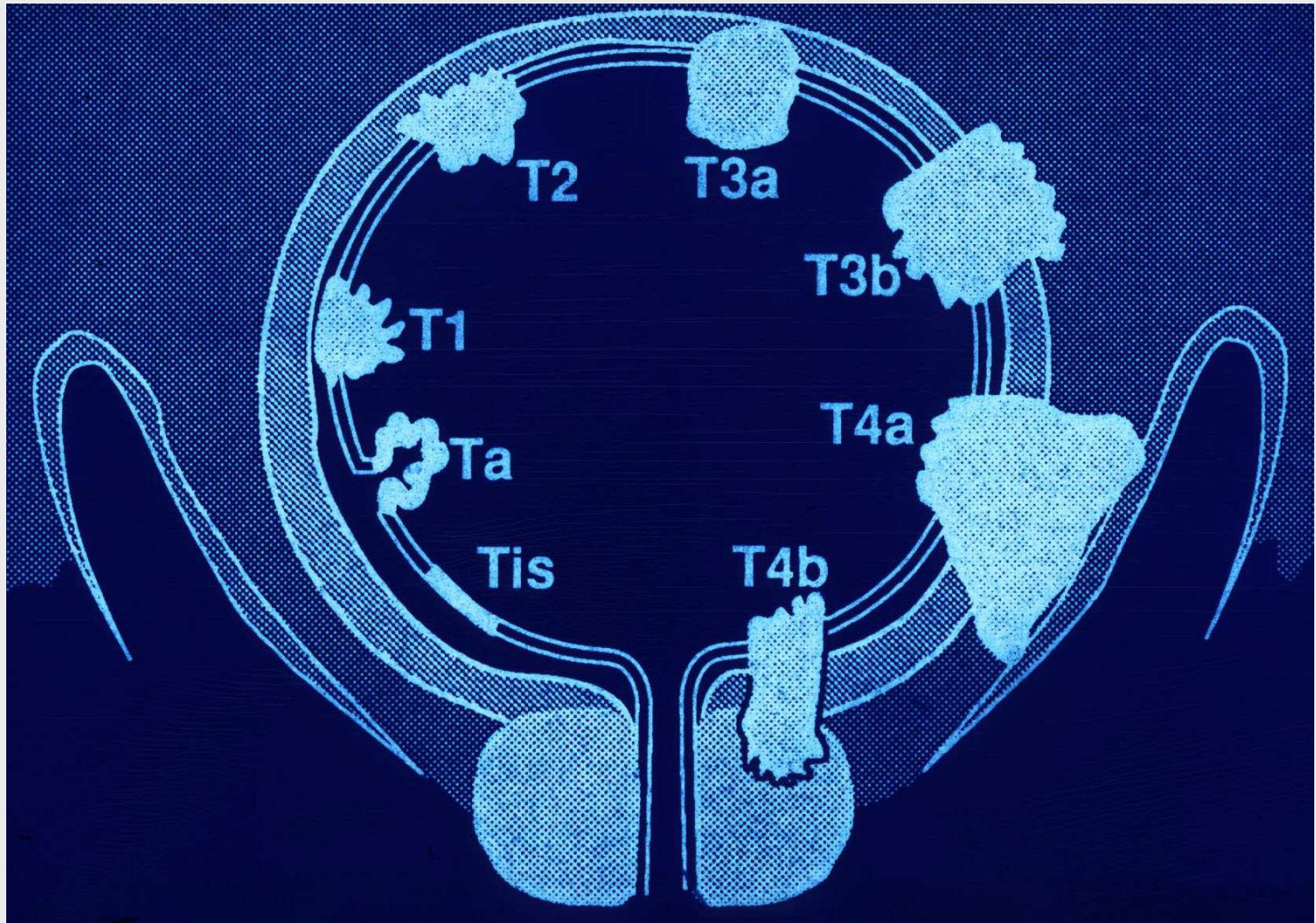


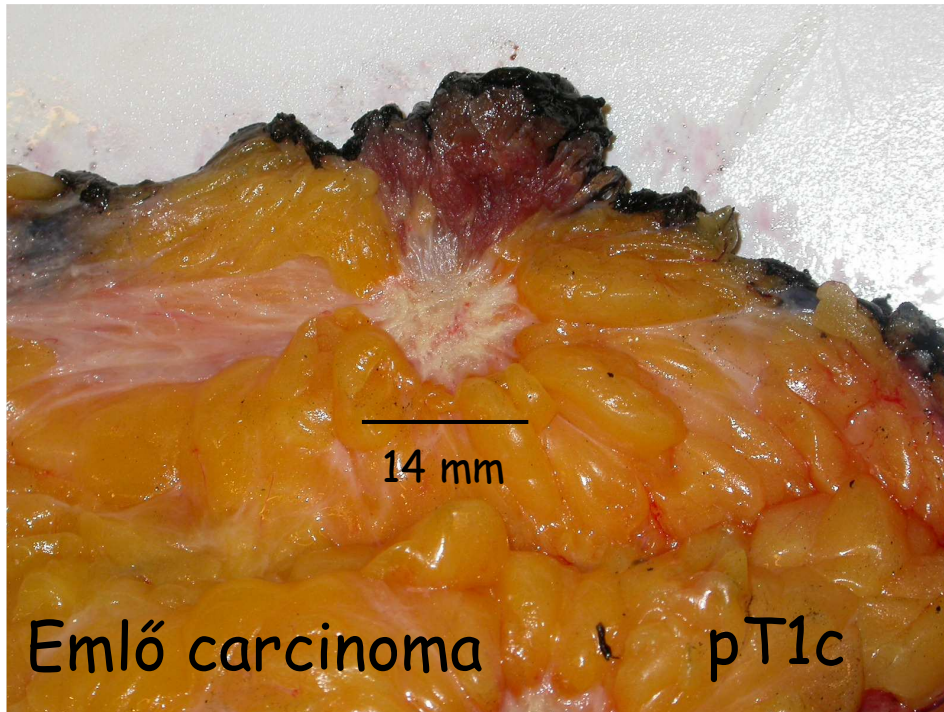
- (TX) T0, Tis, T1, T2, T3, T4
- (NX) N0, N1, N2, N3
- (MX) M0, M1

- cTNM: klinikai
- pTNM: patológiai
- rTNM: recidiv tumor
- aTNM: autopsia
- y TNM: primer onkoterápia után
- (m): multiplex primer tumor

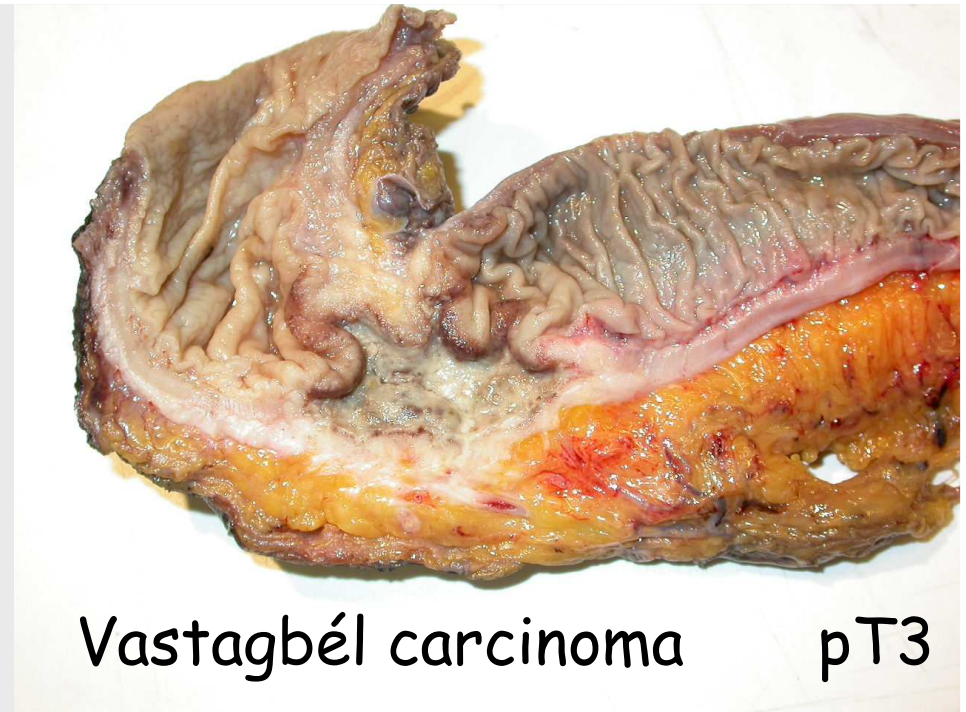


pT

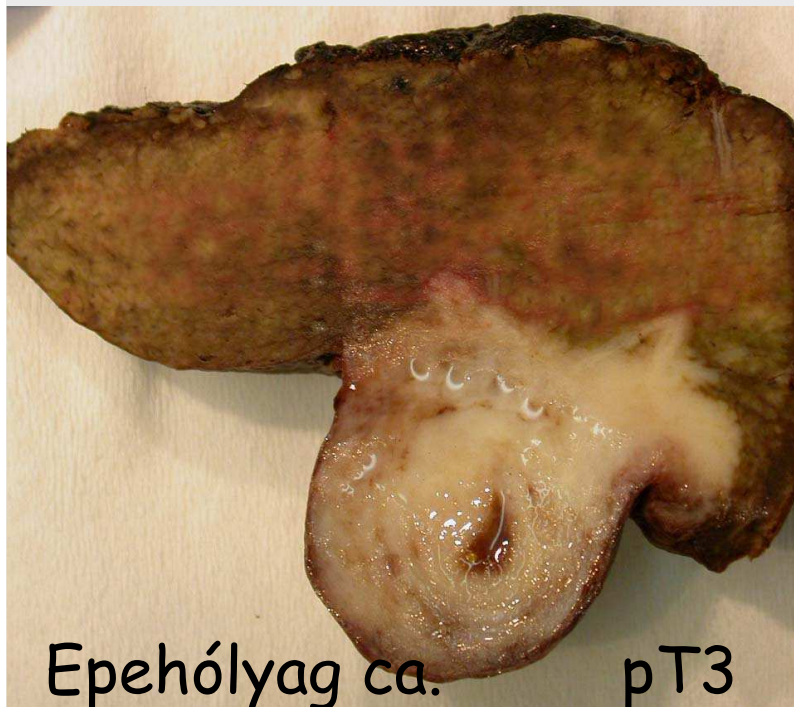




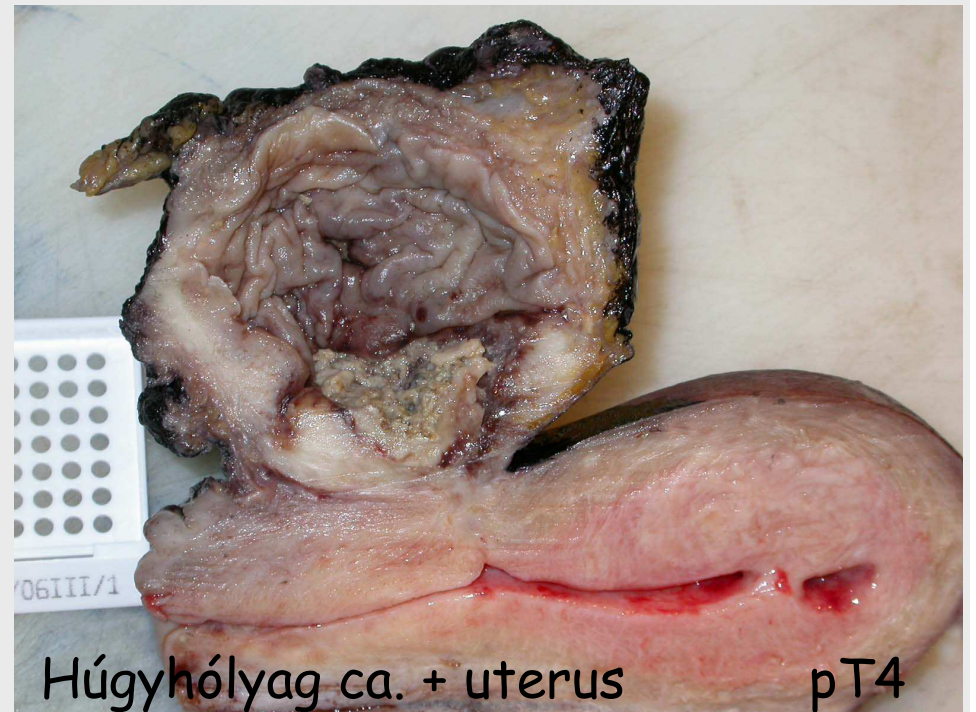
Emlő carcinoma pT1c



Vastagbél carcinoma pT3



Epehólyag ca. pT3



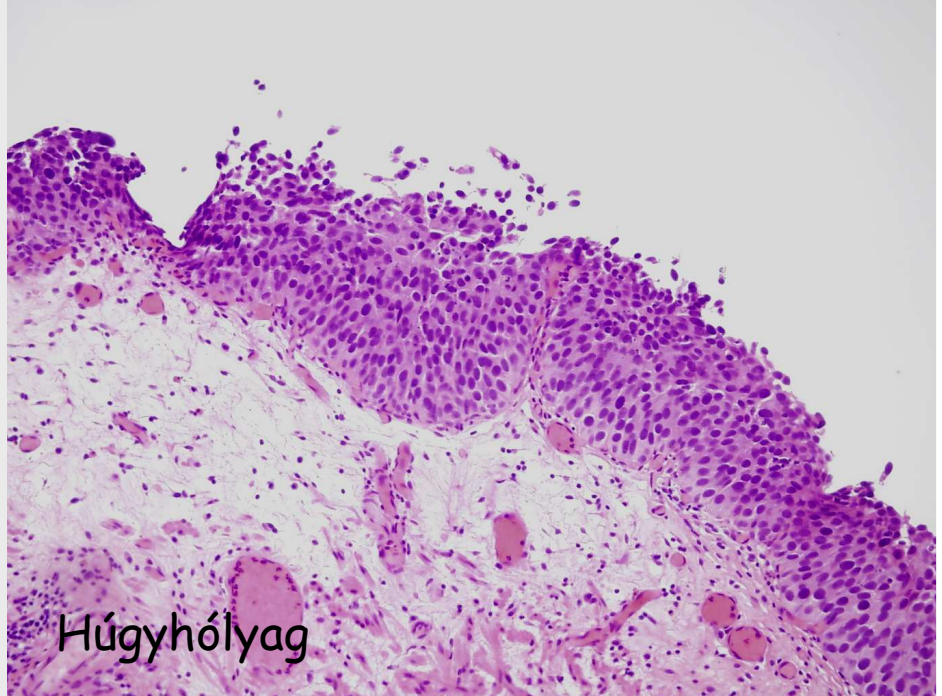
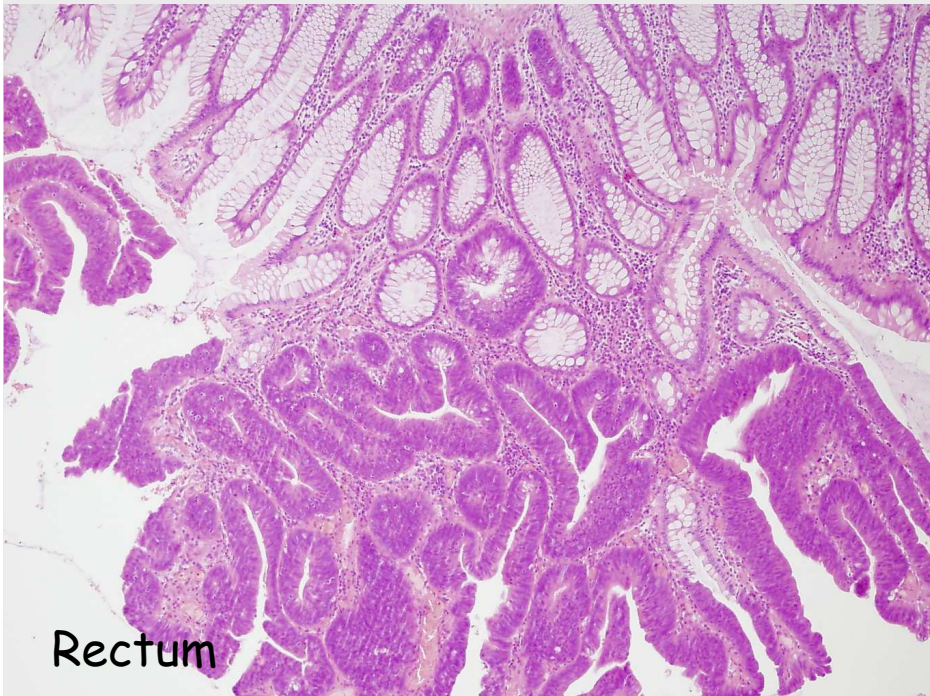
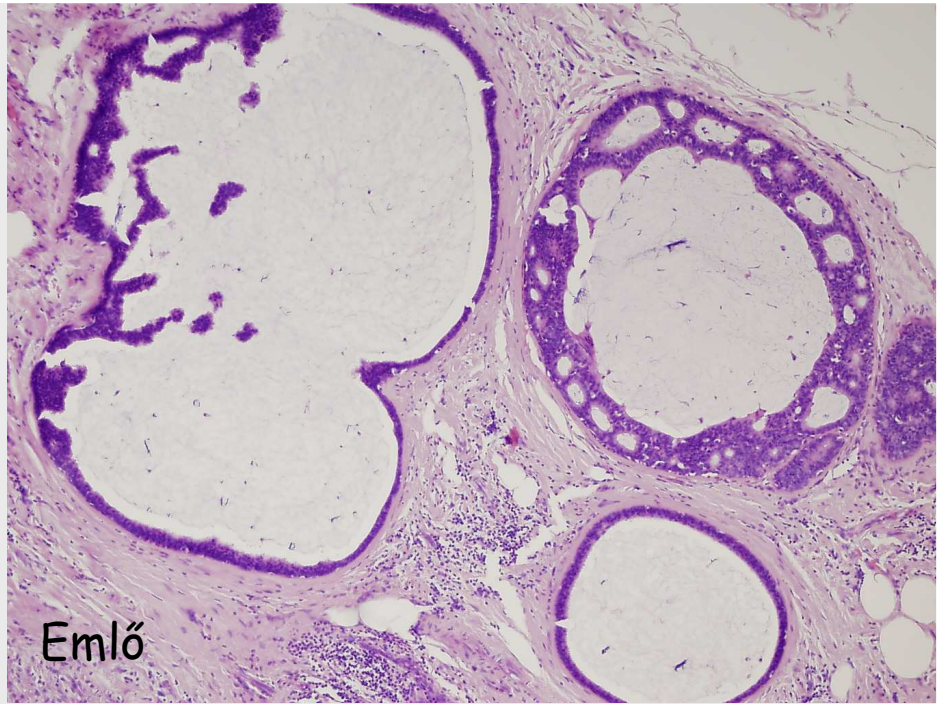
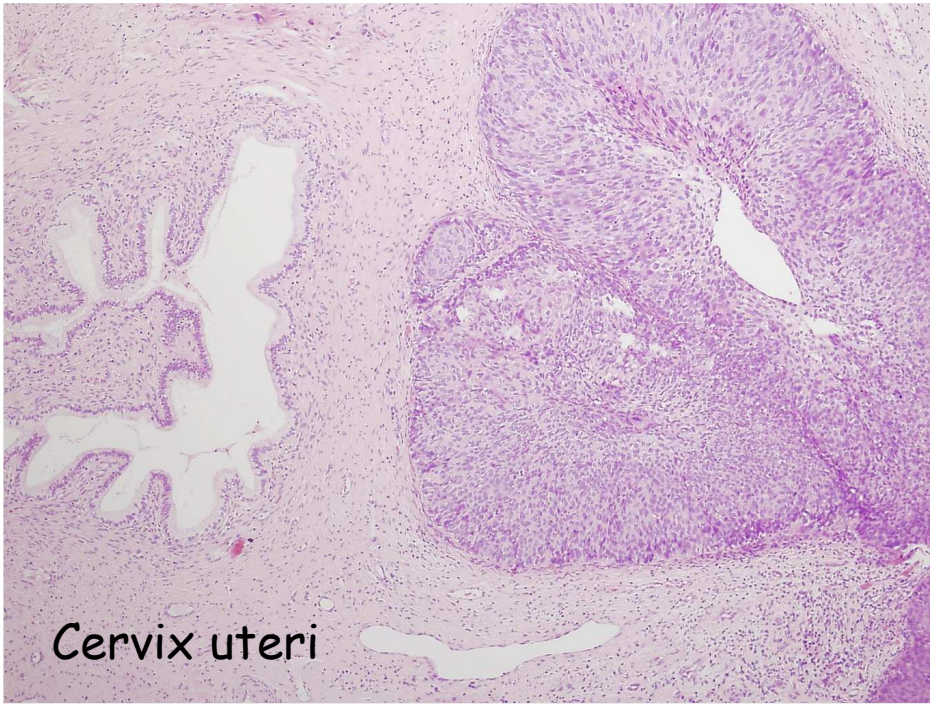
Húgyhólyag ca. + uterus pT4

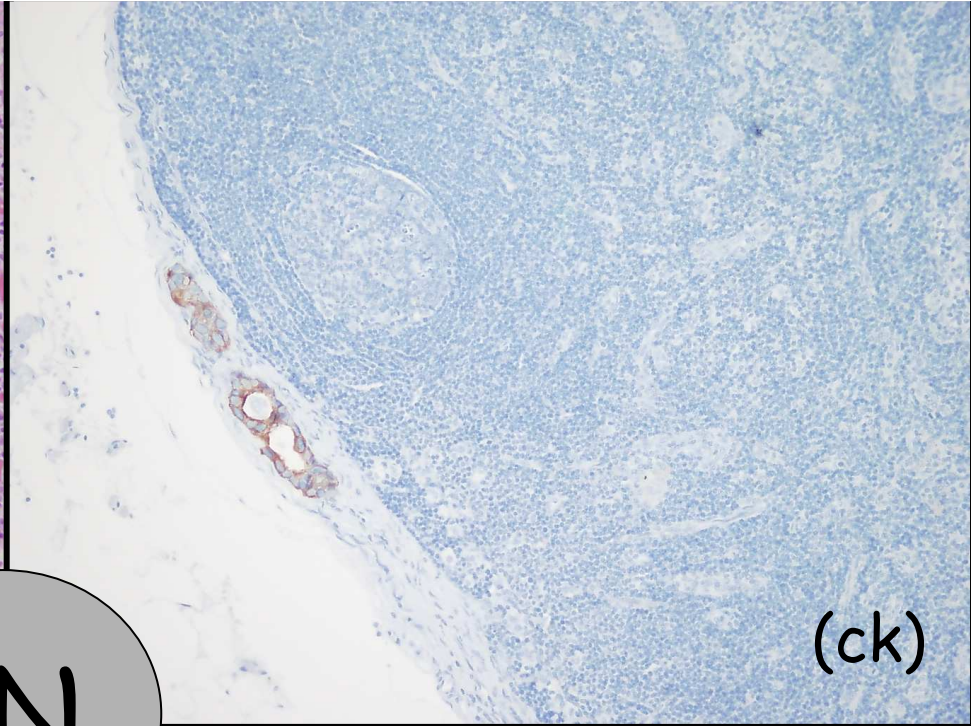
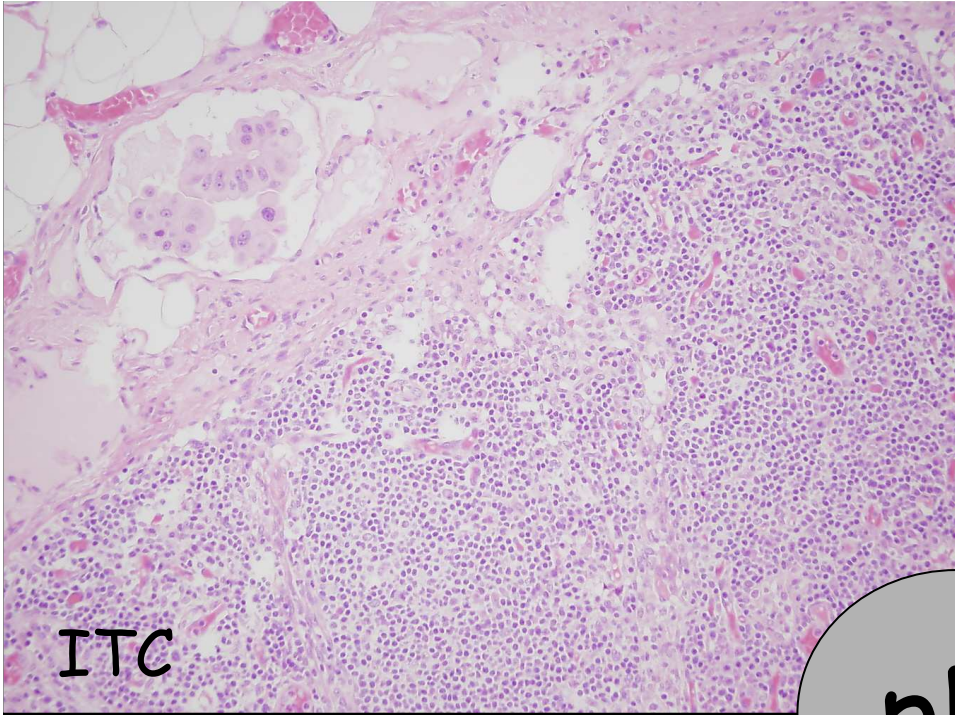
Tis: Carcinoma in situ

Carcinoma a hámra korlátozódik. A basalis membrán ép

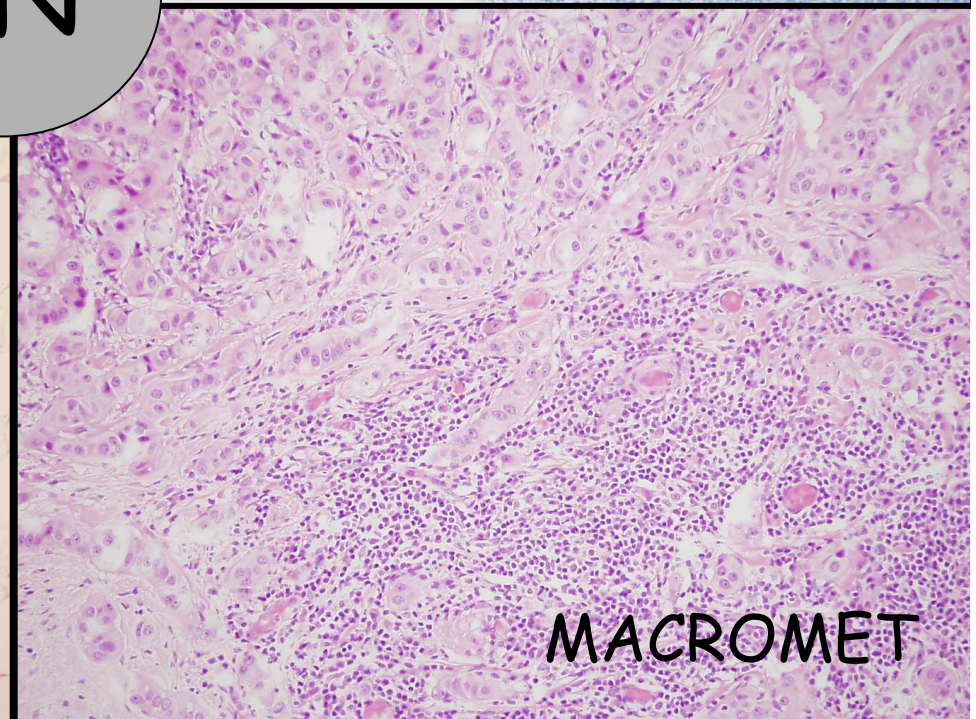
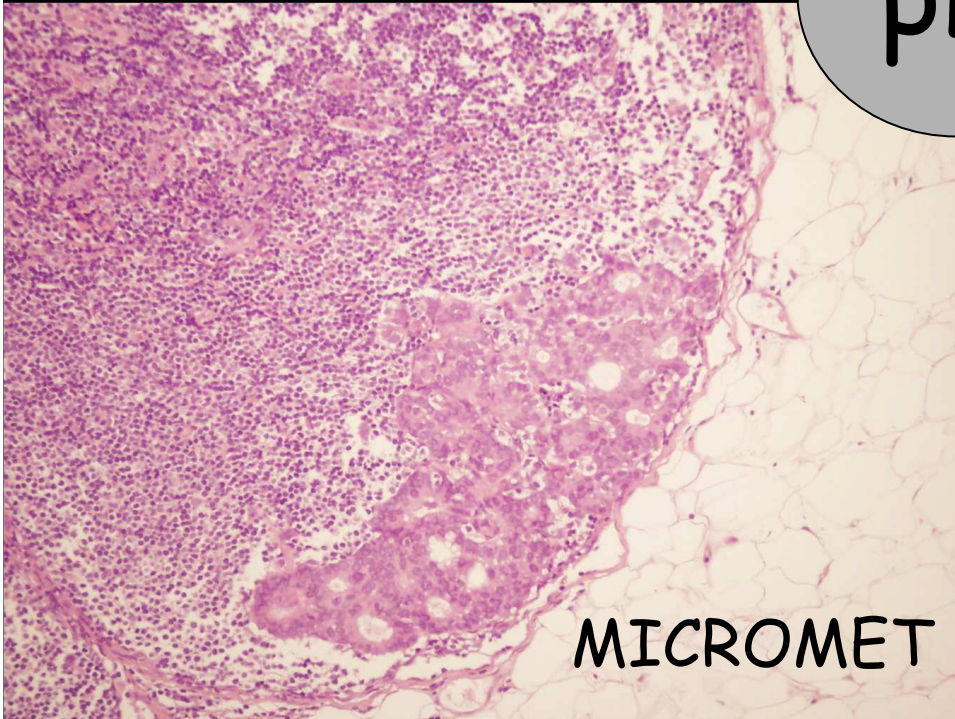
- Cytologiailag malignus
- Nem infiltrál
- Nem ad metastasist

SZŰRÉS jelentősége: cervix uteri, emlő, colon, bőr, prostata, gyomor

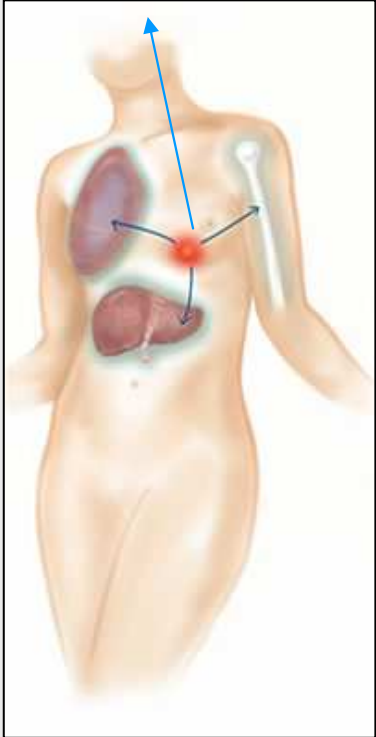
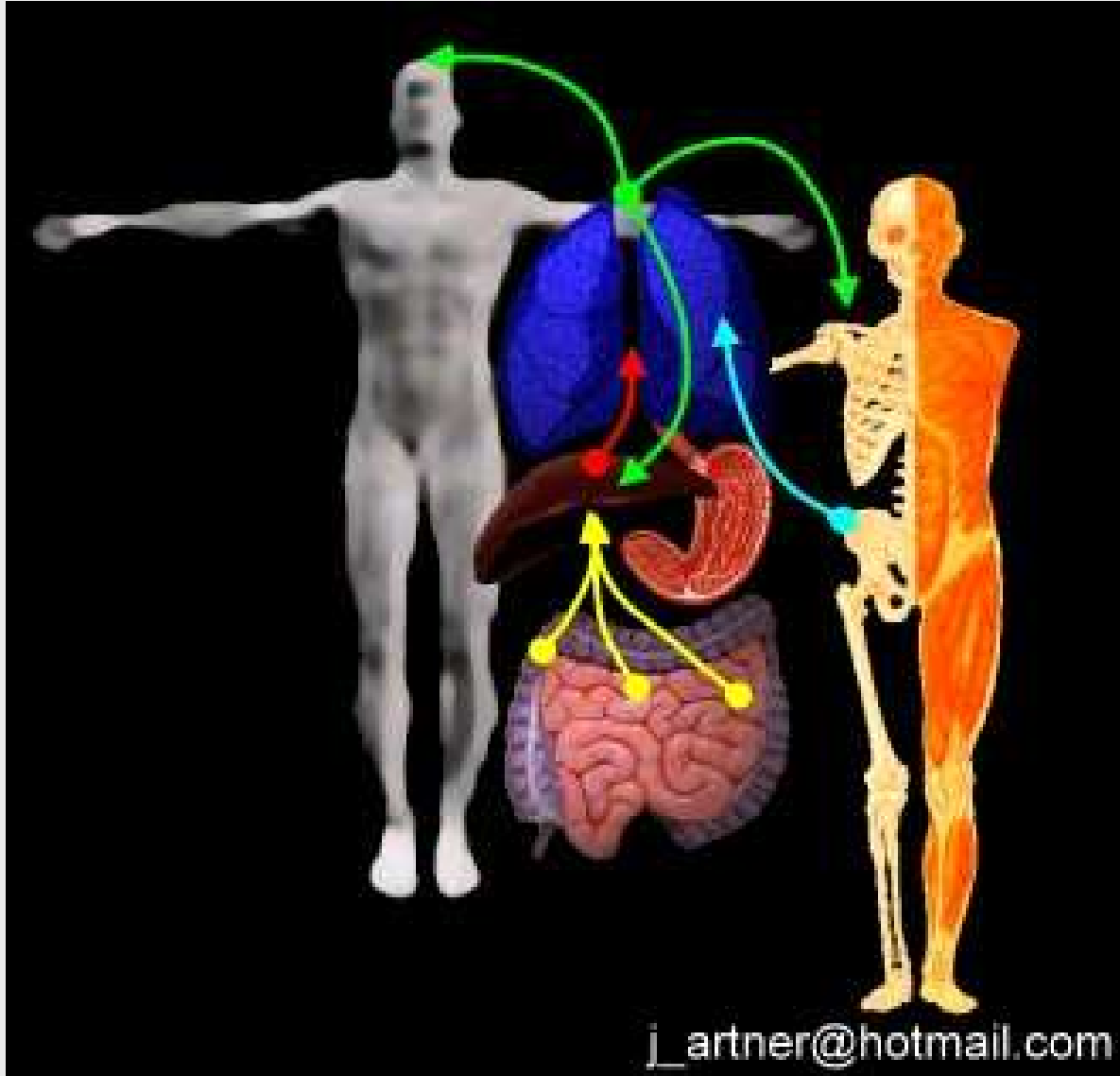


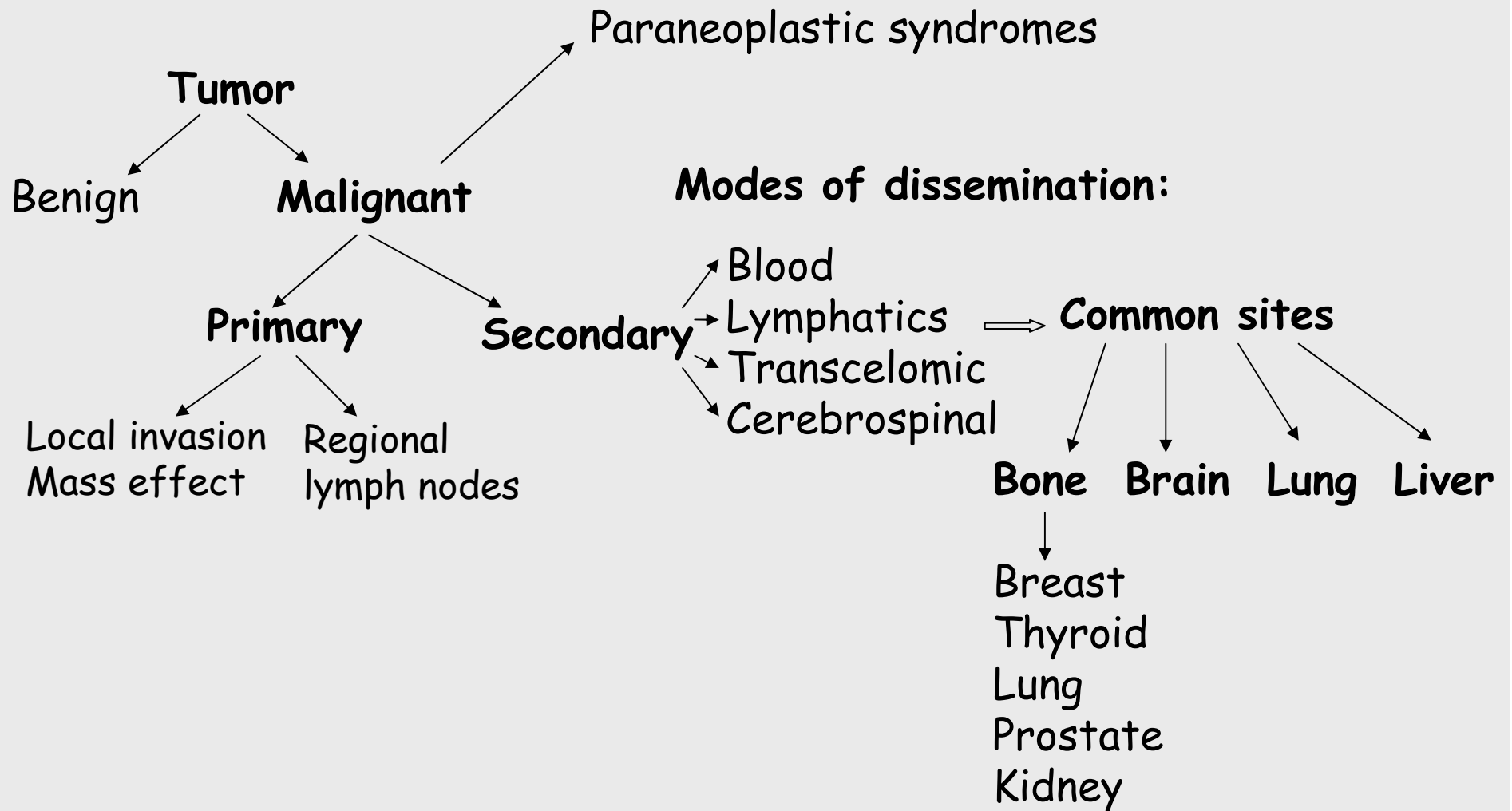


pN



M





AGYI METASTASIS



TÜDŐ -és
EMLŐ CARCINOMA
MALIGNUS MELANOMA

Megj.: primer agydaganatok nem adnak extracraniális áttétet!

CSONT METASTASIS



TÜDŐ -
EMLŐ -
PAJZSMIRIGY -
PROSTATA -
VESESEJTÉS CA.

Megj.: a prostata carcinoma a Batson vénákon át ad csigolyaáttétet

MÁJ METASTASIS



GASTROINTESTINALIS -
TÜDŐ -
EMLŐ CARCINOMA

MELANOMA

NEUROBLASTOMA

STB.

TÜDŐ METASTASIS



EMLŐ -

MÁJ -

VESE -

RECTUM CARCINOMA

CSÍRASEJTES TUMOROK

LÁGYRÉSZ SARCOMÁK

OSTEOSARCOMA

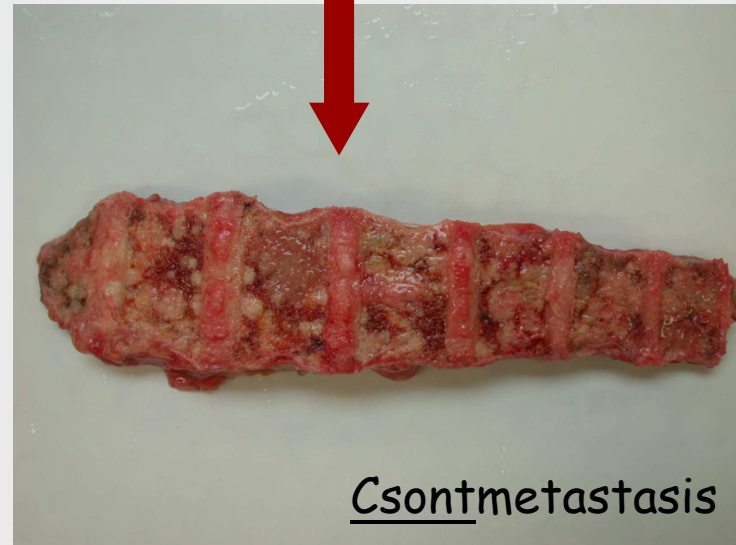
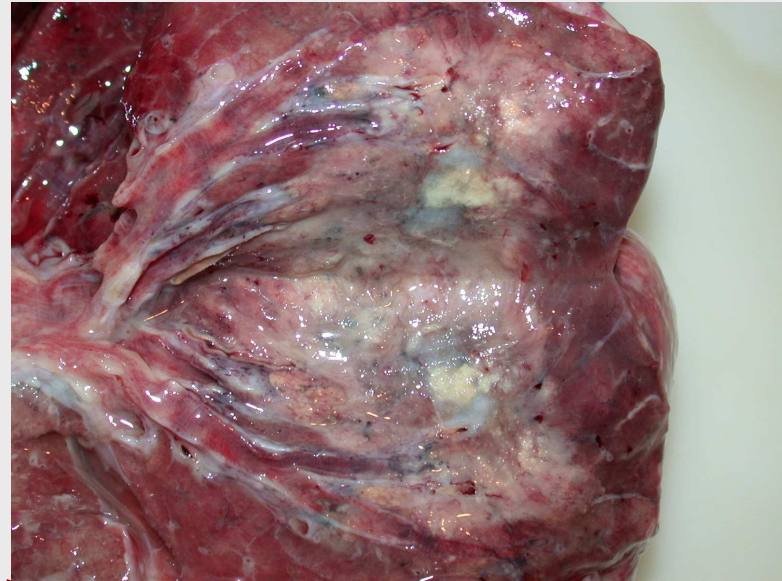
TÜDŐRÁK



Agyi metastasis

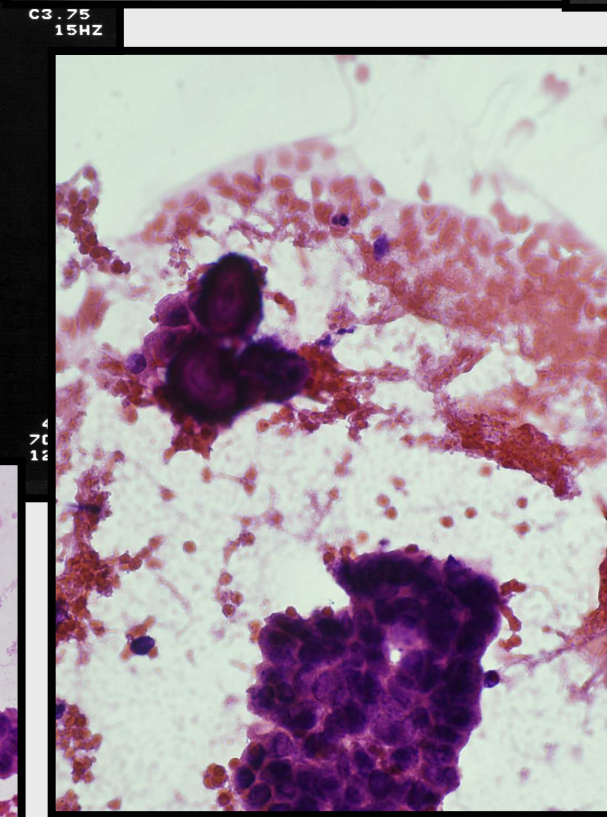
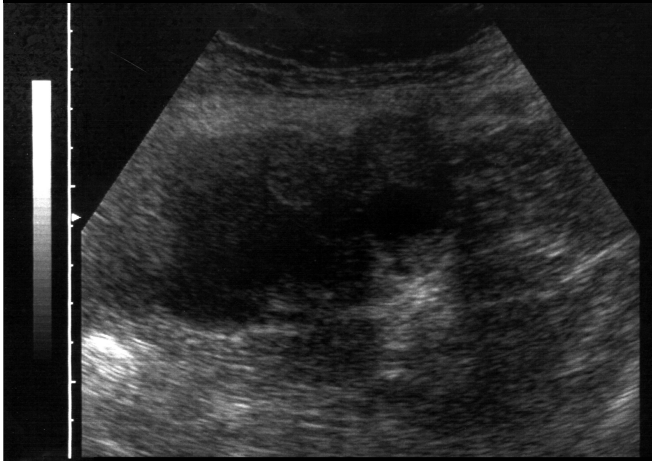
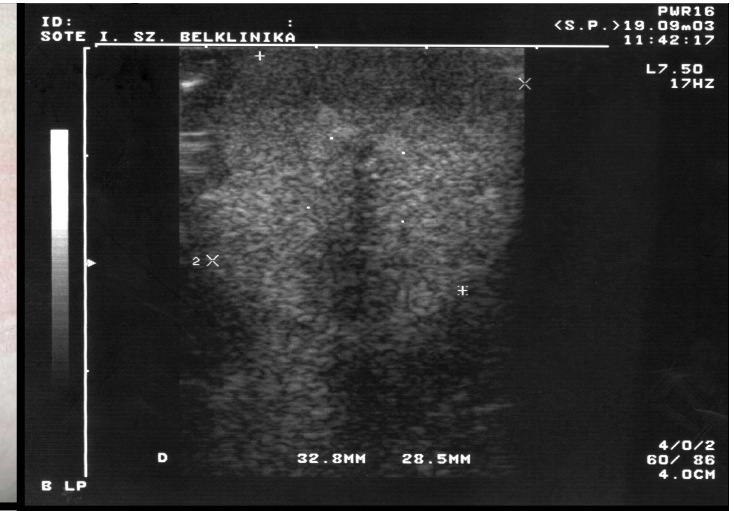


Mellékvesekéreg metastasis

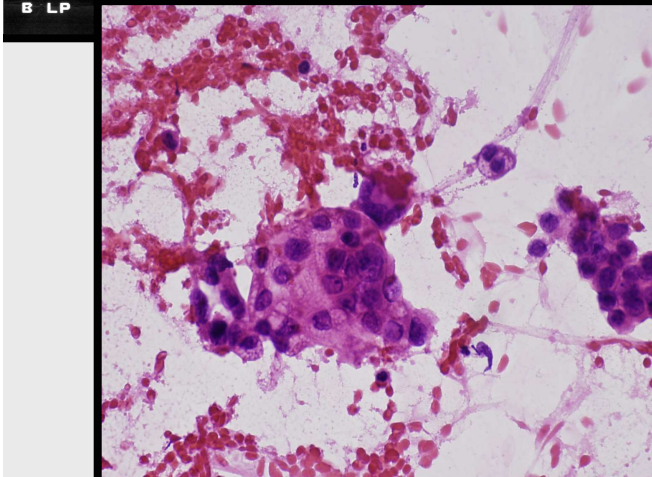
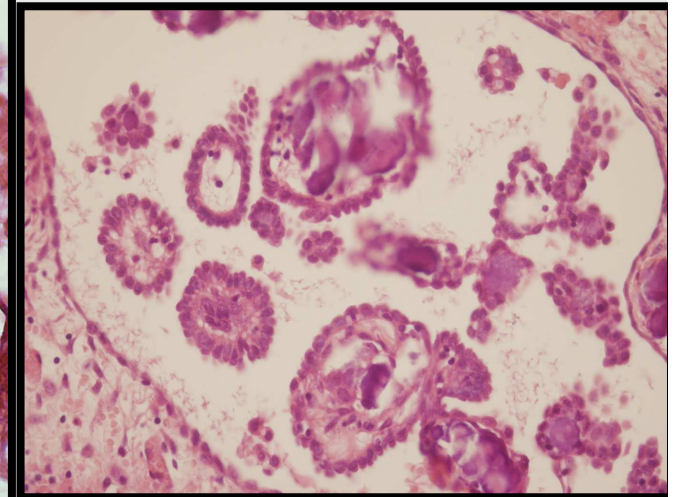


Csontmetastasis

Máj met.



Sister Mary Joseph nodule




AJC STAGE

ÁLTALÁBAN: I - II - III - IV

STAGE 0 in situ carcinoma

STAGE IV távoli áttét

TNM STAGING OF LUNG CANCER

Supraclavicular Scalene(ipsi-/contralateral)	Mediastinal		Subcarinal	Hilar		Peribronchial (ipsilateral)	LYMPH NODE (N)						
	(contralateral)	(ipsilateral)		(contralateral)	(ipsilateral)								
+	/	+	/	+			N3	Stage IV M1 (any T, any N)					
-	-	-	+ &/ +	-			N2	Stage III B					
-	-	-	-	-	+ &/ +	*	N1	Stage II A	Stage II B				
-	-	-	-	-	-	-	N0	Stage I A	Stage I B	Stage II B			
Stage 0 (Tis, N0, M0)								T1	T2	T3	T4	PRIMARY TUMOR (T)	
								a&b&c	any of a,b,c,d	(a&c)/b/d	(a&c)/d	Criteria	
								≤ 3 cm	> 3 cm	any	any	a. Size	
								No invasion proximal to the lobar bronchus	Main bronchus (≥ 2 cm distal to the carina)	Main bronchus (< 2 cm distal to the carina)	-	b. Endo-bronchial location	
								surrounded by lung or visceral pleura	Visceral pleura	Chest wall **/ diaphragm/ mediastinal pleura/ parietal pericardium	Mediastinum/ trachea/heart/ great vessels/ esophagus/ vertebral body/ carina	c. Local Invasion	
								-	Atelectasis/ obstructive pneumonitis that extends to the hilar region but doesn't involve the entire lung	Atelectasis/ obstructive pneumonitis of the entire lung	Malignant pleural/peri-cardial effusion or satellite tumor nodule(s) within the ipsilateral primary-tumor lobe of the lung	d. Other	

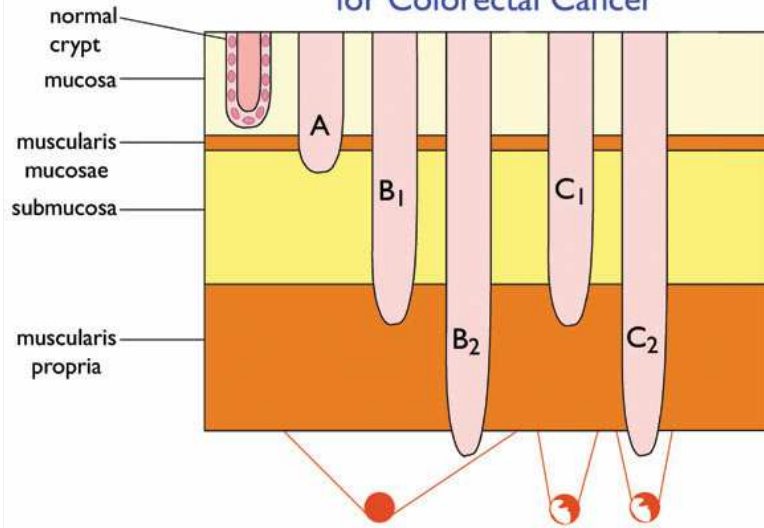
METASTASES (M)
M0 : Absent
M1 : Present
 Separate metastatic tumor nodule(s) in the ipsilateral nonprimary-tumor lobe(s) of the lung also are classified M1

Tis : Carcinoma *in situ*
Staging is not relevant for Occult Carcinoma (Tx, N0, M0)

* Including direct extension to intrapulmonary nodes
 ** Including superior sulcus tumor
 (& : and) (/ : or) (&/ : and /or)

- COLORECTALIS CARCINOMA
 - DUKES A, B, C
 - MODIFIED ASTLER-COLLER (MAC) A, B, C, D
- MALIGNANT MELANOMA
 - CLARK
 - I. intraepidermalis (in situ)
 - II. papillaris dermis
 - III. reticular dermisig
 - IV. reticular dermis
 - V. subcutan zsírszövet
 - BRESLOW: mm-ben mért vastagság
- GYNECOLOGIAI MALIGNUS TUMOROK
 - F I G O
- MALIGNUS LYMPHOMA
 - Ann-Arbor

ASTLER-COLLER-Staging System for Colorectal Cancer



Astler-Coller	TNM	UICC
—	T ₀ N ₀ M ₀	0
A	T ₁ N ₀ M ₀	I.
B ₁	T ₂ N ₀ M ₀	AJCC II.
B ₂	T ₃ N ₀ M ₀	
B ₃ *	T ₄ N ₀ M ₀	
C ₁	T ₁₋₂ N ₁₋₂ M ₀	III.
C ₂	T ₃ N ₁₋₂ M ₀	
C ₃ *	T ₄ N ₁₋₂ M ₀	
D	T ₁₋₄ N ₁₋₂ M ₁	IV.

The Ann Arbor Staging

As with many other malignancies, NHL is categorized on the basis of tumor burden. The Ann Arbor Staging System is the most popular system for classifying NHL. The Ann Arbor Staging groups are as follows:

Stage 1: NHL is limited to **one lymph node group** (e.g., neck, underarm, groin, etc.) above or below the diaphragm, or NHL is **in an organ or site** other than the lymph nodes (extranodal) but has not spread to other organs or lymph nodes.

Stage 2: NHL is limited to **two lymph node groups on the same side of the diaphragm**, or NHL is limited to **one extranodal organ and has spread to one or more lymph node groups on the same side of the diaphragm**.

Stage 3: NHL is in **two lymph node groups, with/without partial involvement of an extranodal organ or site above and below the diaphragm**.

Stage 4: NHL is **extensive (diffuse)** in one organ or site, with/without NHL in distant lymph nodes.

Prognosis

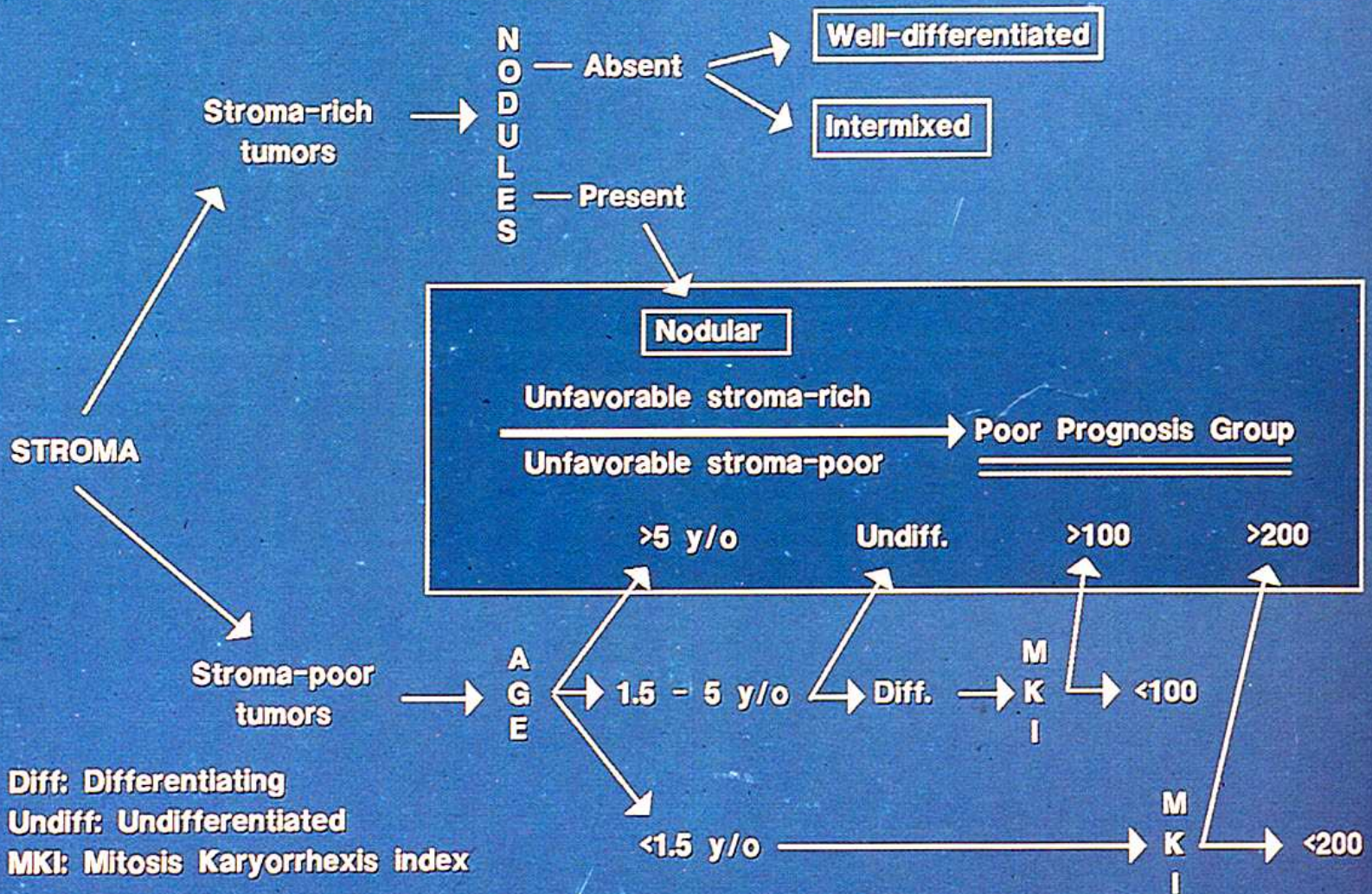
- TÚLÉLÉS
 - overall survival (os) TELJES TÚLÉLÉS
 - disease free survival (dfs)
BETEGSÉGMENTES TÚLÉLÉS
- ÉLETMINŐSÉG

Quality of Life: A multidimensional construct encompassing complete information on the impact of disease or its treatment on a patient's usual or expected physical, psychological, and social well-being

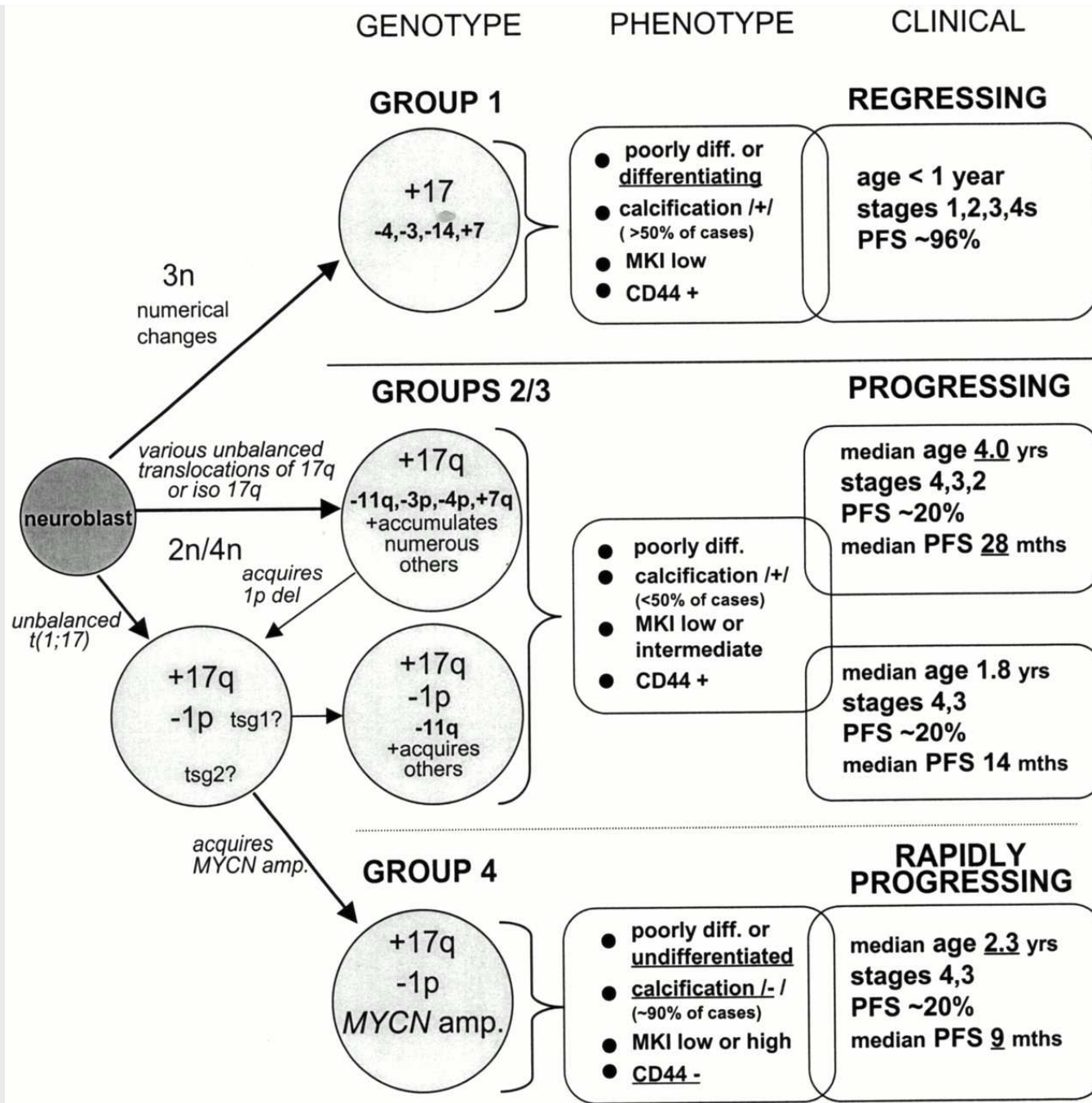
A prognoszt befolyásolja:

- Nem
- Kor
- Tumor típus - grade - méret - stage
- Tumor elhelyezkedése
- Genetikai profil
- Célzott, egyénre szabott terápia

PROGNOSTIC FACTORS IN NEUROBLASTIC TUMORS



Shimada et. al. JNCI, 73:405-416, 1984



KEZELÉS

- **Sebészi:** kuratív vagy palliatív
- **Irradiáció:** pre- vagy postoperatív vagy mindkettő
- **Kemoterápia:** pre- vagy postoperatív vagy mindkettő
- **Hormon terápia**
- **Immun terápia**
- **Thermo-terápia**

CÉLZOTT KEZELÉS

A daganat molekuláris genetikai jellegzetességeinek meghatározása



Kezelés megfelelően célzott szerekkel (antitest, enzim blokkolás, stb.)



Jobb hatékonyság, kevesebb mellékhatás

Példák: colon-, emlő- és tüdő carcinoma, gastrointestinalis stromalis tumor, chronicus myeloid leukaemia

PREVENCIÓ

KORAI FELISMERÉS

Nagyon fontos!!!

A daganatos betegségek gyógyítása



MULTIDISCIPLINÁRIS SZEMLÉLETET KÖVETEL