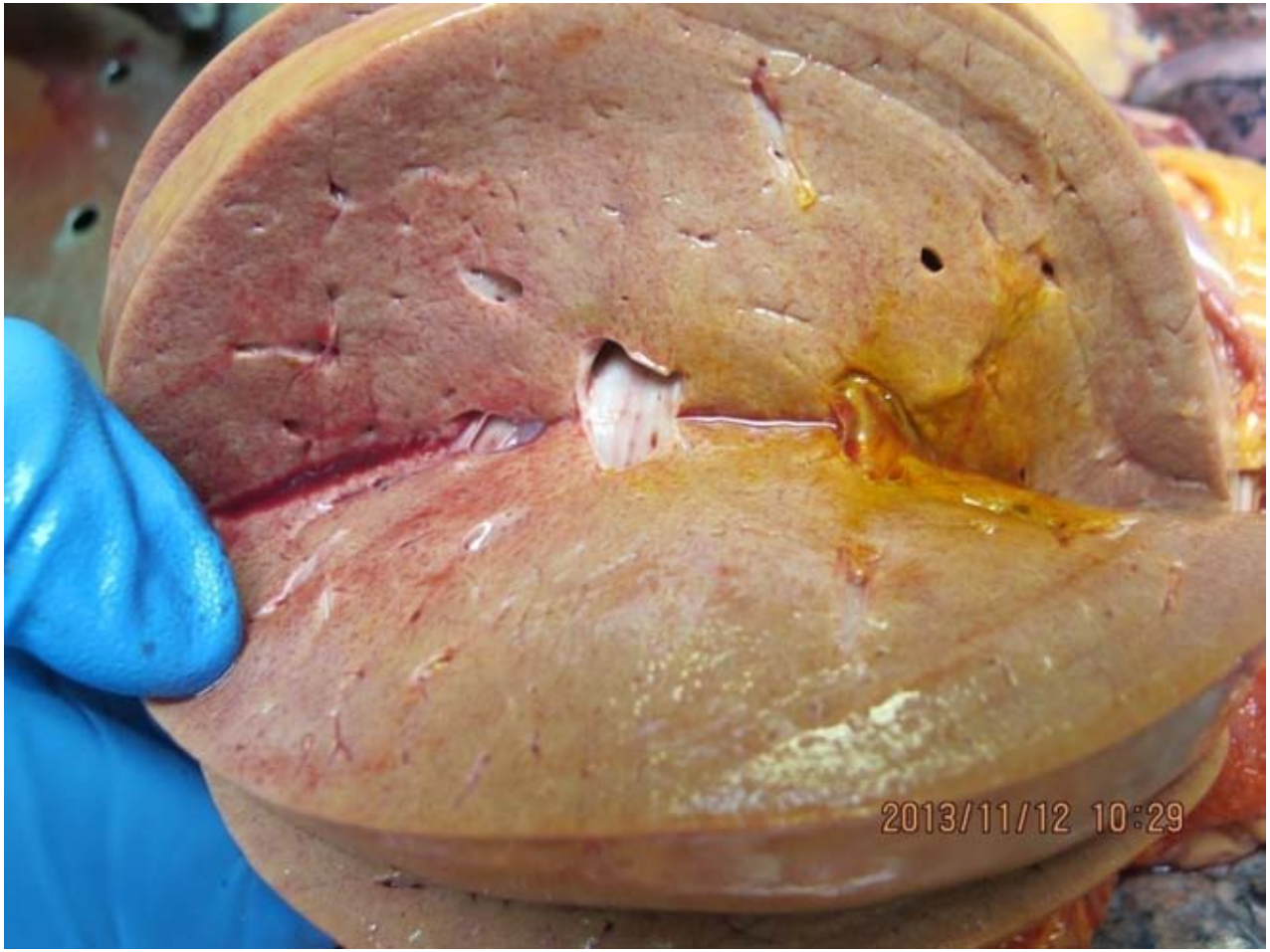
Alcoholic hepatitis

Macroscopy	
Localisation	Liver
Pattern	Diffus
Colour	Fatty liver=**yellowish** liver parenchyma. In chronic cases may cause fibrosis or cirrhosis=grayish, firm liver parenchyma
Consistency	Soft
Other	

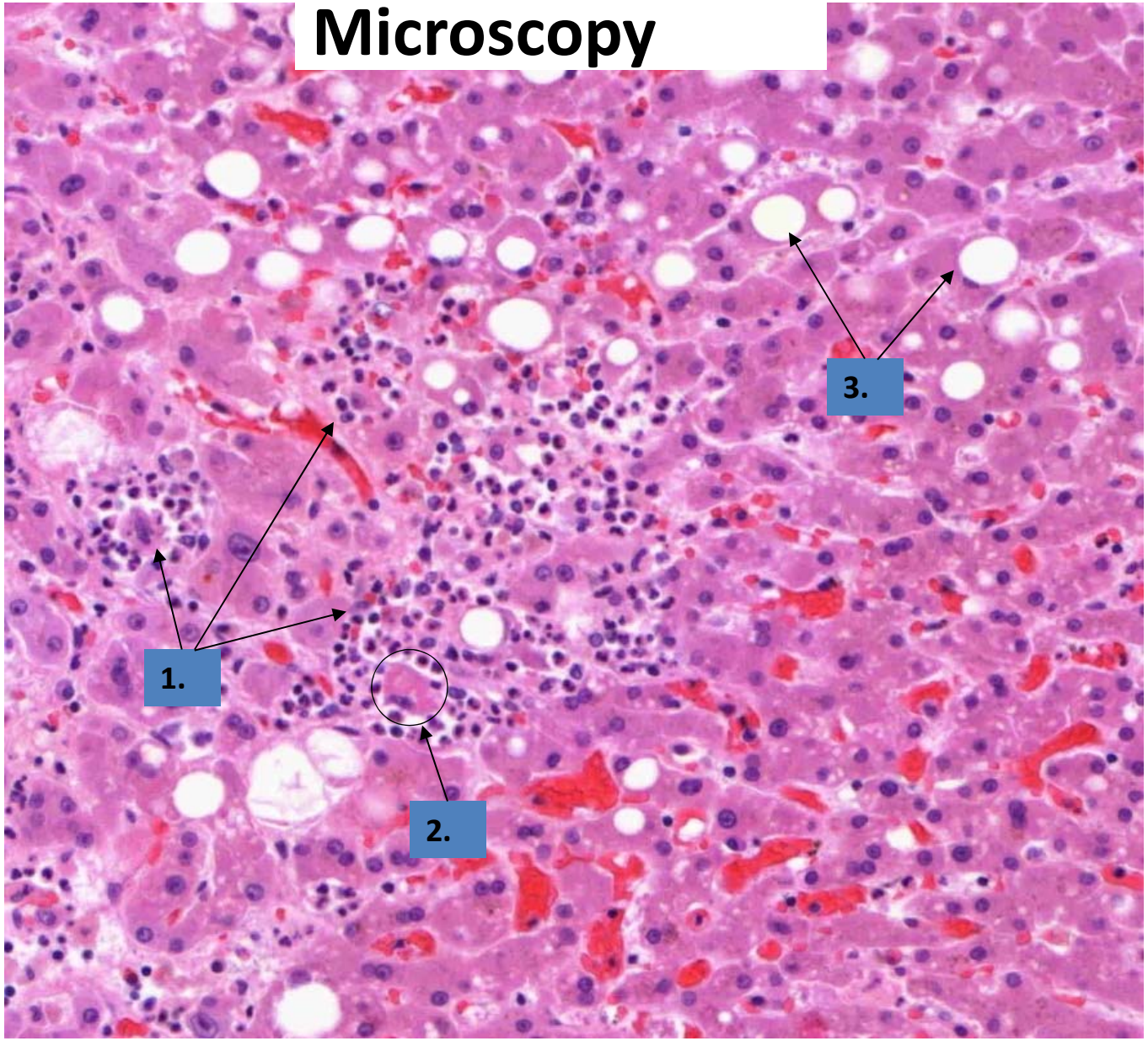
Microscopy

1. Pattern of inflammation: Granulocytic infiltration between hepatocytes (not in portal spaces). Necrotic hepatocyte can be surrounded by granulocytes=
2. Mallory's body: hyaline deposits in hepatocyte's cytoplasm (cytoskeletal degradation)
3. Degeneratio adiposa=fatty vacuoles in hepatocyte's cytoplasm
4. Liver cell necrosis results fibrosis→end stage=cirrhosis

Macroscopy



Microscopy



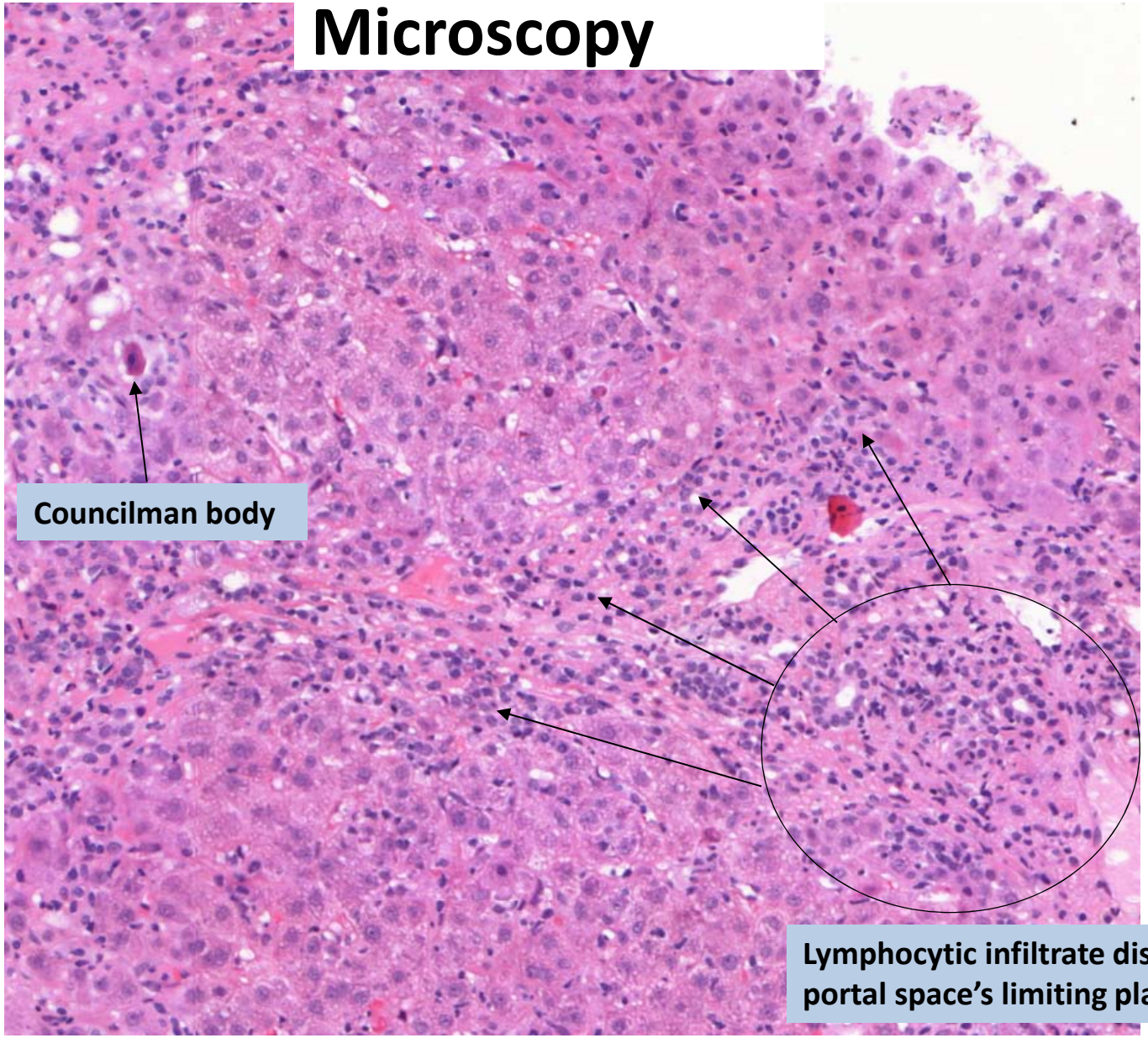
Viral hepatitis

Macroscopy	
Localisation	Liver
Pattern	Diffuse
Colour	
Consistency	
Other	Stage dependent fibrosis. End stage: cirrhosis Acut fulminant hepatitis: acute necrotic form of viral infection: edematic, red, fragile liver parenchyma

Microscopy

1. Pattern of inflammation: Lymphocytic infiltration. **a)** inside portal spaces without necrosis, or **b)** in a narrow zone around portal spaces=interface hepatitis with „piecemeal" necrosis, or **c)** between portal spaces=bridgeing necrosis
2. Ground glass hepatocytes: viral accumulation in cytoplasm (HBsAg)
3. Councilman body: apoptotic hepatocyte
4. Liver cell necrosis results fibrosis→end stage=cirrhosis

Microscopy


Councilman body
Lymphocytic infiltrate disrupt portal space's limiting plate

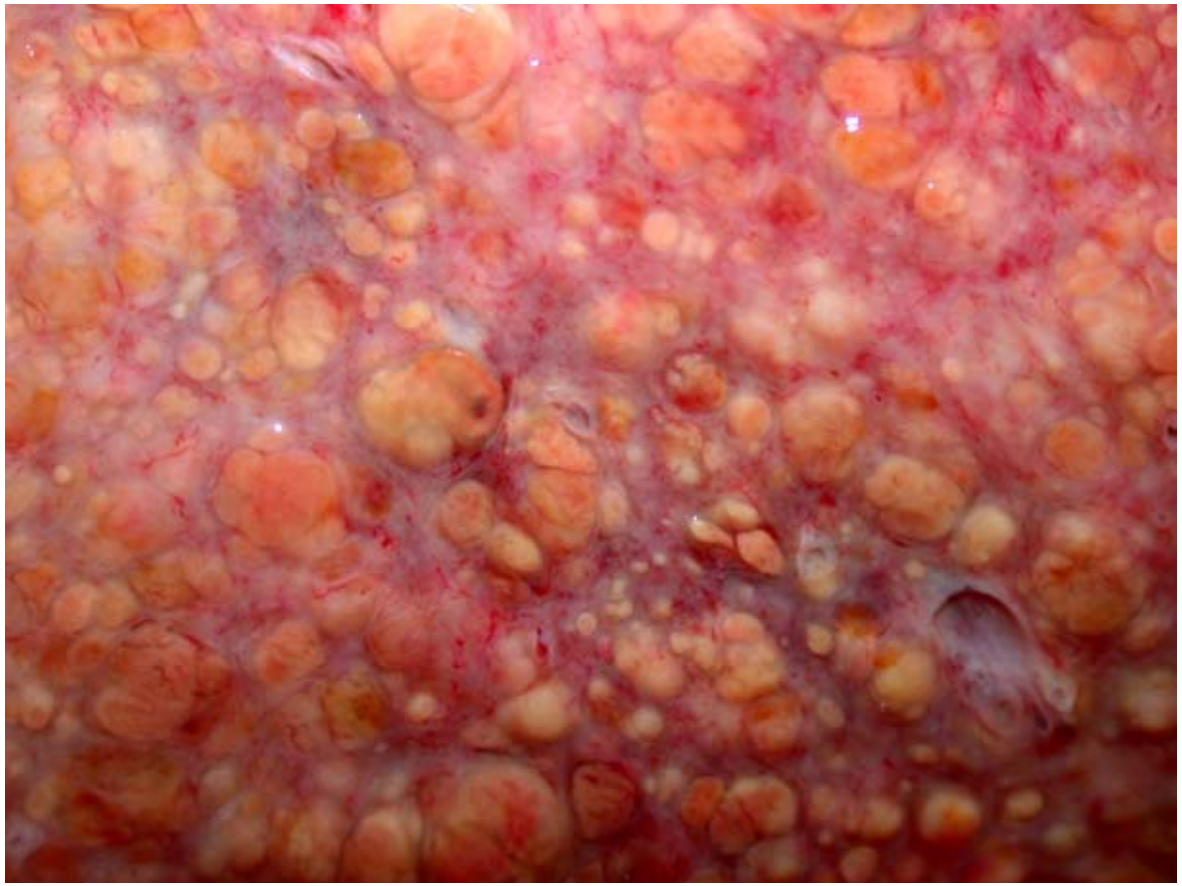
Cirrhosis

Macroscopy	
Localisation	Liver
Pattern	Nodular
Colour	Gray
Consistency	Firm
Other	Micronodular form: (common: alcohol, viral): equally <5 mm sized nodules Macronodular form: (rare, postnecrotic regeneration: toxic, viral): variable >5 mm sized nodules

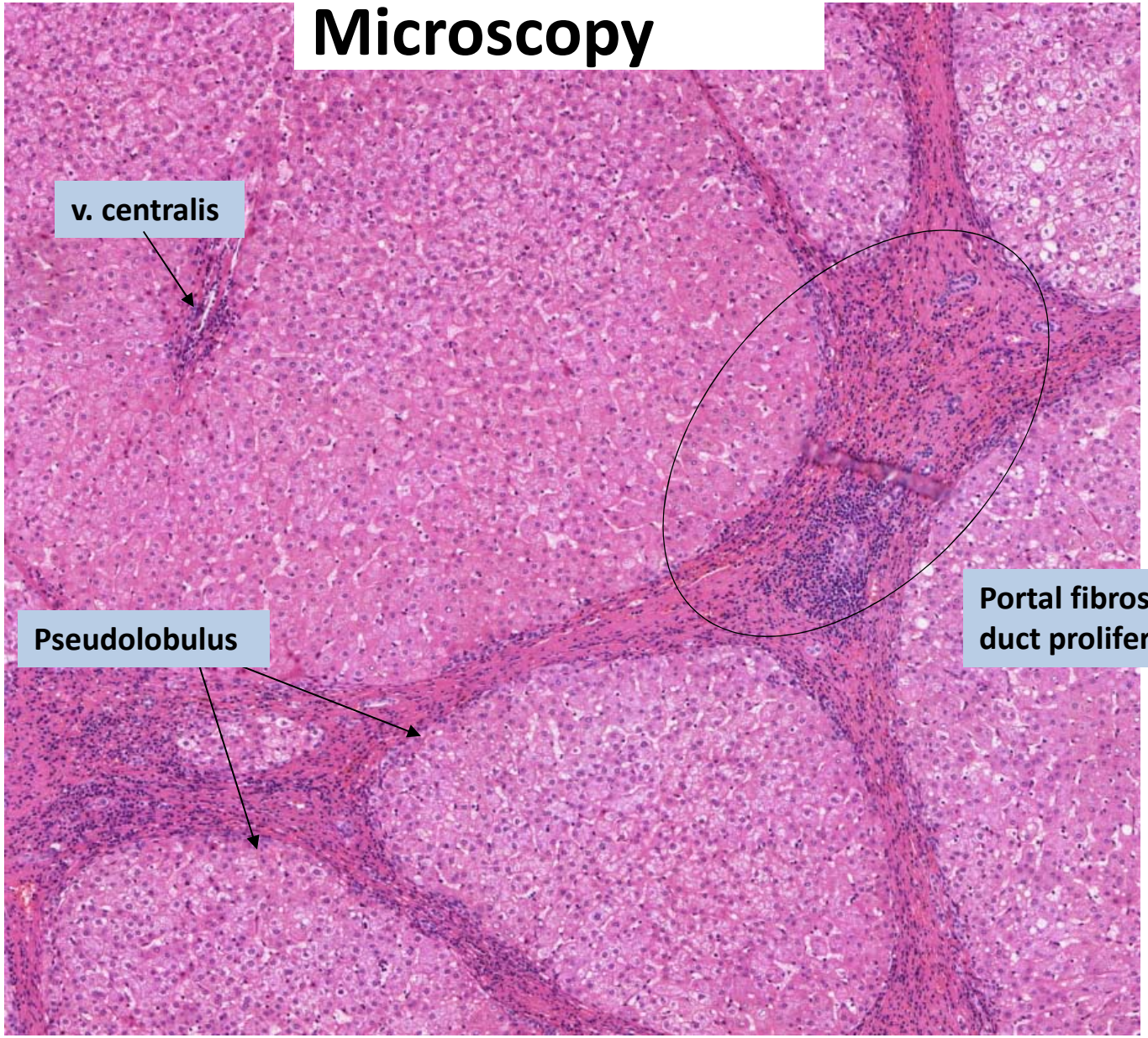
Microscopy

1. Interportal-intercentral fibrotic septa result→"pseudolobules" (lobule formation without central vein)
2. Ductular reaction: small bile duct proliferation
3. Regenerative nodules→increased cancer risk!! (HCC)

Macroscopy



Microscopy


v. centralis
Pseudolobulus
Portal fibrosis+
duct proliferation

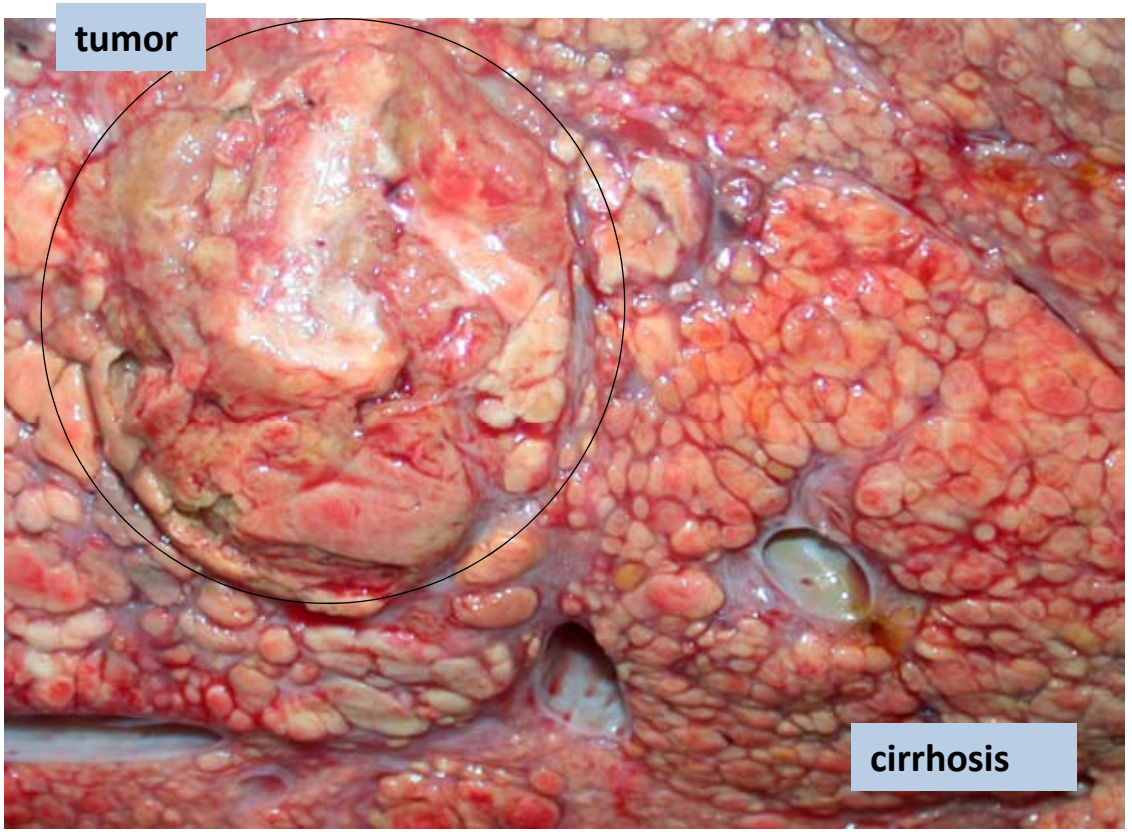
Hepatocellular carcinoma (HCC)

Macroscopy	
Localisation	Liver
Pattern	Solitary, rarely multifocal. Generally well circumscribed nodules
Colour	Heterogeneous: may be yellow-green-brown
Consistency	Soft
Other	Common (even macroscopic) portal/hepatic vein invasion→ hematogenous metastatisation!

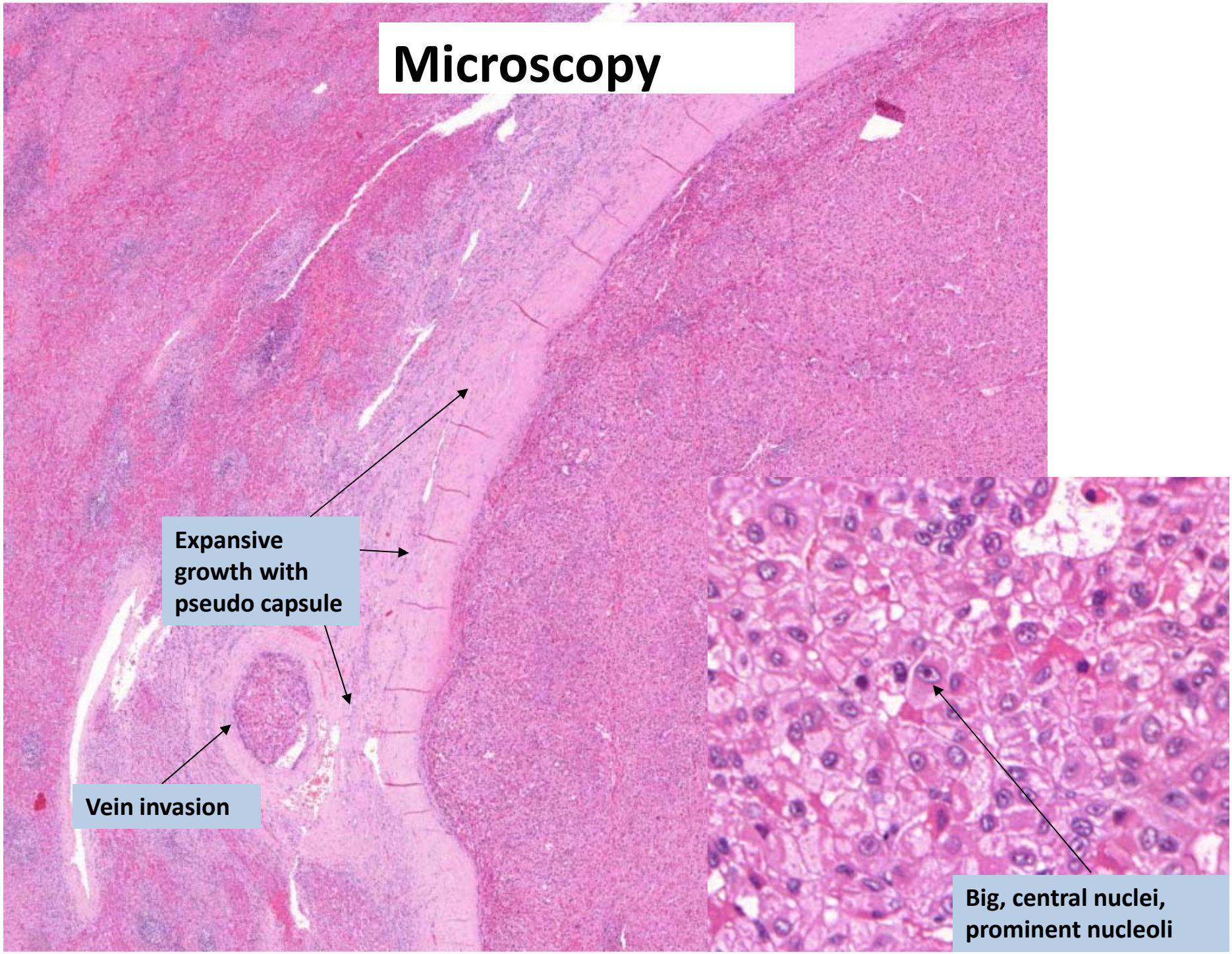
Microscopy

1. Expansive growth!
2. Heterogeneous structures: trabecular-pseudoglandular etc
3. High cellularity, no desmoplasia
4. Hepatocyte-looking tumor cells: large N/C ratio, prominent nucleoli, bile secretion can occur!
5. Common necrosis/hemorrhage
6. Generally cirrhosis associated

Macroscopy



Microscopy

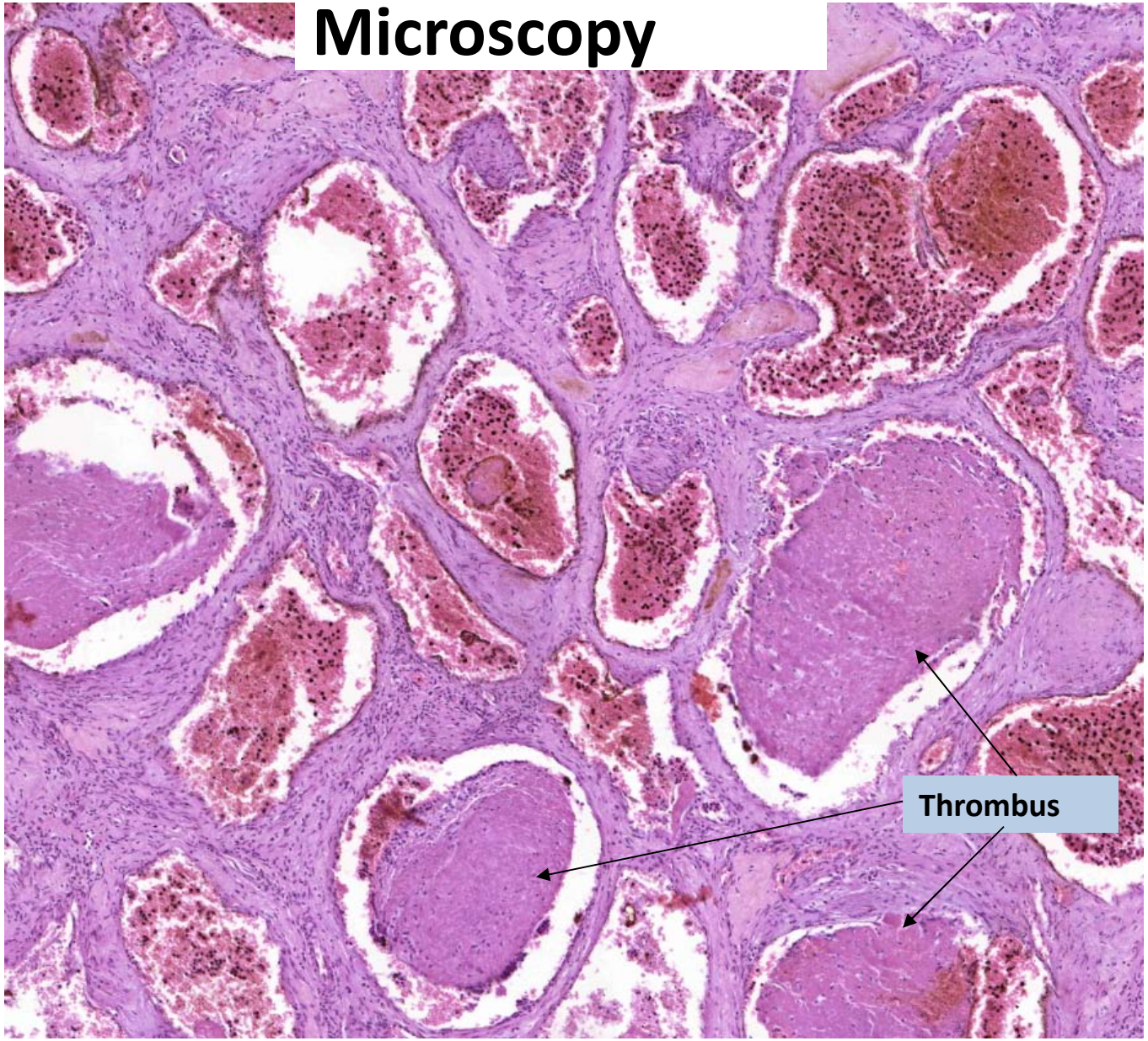

Expansive growth with pseudo capsule
Vein invasion
Big, central nuclei, prominent nucleoli

Hemangioma cavernosum

Macroscopy	
Localisation	Liver (or other parenchymal organs, soft tissues, bone)
Pattern	Solitary (can be >10 cm large)
Colour	Red
Consistency	Soft-spongious with frequent central fibrotic degeneration
Other	Can be thrombotic→ mimic solid tumor
Microscopy	
1. Large spaces filled with RBCs. Frequent thrombus formation 2. Regular endothelial lining	

Macroscopy

Microscopy



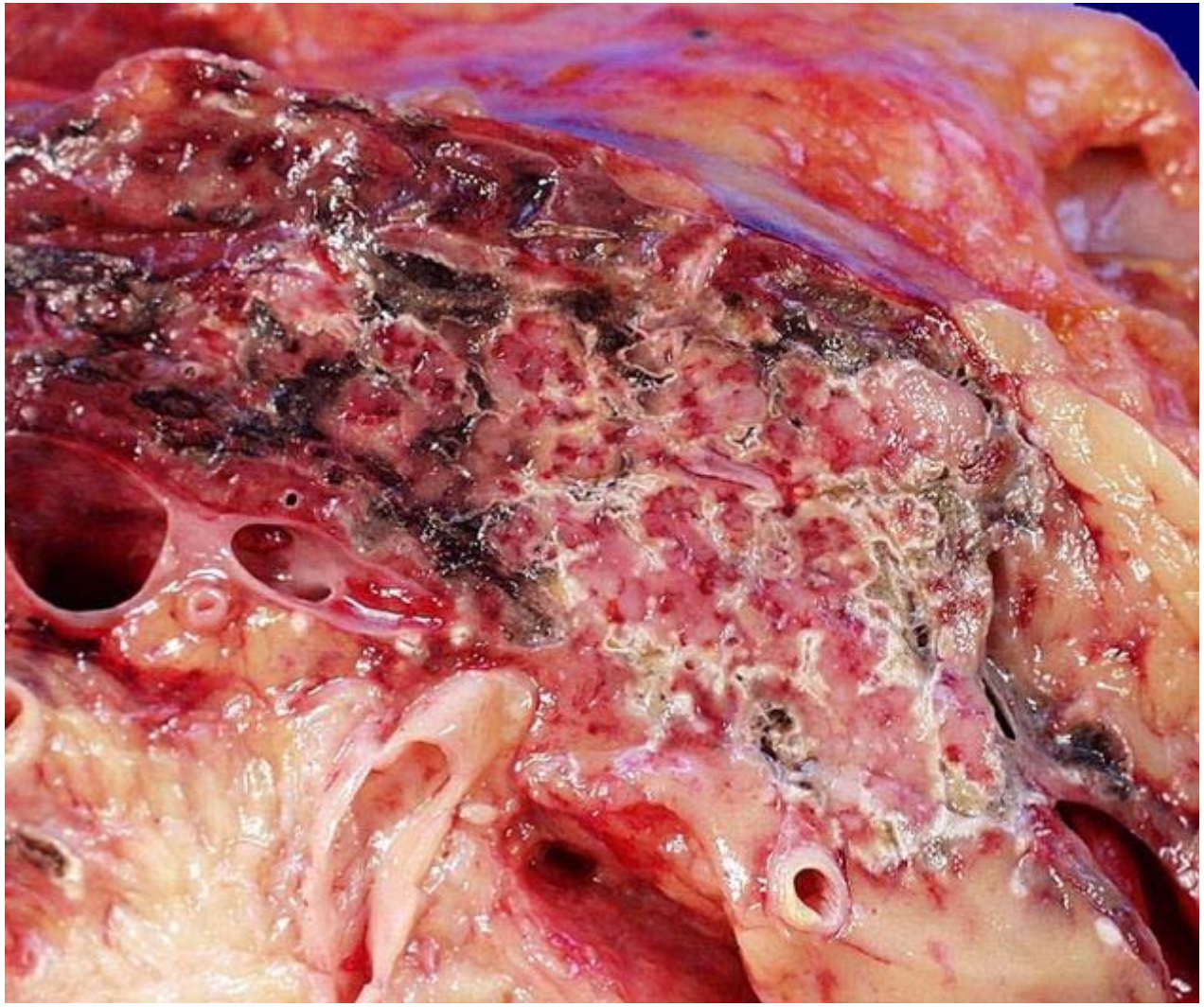
Acute pancreatitis

Macroscopy	
Localisation	Pancreas+peripancreatic fat
Pattern	Diffuse
Colour	Reddish (in case of complete hemorrhagic necrosis→dark red/brown)
Consistency	Edematic, swollen
Other	Fat necrosis: small, sometimes confluent gray, firm foci in peripancreatic fat

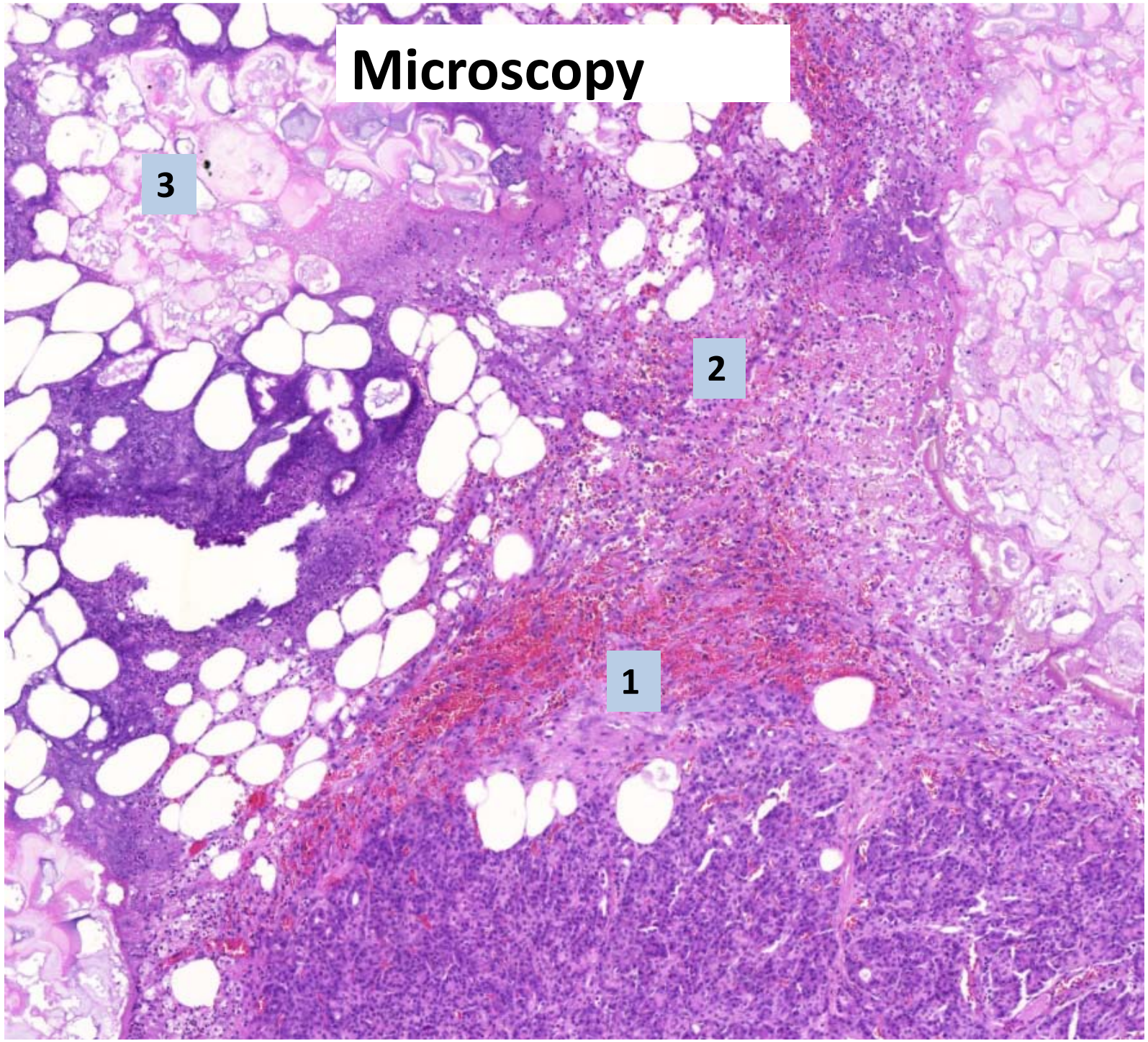
Microscopy

1. Hemorrhage and hemorrhagic necrosis in the parenchyma
2. Granulocytic infiltration
3. Fat necrosis=basophilic area with shade of adipocytes (calcification)

Macroscopy



Forrás: http://radiopaedia.org/articles/acute-pancreatitis


Microscopy
3
2
1

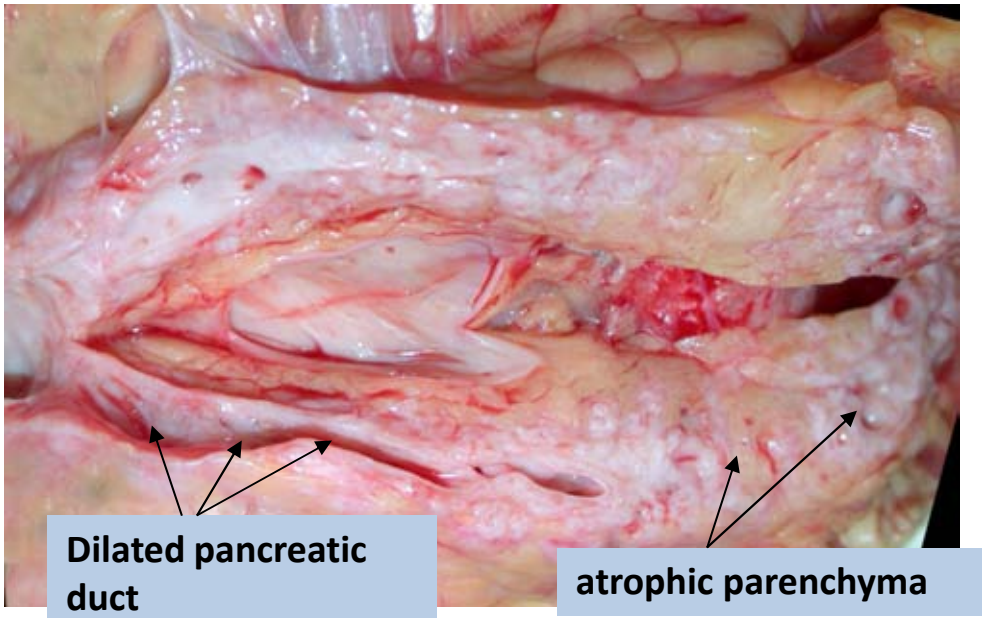
Chronicus pancreatitis

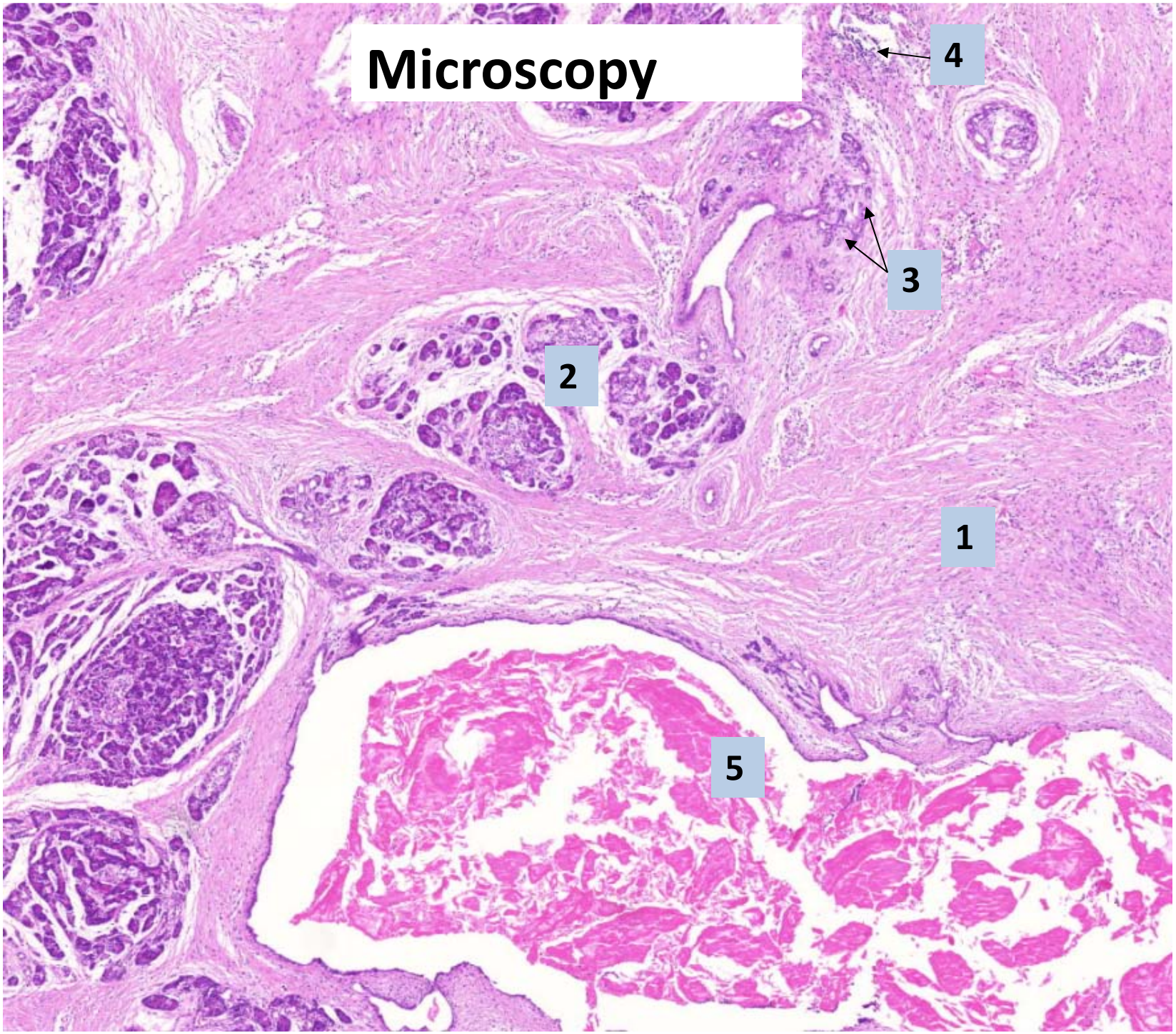
Macroscopy	
Localisation	Pancreas
Pattern	Diffuse (alkoholic, hereditary, cystic fibrosis), or focal (obstructive pancreatitis=distal from the obstruction, alcoholic or autoimmune pancreatitis: mass formation→mimic cancer!!!)
Colour	Gray
Consistency	Firm
Other	

Microscopy

1. Interlobular fibrosis
2. Acinus atrophy (persisting endocrin islands)
3. Ductal proliferation
4. Lymphocytic infiltration
5. In alkoholic pancreatitis: intraductal protein plugs are typical (with calcification)

Macroscopy




Microscopy
4
3
2
1
5

Pancreatic adenocarcinoma

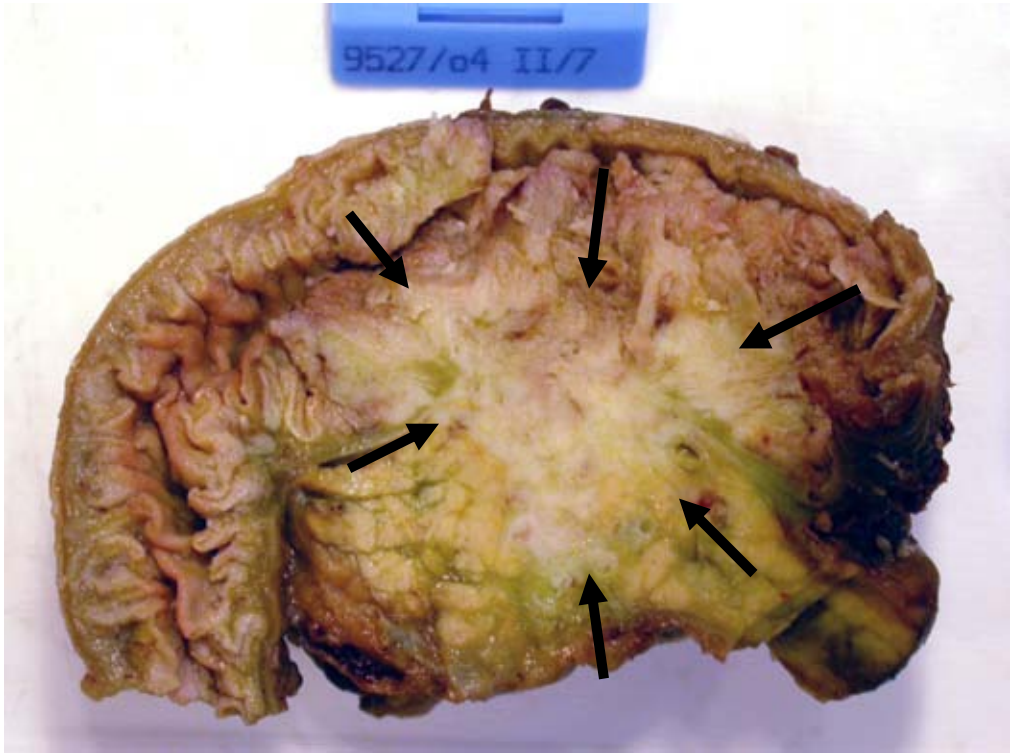
Macroscopy	
Localisation	Most commonly: head of the pancreas
Pattern	Infiltrative mass, frequently spread into the doudenum or retroperitoneal fat
Colour	Gray
Consistency	Firm
Other	Macroscopically very difficult to distinguish from chronic pancreatitis Frequent liver metastasis, poor prognosis

Microscopy

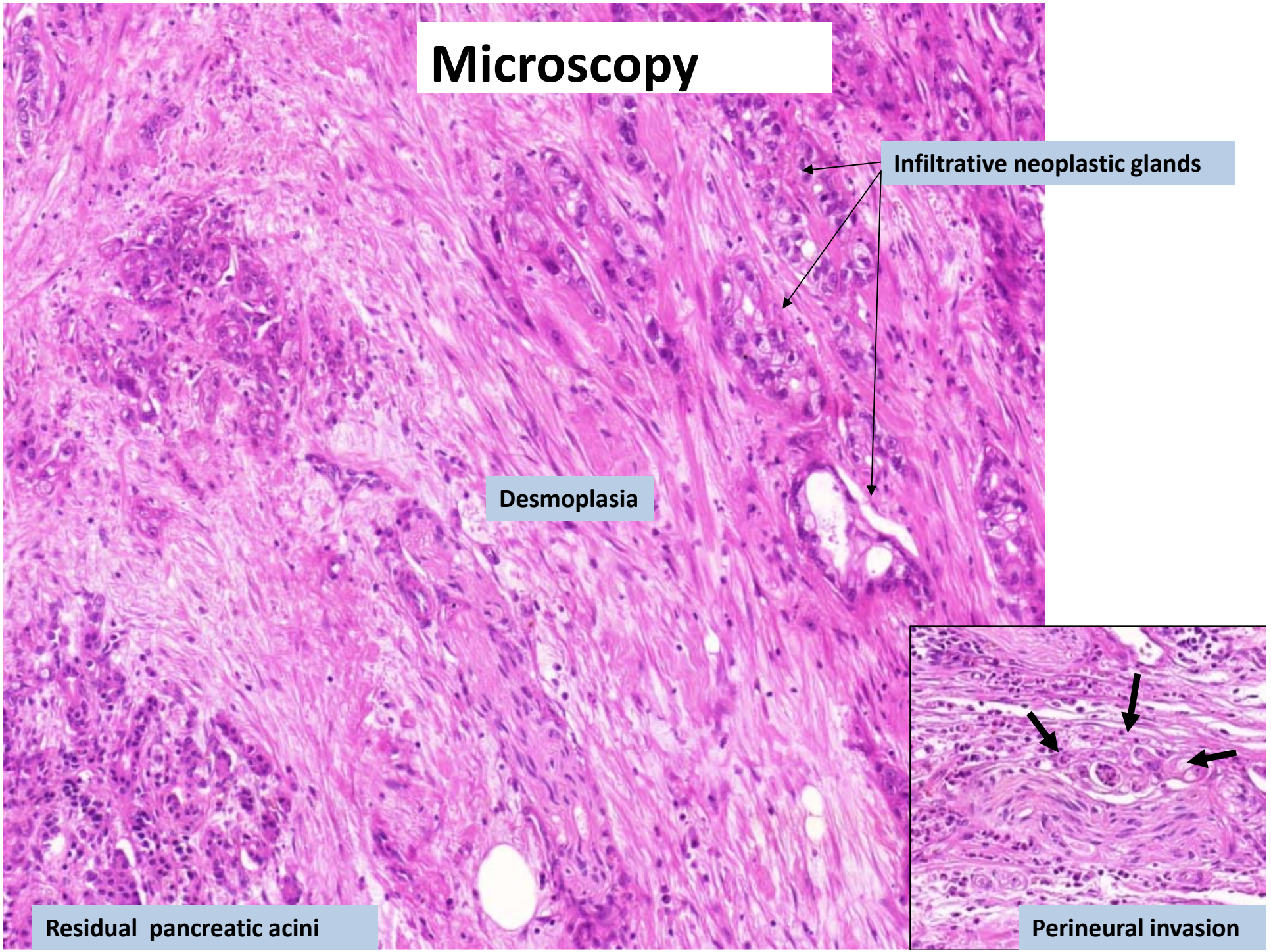
1. Irregular infiltrative glandular structures (frequent perineural invasion!!)
2. Desmoplasia
3. Cellular atypia (polymorphia, hyperchromasia etc)

Preinvasive condition: PanIN (pancreatic intraepithelial neoplasia= dysplasia of the ductal epithelium)

Macroscopy



Microscopy


Infiltrative neoplastic glands
Desmoplasia
Residual pancreatic acini
Perineural invasion

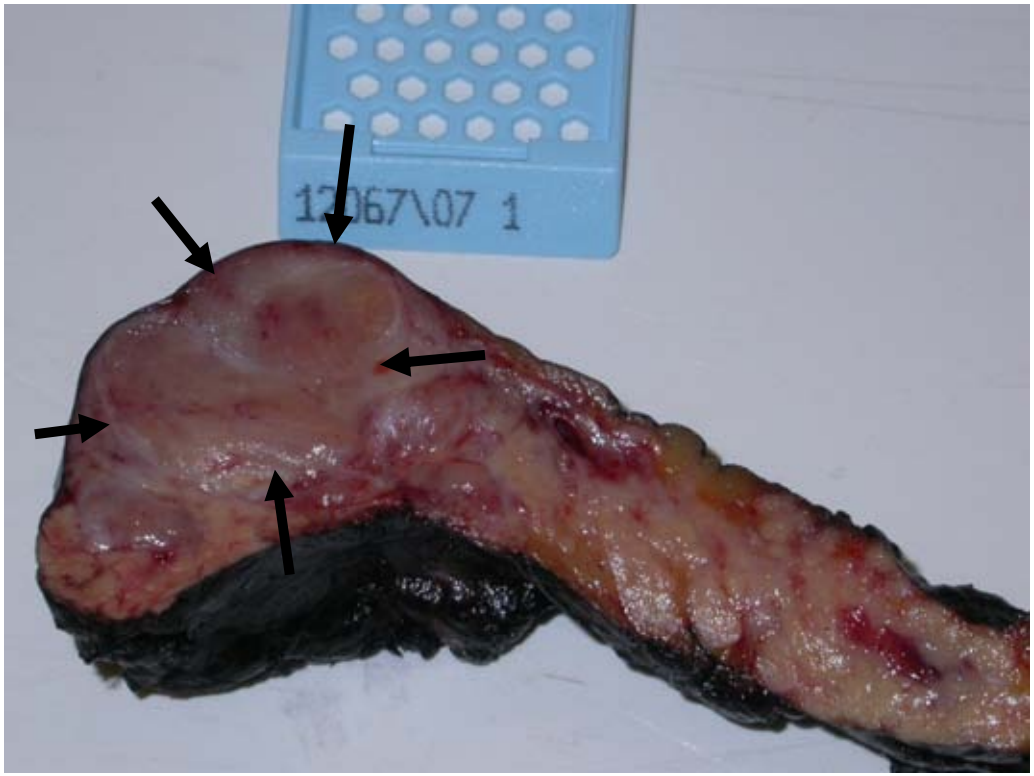
Neuroendocrine tumor

Macroscopy	
Localisation	Pancreas, frequently in the tail (can occur in the whole GI tract and lung)
Pattern	Can be well circumscribed or infiltrative
Colour	Yellowish-gray
Consistency	Very firm
Other	Less frequent metastatisation/better prognosis than adenocarcinoma

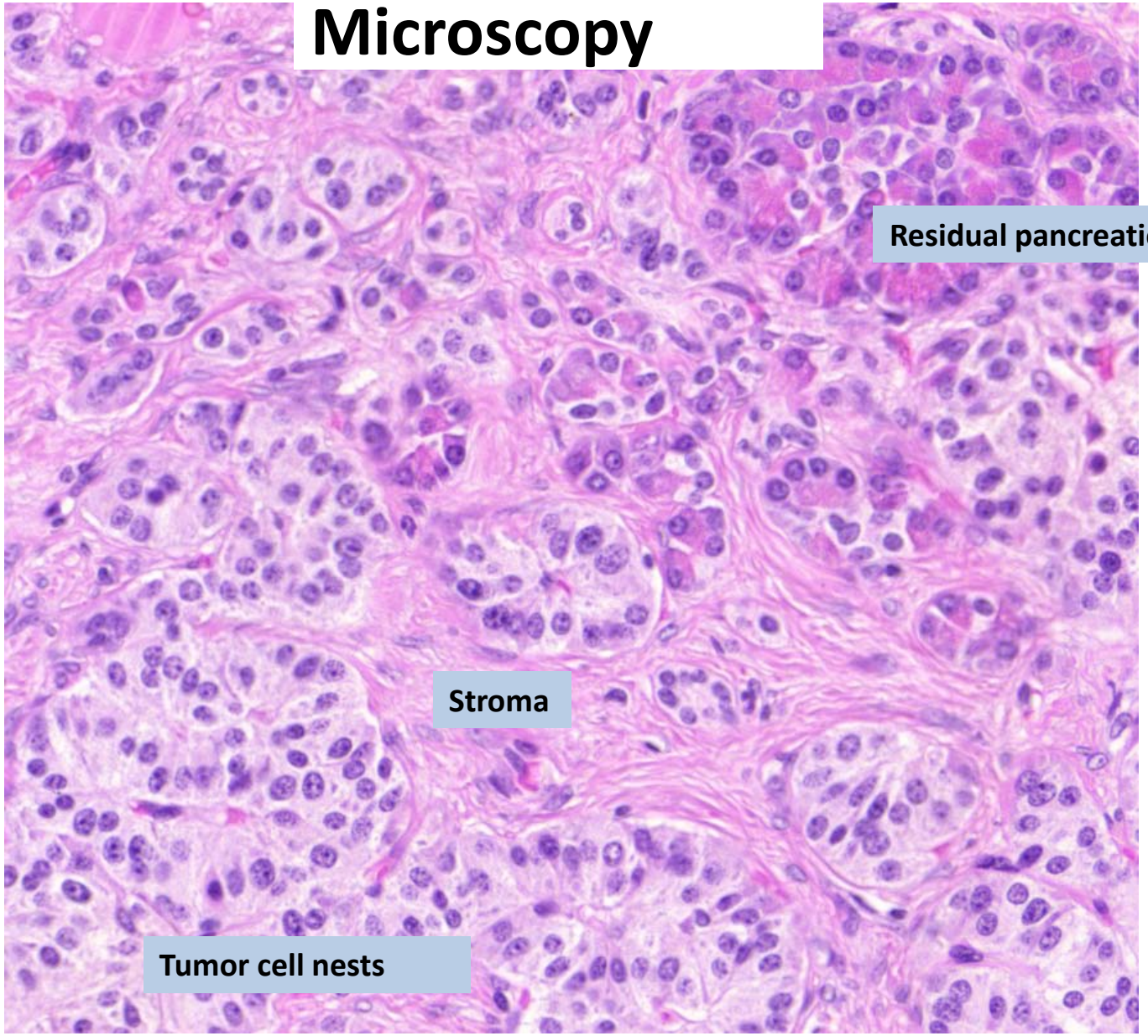
Microscopy

1. Nesty/trabecular structures (no gland formation)
2. Marked desmoplasia= dense amyloid-like stroma
3. Monotonous cytomorphology (mild atypia, round nuclei with salt&pepper chromatin, low mitotic count)

Macroscopy



Microscopy



Adrenal hyperplasia+adenoma

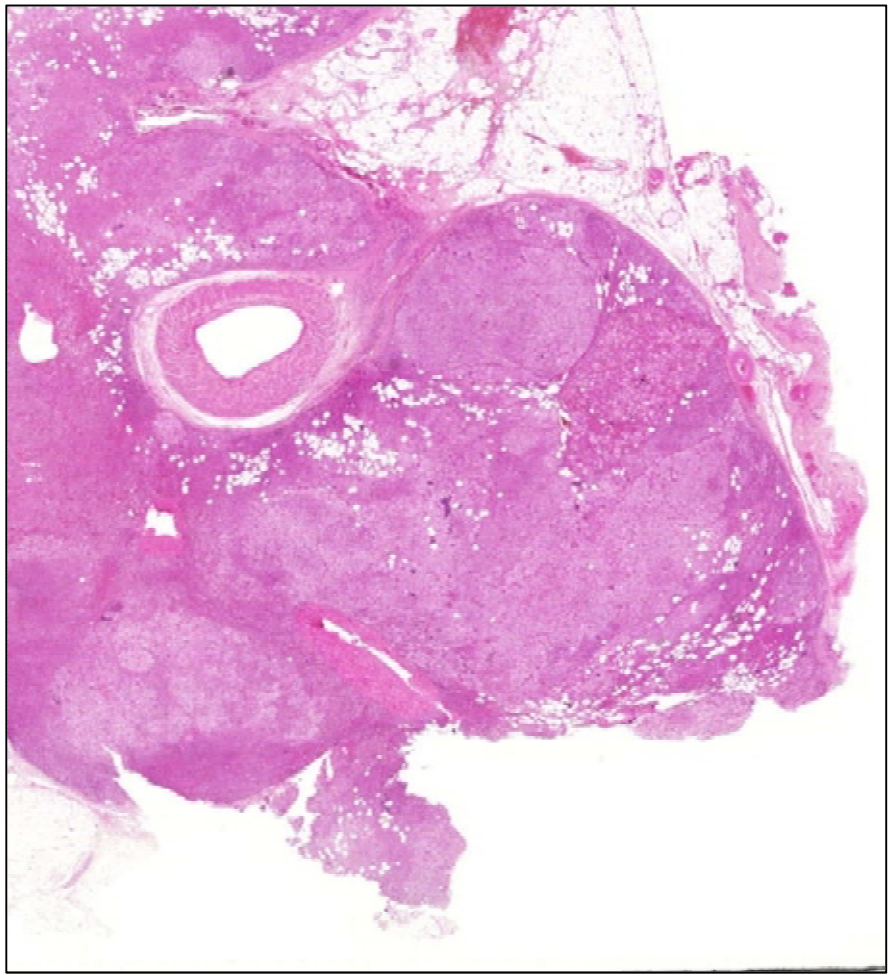
Macroscopy		
Localisation	Adrenal cortex	
Pattern	Nodular/diffuse	Solitary (generally <5 cm)
Colour	Yellow	Yellow
Consistency	Rubbery	Rubbery
Other	Usually bilateral Generally caused by pituitary adenoma (ACTH sectretion)	Generally unilateral Can release cortisol (Cushing's) or aldosteron (Conn's)
Microscopy		
Both lesion composed of mainly zona fasciculate-like vacuolised clear cells Slight atypia/polymorphism can occur but it does not indicate malignancy!		

Macroscopy

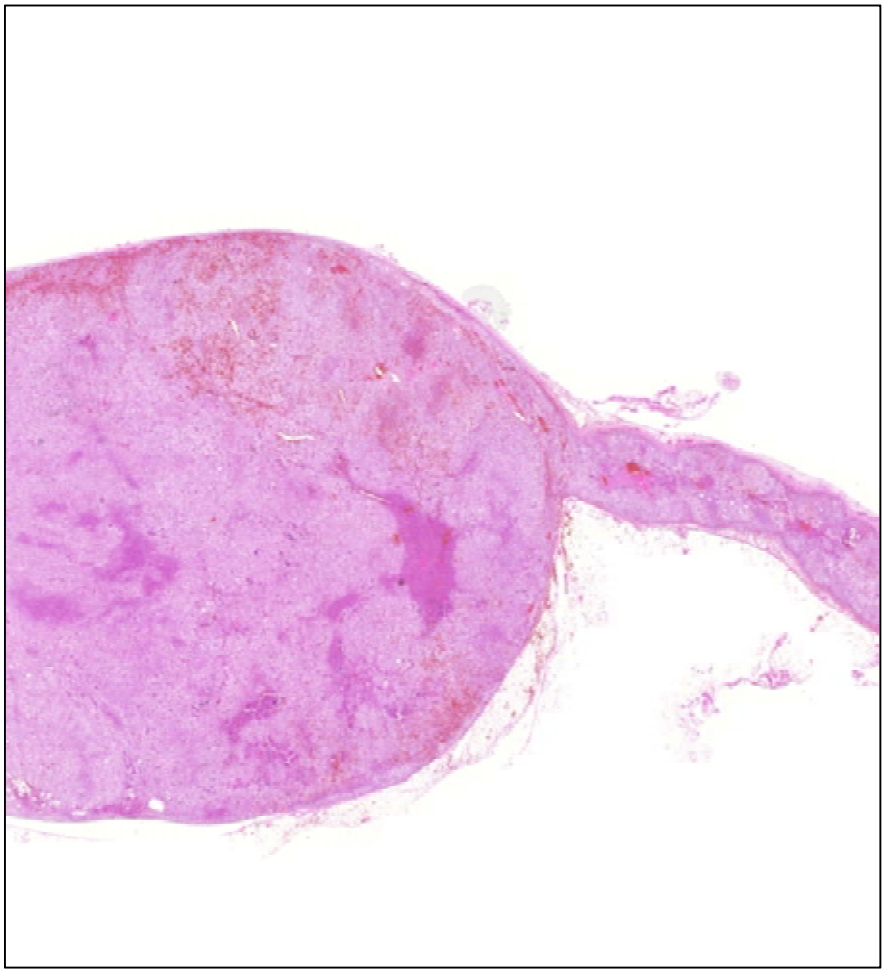
Nodular hyperplasia

Adenoma

Microscopy



Nodular hyperplasia



Adenoma

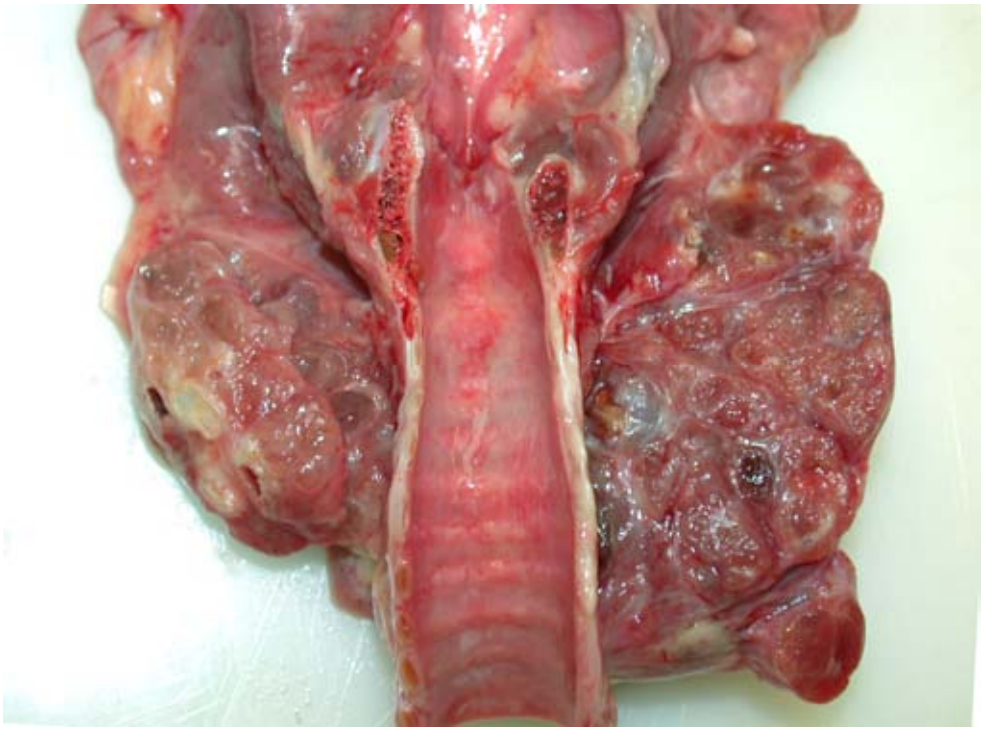
Nodular goiter

Macroscopy	
Localisation	Thyroid gland
Pattern	Assymetrical nodular proliferation
Colour	Variable (generally red/brown)
Consistency	Variable (colloid nodule=soft/liquid, adenomatous nodule=rubbery, degenerative nodule=firm/calcified)
Other	Hormonally active nodule=hyperthyreosis Large nodules can cause compression of neck/upper mediastinal structures

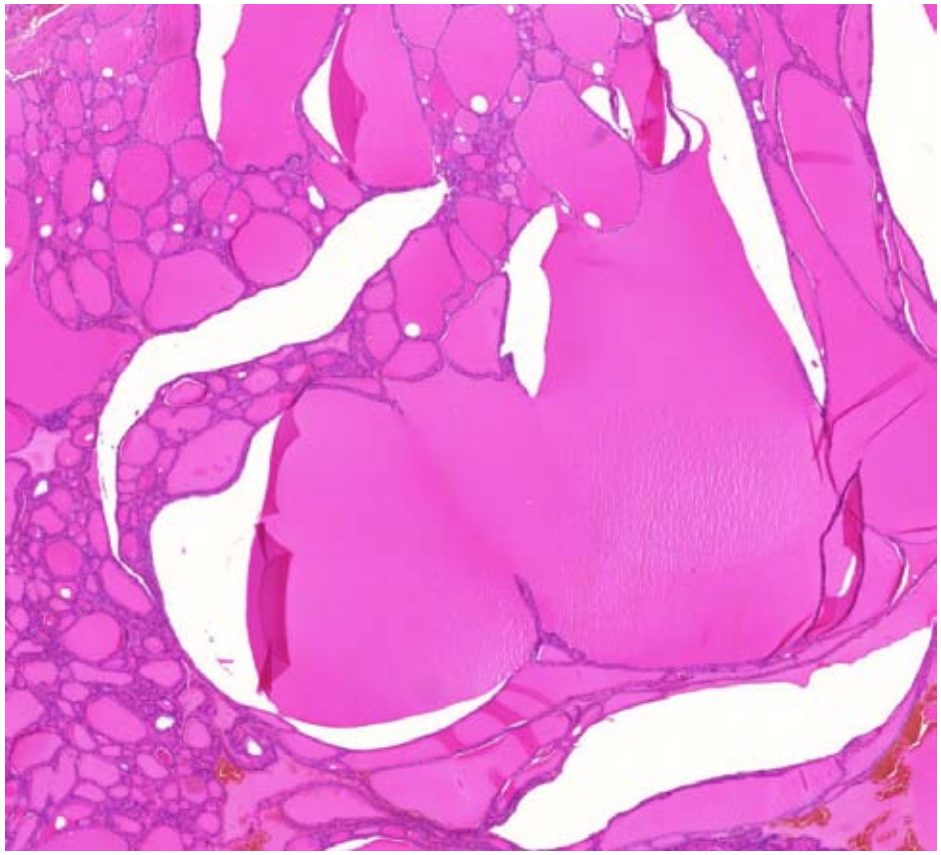
Microscopy

1. Colloid nodule (hormonally inactive)= large dilated follicles, colloid rich, flat epithelium
2. Adenomatous nodule (hormonally active)= small hyperplastic follicles, colloid-poor, cuboidal vacuolised epithelium
3. Degeneration= hemosiderin+cholesterin accumulation, fibrosis, hyalinisation, calcification

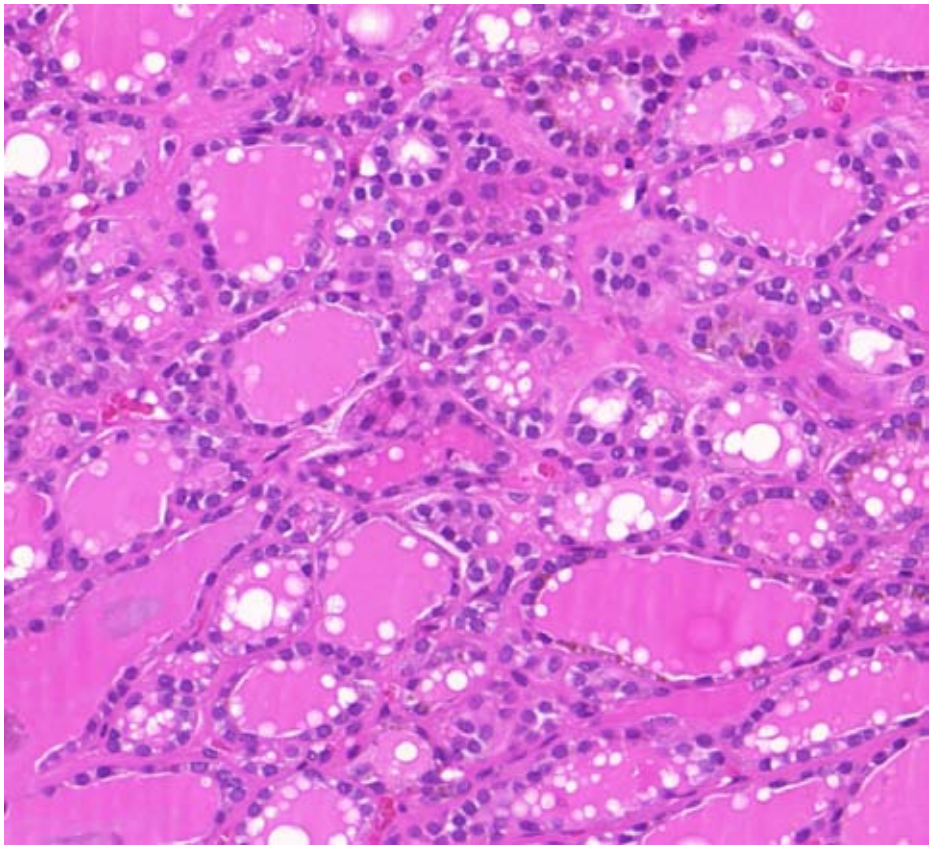
Macroscopy



Microscopy



1



2

Hashimoto's thyreoiditis

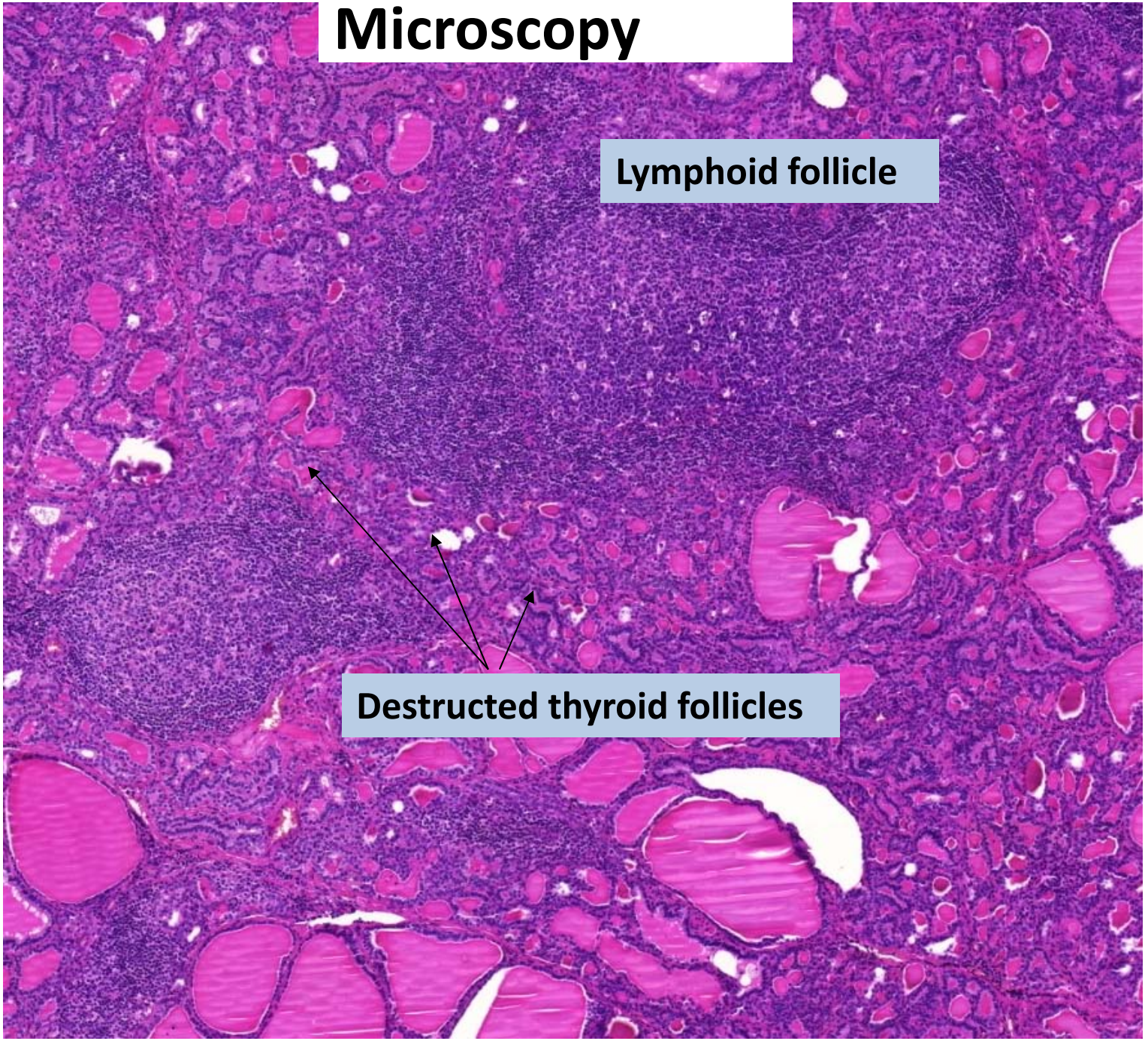
Macroscopy	
Localisation	Thyroid gland
Pattern	Early stage: mild hyperplasia. Late stage: atrophy (generally symmetric lobes, sometimes nodules can develop)
Colour	Patchy gray (lymphatic follicles in thyroid tissue)
Consistency	Late stage: firm
Other	MALT lymphoma can develop

Microscopy

1. Multifocal lymphocytic infiltration with lymphoid follicles
2. Destruction of follicular epithelium with oncocyter metaplasia =Hürtle cells
3. Late stage: complete follicular atrophy and fibrosis („burned out" inflammation)

Macroscopy

Microscopy



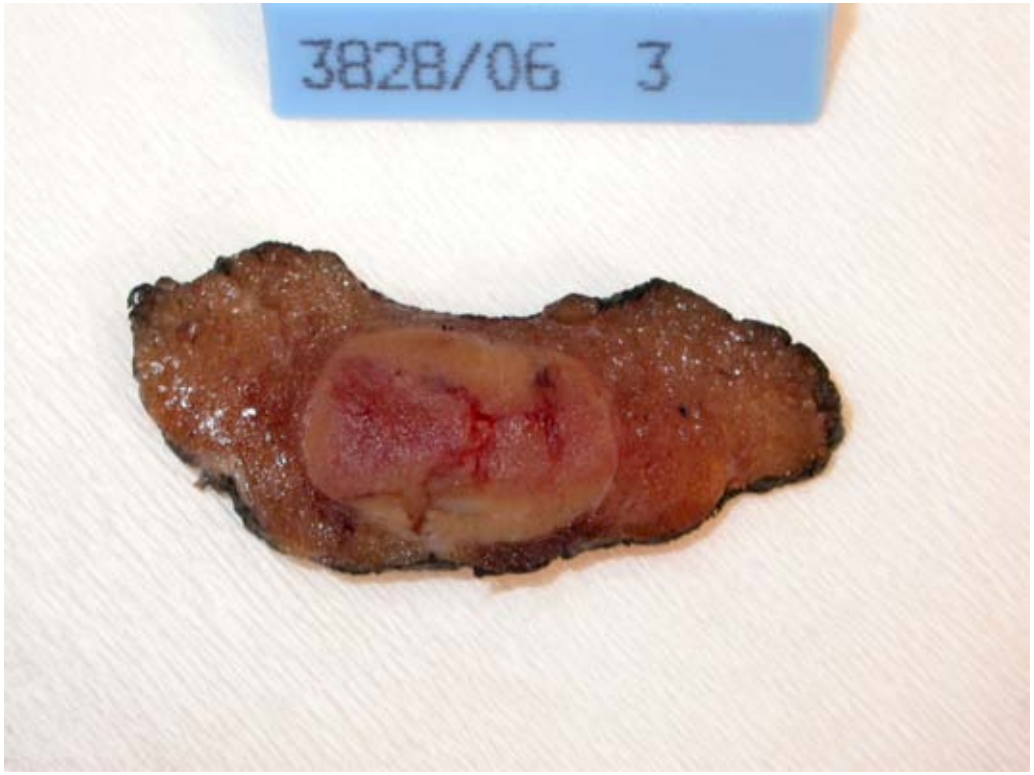
Follicular adenoma

Macroscopy	
Localisation	Thyroid gland
Pattern	Solitary nodule
Colour	Red/gray/brown
Consistency	Rubbery
Other	Encapsulated!

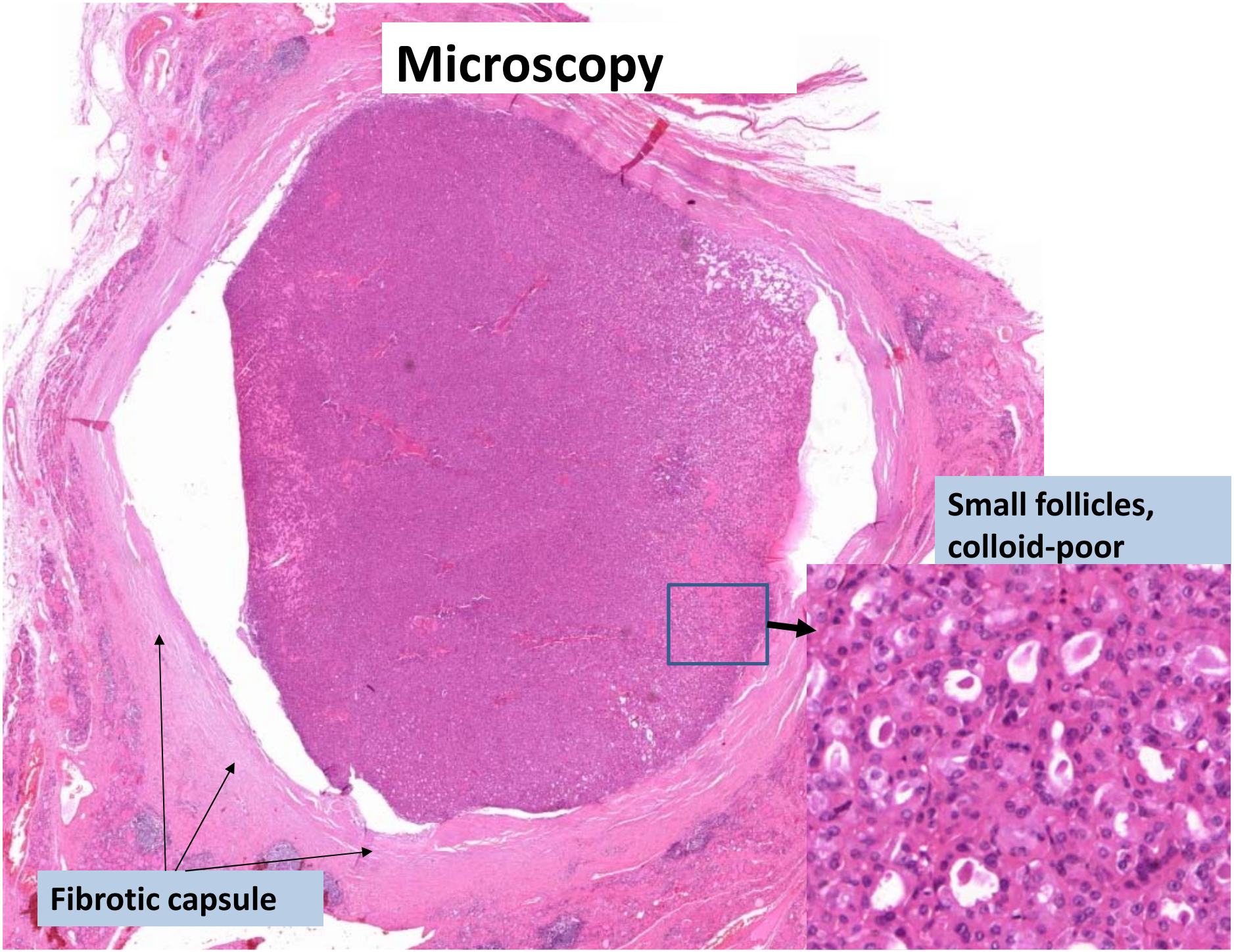
Microscopy

1. Complete fibrous capsule!!
2. Follicular structures (generally microfollicular, rarely macrofollicular)
3. Low colloid content
4. Benign cytomorphology – Slight atypia/polymorphism can occur but it does not indicate malignancy!
5. Criteria of malignancy: **a)** infiltration of the capsule **b)** vascular invasion

Macroscopy



Microscopy



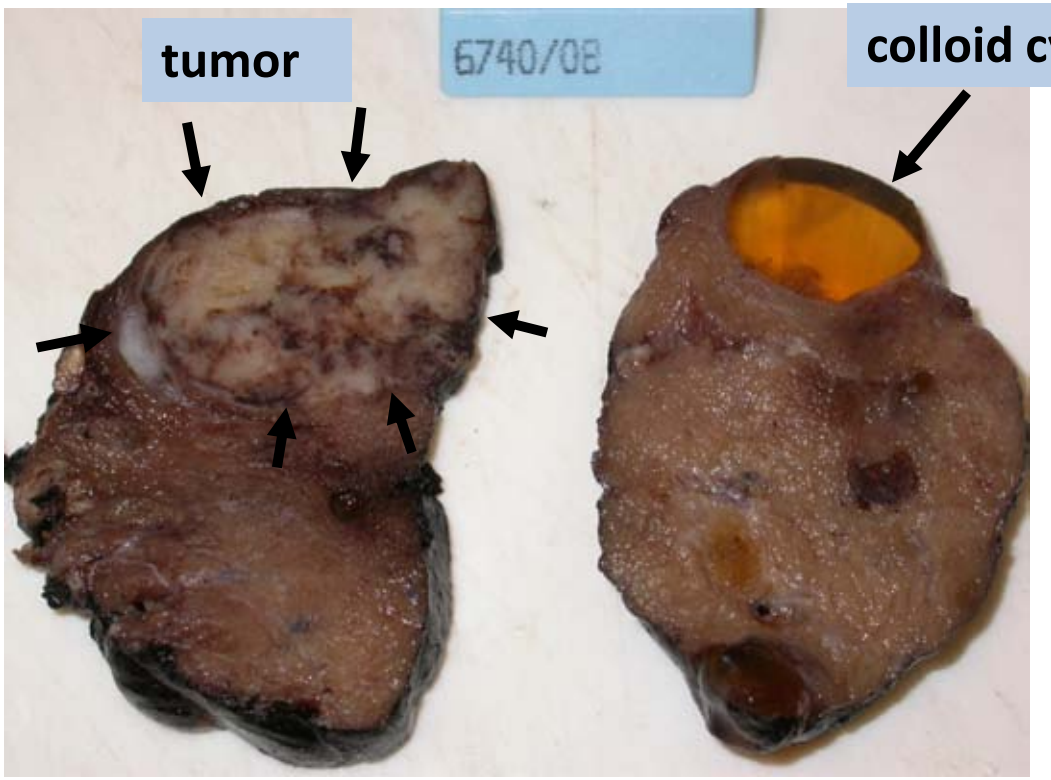
Papillary carcinoma

Macroscopy	
Localisation	Thyroid gland
Pattern	Generally solitary, sometimes multifocal infiltrative nodule
Colour	Gray
Consistency	Firm
Other	Frequent lymph node metastasis – but good prognosis!

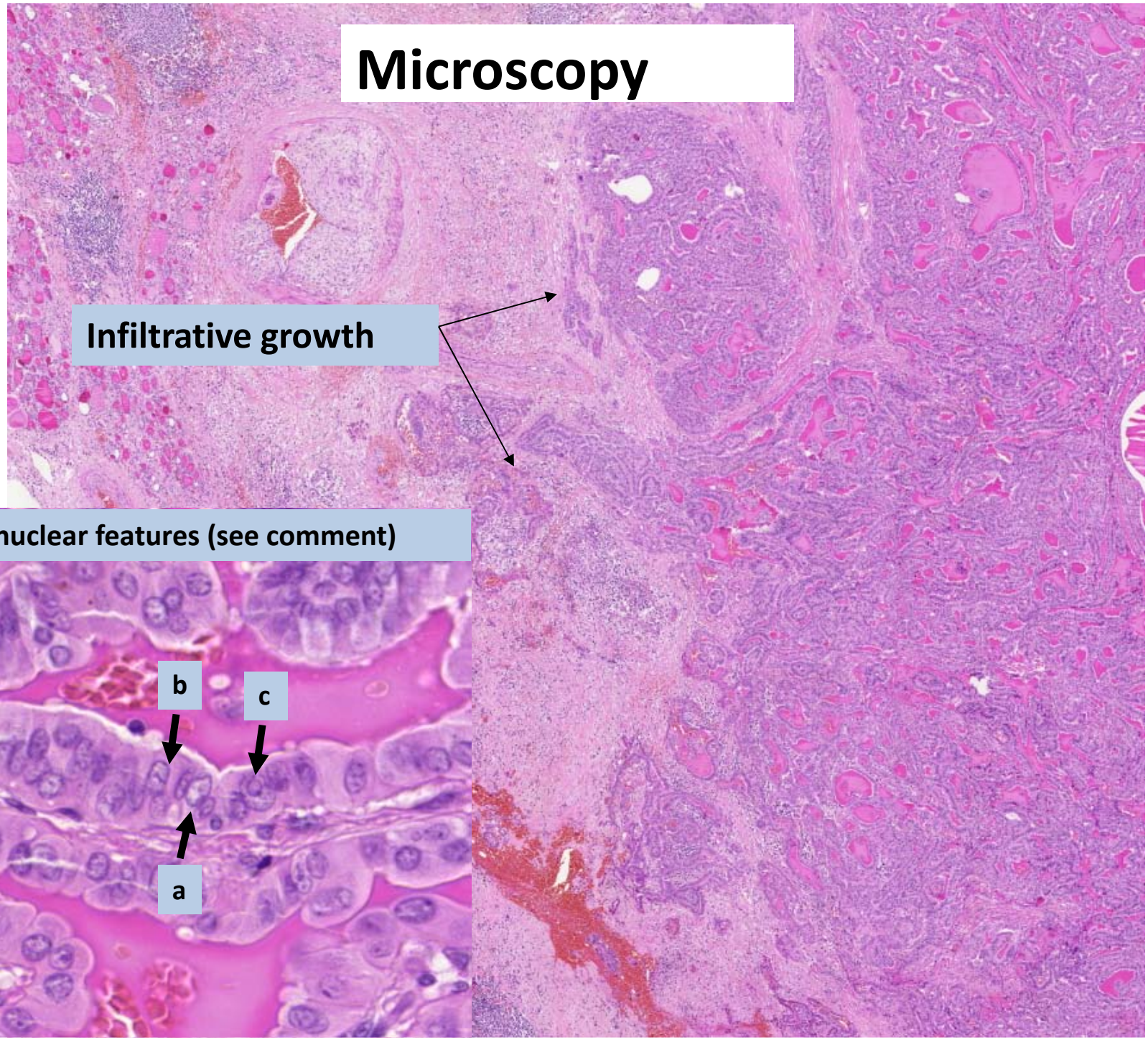
Microscopy

1. Infiltrative growth
2. Desmoplasia
3. Papillary or follicular structures
4. Characteristic cytomorphology: (special nuclei!!): **a)** „Orphan Annie” (=chromatin clearing) **b)** grooves (=coffee bean nuclei) **c)** intranuclear cytoplasmic inclusions
5. Psammoma body=concentrical microcalcification in the stroma (not obligate)

Macroscopy



Microscopy

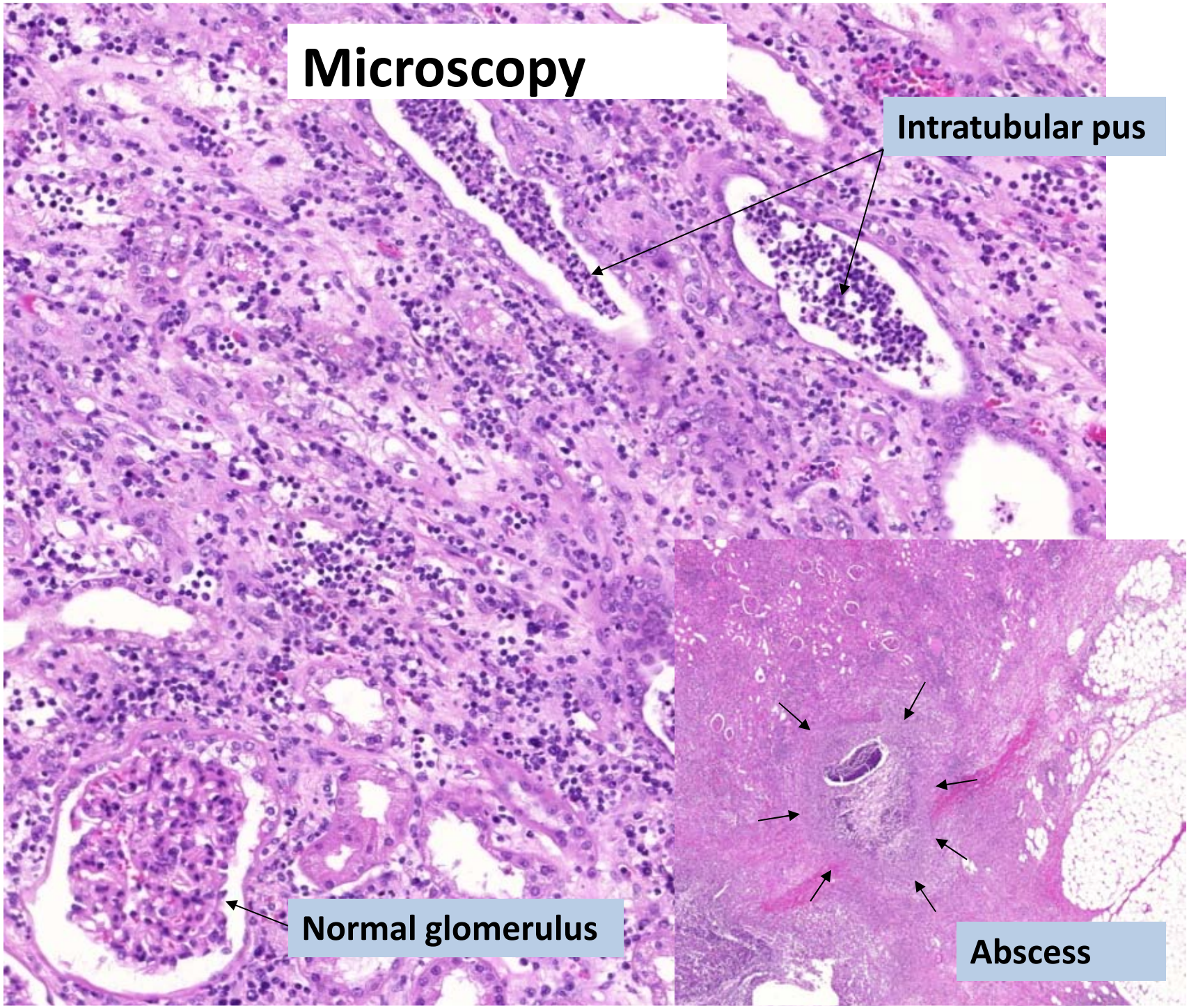

Infiltrative growth
Special nuclear features (see comment)
b
c
a

Acute pyelonephritis

Macroscopy	
Localisation	kidney
Pattern	Diffuse Can complicated with papilla-necrosis
Colour	Basic colour: deep red (=active hyperaemia), with yellow spots (=microabscesses)
Consistency	Edematic, soft
Other	Cortex/medulla border not definable

Microscopy
1. Ascendind infection: granulocytic infiltrate in tubuli and interstitium
2. Abscess formation
3. Preserved glomeruli

Macroscopy


Microscopy
Intratubular pus
Normal glomerulus
Abscess

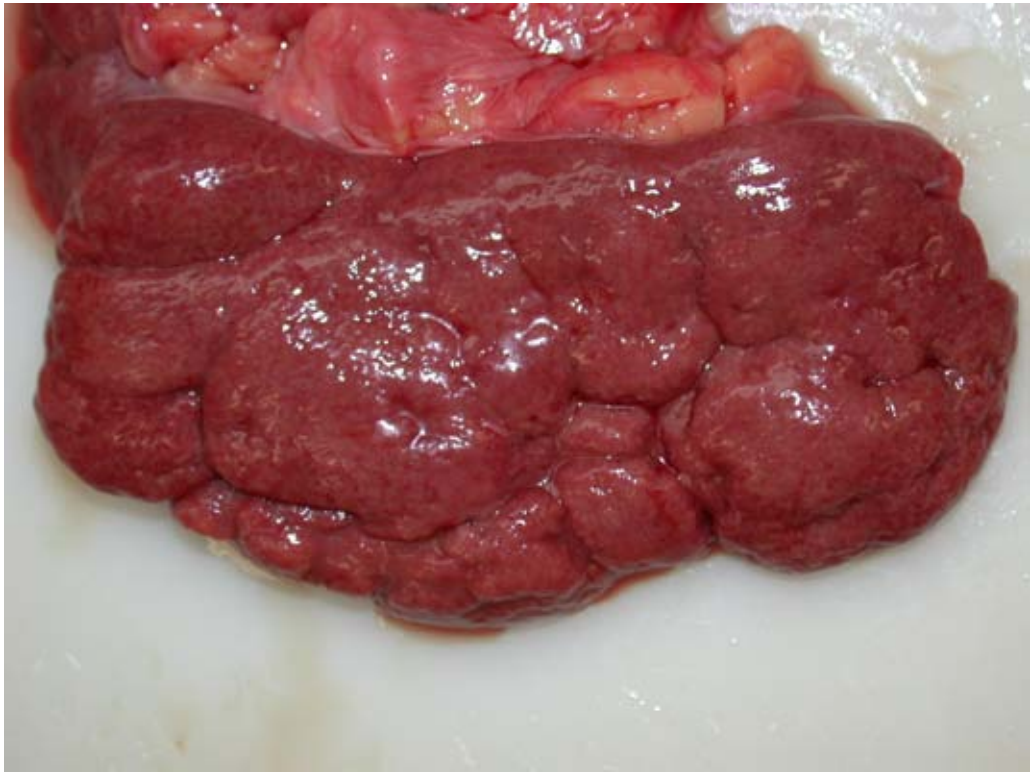
Chronic pyelonephritis/end stage kidney

Macroscopy	
Localisation	kidney
Pattern	Irregular retractions on the surface, parenchymal atrophy
Colour	Gray scar tissue in the parenchyma
Consistency	Firm
Other	

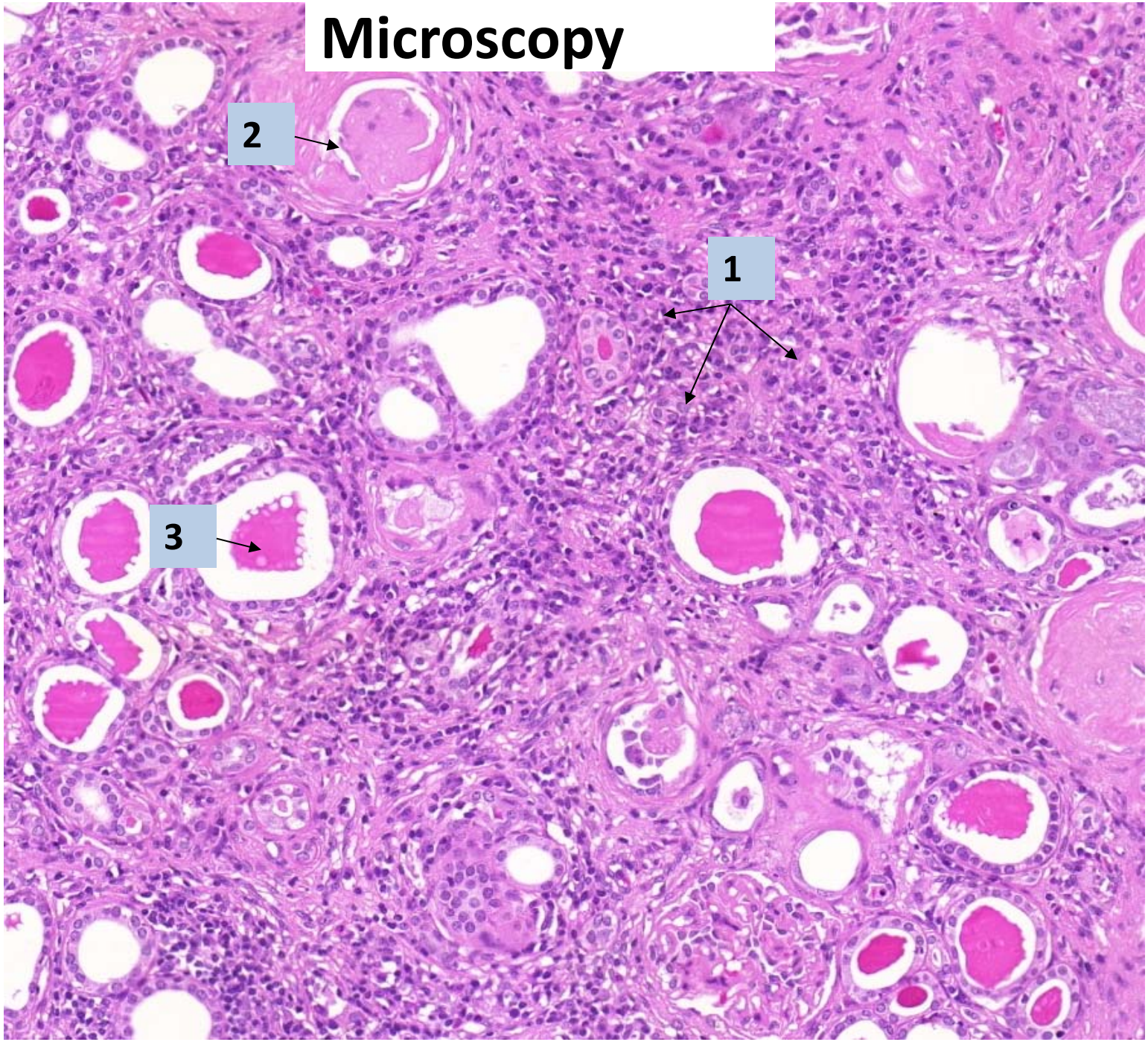
Microscopy

1. Interstitial fibrosis+lymphocytic infiltration
2. Glomerulosclerosis
3. Tubular atrophy+”thyreoidisation” (=tubular protein cylinders)

Macroscopy



Microscopy



Clear cell carcinoma

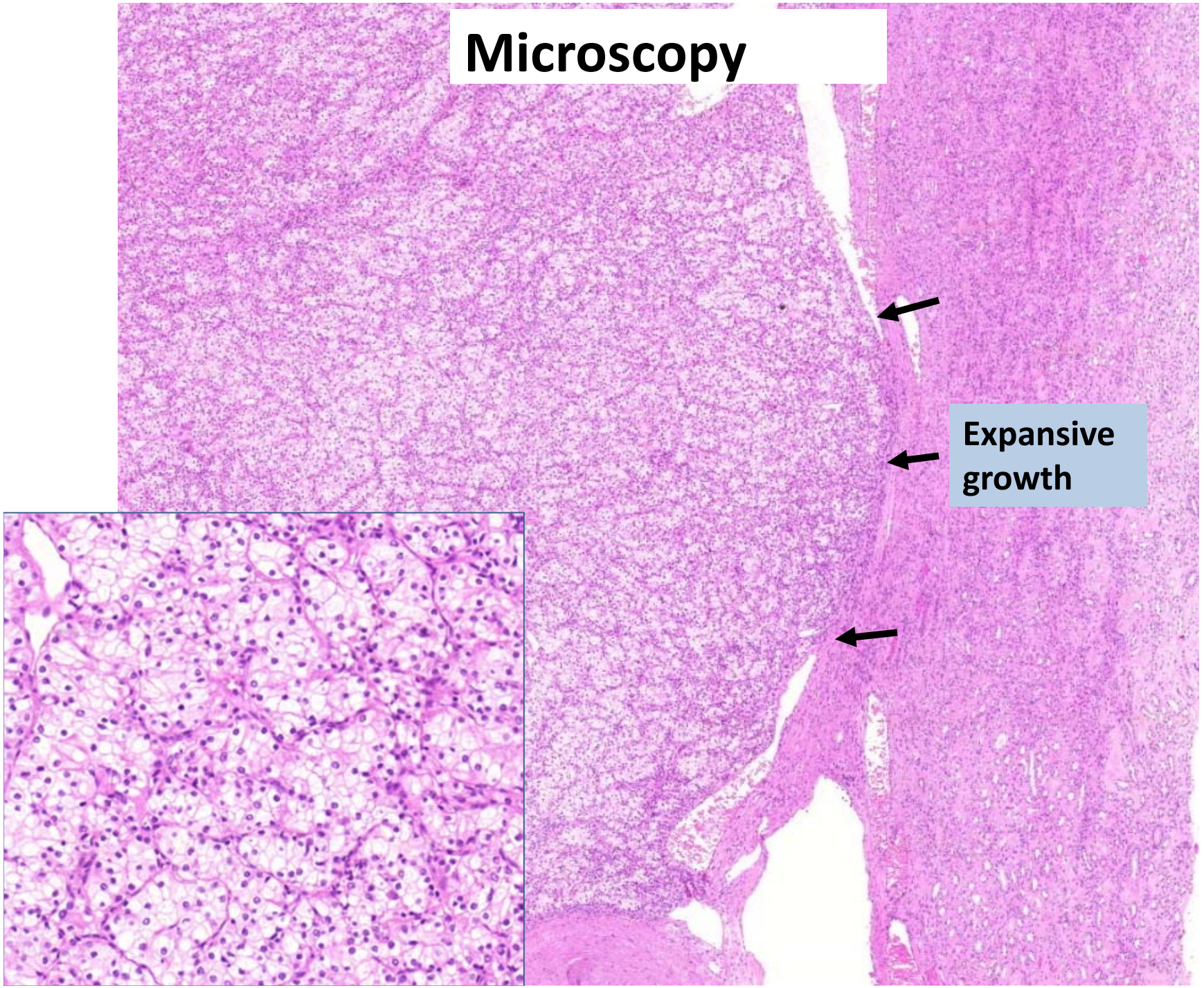
Macroscopy	
Localisation	Kidney
Pattern	Generally solitary, well circumscribed nodule
Colour	Yellow
Consistency	Soft
Other	Common (even macroscopic) renal vein invasion→ hematogenous metastatisation!

Microscopy

1. Expansive growth
2. High cellularity and vascularisation, no desmoplasia
3. Nesty/acinar structures
4. Clear cytoplasm (=glycogen rich), variable nuclear atypia and nucleoli (which determines the „Fuhrman's grade).

Macroscopy

Microscopy



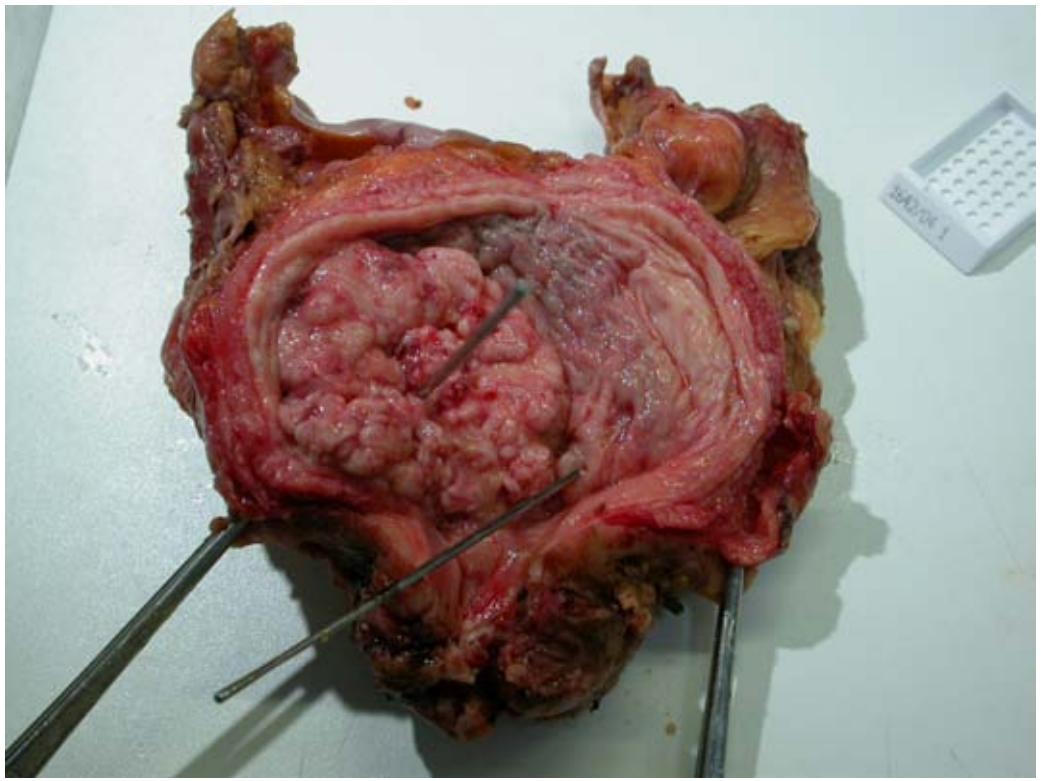
Urothelial cell carcinoma

Macroscopy	
Localisation	Most common: urinary bladder, Other localisation: kidney (pyelon), ureter, urethra
Pattern	Two main type: **a)** superfitial-less invasive= flat, „fluffy" tumor, can be multifocal **b)** muscle invasive=exophytic/ulcerated tumor Can progress a→b
Colour	Gray
Consistency	Superfitial: soft. Deep invasion: firm
Other	

Microscopy

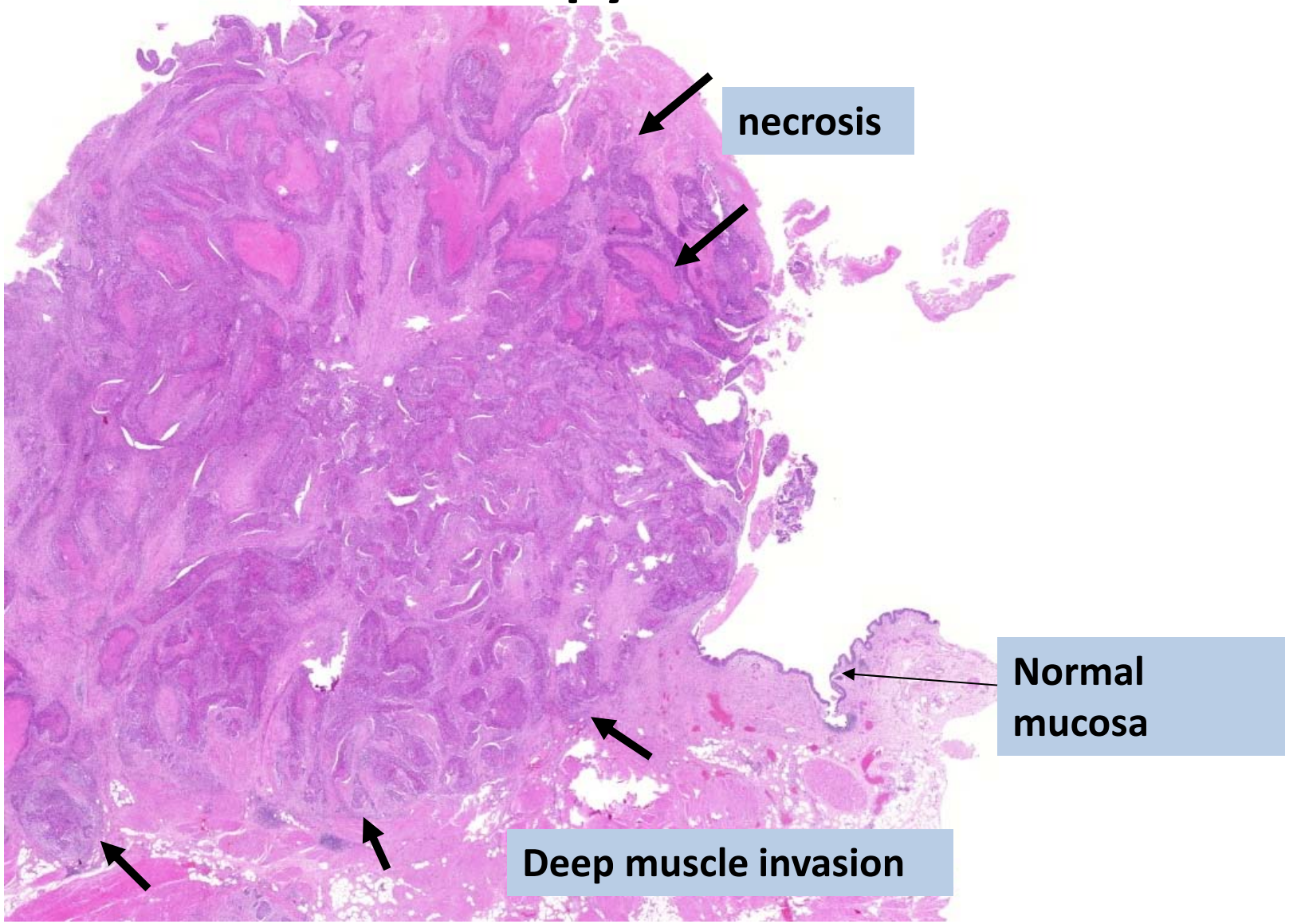
1. Superfitial: papillary structures. Deep invasion: nesty-papillary structures with desmoplasia
2. Tumor cells with urothelial differentiation karakterű sejtek: Superfitial: generally well differentiated (low grade). Deep invasion: generally poorly differentiated (high grade).

Macroscopy



Radical cystectomy specimen: large exophytic tumor surrounding the right ureter

Microscopy



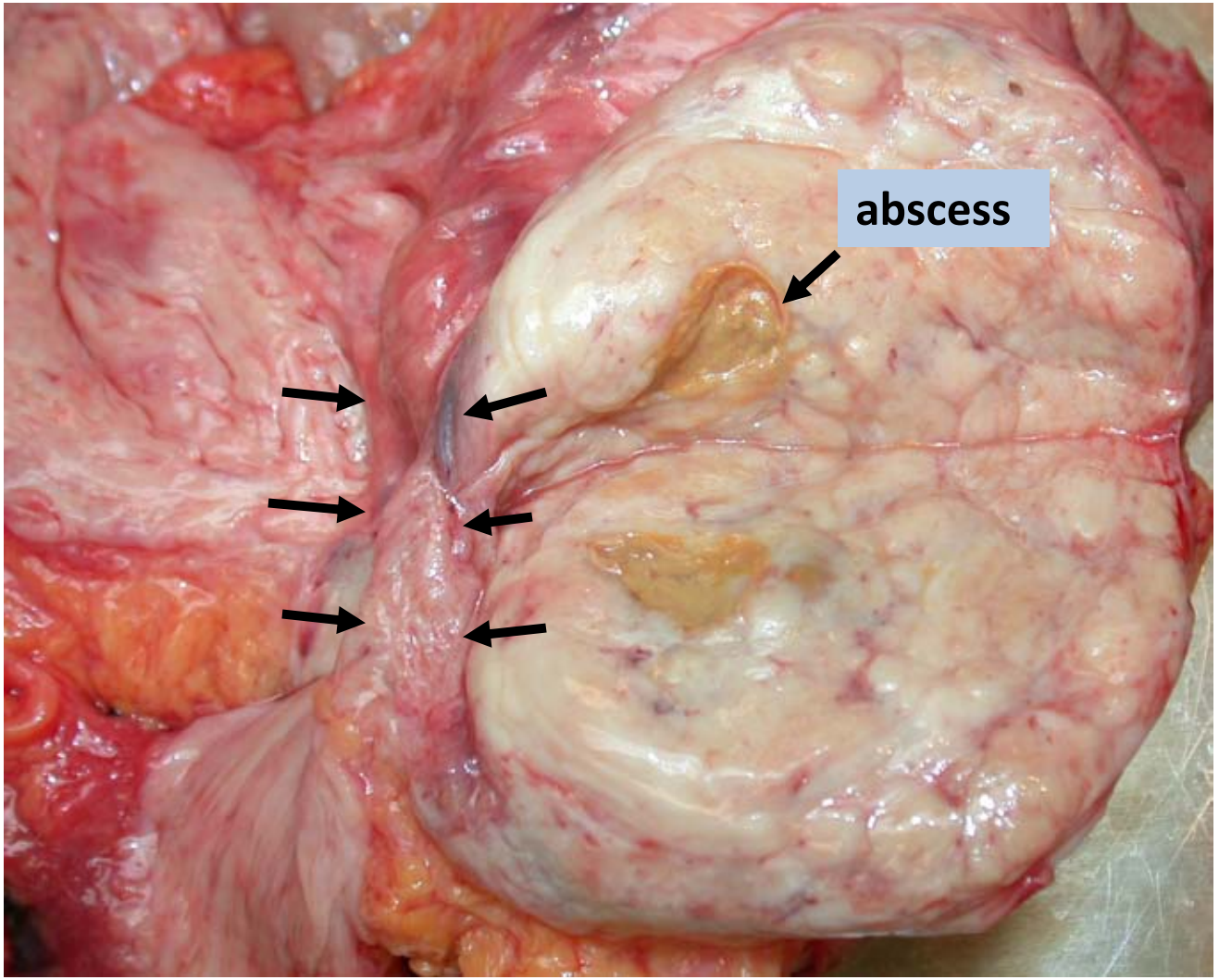
Nodular prostate hyperplasia

Macroscopy	
Localisation	Prostate
Pattern	Nodular (dominantly central)
Colour	Gray
Consistency	Rubbery-spongious
Other	

Microscopy

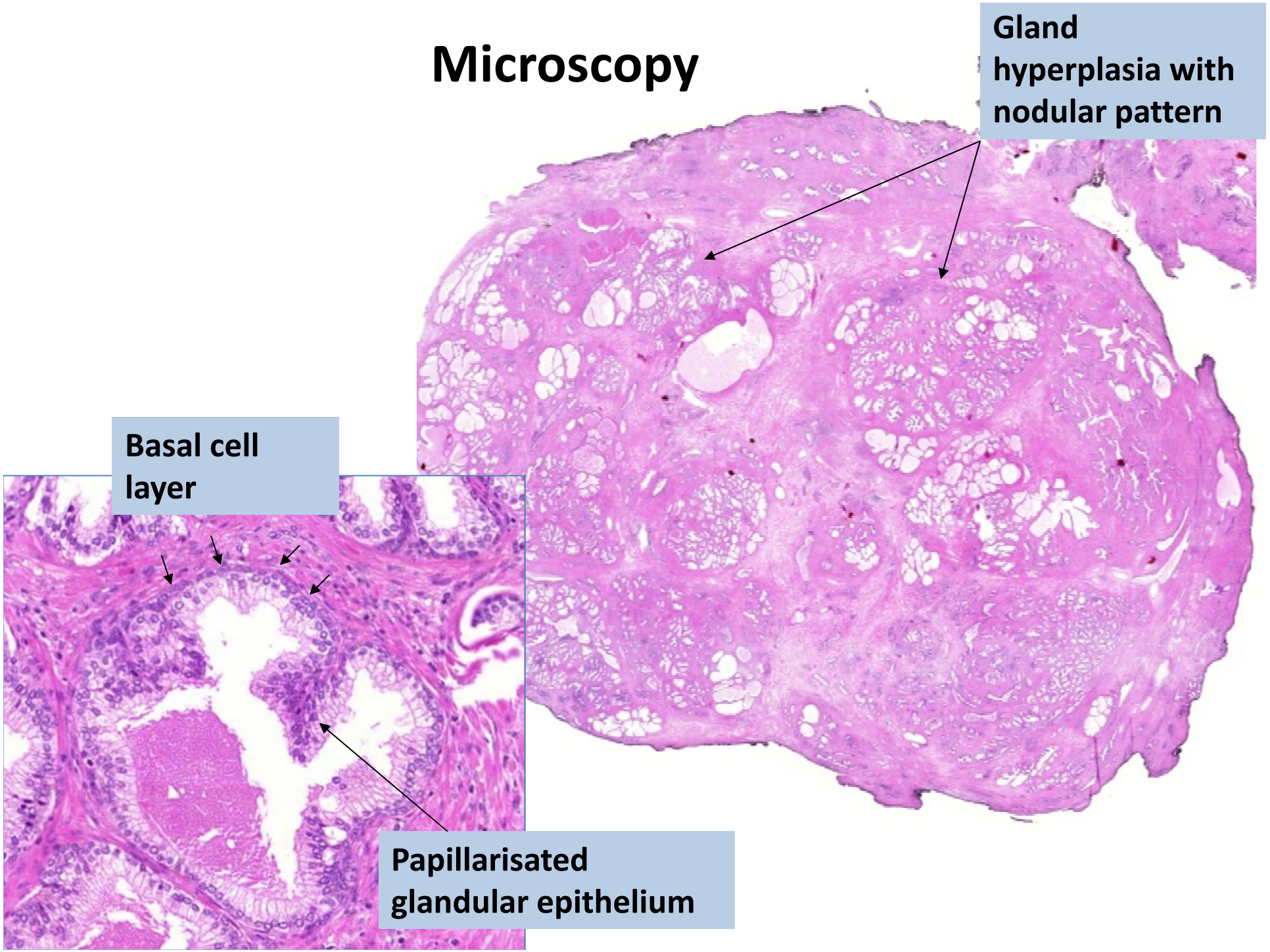
1. Nodular overgrowth of glands+stroma
2. Structure of hyperplastic glands: large, cystic, papillarised epithelium
3. Basal cell layer always present!!!
4. Frequent inflammatory changes

Macroscopy



Cut surface of the left lobe with compressed urethra (arrows)

Microscopy


Gland hyperplasia with nodular pattern
Basal cell layer
Papillarisated glandular epithelium

Prostatic adenocarcinoma

Macroscopy

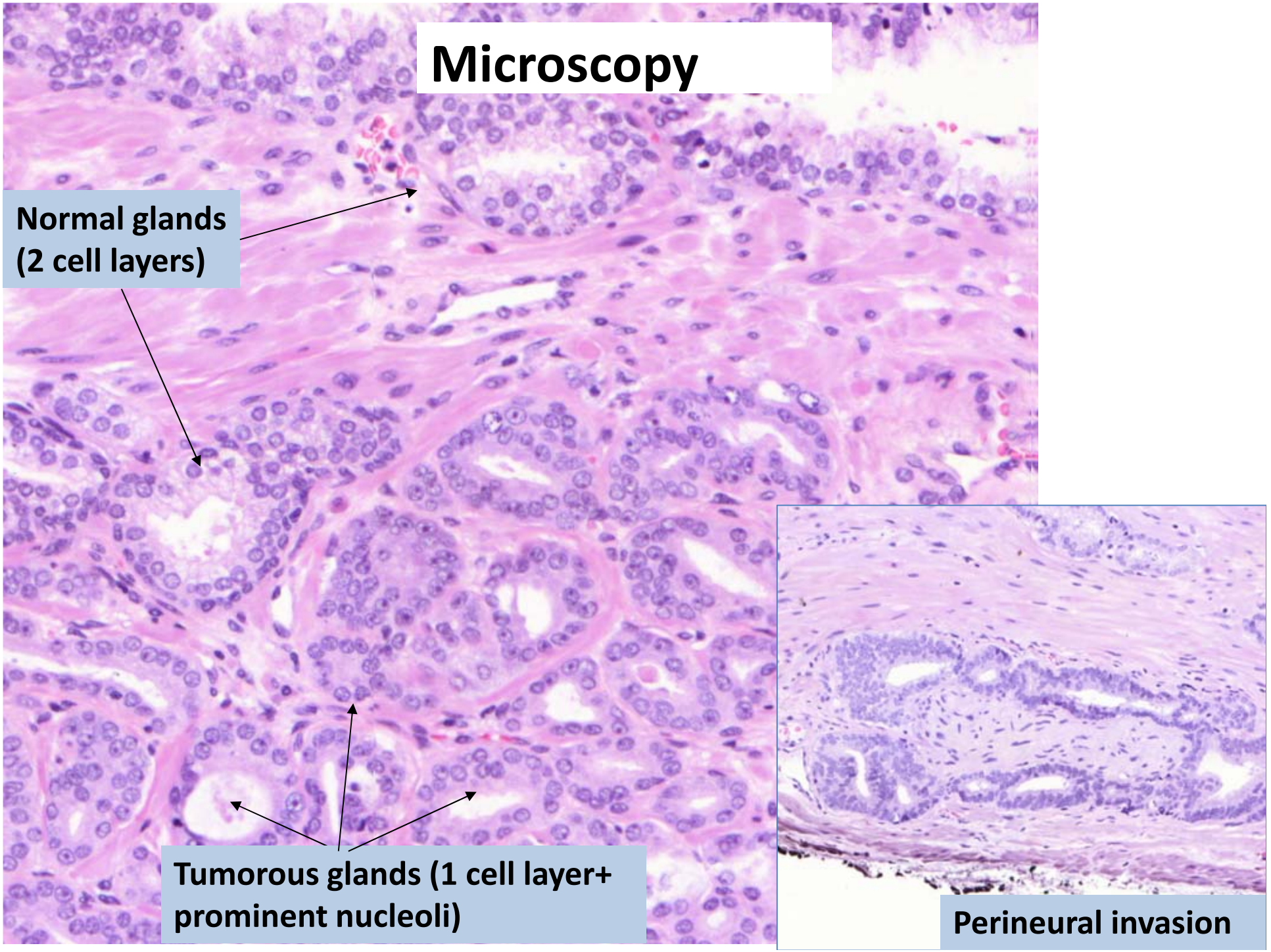
Localisation	Prostate
Pattern	Infiltrative (dominantly peripherial-apical)
Colour	Gray
Consistency	Hard
Other	Macroscopicaly invisible most of the cases (has the same colour as the prostate parenchyma). Palpation is more sensitive.

Microscopy

1. Infiltrative growth (frequent perineural invasion)
2. Tumorous gland: smaller than the hyperplastic glands
3. Arrangement of tumorous glands: back-to-back (no intervening stroma between glands), or confluence
4. Tumorous gland never contain basal cells!!
5. Cytomorphology: large hyperchromatic nuclei with prominent nucleoli

Macroscopy

Microscopy


Normal glands
(2 cell layers)
Tumorous glands (1 cell layer+
prominent nucleoli)
Perineural invasion

Seminoma type germ cell tumor

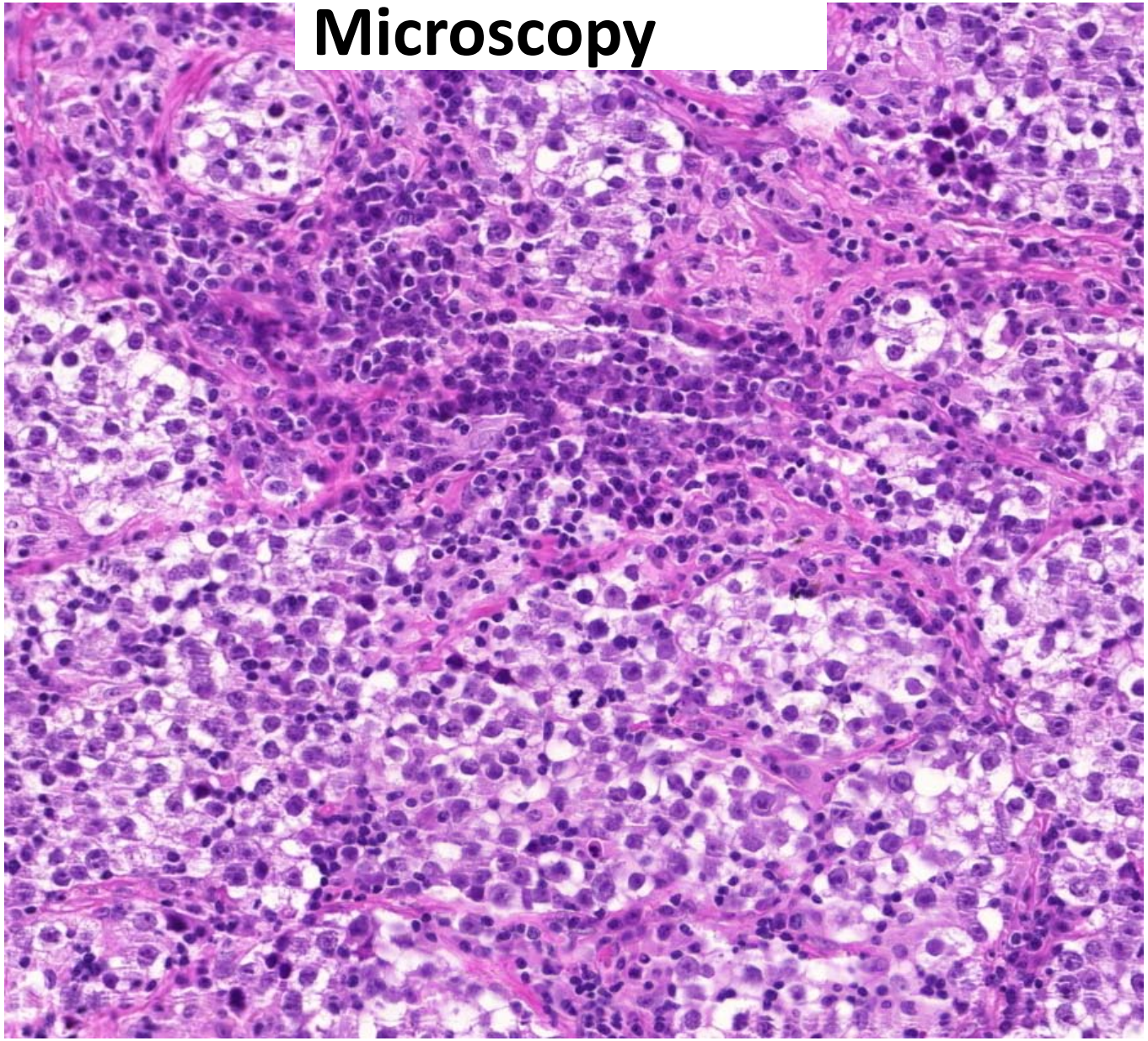
Macroscopy	
Localisation	Testis (ovary=dysgerminoma), very rarely retroperitoneum, mediastinum
Pattern	Well circumscribed, nodular
Colour	Yellow
Consistency	Soft
Other	Lymph node metastasis→retroperitoneum!

Microscopy

1. Expansive growth (vascular invasion can be present)
2. High cellularity and vascularisation, no desmoplasia
3. Nesty pattern, dense lymphocytic infiltrate
4. Cytomorphology: clear cytoplasma (glycogen rich), monotonous round nuclei with prominent nucleoli

Macroscopy

Microscopy



Non-seminoma type germ cell tumor (embryonal carcinoma)

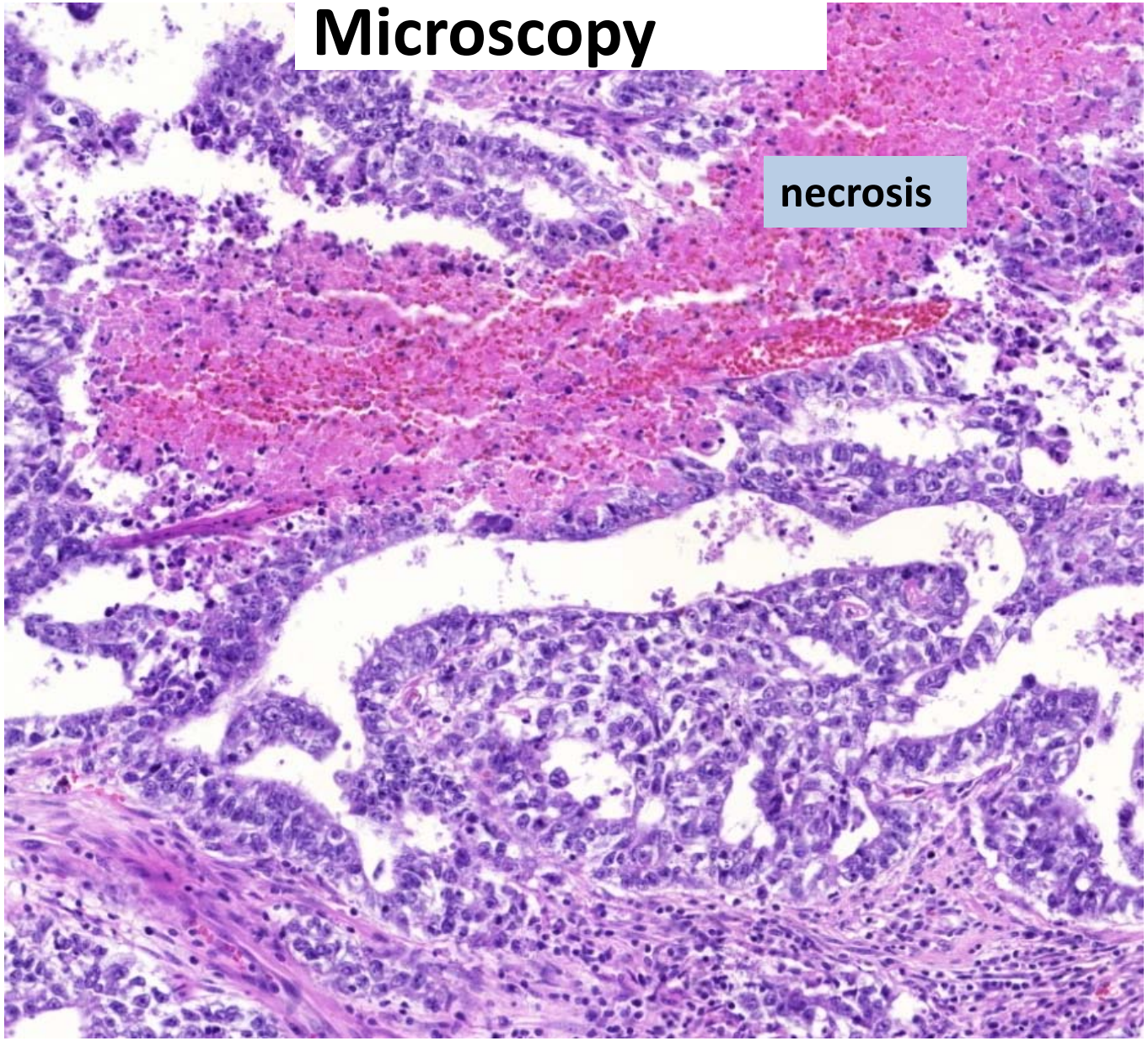
Macroscopy	
Localisation	Testis (ovary=dysgerminoma), very rarely retroperitoneum, mediastinum
Pattern	Less circumscribed, infiltrative
Colour	Variable
Consistency	Variable, frequent necrosis+hemorrhage
Other	Lymph node metastasis→retroperitoneum!

Microscopy

1. Infiltrative growth (common vascular invasion)
2. High cellularity
3. Heterogenous structures: glandular, nesty, cystic, solid etc.
4. Commonly mixed with other germ cell tumors (yolk-sac, teratoma etc)
5. Cytomorphology: severe polymorphism, prominent nucleoli, high mitotic count. Multinucleated giant cells=suspicious for choriocarcinoma!!

Macroscopy

Microscopy



Extrauterine gravidity

Macroscopy	
Localisation	Salpinx
Pattern	Focal dilation of the salpinx
Colour	Red (hemorrhage)
Consistency	
Other	Complications: rupture, acute abdomen, hemorrhagic shock

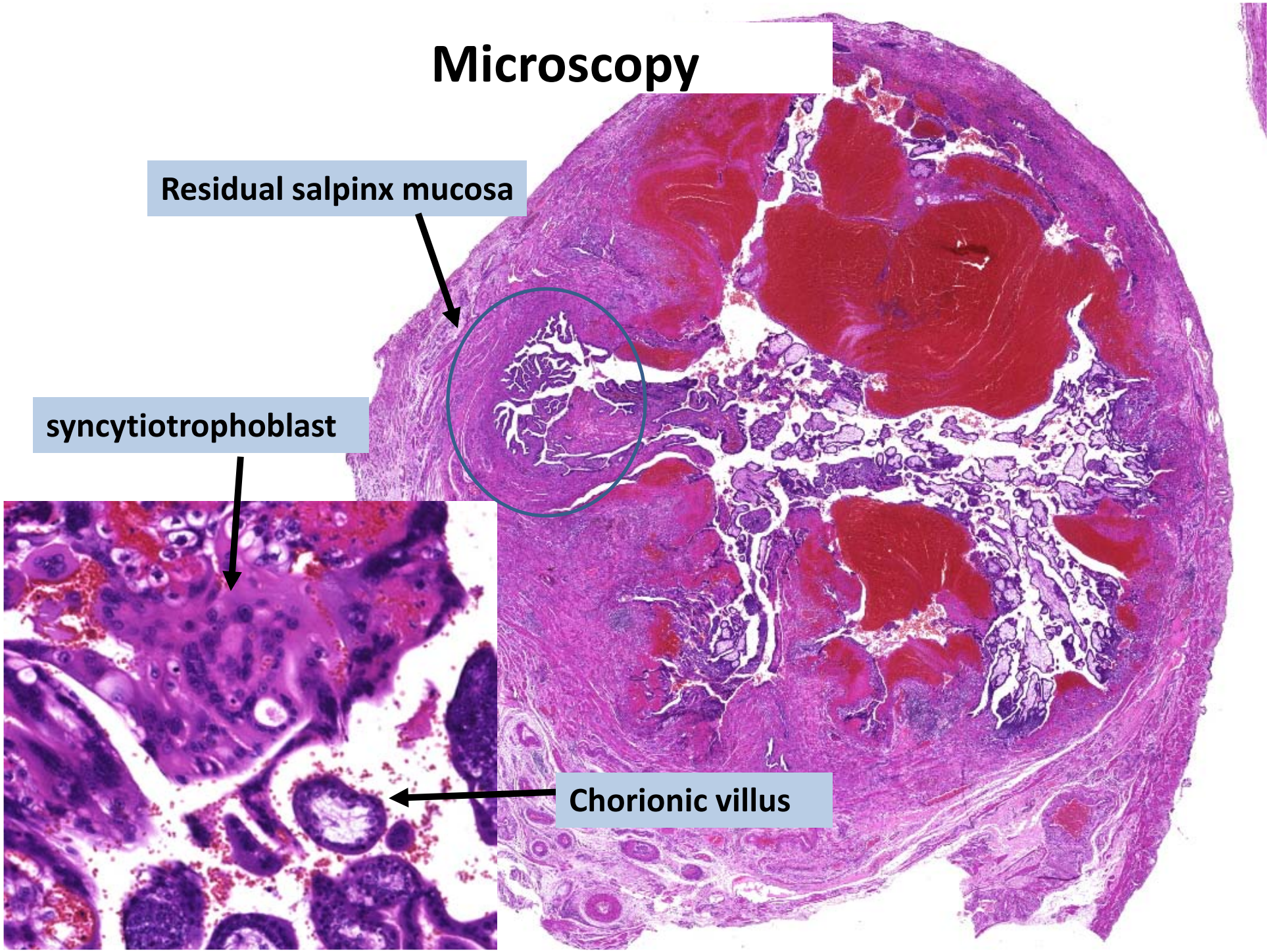
Microscopy

1. Hemorrhage
2. PlacentaL elements embedded in the wall of the salpinx: chorionic villi, decidua (cytotrophoblast, syncytiotrophoblast)

Macroscopy

http://library.med.utah.edu/WebPath/FEMHTML/FEM039.html

Microscopy


Residual salpinx mucosa
syncytiotrophoblast
Chorionic villus

Endometriosis

Macroscopy	
Localisation	Ovaries, salpinx, pelvic peritoneum, urinary bladder, colon, abdominal wall (=scar of cesarian section) Very uncommon: parenchymal organs (lung, liver etc)
Pattern	Ovary: large cystic lesion Perintoneum: small plaques
Colour	Red-brown (cyclic hemorrhage→hemosiderin) Brown content=„chocolate cyst”
Consistency	
Other	

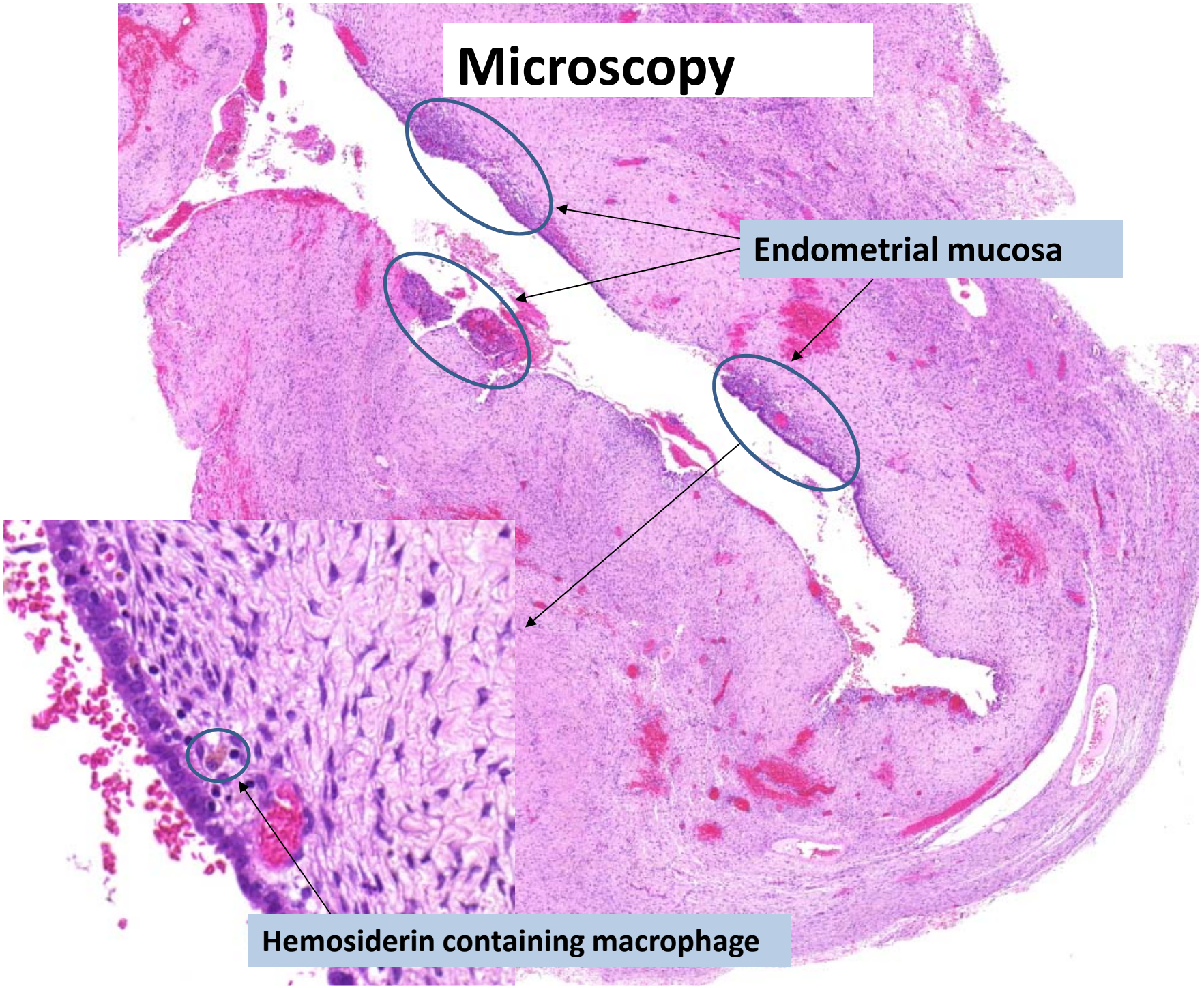
Microscopy

1. Fibrotic cyst wall in the ovarian parenchyma
2. Lining: endometrial epithelium+stroma
3. Hemosiderin accumulation (prussian blue positive)

Macroscopy

http://www.ovarian-cyst-symptoms.info/Chocolate-Cyst.html

Microscopy



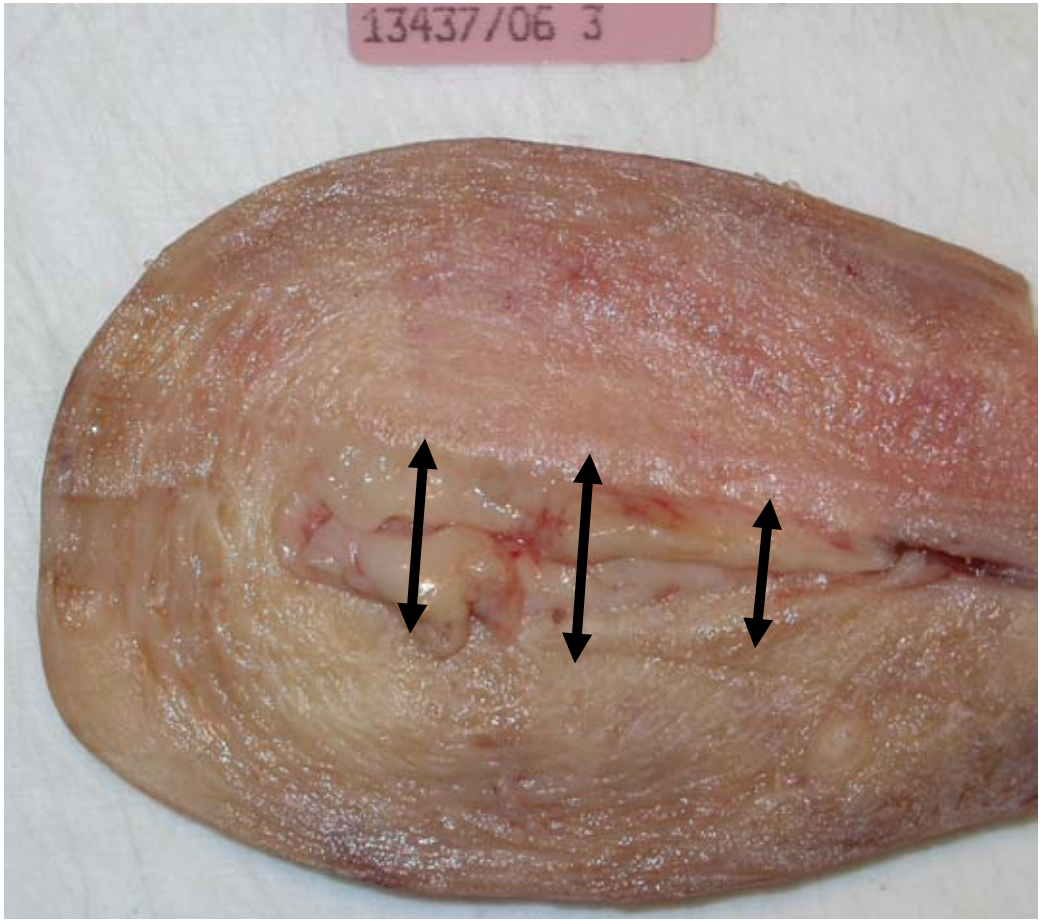
Endometrial simplex hyperplasia

Macroscopy	
Localisation	Endometrium
Pattern	Affect the whole endometrium
Colour	Reddish gray
Consistency	Soft
Other	

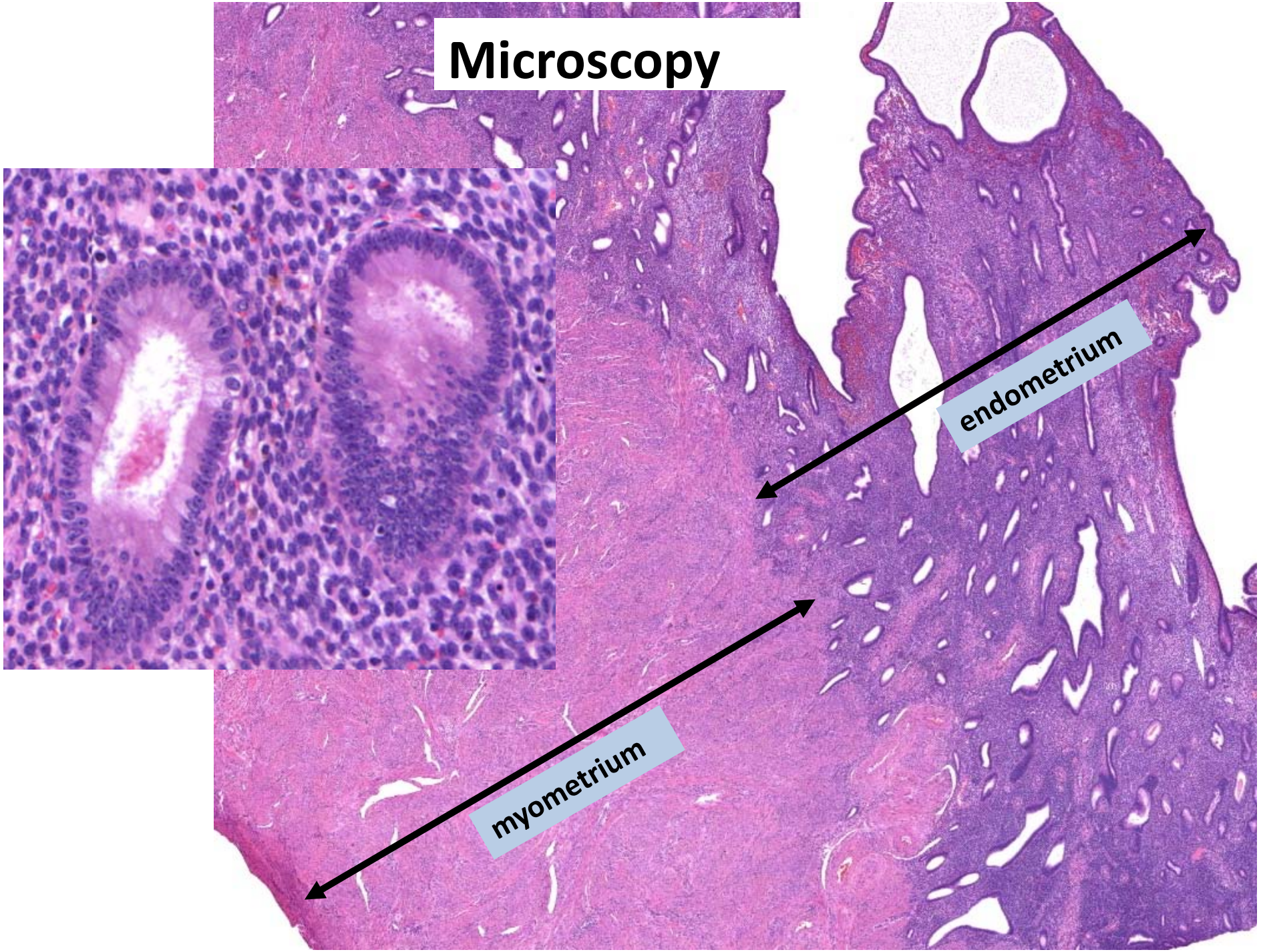
Microscopy

1. Thick endometrium (endometrium/myometrium ratio↑)
2. Gland/stroma ratio ↑ +enlarged glands with variable sized cystic structures (no gland confluence!)
3. Proliferative type epithelium without atypia

Macroscopy



Microscopy



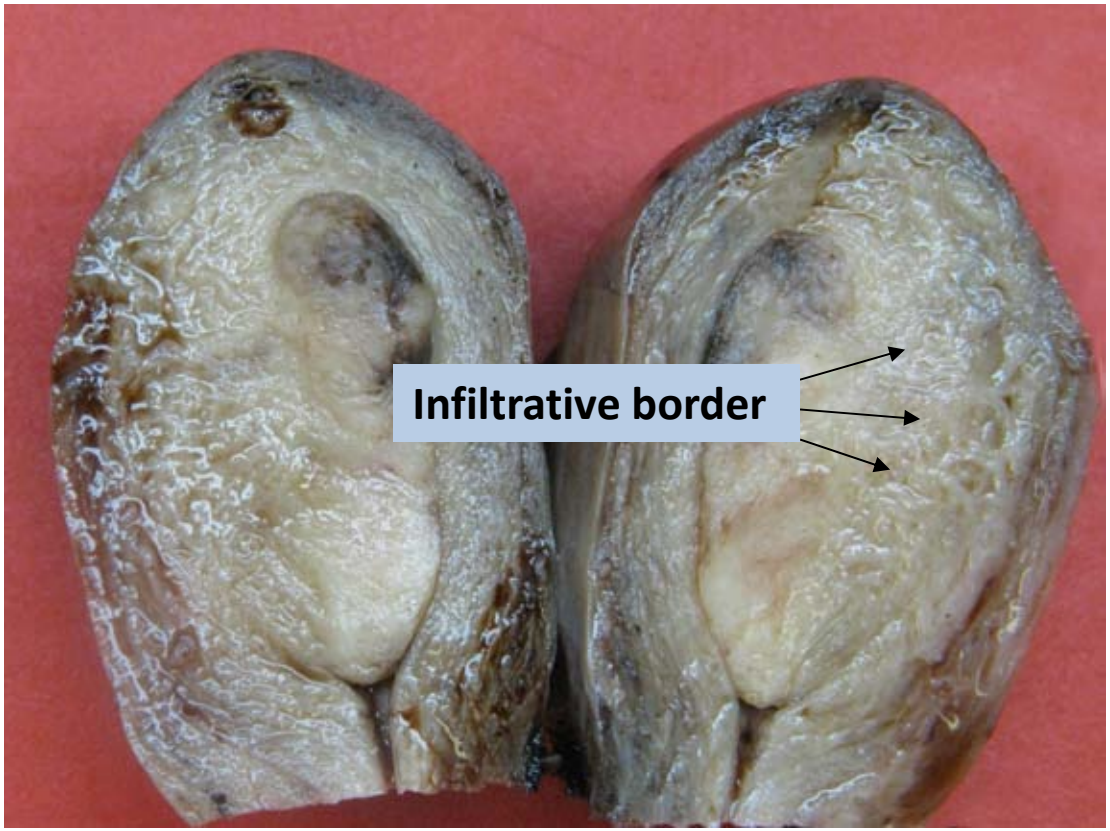
Endometrioid adenocarcinoma

Macroscopy	
Localisation	Endometrium (identical tumor can develop in ovaries)
Pattern	Infiltratív vagy polypoid
Colour	Gray
Consistency	Firm
Other	

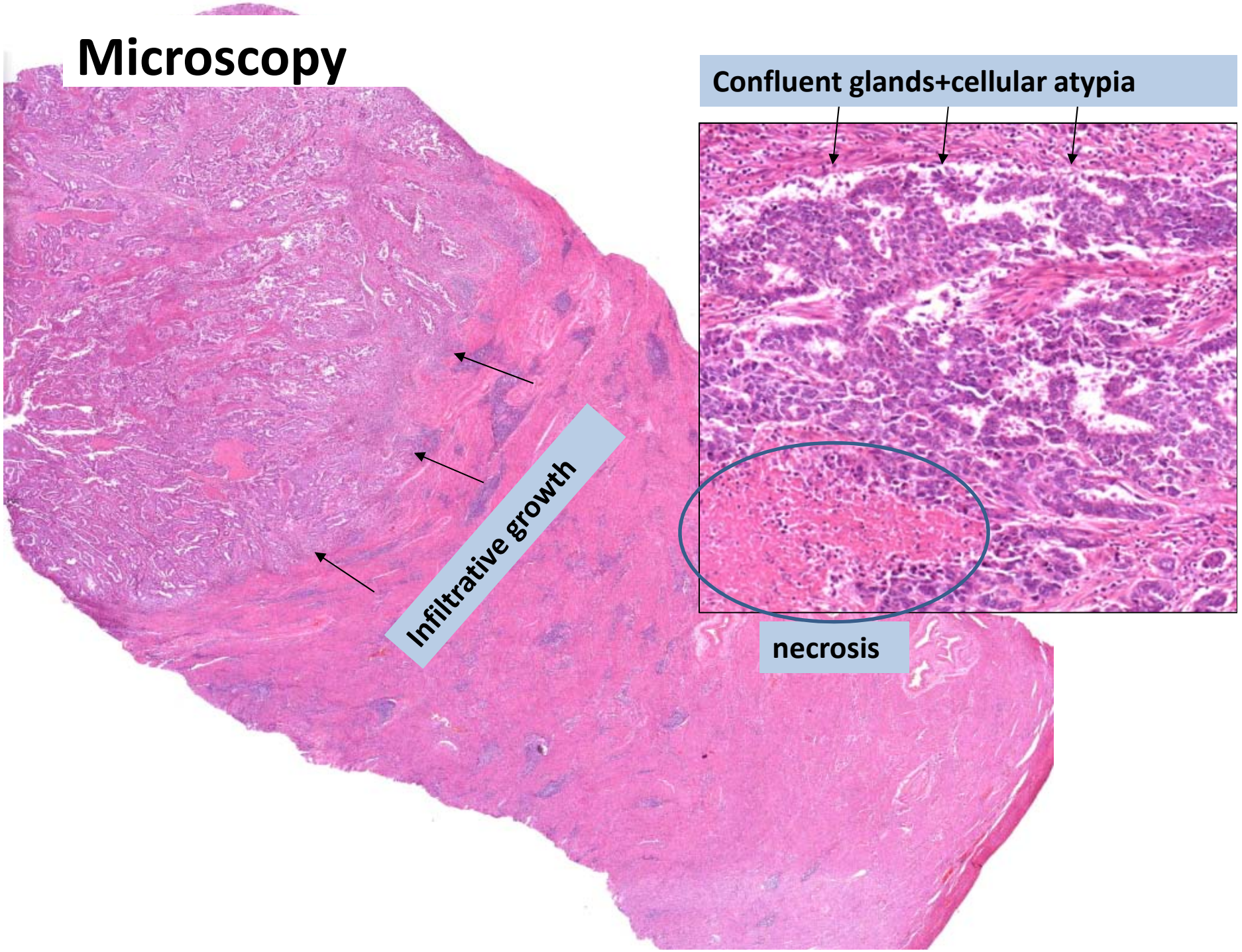
Microscopy

1. Myometrium invasion
2. Desmoplasia
3. Necrosis
4. Structural complexity= confluent glands with papillary projections
5. Cellular atypia

Macroscopy



Microscopy


Confluent glands+cellular atypia
Infiltrative growth
necrosis

Cystadenoma/carcinoma mucinosum

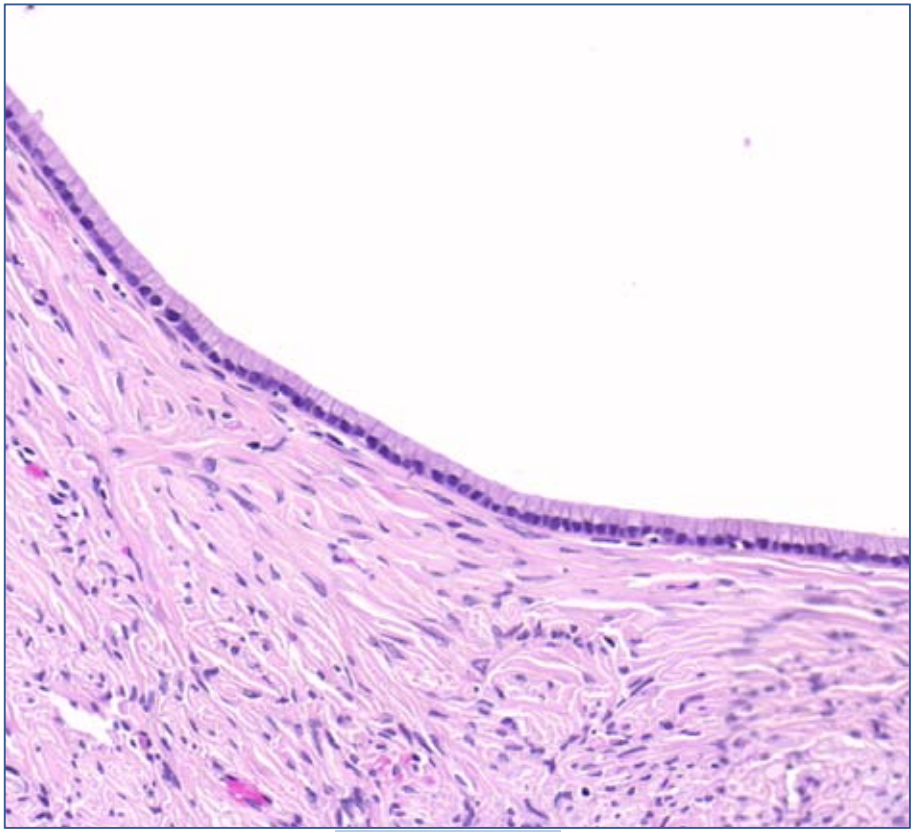
Macroscopy	
Localisation	Ovary (identical tumor can develop in appendix/pancreas)
Pattern	Cystic (multilocular), can be extremly large (>10 cm) Malignant area can be solid
Colour	
Consistency	Filled with mucus
Other	Peritoneal spread= pseudomyxoma peritonei

Microscopy

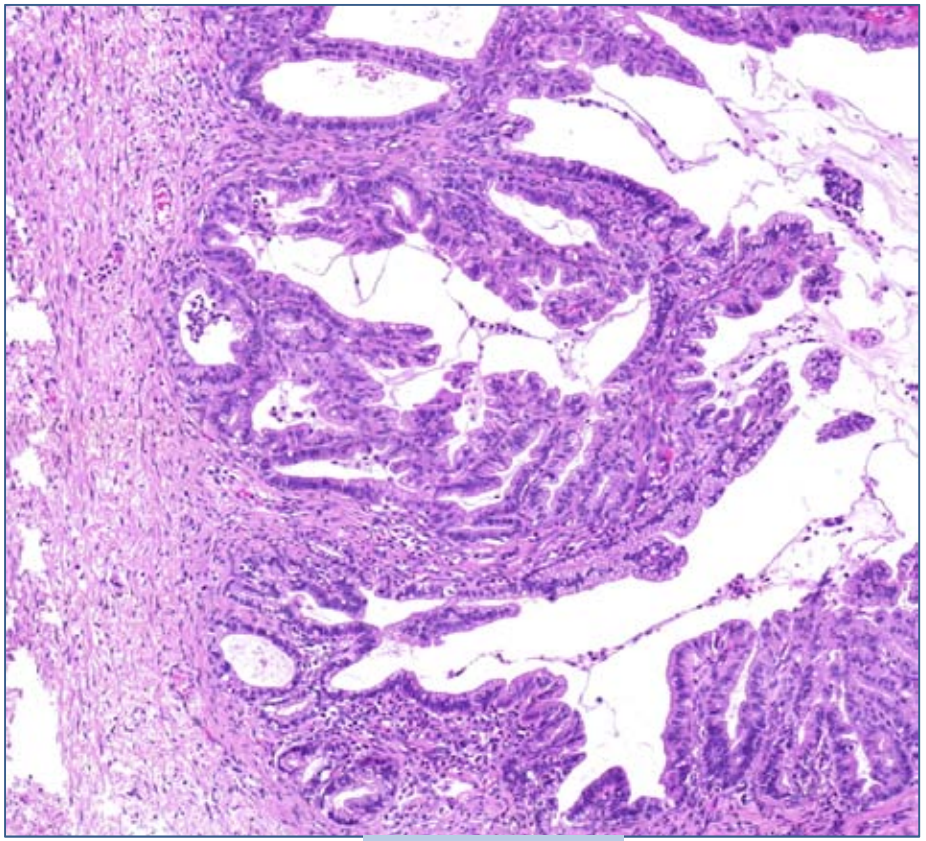
1. Benign: thin fibrotic septa covered by simple columnar mucin-producing epithelium – no atypia
2. Malignant: thicker septa with complex papillary proliferation+ cellular atypia+ invasion
3. Borderline=atypia but not invasive

Macroscopy

Microscopy



benign



malignant

Cystadenoma/carcinoma serosum

Macroscopy	
Localisation	Ovary
Pattern	Cystic (multilocular), often bilateral, smaller than the mucinous type Malignant area can be solid
Colour	
Consistency	Filled with serous fluid
Other	Peritonealis spread: carcinosis peritonei+ascites

Microscopy

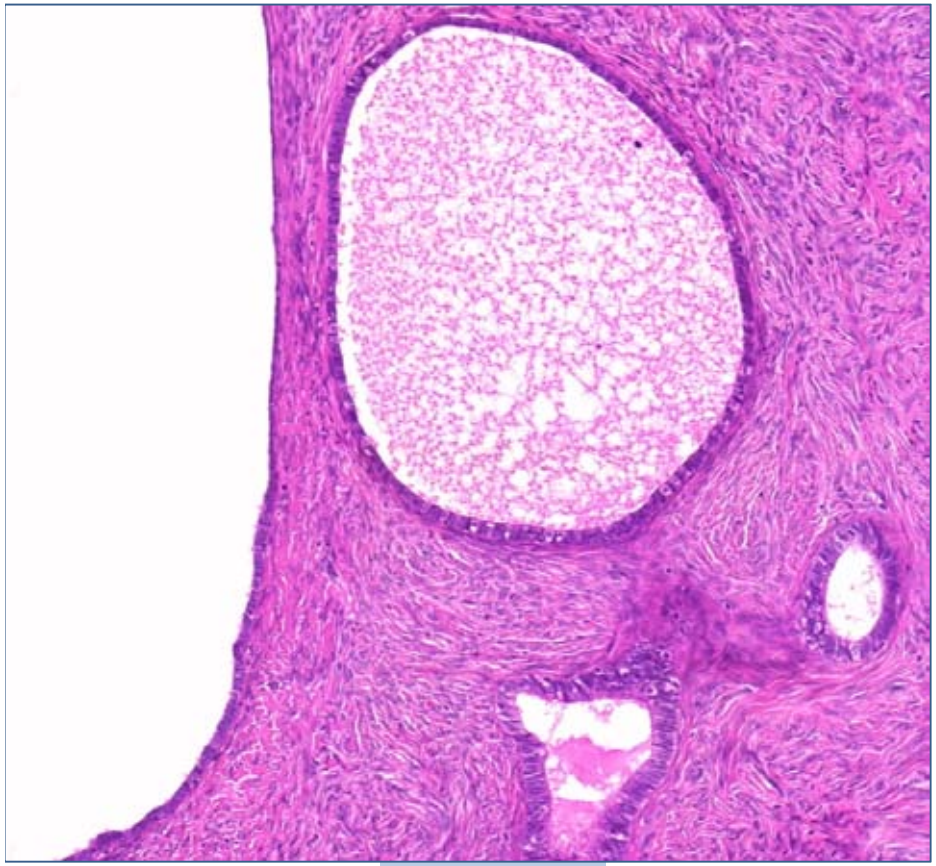
1. Benign: thin septa covered by simple layer of ciliated epithelium – no atypia
2. Malignant: thick septa+solid desmoplastic area with complex papillary proliferation+cellular atypia+invasion+psammoma bodies
3. Borderline= atypia+not invasive

Macroscopy

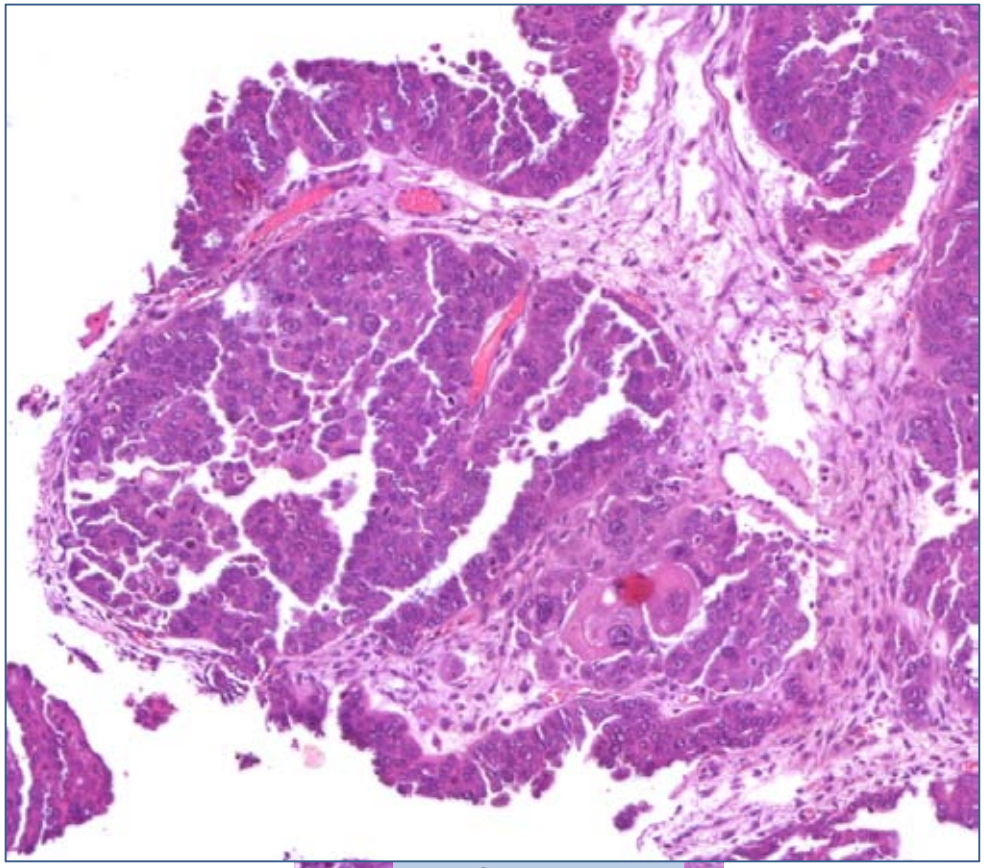
benign

malignant

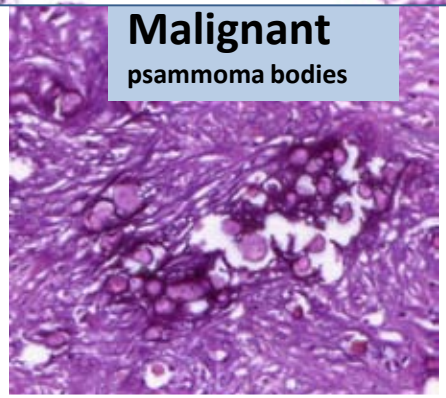
Microscopy



benign



Malignant
psammoma bodies



Teratoma

Macroscopy	
Localisation	Ovary, testis Rarely: mediastinum, retroperitoneum, sacrum, neck (midline of the body)
Pattern	Well circumscribed: inner structure: solid&cystic
Colour	Variable
Consistency	Variable
Other	Monodermal (ectodermal) ovarian teratoma: dermoid cyst

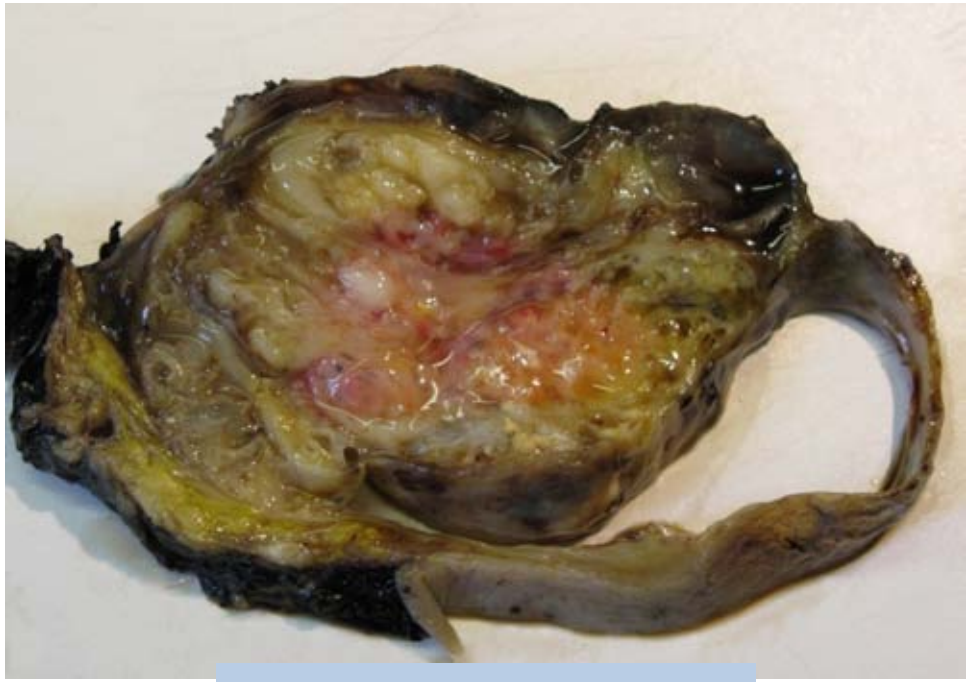
Microscopy

Mixture of matured tissues:

1. Ectodermal: squamous epithel, skin appendages, teeth, nervous tissue
2. Endodermal:glandular epithel, respiratory epithel etc.
3. Mesodermal:fat, muscle, cartilage, bone etc.

Unmatured tissues or malignant tumor component can occur.

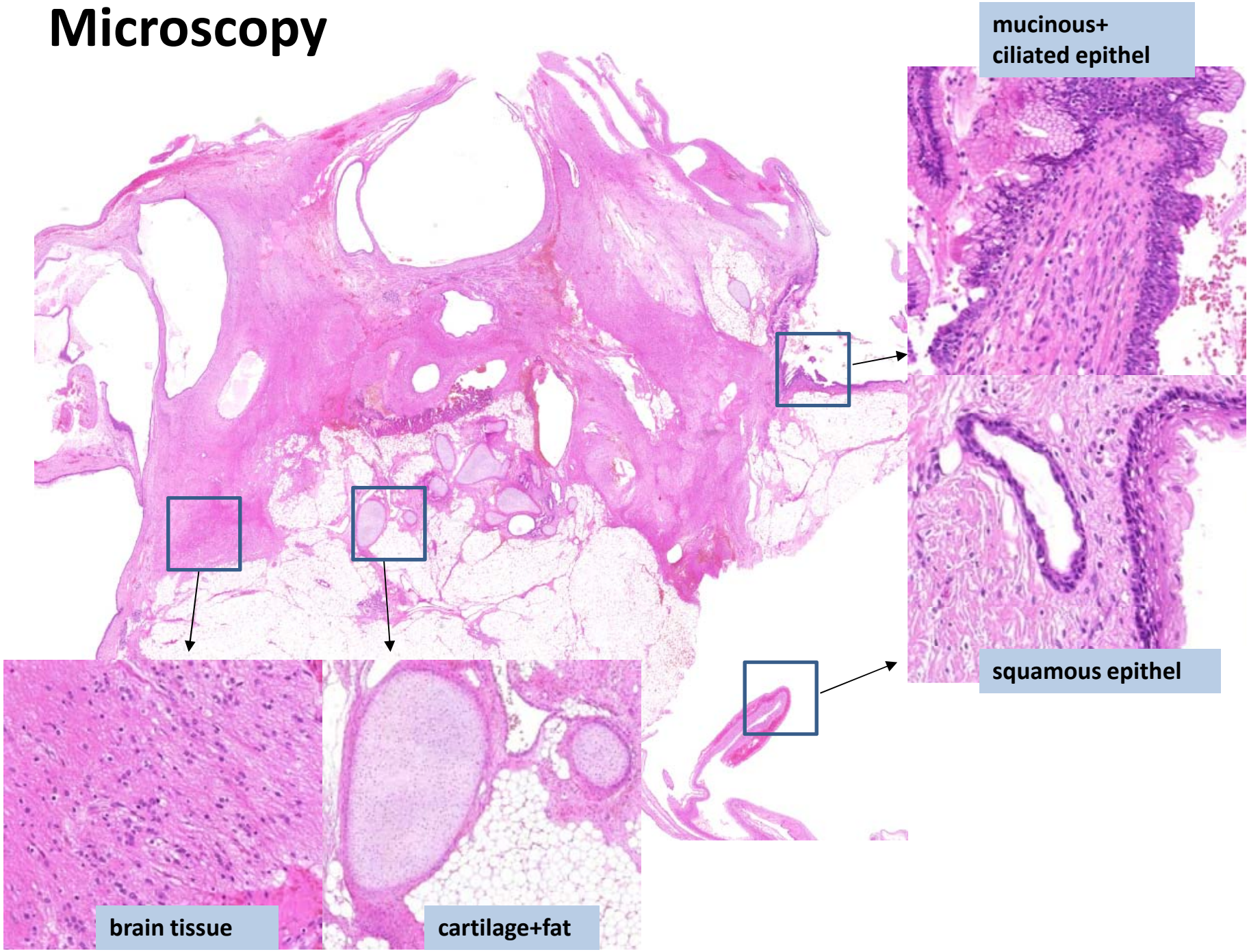
Macroscopy



Solid&cystic teratoma

Dermoid cyst (sebaceous+hair)

Microscopy


mucinous+
ciliated epithel
squamous epithel
brain tissue
cartilage+fat

Fibrocystic change

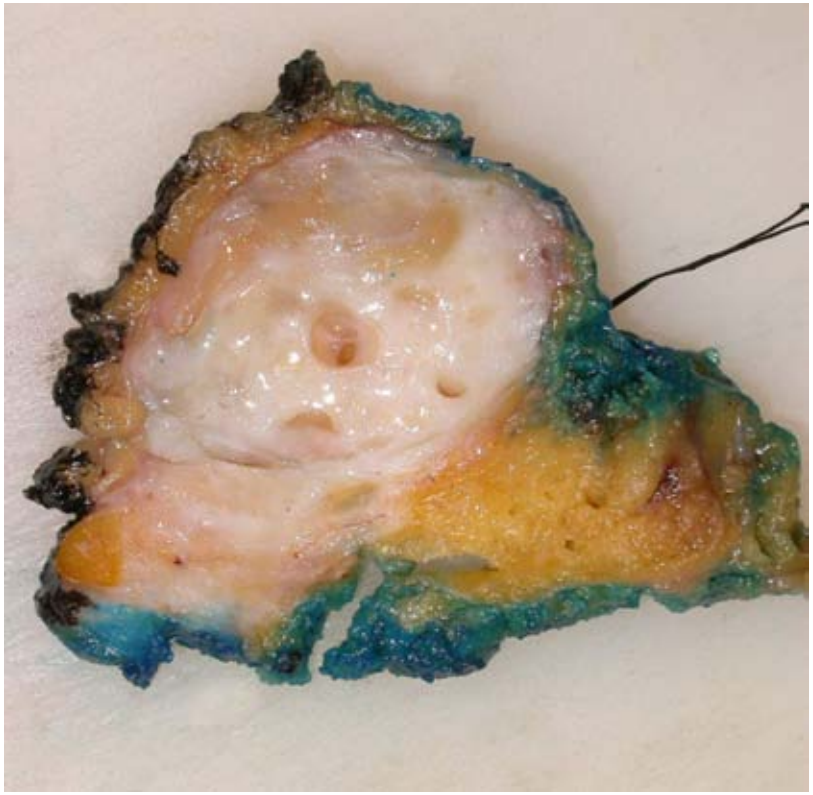
Macroscopy

Localisation	Breast
Pattern	More or less circumscribed cystous area
Colour	Gray (hemorrhagic area=brown)
Consistency	Rubbery-firm
Other	

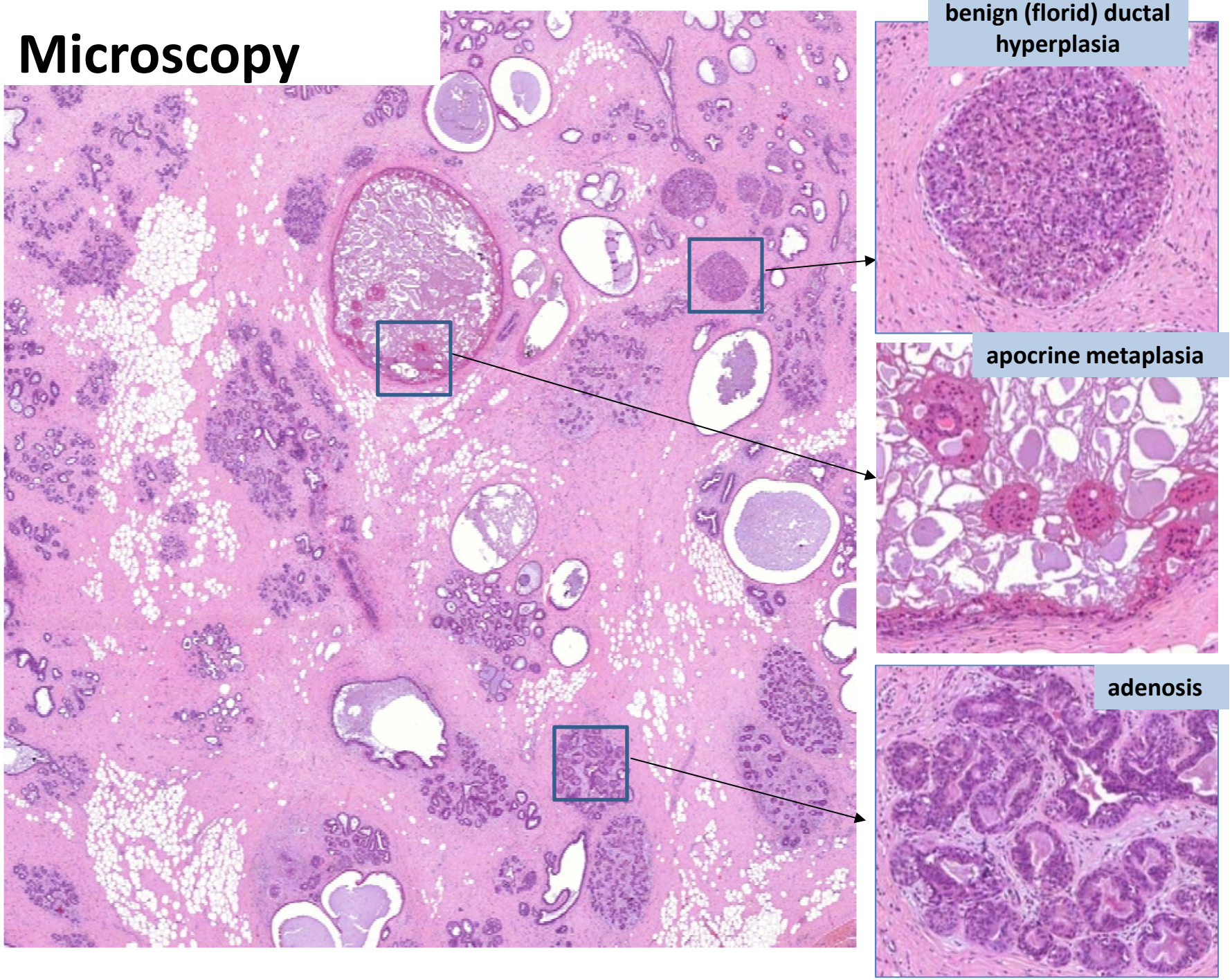
Microscopy

1. Fibrosis: fibrous tissue/fat ratio ↑
2. Structural changes: cysts, adenosis (proliferation of glands)
3. Ductal epithelial changes:
   - benign: apocrine metaplasia, florid hyperplasia, columnar cell change etc.
   - atypical (precancerosis): atypical ductal/lobular hyperplasia

Macroscopy



Microscopy


benign (florid) ductal hyperplasia
apocrine metaplasia
adenosis

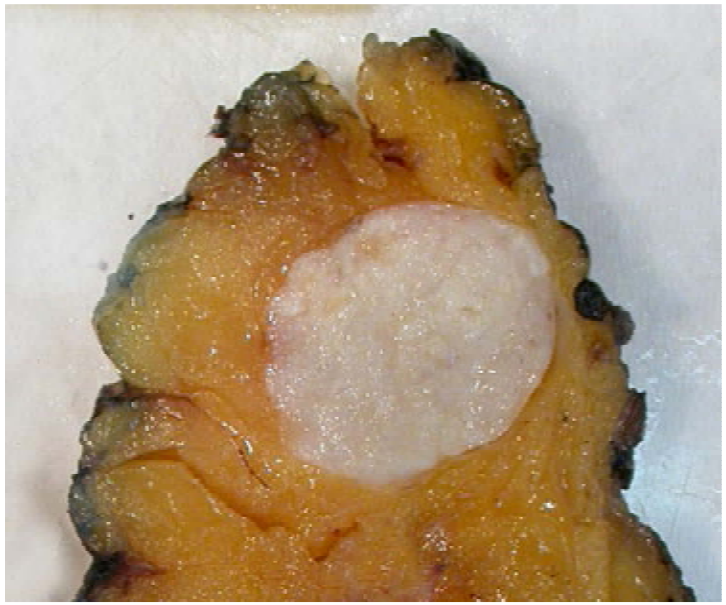
Fibroadenoma

Macroscopy	
Localisation	Breast
Pattern	Roundish, sharply demarcated, a few cm in diameter
Colour	Gray
Consistency	Rubbery firm
Other	

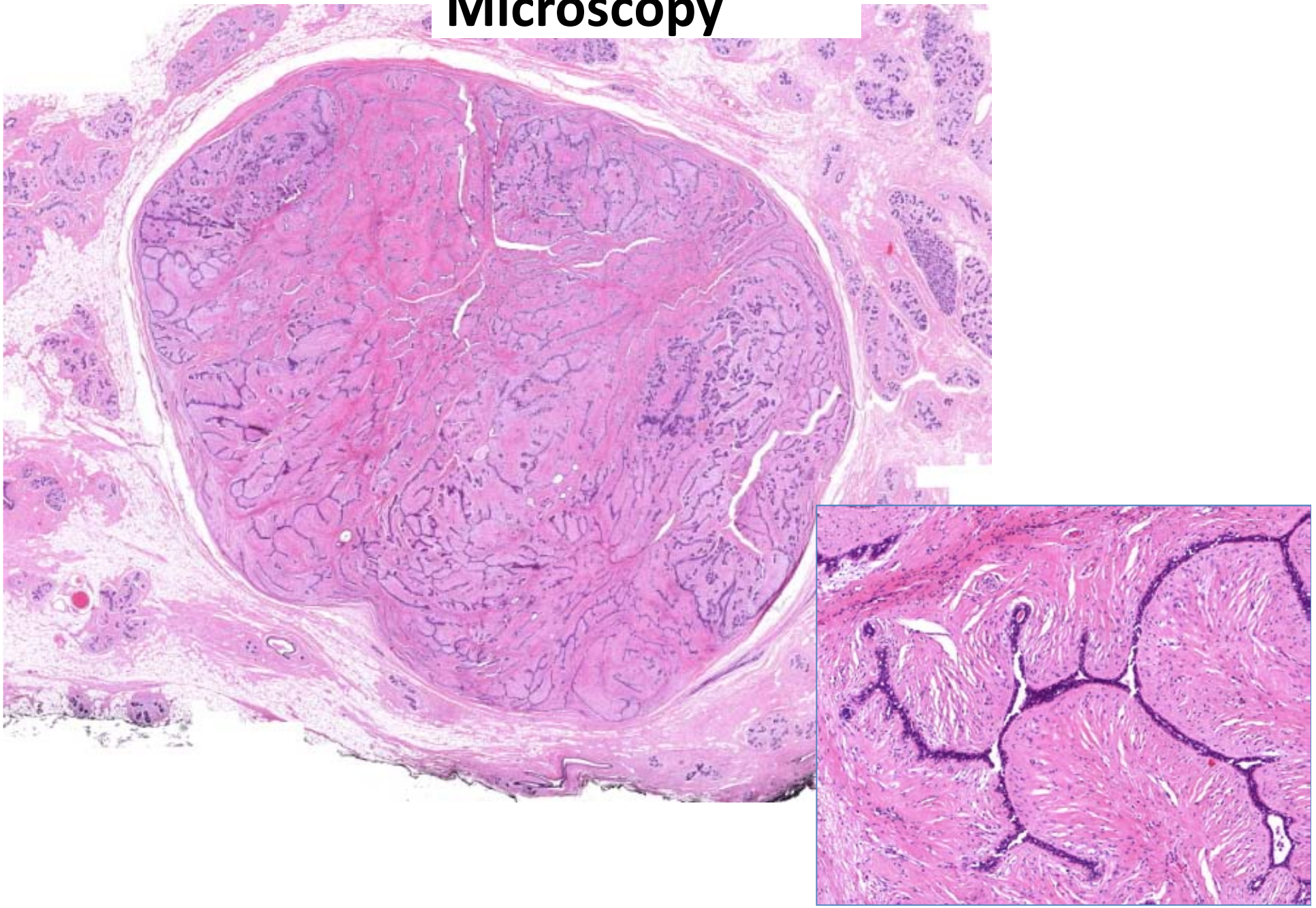
Microscopy

1. Symmetric nodule, expansive growth
2. Two component (biphasic): fibrous stroma+benign ductal epithelial proliferation with compressed-branched ductules

Macroscopy



Microscopy



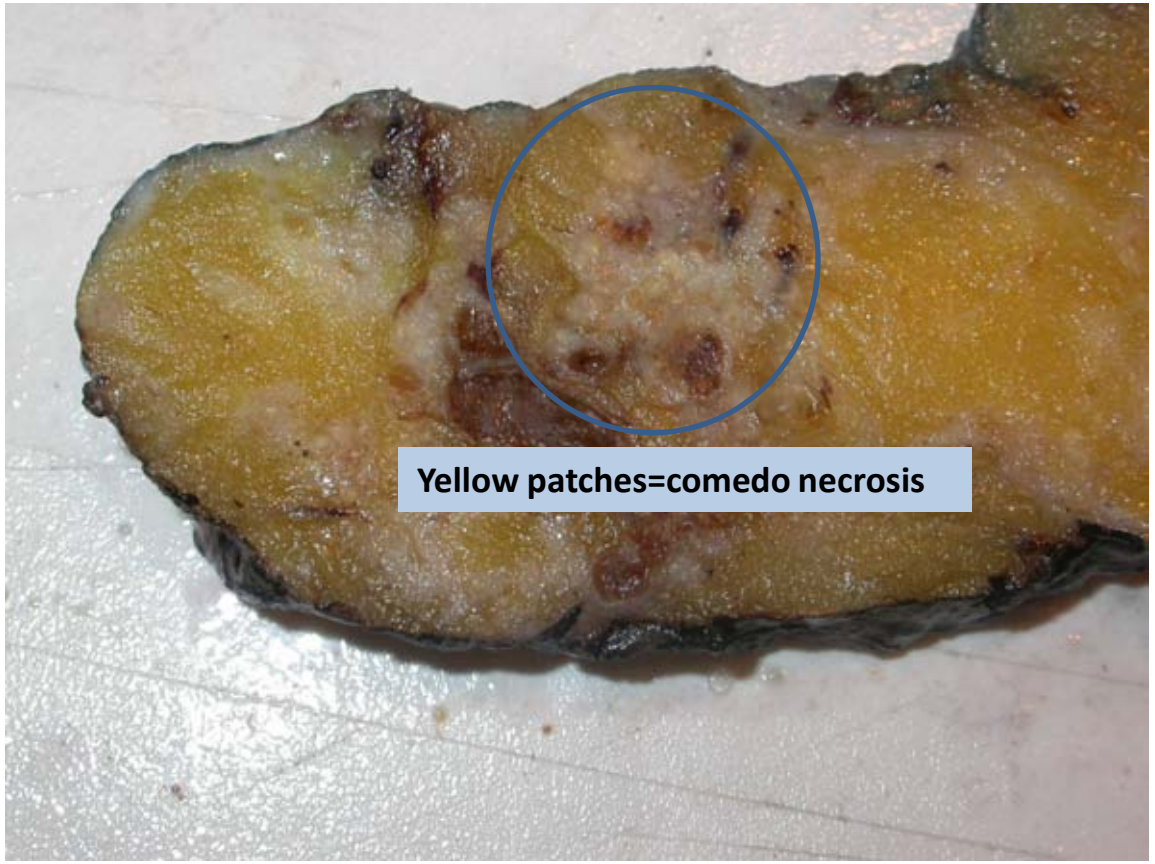
Intraductal carcinoma (DCIS=ductal carcinoma in-situ)

Macroscopy	
Localisation	Breast
Pattern	Can affect a focal area, complete lobe or the whole breast Macroscopically invisible most of the cases
Colour	If visible: small yellow-gray patches (comedo type)
Consistency	
Other	Association with microcalcification!! (mammography)

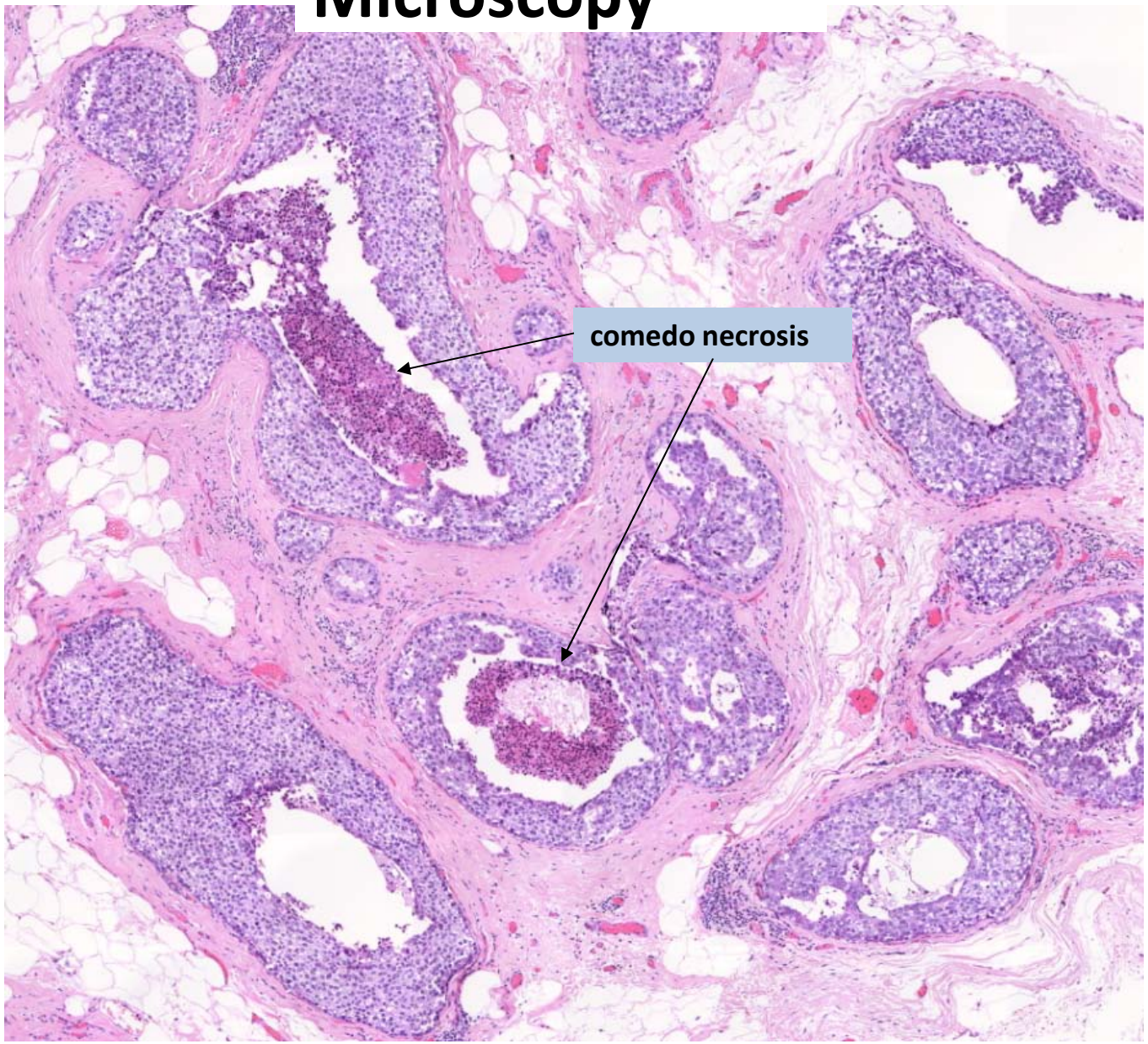
Microscopy

1. Dilated ducts with roundish contour, filled with tumor cells (preserved myoepithelial cells around the duct!!)
2. Types (based on sructure): papillary, cribriform, solid, flat, comedo
3. Cytomorphology: mild atypia=low grade, severe atypia=high grade

Macroscopy



Microscopy



Invasive carcinoma of the breast

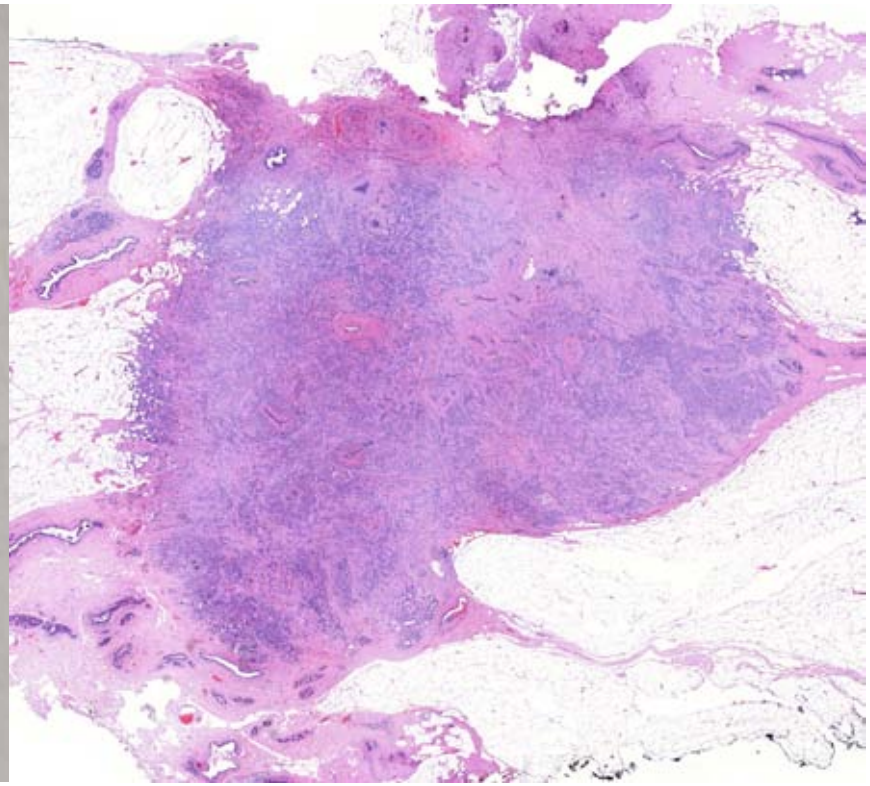
Macroscopy

Localisation	Breast
Pattern	Infiltrative. Solitary, multifocal or diffuse Rarely well circumscribed form can occur (mimics benign tumor!!)
Colour	Gray
Consistency	Firm
Other	

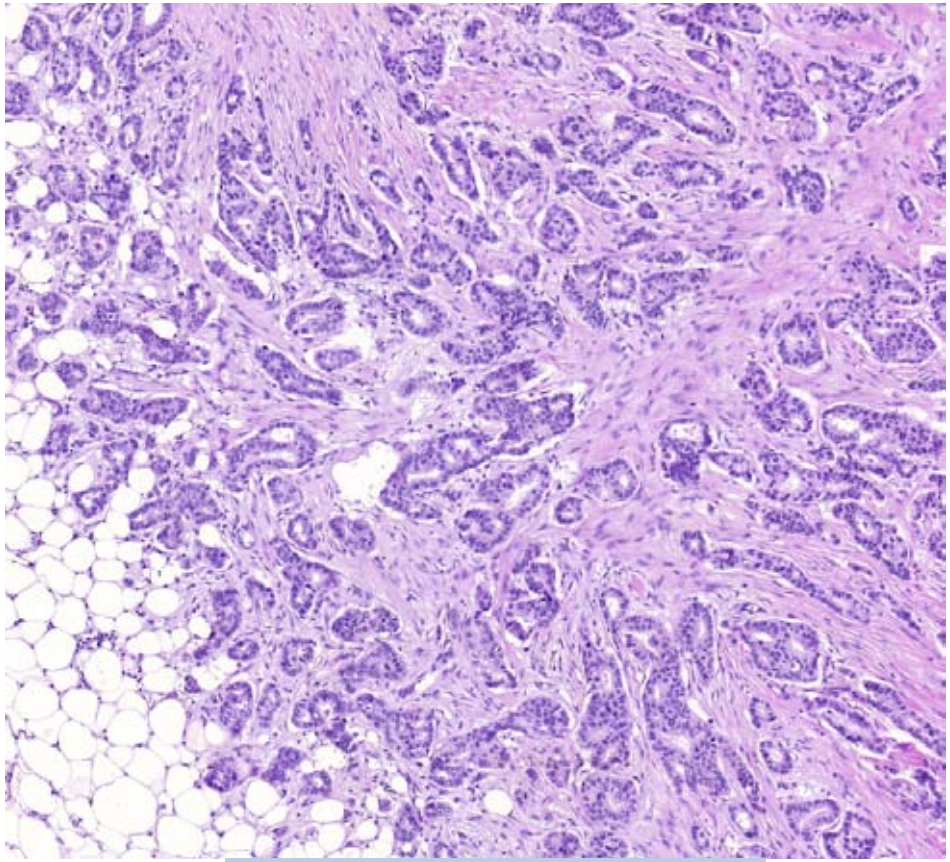
Microscopy

1. Infiltrative growth (lymphovascular/perineural invasion)
2. Desmoplasia
3. Structures: **ductal type**: forming tubules; **lobular type**: dissociated cells, spreading in lines („indian file pattern”)
4. Cytomorphology: **ductal type**: variable (well-moderately-poorly differentiated large-medium sized cells); **lobular type**: monotonous small cells
5. GRADE determination: structure+nuclear atypia+mitotic count

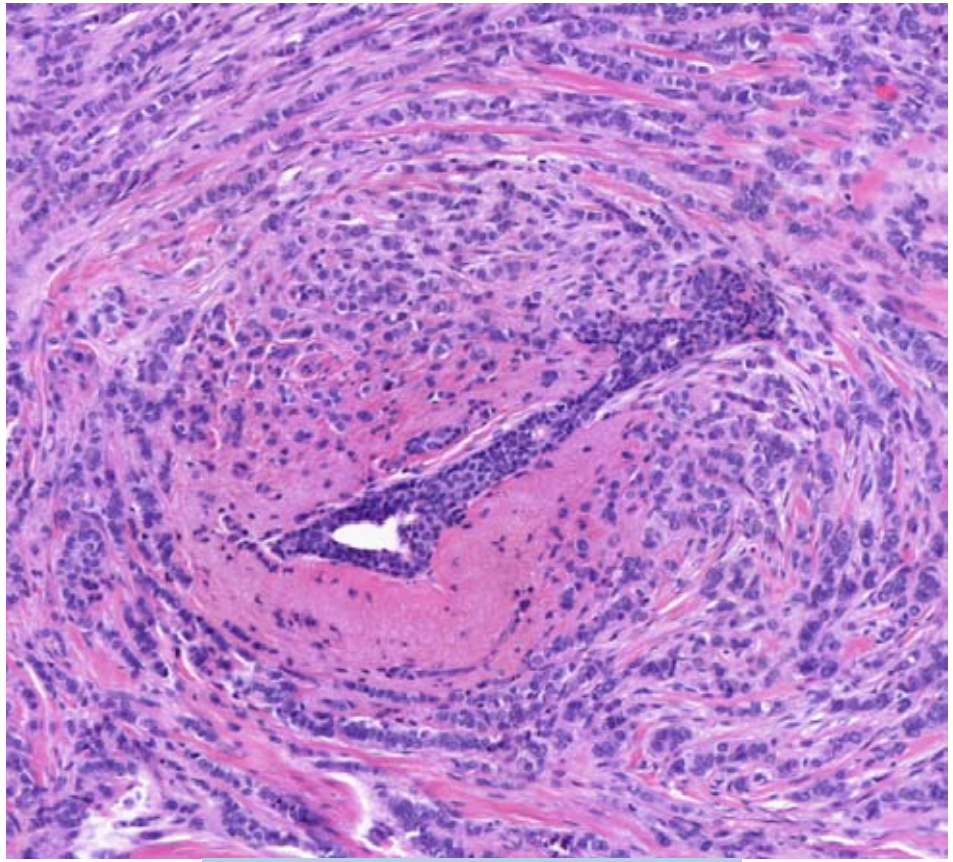
Macroscopy



Microscopy



Invasiv ductal carcinoma (IDC)



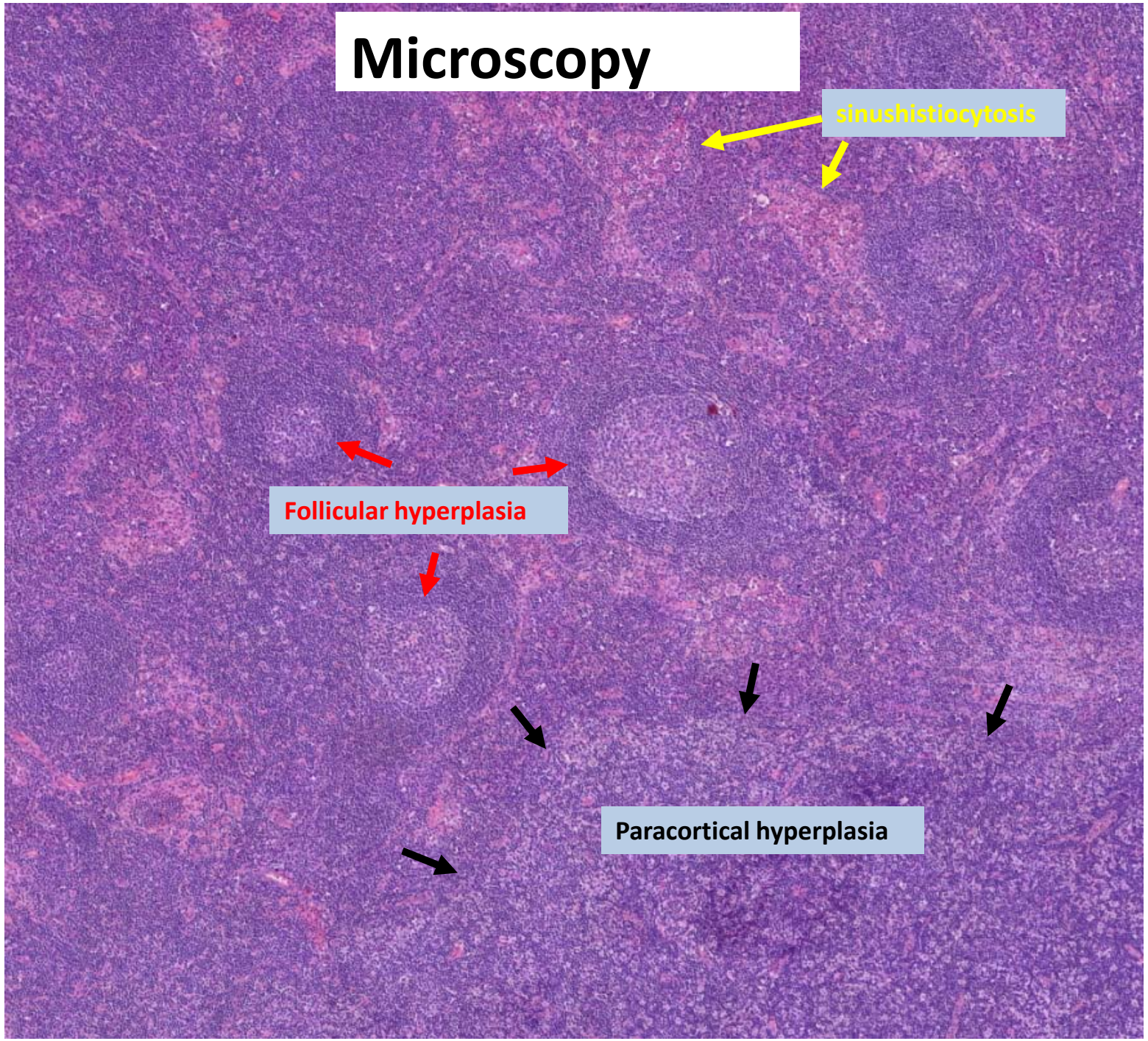
Invasiv lobular carcinoma (ILC)

Reactive lymphadenopathy

Macroscopy	
Localisation	Lymph nodes, tonsills
Pattern	Enlargement of the affected lymph node (single or lymph node region)= lymphadenomegaly
Colour	Gray
Consistency	Rubbery
Other	

Microscopy

1. Follicular hyperplasia (germinativ centre=centroblast+follicular dendritic reticular cell+macrophage-”tingible body”)
2. Paracortical hyperplasia (matured small lymphocytes+immunoblasts)
3. Sinushistiocytosis (macrophages+hypertrophic endothel)


Microscopy
sinushistiocytosis
Follicular hyperplasia
Paracortical hyperplasia

Lymphoma

Macroscopy

Localisation	Lymph node (=nodal), Other organ (=extranodal)
Pattern	Lymph node enlargement, hepato/splenomegaly Rarely focal lesion (mimics solid tumor)
Colour	Gray
Consistency	Rubbery (except: nodular sclerosing Hodgkin lymphoma)
Other	

Microscopy

Hodgkin lymphoma

Tumor cell: Reed-Sternberg cell and variants(=mono or binucleated giant cells with prominent nucleoli)

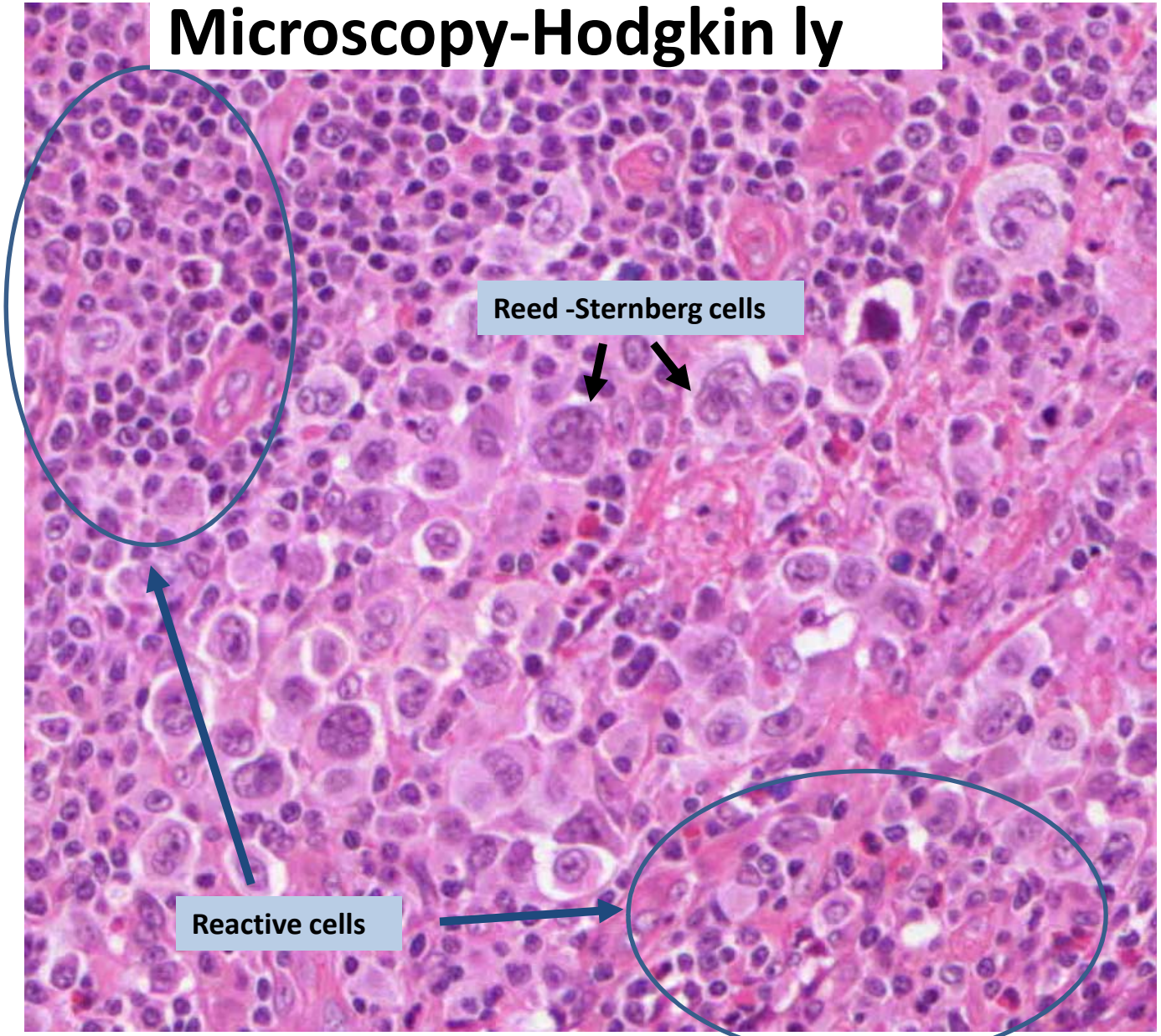
Reactive cells: lymphocytes, eosinophils,fibrosis

Non-Hodgkin lymphoma

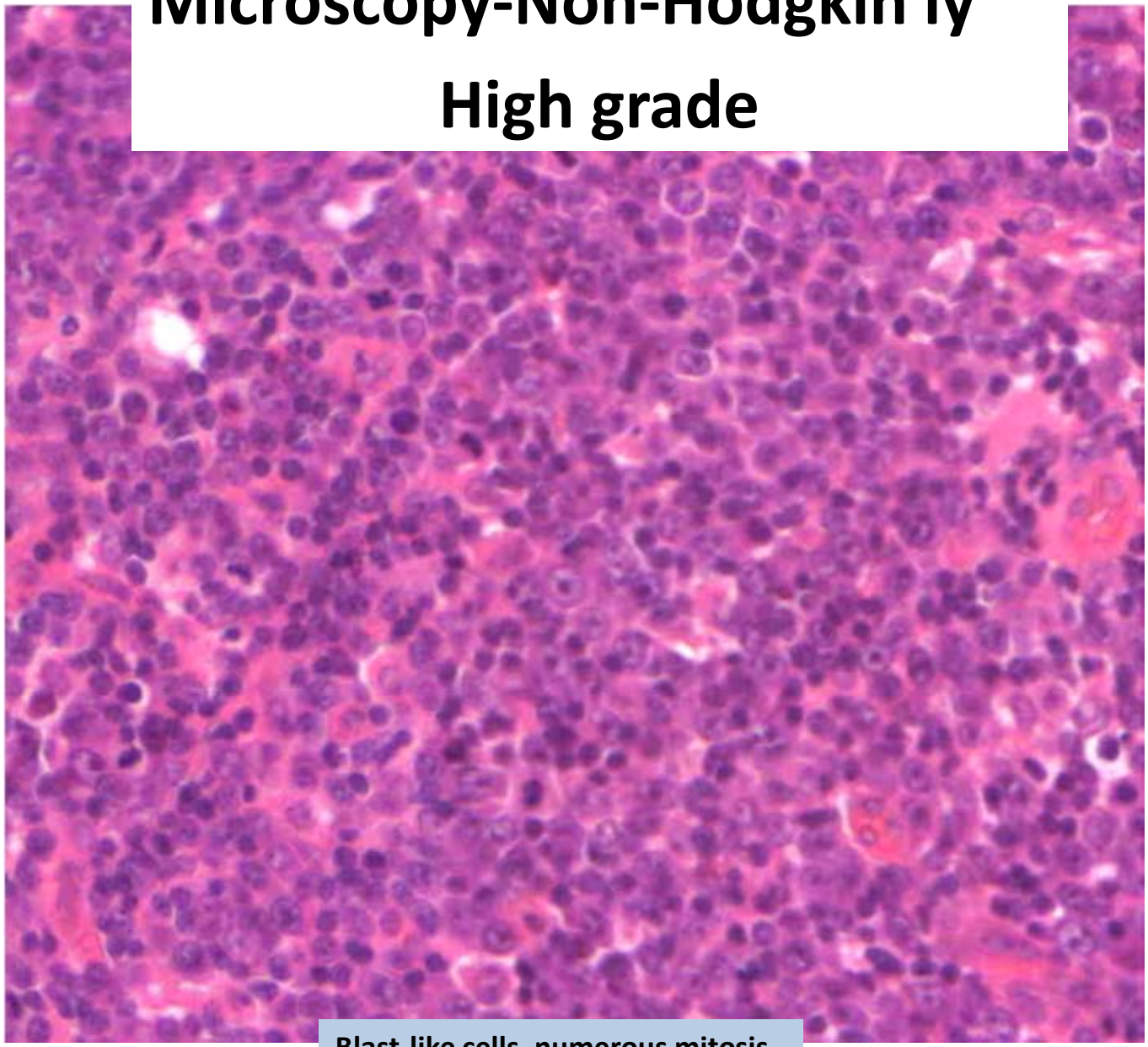
Low grade: lymphocyte-like cells, mild atypia, low proliferation

High grade: big, atypical (blast-like) cells, promint nucleoli, high proliferation

Microscopy-Hodgkin ly

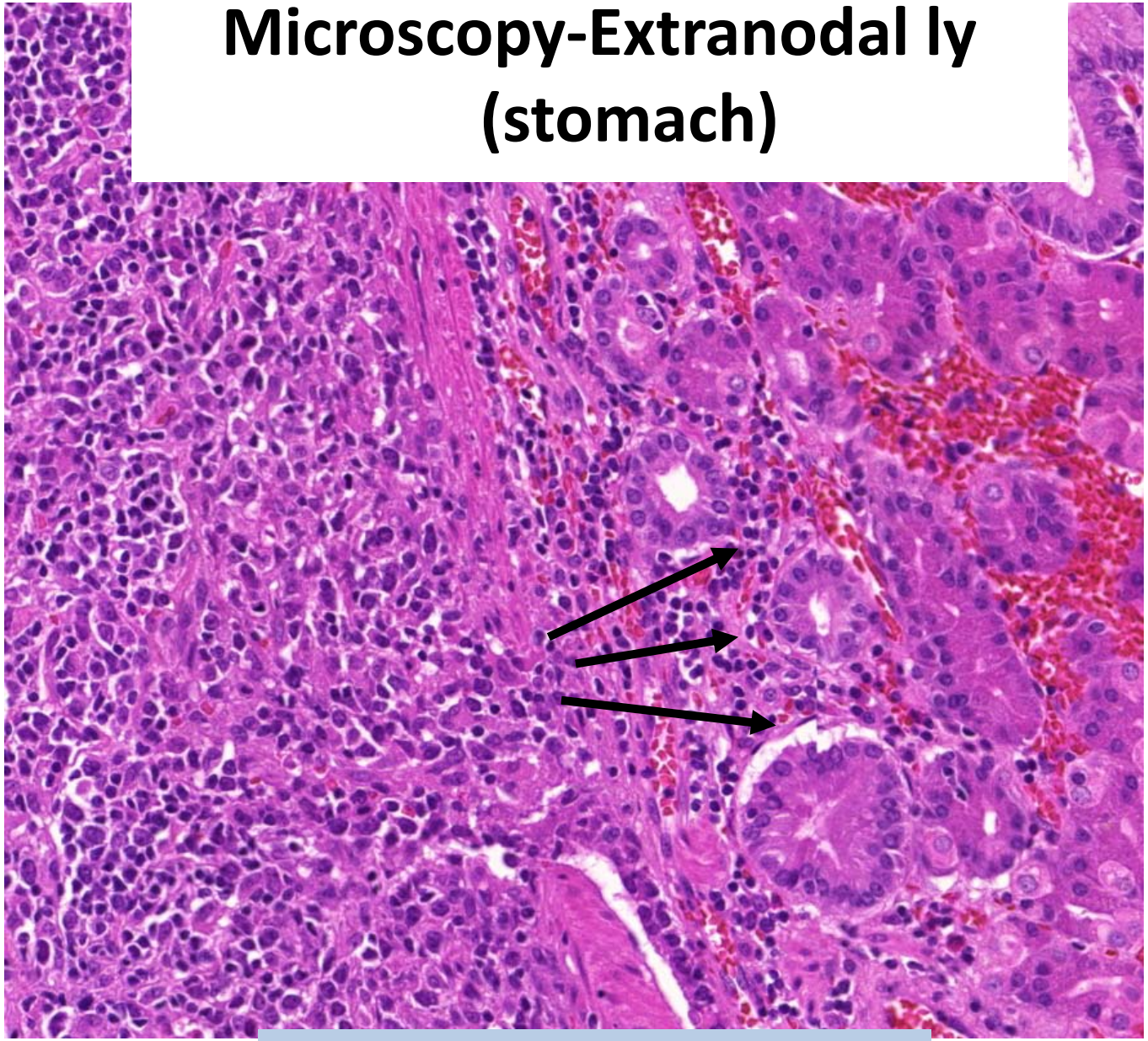


Microscopy-Non-Hodgkin ly High grade



Blast-like cells, numerous mitosis

Microscopy-Extranodal ly (stomach)



Lymphoid tumor cells spreading into the mucosa

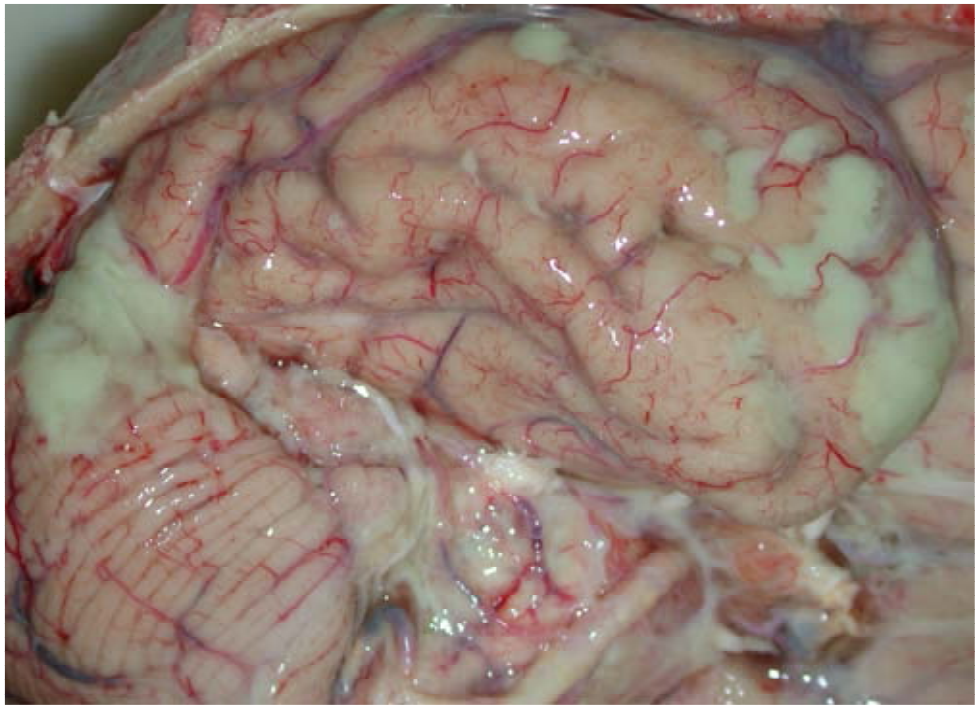
Purulent meningitis

Macroscopy	
Localisation	Subarachnoidal Meningococcus - convexities Haemophilus – basal
Pattern	Subarachnoidal pus accumulation, mainly in gyri
Colour	Yellowish exsudate
Consistency	Fluent
Other	

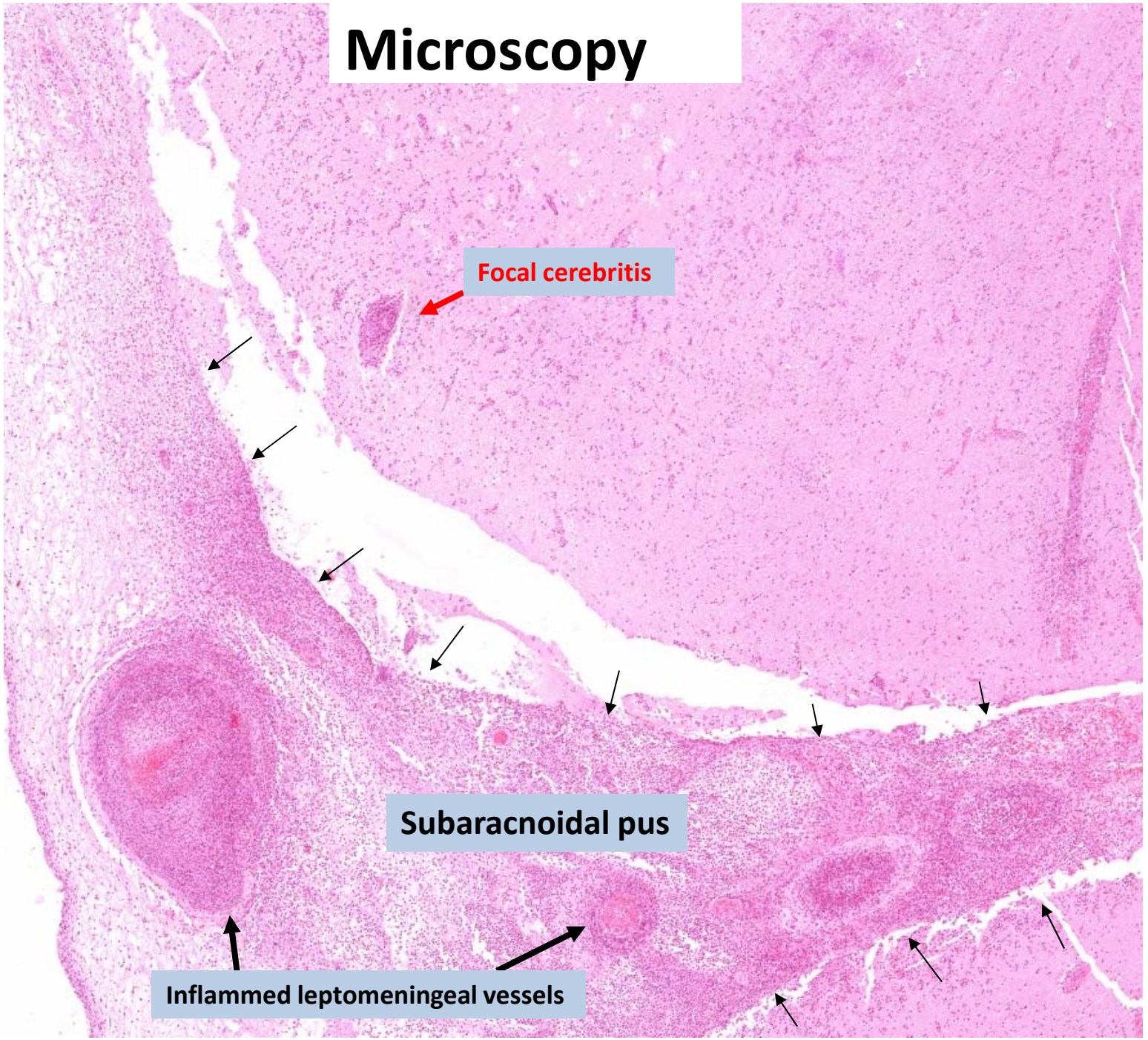
Microscopy

1. Granulocytic infiltration in the subarachnoid space. Dominantly perivascular.
2. In fulminant cases superfitial inflammation spreads into the superfitial brain parenchyma along vessels (=focal cerebritis)

Macroscopy



Microscopy


Focal cerebritis
Subaracnoidal pus
Inflammed leptomeningeal vessels

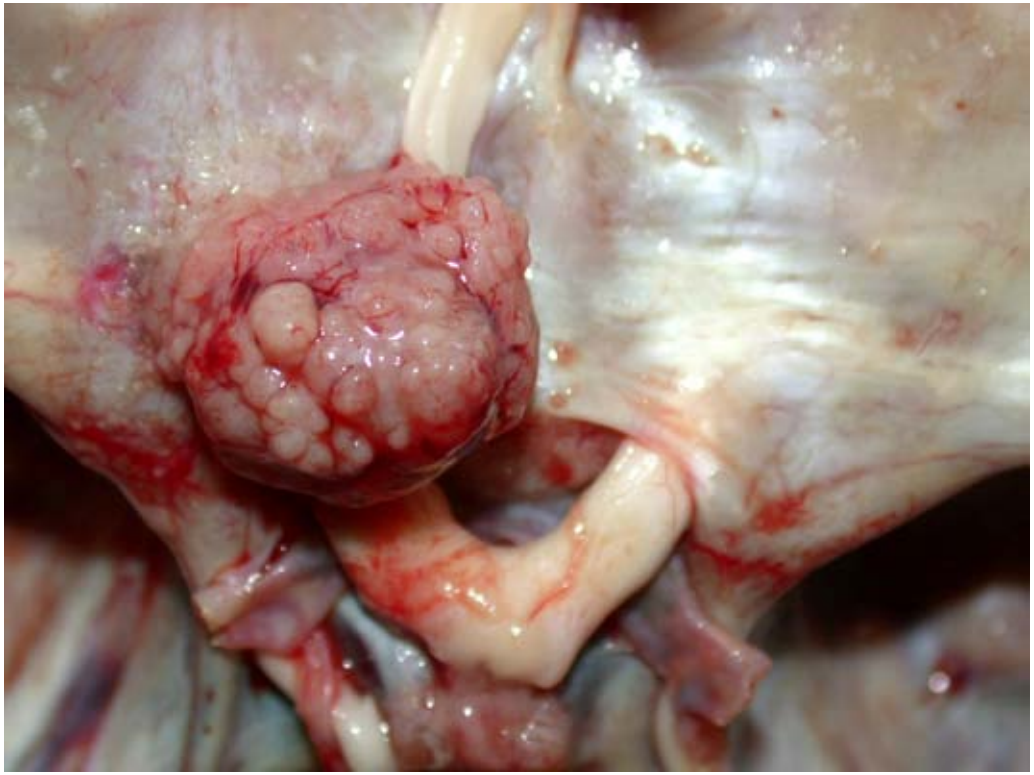
Meningioma

Macroscopy	
Localisation	Dura mater *Convexity: cortex compression, easy to resect* *Basalis: brain nerve compression, commonly inoperable*
Pattern	Solitary, a few cm large nodule
Colour	Gray
Consistency	Firm
Other	Generally benign (rare malignant tumors can infiltrate the skull)

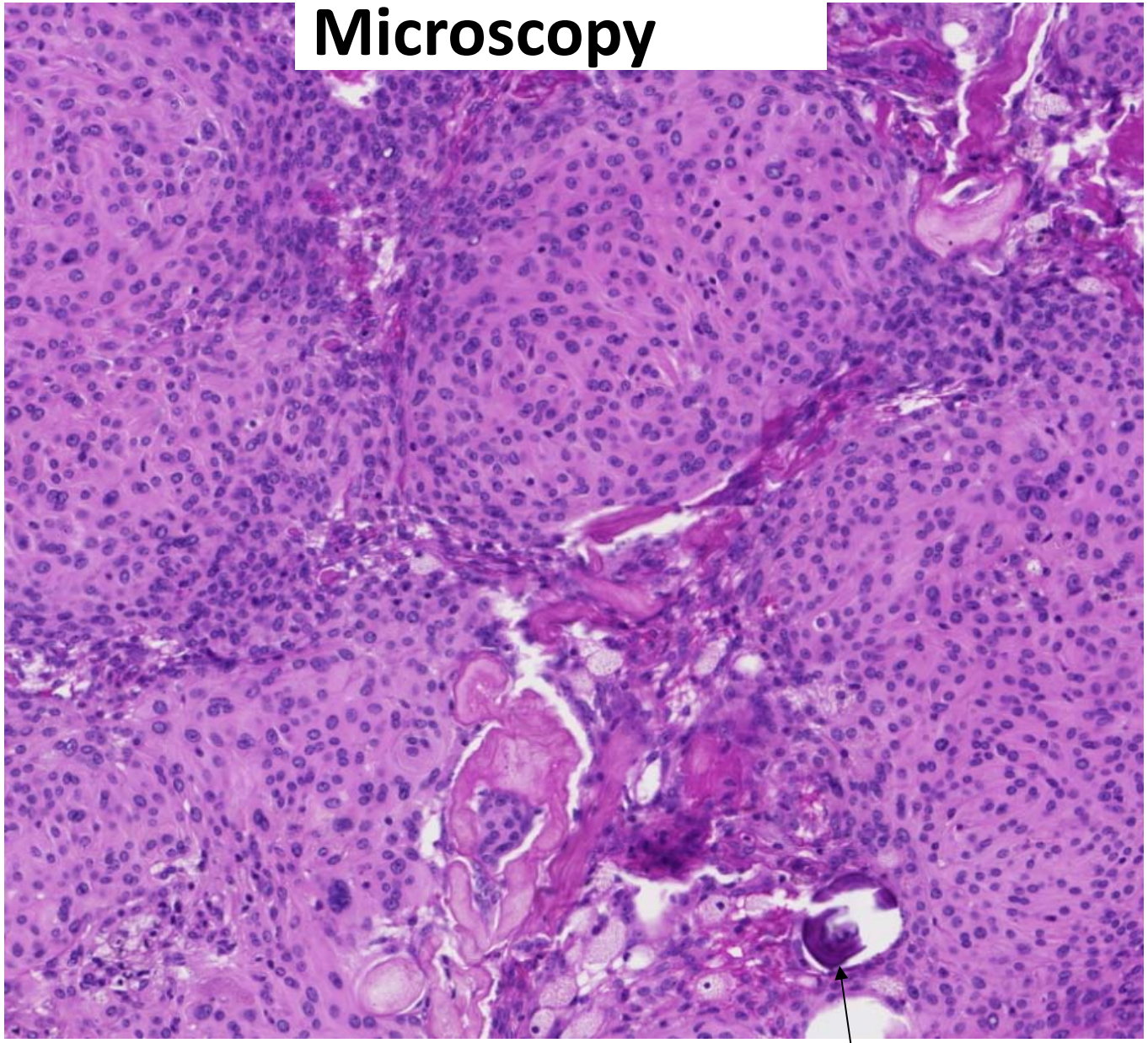
Microscopy

1. Numerous histological variant. Most common pattern is nesty tumor with fibrotic stroma
2. Cytomorphology: benign form shows monotonous oval cells without atypia or mitoses
3. Psammoma bodies are typical (see also: thyroid papillary carcinoma+ovarian serous carcinoma!!)

Macroscopy



Microscopy



Glioma

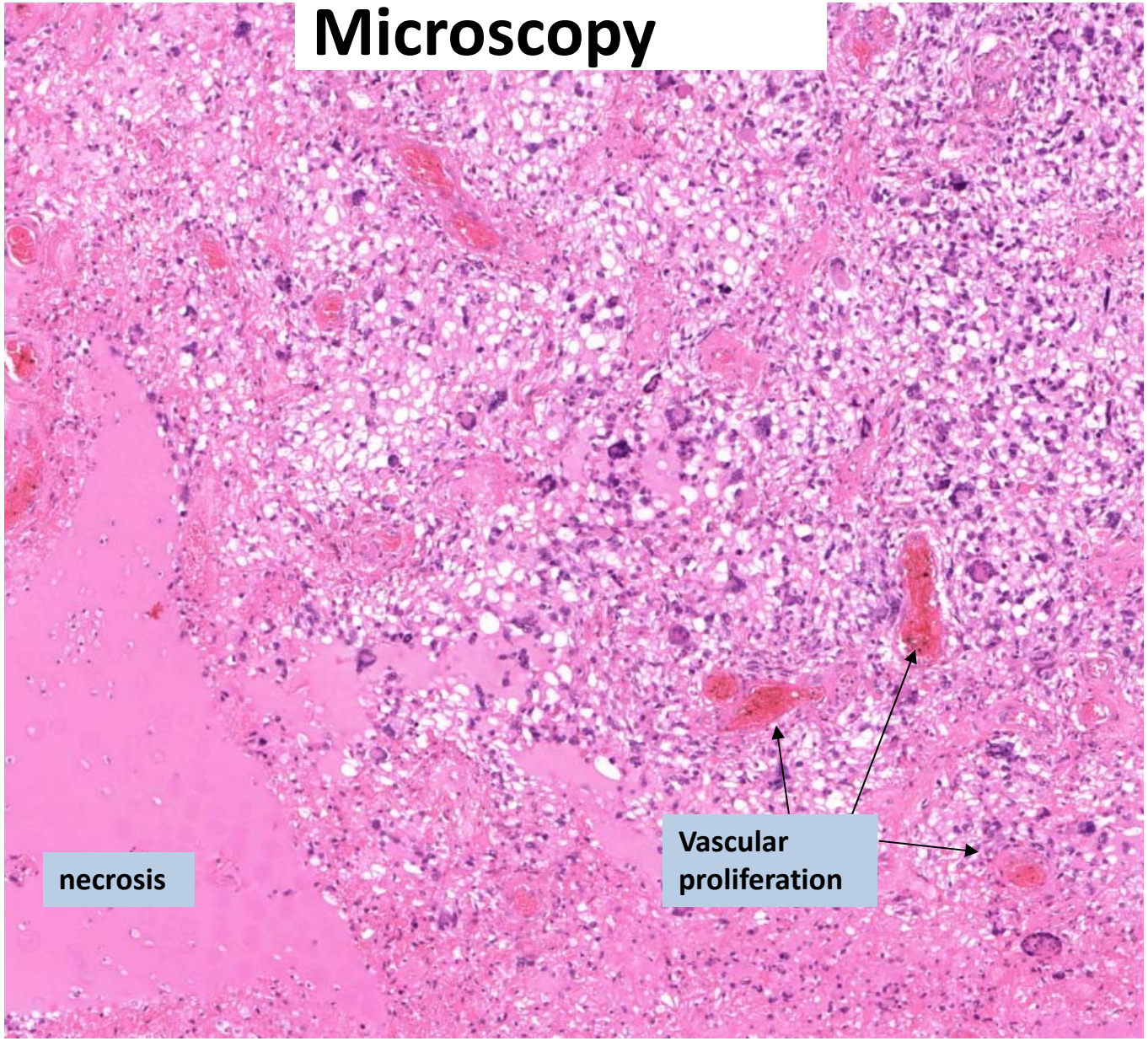
Macroscopy	
Localisation	Generally white substance of hemispheries
Pattern	Infiltrative
Colour	Gray
Consistency	Soft, cystic/necrotic areas can occur
Other	

Microscopy

1. Differentation: Grade I-IV. The presented slide contains glioblastoma multiforme (=grade IV)
2. Solid tumor tissue, anorganised polymorphic cells (pseudopalisade arrangement around necrosis)
3. Severe cytological atypia, frequent multinucleated cells
4. Necrosis
5. Vascular proliferation (neoangiogenesis)

Macroscopy

Microscopy



Seborrhoic keratosis

Macroscopy	
Localisation	Skin (anywhere-predominantly trunk, head&neck)
Pattern	Warty elevations, generally <1 cm. Often multiple in elderly.
Colour	Gray or pigmented (mimics pigmented neoplasm)
Consistency	Rubbery firm
Other	

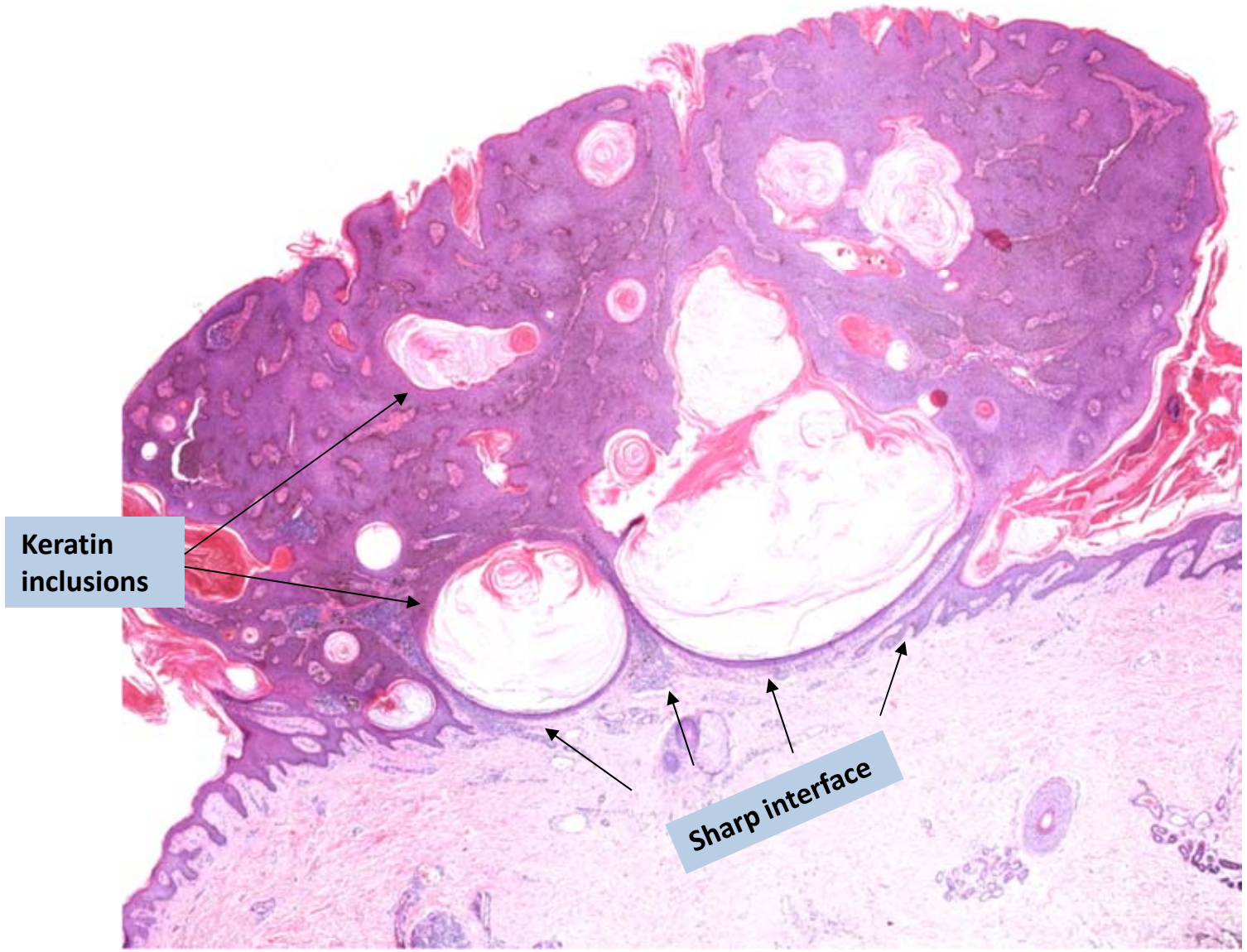
Microscopy

1. Symmetrical epithelial proliferation. Sharp dermo-epidermal interface
2. Widening of the basal cell layer (sometimes with pigmentation) without atypia
3. Hyperkeratosis+keratin inclusions

Macroscopy

Forrás: http://www.riversideonline.com/health_reference/Disease-Conditions/DS00846.cfm

Microscopy



Basalsejtes carcinoma

Macroscopy	
Localisation	Skin (sun-exposed areas – especially head&neck)
Pattern	Plaque-like, nodular, infiltrative, ulcerative (horizontally spreading ulcer=ulcus rodens)
Colour	Grayish-pearly. Rarely pigmented (mimics melanoma)
Consistency	Firm
Other	

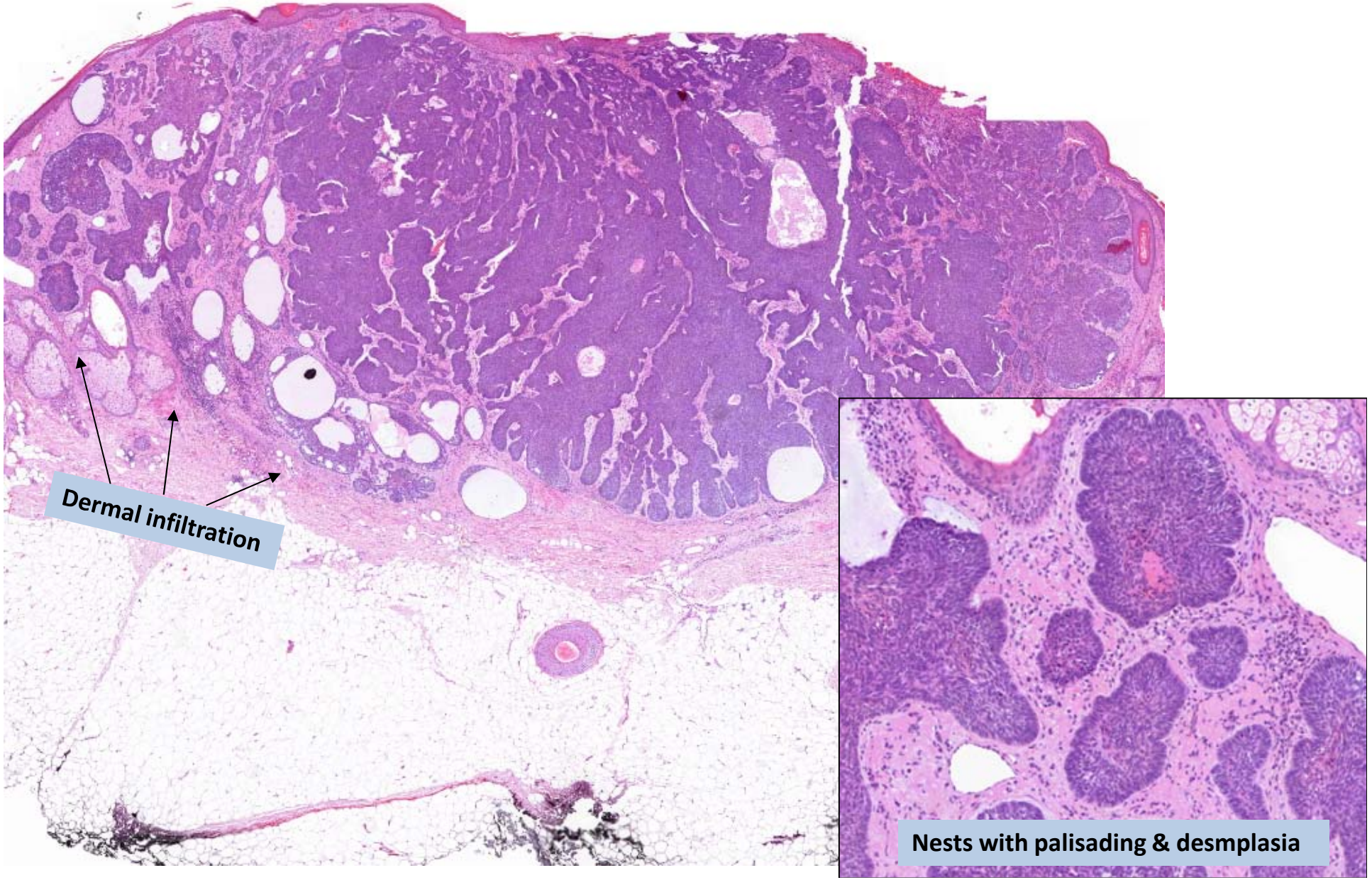
Microscopy

1. Less symmetric dermal infiltration in connection with epidermis
2. Most common structure: nesty-nodular. Palisade arrangement (paralel organisation of nuclei on nest's periphery)
3. Desmoplasia

Macroscopy

Forrás: www.plasticsurgery4cyprus.com/page/en/83/nonmelanoma-skin-cancer?PHPSESSID=d27731ad03a05086bd284f1b43e5fe74

Microscopy



Pigmented nevus

Macroscopy

Localisation	Skin (anywhere)
Pattern	Symmetrical nodule/patch. Well circumscribed.
Colour	Variable degree of pigmentation (matured less pigmented). Equal distribution of pigment.
Consistency	
Other	

Microscopy

1. Nevus cells descend into deep dermis during life (maturation)
2. Forms determined by location of nevus cells: **1)** junctional **2)** compound **3)** intradermal
3. Phases of maturation:

Superfitially: nesty structures in the basal epidermis-papillary dermis, bigger pigmented cells&nuclei, small nucleoli

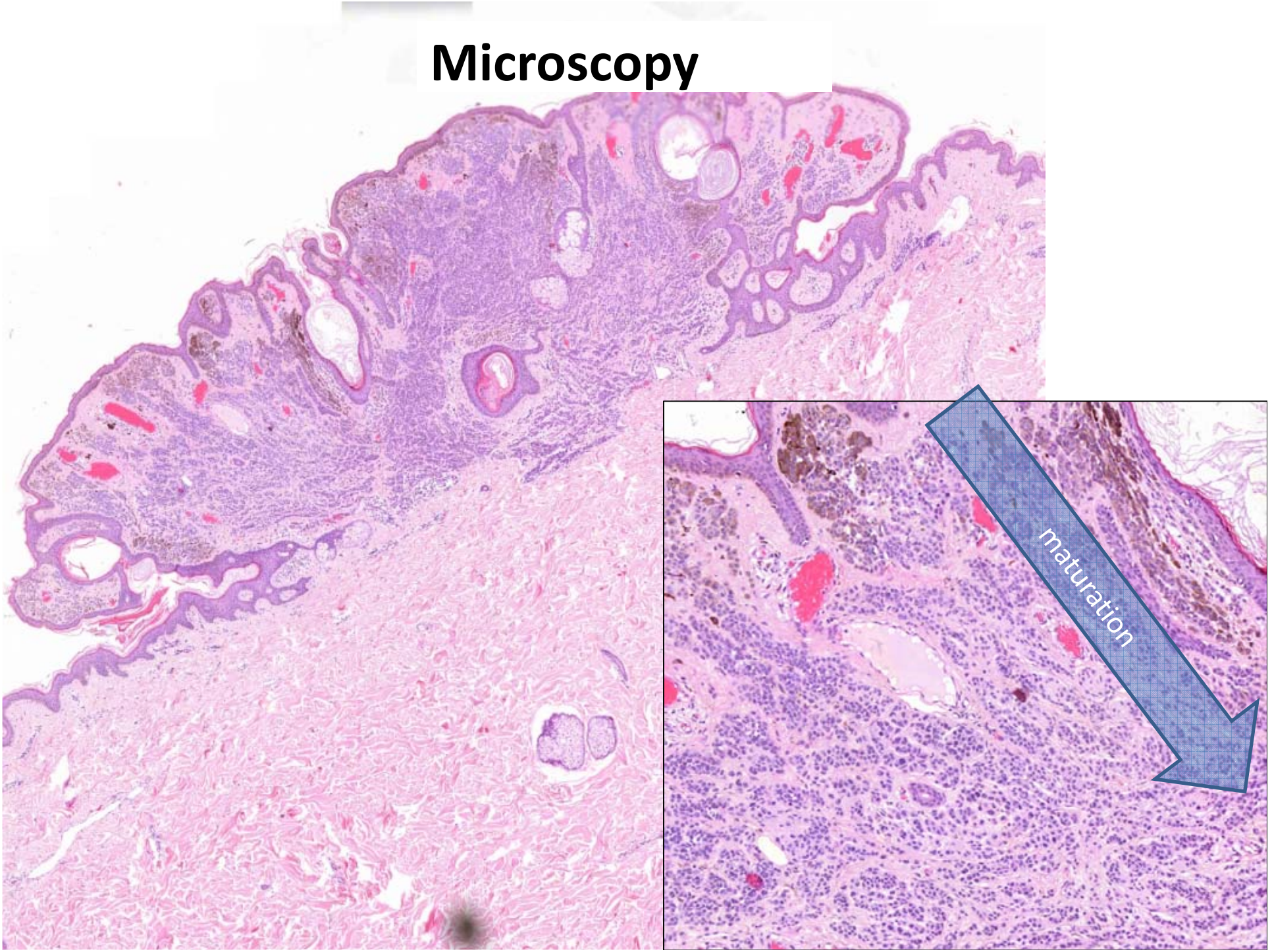
Deep: confluent cell groups in reticular dermis, smaller cells, compact nuclei, less pigmentation, neuroid features

None of these phases contain mitosis!!

Macroscopy

Forrás: http://en.wikipedia.org/wiki/Congenital_melanocytic_nevus

Microscopy



Malignant melanoma

Macroscopy

Localisation	Skin (anywhere), rarely: ocular, mucosal
Pattern	Assymmetric, flat or exophytic, blurred edges
Colour	Uneven pigmentation. Non pigmented form=amelanotic MM
Consistency	
Other	Ulceration can occur

Microscopy

Main types:

SMM (most common)=superfitial spreading melanoma=epidermal+dermal components

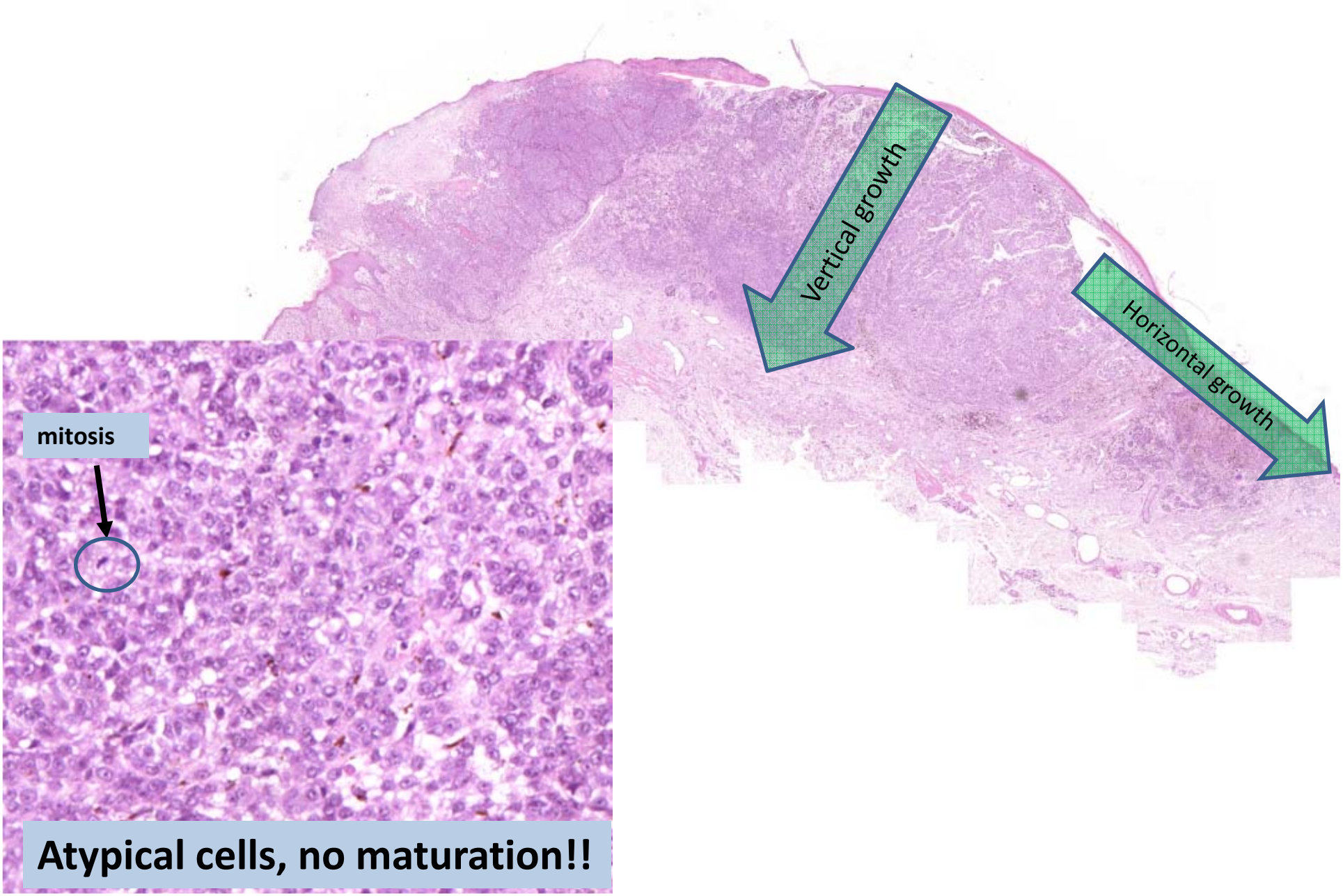
Lentigo maligna: in situ melanoma of sun exposed skin

Nodular melanoma (worst prognosis)= only dermal component

1. Horizontal phase of growth: pagetoid spread=single tumor cells in the whole thickness of epidermis
2. Vertical phase of growth: tumor cells migrate downward without maturation
3. Variable cytomorphology (epitheloid/spindle cells), cellular atypia & mitoses!!

Macroscopy

Microscopy


Vertical growth
Horizontal growth
mitosis
Atypical cells, no maturation!!

MORE PICTURES ON:

http://library.med.utah.edu/WebPath/webpath.html#MENU

…and on other sites…