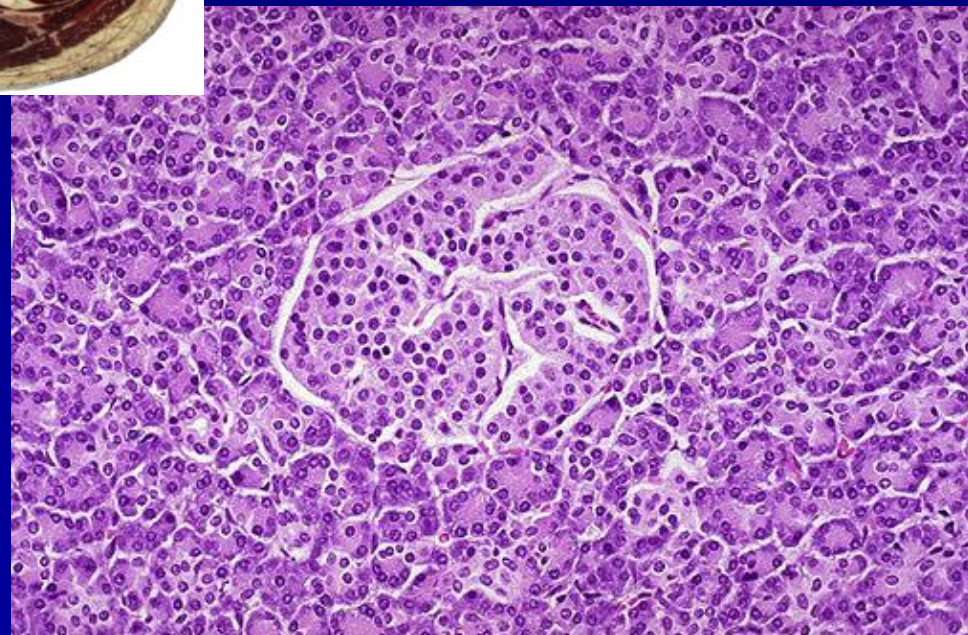
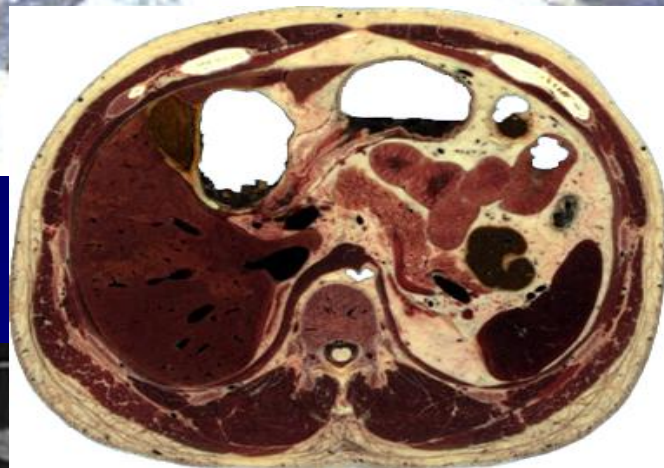
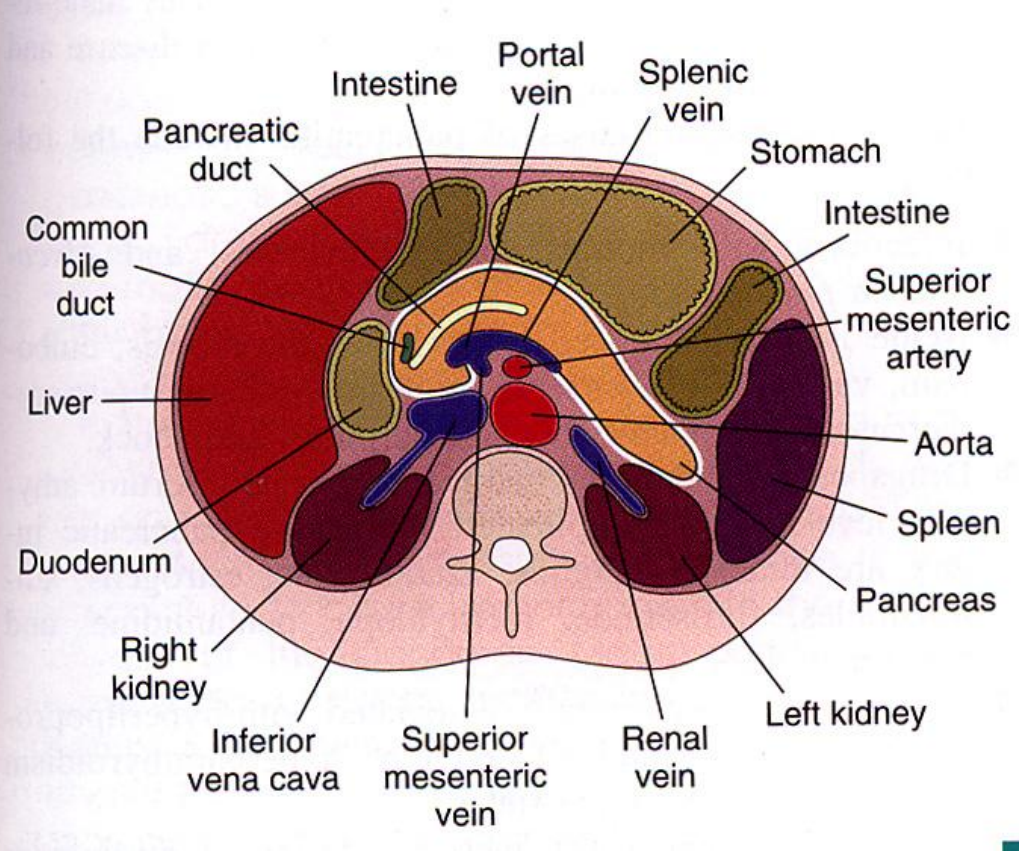
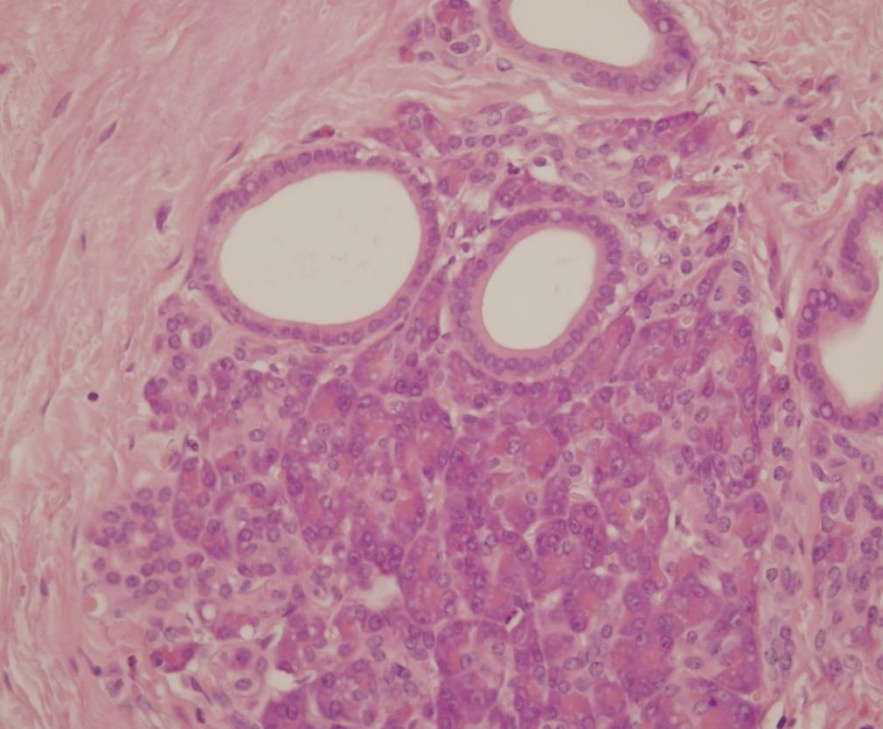
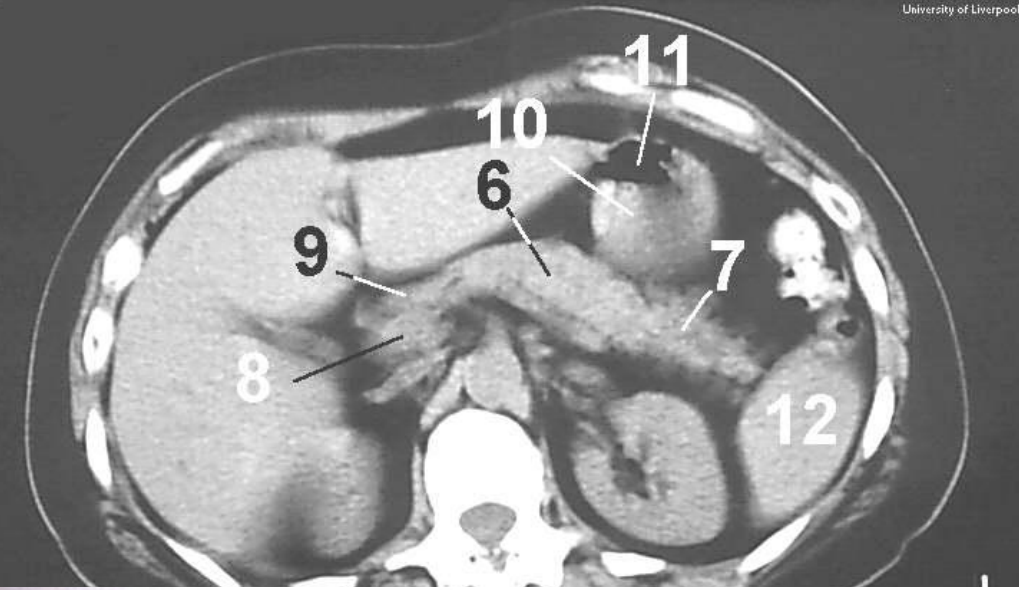
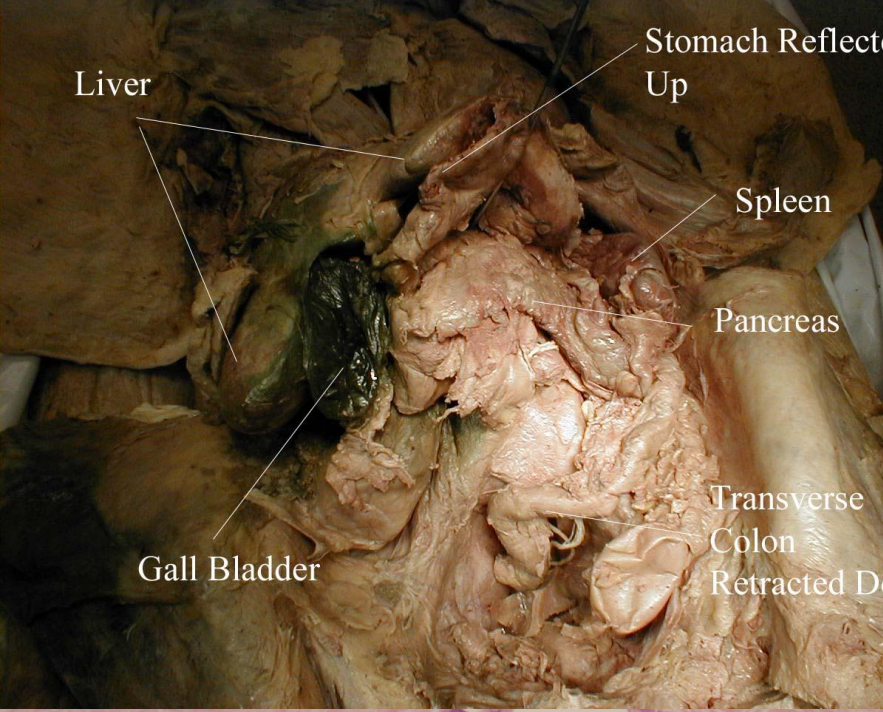


# Az exocrin pancreas pathológiája

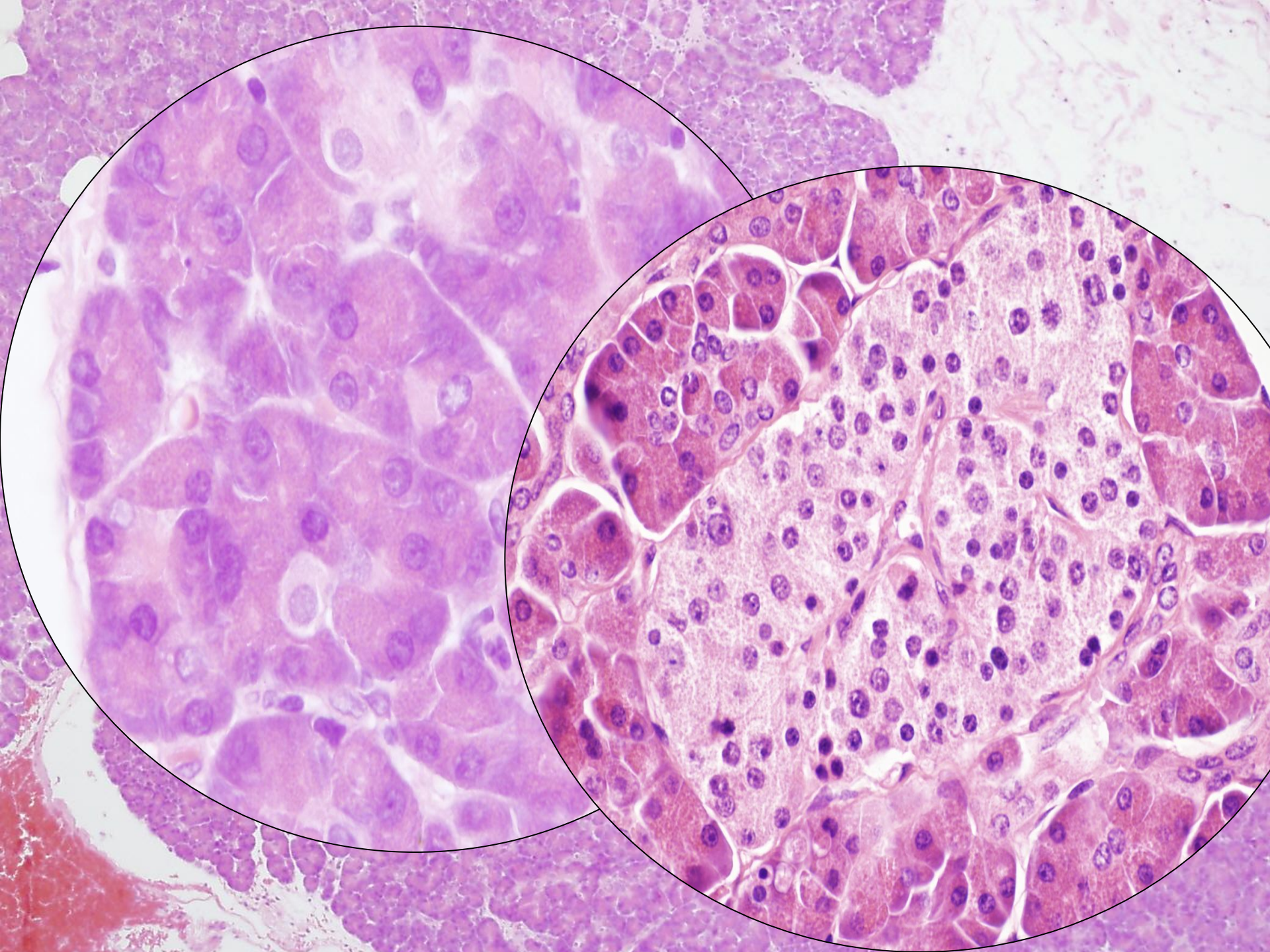














# Funkció

Exocrin állomány:

aktív enzimek: tripszinigén, amiláz, lipáz,  
kollagenáz, elasztáz, nukleáz

Endocrin állomány: Langerhans sziget

Tünetek: Pancreaselégtelenség

Exocrin: Maldigestio - Malabsorptio

Endocrin: Diabetes mellitus

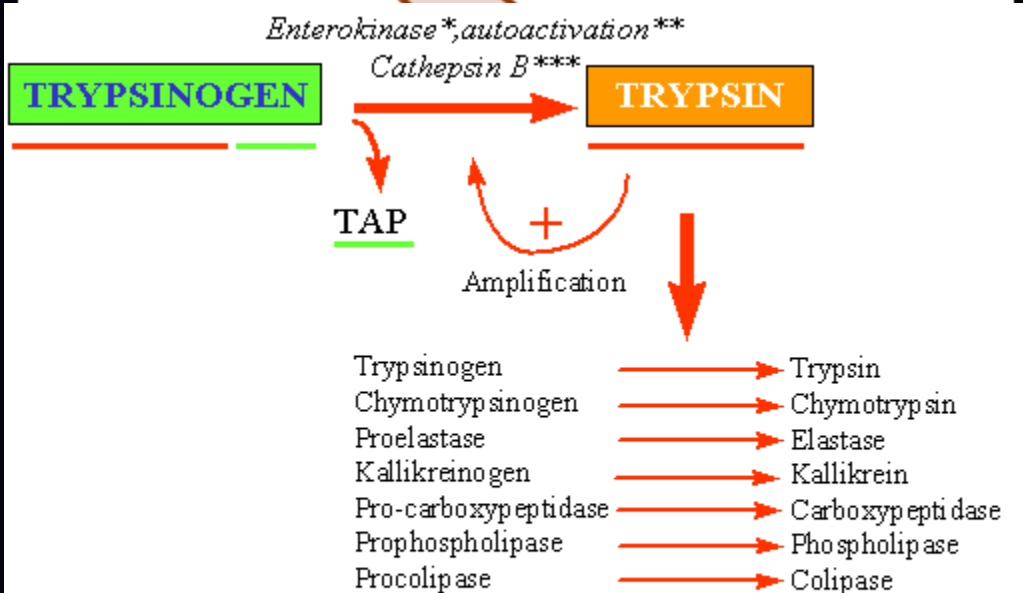
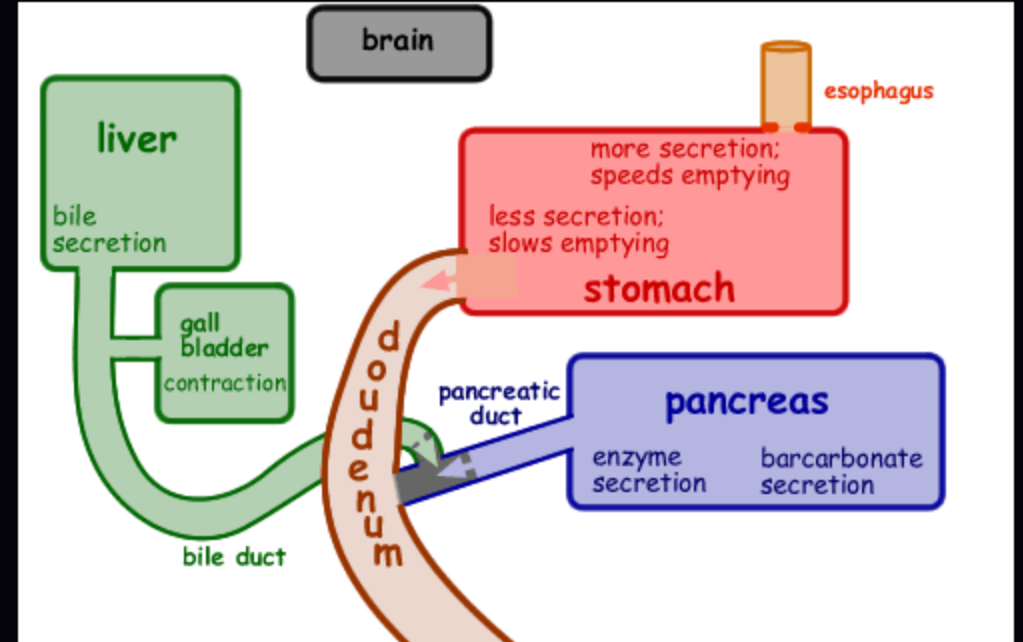
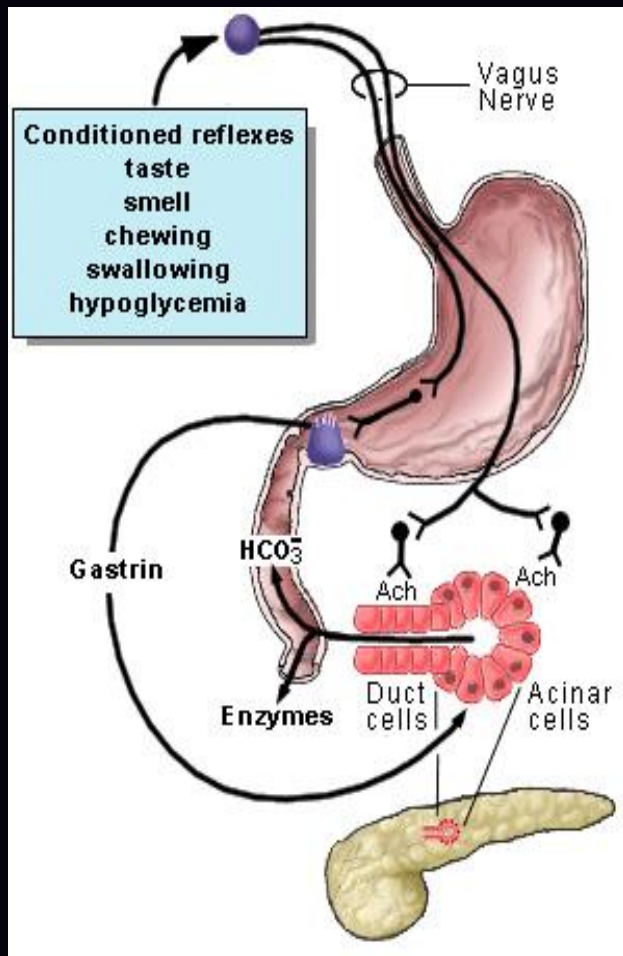


# Pancreas által szekretált enzimek

- Trypsin - autoaktivatio
- (act.: enterokinase, - secretin - cholecystokinin-
  - inh.: acinic, ductal secretumok )
- Chymotripsin
- Aminopeptidase
- Elastase
- Amylase
- Lipase
- Phospholipase
- Nuclease

Nincs proenzim





\*Normal pathway: enterokinase is located in the brush border of the small intestine  
 \*\*Normal pathway: Trypsinogen autoactivation is a unique feature of human trypsinogen  
 \*\*\*Abnormal pathway: cathepsin B is located within acinar cells



# A hasnyálmirigy vizsgálata

Labor

UH

CT

MR

Cytológiai - UH v. CT vezérelt percután

UH endoscopos

ERCP-pancreasnedv

Epeút kaparék

Intraoperatív

# Fejlődési rendellenességek

## Agenesia

Pancreas annulare (mechanicus akadály-  
duodenum obstrukció)

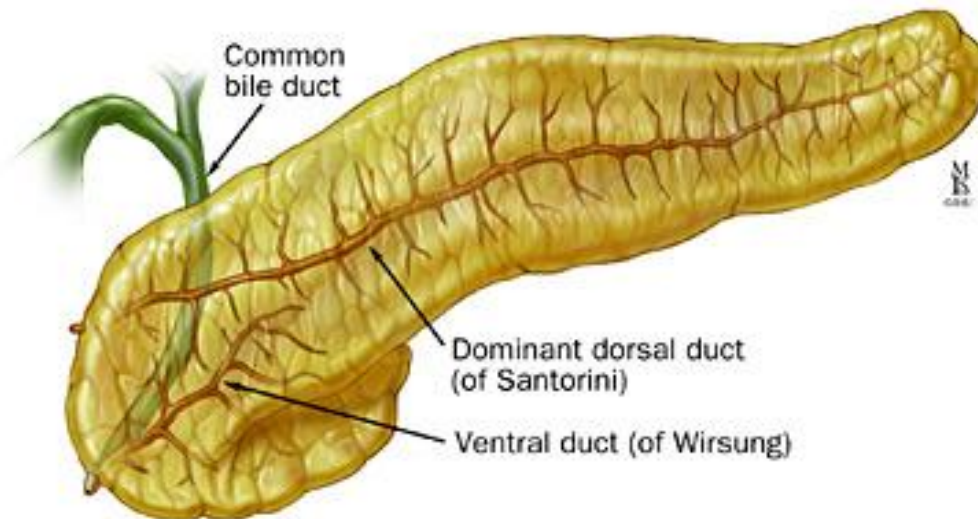
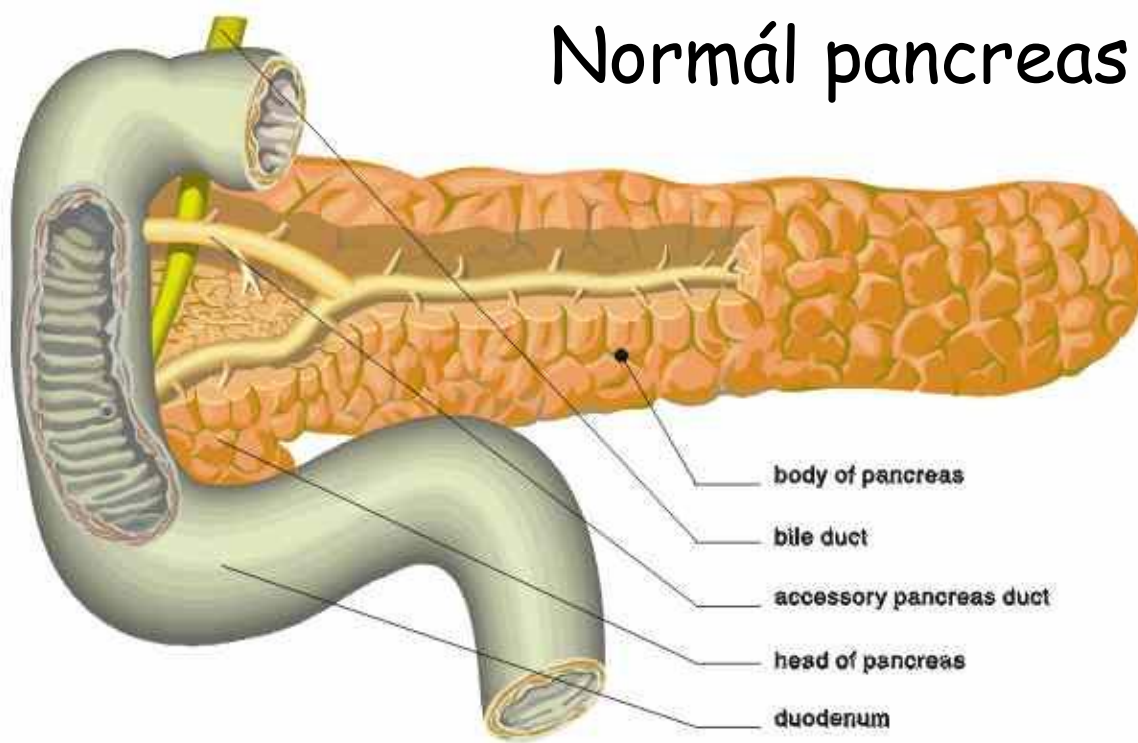
Pancreas divisum (hajlamosít pancreatitisre)

Wirsung-Santorini szétválása (sebészek!)

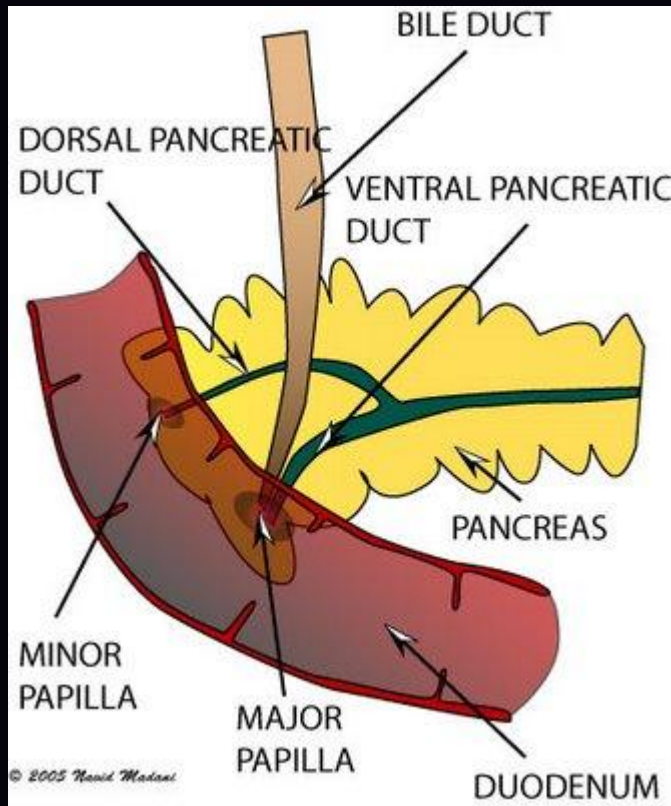
Ectopiás pancreas (ált. mikroszkopikus  
méretű, vérzés forrása lehet, szigetsejtes  
tumorok 2 %-a ~-ban)



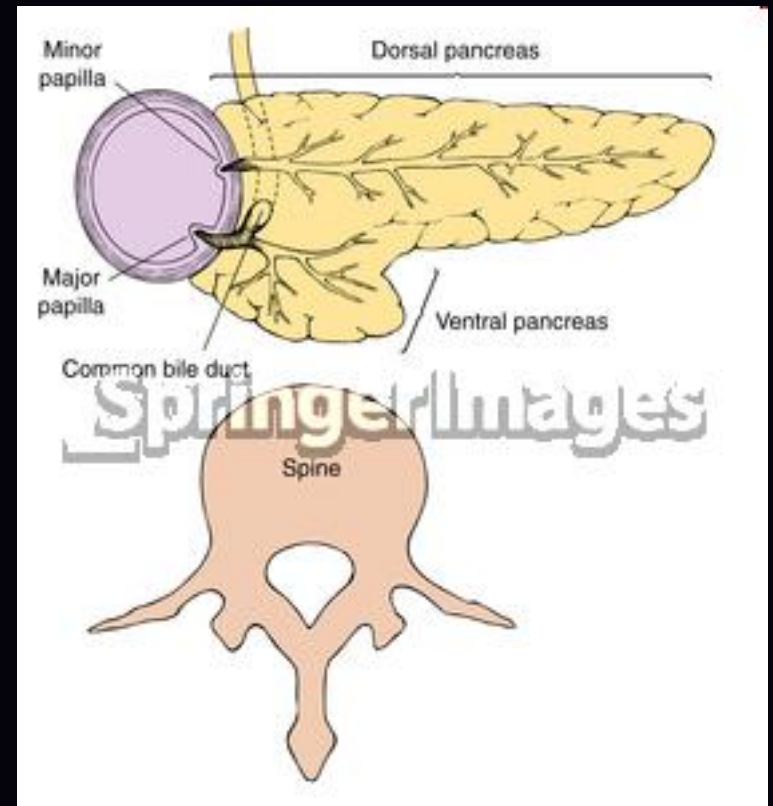
# Normál pancreas



Pancreas  
divisum

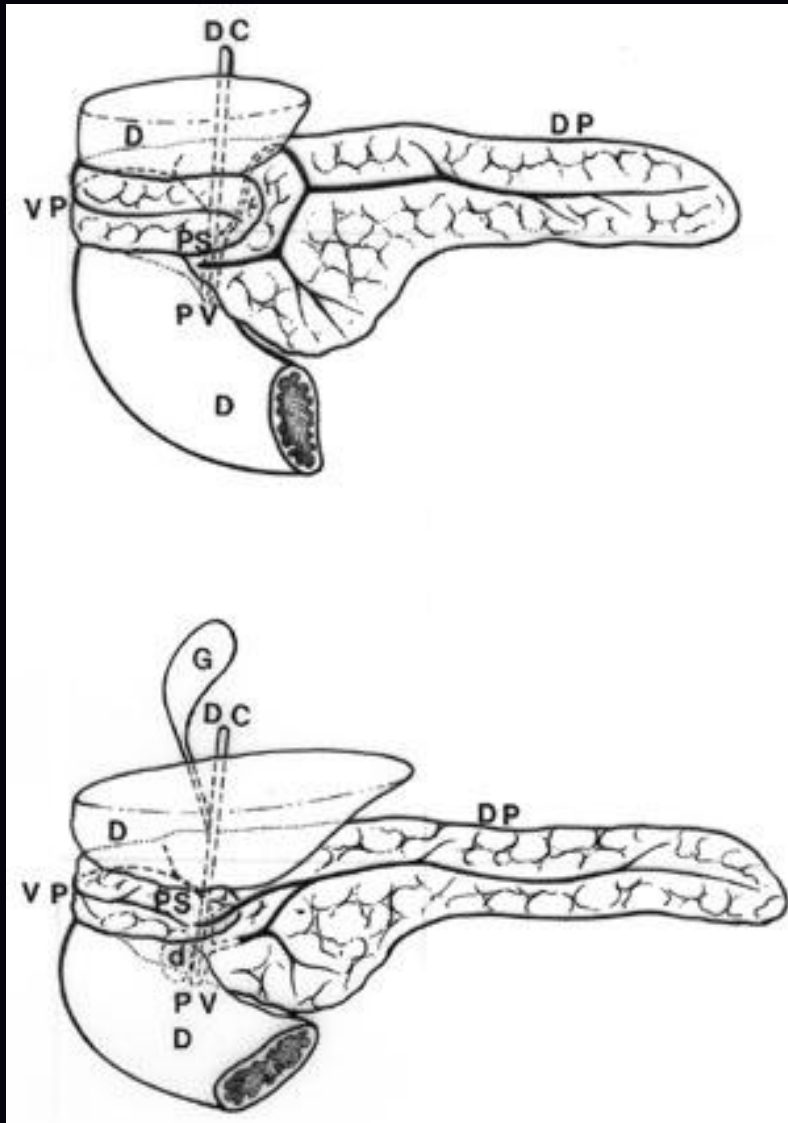


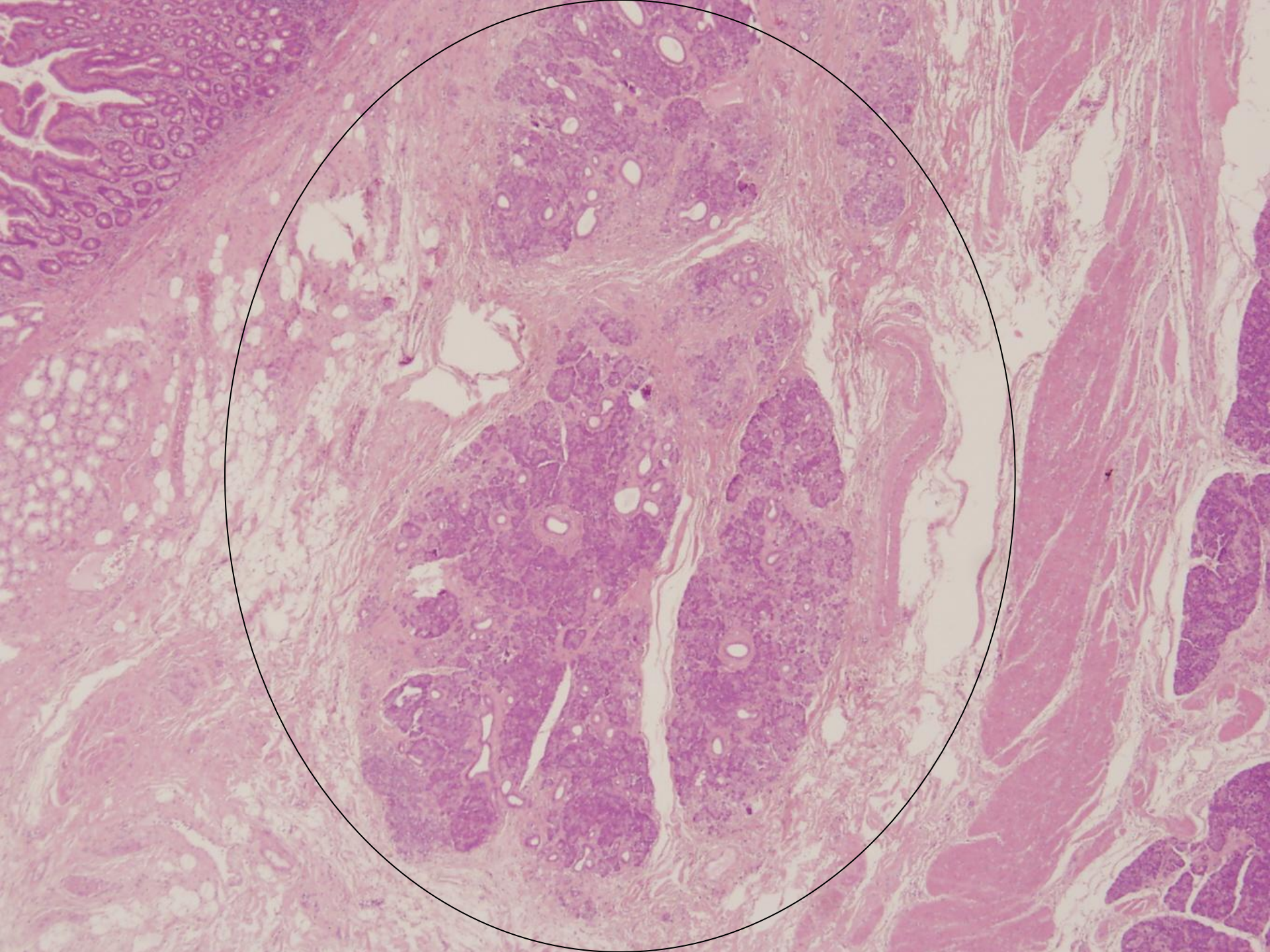
Normal



Pancreas divisum









# Pancreatitisek

Acut interstitialis pancreatitis

Acut necrotisalo haemorrhagias  
pancreatitis

Chronikus pancreatitis

# Pancreatitisek osztályozása (2007)

- Alkoholos enyhe acut pancreatitis
- Alkoholos súlyos acut pancreatitis
- Alkoholos, chronicus pancreatitis korai fázisa
- Alkoholos chronicus pancreatitis
- Biliaris acut enyhe/súlyos pancreatitis
- Herediter acut enyhe/súlyos pancreatitis
- Herediter chronicus pancreatitis
- Shock/toxin okozta pancreatitis
- Fertőzőses acut pancreatitis (mumpsz, CMV, Coxsackie, hepatitis, skarlát)
- Autoimmun pancreatitis
- Metabolikus pancreatitis
- Paraduodenalis pancreatitis

# Acut pancreatitis

Inc.: 10-20/100000

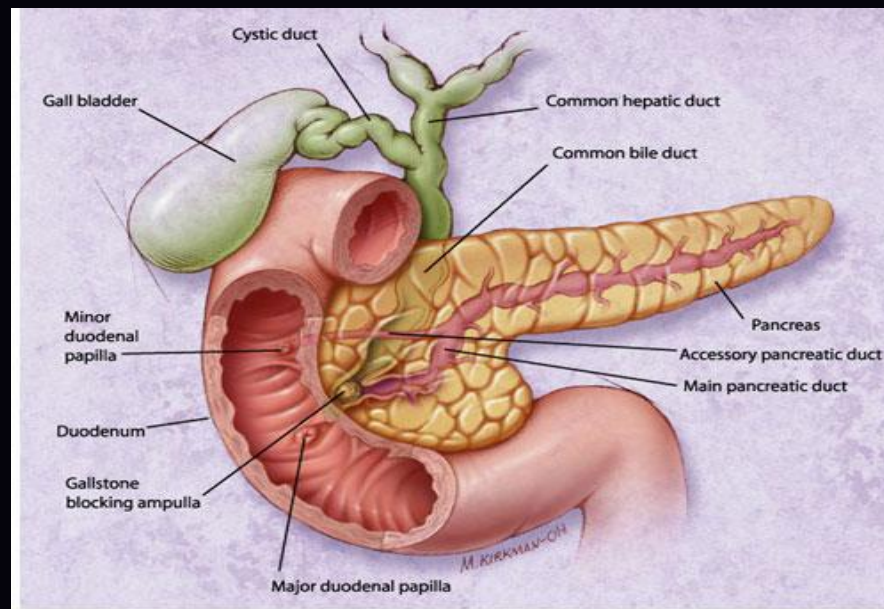
Epekövesség az ~ 35-65%-ban

Epekövesség 5 %-ban fordul elő ~!

Alkoholizmus változó frekvenciájú- 65%-5%

Ffi/Nő 1/3 epekövességnél

Ffi/Nő 6/1 alkoholizmus esetén





# Acut pancreatitis etiológiája

## Epekövesség

Alkohol

Diétahiba

*Örökletes (Cationic trypsinogen - PRSS1, Serin proteaz inhibitor Kazal típus - SPINK1)*

Hyperparathyreosis- hypercalcaemia

Hyperlipoproteinaemia (I, V típus)

Iatrogén /ERCP, postoperatív/

Fertőzés / mumps, coxsackie vírus, Mycoplasma /

Trauma

Vascularis (PAN, SLE, Henoch-Schönlein, shock)

Gyógyszerek ( thiazidok, azathioprin, oestrogen, sulfonamid, furosemid, methyldopa, pentamidin, procainamid)

Idiopathiás (10-20%)

# Örökletes pancreatitis

## *Cationic trypsinogen - PRSS1*

Cationos trypsinogen gén mutáció (AD)

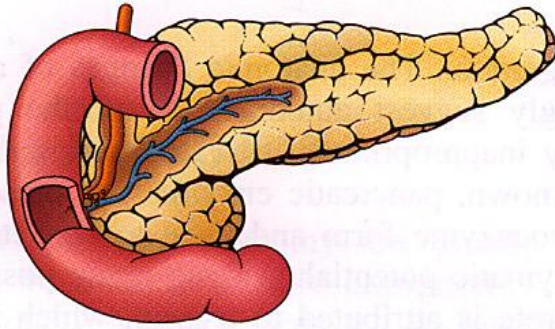
Hatására a trypsinogén molekulán hiányzik egy pont, mely az autoaktivált trypsin inaktiválását (hasítását) biztosítja, így az aktivált trypsin abnormis fokú aktivitást fejt ki, beindítja a pancreatitis cascado

## *Serin proteáz inhibitor Kazal típus - SPINK1*

Ez is egy trypsin inaktivator. Hiányában abnormis trypsin aktivitás jön létre.

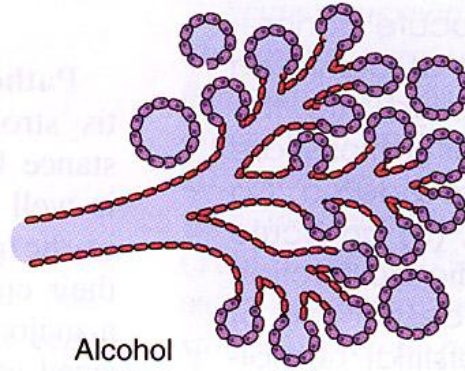
**CAUSES:**

**DUCT OBSTRUCTION**



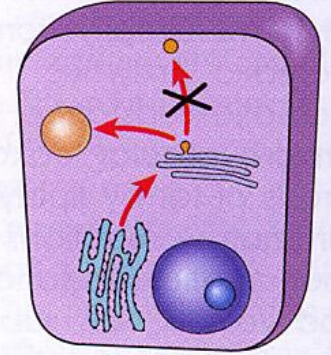
- Cholelithiasis
- Ampullary obstruction
- Chronic alcoholism
- Ductal concretions

**ACINAR CELL INJURY**



- Alcohol
- Drugs
- Trauma
- Ischemia
- Viruses

**DEFECTIVE INTRACELLULAR TRANSPORT**



- Metabolic injury (experimental)
- Alcohol
- Duct obstruction

**MECHANISMS:**

Interstitial edema  
↓  
Impaired blood flow  
↓  
Ischemia

Release of intracellular  
proenzymes and lysosomal  
hydrolases

Activation of enzymes  
(intra- or extracellular)

Delivery of proenzymes to  
lysosomal compartment

Intracellular activation  
of enzymes

Acinar cell injury

**ACTIVATED ENZYMES**

**LESIONS:**

Interstitial  
inflammation  
and edema

+

Proteolysis  
(proteases)

+

Fat necrosis  
(lipase, phospholipase)

+

Hemorrhage  
(elastase)

**ACUTE PANCREATITIS**



# Acut pancreatitis morphológiája

zsírnecrosis


vérzés

necrosis

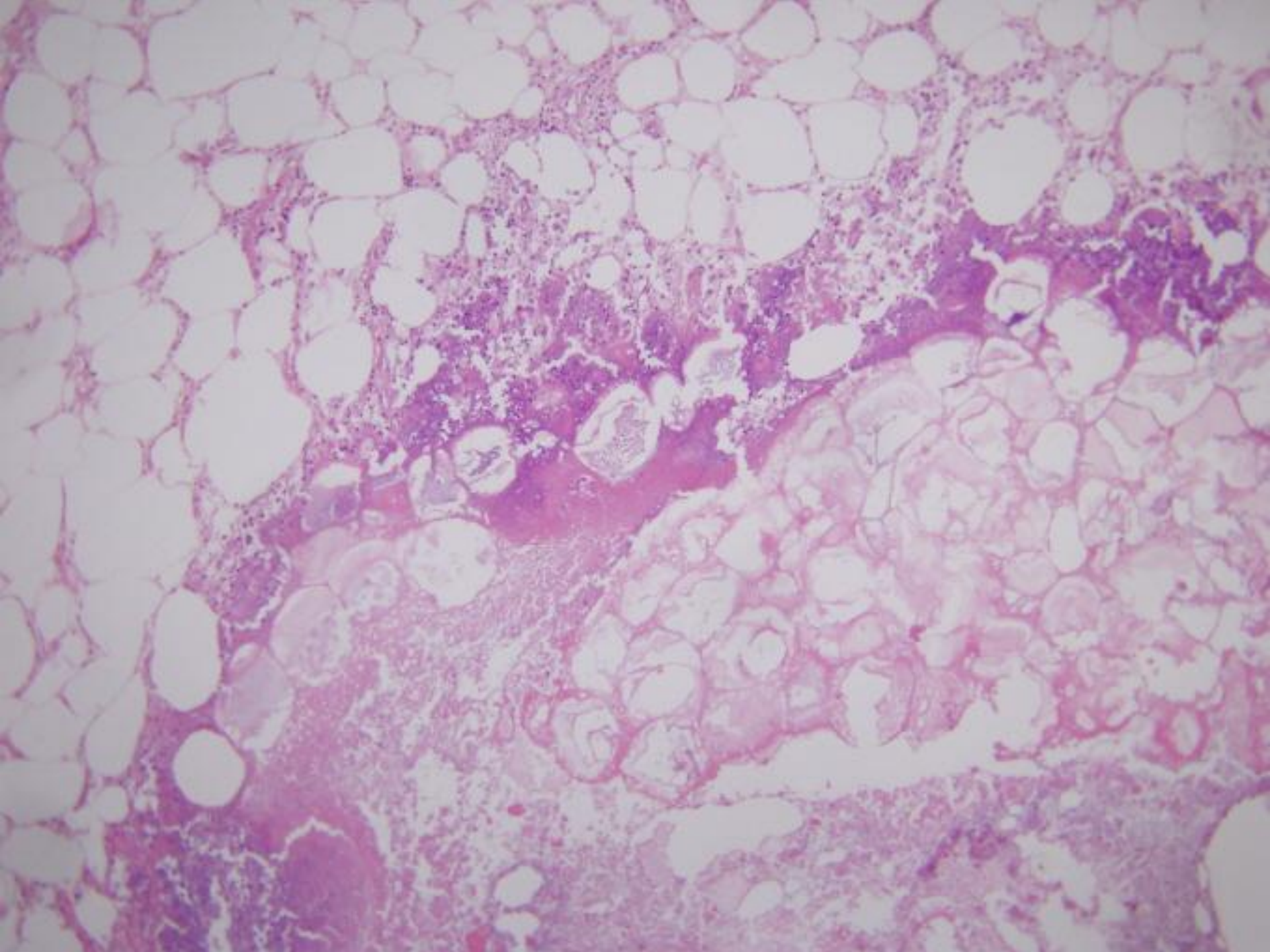
pseudocysta

tályog

erek arrosiója

- 
- The background image is a histological section of pancreatic tissue stained with hematoxylin and eosin (H&E). It shows a complex arrangement of acinar cells, ducts, and connective tissue. There are several areas of interest: 1) Microvascular hemorrhage (szivárgás) indicated by red-stained areas. 2) Fat necrosis (Zsír necrosis) characterized by pale, foamy areas with calcium soaps (Ca-szappanok). 3) Pseudocysts (Pseudocysta) which are fluid-filled spaces surrounded by a layer of fibrous tissue, representing a destructive process of the parenchyma. 4) Acute inflammation (Heveny gyulladás) with the formation of abscesses (tályogképződés). 5) Arterial aneurysms (Érek arrosiója) where the arterial wall is weakened and dilated.
- Microvascularis szivárgás - oedema
  - Vérzés
  - Zsír necrosis - Ca-szappanok
  - Pseudocysta -(a parenchyma proteolyticus destructioja)
  - Heveny gyulladás - tályogképződés
  - Érek arrosiója



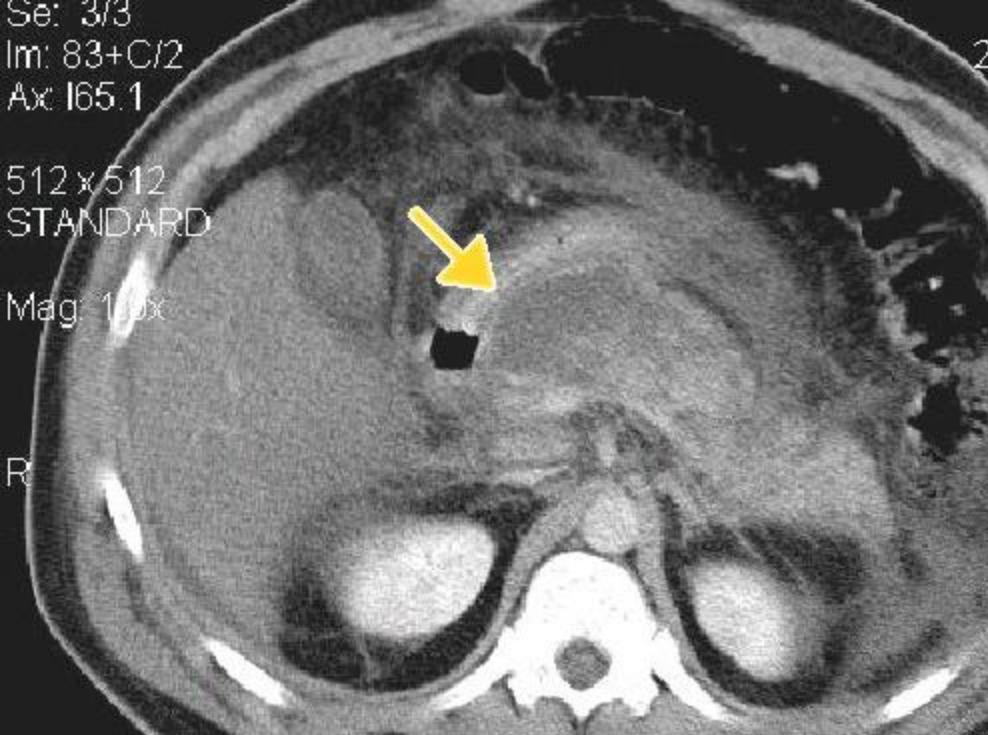


Se: 3/3  
Im: 83+C/2  
Ax: 165.1

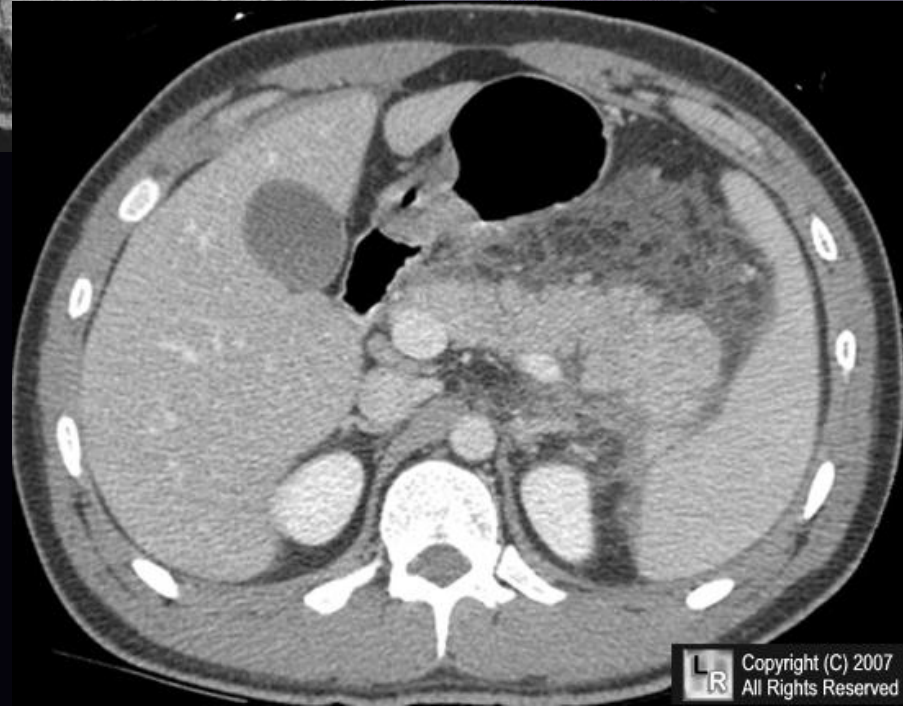
512 x 512  
STANDARD  
Mag: 1.0x

R

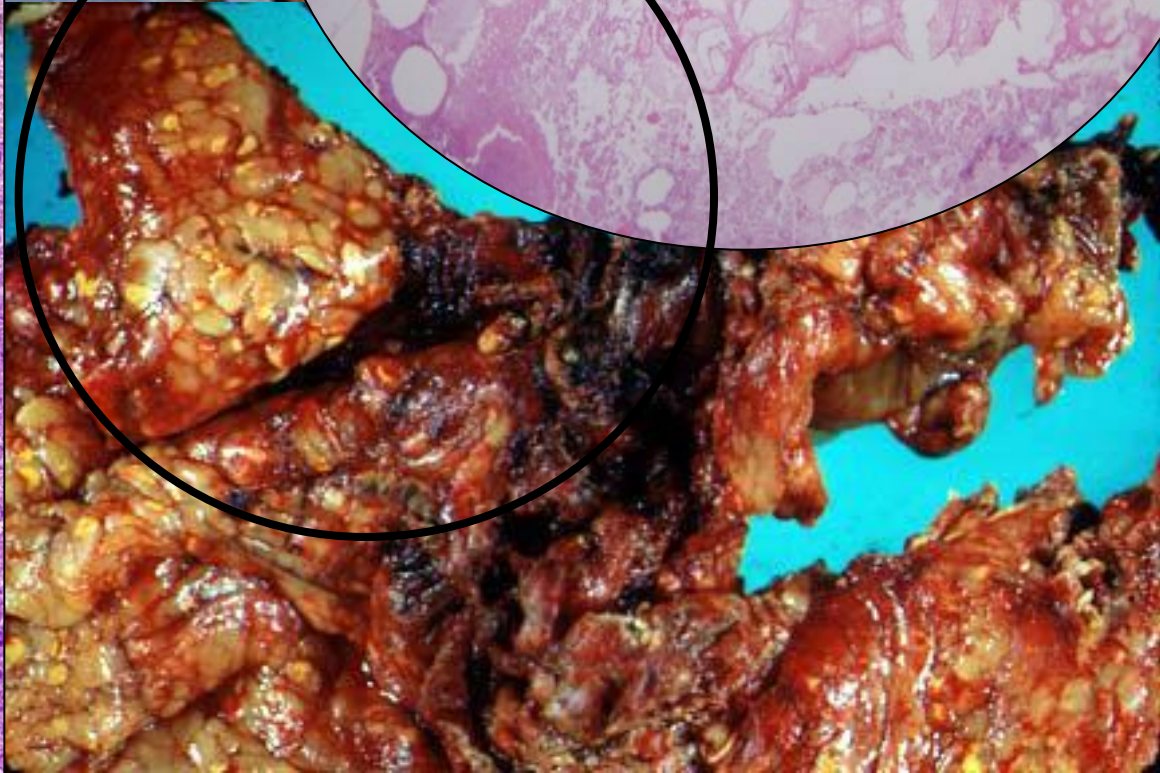
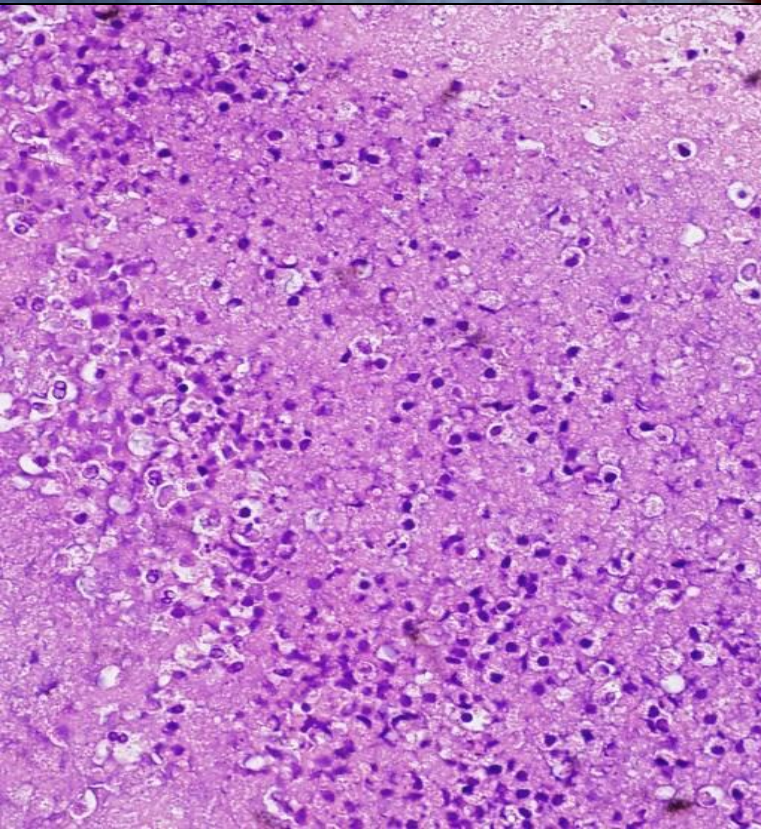
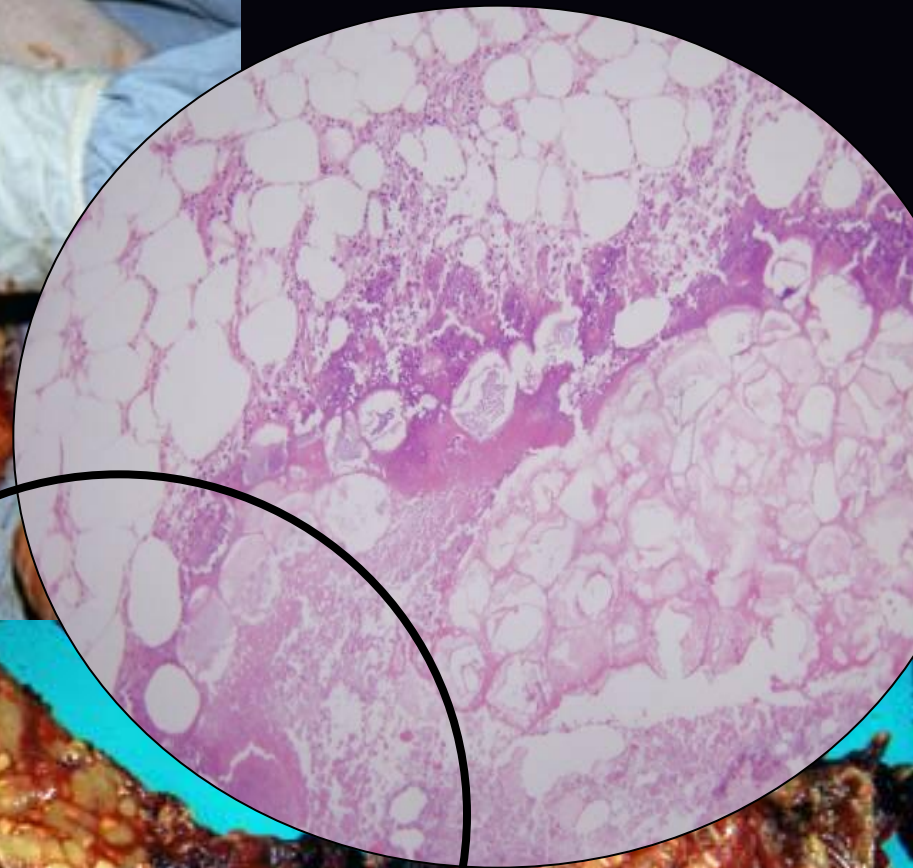
140.0 kV  
290.0 mA  
7.0 mm / 0.4



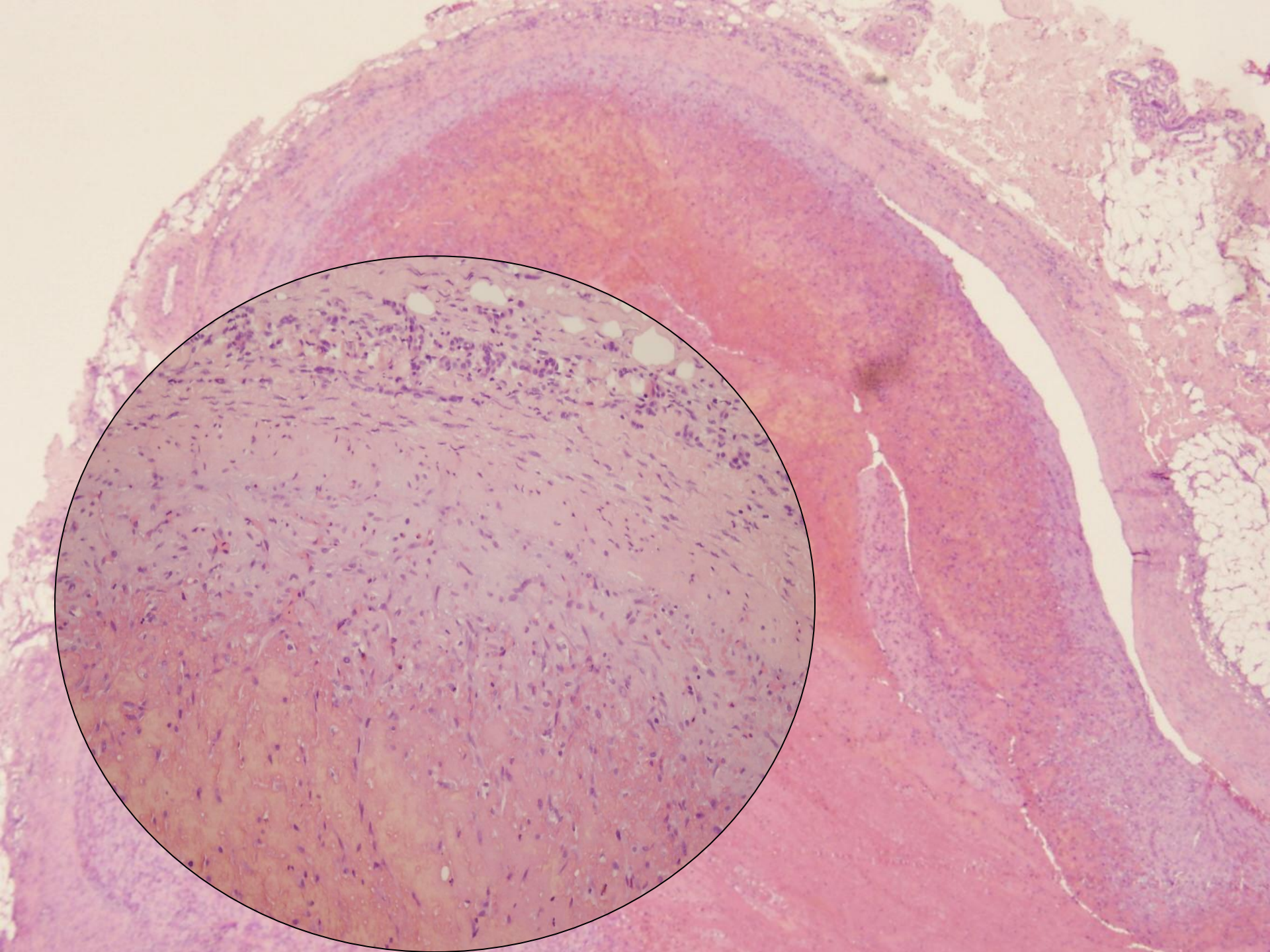
Storing HDD: 96% Free CINE REVIEW #42 IP5 ABC











# Acut pancreatitis tünetek, labor

Fájdalom - fájdalom hátba sugárzása

Hányás

Láz

Passage zavar

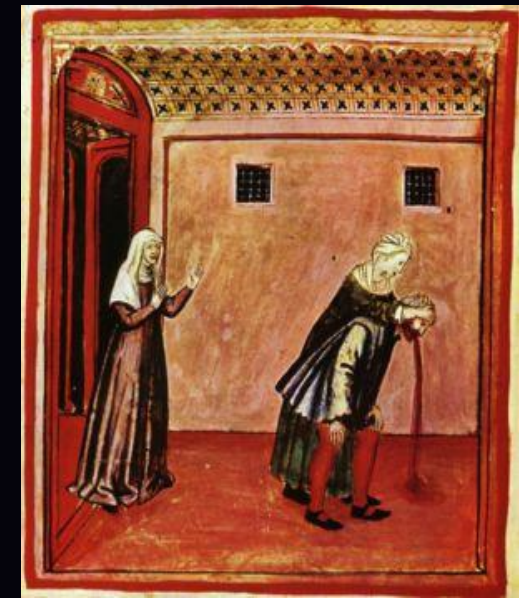
Shock

DIC, hemolízis

Acut renális tubuláris necrosis

ARDS

Emelkedett se amiláz, lipáz,  
hypocalcaemia





# Acut pancreatitis -shock okai

Vérvesztés

Endotoxaemia



Vazoaktív anyagok keringésbe kerülése  
(bradykinin, prostaglandin, NO, PAF)



# KOMPLIKÁCIÓK

- Autodigestiv necrosis
- Pseudocysta, tályog
- Intraperitonealis vérzés, zsírnecrosis, peritonitis
- Paralyticus ileus
- Hypovolaemia, hypotensio
- Gastrointestinalis vérzés
- Septicus-toxicus shock, sepsis (ARDS, MOF)
- DIC
- Hyperglycaemia, hypertriglyceridaemia
- Hypocalcaemia, tetania

# Acut pancreatitis differenciáldiagnosztikája

cholelithiasis/cholecystitis

ulcus

mesenterialis embolisatio

appendicitis

AMI

nephrolithiasis

# Chronikus pancreatitis

chronikus progressiv betegség  
mind funkcionális, mind morphologiai  
elváltozást okoz  
alacsony mortalitás  
rossz életminőség



# Chr. pancreatitis etiológiája

Alkohol

Hypercalcaemia/hyperlipoproteinaemia

Hereditær (pancreas divisum)

epekövesség

Gyógyszerek

40 %-ban az etiológia nem mutatható ki

# Chronicus pancreatitis

## TIGAR-O

### etiológiai rizikófaktorok alapján

- Toxikus-metabolikus
- Idiopatiás
- Genetikai
- Autoimmun
- Recidiváló és súlyos akut pancreatitis
- Obstructiv

# TIGAR-O - Toxicus-metabolikus

Alkohol

Dohányzás

Hypercalcaemia: PHPT

Hyperlipidaemia

Gyógyszerek

Toxinok

Chronicus vesebetegség, dialízis



# Chr. pancreatitis pathomechanizmusa

Ductus obstructió - fehérje dugók- el is meszesedhetnek

Lithostatine szekréció csökkenése

Oxidatív stressz - acinus károsodás-  
abnormis fehérjeszekréció

Progresszív fibrosis- (ördögi kör)-  
+ intrapancreaticus lipid metabolitok

Autosom hereditær pancreatitis

(pontmutáció következtében tripsin  
inaktiválhatatlan)

# Chronikus pancreatitis tünetei

Fájdalom változó erősségű- hátba sugárzó

Fogyás-malabsorbtio

Hasmenés-steatorrhea

Passage zavar

Sárgaság

Diabetes

Calcificatio

Laborleletek- változóak, a megmaradt működő exocrin állomány függvénye

# Chronikus pancreatitis morphológiája

Acinusok atrophiája

Fibrosis

Meszesedés

Ductectasia

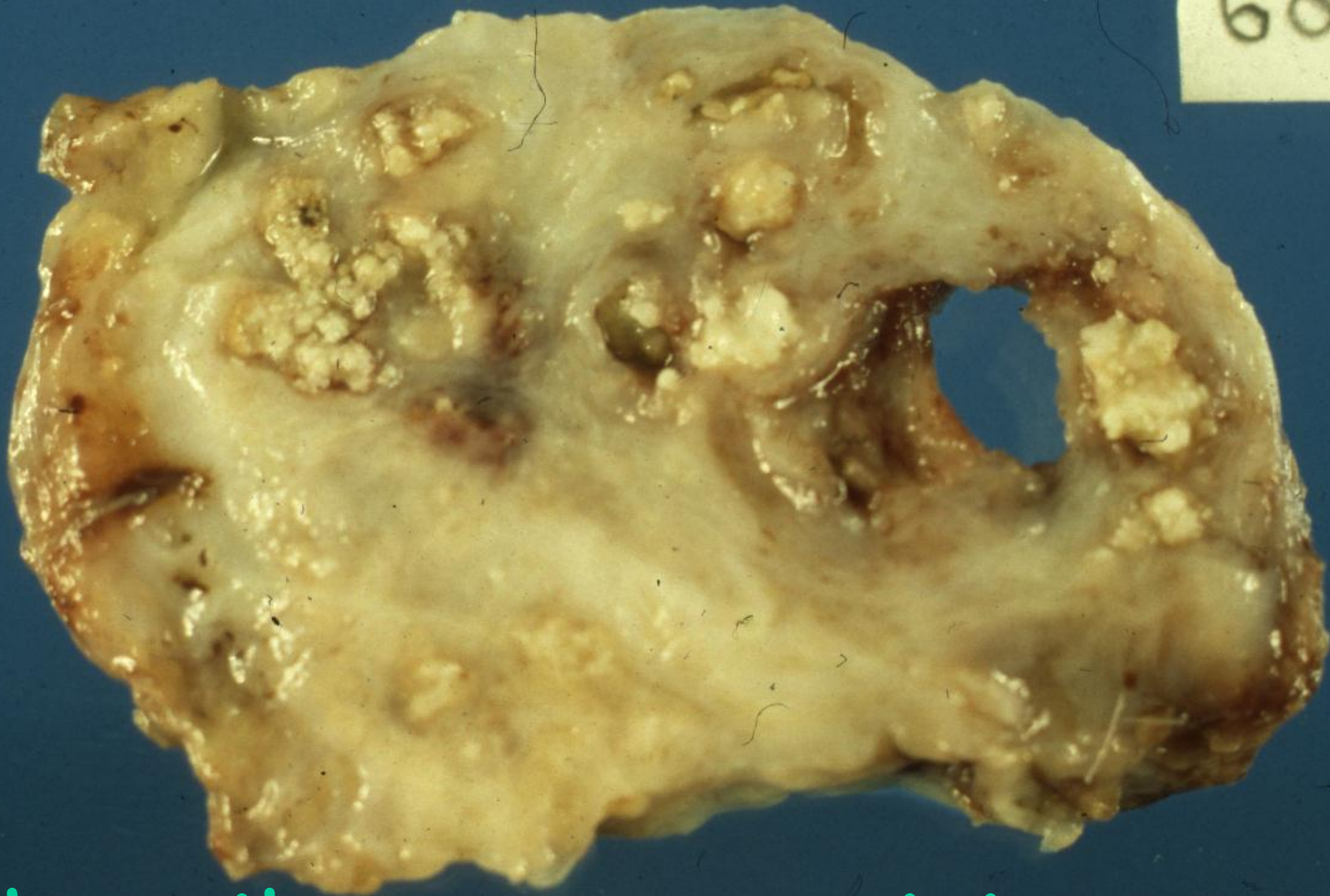
Ductus proliferatio-metaplasia, dysplasia

Lymphocytás infiltratio

Amputációs neuromák

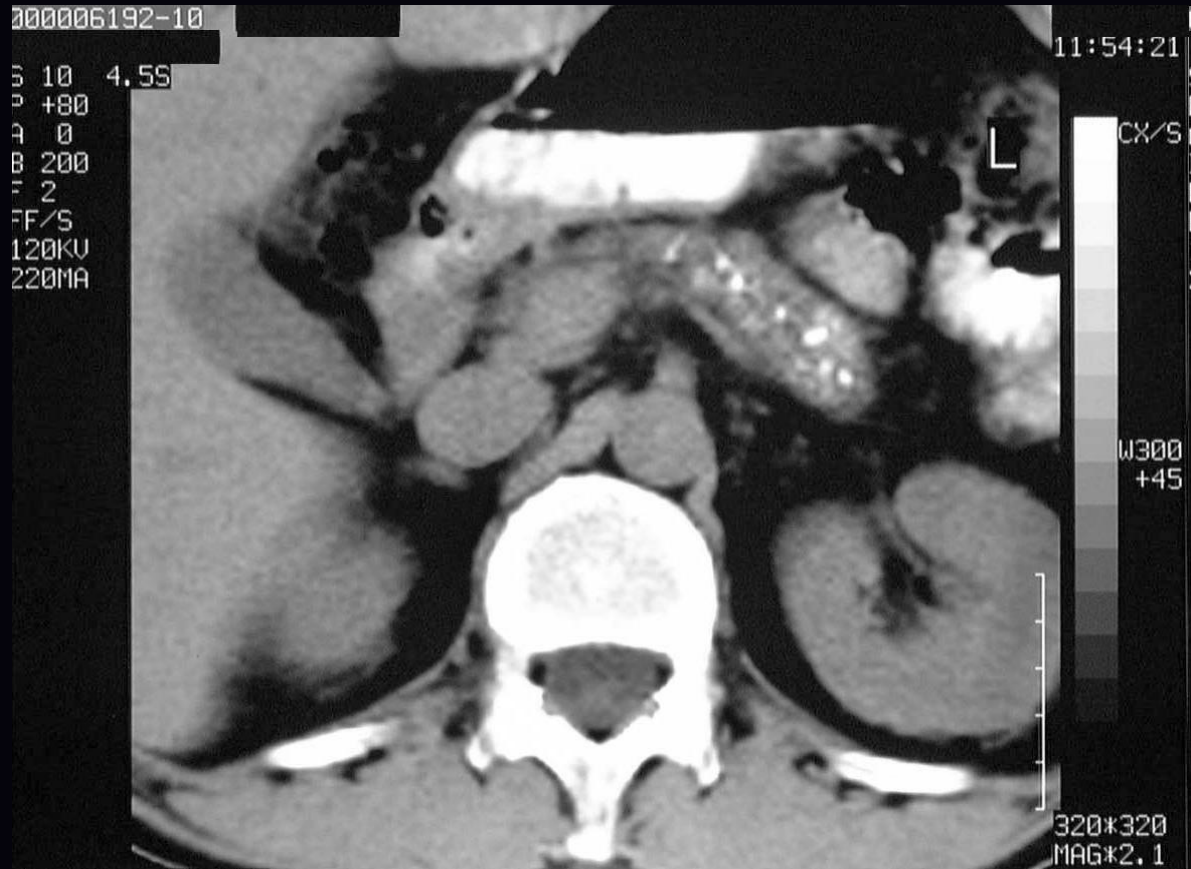


6848/96

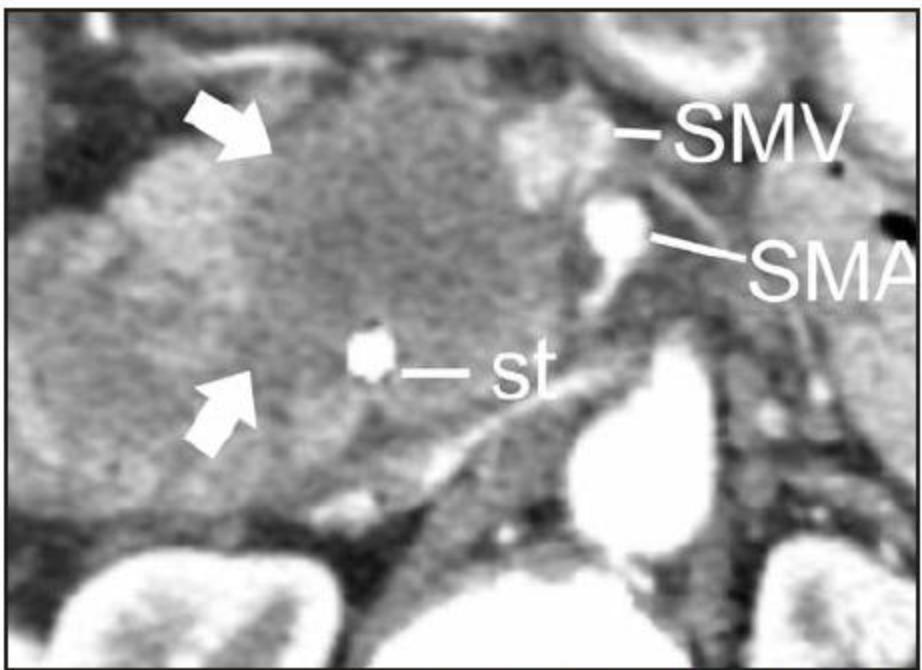


Chronikus pancreatitis-meszesedés





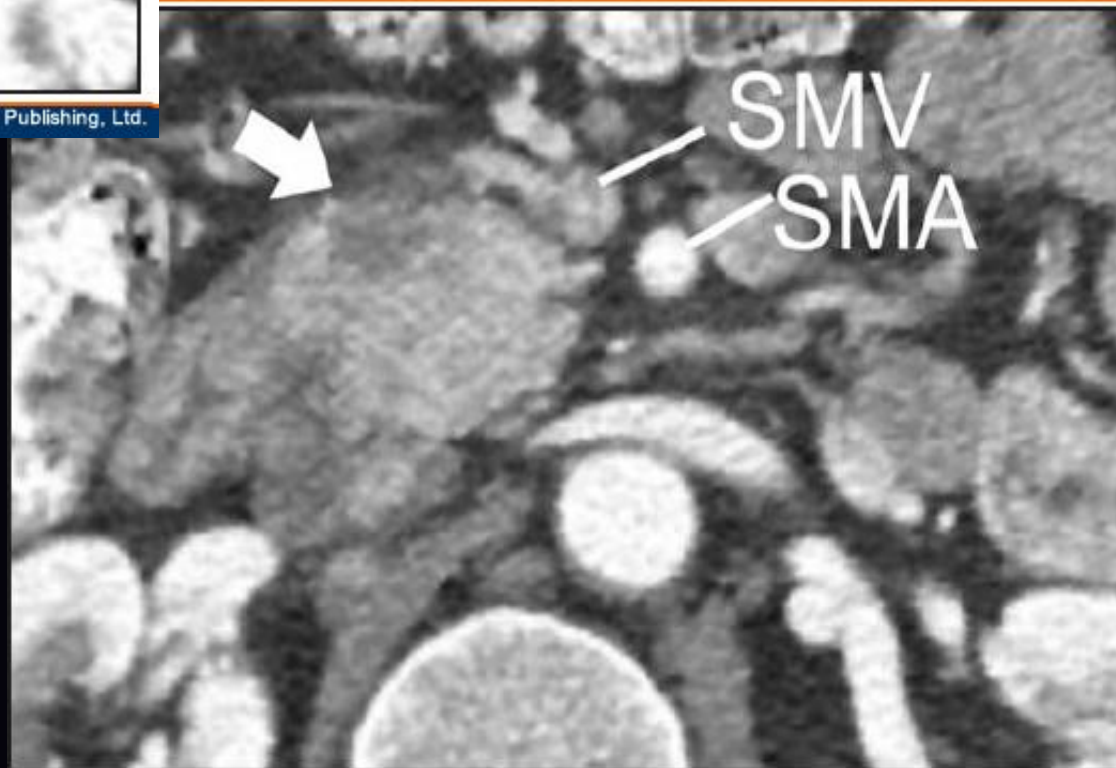
Chronic calcifying pancreatitis



Source: Appl Radiol © 2008 Anderson Publishing, Ltd.

Chronic pancreatitis  
Mimicking cancer

www.medscape.com



Source: Appl Radiol © 2008 Anderson Publishing, Ltd.



849795

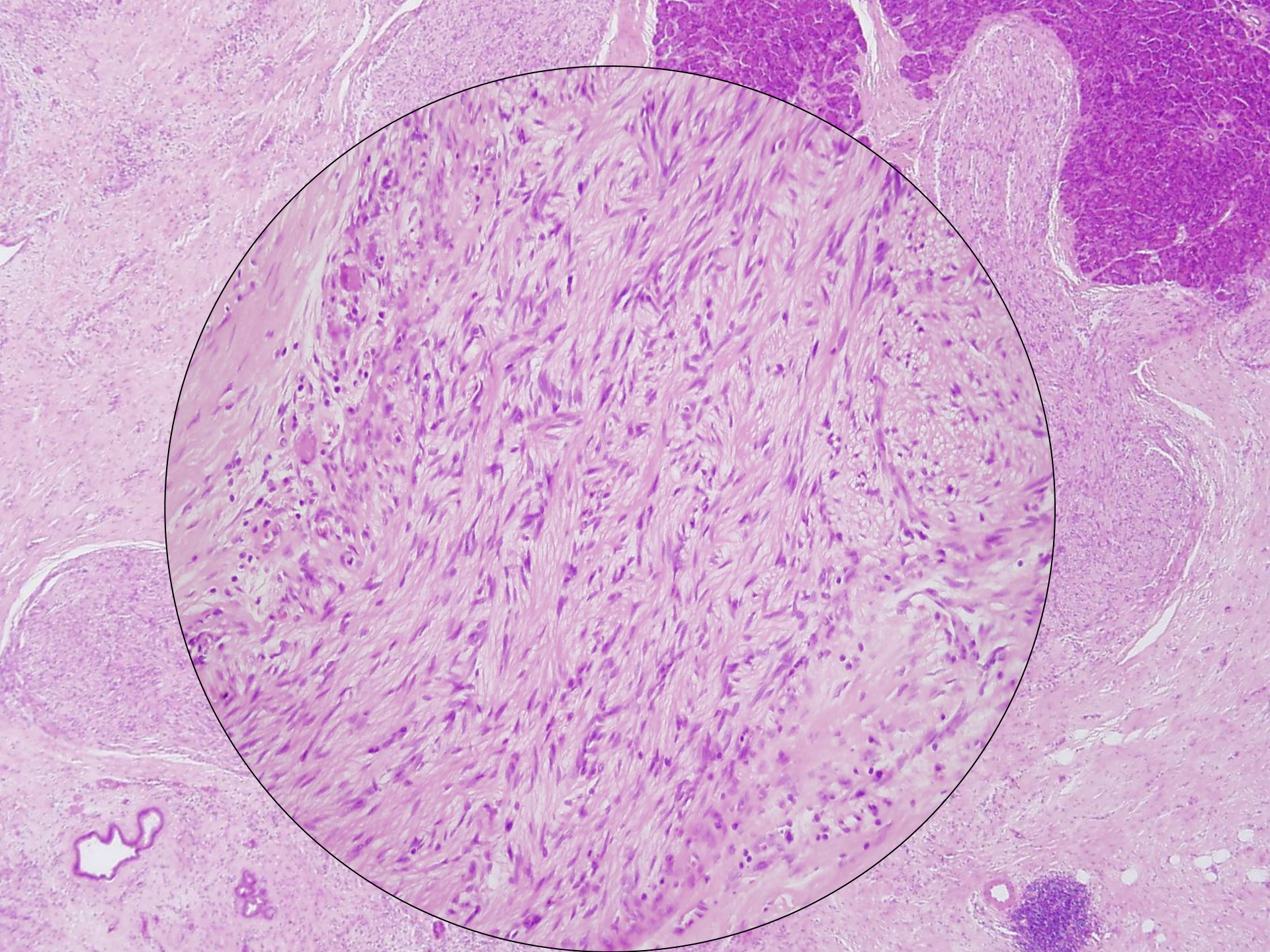
Chronikus  
pancreatitis  
duodenum  
szűkület



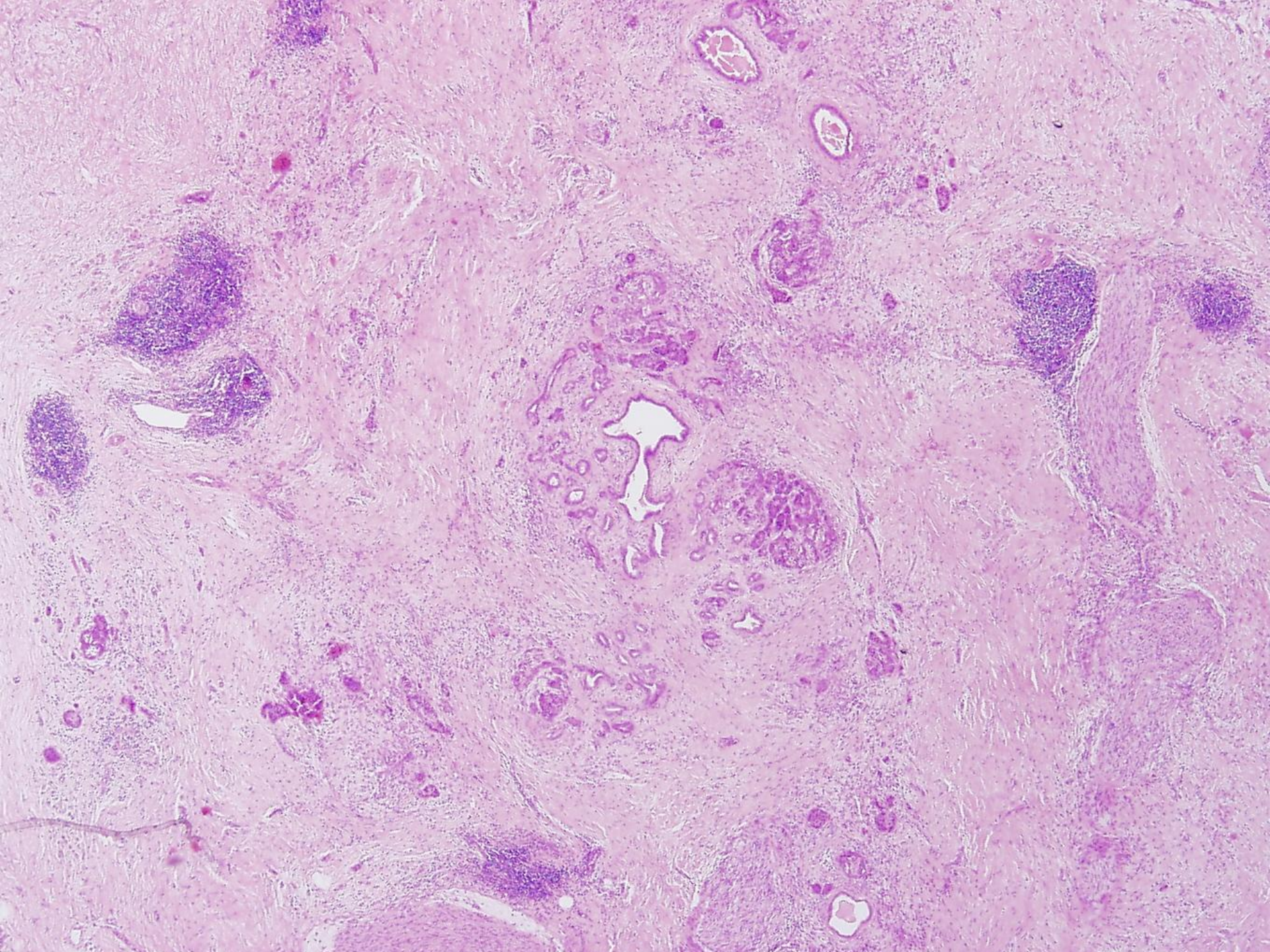




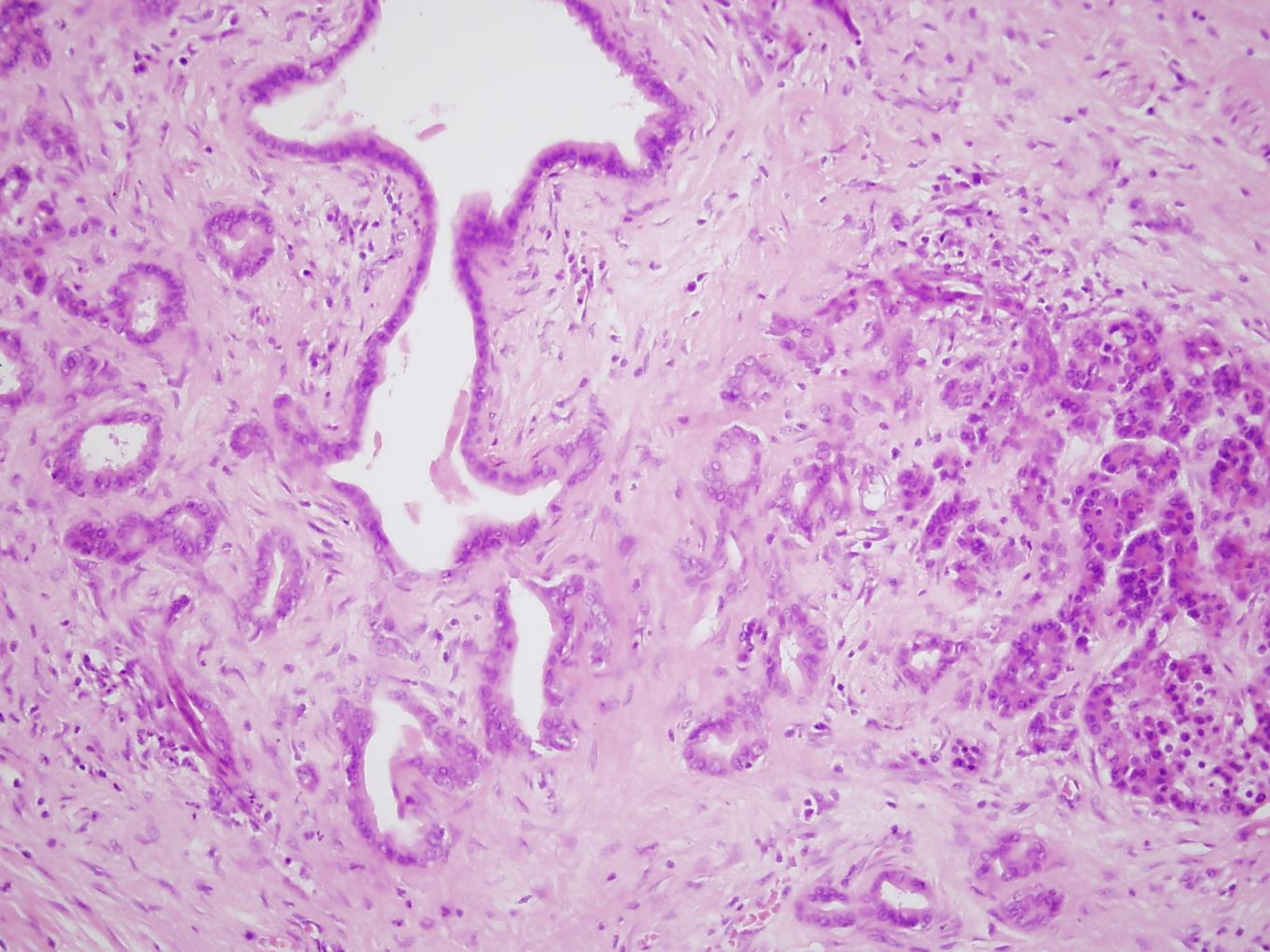




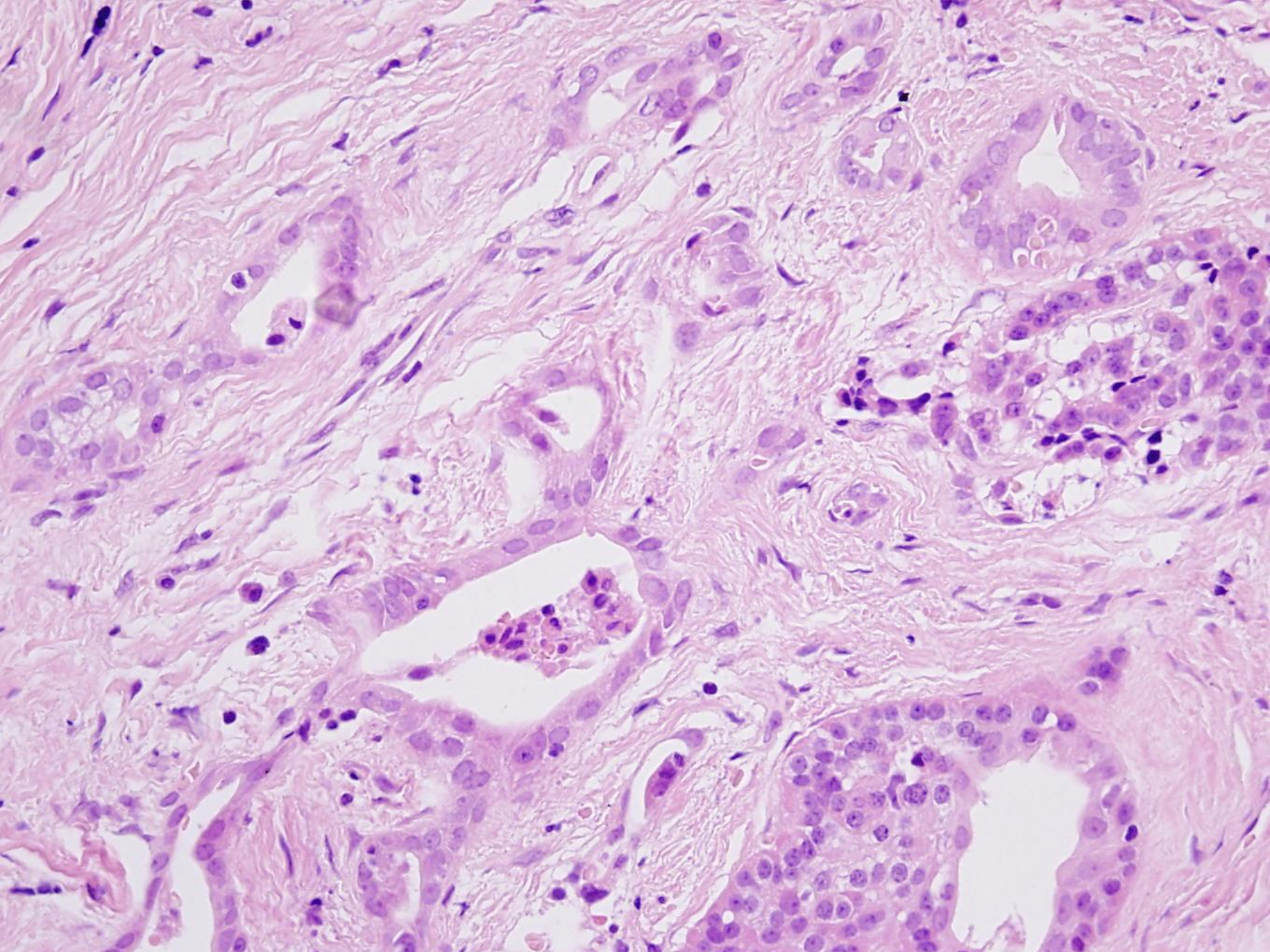




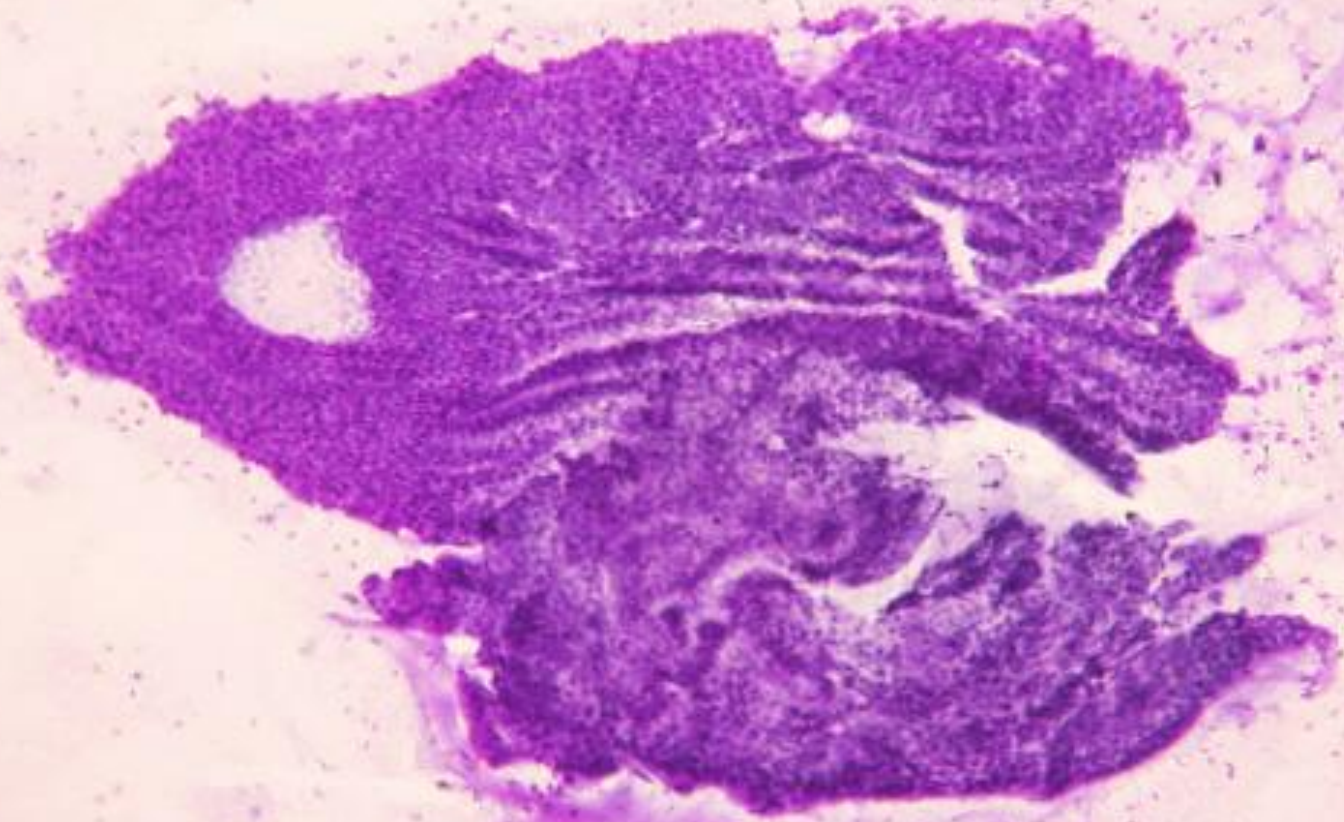




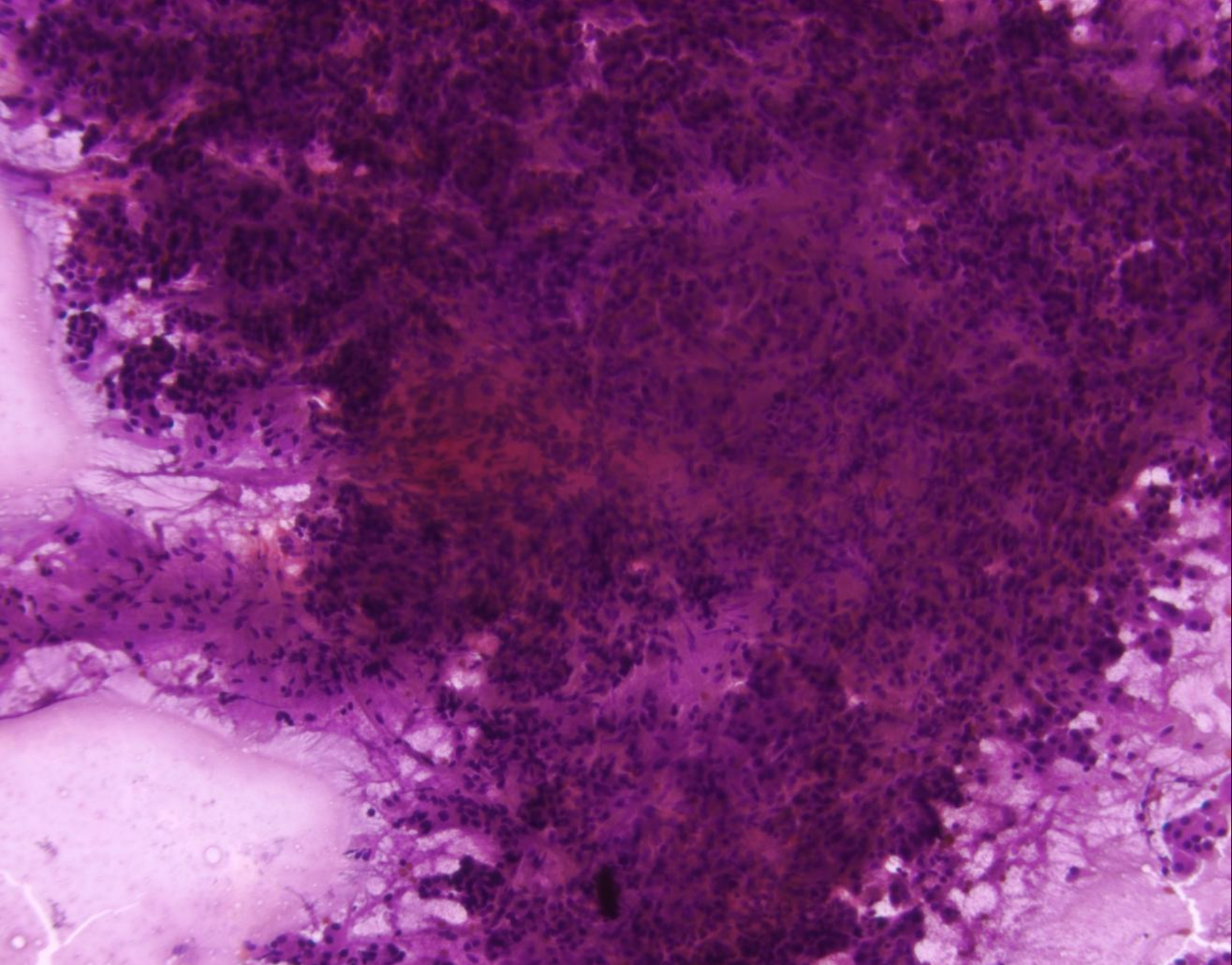




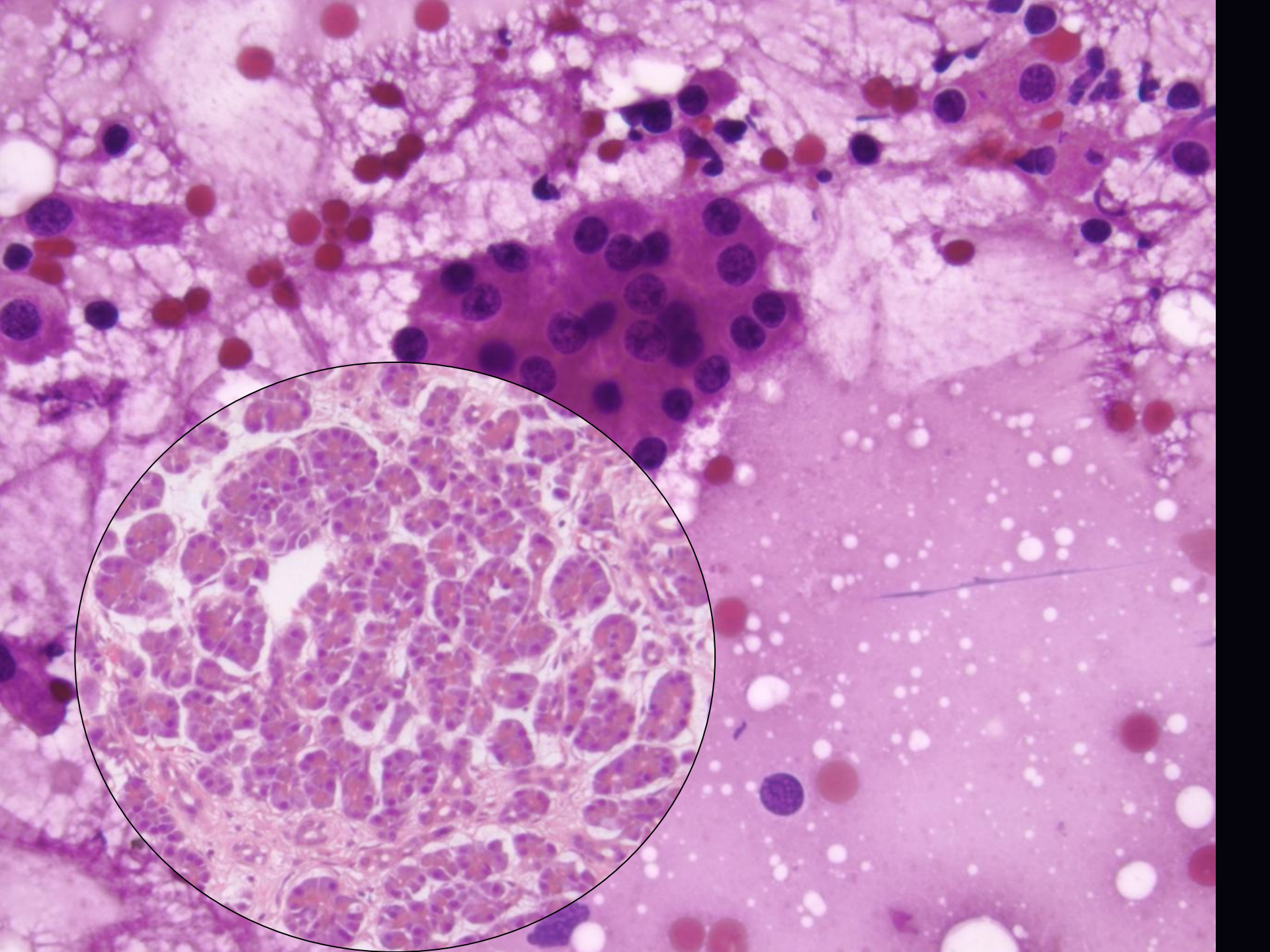




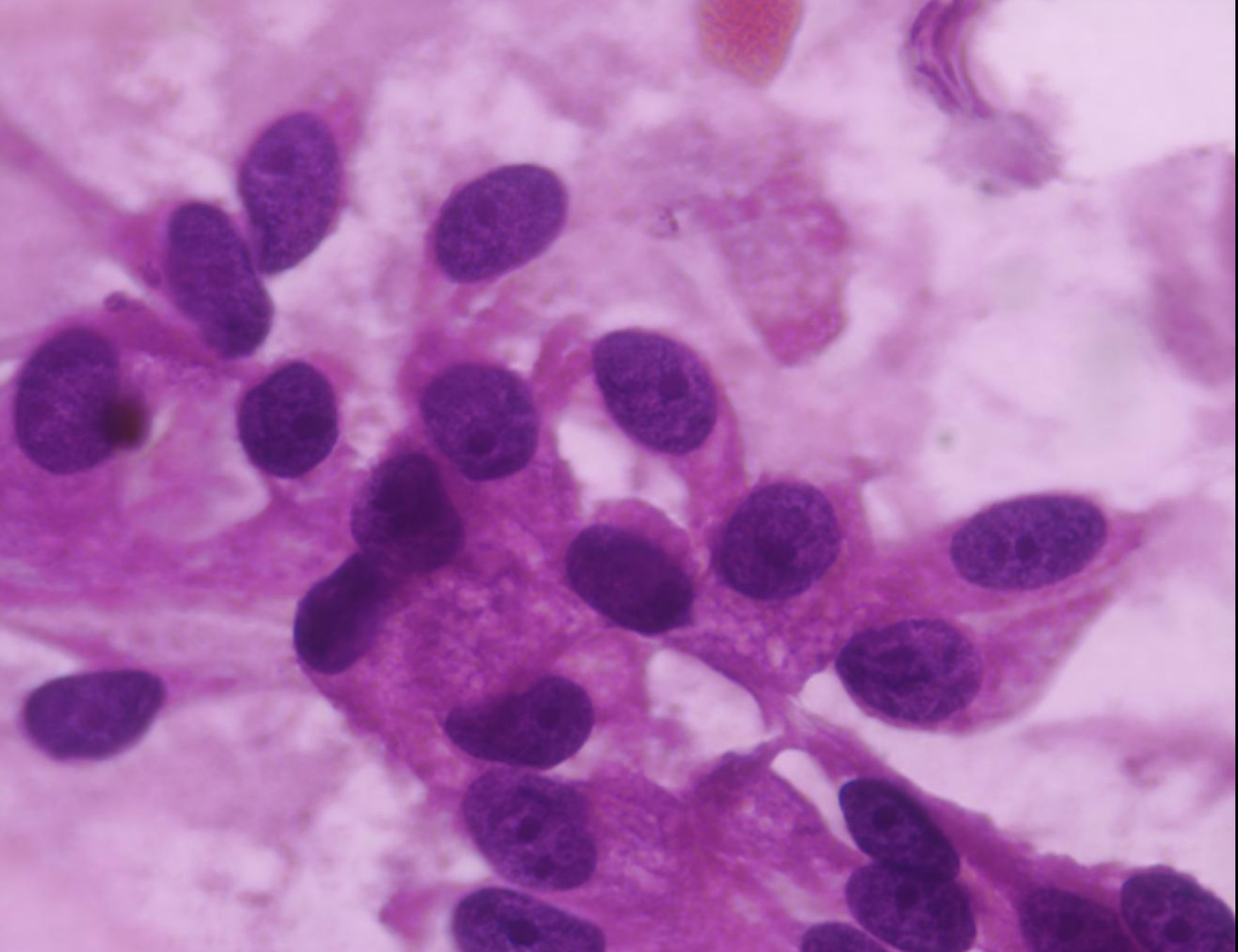




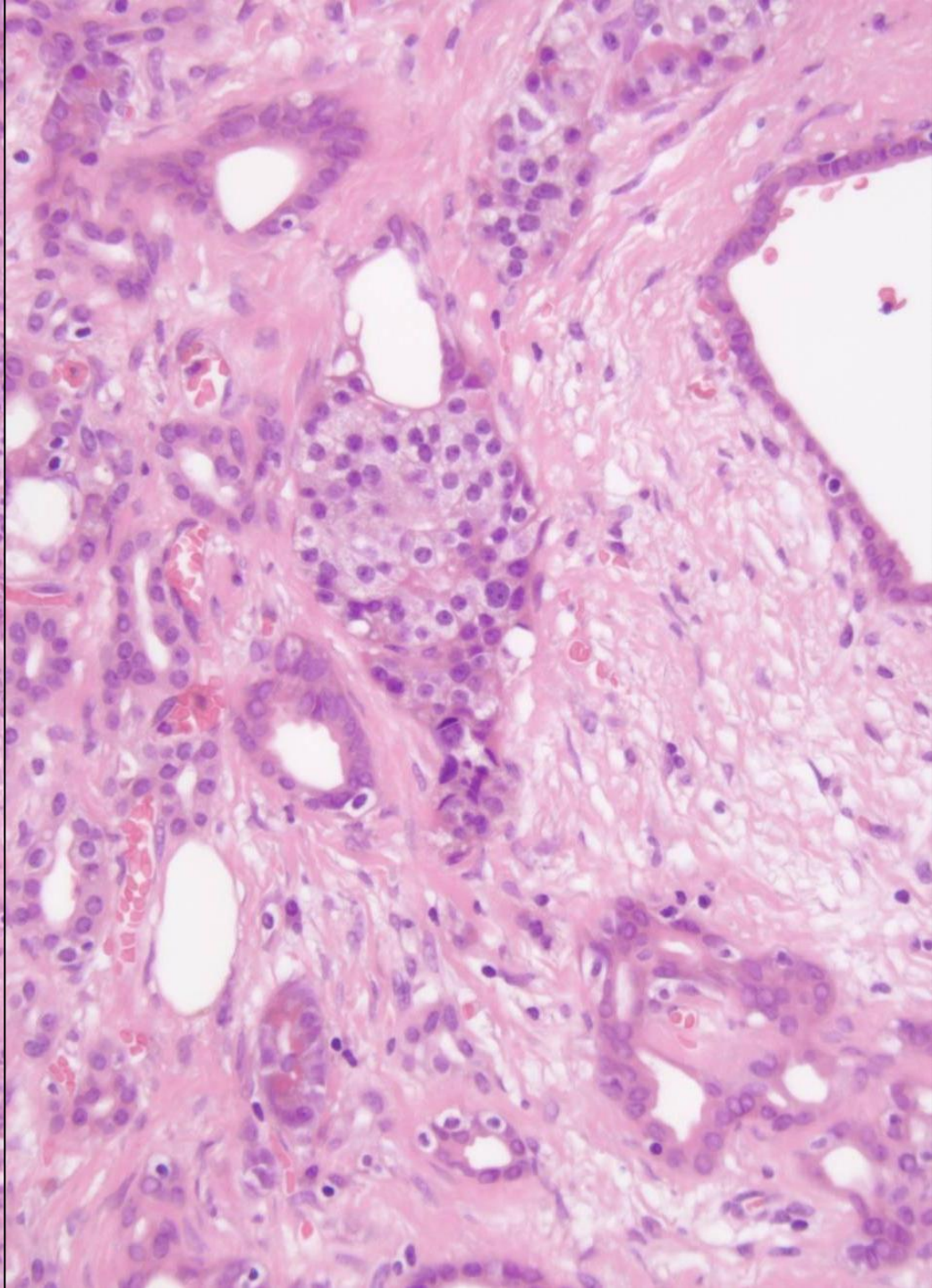
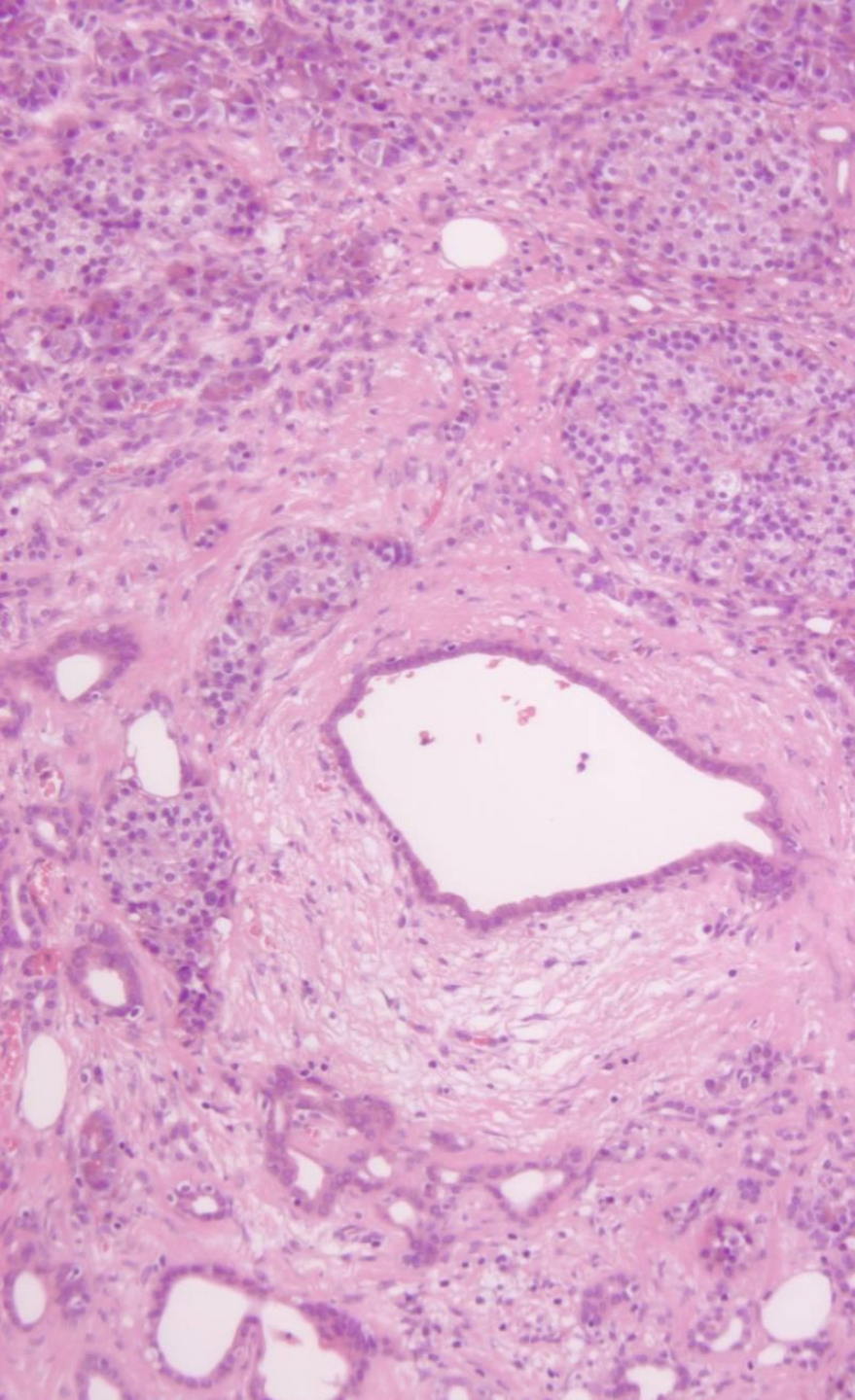




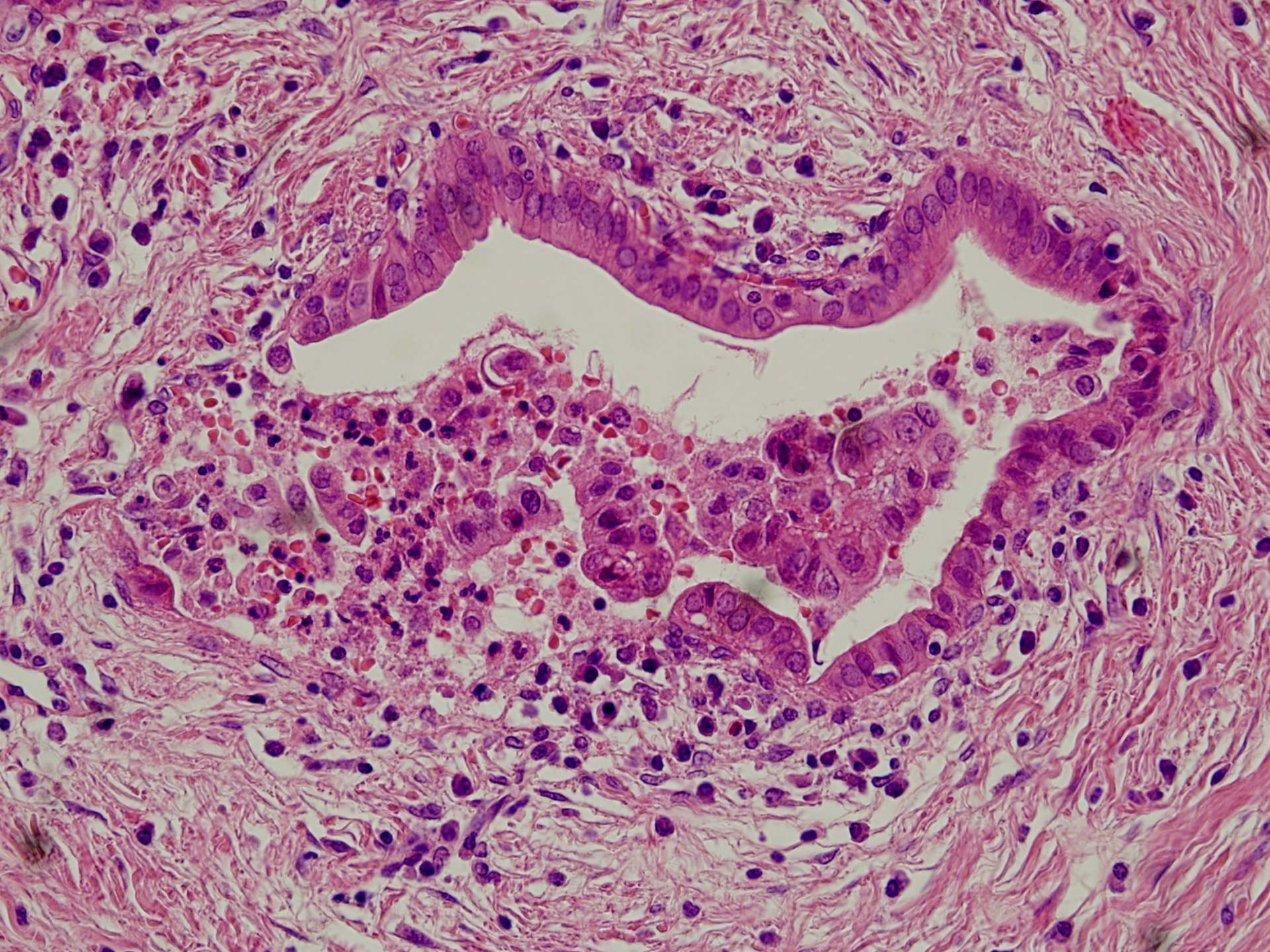




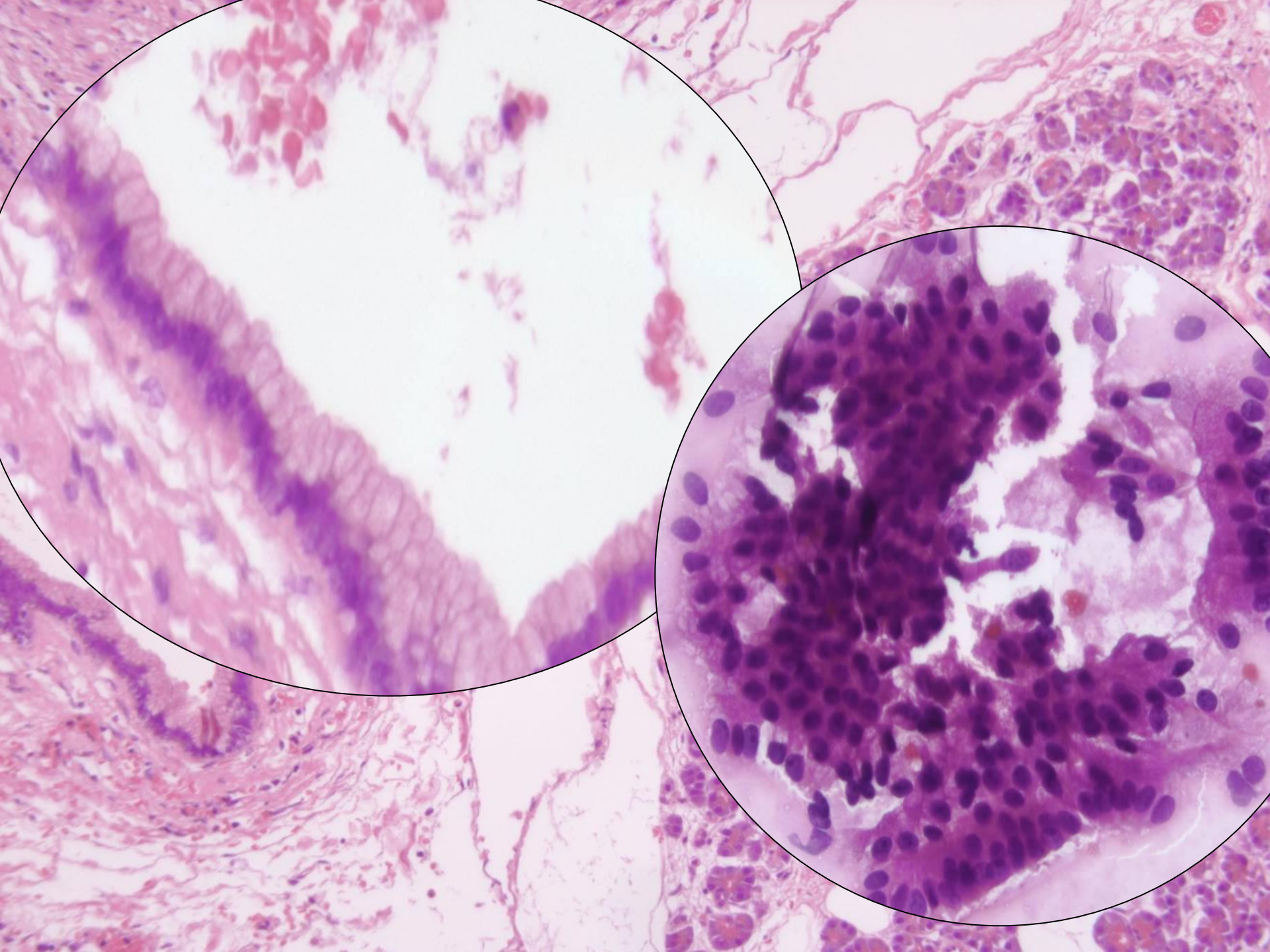




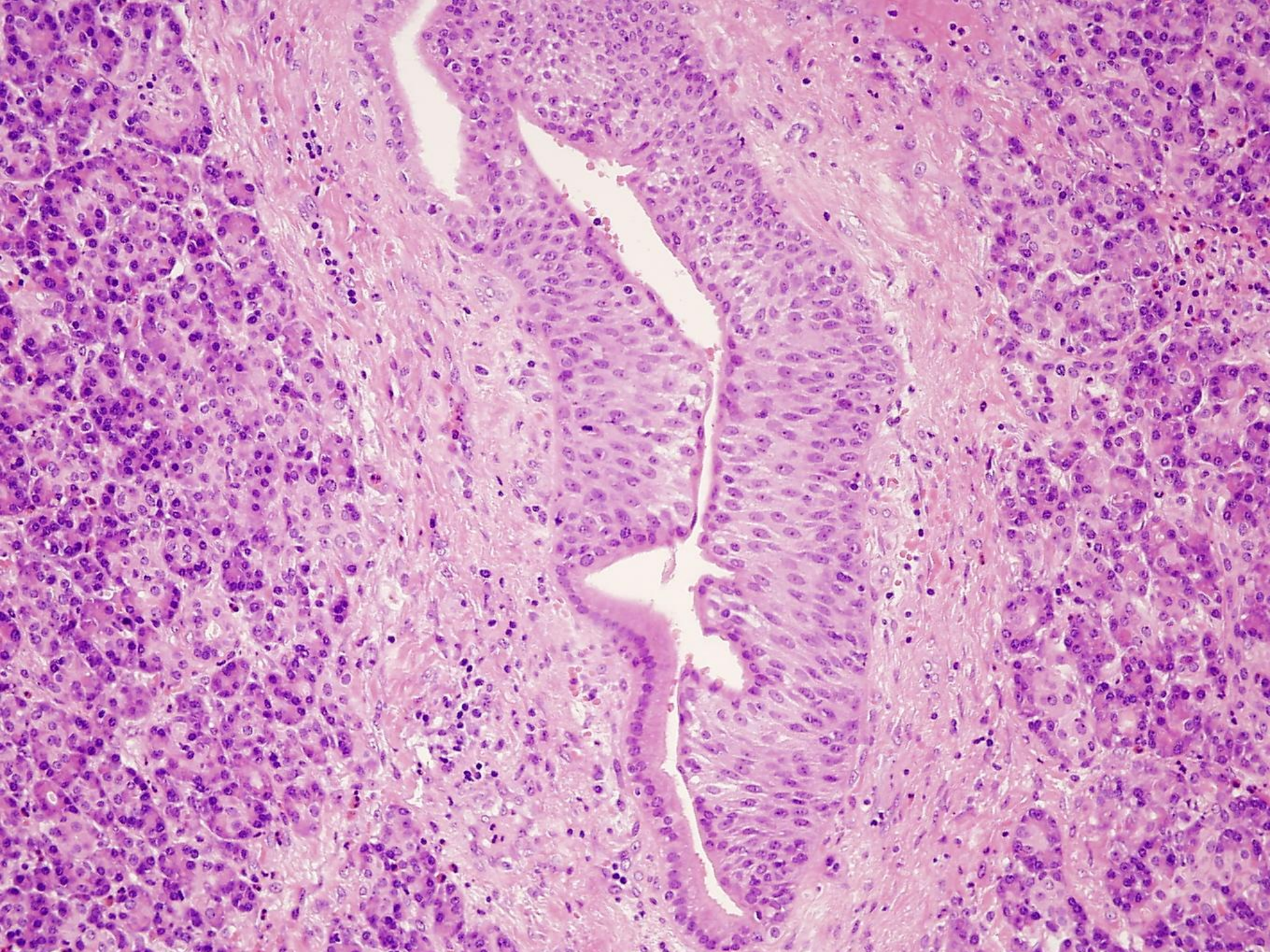














Chari ST. Smyrk TC. Levy MJ. Topazian MD.  
Takahashi N. Zhang L. Clain JE. Pearson RK.  
Petersen BT. Vege SS. Farnell MB.

Diagnosis of autoimmune pancreatitis: the Mayo Clinic experience. [Journal Article] *Clinical Gastroenterology & Hepatology*. 4(8):1010-6; quiz 934, 2006 Aug.

AIP diagnóza felállítható a betegeknel ha legalább egy a következő kritériumok közül fennáll: (1) diagnosztikus szövettan, (2) karakterisztikus CT és pancreatográfiás megjelenés emelkedett serum IgG4 szinttel, vagy (3) az AIP pancreatikus/extrapancreatikus manifesztációinak szteroid terápiaára való kedvező válasza. 20 egyéb betegnél feleltek meg az AIP kiterjesztett diagnosztikus kritériumai, és a demográfiai és klinikai profiljuk hasonló volt a 29 betegéhez akiknél a



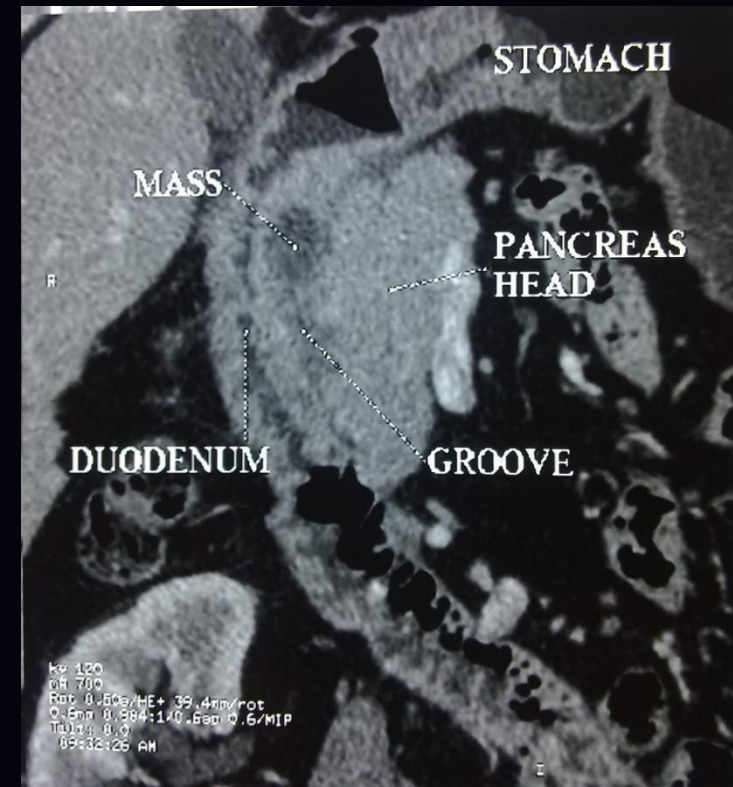
# Paraduodenalis pancreatitis

Paraampullaris duodenalis fali cysta  
Duodenumfal cysticus dystrophiaja - 1970  
Groove pancreatitis

Férfiak, alkoholizmus

Tumorszerű klinikai tünetek: Icterus, ductus choledochus és duodenum stenosis,  
recidív hányás, fogyás

Ok: heterotop pancreas a duodenumfalban  
Groove: duodenum C kacs és a pancreasfej  
között paraampullaris barázda



- *Cysta* a duodenum submucosában vagy a muscularis rétegben, kőképződés

Cystás típus: 1-10 cm, Solid típus: < 1 cm

- **Ductus choledochus stenosisa**

- **Peripancreaticus nyirokcsomó megnagyobbodás**





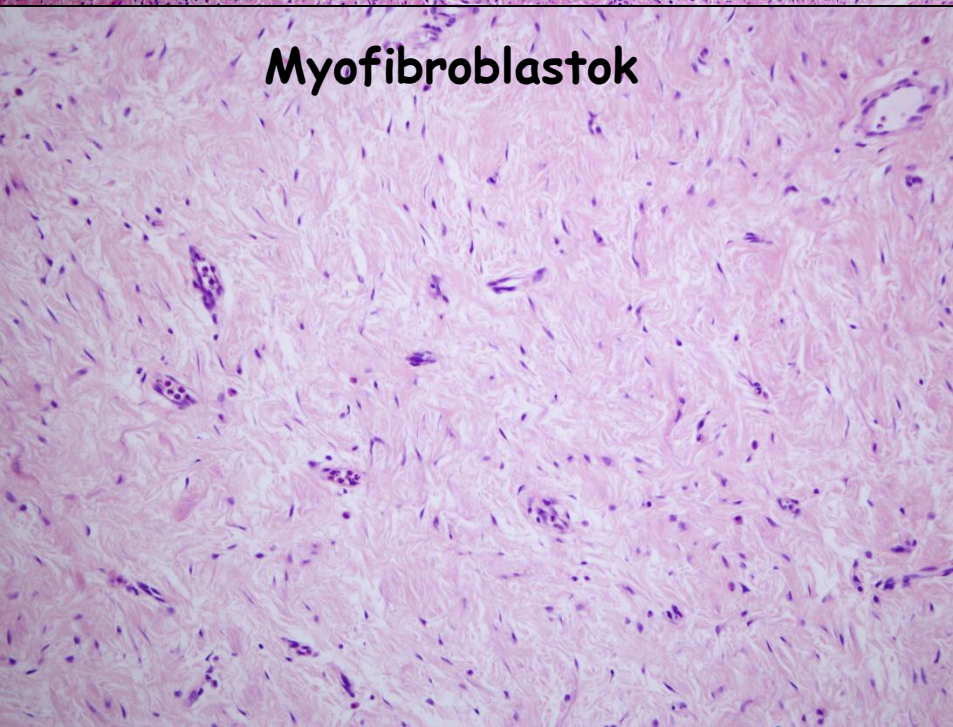
**Pancreas az izomszövetben**



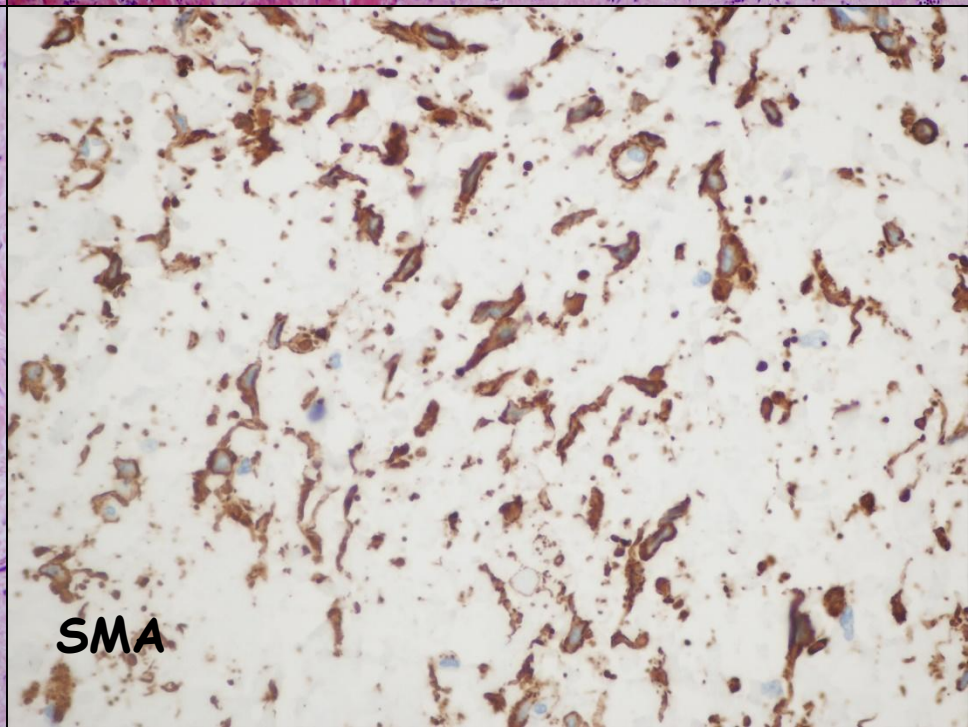
**Fibrosis az izomfalban**



**Myofibroblastok**



**SMA**





# Pancreatitis következményei

Acut

/

Chronicus

Multi organ failure

Shock

ARDS

DIC

Tályog

Pseudocysta

Duodenum obstructio

Pseudocysta

Duodenum obstructio

Malabsorptio

- Steatorrhea

Másodlagos diabetes



# Pancreas pseudocysta

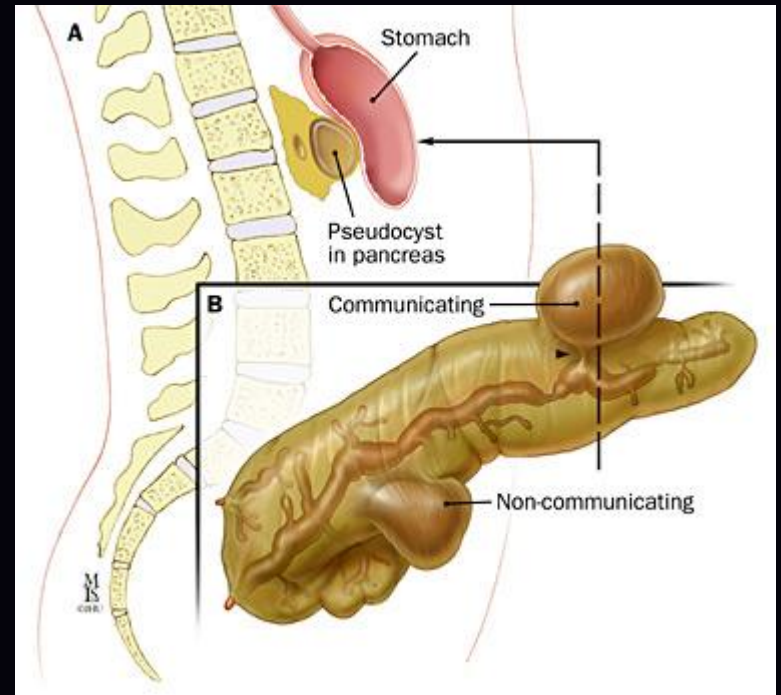
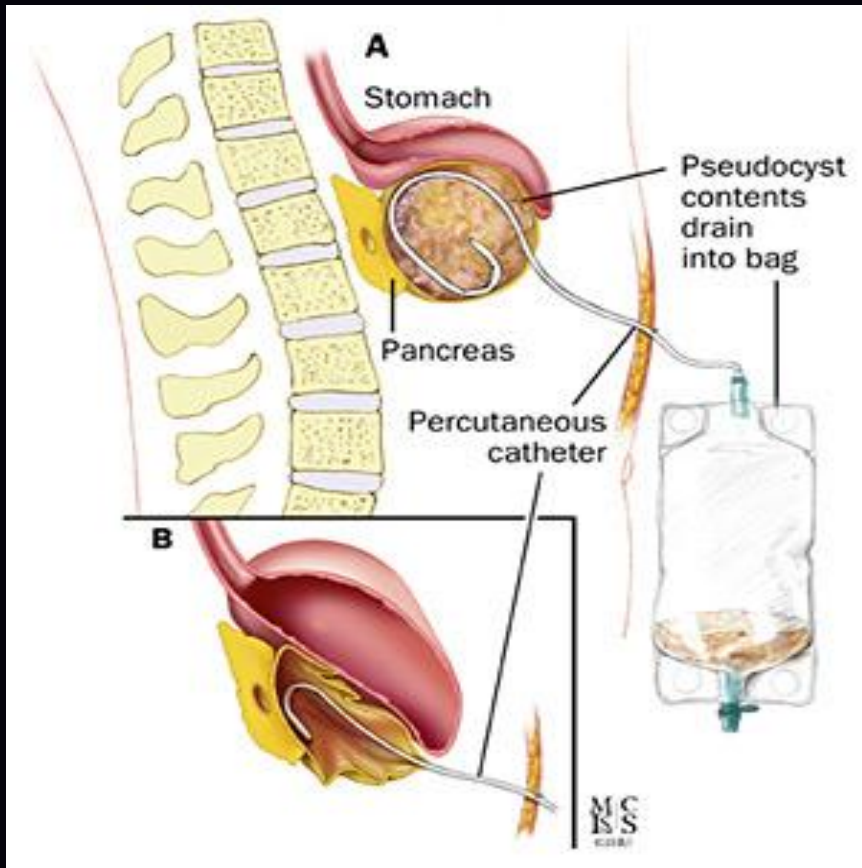
Pancreas nedv lokális felhalmozódása  
gyulladás után keletkezik

# Pancreas abscessus

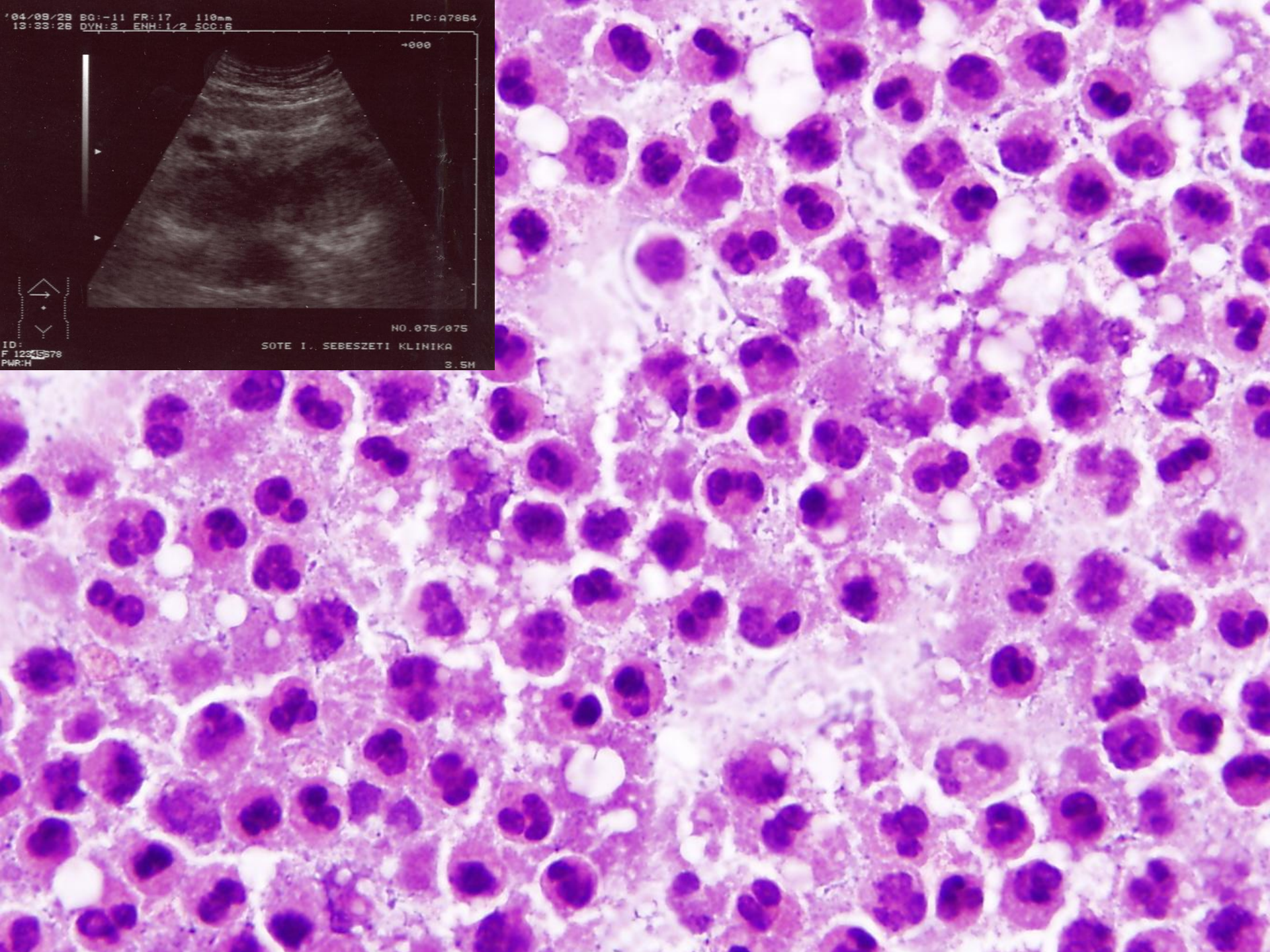
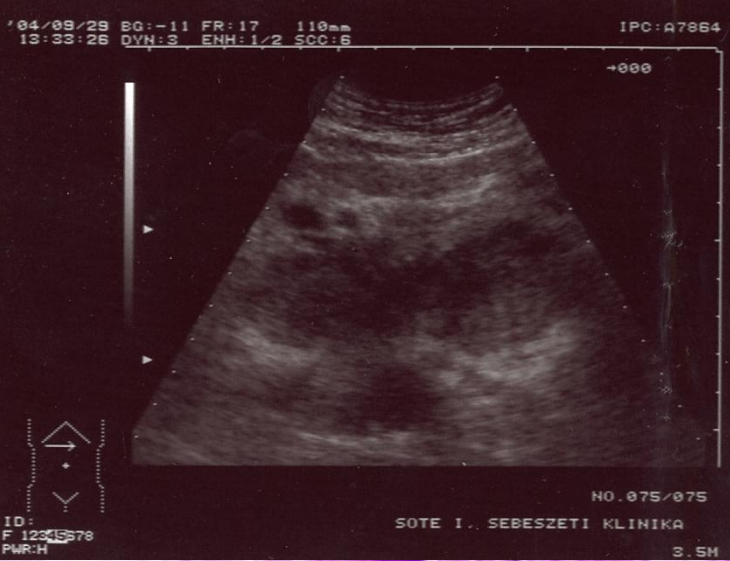
Pancreatitis után keletkezik, a  
colliquatio necrosis következtében.  
Általában, (ha nem fertőződik felül),  
steril, de az esetek több, mint felében  
felülfertőződik.















Pseudocysták

diff.dg.: cysticus tumorok

(Ld. később)



# Cystic fibrosis (Mucoviscidosis)

A.-rec., 1:2500 újszülött

- CFTR (Cystic-Fibrosis-Transmembrane-Conductance-Regulator) - Kr. 7.
- Meconium ileus
- Pancreas elégtelenség: ductectasia, fibrosis
- Bronchitis, visszatérő pneumoniák
- Secunder biliaris cirrhosis

**A** Organs affected by cystic fibrosis

**Sinuses:** sinusitis (infection)

**Lungs:** thick, sticky mucus buildup, bacterial infection, and widened airways

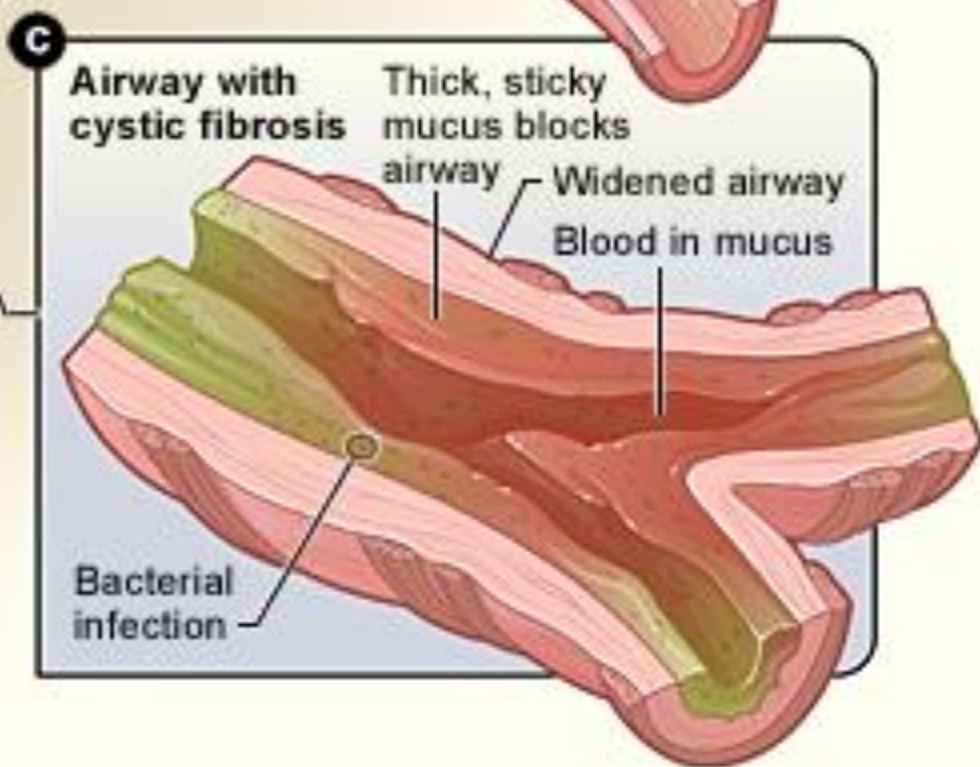
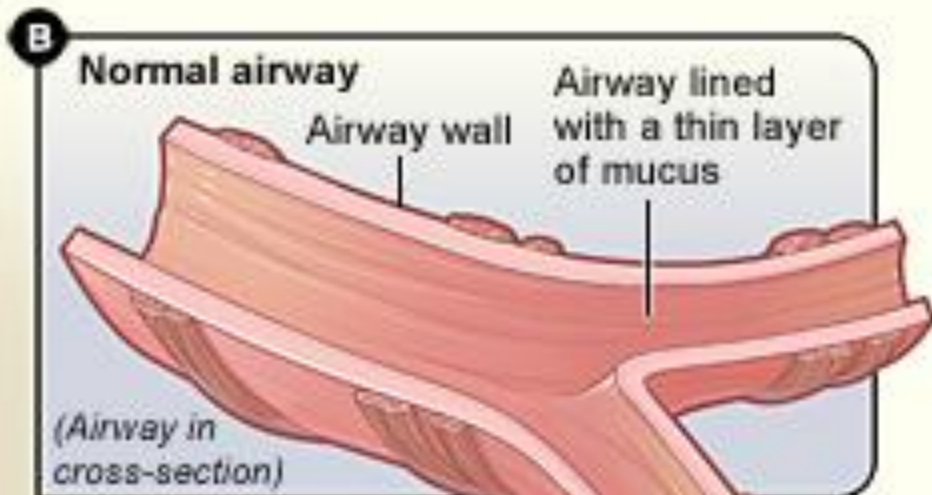
**Skin:** sweat glands produce salty sweat.

**Liver:** blocked biliary ducts

**Pancreas:** blocked pancreatic ducts

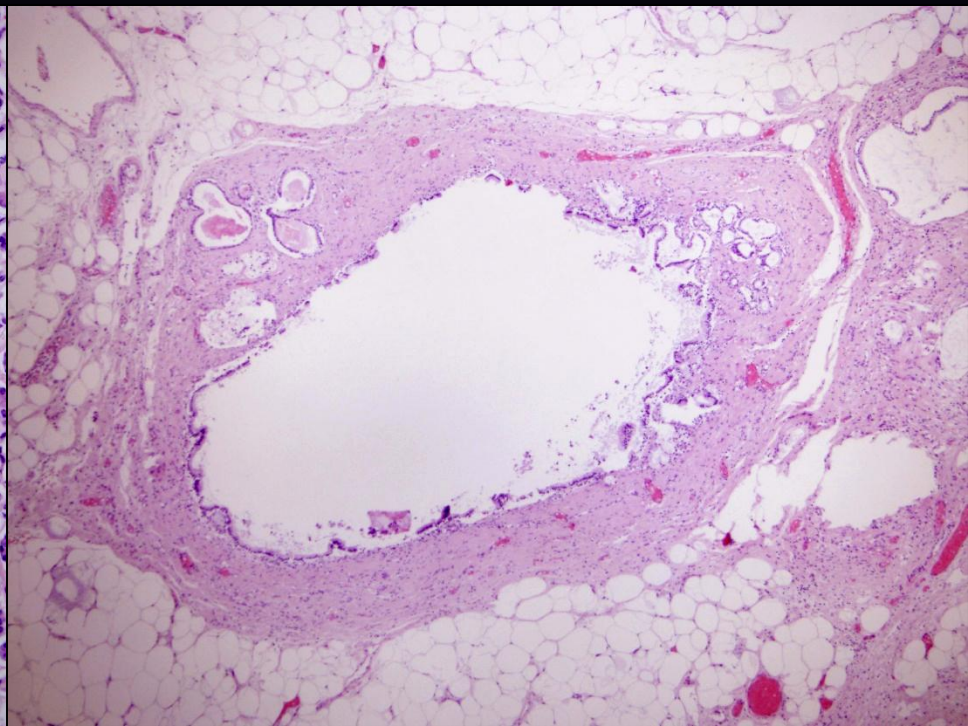
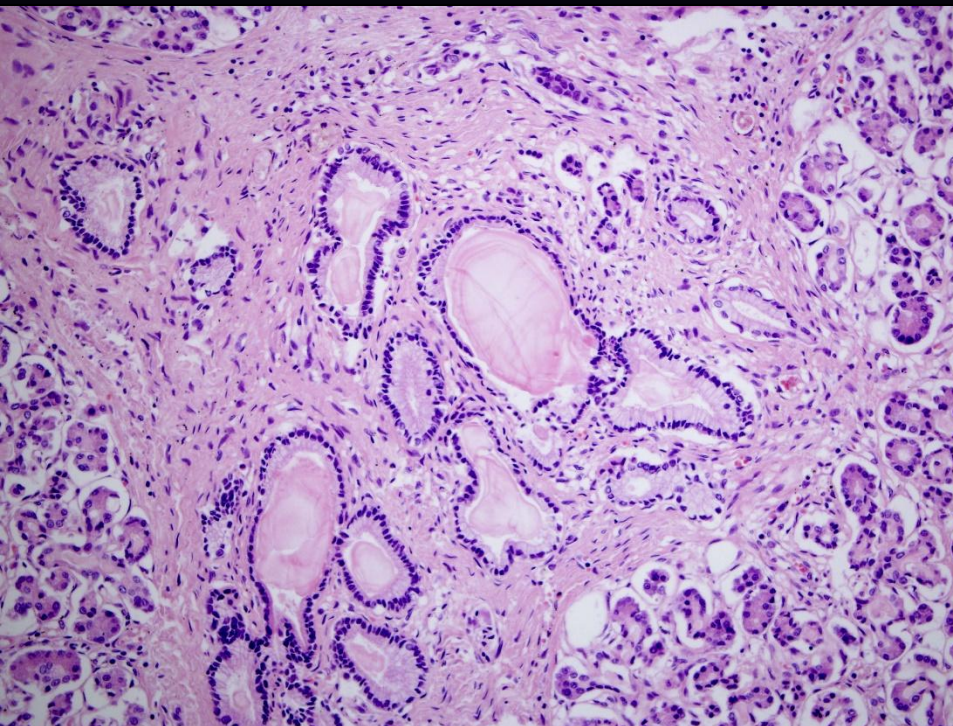
**Intestines:** cannot fully absorb nutrients

**Reproductive organs:** (male and female) complications





- **Makroszkópia:** besűrésödött nyák -ductus- dilatáció - recurráló pancreatitis, acinaris atrophia, fibrosis
- **Mikroszkópia:** eosinophil concrementumok az acinusok, ductulusok lumenében, ductus dilatáció



# PanIN fogalma

R.H. Hruban és mtsai

Am J Surg Pathol 25/5/:579-586,2001

[http://pathology.jhu.edu/pancreas\\_panin](http://pathology.jhu.edu/pancreas_panin)

35 metszet- 8 pathologus- 70 különböző terminus  
technicus

Egységes nomenclatura megalkotása a korábbi  
terminológiák helyett

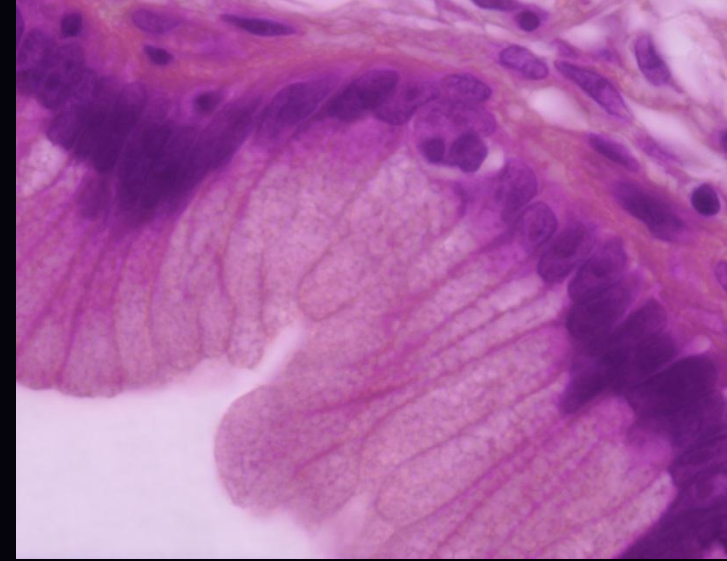
A pancreas kis ductusok proliferatív  
hámelváltozásainak számos szinonimája ismert-  
hyperplasia, metaplasia, dysplasia, CIS, stb.

PanIN- pancreas intraepithelial neoplasia

A pancreas ductalis adenocarcinomáinak precursor  
léziói



# PanIN 1



## PanIN-1A:

magas hengerhámsejtek, basalis magok,  
supranucleáris mucin.

A magok kerekerek vagy oválisak,  
perpendiculárisan állnak a basal membránra.  
(Neoplastikus volta kérdéses,  
metaplasia lényegében azonos szöveti képet  
mutat).

PanIN 1B:

papilláris,  
mikropapilláris,  
vagy

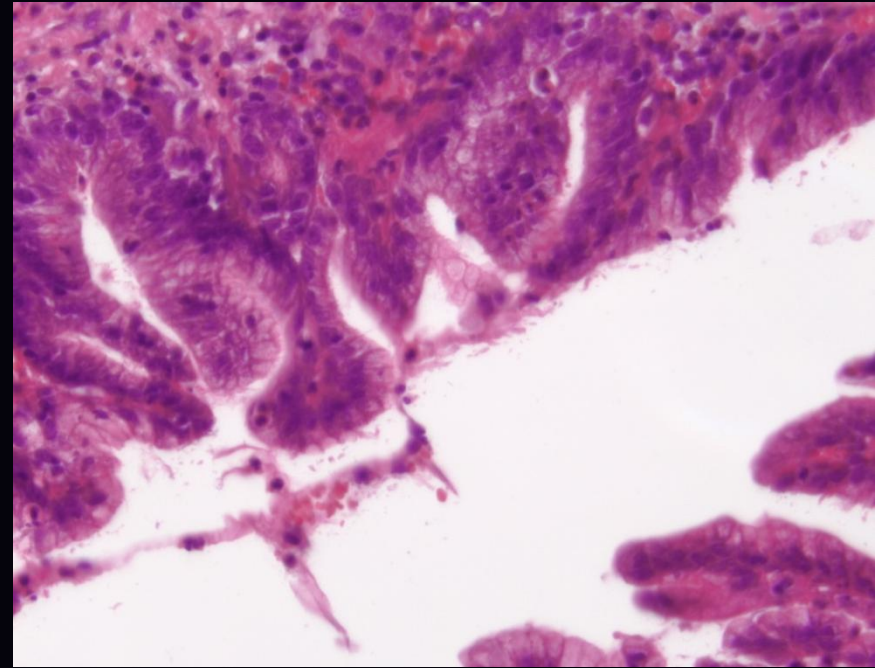
pseudostratificált  
architektúra,

Egyébként

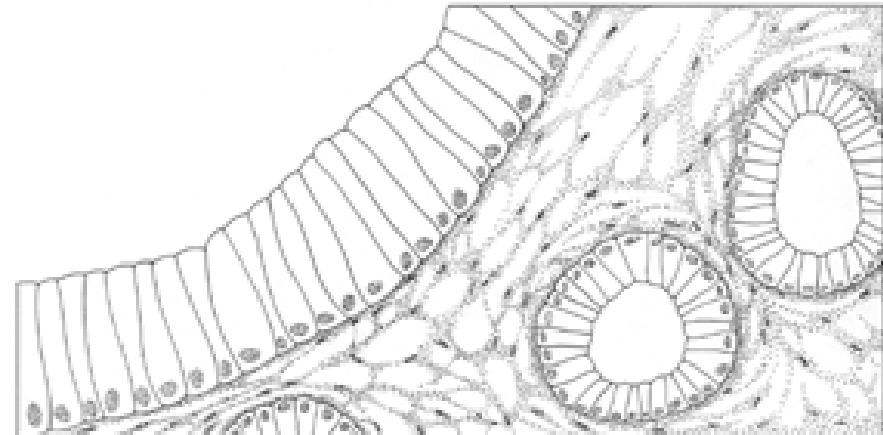
megegyezik panIN

1A-val

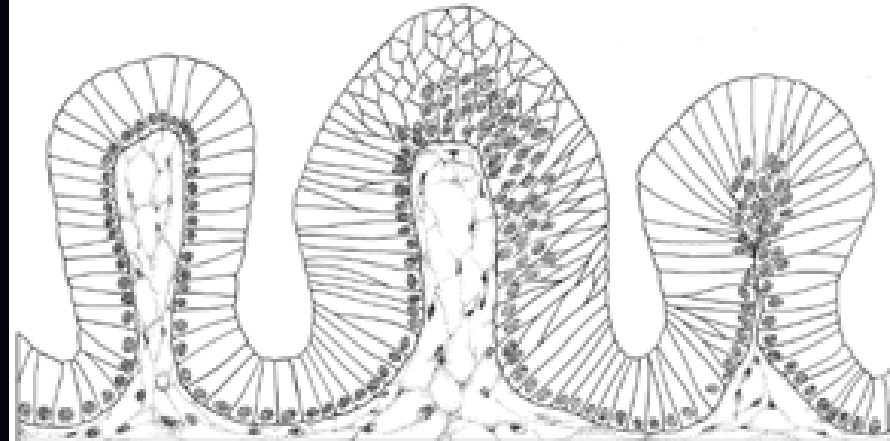
# PanIN 1



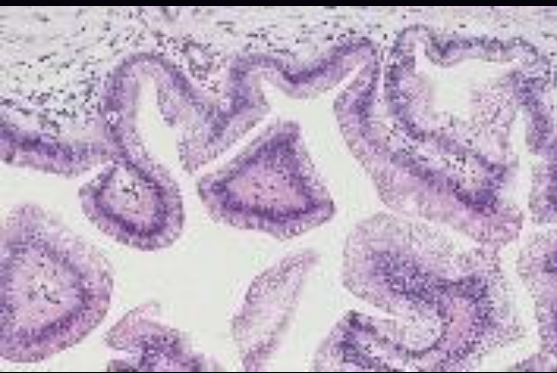
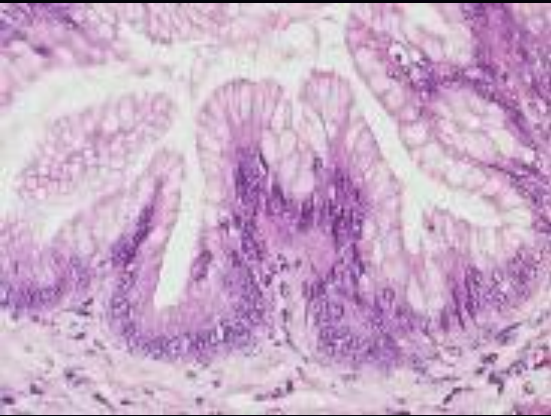
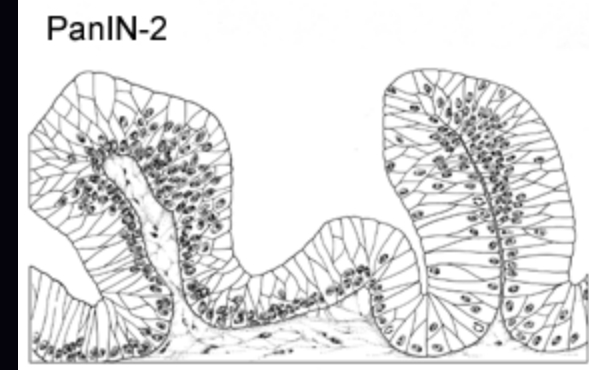
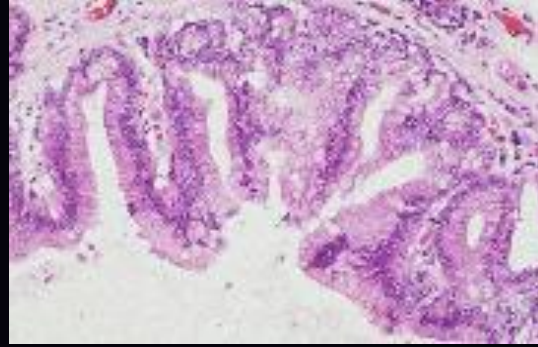
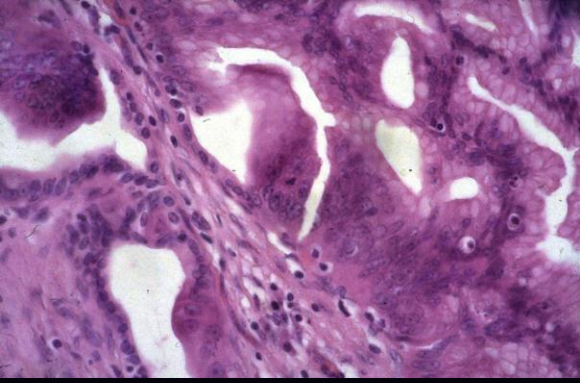
PanIN-1A



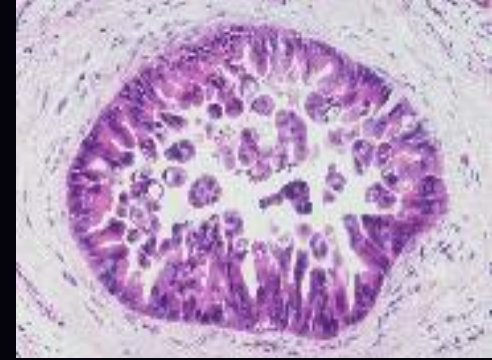
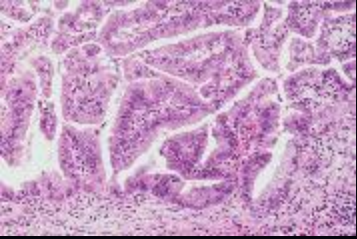
PanIN-1B







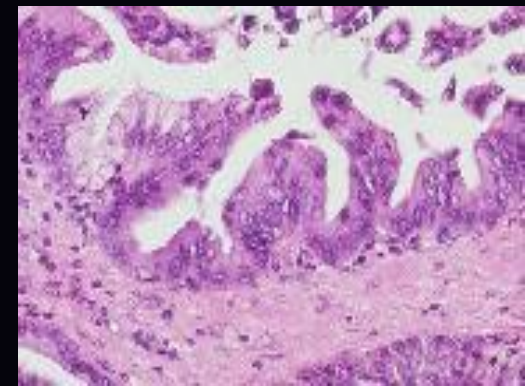
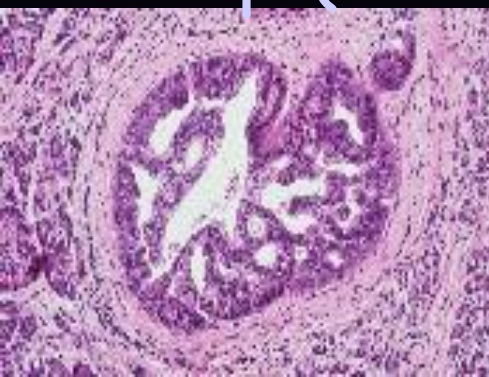
Mucinosus elváltozás, általában papilláris, magabnormalitás jelen van, polaritás elvesztése, magok torlódnak, hyperchromak, nagyobbak, többmagsoros a hám. Mitosis ritka, basalis, típusos. Cribriform mintázat, necrosis nincs.



Papilláris, ritkán lapos elváltozás, lehet cribriform. Necrosis gyakori

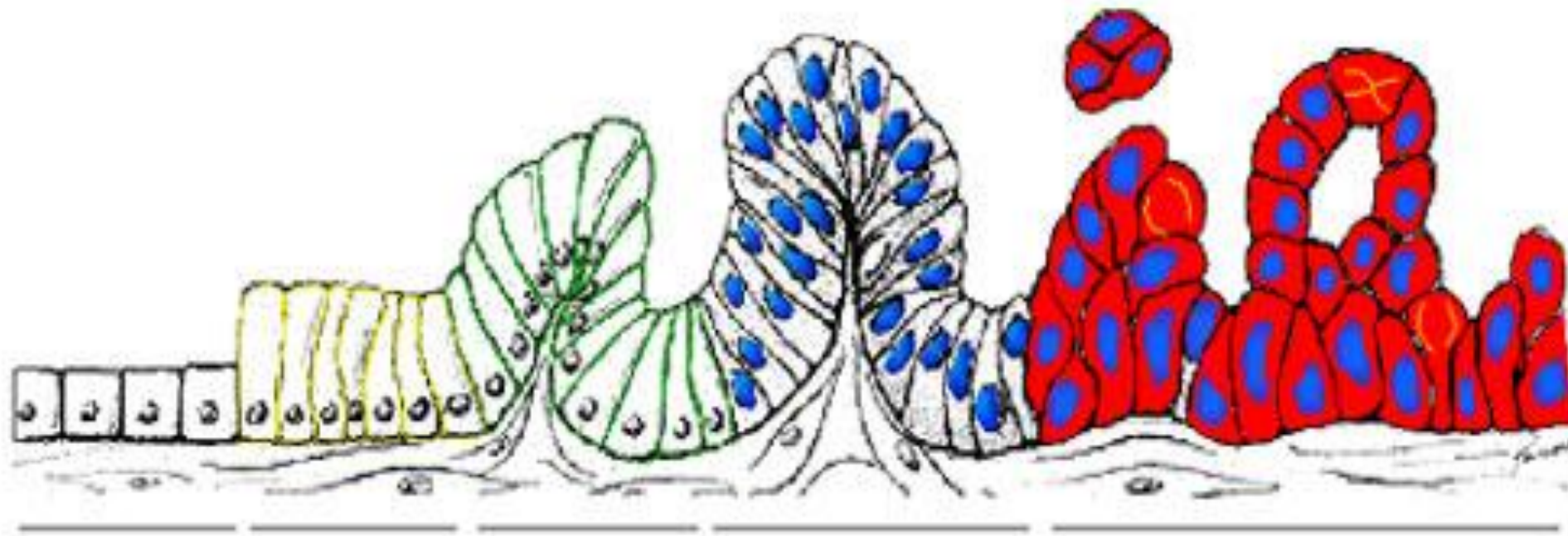
Polaritás elvész, atipusos mitosisok, szabálytalan magok, macronucleolusok.

Sejtszinten carcinoma, de a basalmembrán ép (CIS).





# Pancreatic cancer progression



Normal

PanIN-1A

PanIN-1B

PanIN-2

PanIN-3



*Her2Neu*  
*K-Ras*

*p16<sup>INK4A</sup>*

*p53*  
*DPC4*  
*BRCA2*



LOH 9p

LOH 18q, 17p, 6q

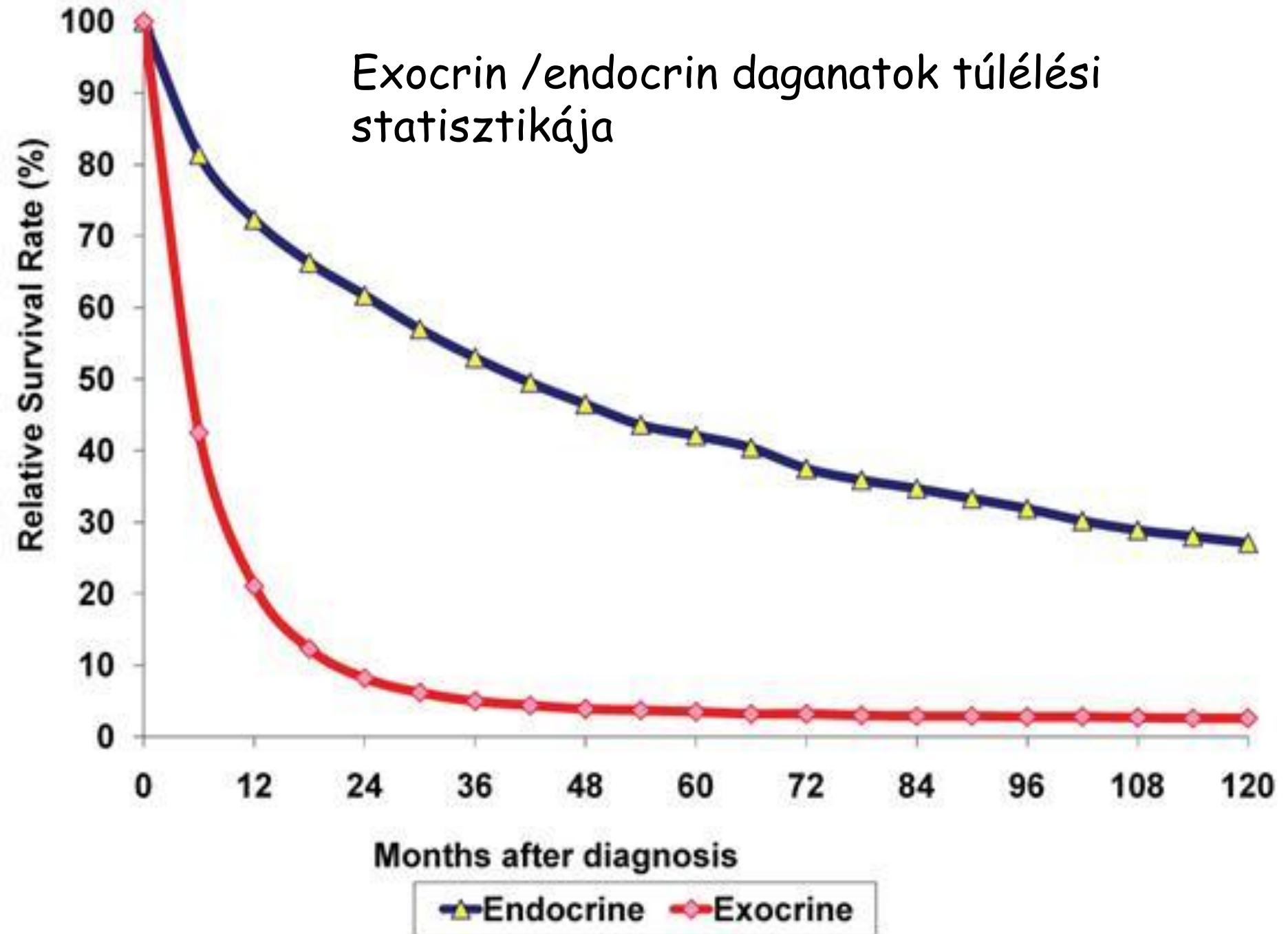
# Az exocrin pancreas daganatai

Benignus

Malignus



# Exocrin /endocrin daganatok túlélési statisztikája



# Malignus pancreas tumorok

Etiológia

CHRONICUS PANCREATITIS ??

DOHÁNYZÁS!

Herediter nonpolyposis colorectal cc

„ ovarium, emlő cc

„ pancreatitis

Peutz-Jeghers sy

Familiaris multiplex mola, melanoma sy



# Malignus pancreas tumorok

*Szövettani típusok*

DUCTALIS ADENOCARCINOMA  
IDMN

Mucinosus cystadenocarcinoma

Acinus sejtes cc.

Anaplasticus cc.

Áttétek

Lymphomák

Sarcomák

# Pancreas carcinoma tünetei

- Sárgaság - Courvoisier jel
- Fogyás
- Fájdalom
- Passage zavar
- Migráló thrombophlebitis (Trousseau)
- Pancreatitis
- Metastasisok
- CA 19-9 szint ↑
- CEA „ ↑



U3-MAY-1909  
18-MAY-2004  
10:23:11.13

SE-AOK RAD.ONKOT.KLIN  
SOMATOM PLUS 4  
VC10B  
H-SP-CR

A

L/U -1024/ 3071  
Mean 1 38.0  
SD 1 15.3  
Area 1 0.83



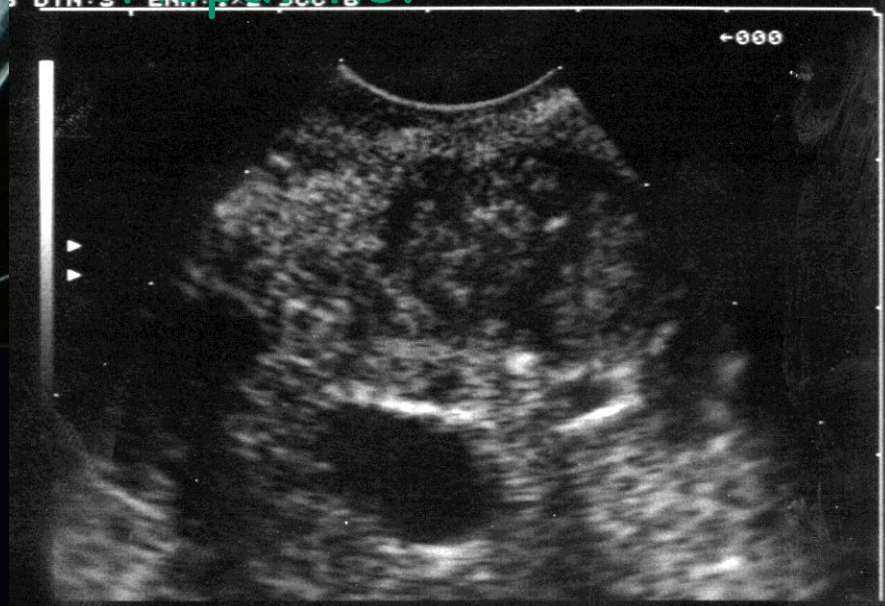
39 éves ffi

Hasi fájdalom

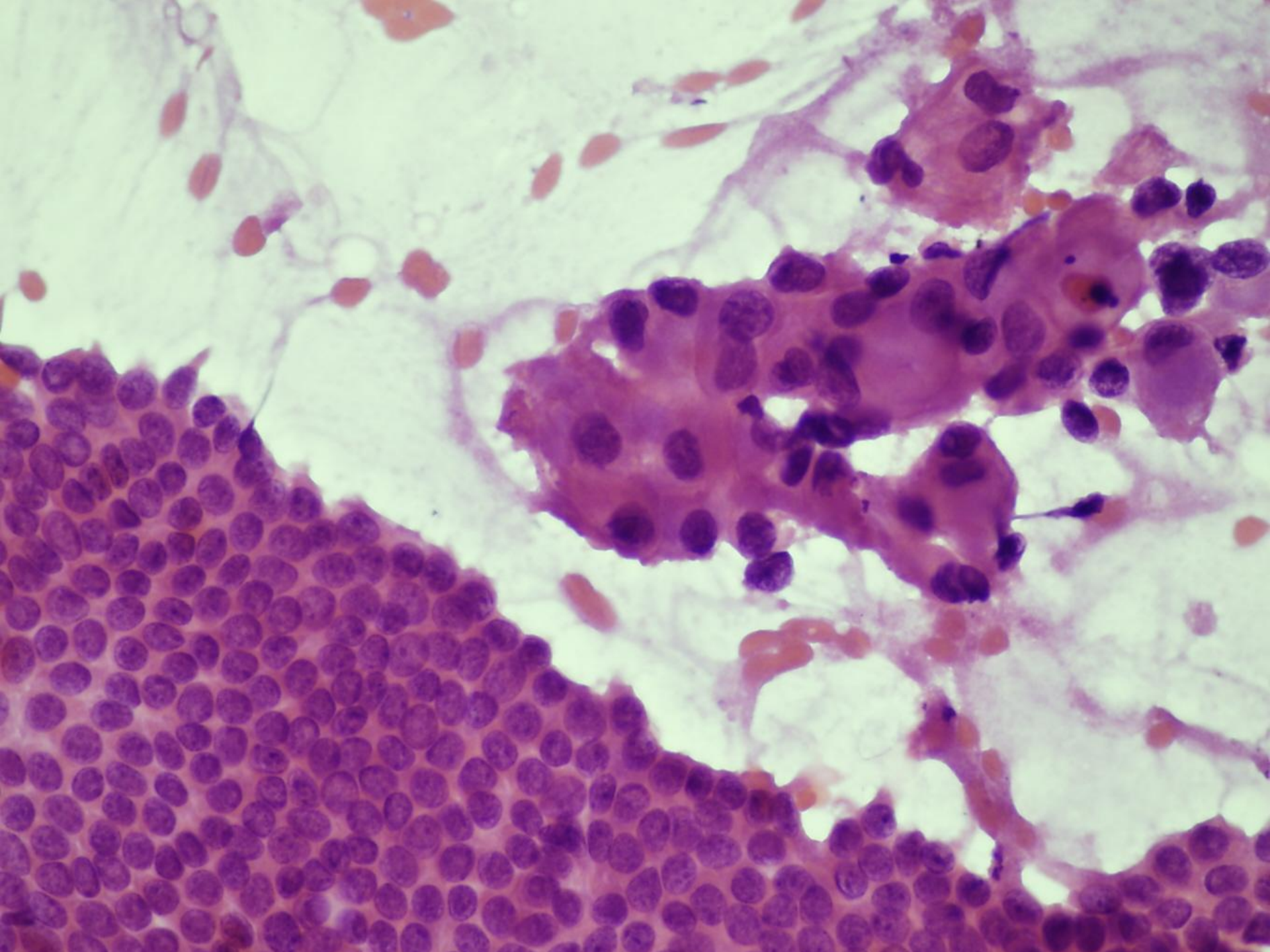
Gastroszkopia: HP+  
gastritis, reflux  
oesophagitis

Kontroll vizsgálatkor  
enyhe sárgaság...

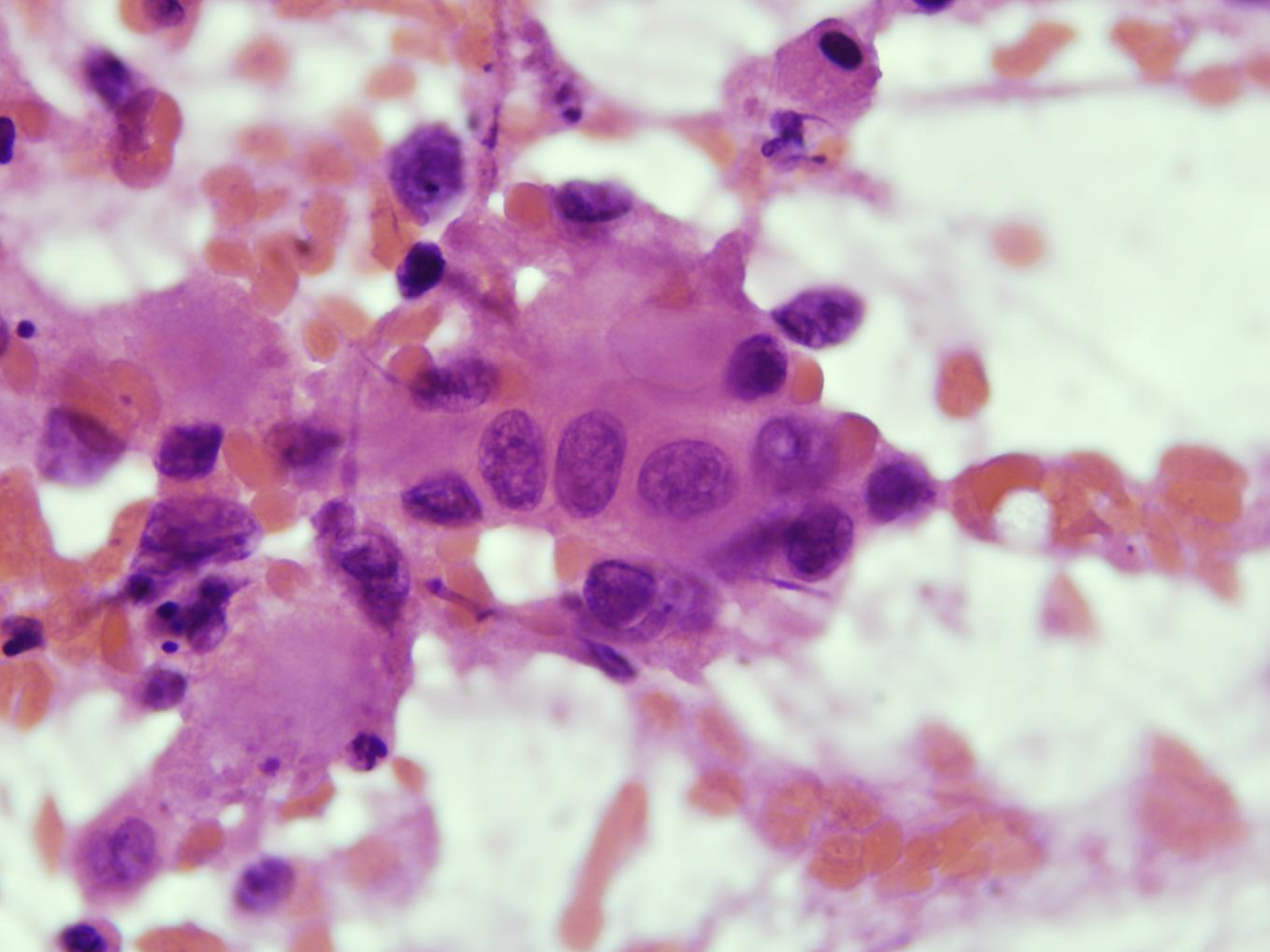
Hepatitis?









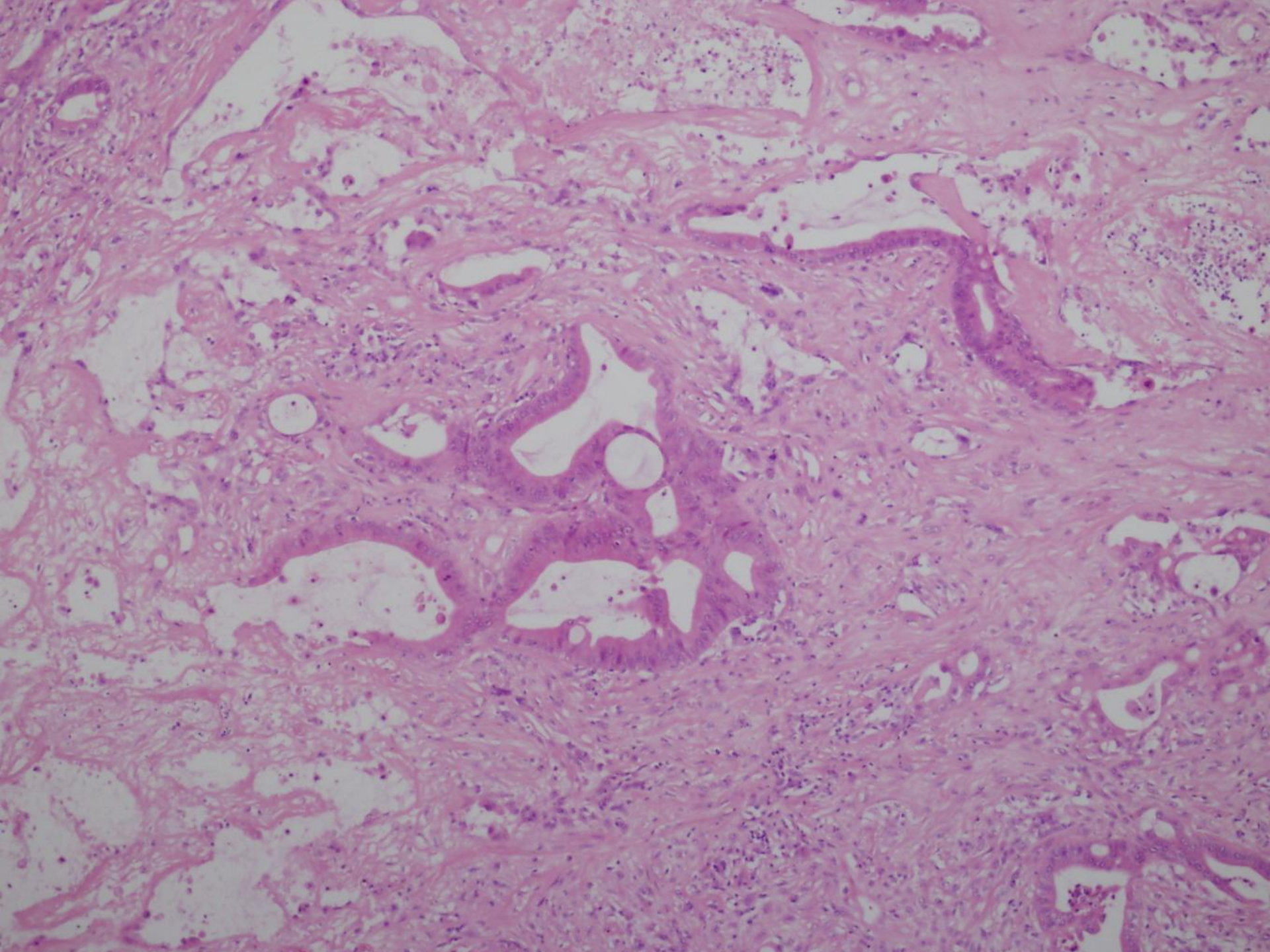




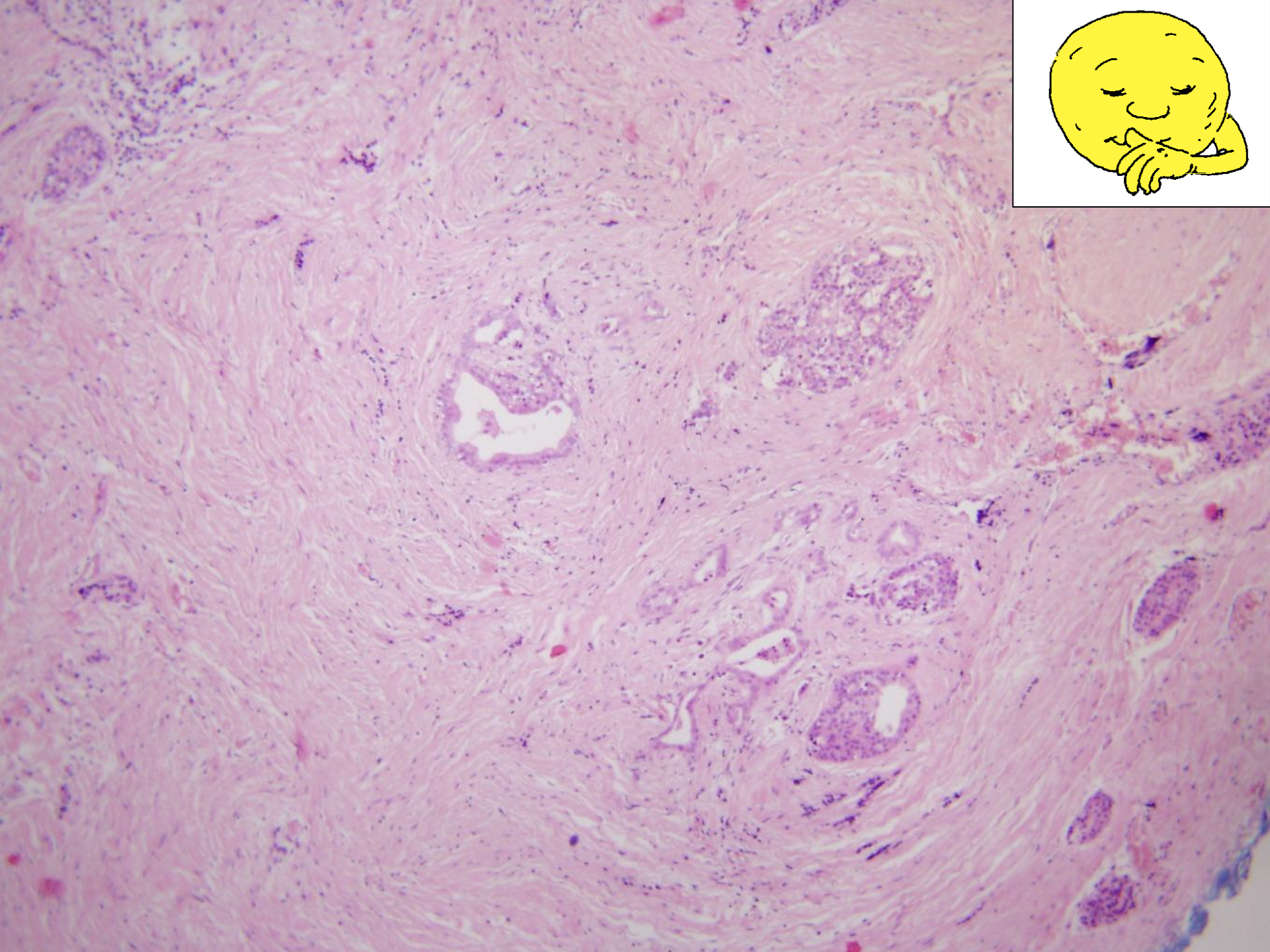


ILLUSZTRÁCIÓ

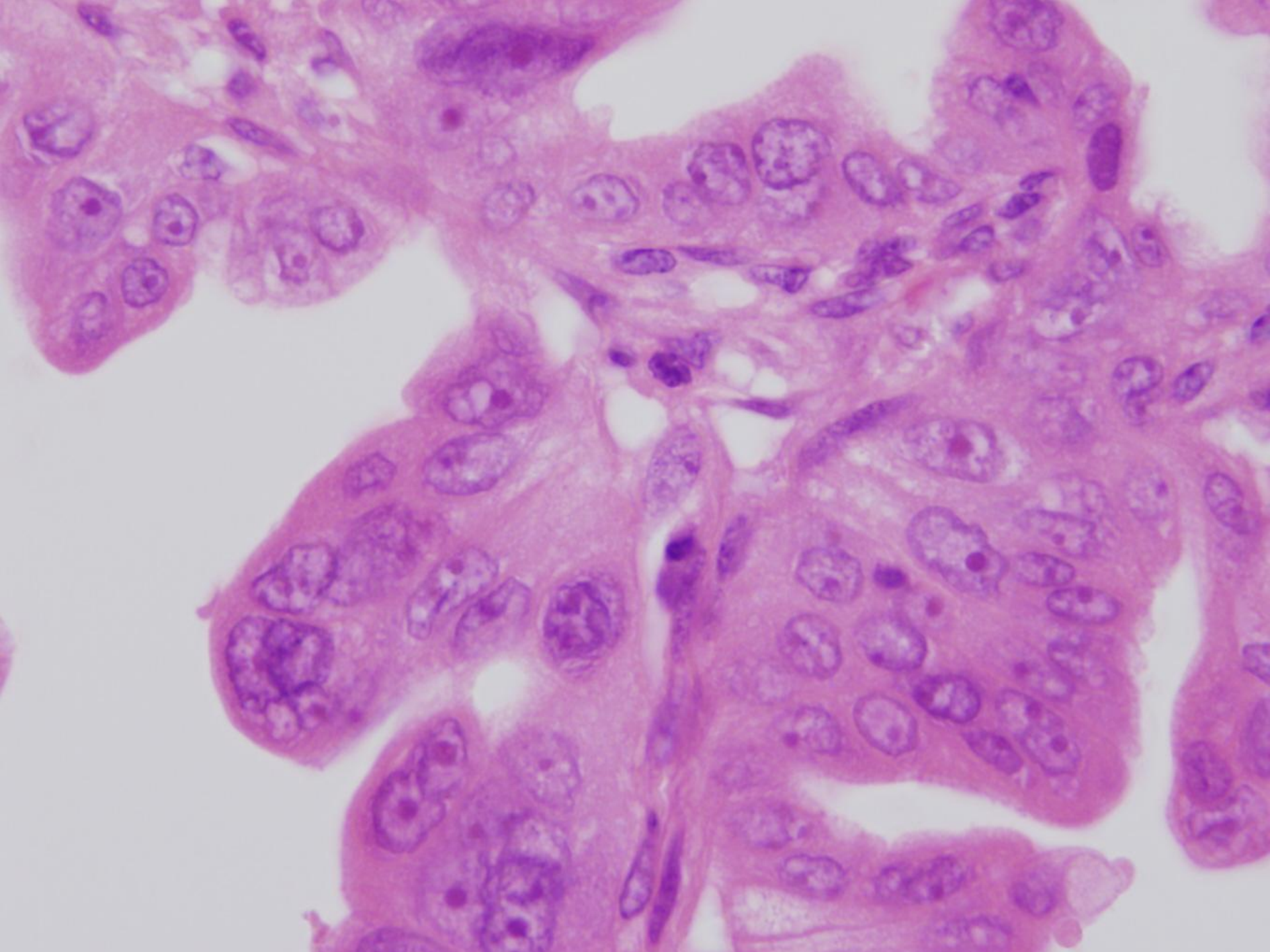




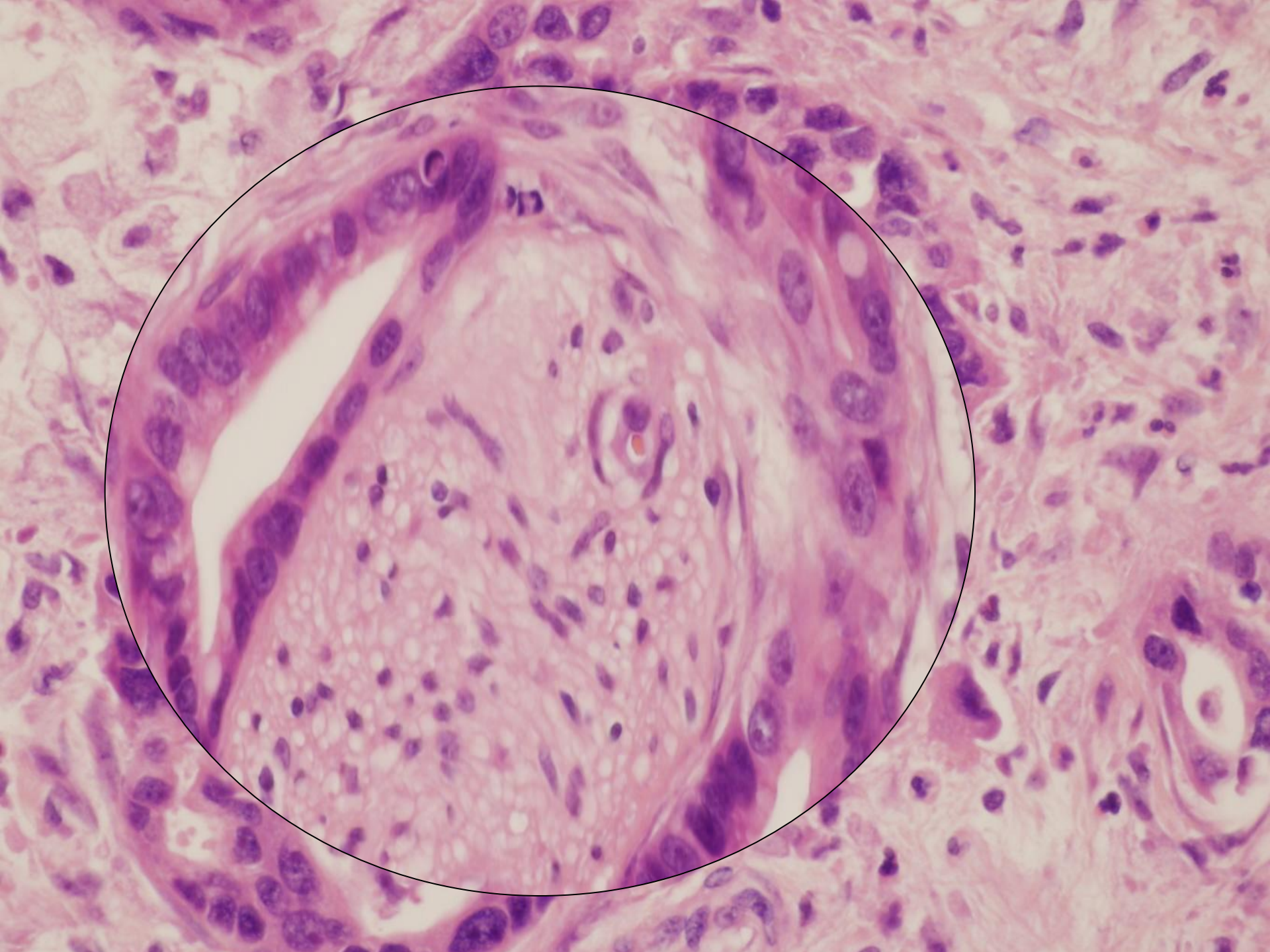














# CUP

„Cancer of unknown primary“

Legtöbbször

- Pancreas

- Tüdő

N. F-né 77 éves  
nőbeteg

Hasi panaszok miatt  
kivizsgálás

CT lelet:

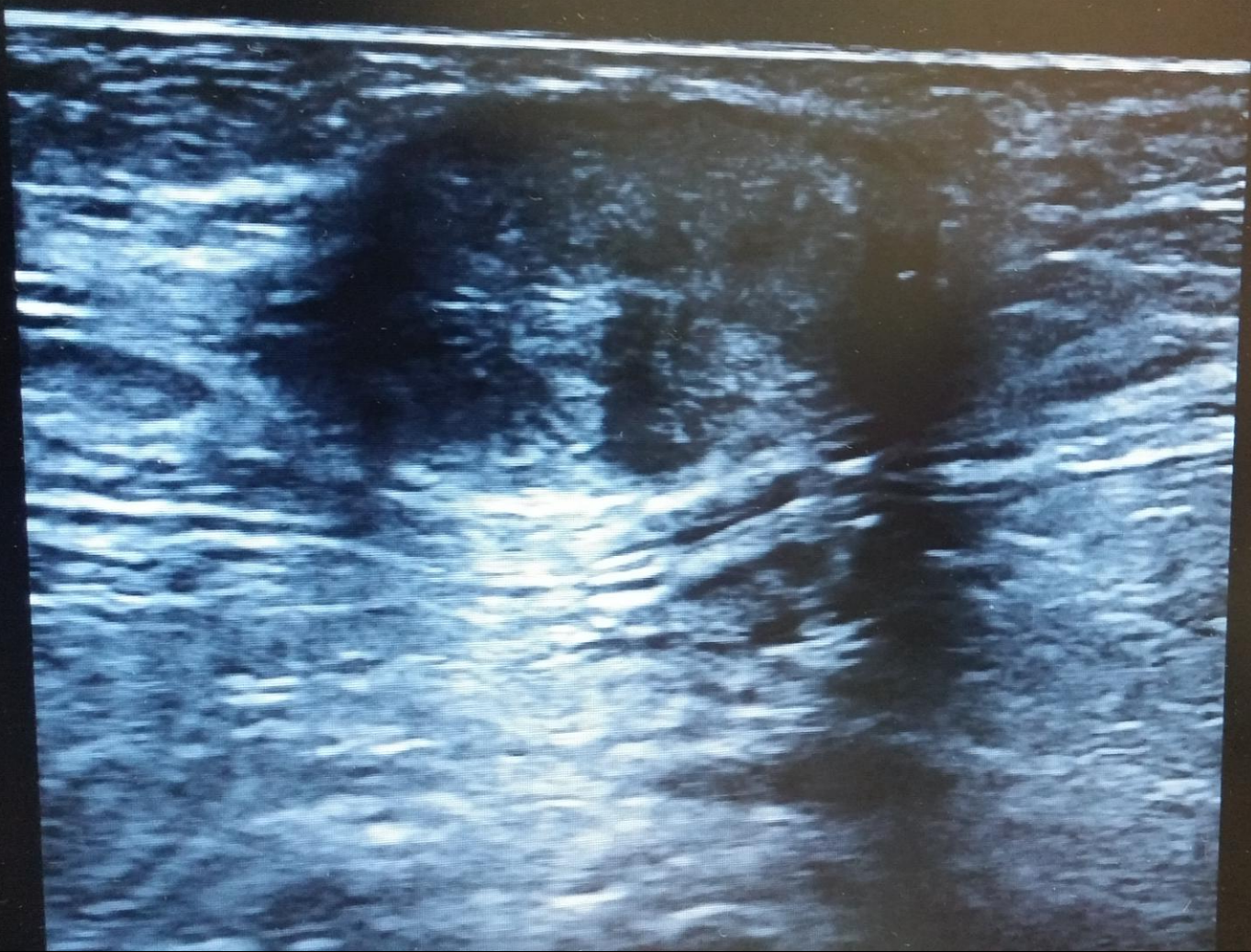
- carcinosis  
peritonei
- metastasis  
omenti
- hydronephrosis I.d





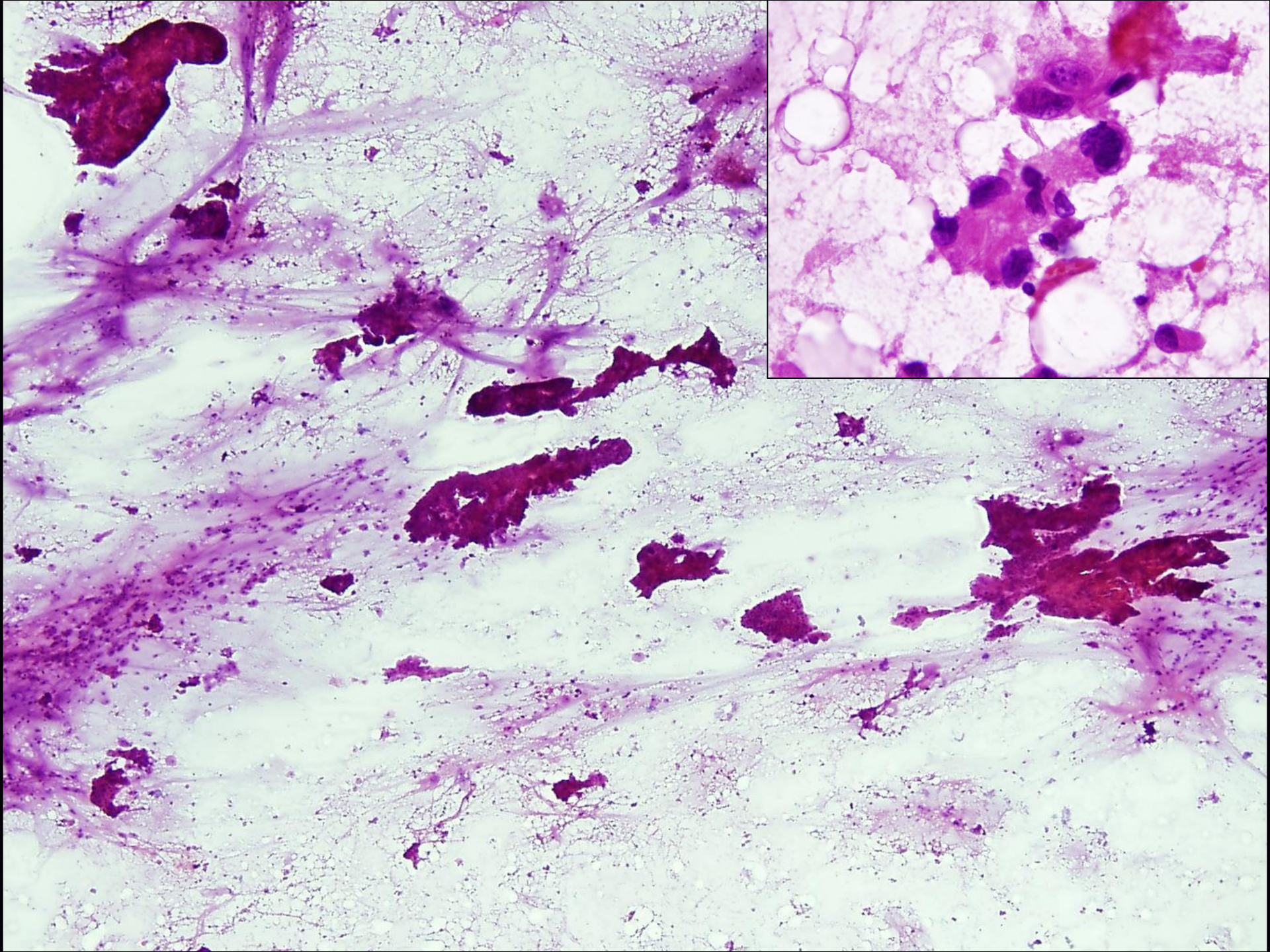


F



- 3







# Sister Mary Joseph nodule

Általában peritonealis metastasisokkal együtt fordul elő

Rossz prognózissal járó jelenség

Kismencedei hasüregi daganatok metastasisa

Az esetek felében gyomor, bél pancreas farokban van a primer tumor

Ovarium, ill. endometrium carcinoma is lehet a metastasis forrása

Ritkán urológiai, vagy tüdő eredet is előfordulhat

**Kialakulása:** direct transperitoneális terjedés

Nyirok utakon keresztül (melyek az elzáródott vena umbilicalissal kapcsolódnak)

Haematogén úton

Ductus vitellinus maradványán keresztül



# Sister Mary Joseph Dempsey

Julia Dempsey:

1856-1939 William J. Mayo  
műtősnője volt (Minnesota,  
Rochester, St. Mary's  
Hospital)

(1890 - 1915).

Ő figyelt fel a jelenségre,  
melyről 1928-ban publikált  
egy cikket.

Sister Mary Joseph  
nodule-nak

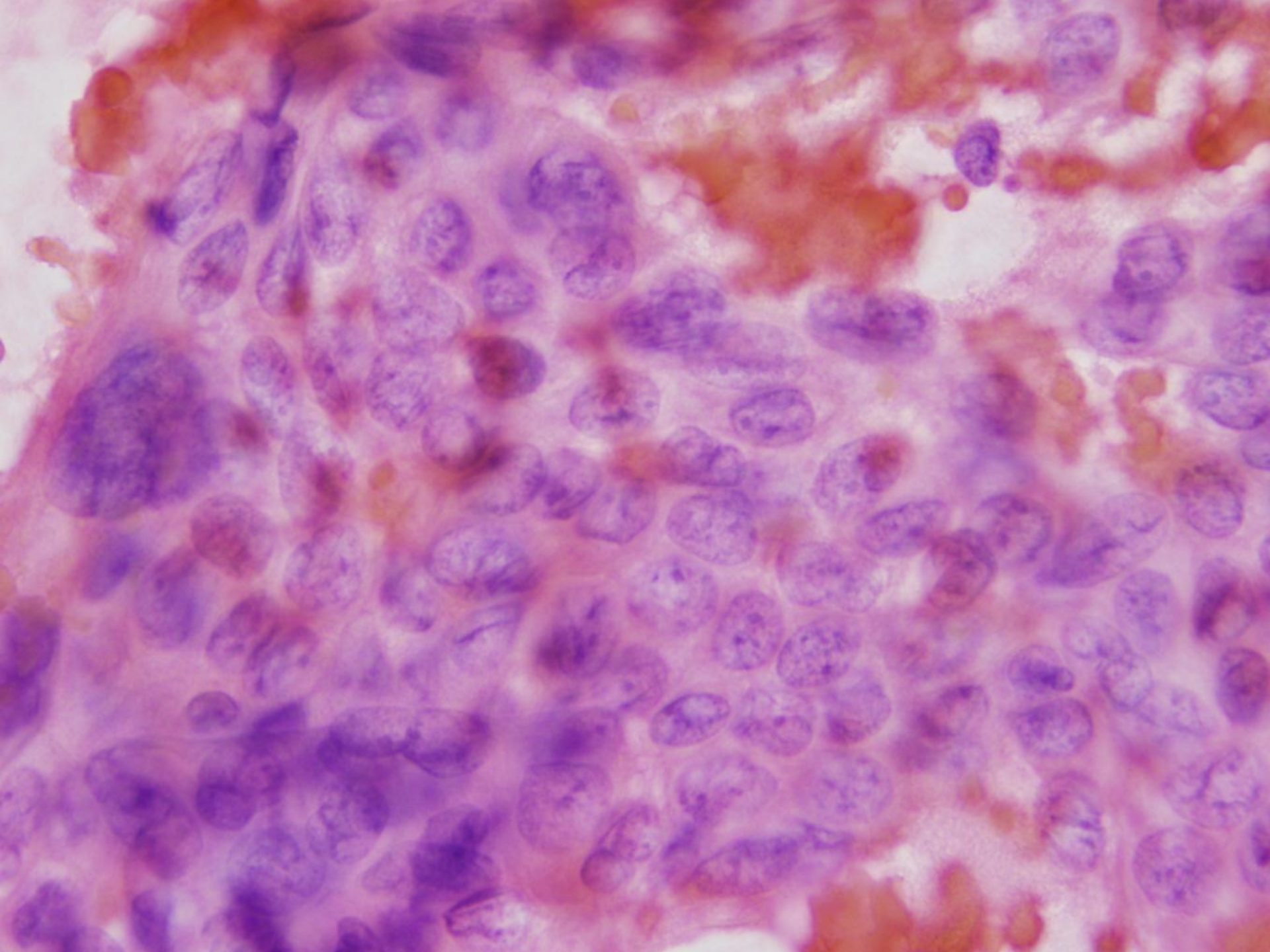
1949 óta nevezik



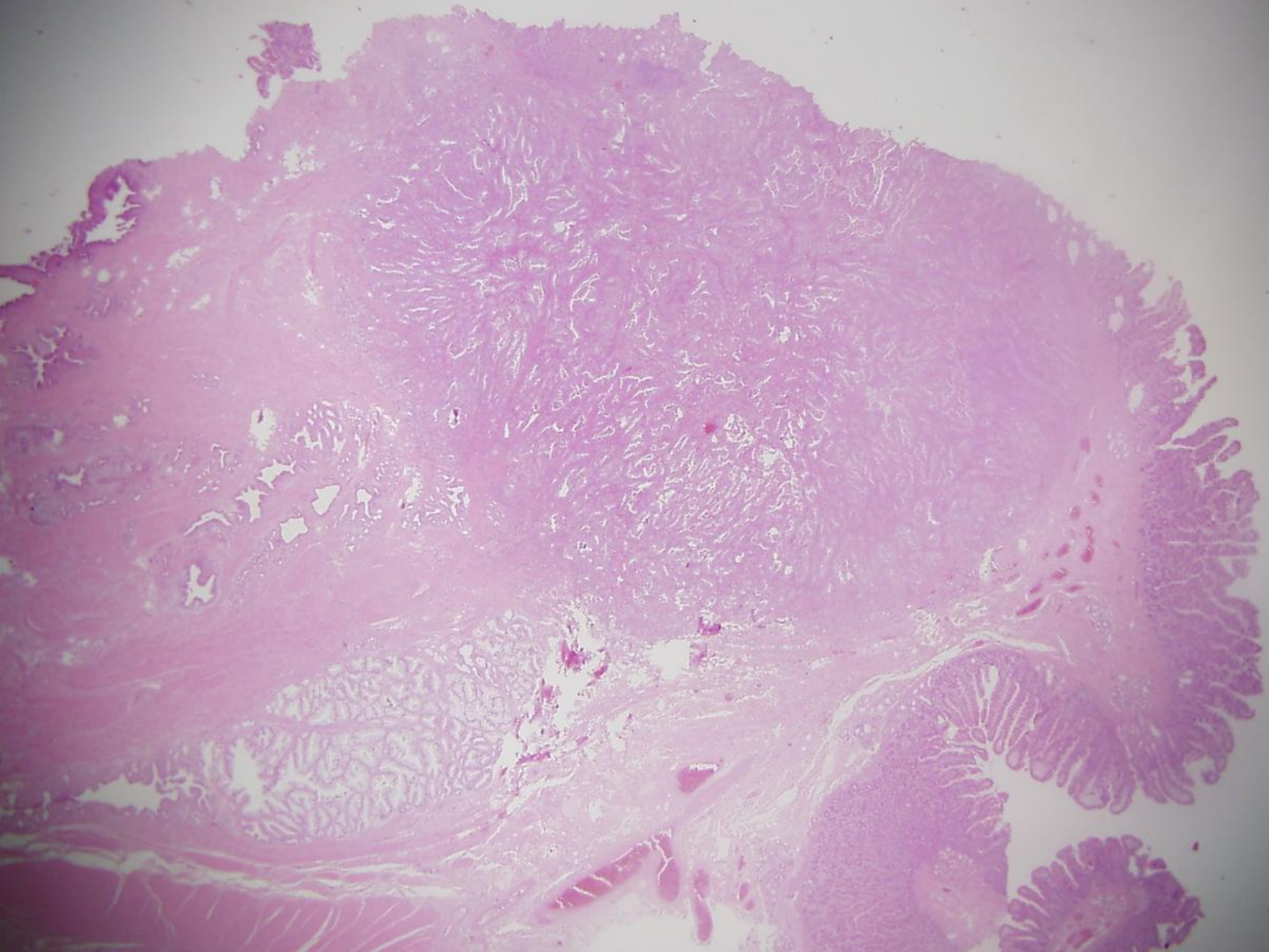
# Vater papilla carcinoma



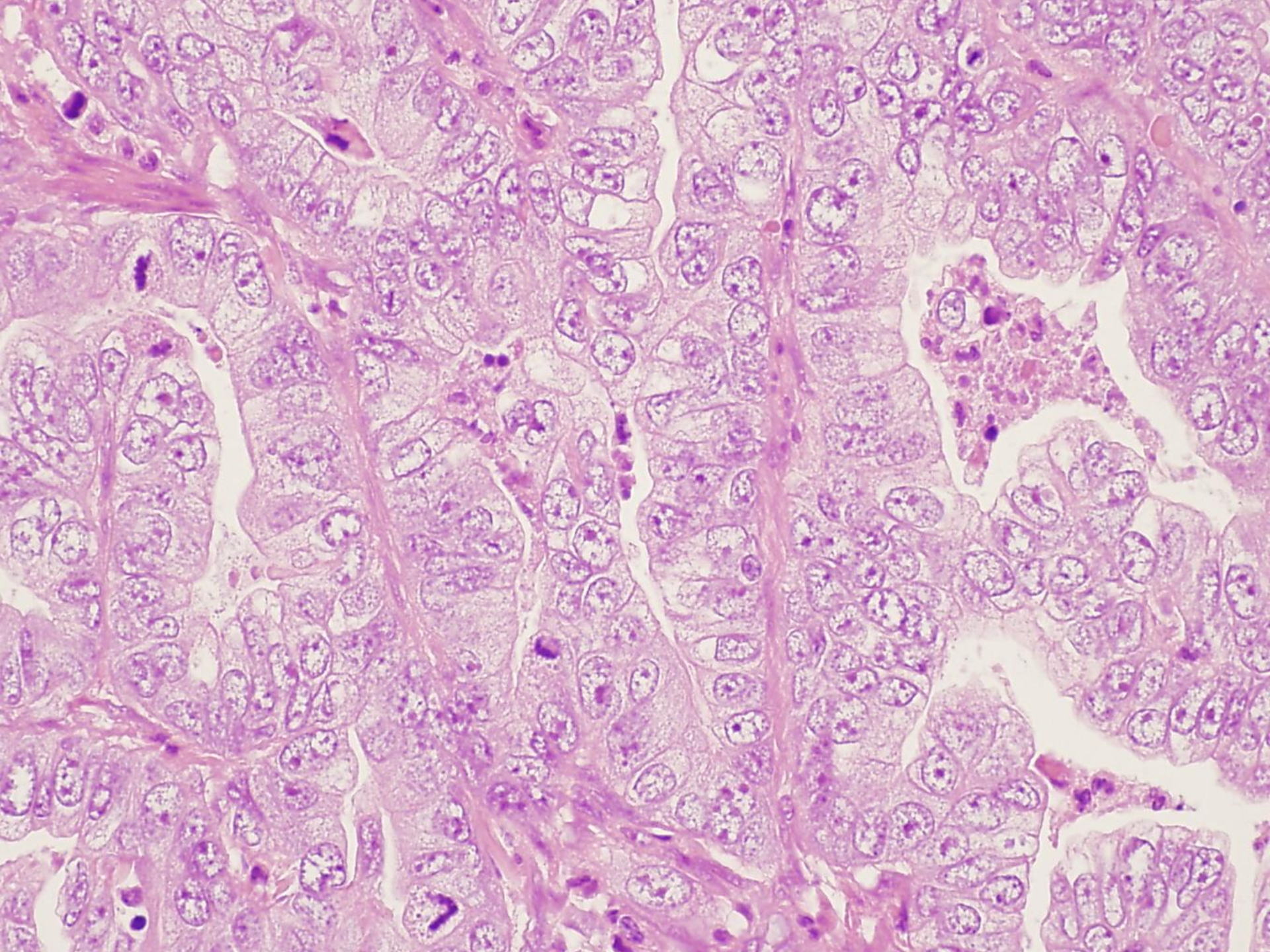






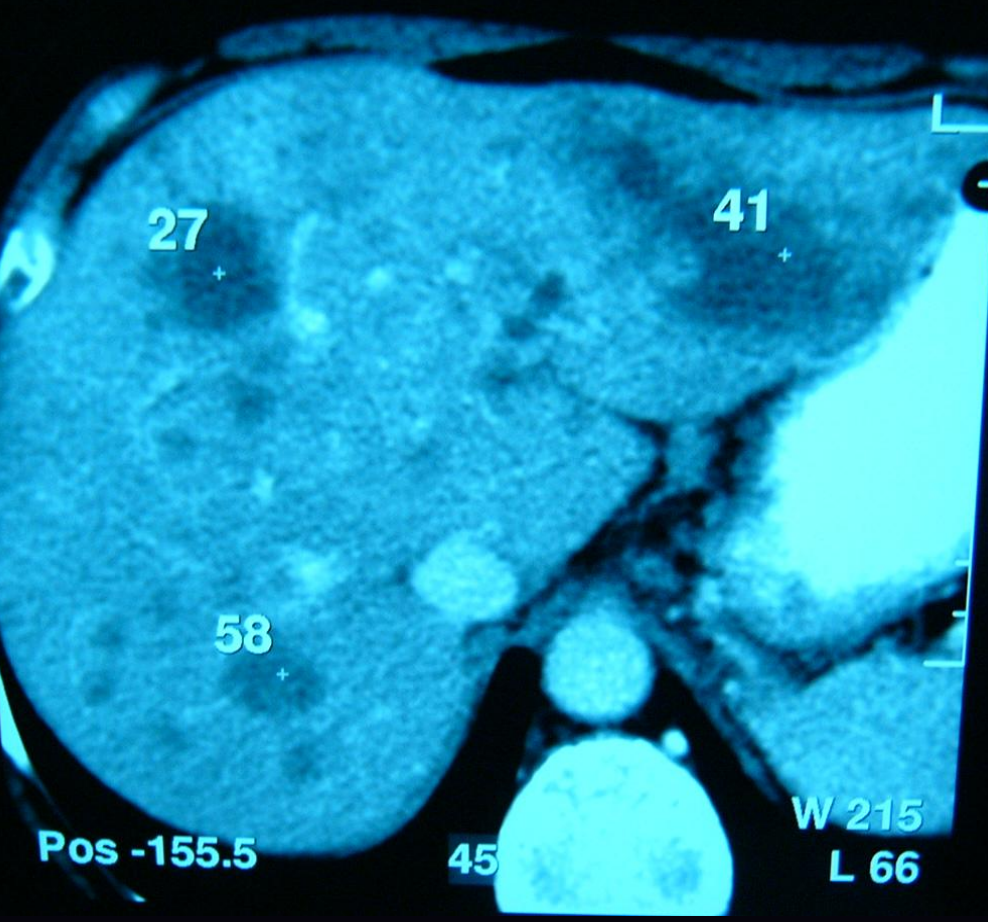




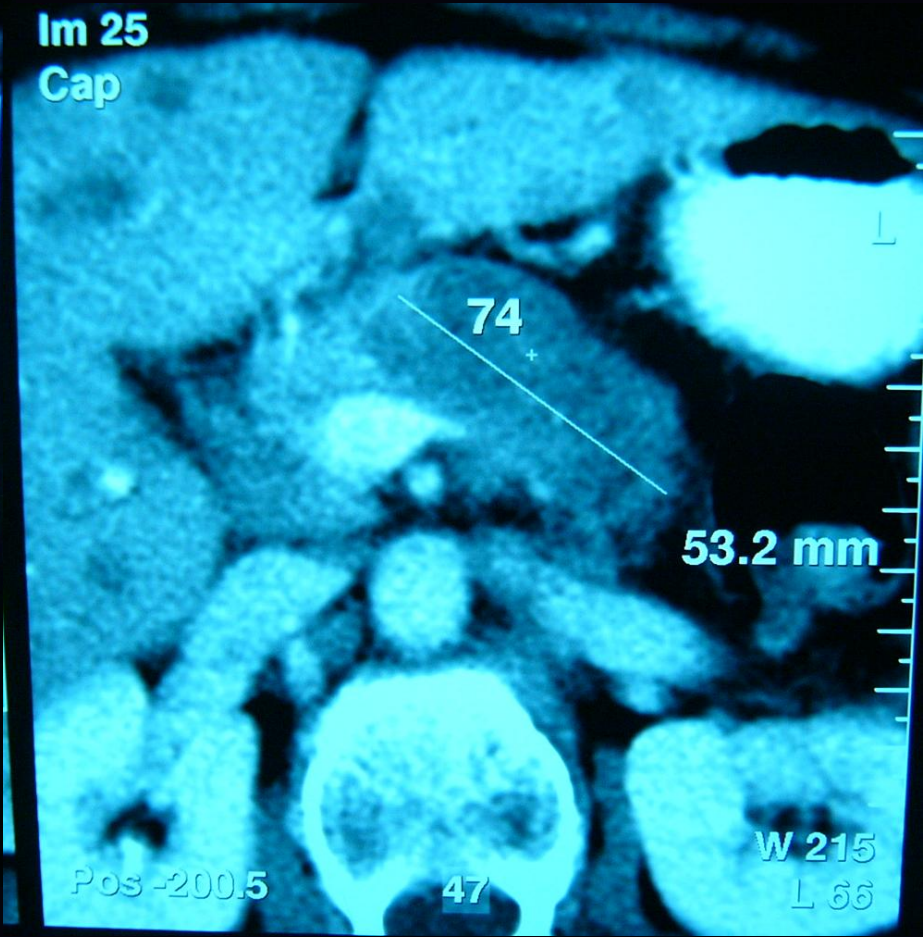




Im 16  
Cap

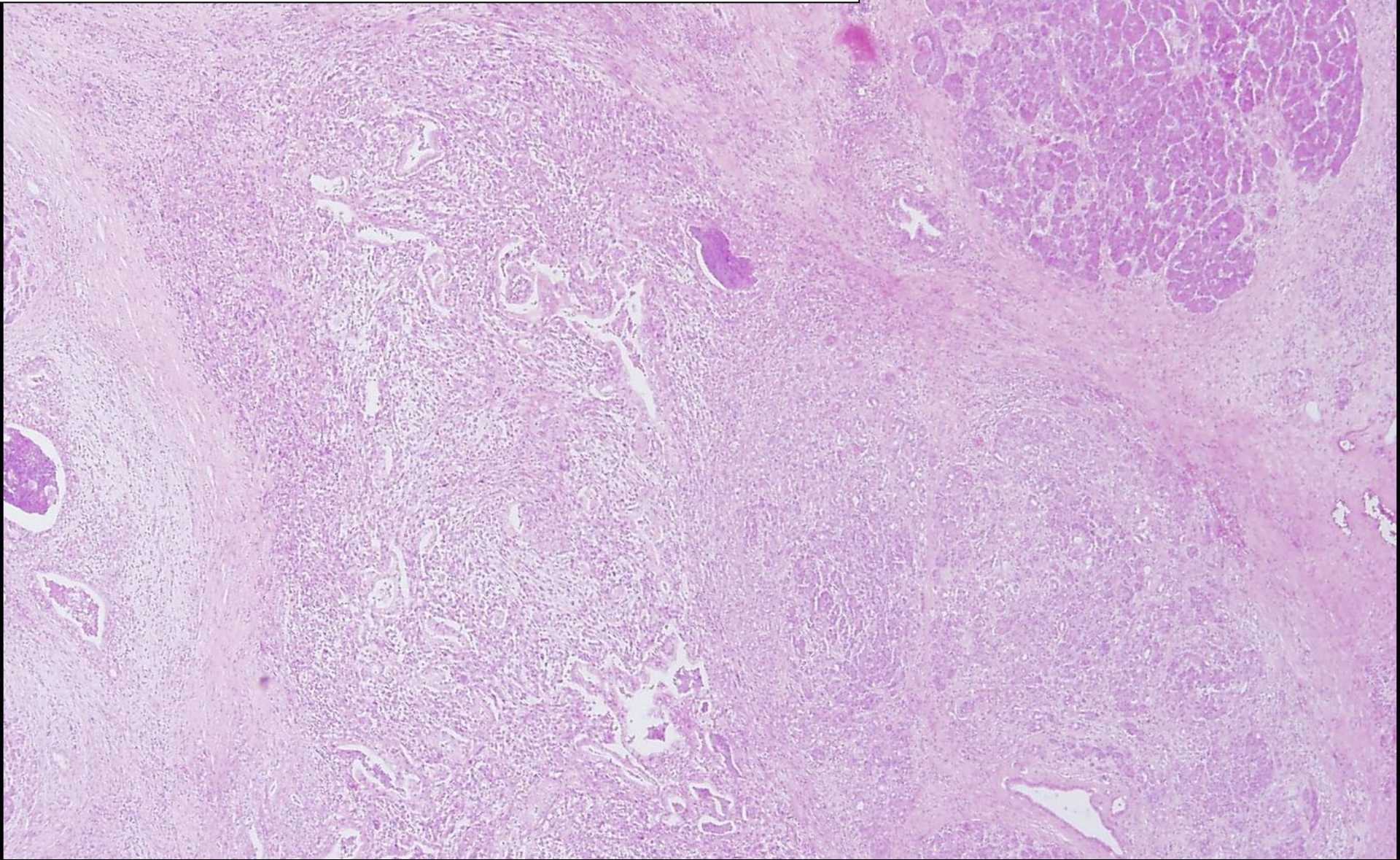


Im 25  
Cap

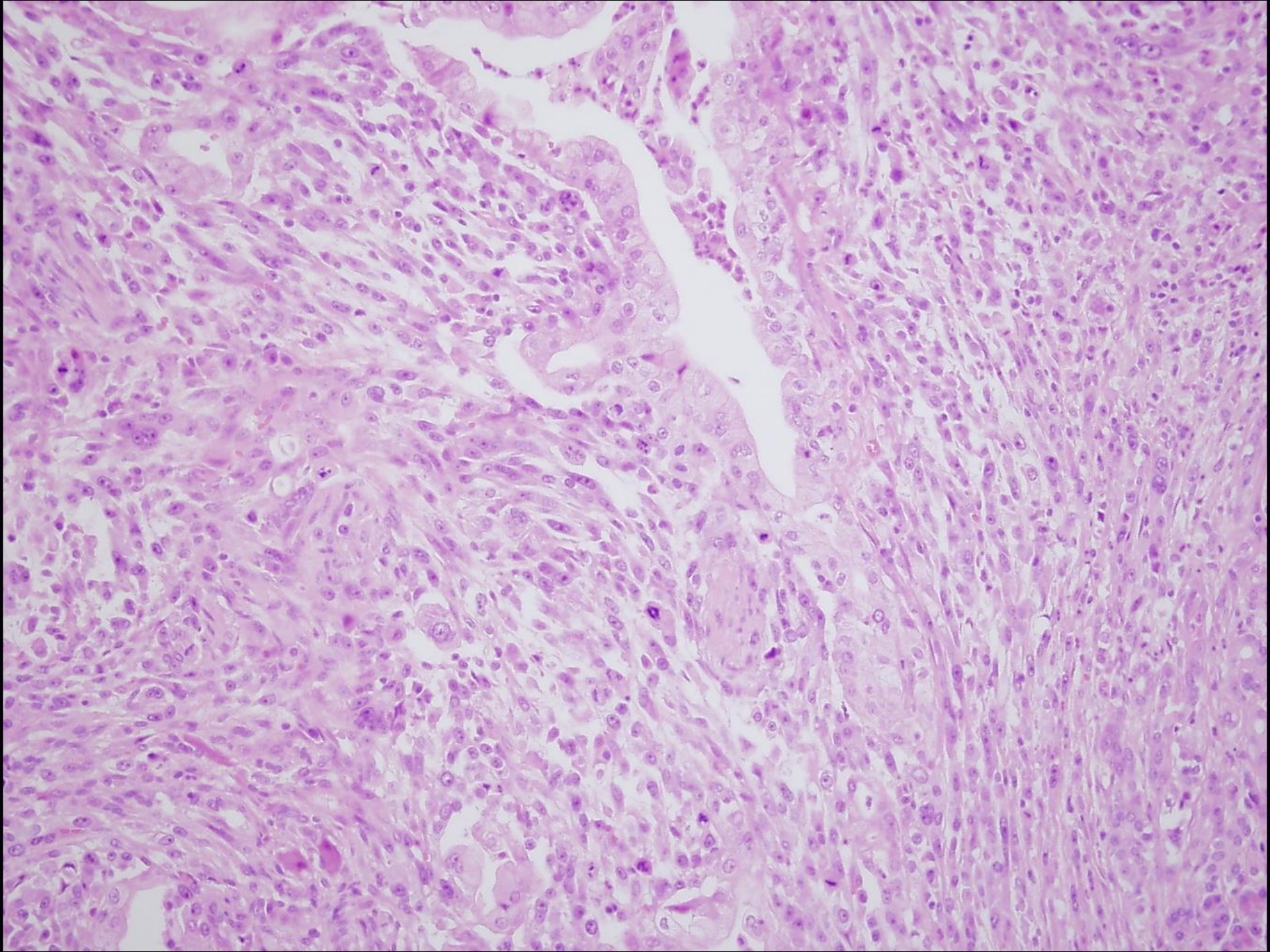




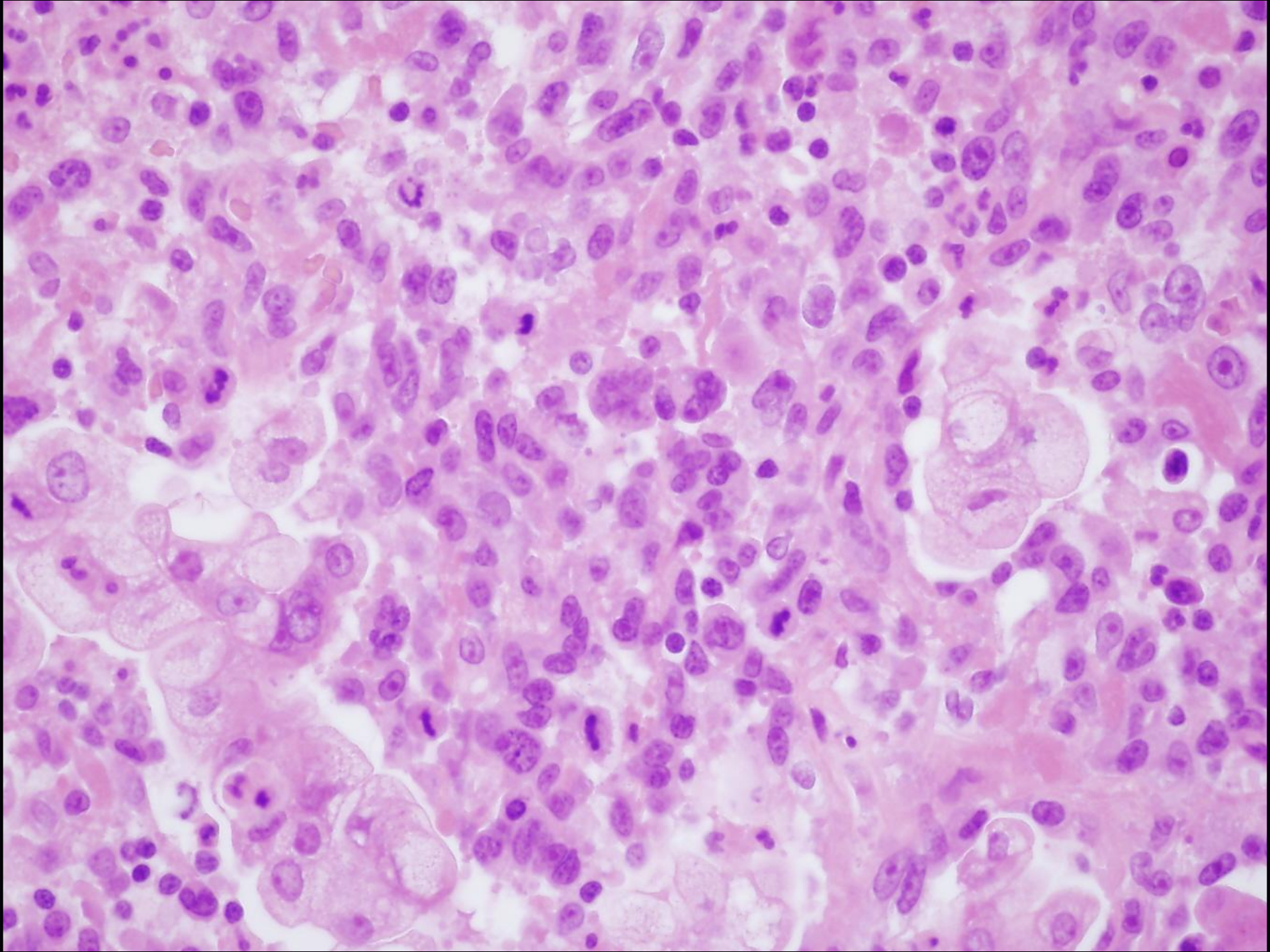
# Sarcomatoid carcinoma



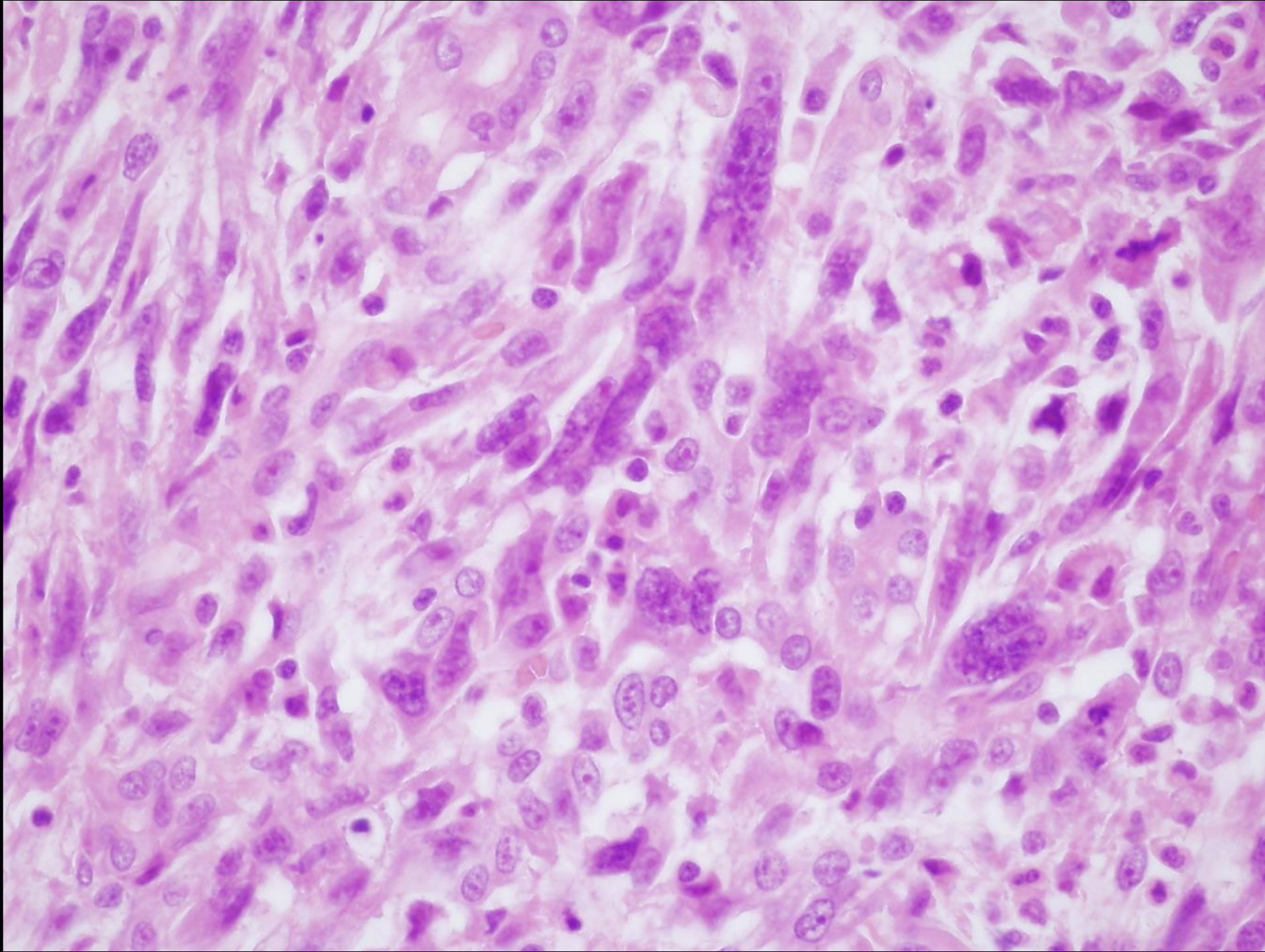




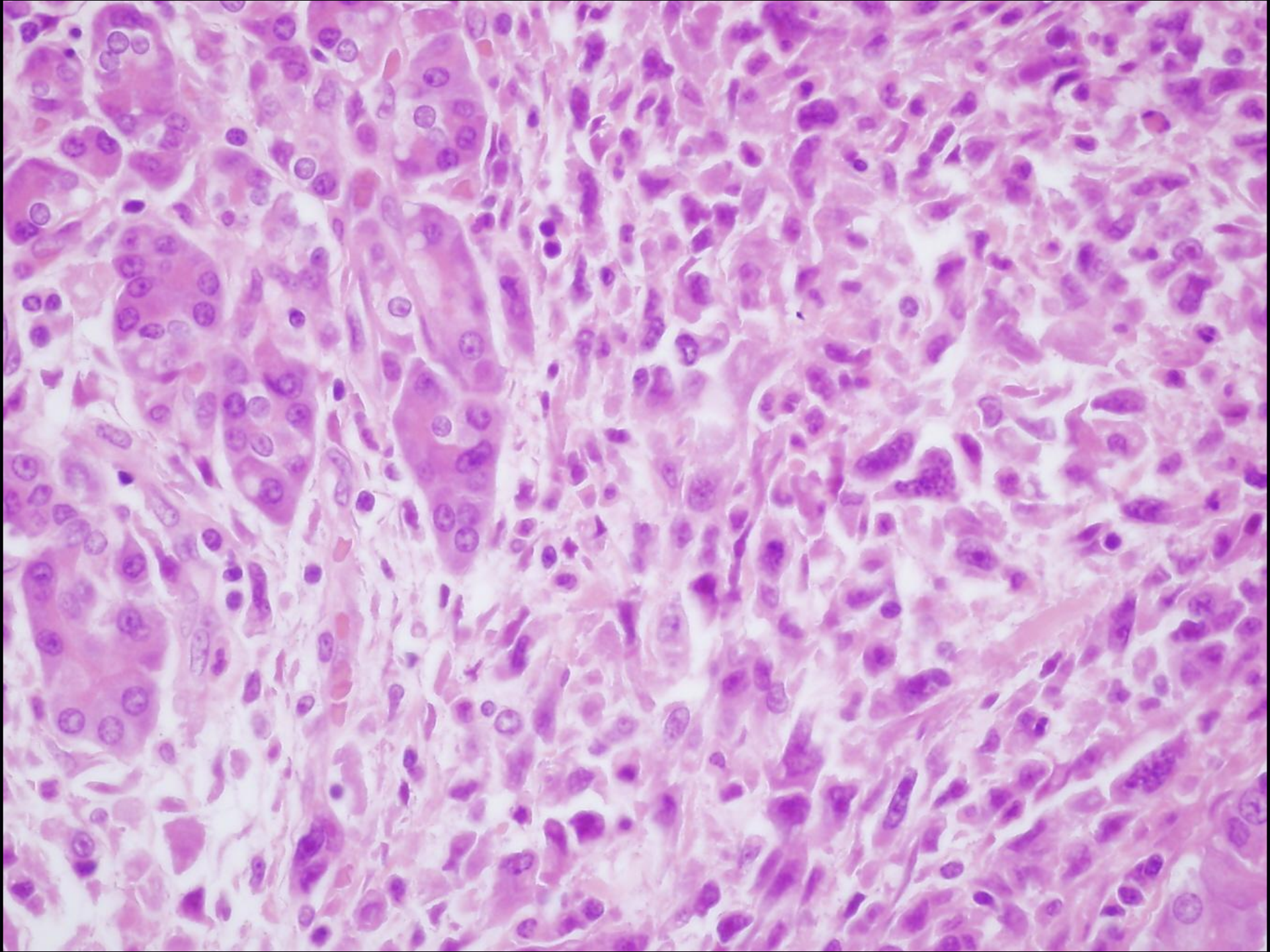












# Alacsony malignitású pancreas tumorok

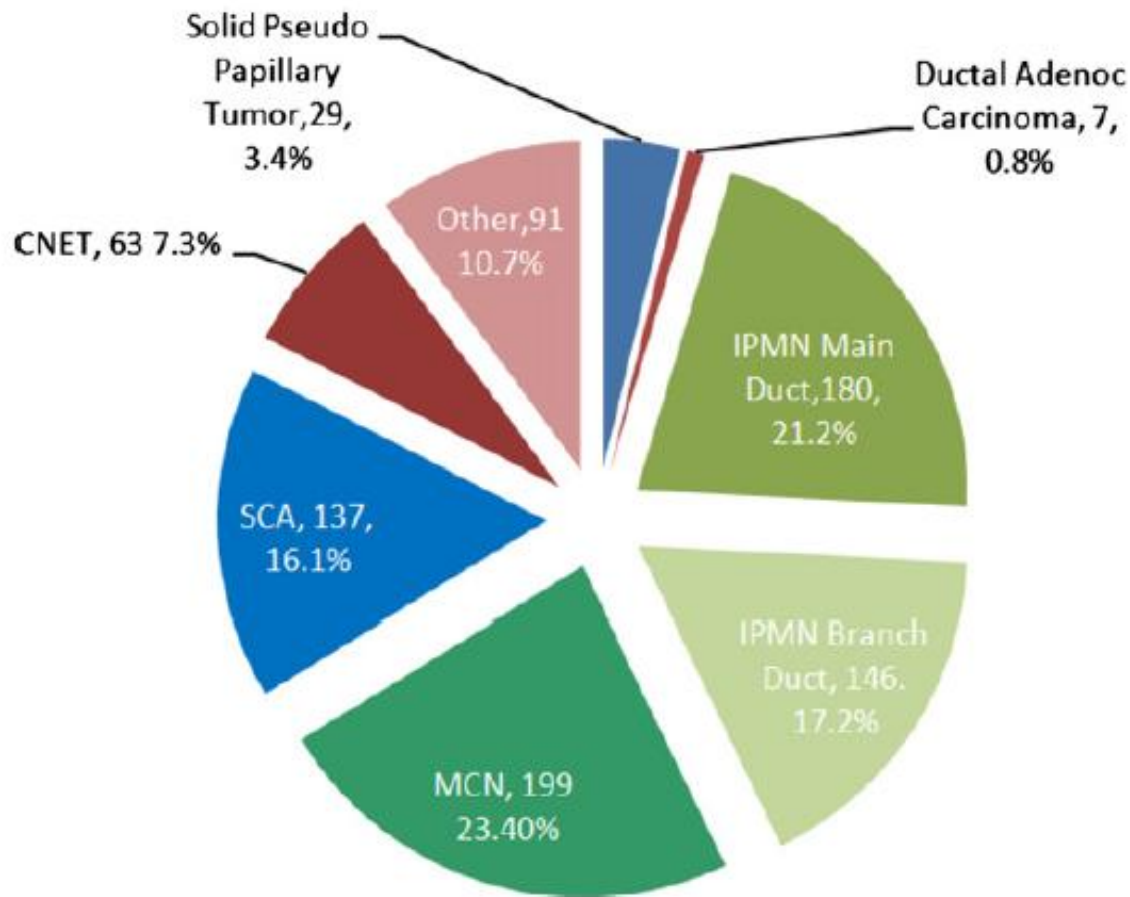
Mucinosus cystikus tumorok  
(nők, farok, ben, bord., mal.)

Intraductális papilláris mucinosus neoplasia  
(Ffi., fej, ben, bord., mal.)

Solid és cystikus papilláris tumor



Típus	Nem	Életkori csúcs	% gyakoriság a cystikus tumorok között	Malignus potenciál
Serosus cystadenoma	Nők	7.évtized	32-39	A reszekció kuratív. Serosus cystadenocarcinoma extrém ritka
Mucinosus cysticus tumor	Nők	5.évtized	10-45	A reszekció kuratív, az atypiától függetlenül. Ha invazív ca.-val társul, rossz prognózis
IPMN	Egyforma	6-7.évtized	21-33	Adenoma és borderline tu. kiváló prognózisú, invazív ca.-val rossz prognózis
Solid pseudopapillaris tumor (PSEN)	Nők	4.évtized	<10	Komplett excisio esetén kiváló prognózis. Indolens tumor, ritkán nodalis és extranodalis met.
Cystikus endocrin tumorok	Egyforma	5-6.évtized	<10	Solid neuroendocrin tumorokhoz hasonló
Ductalis adenoc. cystikus degeneratioval	ffi>nő	6-7.évtized	<1	Roszs prognózis, a solid adenocarcinomához hasonlóan
Acinus sejtes cystadeno - carcinoma	Férfi	6-7.évtized	<1	Agresszív tumor, kicsit kedvezőbb prognózis, mint a ductalis adenoc.

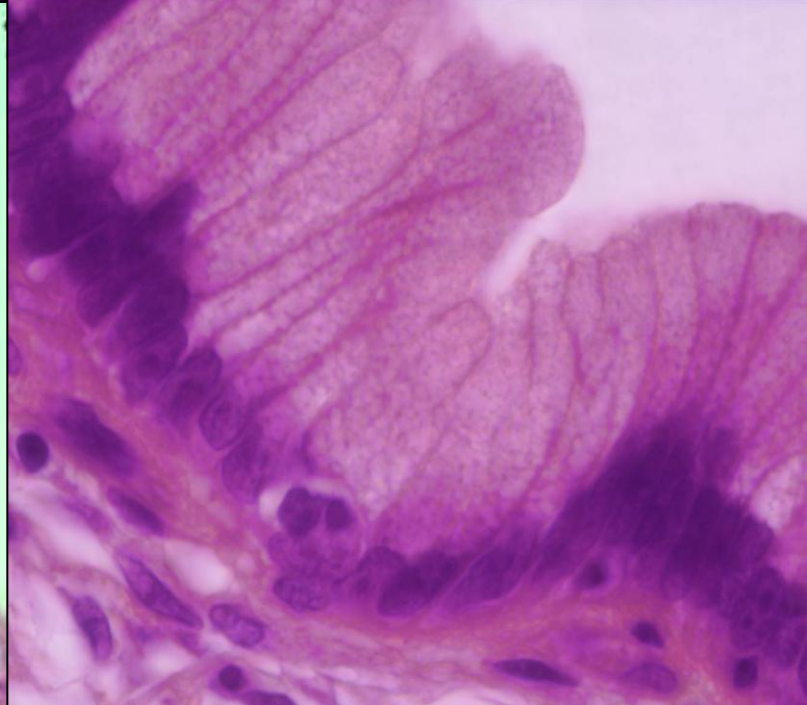
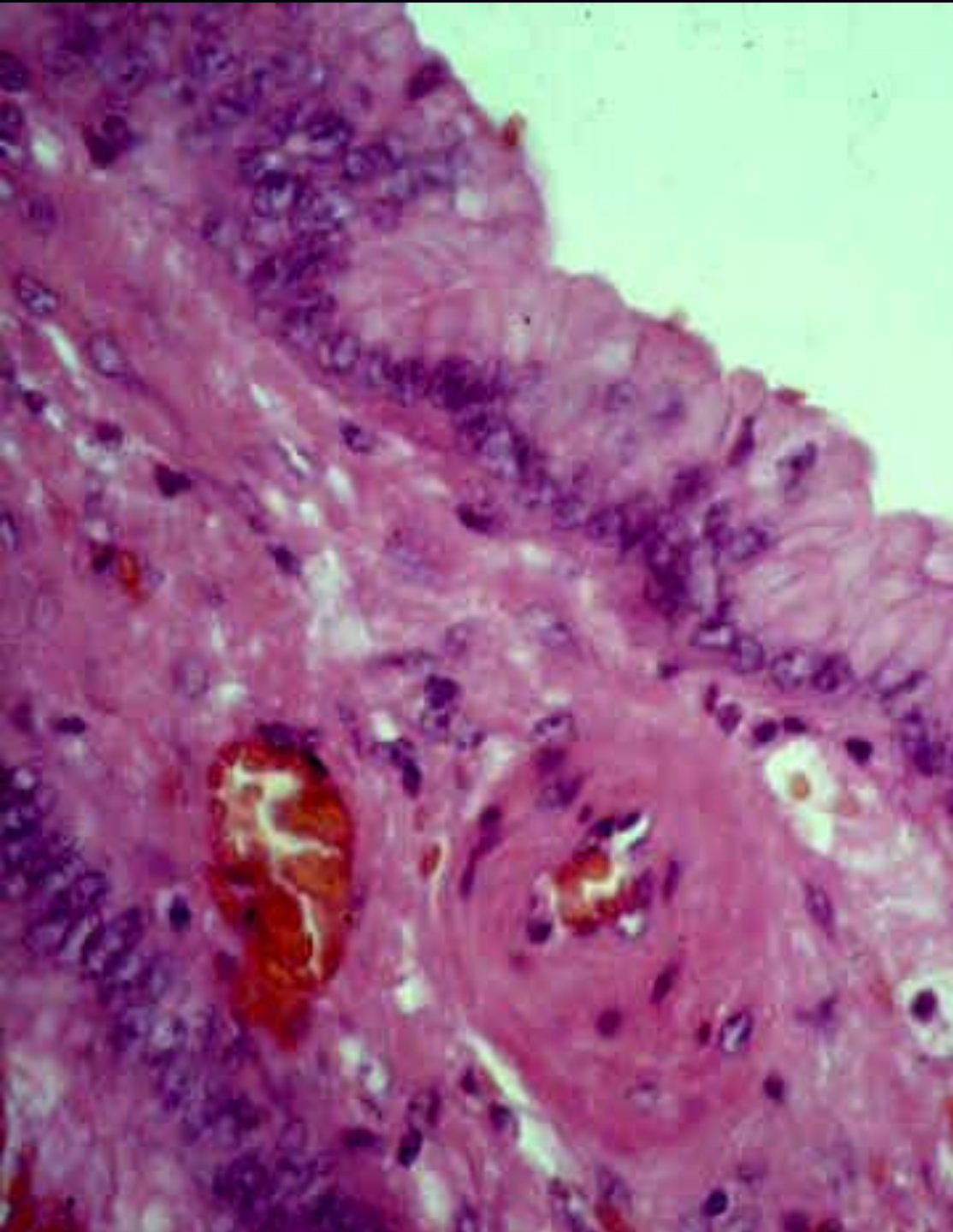


**Fig 1.** Distribution of pathologic diagnoses in 851 resected cystic neoplasms of the pancreas. Lesions classified as “other” included pseudocysts, 25; benign epithelial cysts, 11; acinar cell cystadenomas and cystadenocarcinomas, 3; lymphoepithelial cysts, 5; choledochal cysts, 4; lymphangiomas, 4; hemangiomas, 2; and other unclassified epithelial cysts.



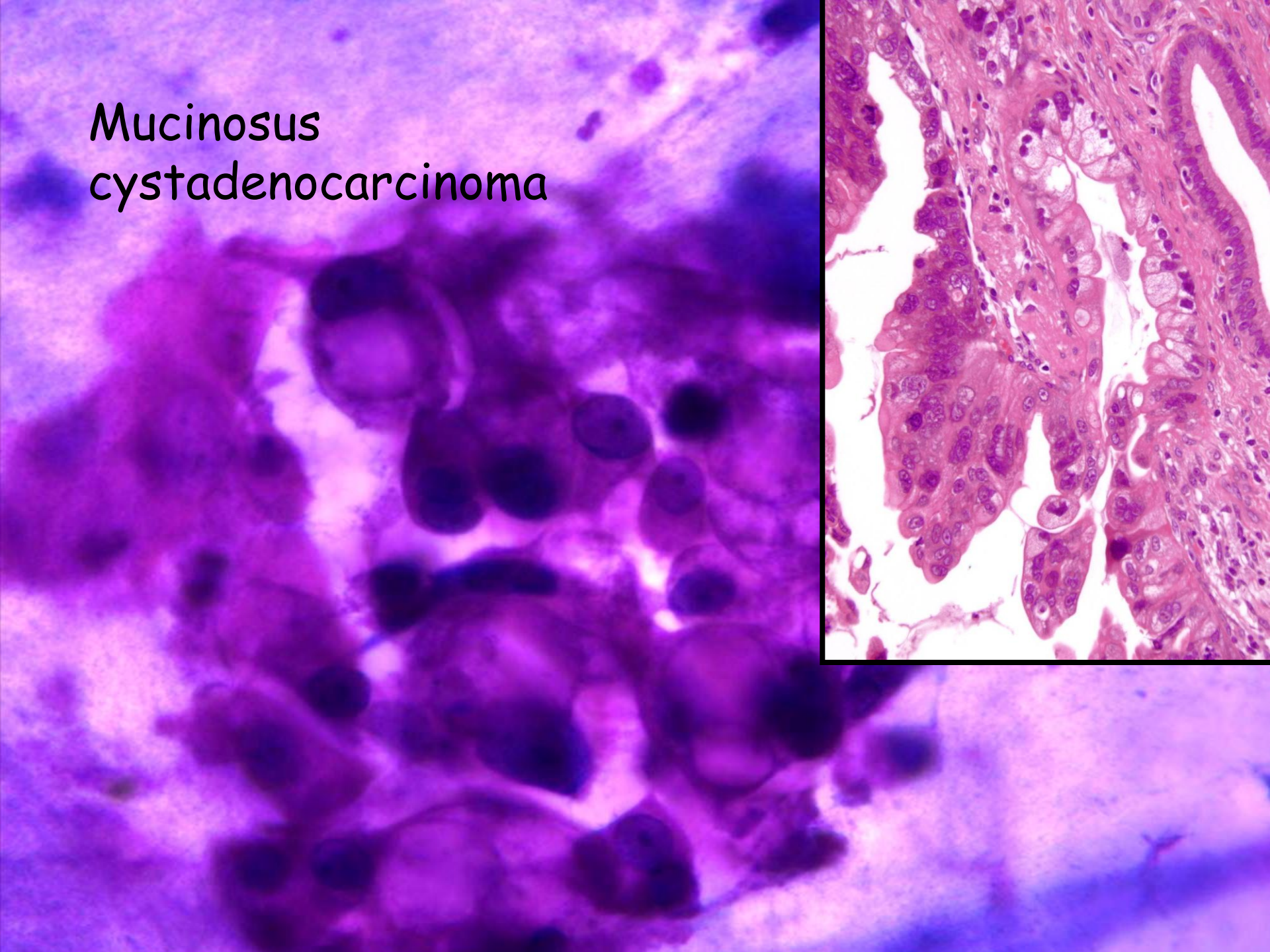
# Cystic mucinous neoplasia







Mucinosus  
cystadenocarcinoma



# Intraductalis papilláris mucinosus neoplasia

A ductus Wirsungianust bélelő, gastroentericus differenciációjú, mucint termelő hengerhámsejtek papillaris felépítésű proliferációja.

A fő pancreasvezeték valamely nagyobb ágában is létrejöhet.



# Vilman needle



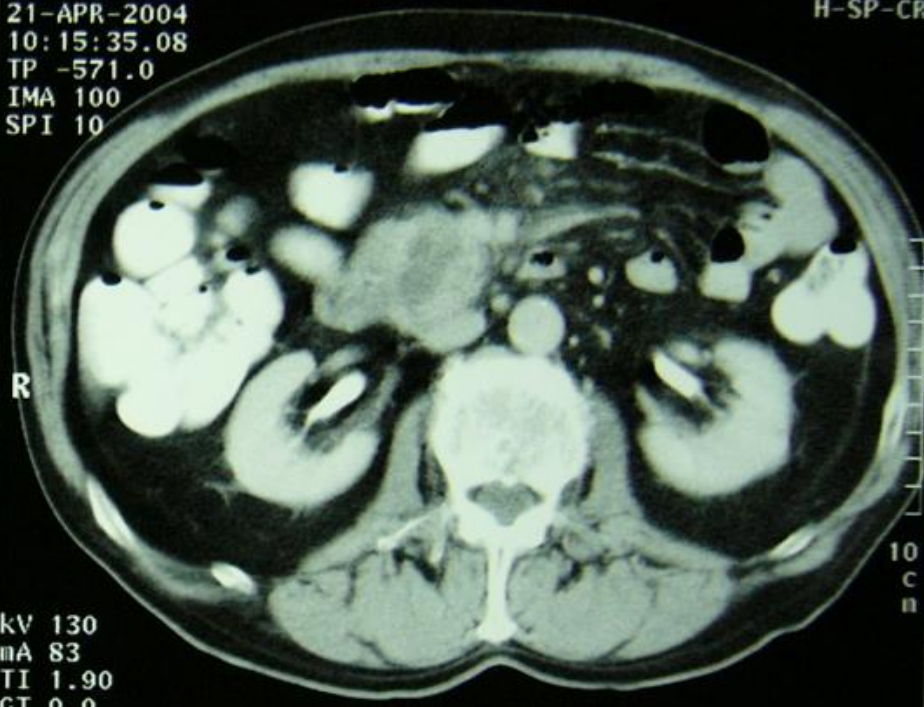


IPMN





02-OCT-1929  
21-APR-2004  
10:15:35.08  
TP -571.0  
IMA 100  
SPI 10



kV 130  
mA 83  
TI 1.90  
GT 0.0

VB41A  
H-SP-CR

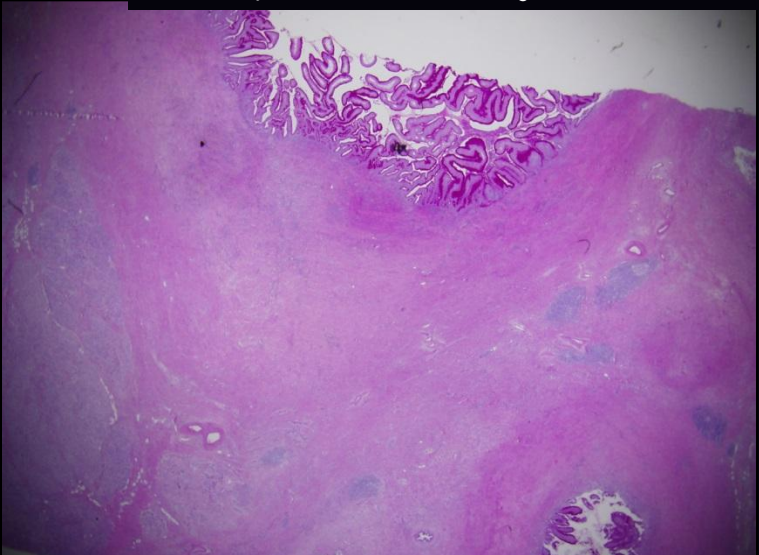
02-OCT-1929  
21-APR-2004  
10:15:33.57  
TP -563.0  
IMA 99  
SPI 10



kV 130  
mA 83  
TI 1.90  
GT 0.0  
SL10.0/1  
345 3/0  
AB40 S0  
121S6>4

SOMATOM AR.SF  
VB41/  
H-SP-CR

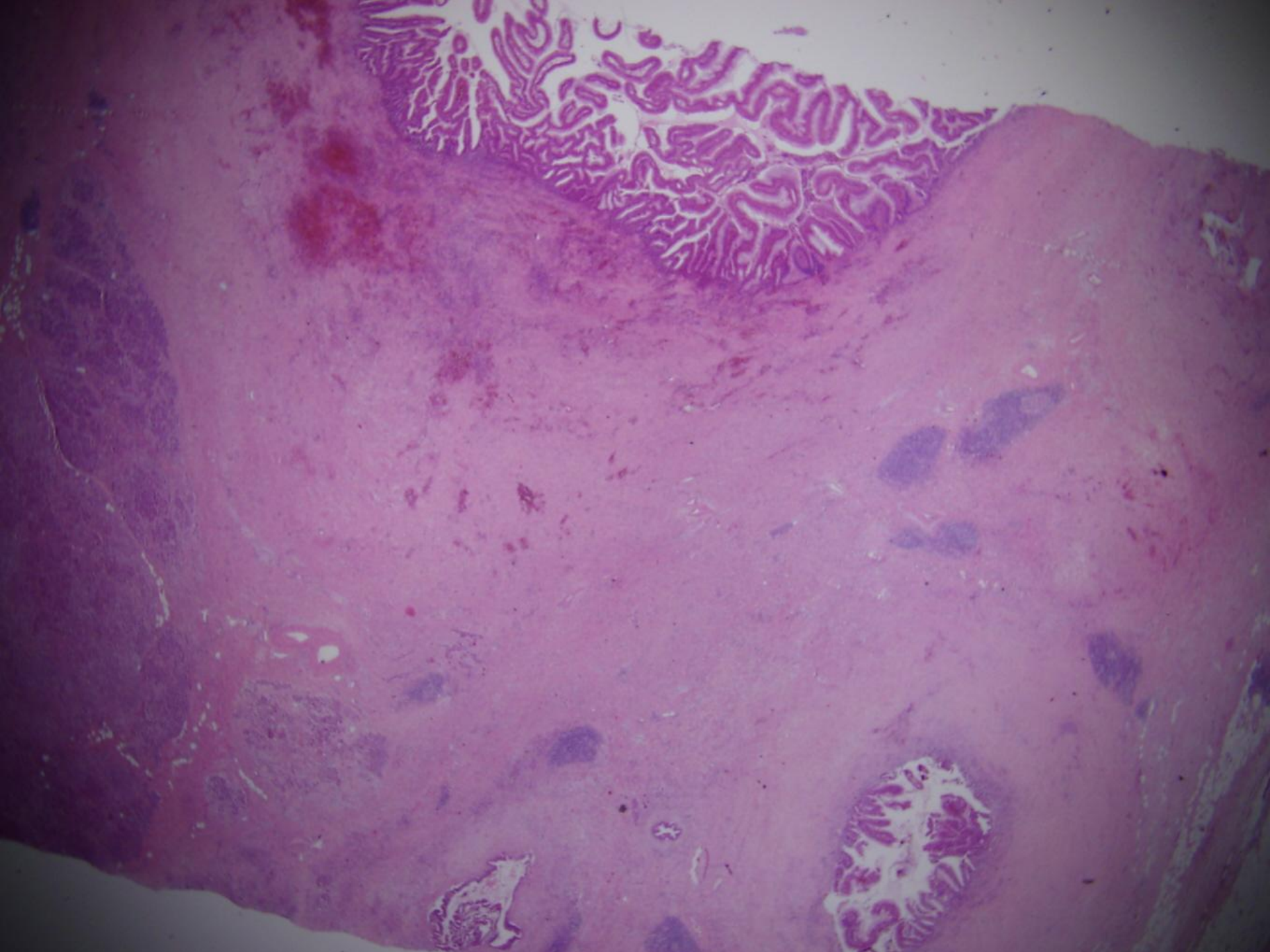
74 éves ffi.  
Hasi fájdalom -  
CT: pancreas feji laesio



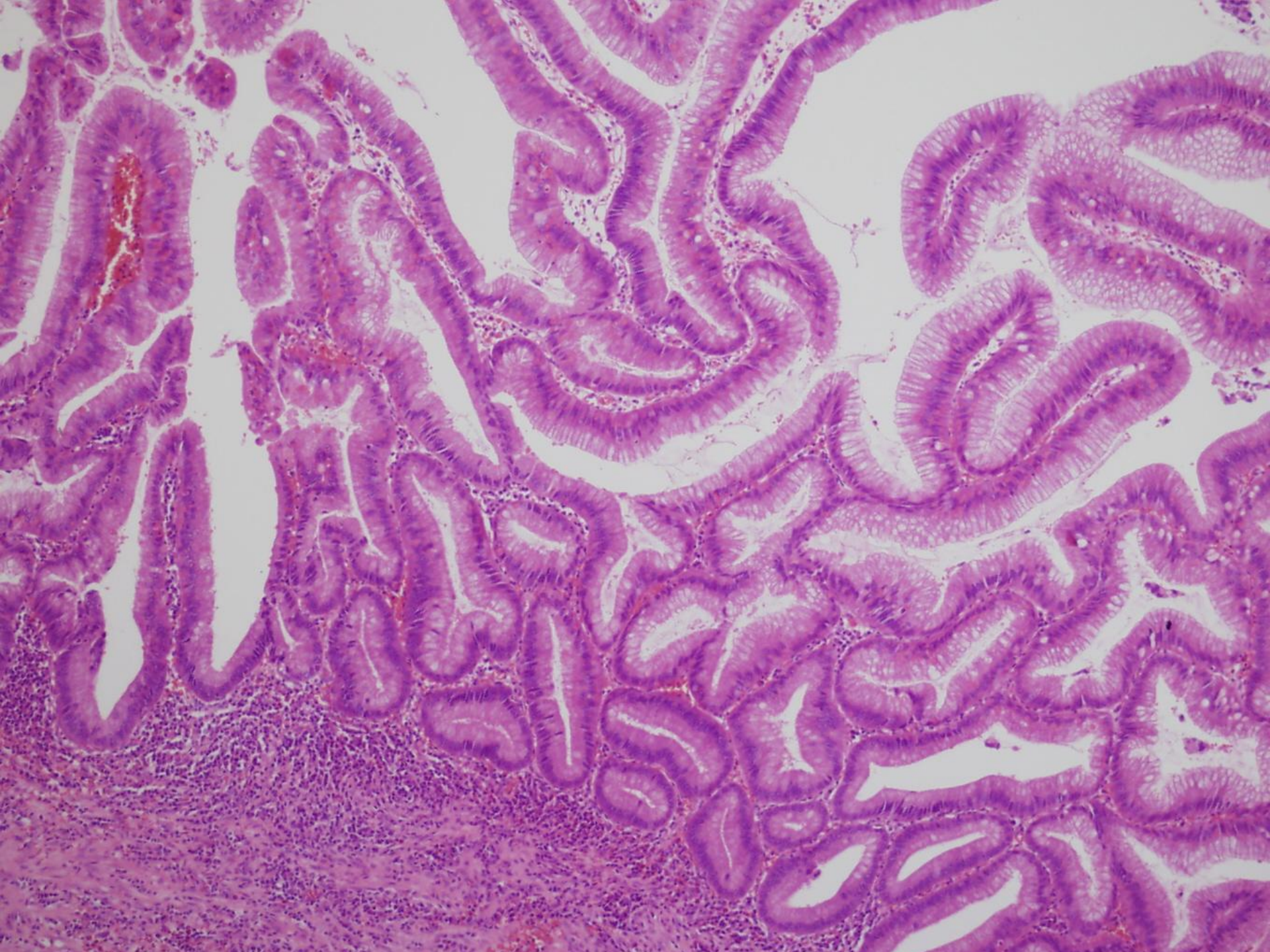




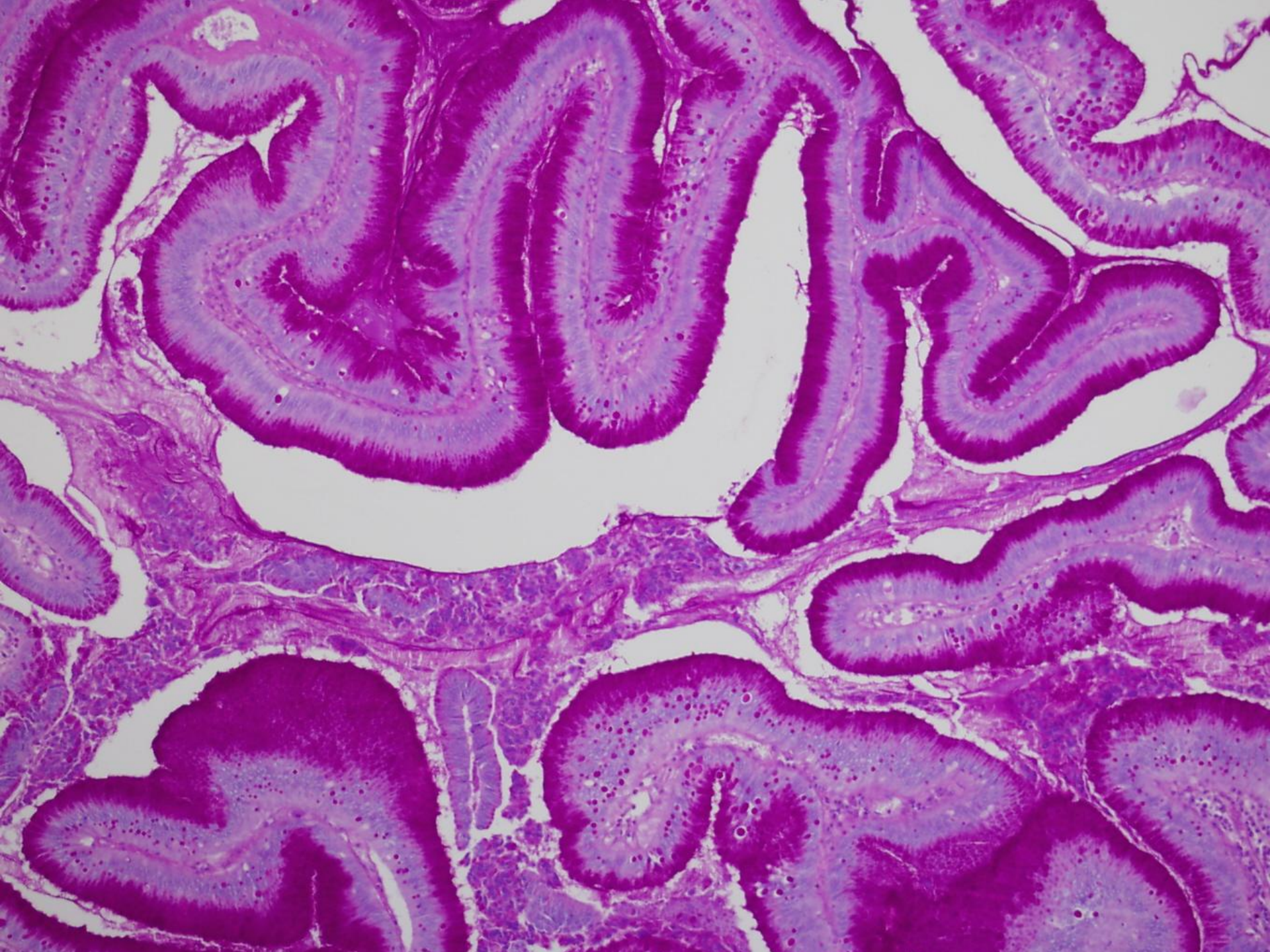




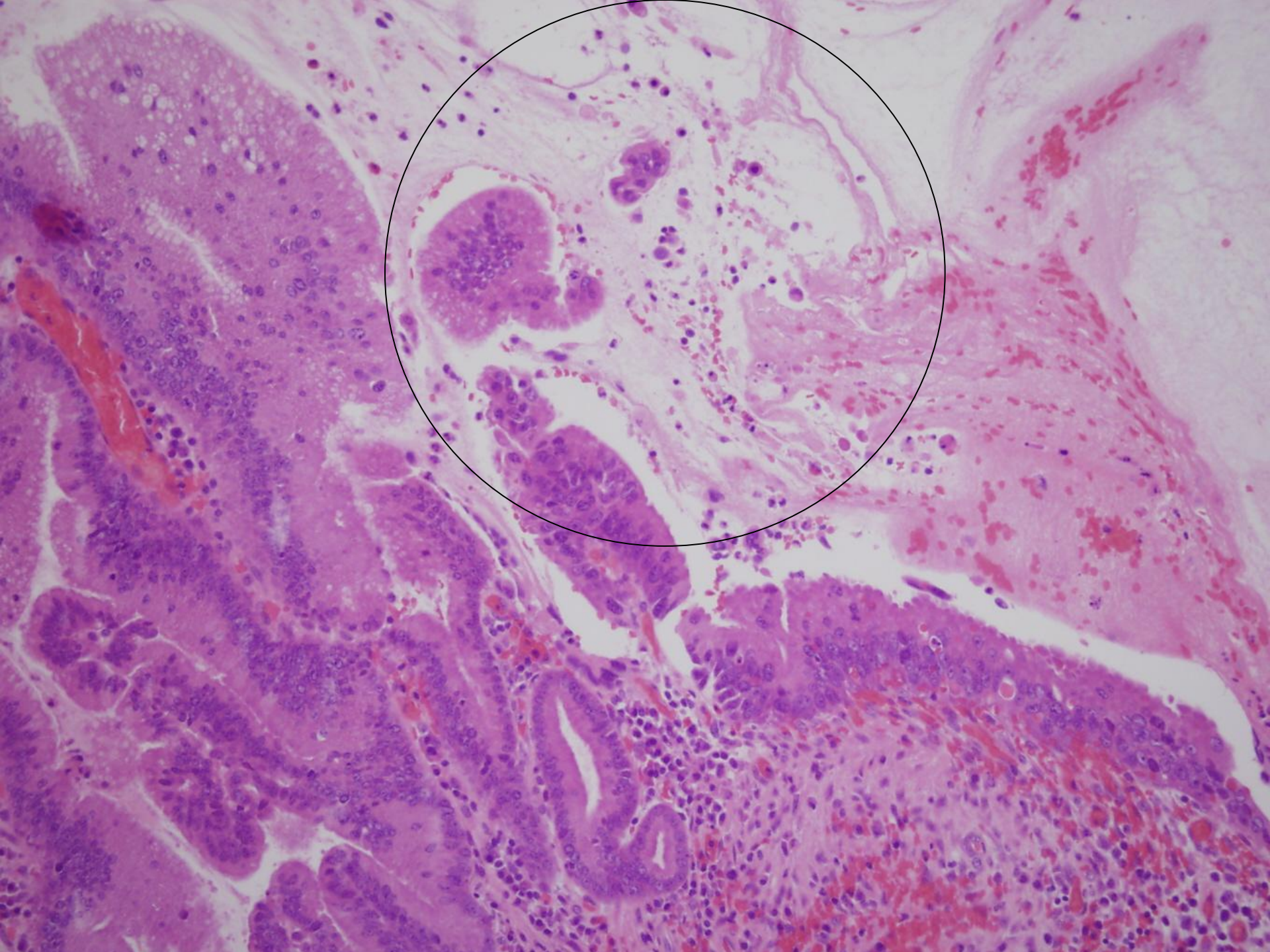




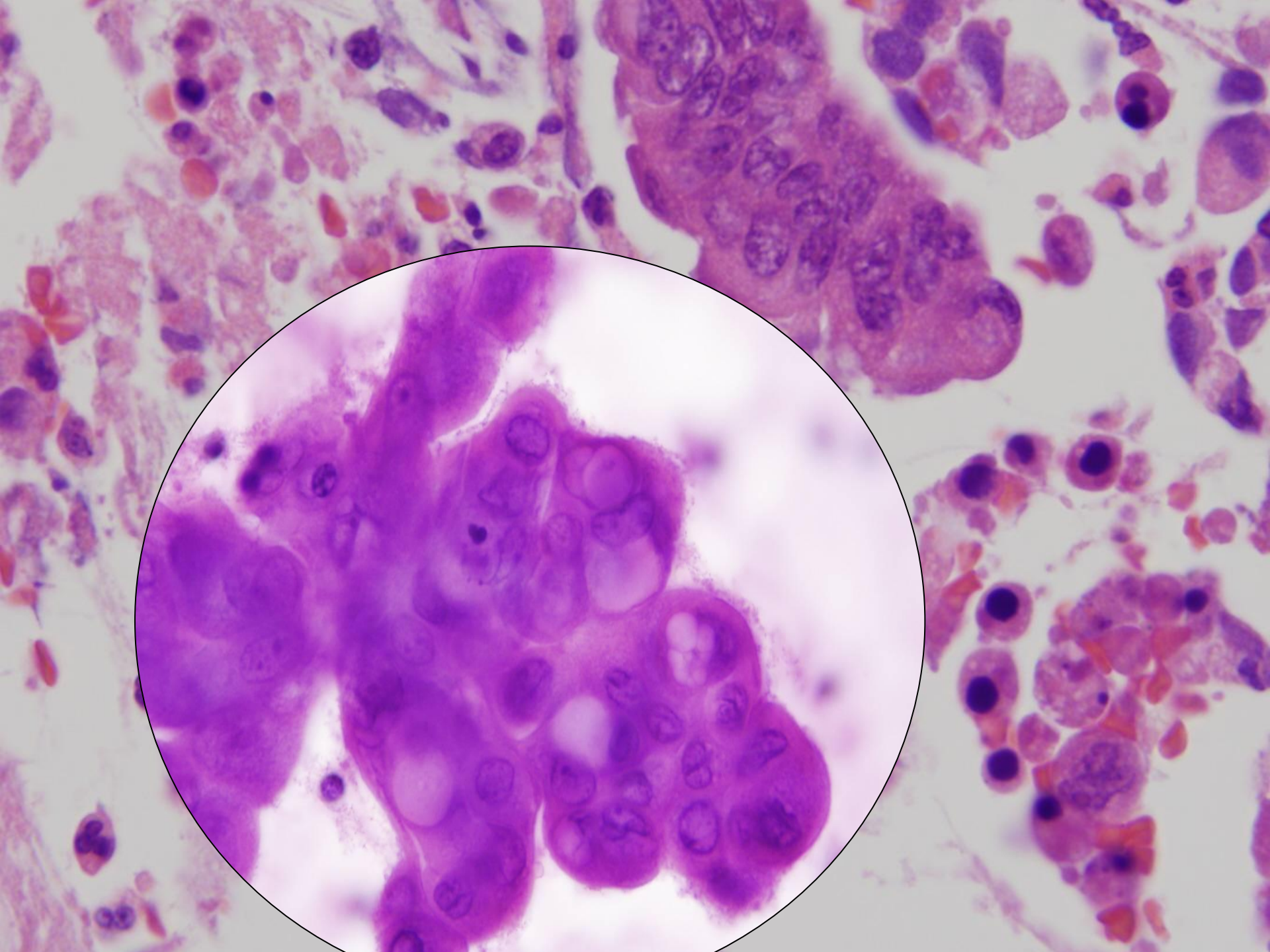




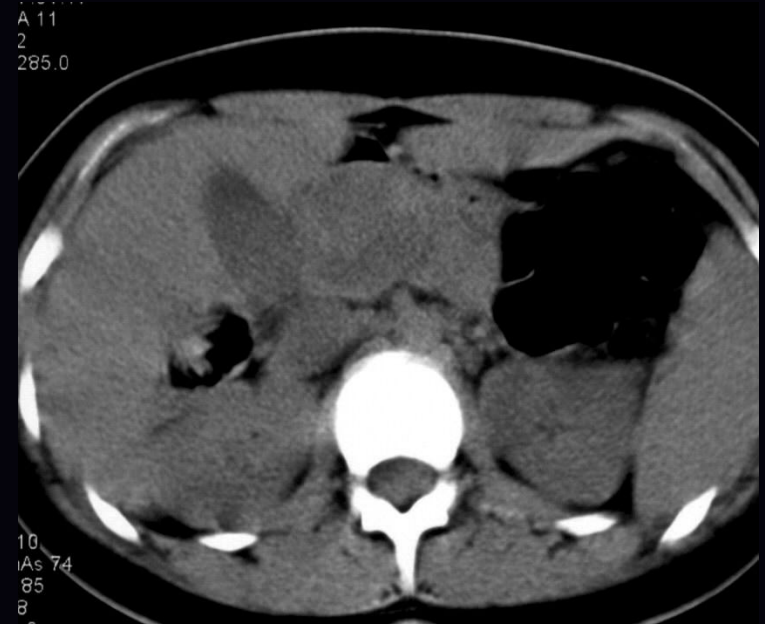
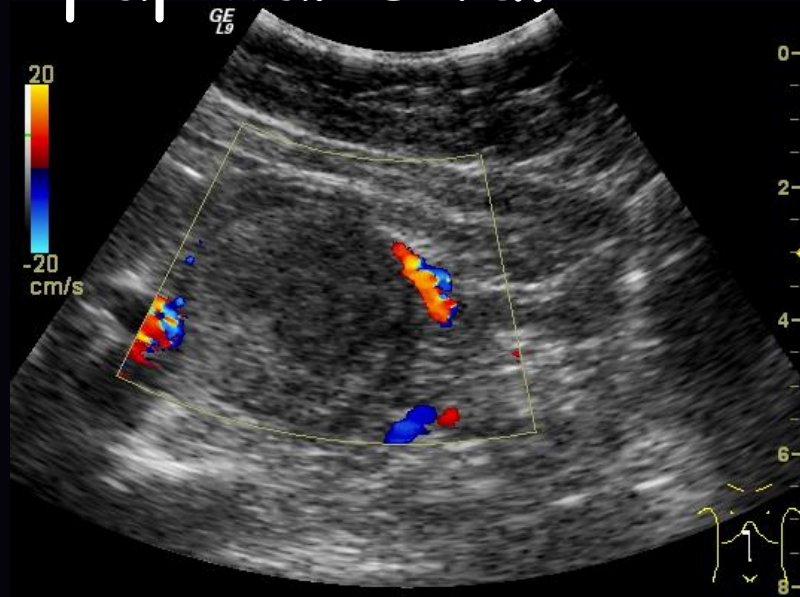




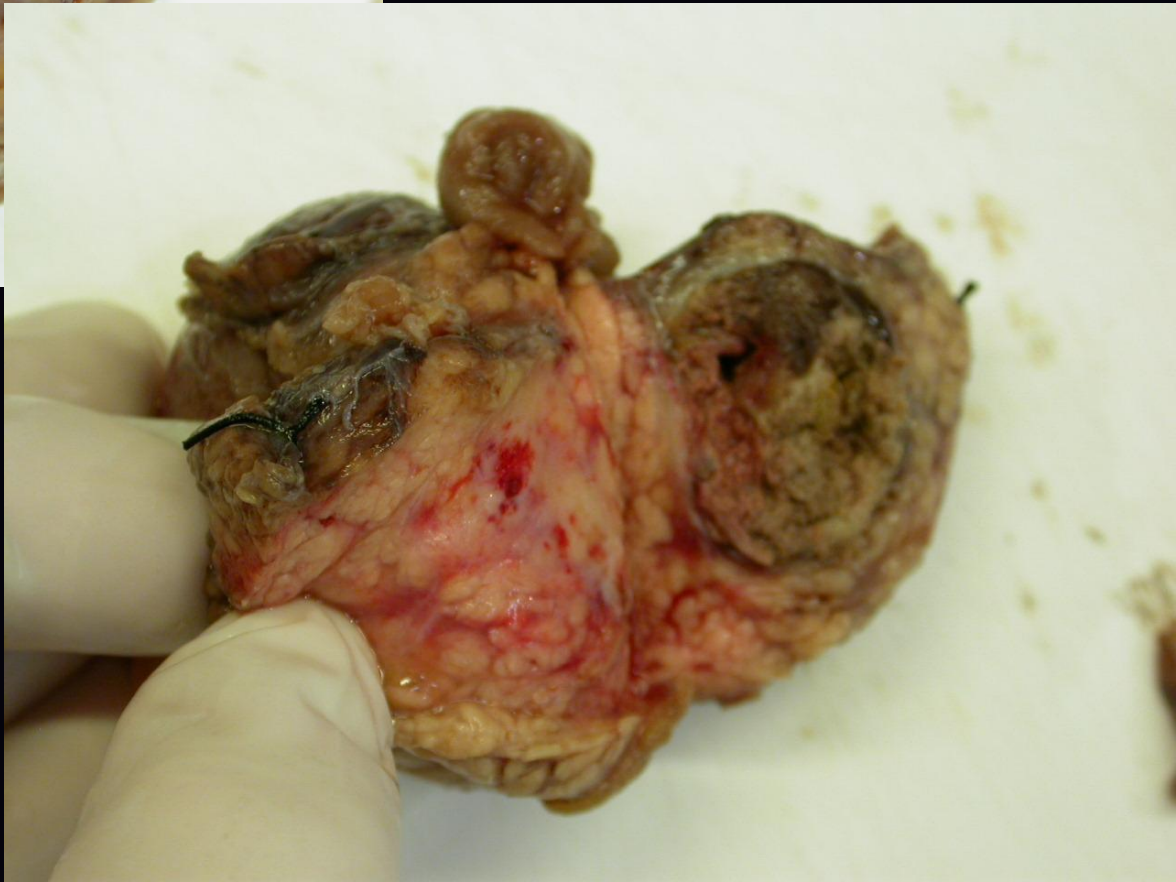




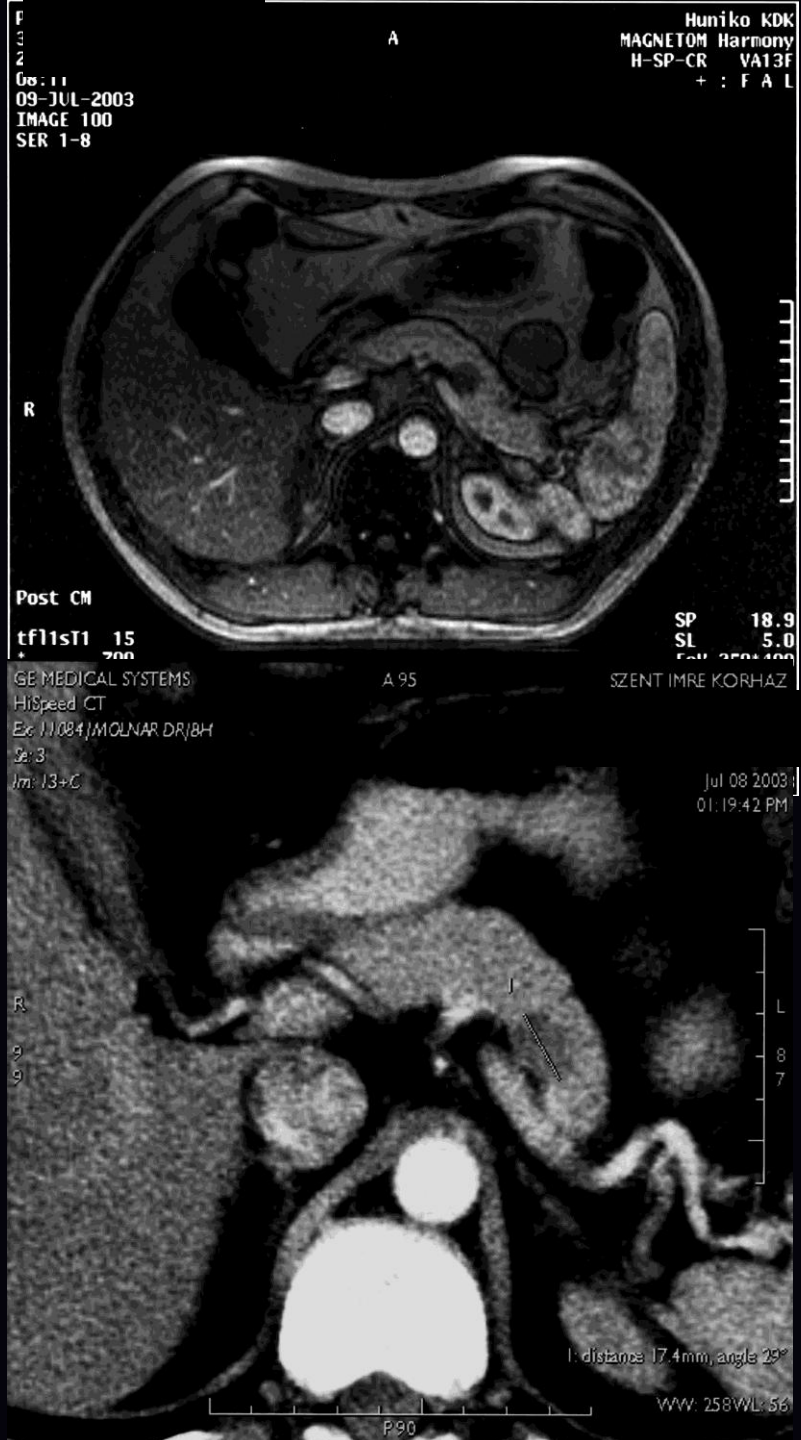
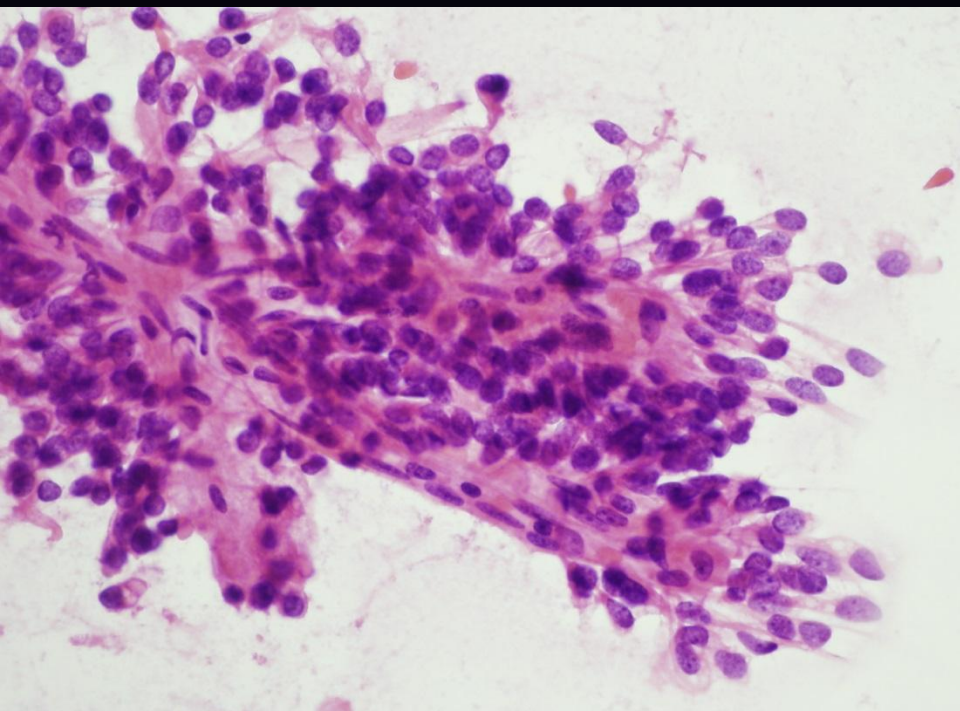
# Solid és cystikus papilláris tu.



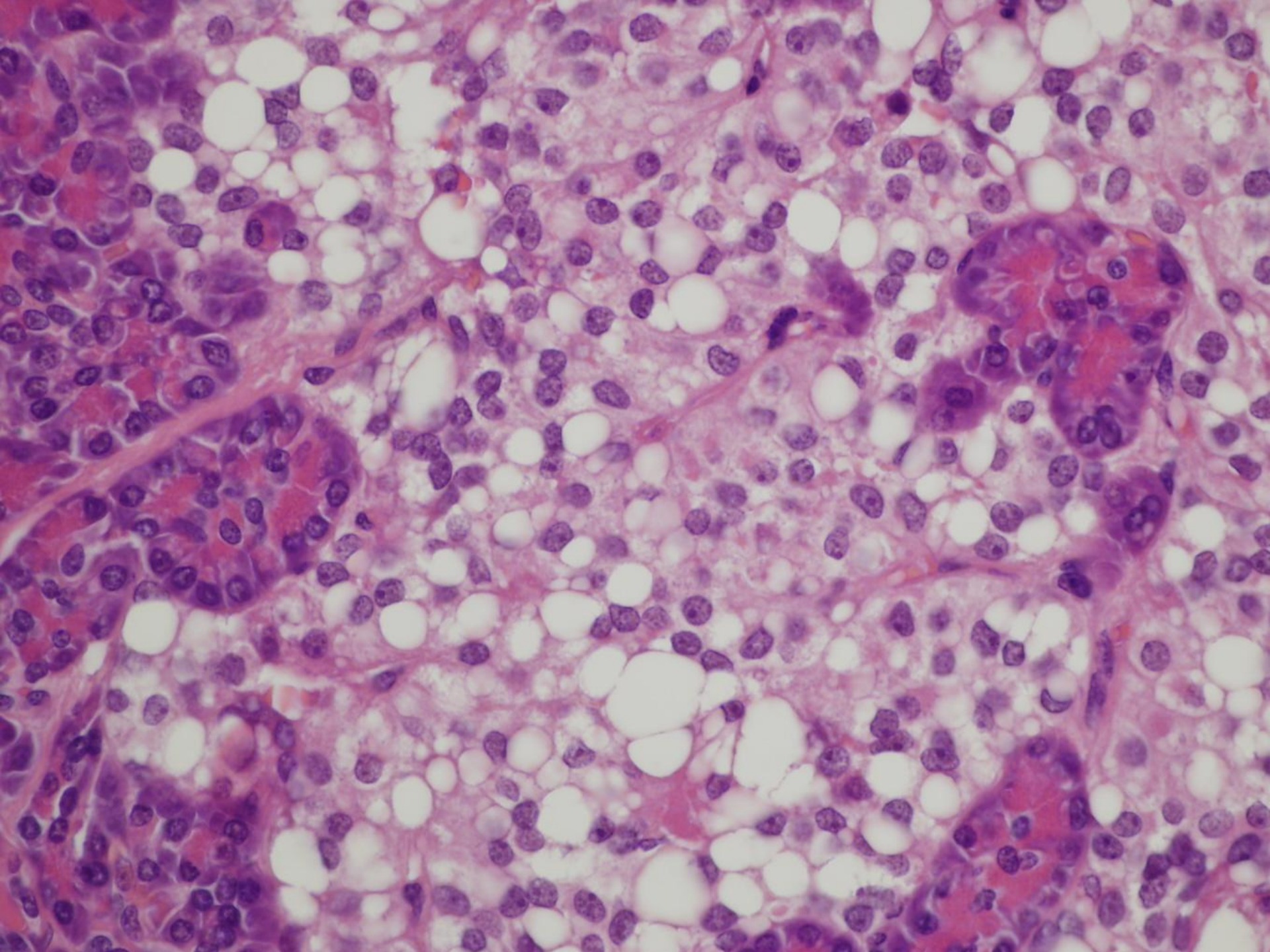




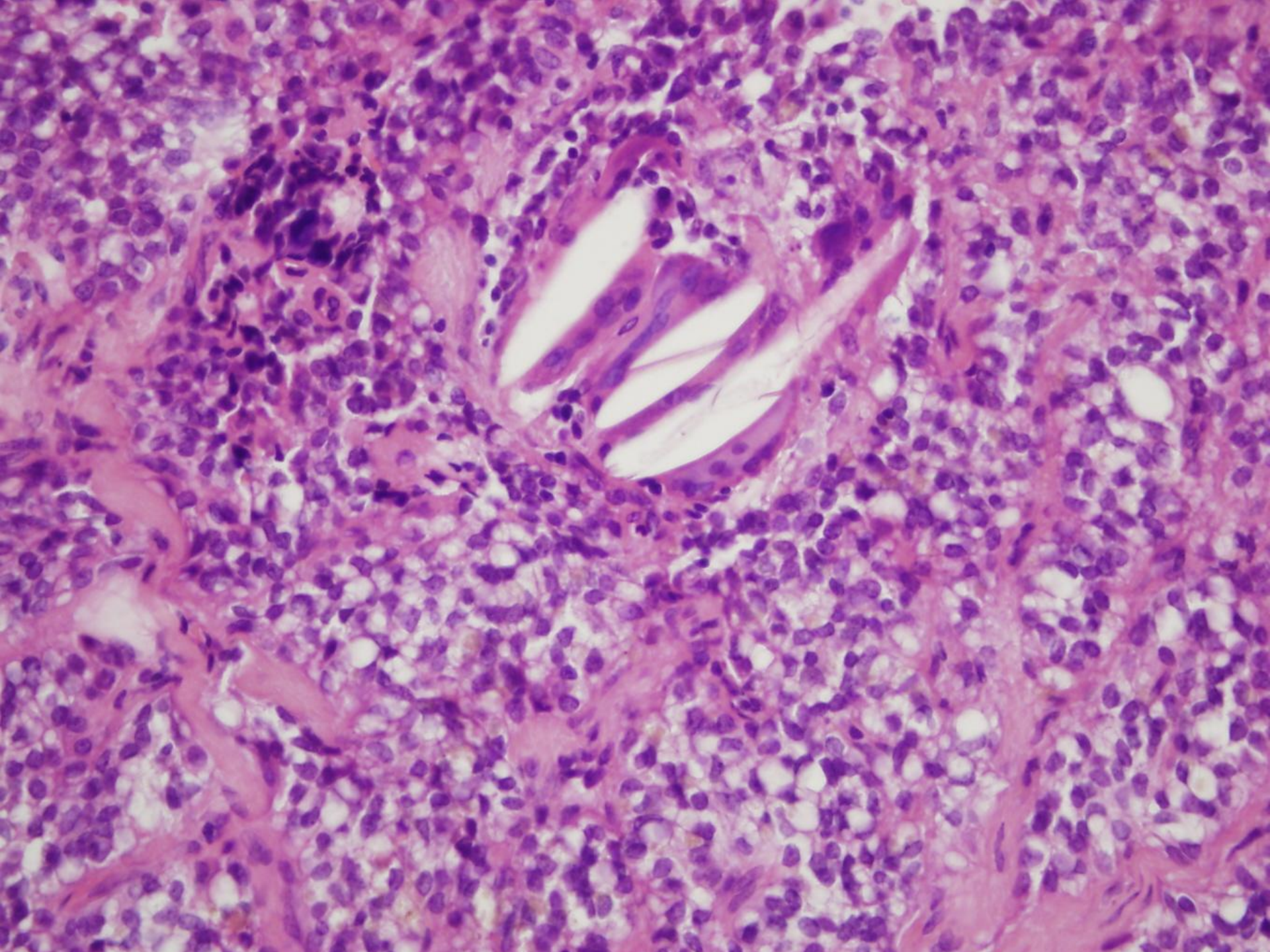
# Solid és cystikus papilláris tumor













# Benignus pancreas tumorok

Serosus cystadenoma

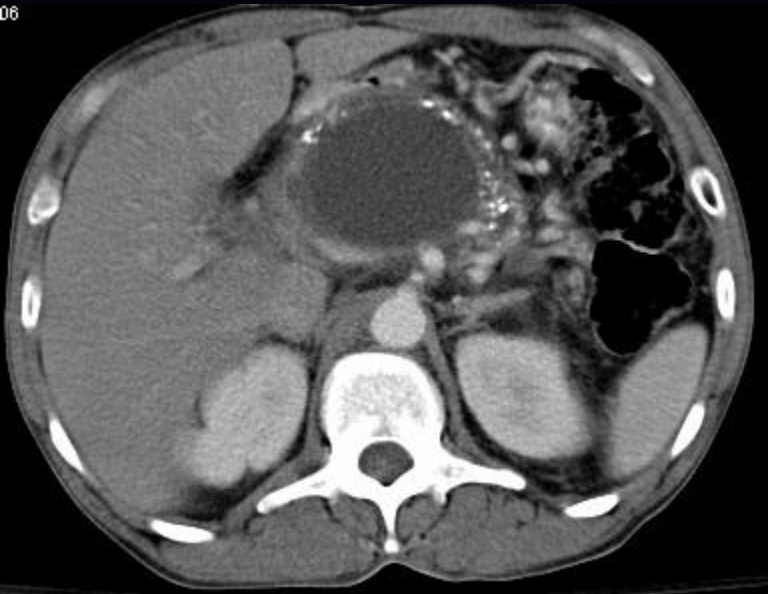
Cisztikus teratoma

Lymphangioma

Szigetsejtes daganatok (!)

Lágyrésztumorok

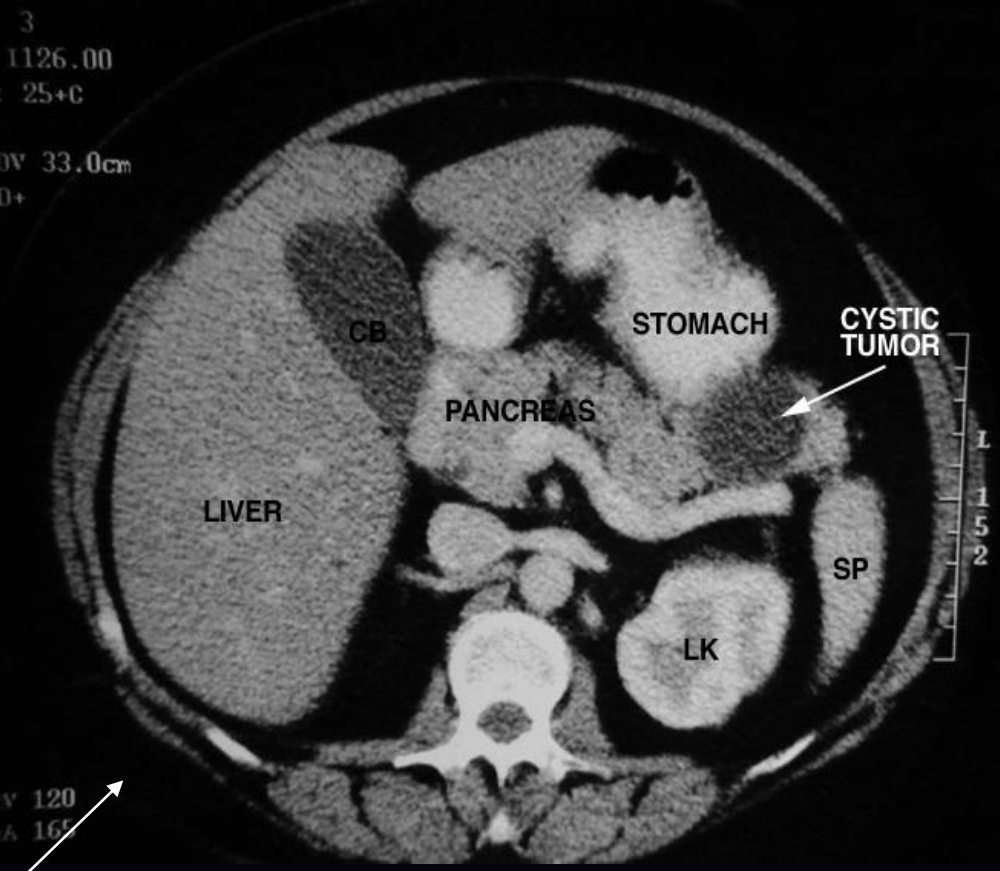
06



ie: 3  
 CY 1126.00  
 Im: 25+C  
 DFOV 33.0cm  
 STD+

R  
 1  
 7  
 8

kV 120  
 mA 160

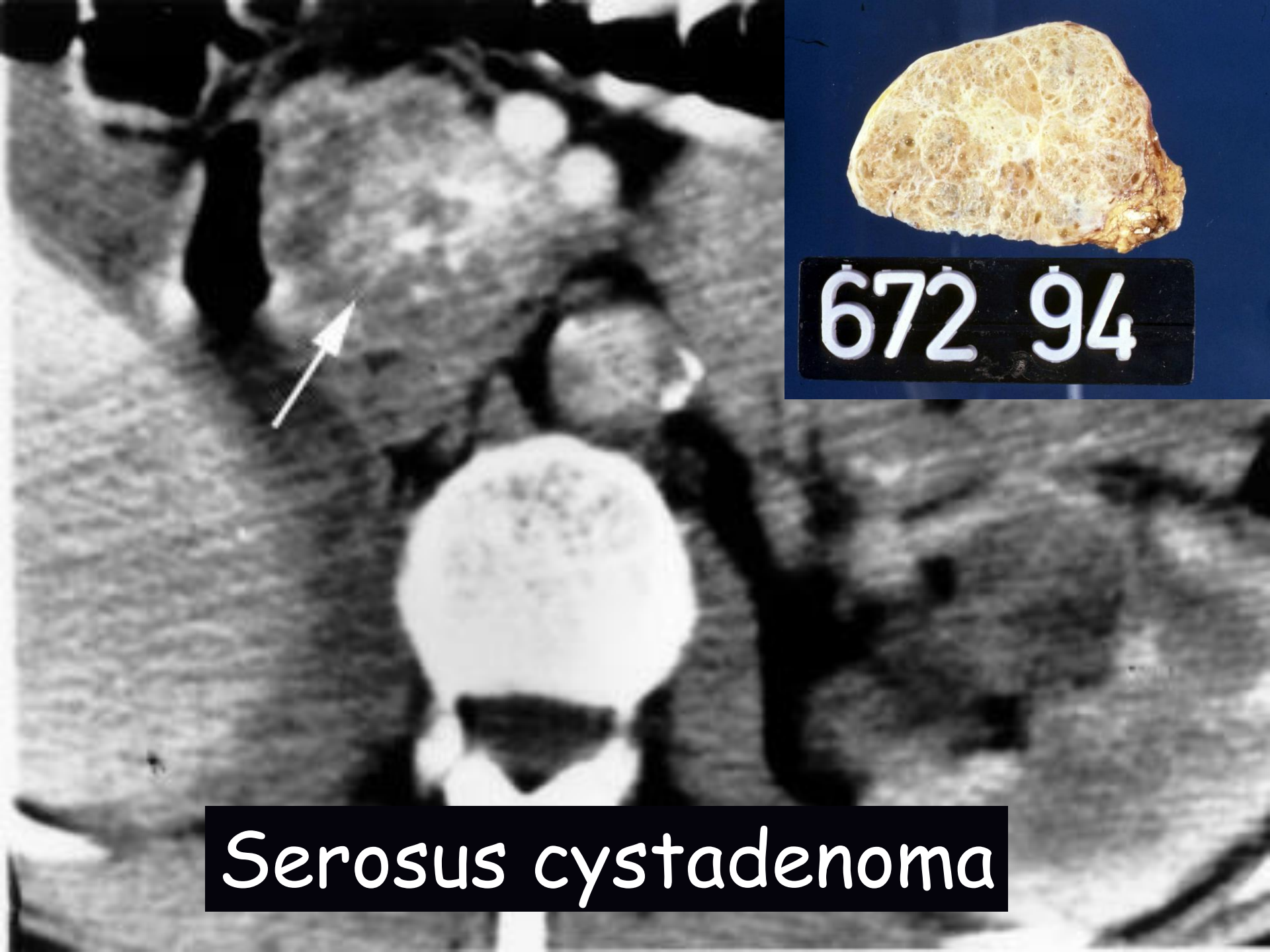


L  
 1  
 5  
 2

Pseudocysták  
 diff.dg.:  
 cysticus tumorok







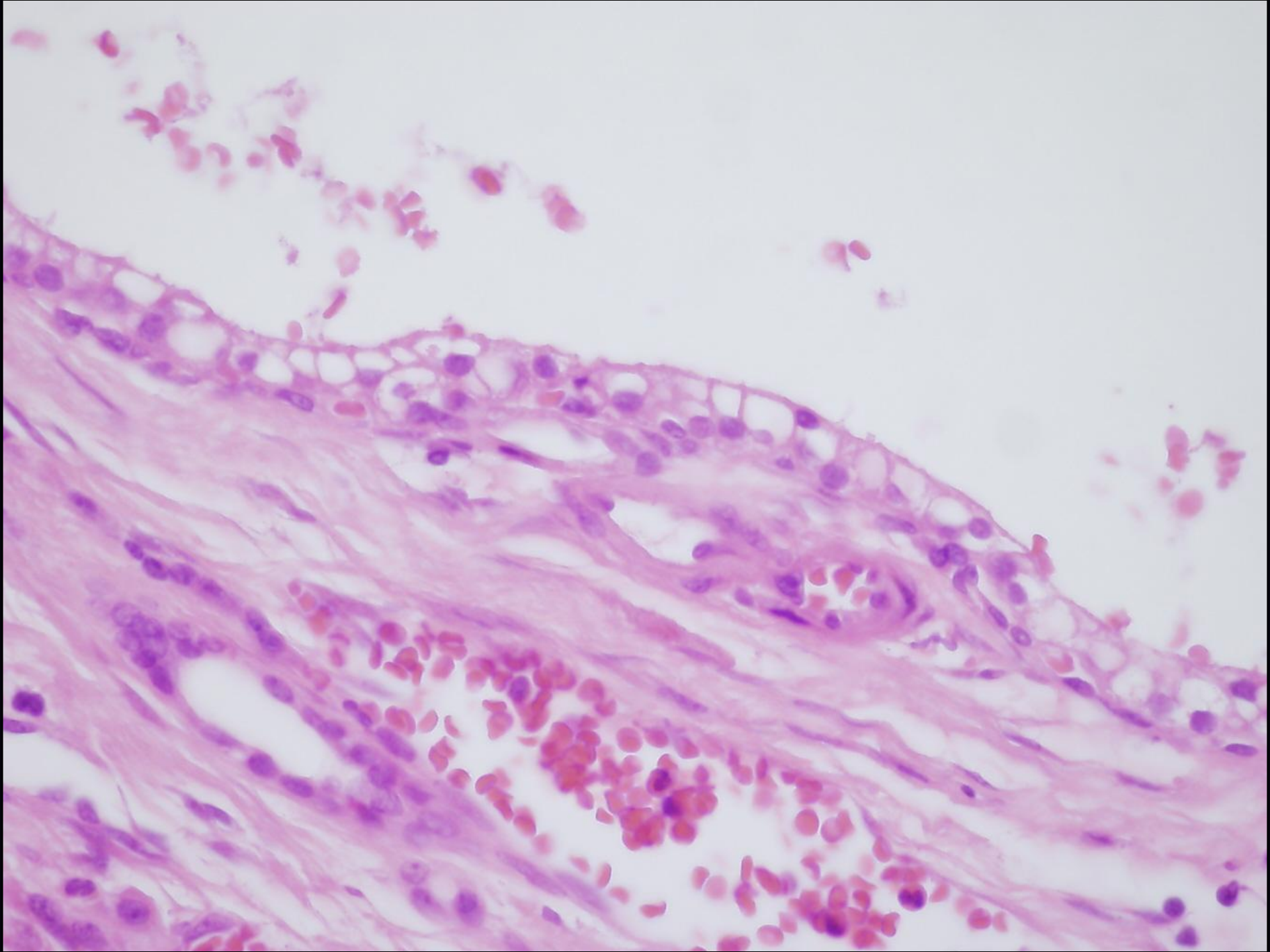
672 94

Serosus cystadenoma

# Serosus cystadenoma





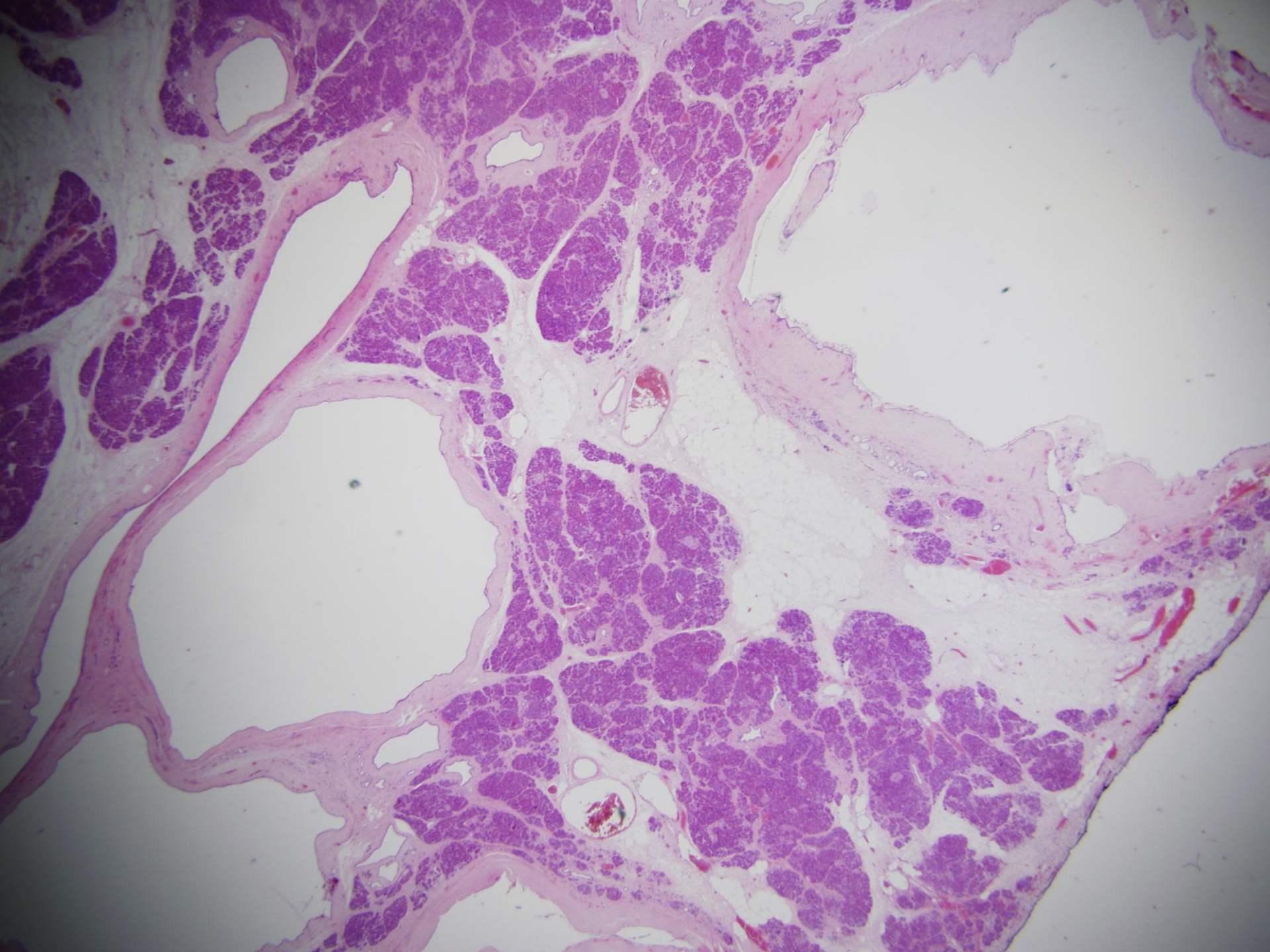




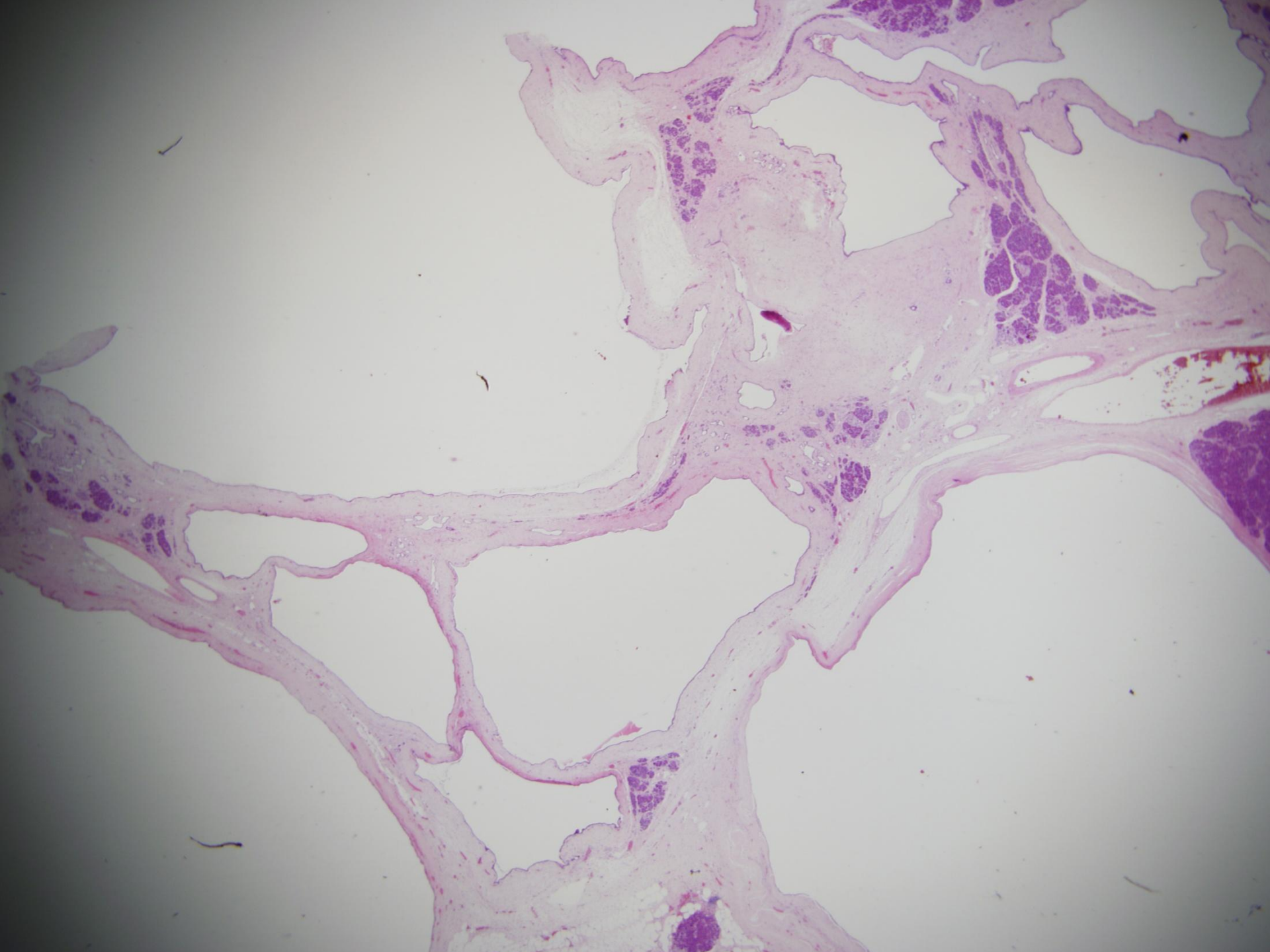
4854/10 1/2













# Metastaticus daganatok

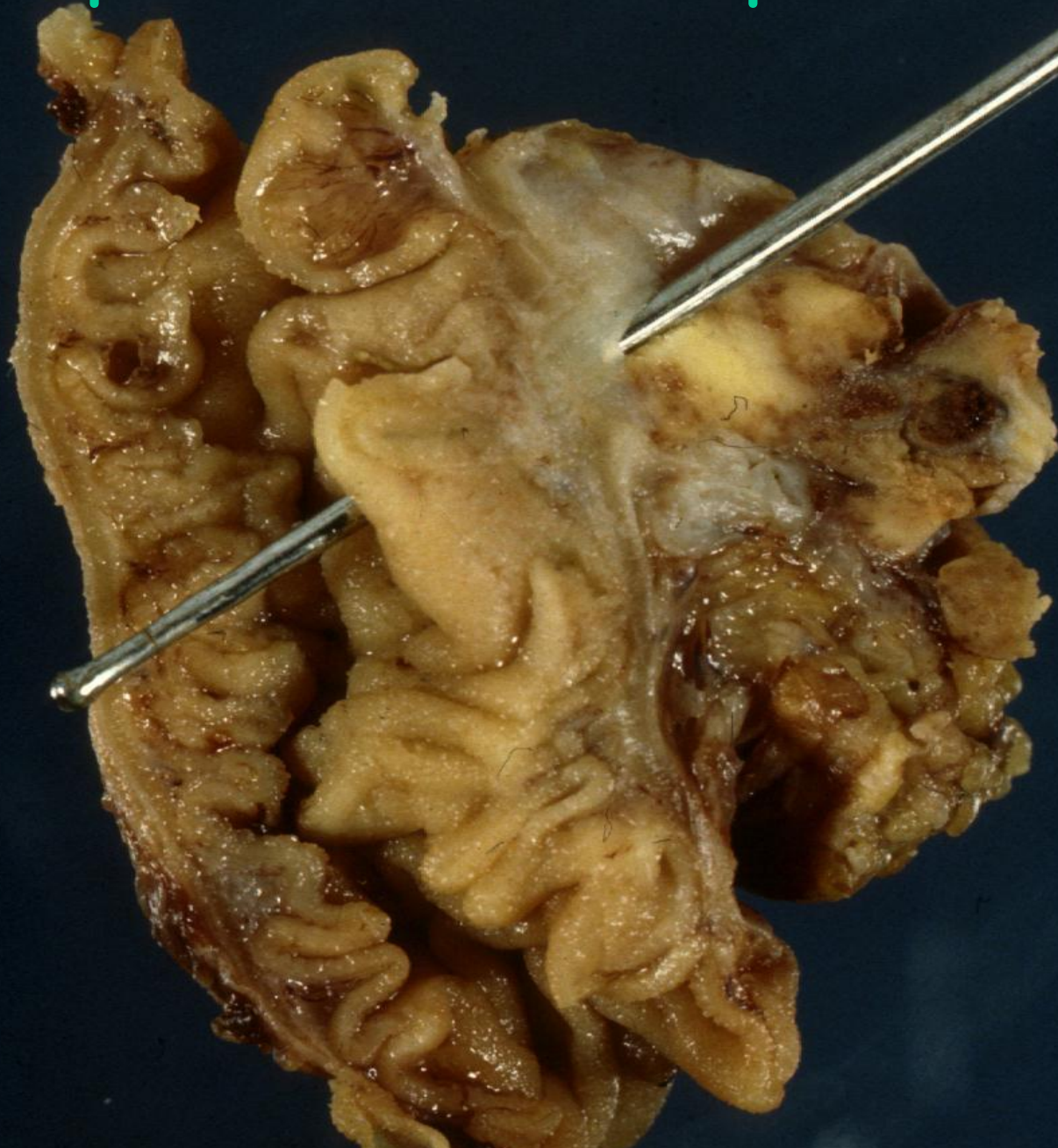
RCC

Kissejtes carcinoma

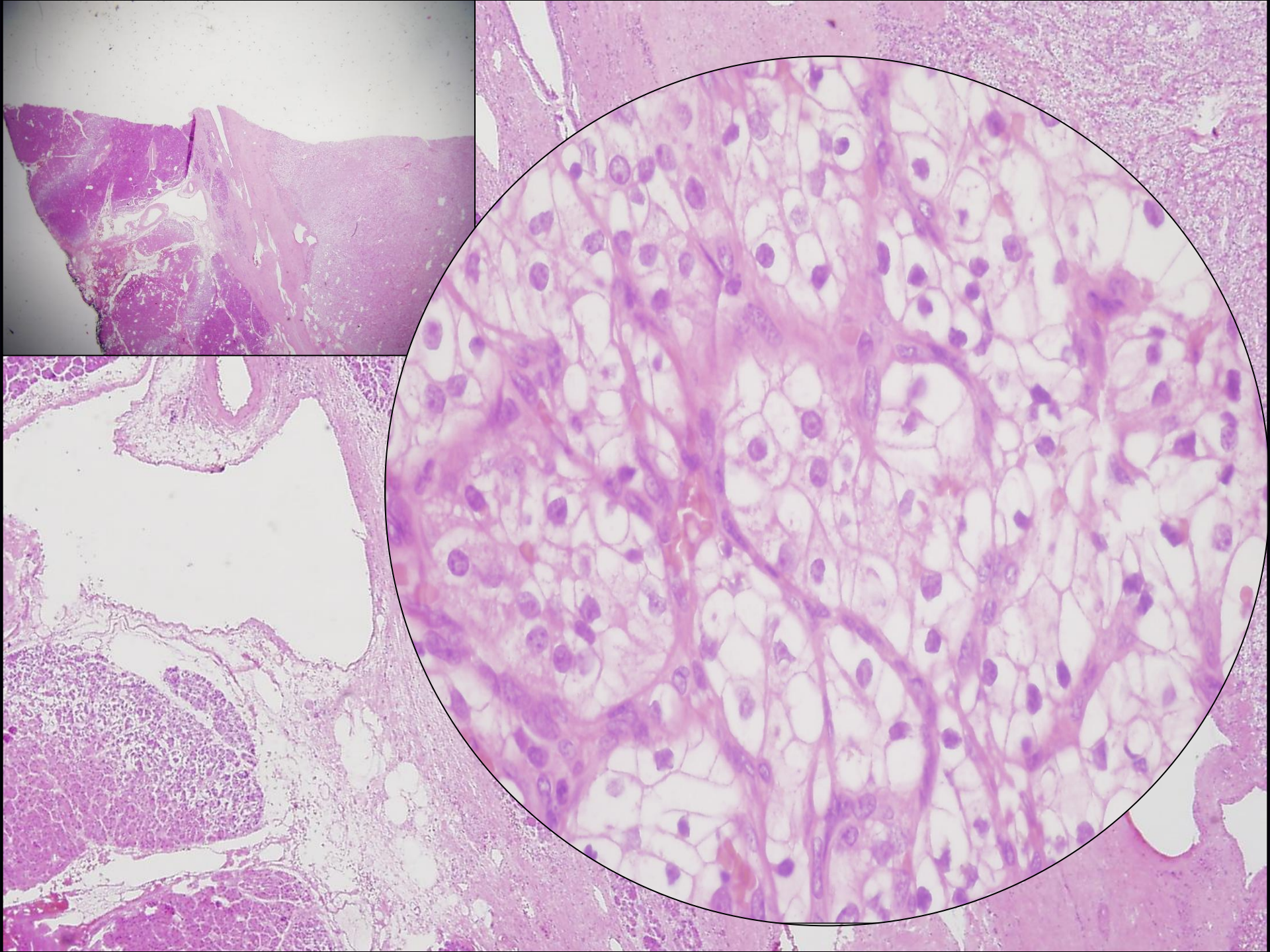
Csírasejtes daganatok

Haematologiai malignus betegségek

# Hypernephroma áttéte pancreasban







# A hasnyálmirigy cytologiai vizsgálata

Intraoperatív

UH v. CT vezérelt percután

UH endoscopos

ERCP-pancreasnedv

epeút kaparék

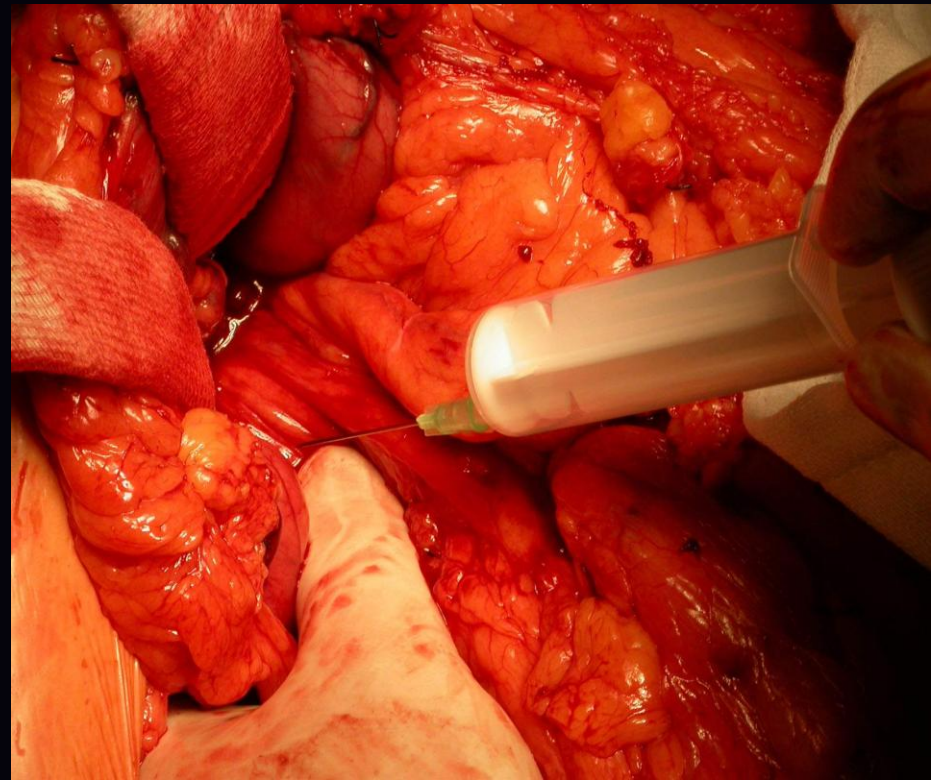
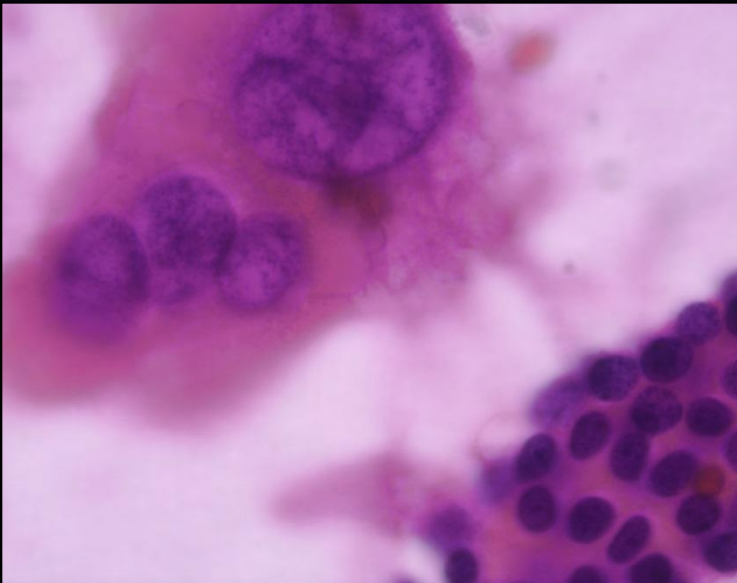


# Biopsziák módzatai

intraoperatív

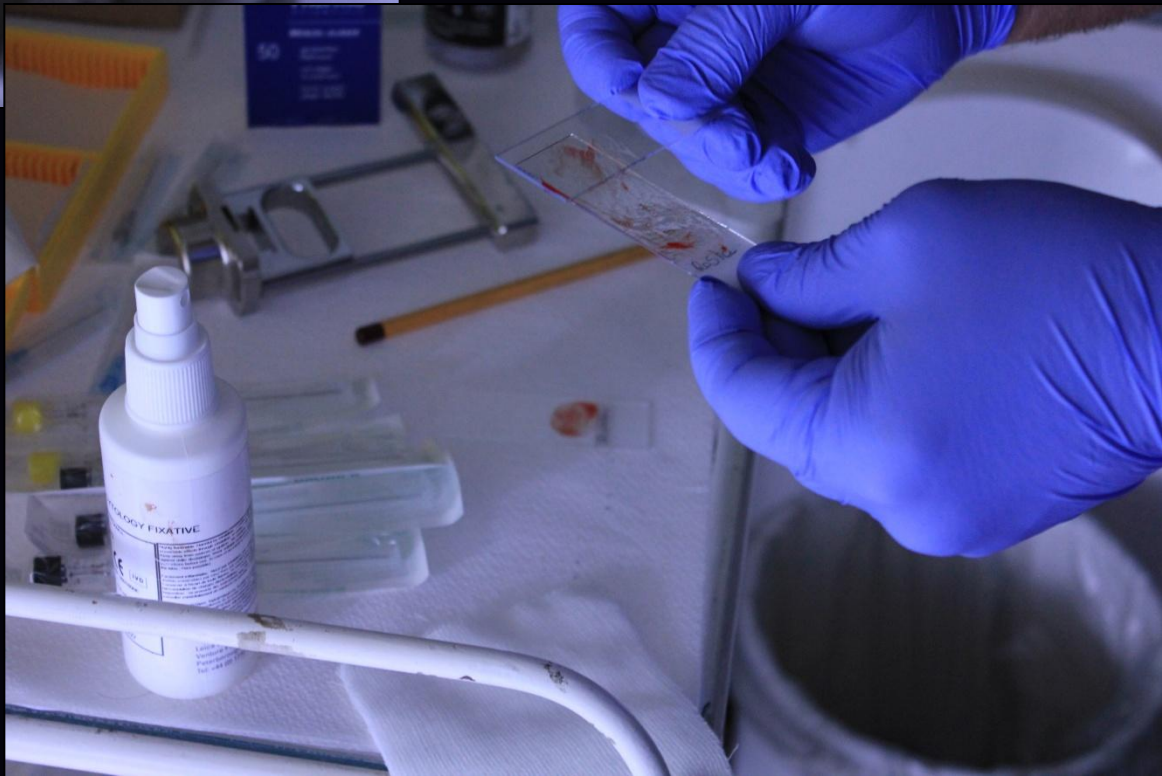
UH vezérelt

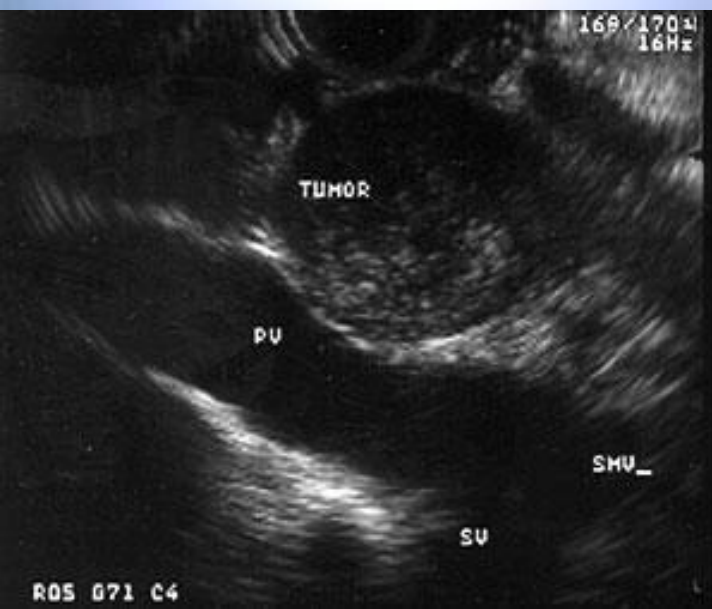
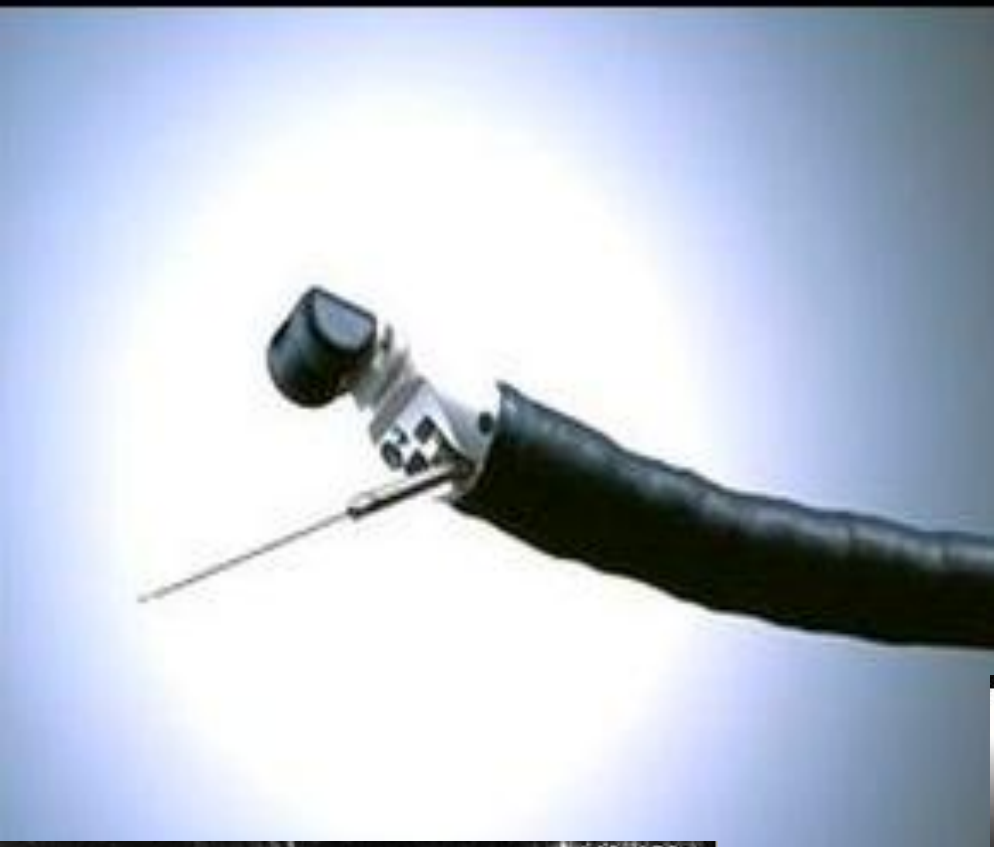
UH endoscopos



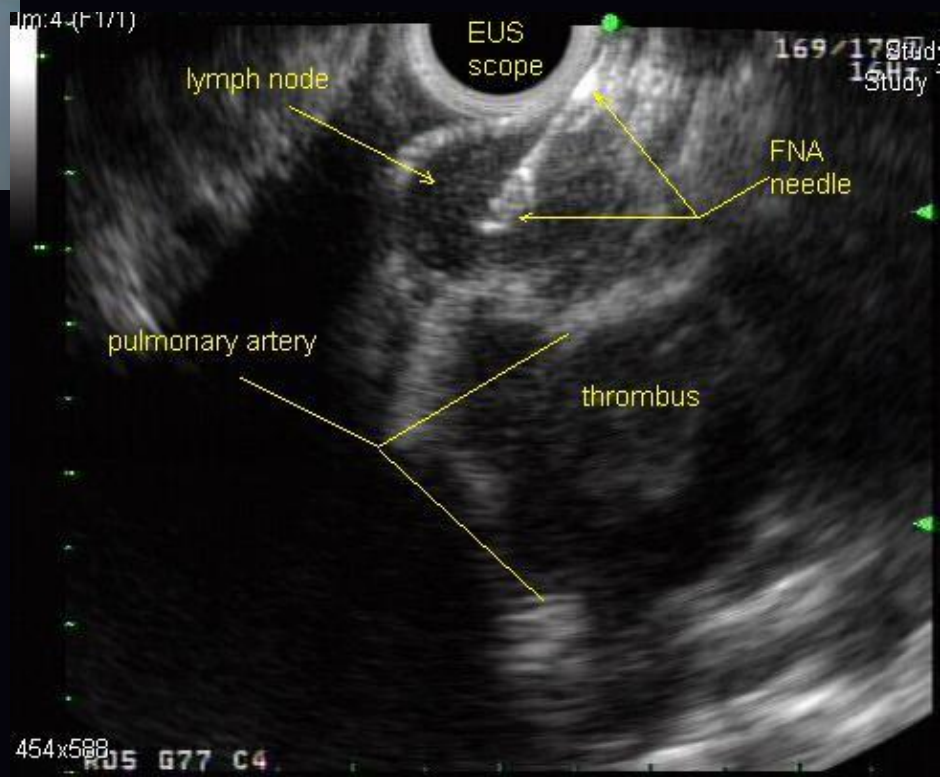




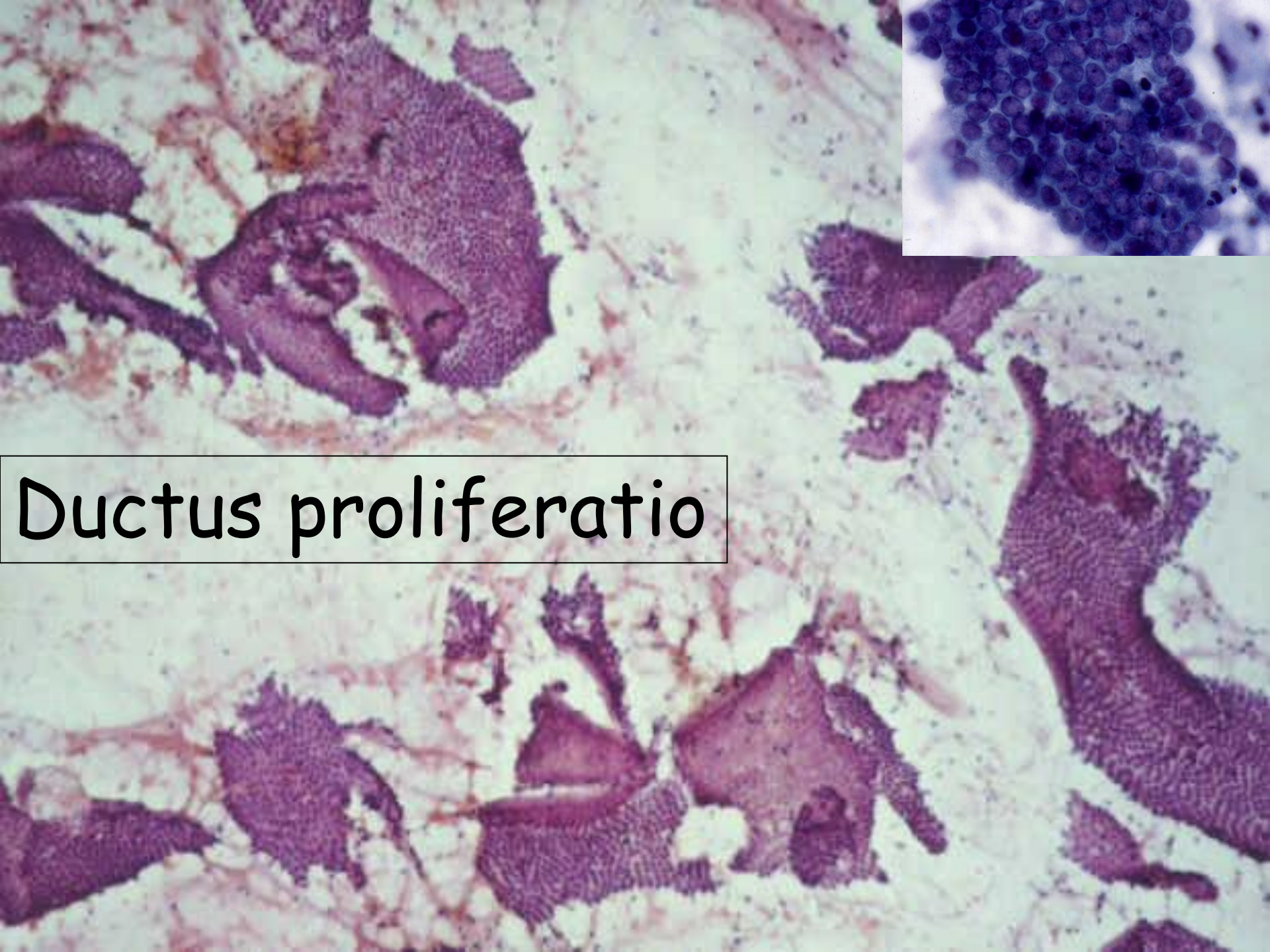




Im:4-(F1/1)







Ductus proliferatio



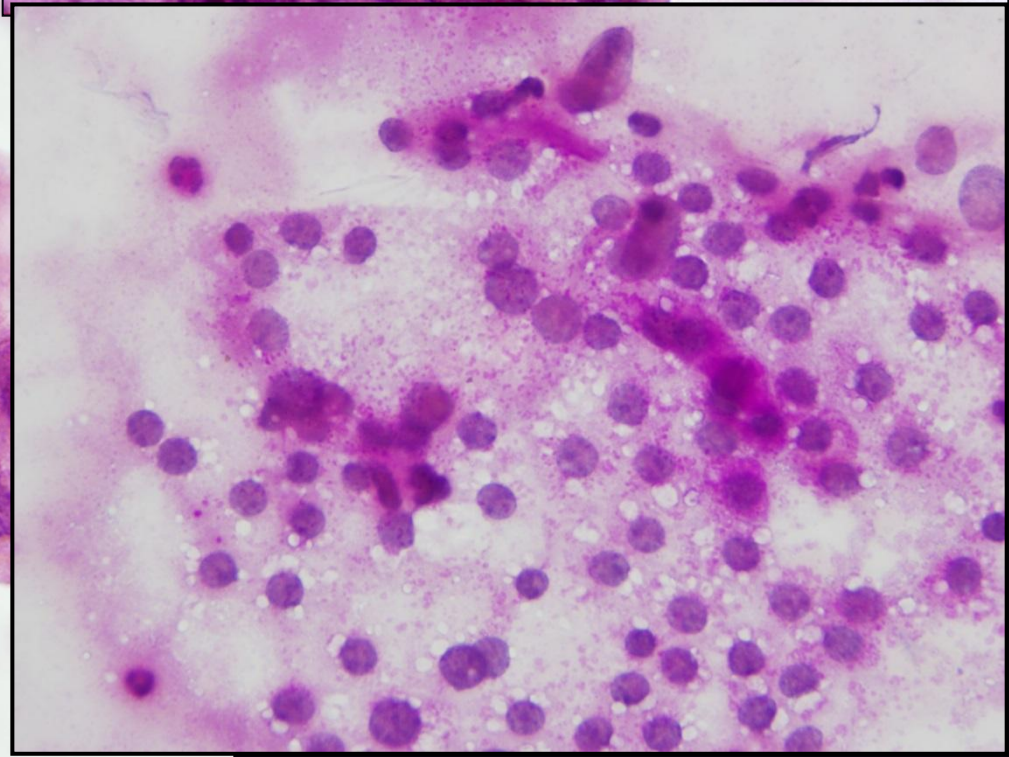
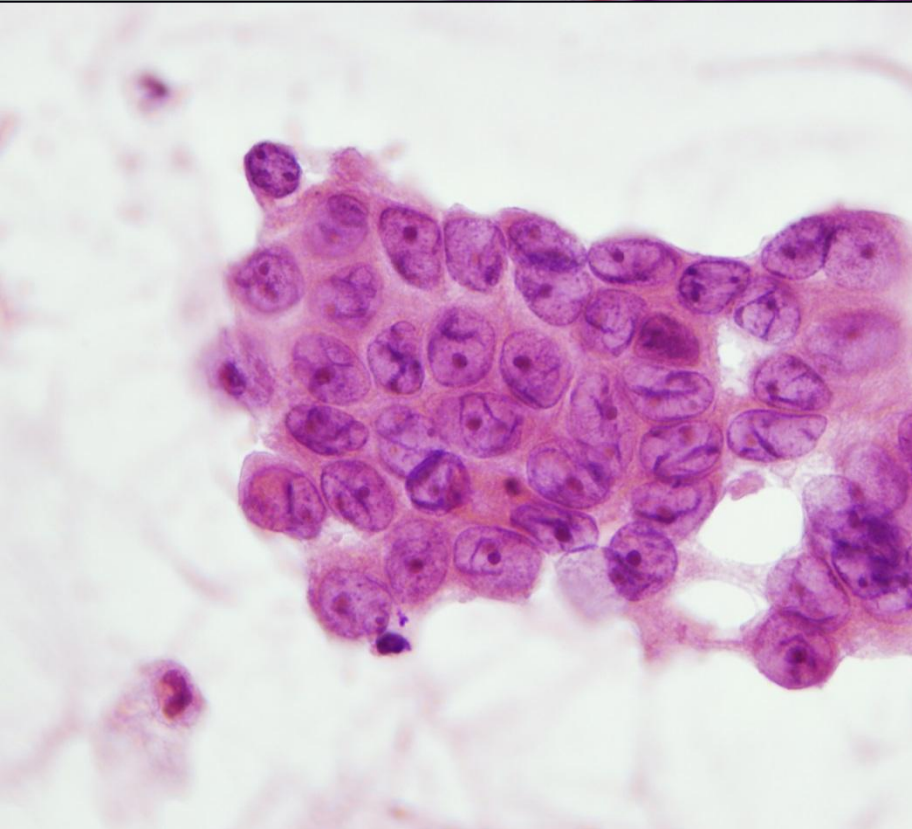
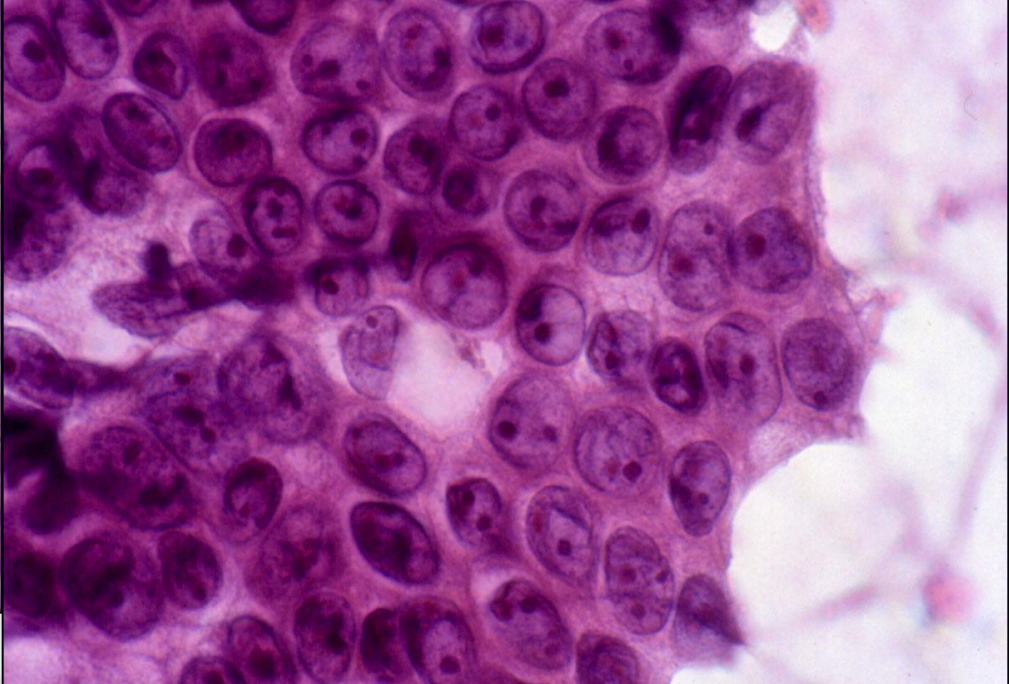
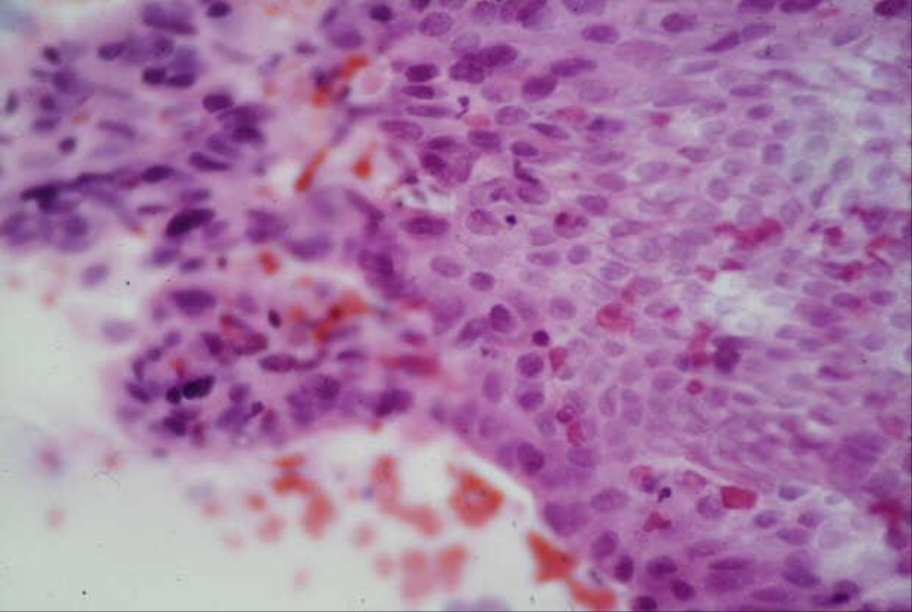
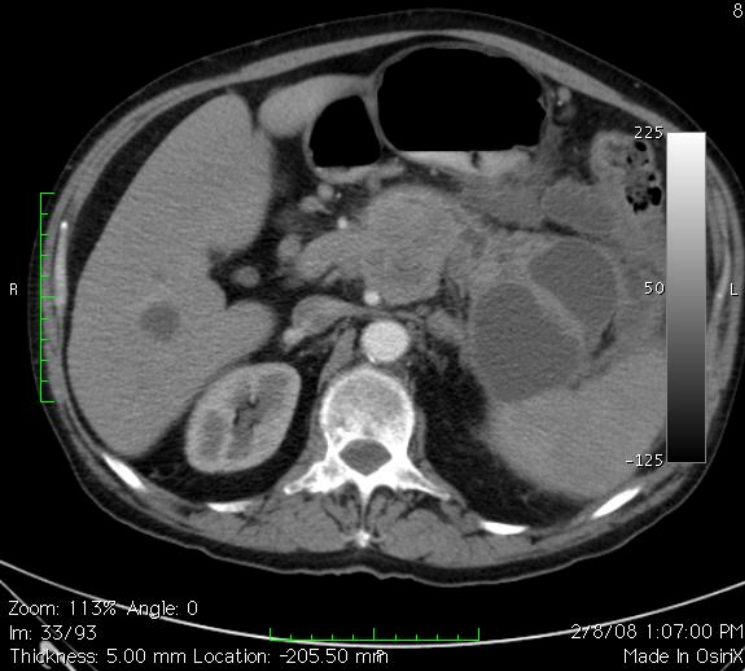




Image size: 512 x 512  
View size: 578 x 578  
WL: 50 WW: 350

014758841 ( 59 y, 58 y )  
HAS 2 FAZIS\_ILM/Abdomen  
16331  
8



Male, 59 years old.

lesion in the  
pancreas, 4 cm in  
diameter

Cl.dg. pancreatic  
carcinoma

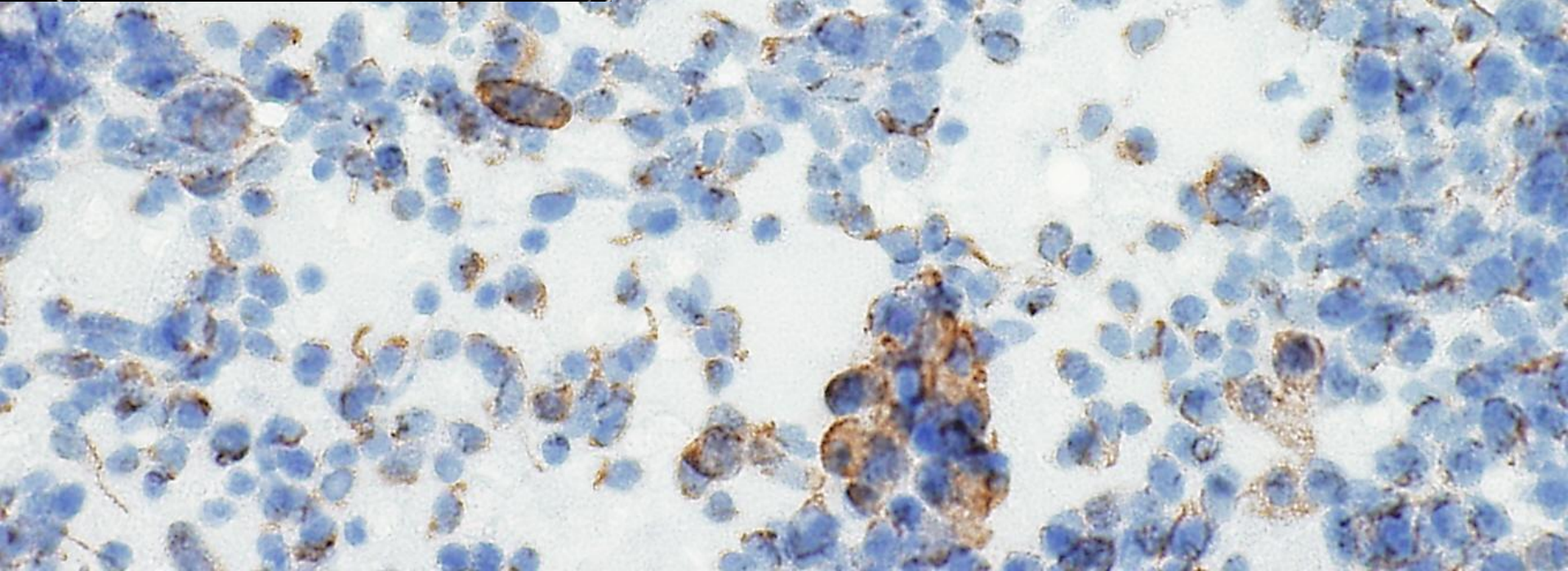
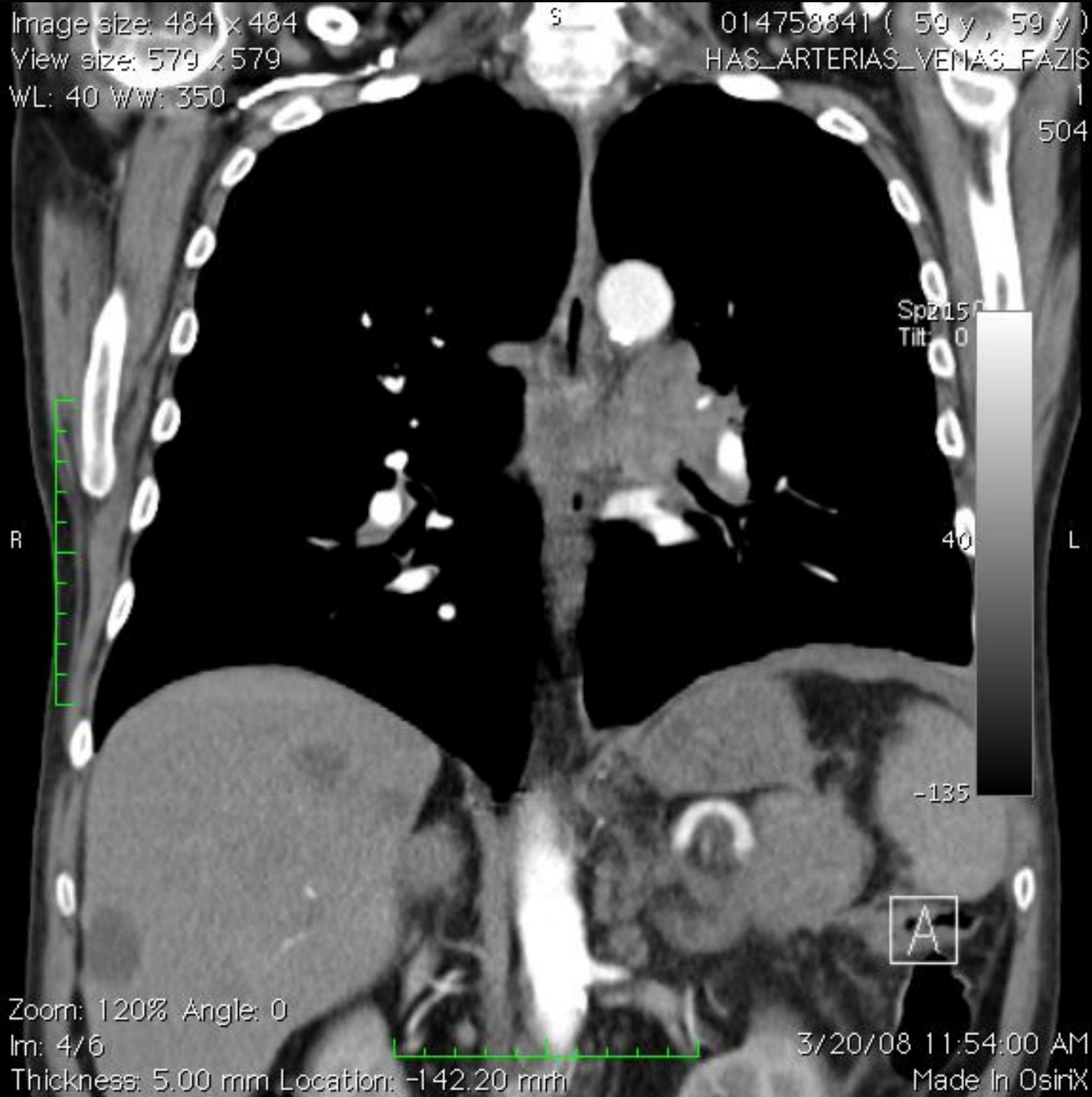


Image size: 484 x 484  
View size: 579 x 579  
WL: 40 WW: 350

014758841 ( 59 y , 59 y )  
HAS\_ARTERIAS\_VENAS\_FAZIS

1  
504



Spz 15  
Tilt 0

40

-135

Zoom: 120% Angle: 0  
Im: 4/6  
Thickness: 5.00 mm Location: -142.20 mm

3/20/08 11:54:00 AM  
Made In OsiriX



