

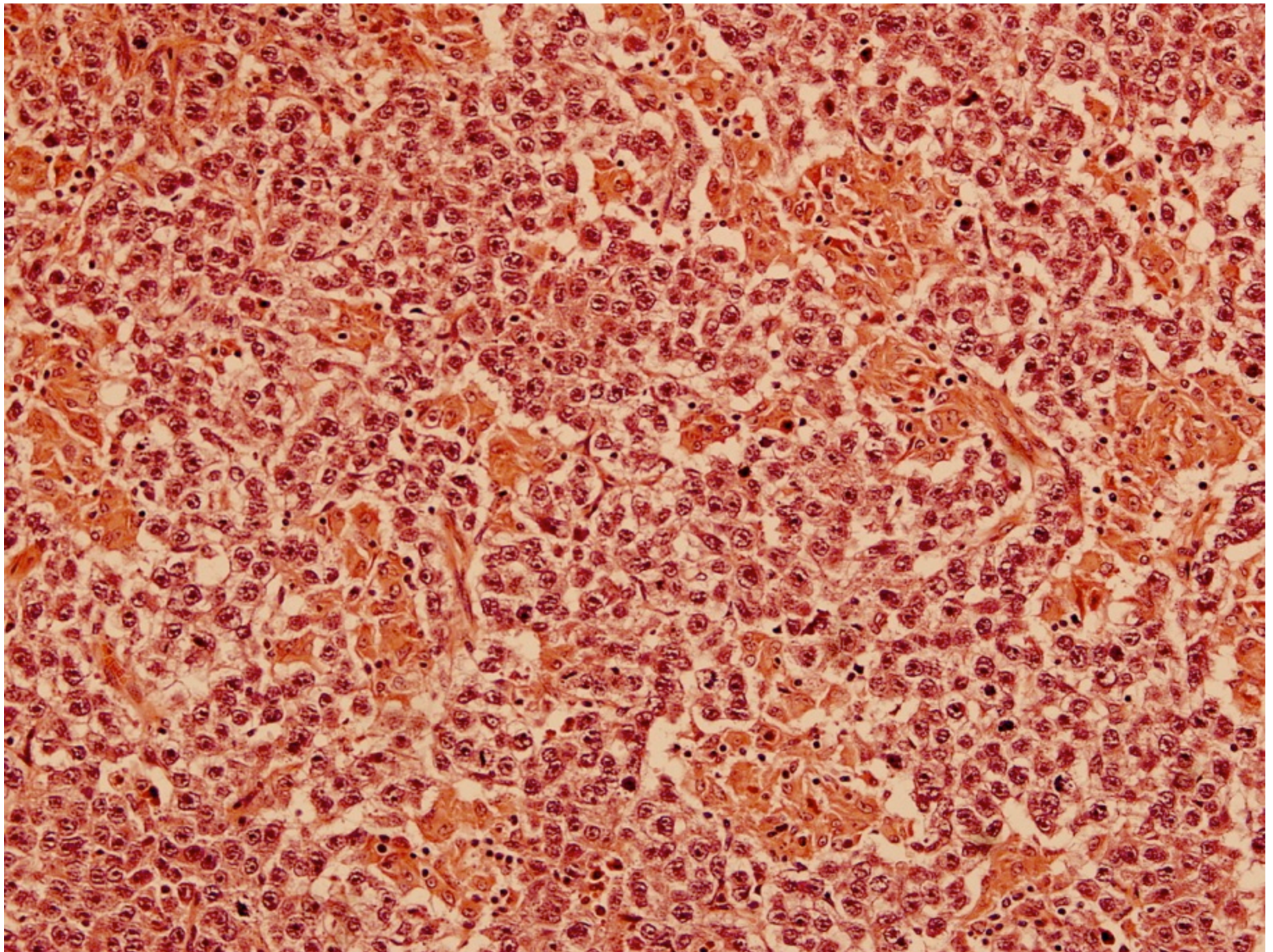
FRCPath Revision Course

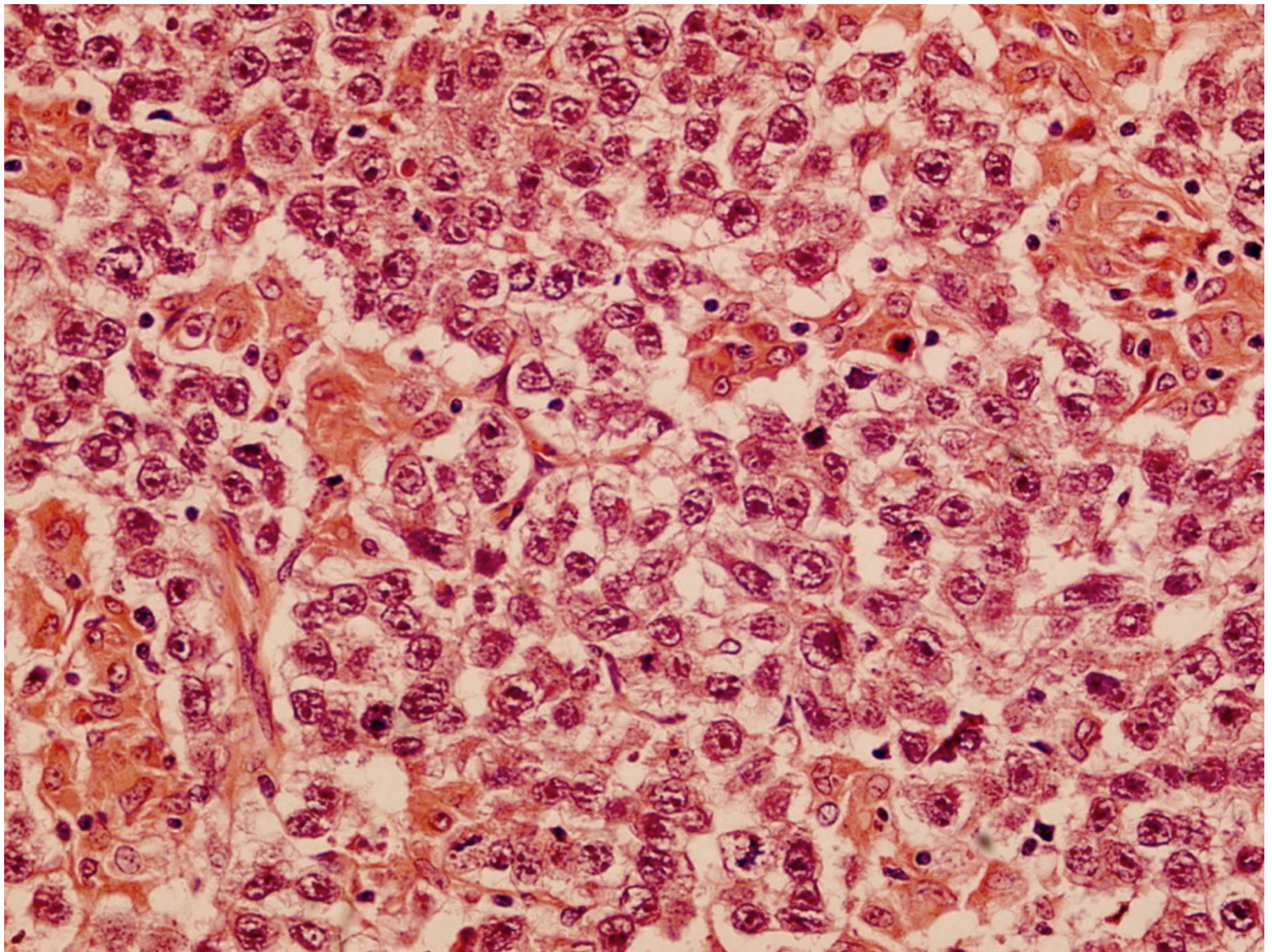
Gynaecological Pathology - 2

Prof Naveena Singh
Barts Health NHS Trust

Case 12: 05H4514

14F with huge abdominopelvic mass ?adnexal





Dysgerminoma

- Commonest ovarian primitive (non-teratomatous) germ cell tumour ($\approx 50\%$)
- 1% of all primary ovarian malignancies; 5-10% in first 3 decades
- Age range: 15-30, abdominal mass, $\uparrow$ LDH, rarely $\uparrow$ HCG resulting in hormonal manifestations
- 1/3rd show extraovarian spread at presentation

Dysgerminoma

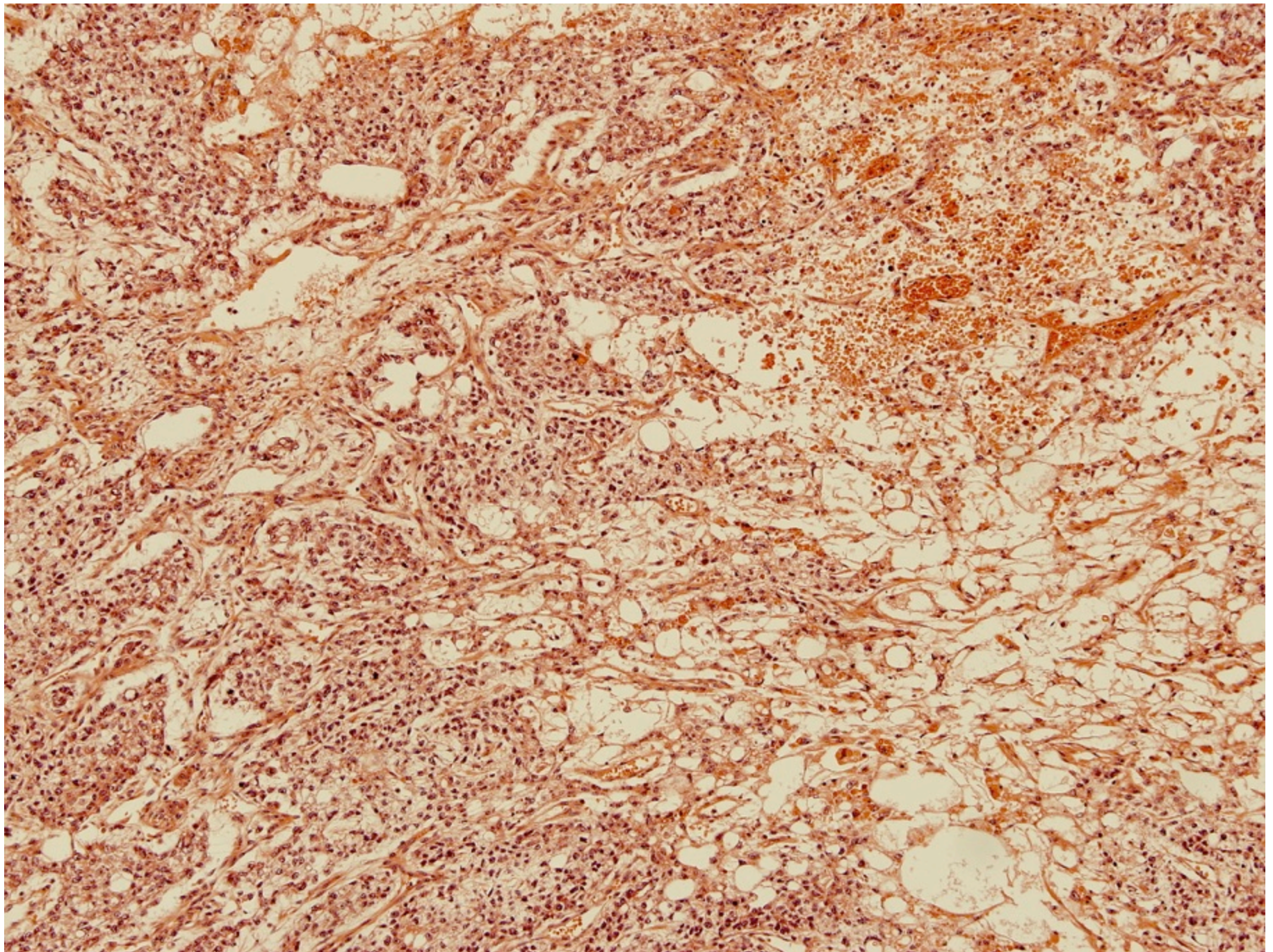
- Usually solid, bosselated
- Cells resembling germ cells in solid sheets, cords, nests. Rarely follicle-like spaces
- Cells are monotonous round with clear or eosinophilic cytoplasm, central round nuclei with 1-2 prominent nucleoli
- Variably prominent fibrous bands
- Invariably present lymphocytic infiltrate, rarely granulomas
- IHC: OCT3/4, CD117 +ve (minority have c-kit mutation)
NOTE: AFP, CD30 –ve

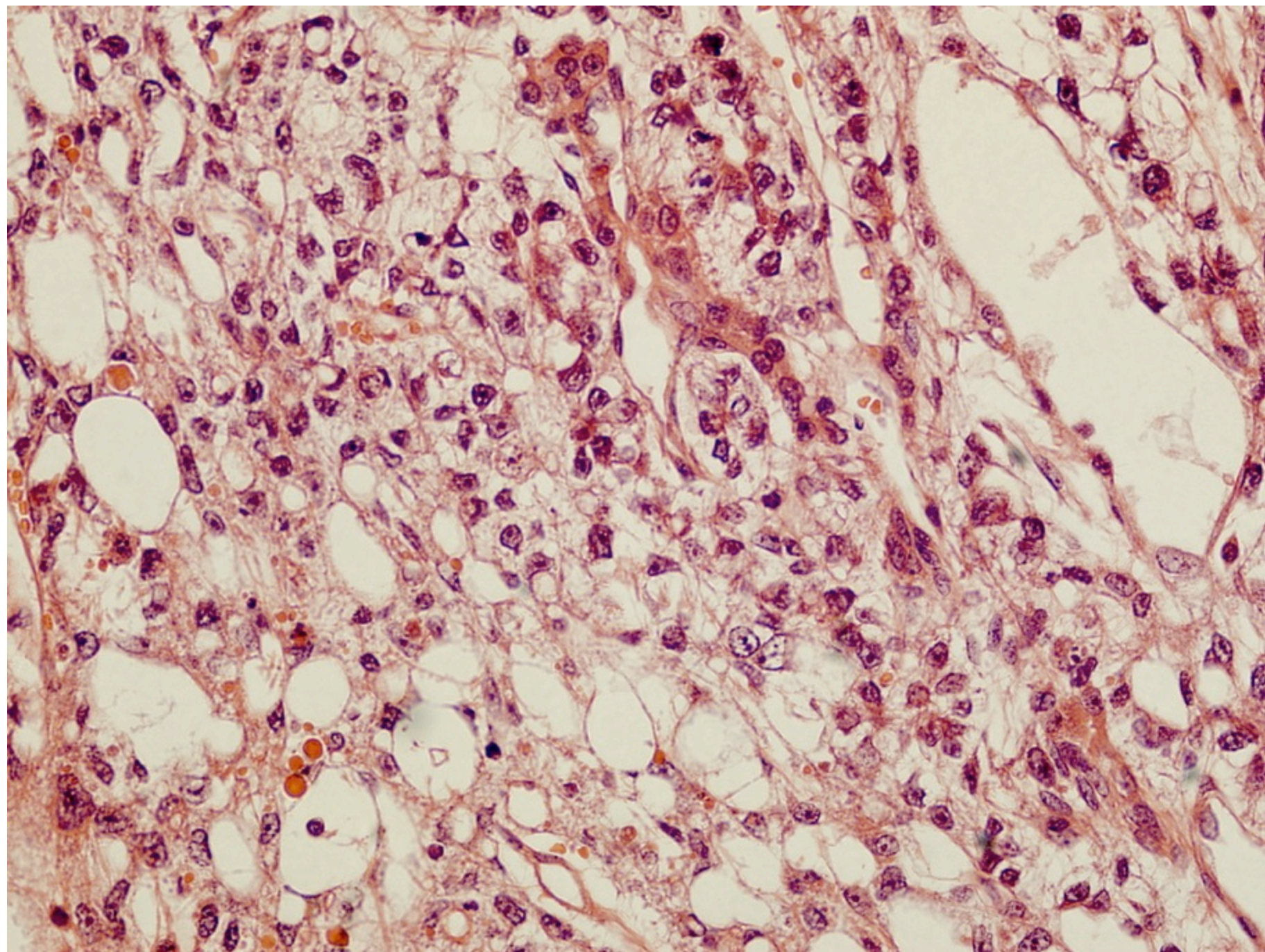
Dysgerminoma - DD

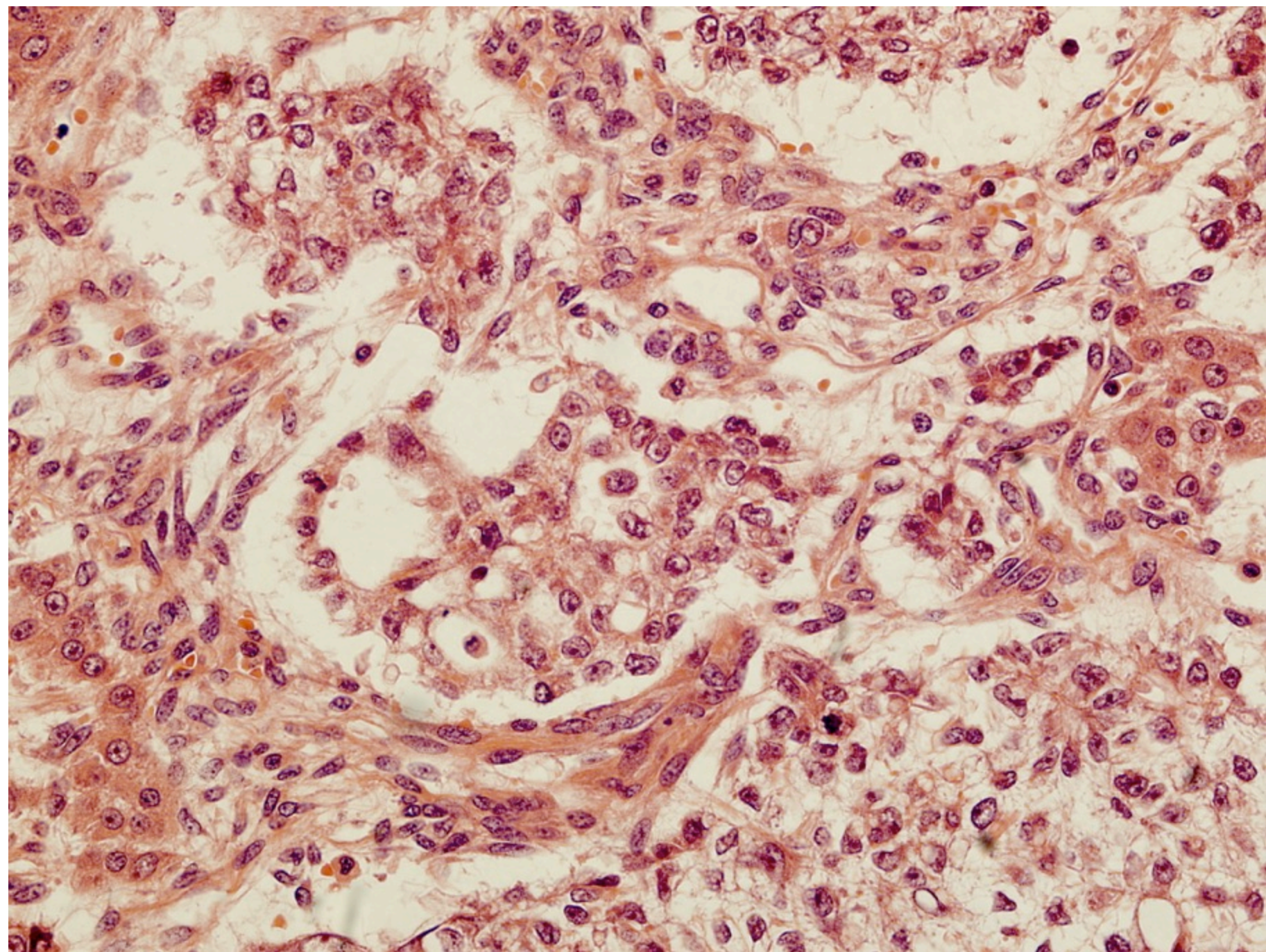
- YST - solid variant
- Embryonal carcinoma – solid
- Clear cell ca
- Small cell and undifferentiated Ca
- NHL

Case 5: 10S12284

22F, right ovarian mass





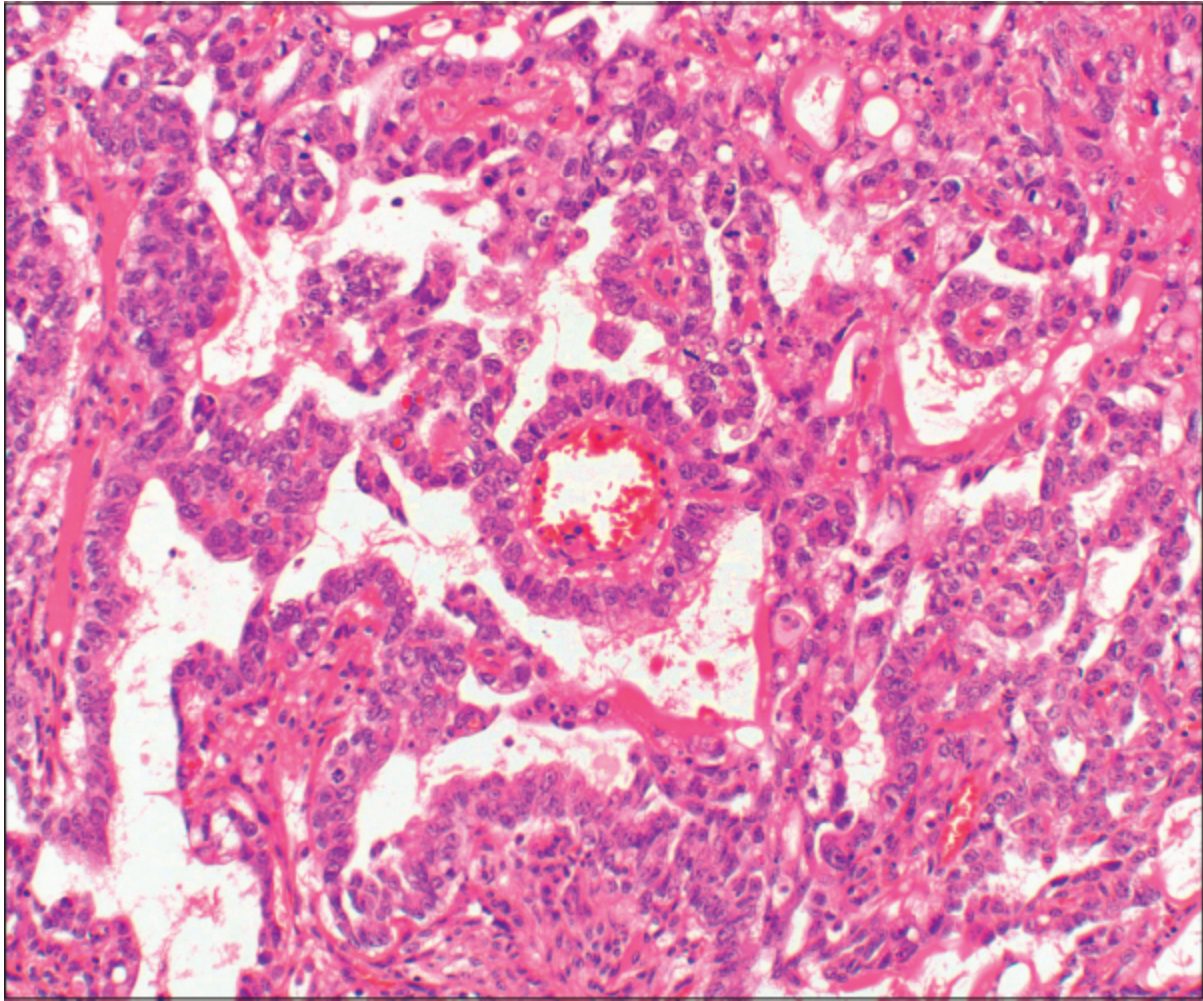


Yolk Sac Tumour

- 20% of primitive GCT
- Age range 16-19 years; abdominal pain, large mass ↑AFP
- Extravaginal spread in ½ cases
- Rarely extraovarian pelvic primary – ovaries normal
- Rarely occur in elderly (epithelial origin)

Yolk Sac Tumour

- Large solid and cystic masses, teratomatous component in 15%
- Typical pattern reticular microcystic
- Tumour cells moderately pleomorphic, moderate amount of pale to clear cytoplasm, hyperchromatic nuclei, often prominent nucleoli, high mitotic activity
- Schiller-Duval bodies chitic but seen in minority of cases
- IHC: AFP+ (may be focal, rarely negative); EMA, CK7, OCT3/4, CD117 –ve
- Variants: hepatoid, glandular (intestinal or endometrioid)



YST - DD

Embryonal carcinoma

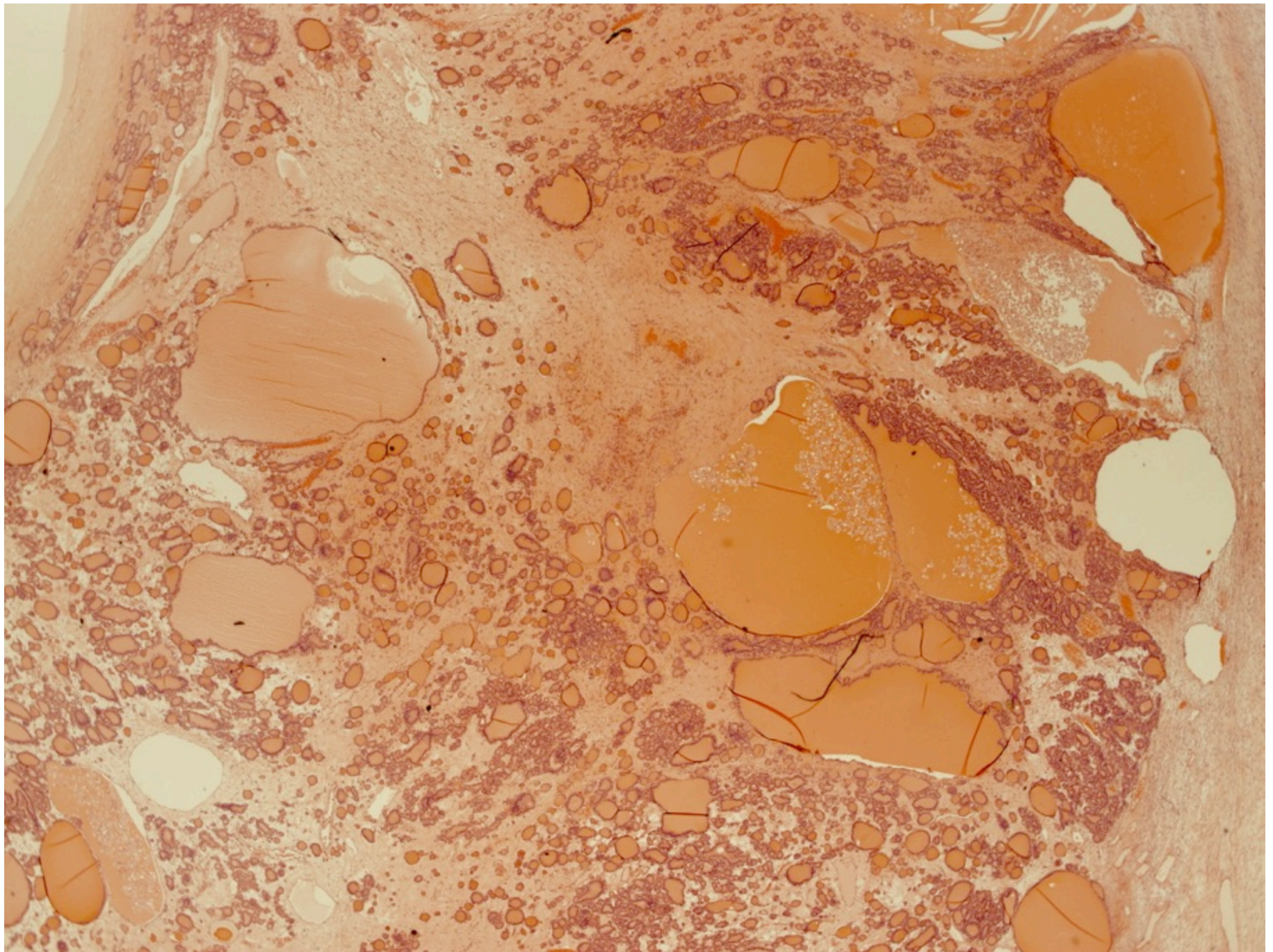
- Rare in ovary in pure form, <1%
- Greater pleomorphism, lack of typical YST patterns, CD30 and OCT3/4 +ve; usually AFP negative, CD117 –ve

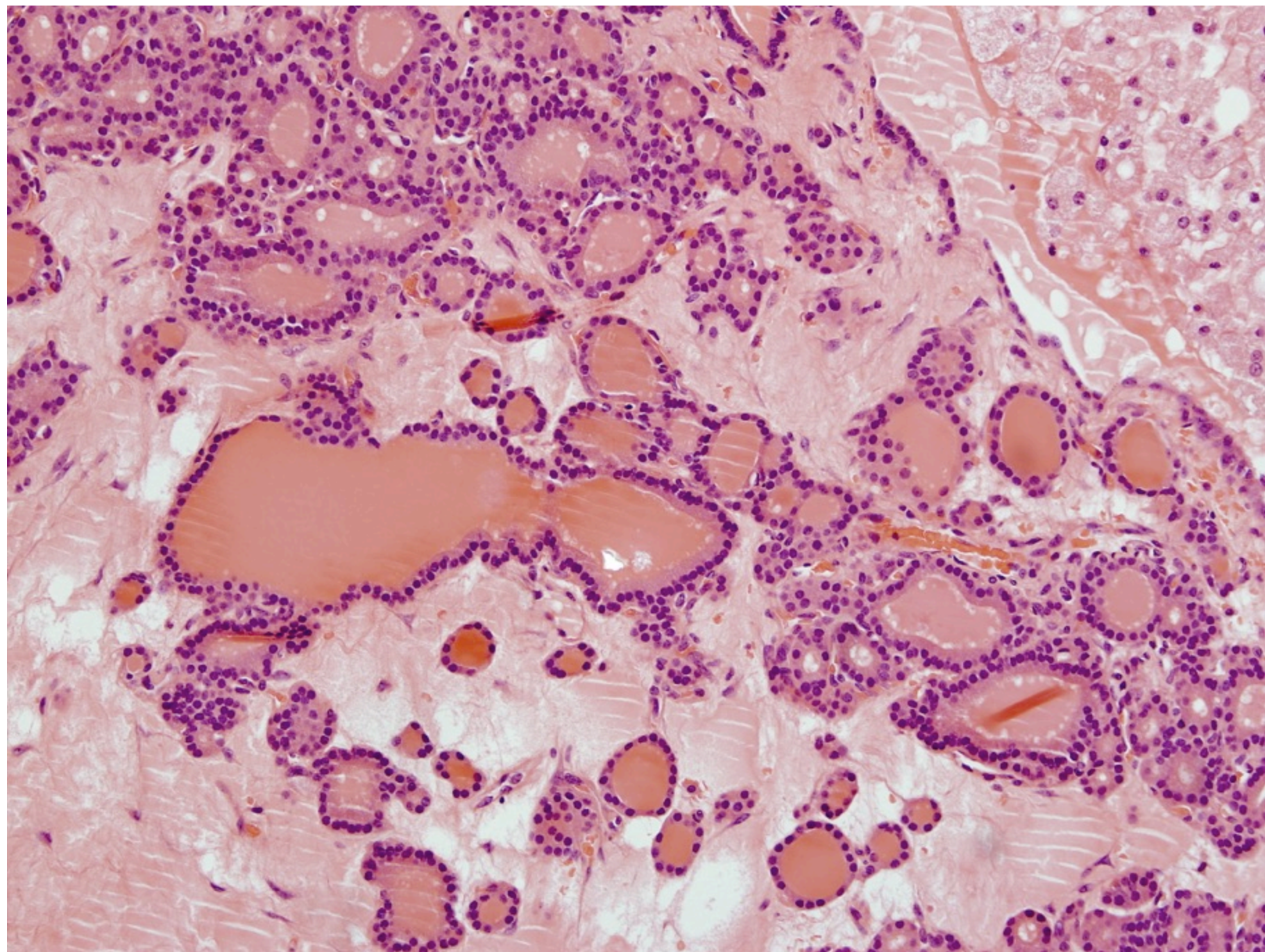
CCC

Endometrioid ca

Case 3: H2811/11

58F, ascites drained, 5L then 2L,
adenocarcinoma cells present, CA125 1000





Struma ovarii

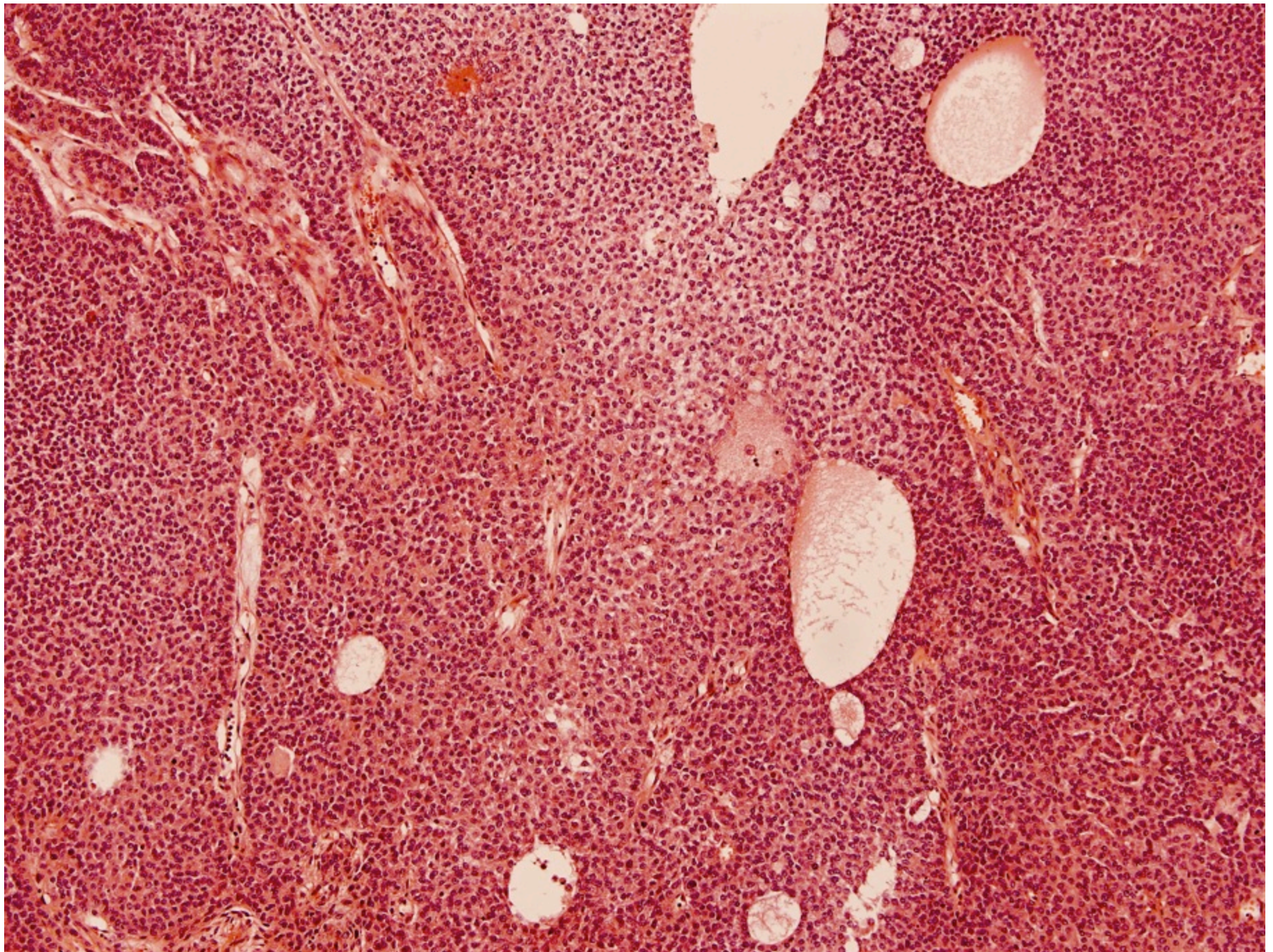
- Thyroid tissue constituting sole component, predominant component or discrete tumour mass
- Ascites in 1/3rd cases, occasionally Meig's, can clinically simulate ovarian ca (↑ CA125)
- Occurrence of papillary or follicular carcinoma is rare, behaviour almost invariably benign
- Newly described 'proliferating or atypical struma'

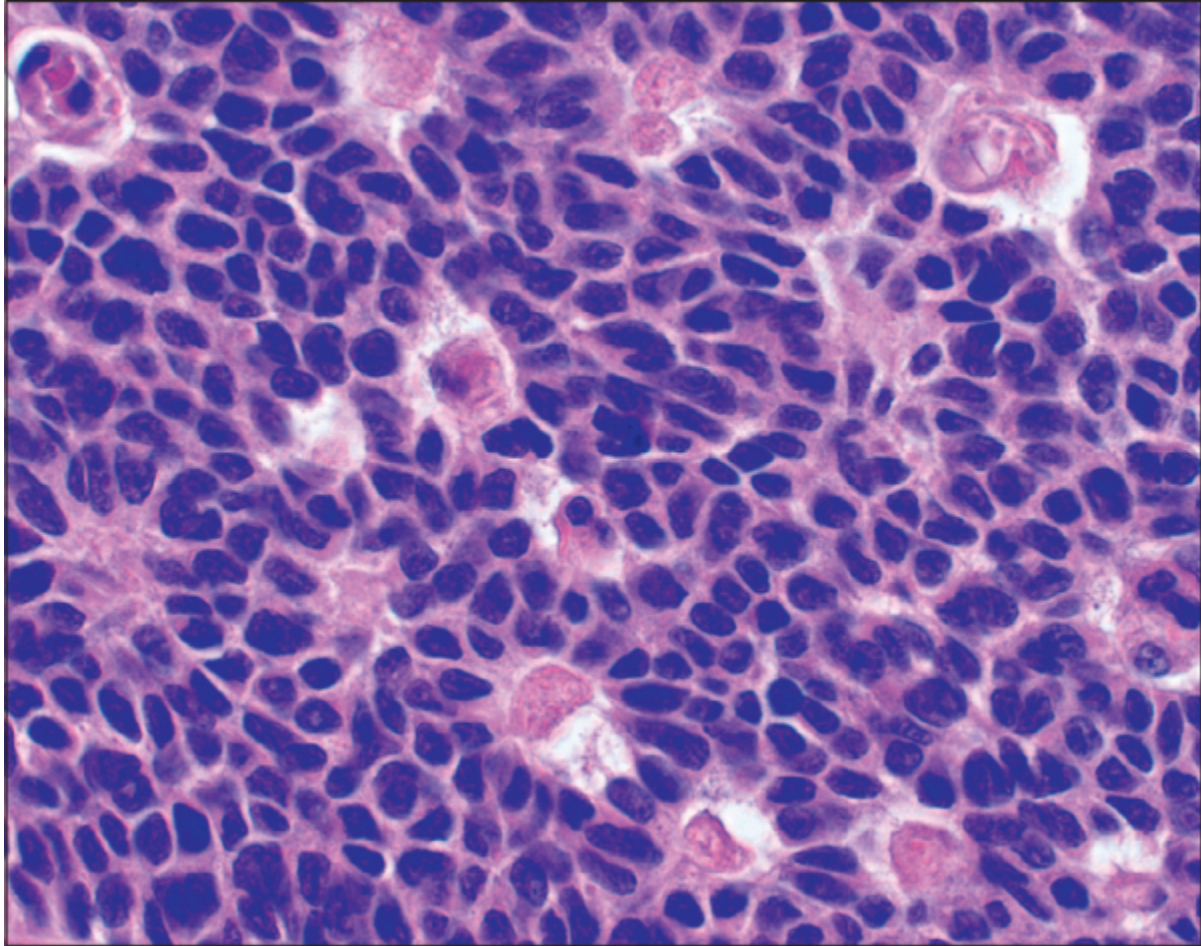
Struma ovarii - DD

- Cystadenoma/ carcinoma
- CCC
- Carcinoid
- Steroid cell tumours

Case 2: 11S20077

36F, left ovarian mass, hirsutism





Granulosa cell tumour – adult type

- 1-2% of all ovarian tumours
- All ages, usually 50-55 years
- Tumour mass, oestrogenic symptoms, rarely progestagenic or androgenic
- 95% confined to ovary

Granulosa cell tumour – adult type

- Unilateral, solid and cystic, haemorrhagic with yellow-white solid areas
- Characteristic cells with scanty cytoplasm, monotonous, pale, oval or angulated, often grooved nuclei ('coffee bean')
- Variety of patterns: solid, microfollicular, trabecular, insular, gyriform
- Variable amount and appearance of stroma
- Mitosis usually low but variable
- IHC: inhibin, calretinin, CD56, CD10, cytokeratin (punctate)
- New markers FOXL2, SF1
- FOXL2 mutation (402C→ G) in >95% cases

Differential diagnosis of AGCT:

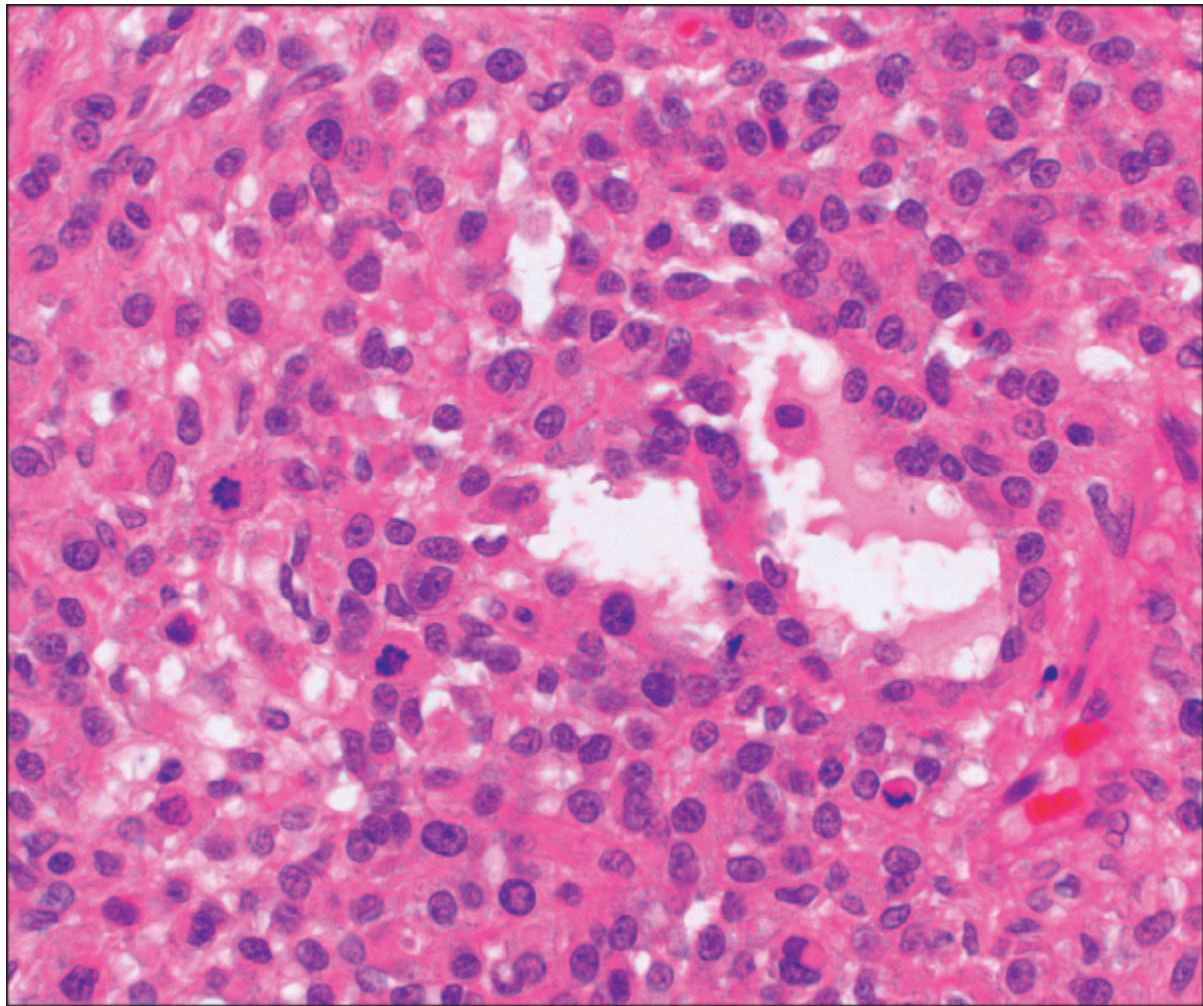
Epithelial tumours

- Small cell ca
- Endometrioid ca
- Undiff ca
- Metastatic melanoma, lobular ca

Carcinoid

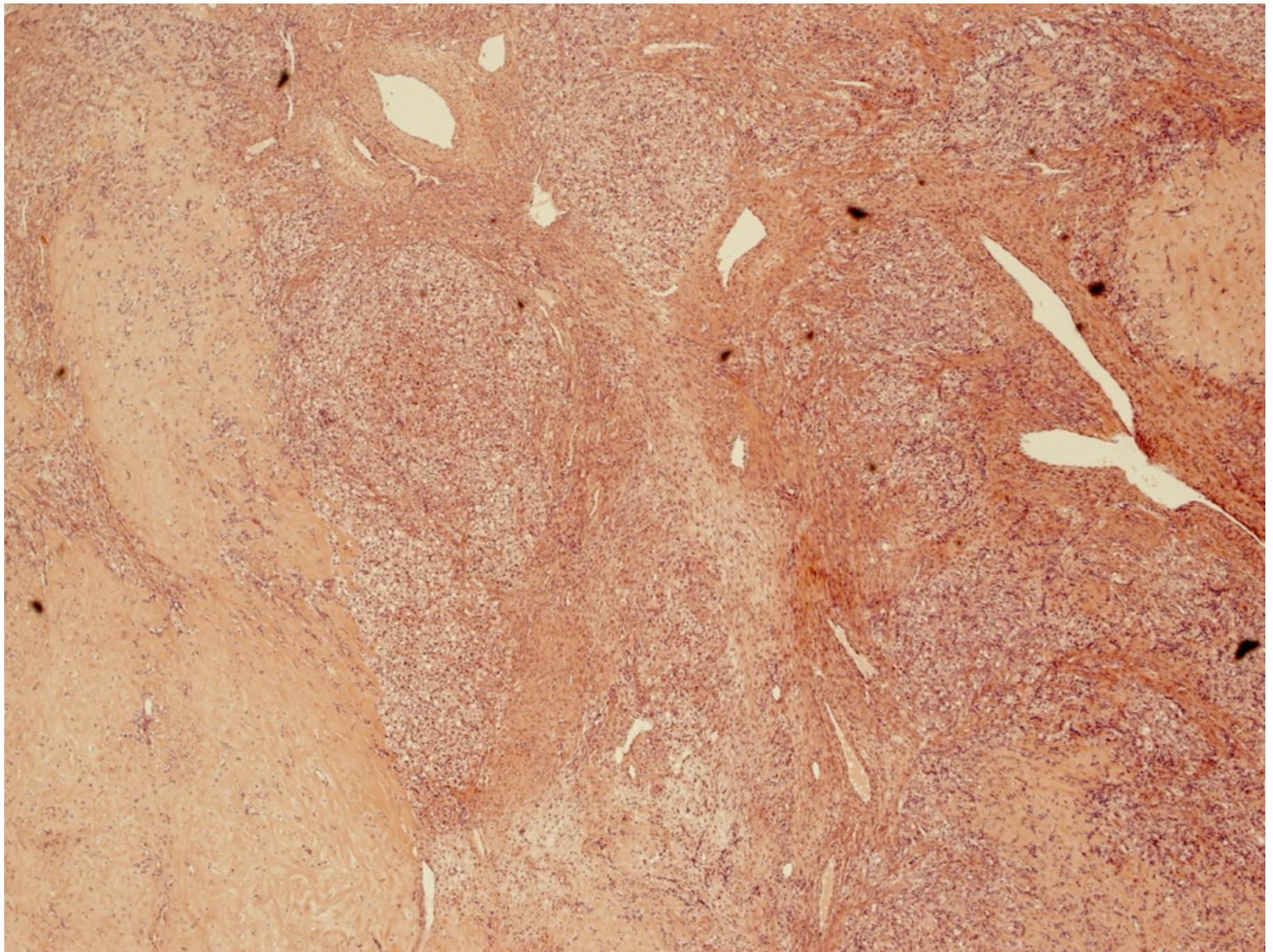
Differential diagnosis of AGCT: Other sex cord stromal tumours

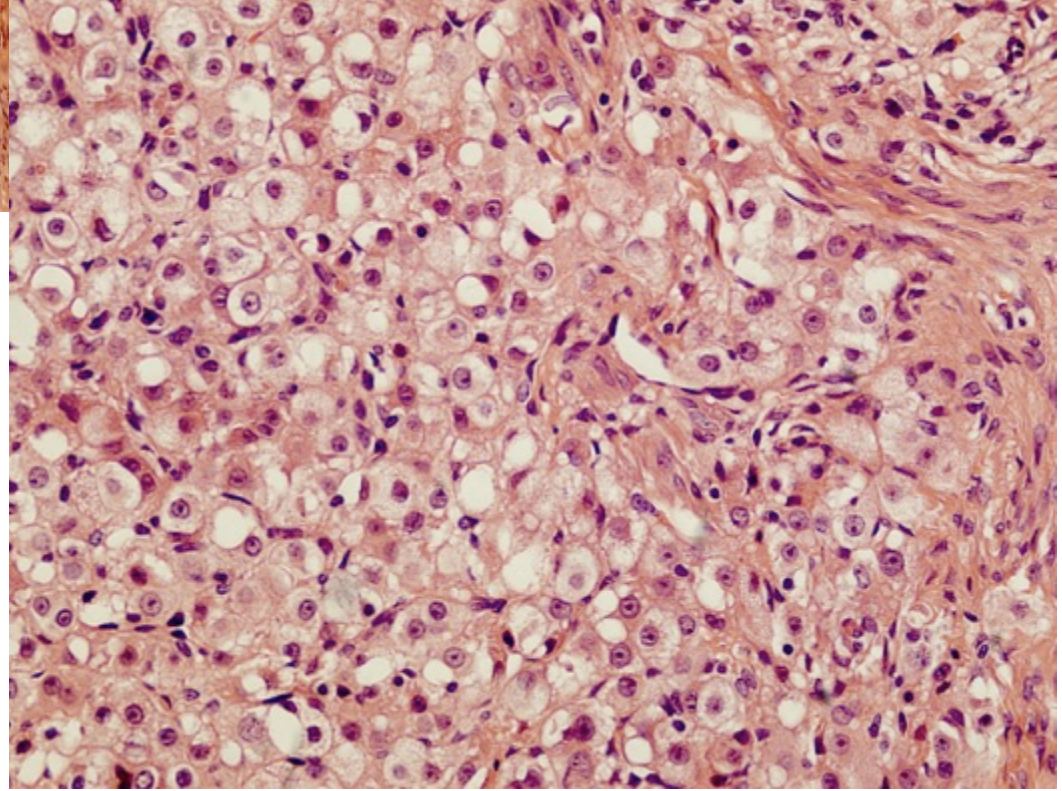
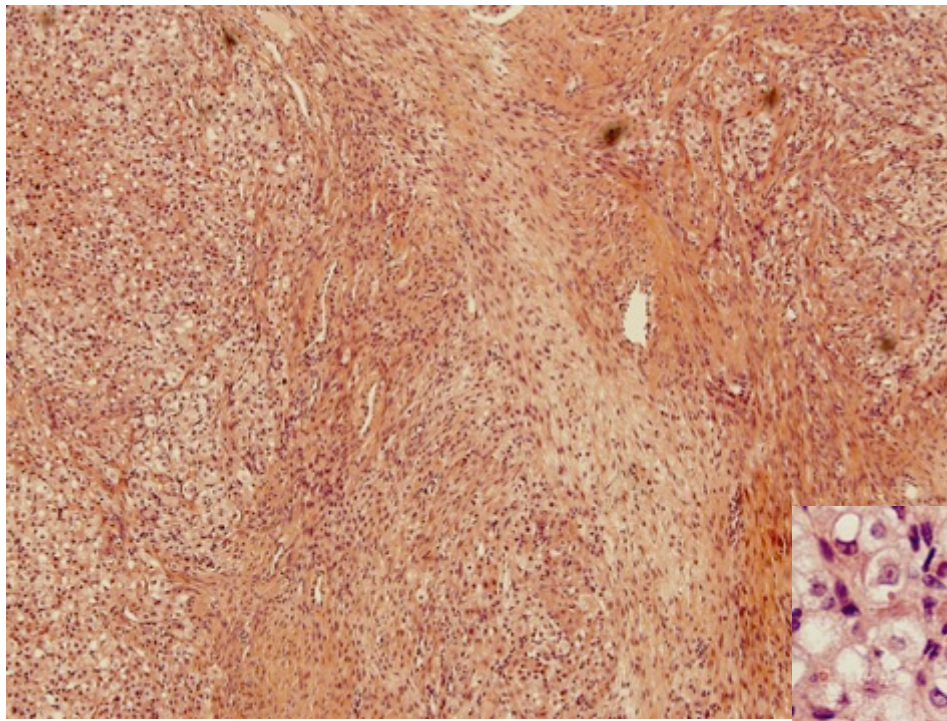
- Thecoma and cellular fibroma: epithelial differentiation absent, pericellular reticulin
- Stromal tumour with minor sex cord elements
- Steroid cell tumours
- Sertoli Leydig cell tumour (retiform)
- Gonadoblastoma
- SCTAT
- JGCT: age, irregularly sized follicles, higher mitotic activity, luteinisation, hyperchromatic nuclei without grooves



Case 6: 11S20797

32F, torsion of left ovarian cyst, hard mass in right ovary. Section from right ovary



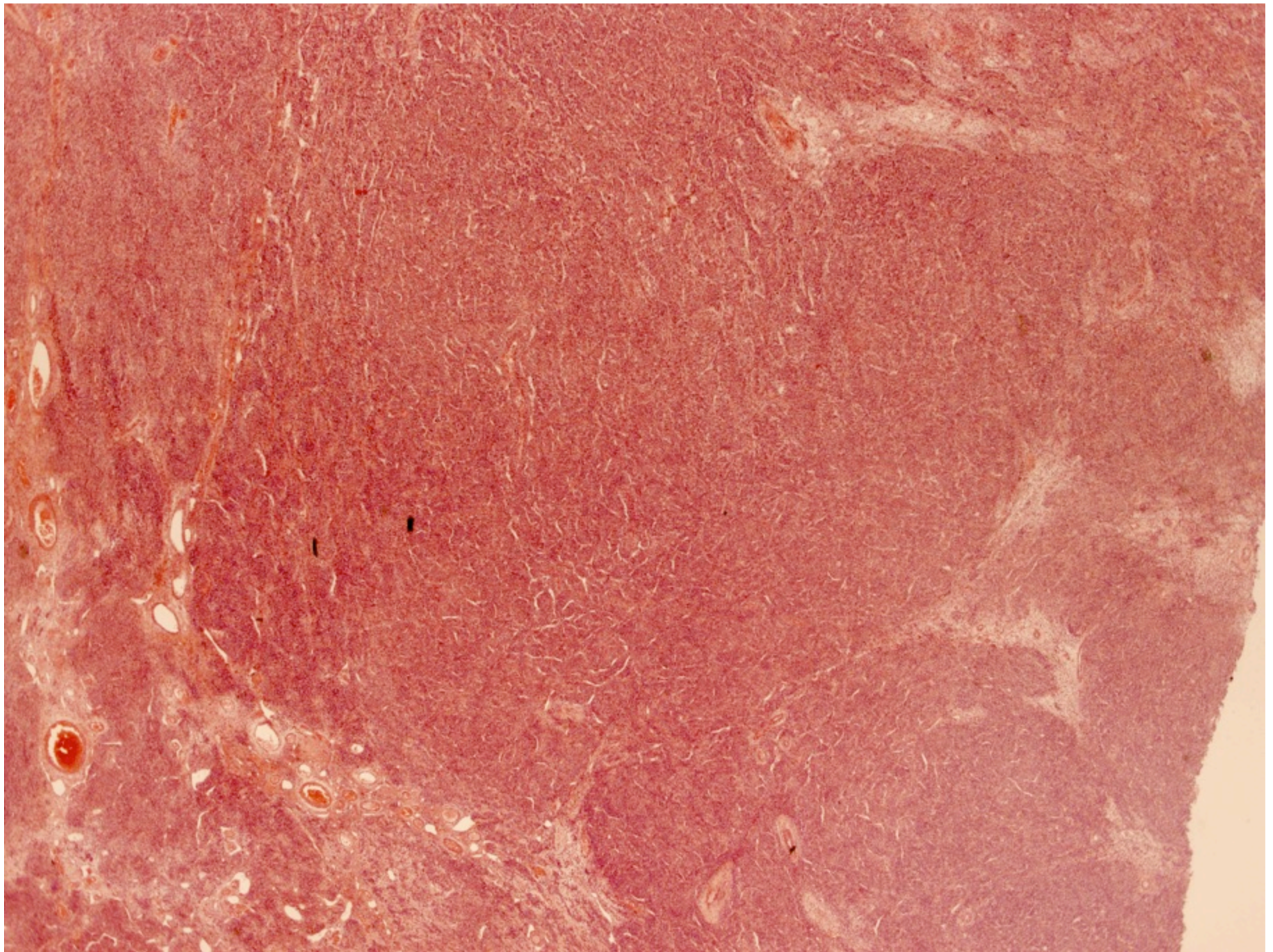


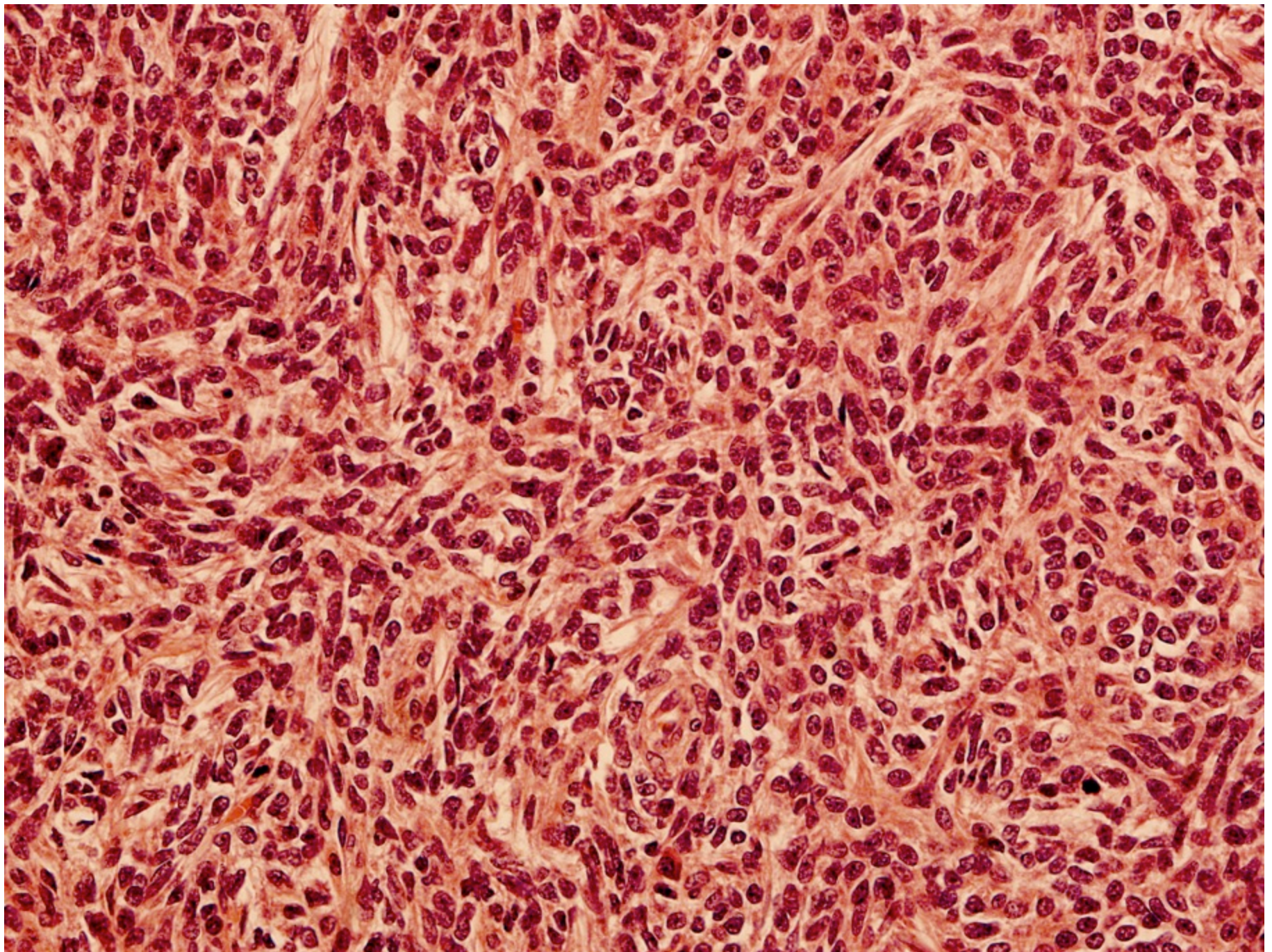
Sclerosing stromal tumour

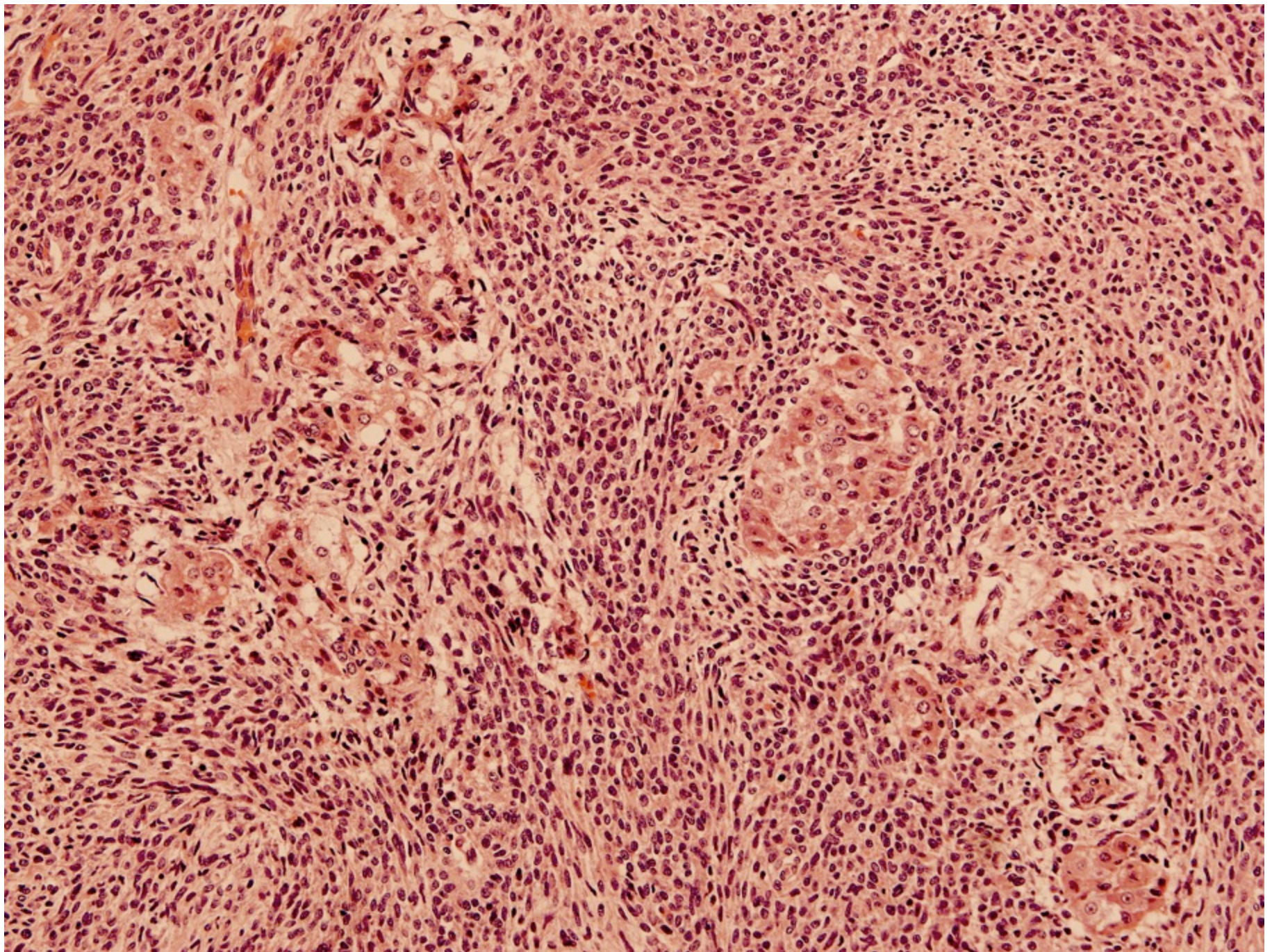
- Unilateral, discrete, sharply demarcated
- Pseudolobular pattern
- Cellular areas alternating with paucicellular densely collagenous or oedematous areas
- Sclerosis variable
- Prominent thin-walled vessels, hemangiopericytomatous pattern
- Cellular areas have disorganised mixture of stromal cells, vacuolated cells, luteinised cells

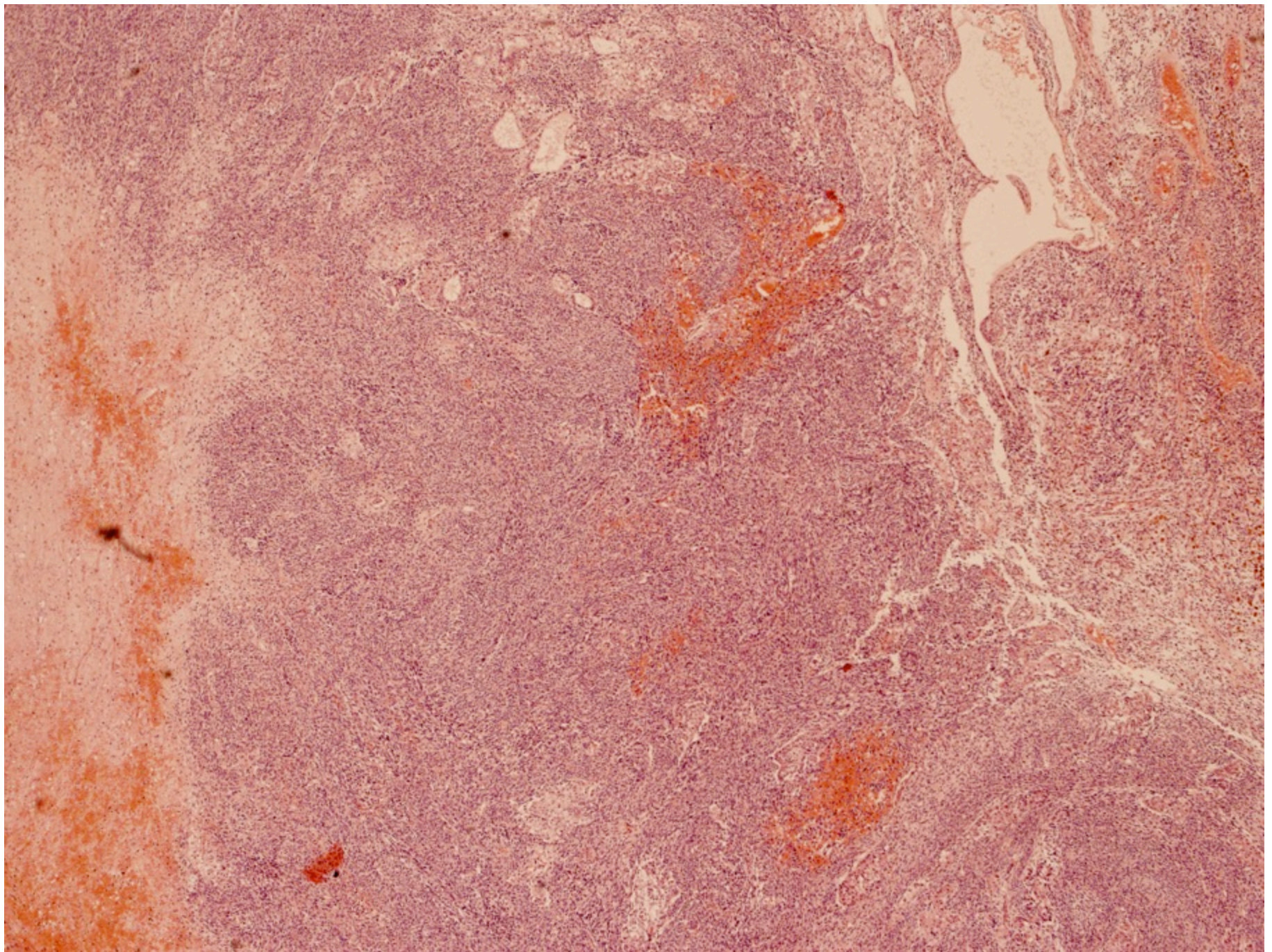
Case 19: 11S3881

24F, raised AFP, LDH and CA125. Left ovarian tumour





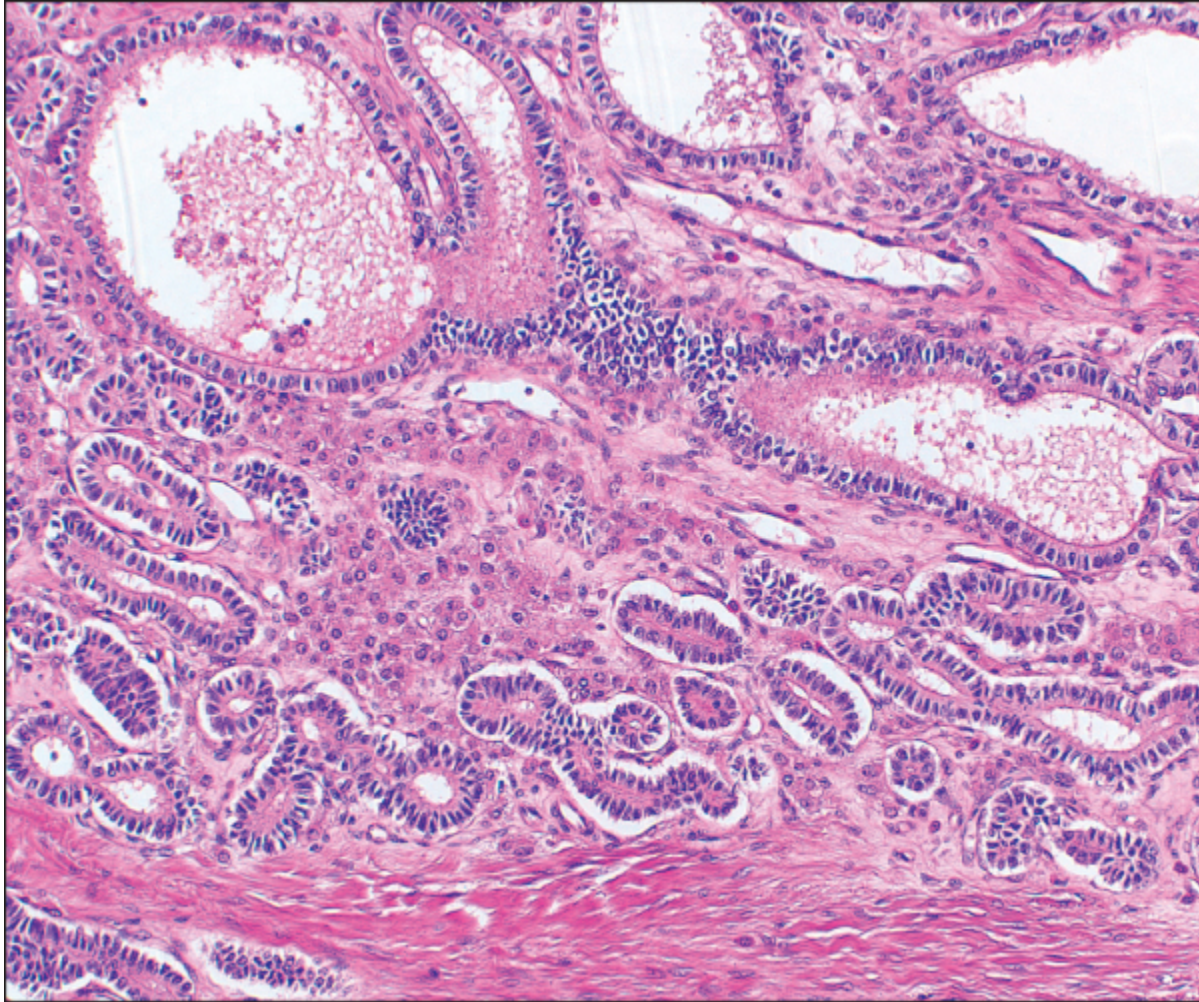




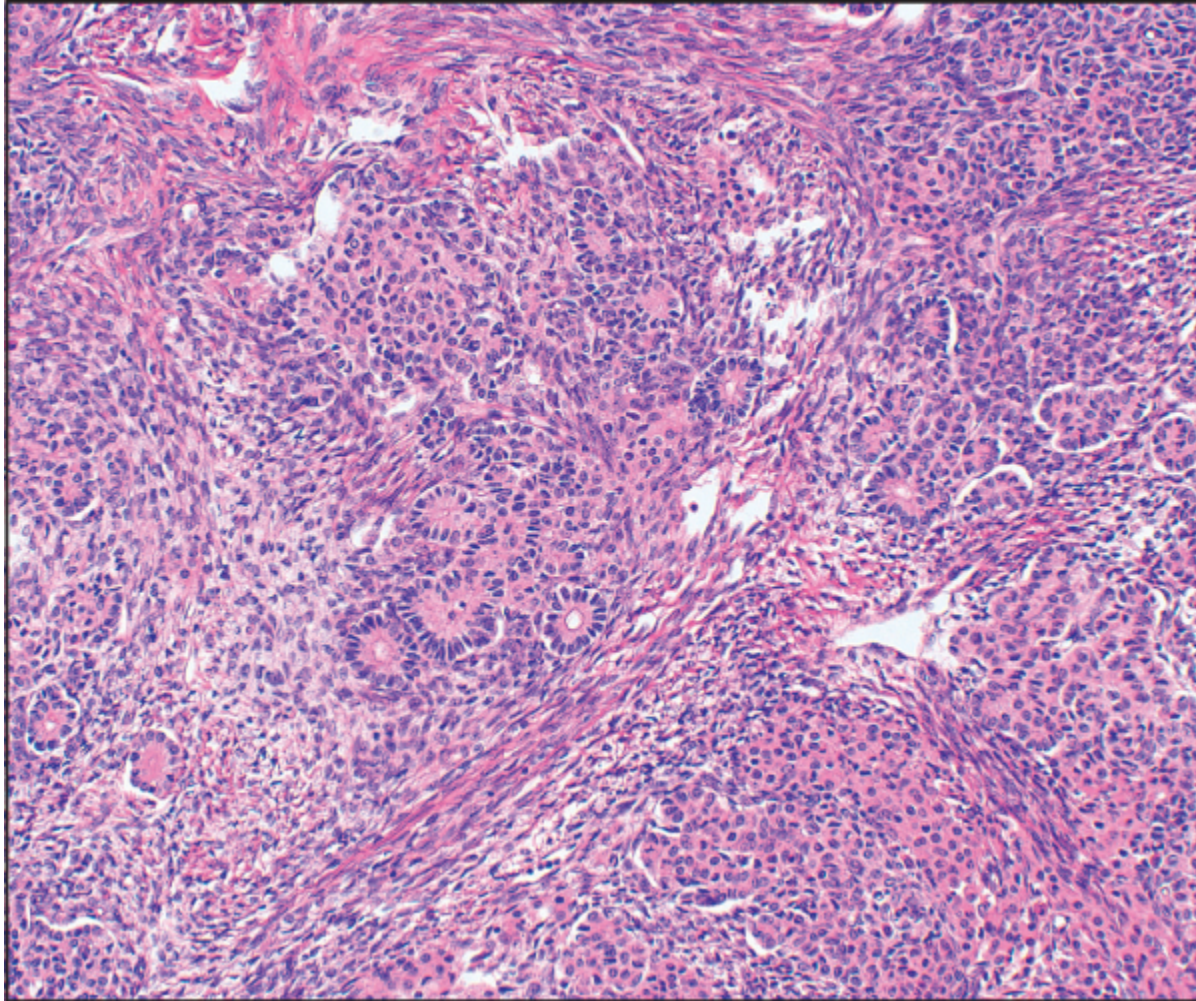
Sertoli-Leydig cell tumour, poorly differentiated with minor heterologous differentiation

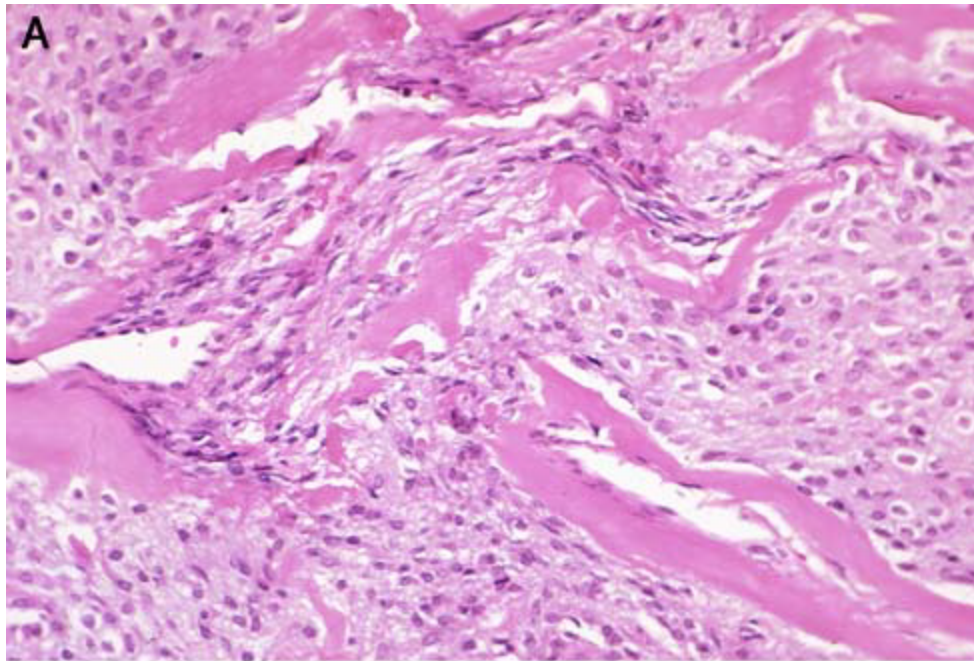
- Rare, usually <30 years age
- Abdominal swelling, pain, 50% have endocrine manifestations, usually androgenic
- DICER1 mutation in poorly differentiated and intermediate differentiation SLCT

Sertoli-Leydig cell tumour – well differentiated

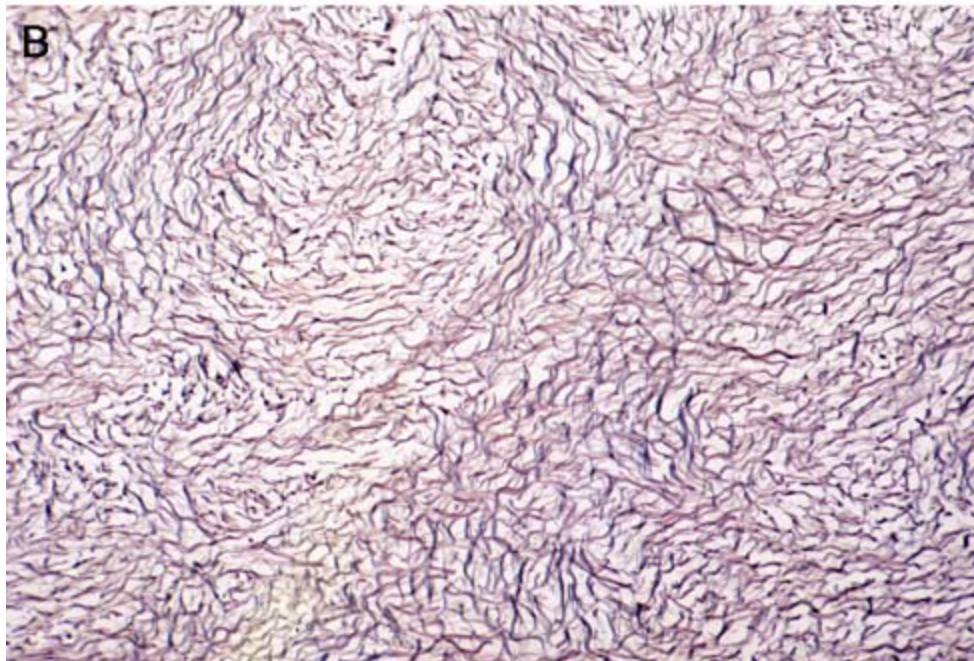


Sertoli-Leydig cell tumour – intermediate differentiation



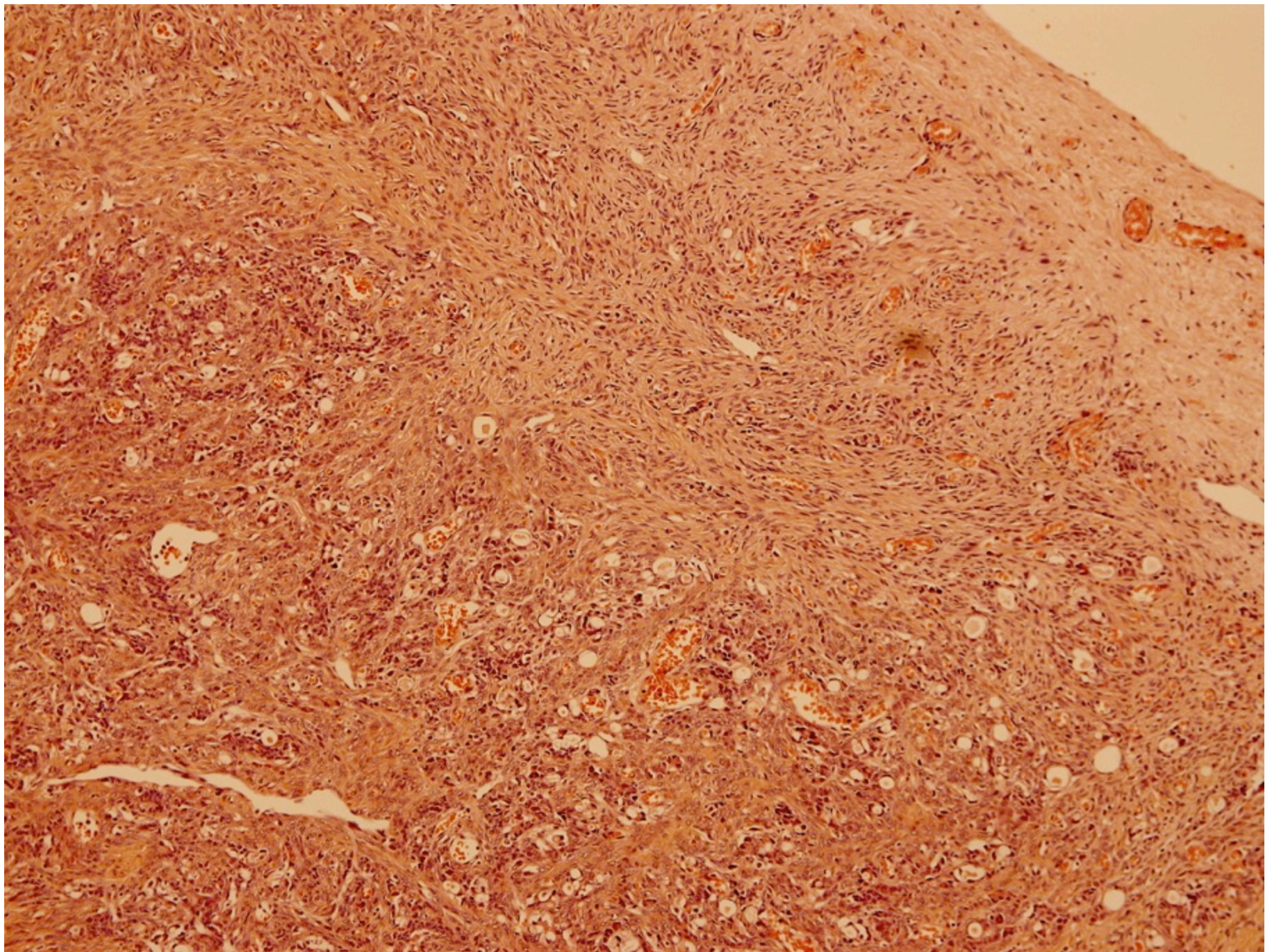


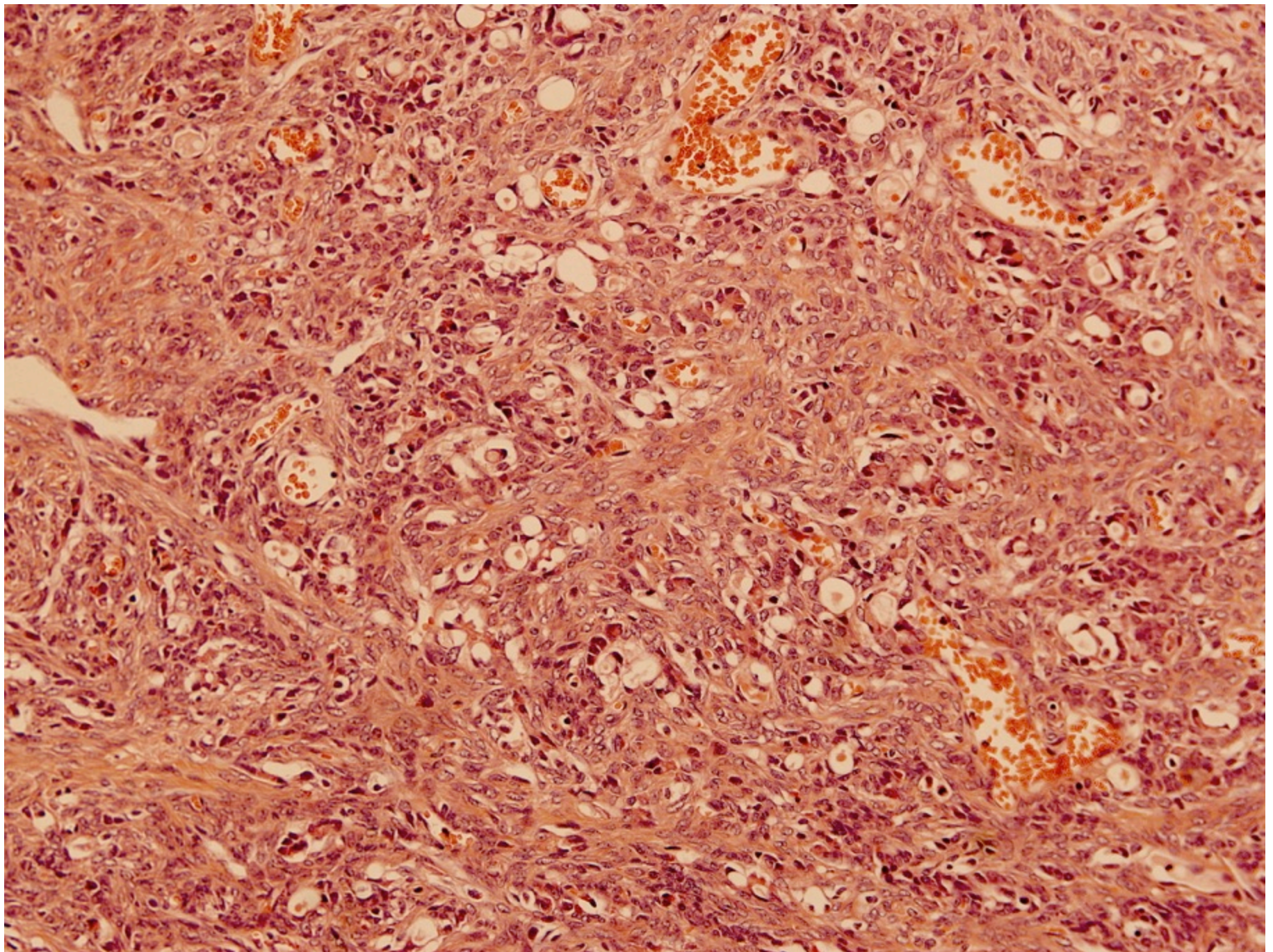
Thecoma

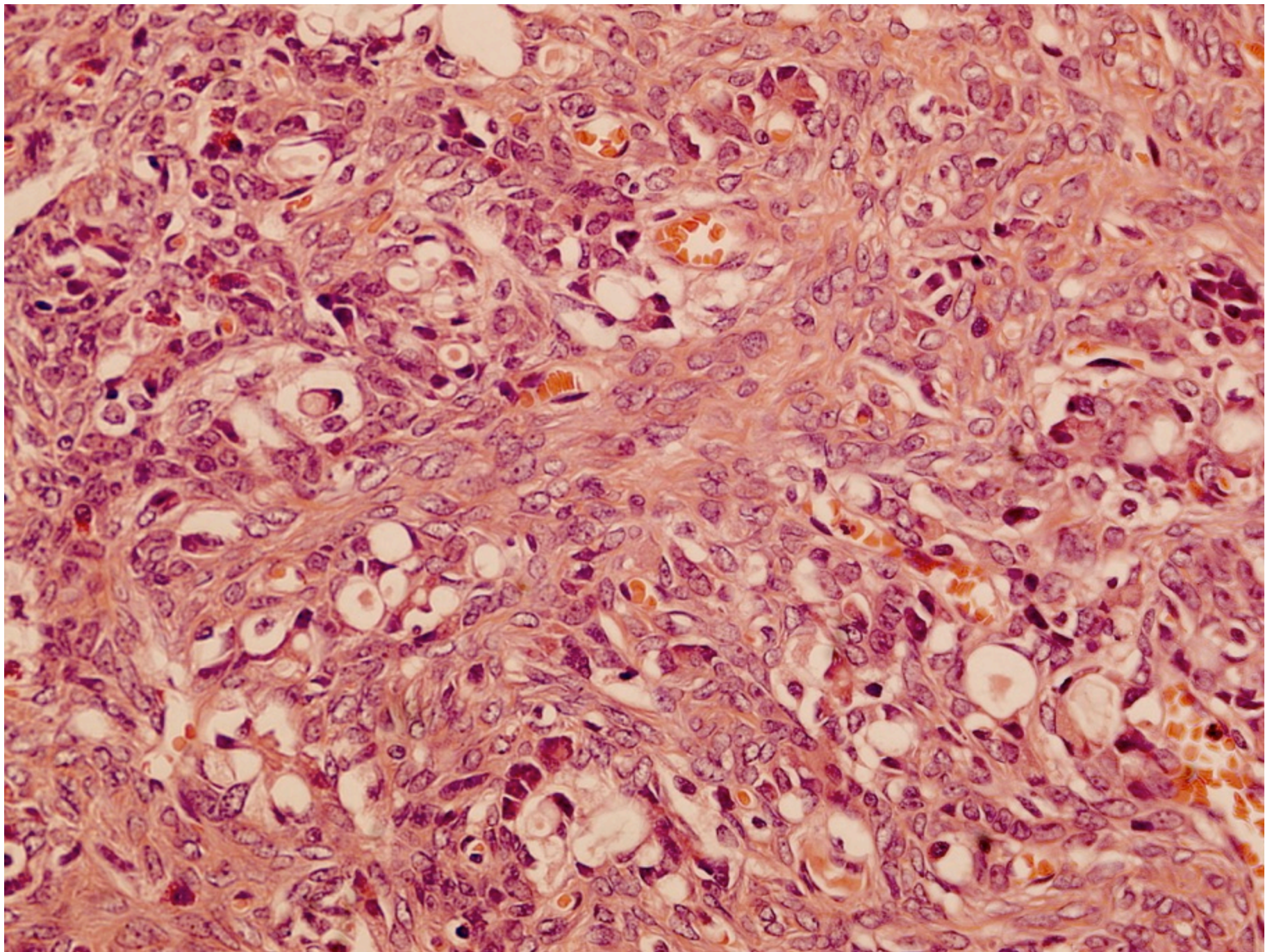


Case 14: 11S1599

32F, bilateral adnexal masses







Krukenberg tumour

- Metastatic Ca in which there is at least 10% component of signet ring cells
- Vast majority gastric origin (>70%)
- Other primary sites: appendix, colon, GB, breast. Rarely pancreas, urinary tract, cervix
- Presentation: Mass-related or endocrine (stromal luteinisation)
- Primary may be difficult to detect
- Almost uniformly fatal in one year

Krukenberg tumour

- 80% bilateral (but may be unequal)
- Solid, bosselated, cerebriform masses, white or yellow
- Signet ring cells may be seen singly, in strands or nests, often tubule formation
- Positive with mucin stains, sometimes with eosinophilic inclusions
- Stroma variably often highly cellular, may be luteinised
- IHC variable depending on primary: CK7, CK20, CDX2, Hep Par 1, MUC1, MUC2, MUC5AC, ER

Krukenberg tumour

- Sex-cord stromal tumours: SLCT, cellular fibroma, sclerosing stromal tumour, signet-ring stromal tumour
- CCC with signet ring like cells
- Goblet cell (mucinous) carcinoid

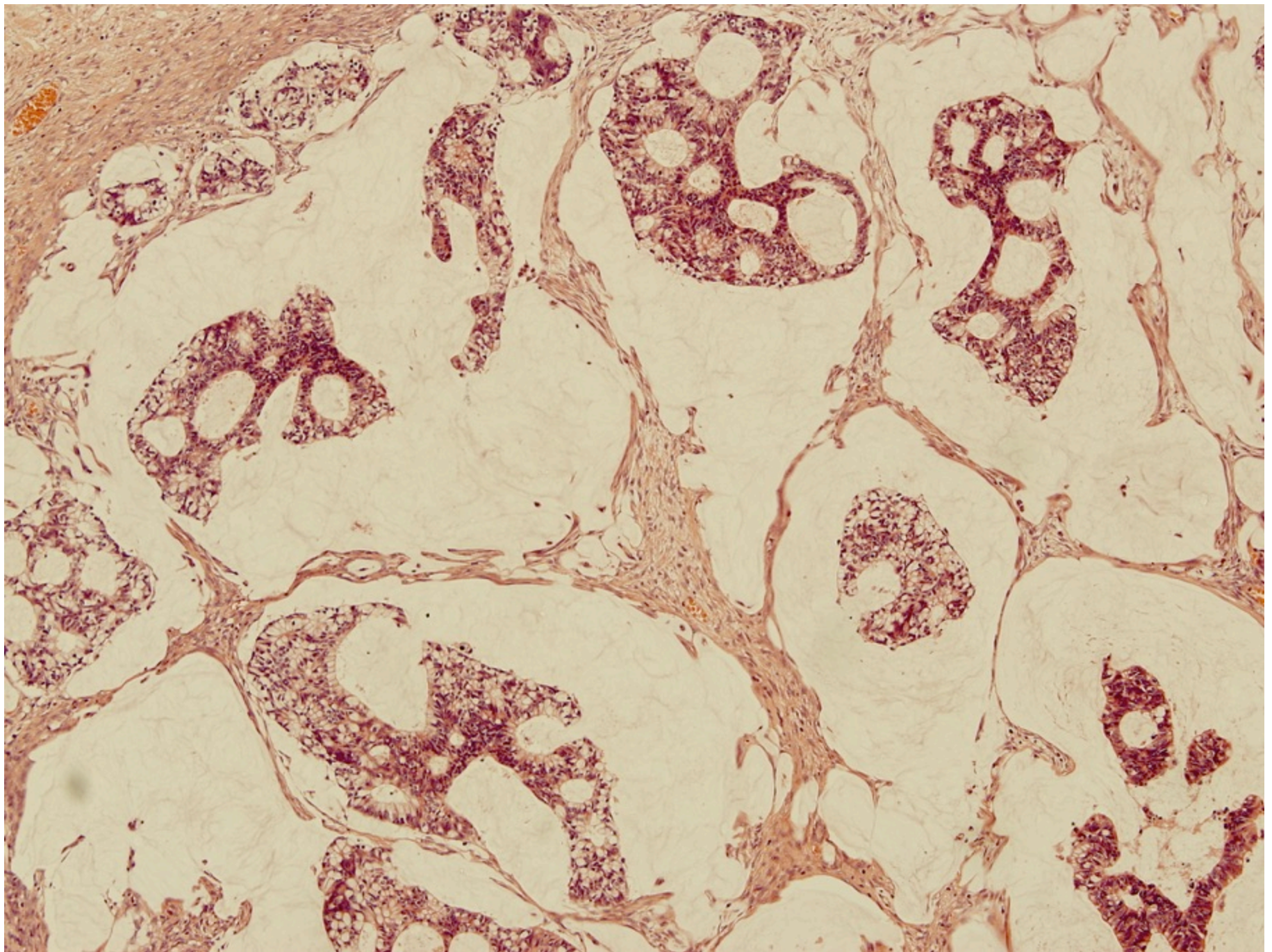
The presence of mucin containing signet ring cells essentially excludes a primary tumour

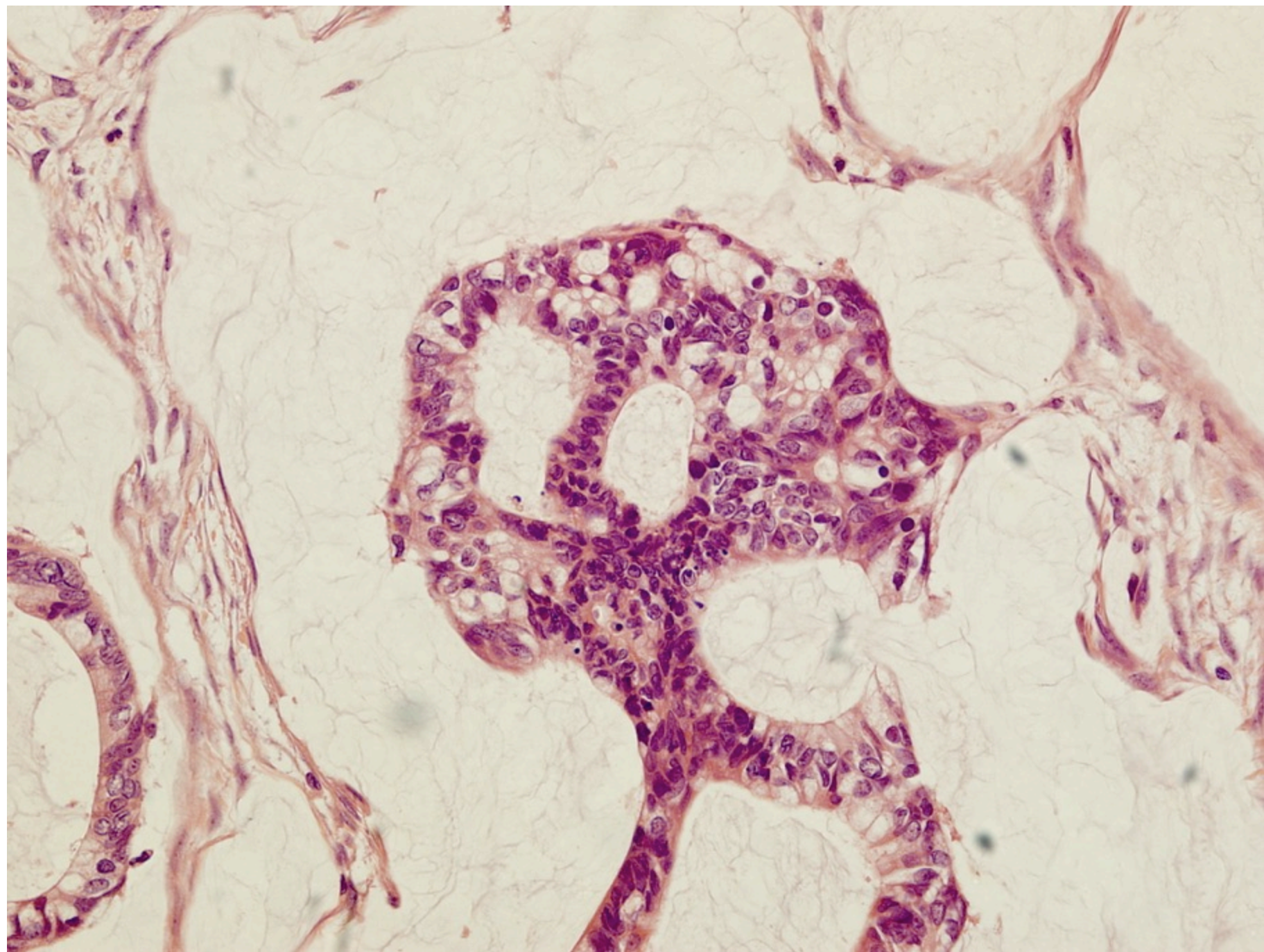
BUT

Rare surface epithelial tumours can contain signet ring cells

Case 8, 11S16856

67F, bilateral complex ovarian masses, CA125
243, ?inflamed appendix





Mucinous ovarian tumours - Features favouring metastasis

- Bilaterality (enlargement may not be symmetrical)
- Diameter <10cm (12, 13, also published cut offs; 10-15 indeterminate)
- Extensive intrabdominal spread
- Multinodular growth pattern
- Surface or hilar involvement
- Infiltrative pattern, desmoplastic reaction, necrosis, LVSI, single cell infiltration
- Resemblance to previous primary (BEWARE: 'maturation phenomenon')

Mucinous ovarian tumours - Features exclusive to metastasis

- **signet ring carcinoma**
- **pseudomyxoma peritonei (ovarii)**
- **colloid carcinoma (extensive mucin extravasation)**

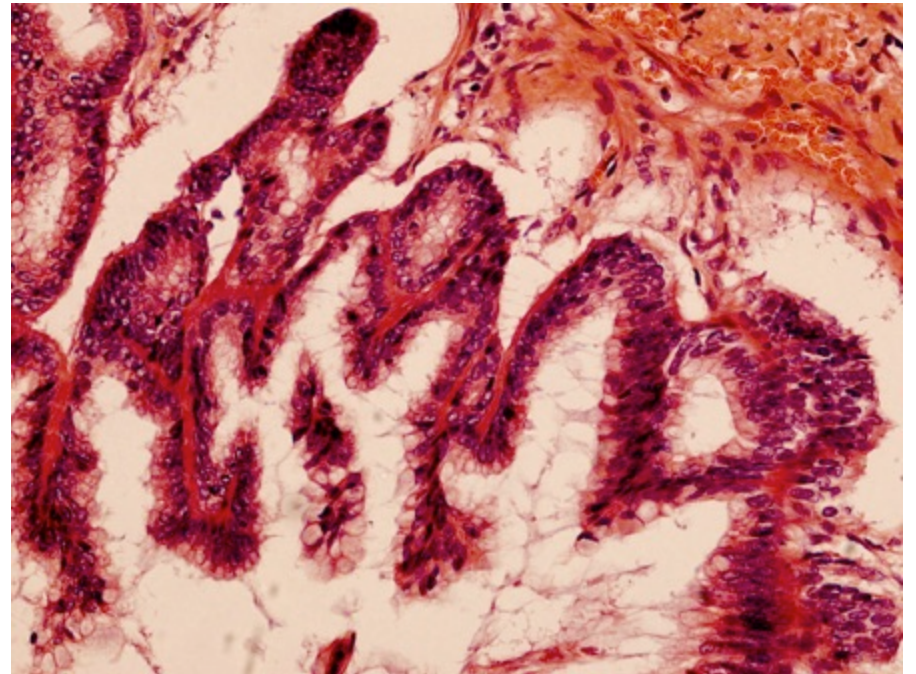
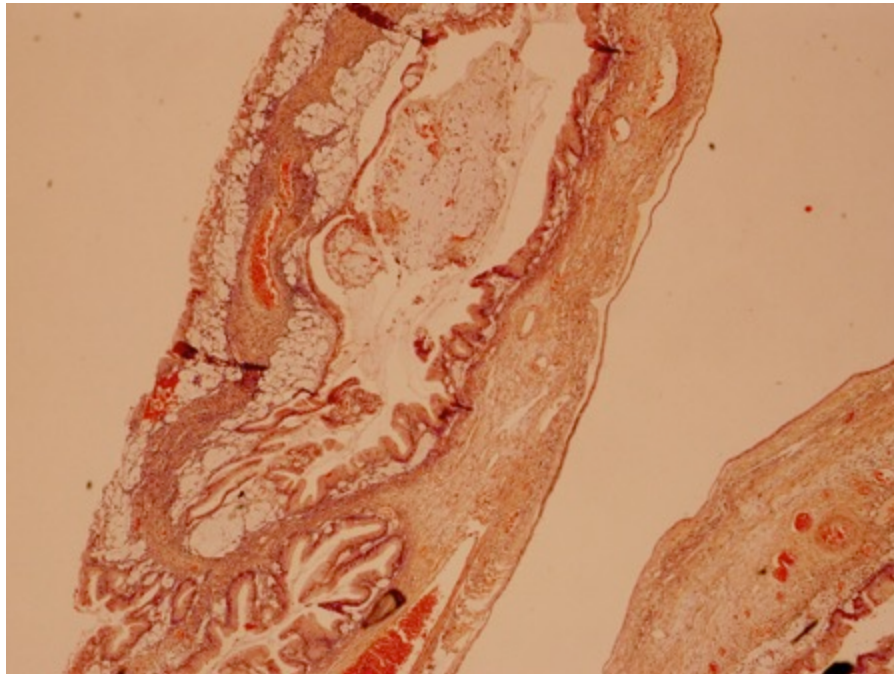
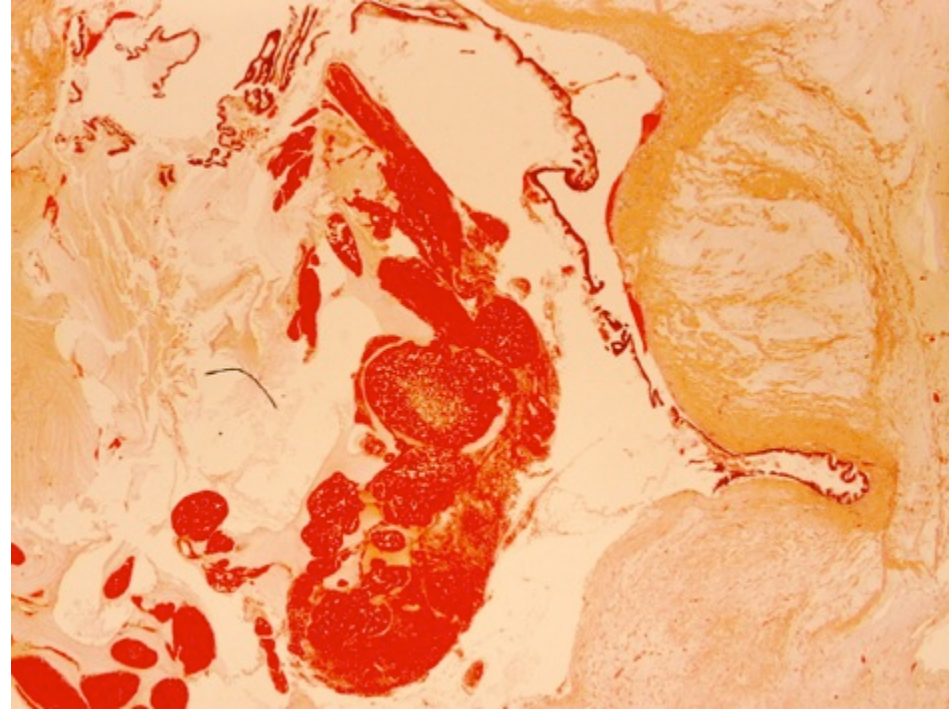
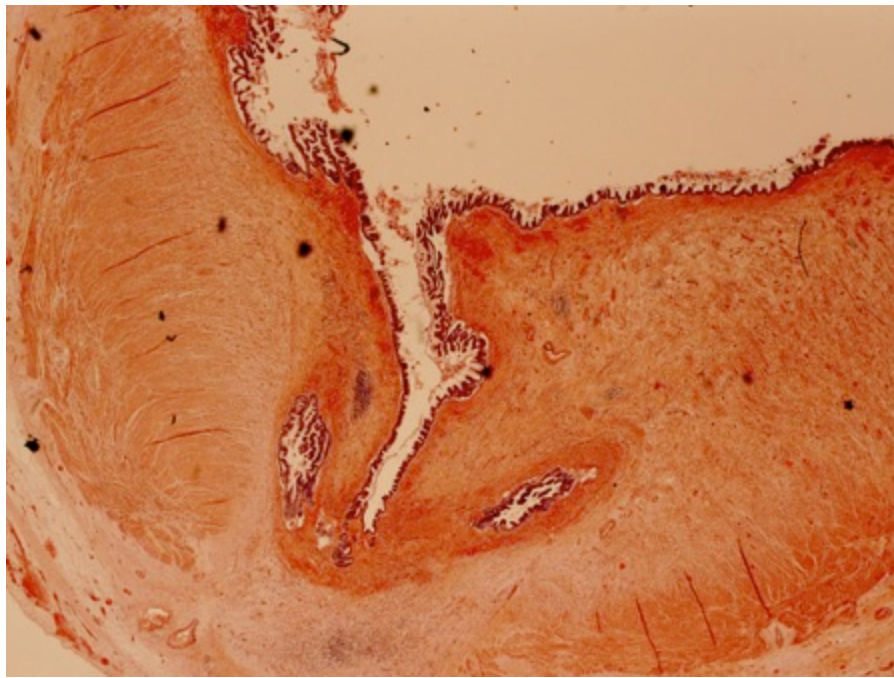
Mucinous ovarian tumours - Features favouring primary

- Unilateral
- Diameter >12cm (10, 13, also published cut offs; 10-15 indeterminate)
- Smooth outer surface
- Associated benign, borderline and malignant appearing areas (BEWARE: 'maturation phenomenon')
- Association with other background changes:
 - Endometriosis (seromucinous tumours – papillary endocervical)
 - Brenner tumour
 - Mature cystic teratoma (patterns typical of mets can all occur)
 - Sertoli-Leydig cell tumour
 - Adenofibroma

Case 11, 11S19206

86F, abdominal distension

Sections from appendix, peritoneal deposit and ovarian mass



Low grade mucinous neoplasm with pseudomyxoma peritonei

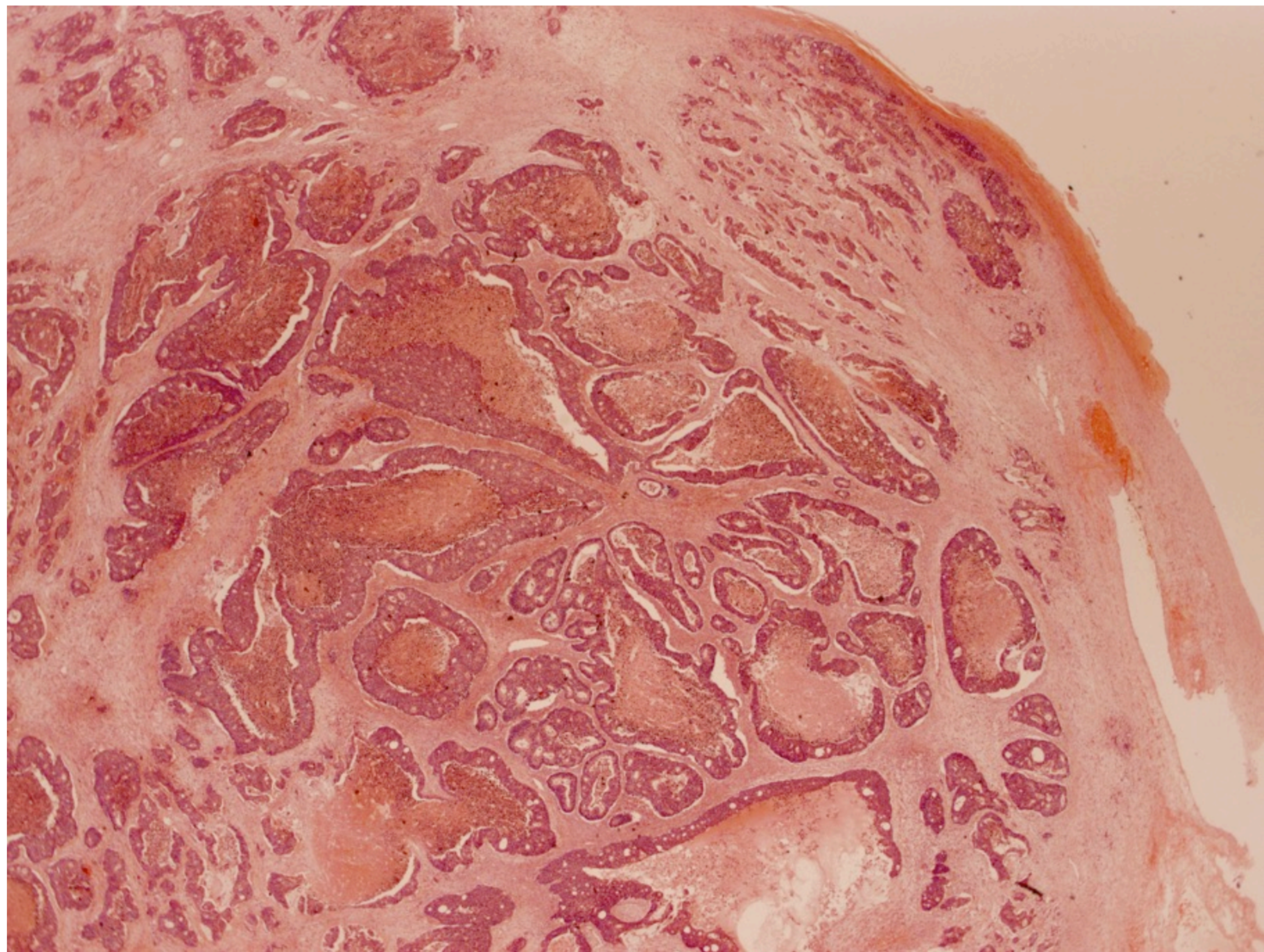
- PMP is a clinical diagnosis (not histopathological)
- Grossly evident peritoneal spread from a mucinous neoplasm – abundant extracellular mucin dissecting peritoneal fat, variable amount of variably atypical epithelium
- NOT the same as mucinous ascites
- Most cases arise from low grade appendiceal mucinous neoplasm
- Rarely true ovarian primary from a background teratoma

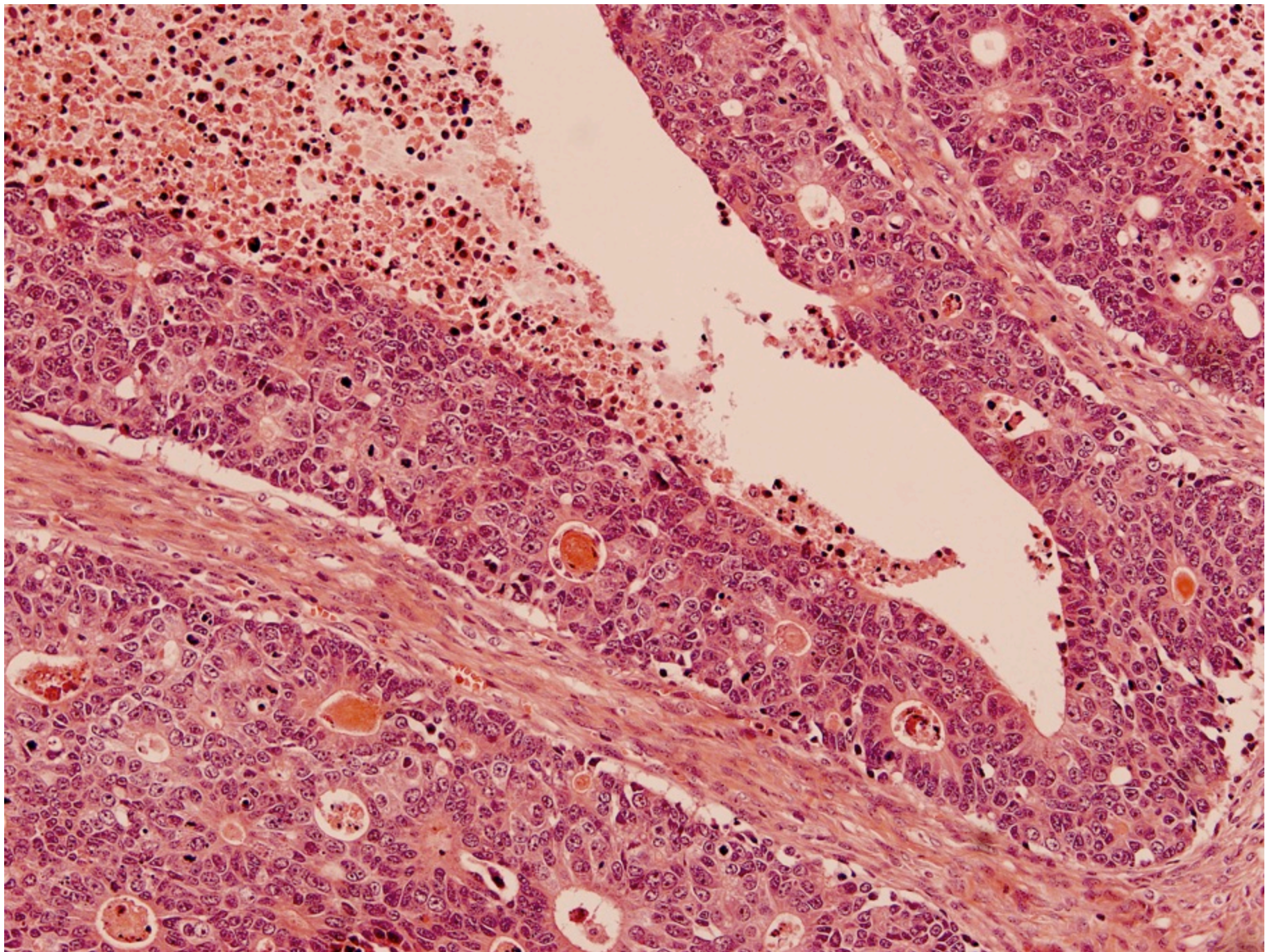
Low grade mucinous neoplasm with pseudomyxoma peritonei

- Pools of basophilic mucin
- Strips or complete glands formed of mucin-secreting tall columnar epithelium, usually bland nuclear features
- Variable hyalinisation and inflammatory reaction

Case 21, H4973/11

58F, known colorectal carcinoma. Now ovarian masses ?metastatic ?primary





Metastatic CRC

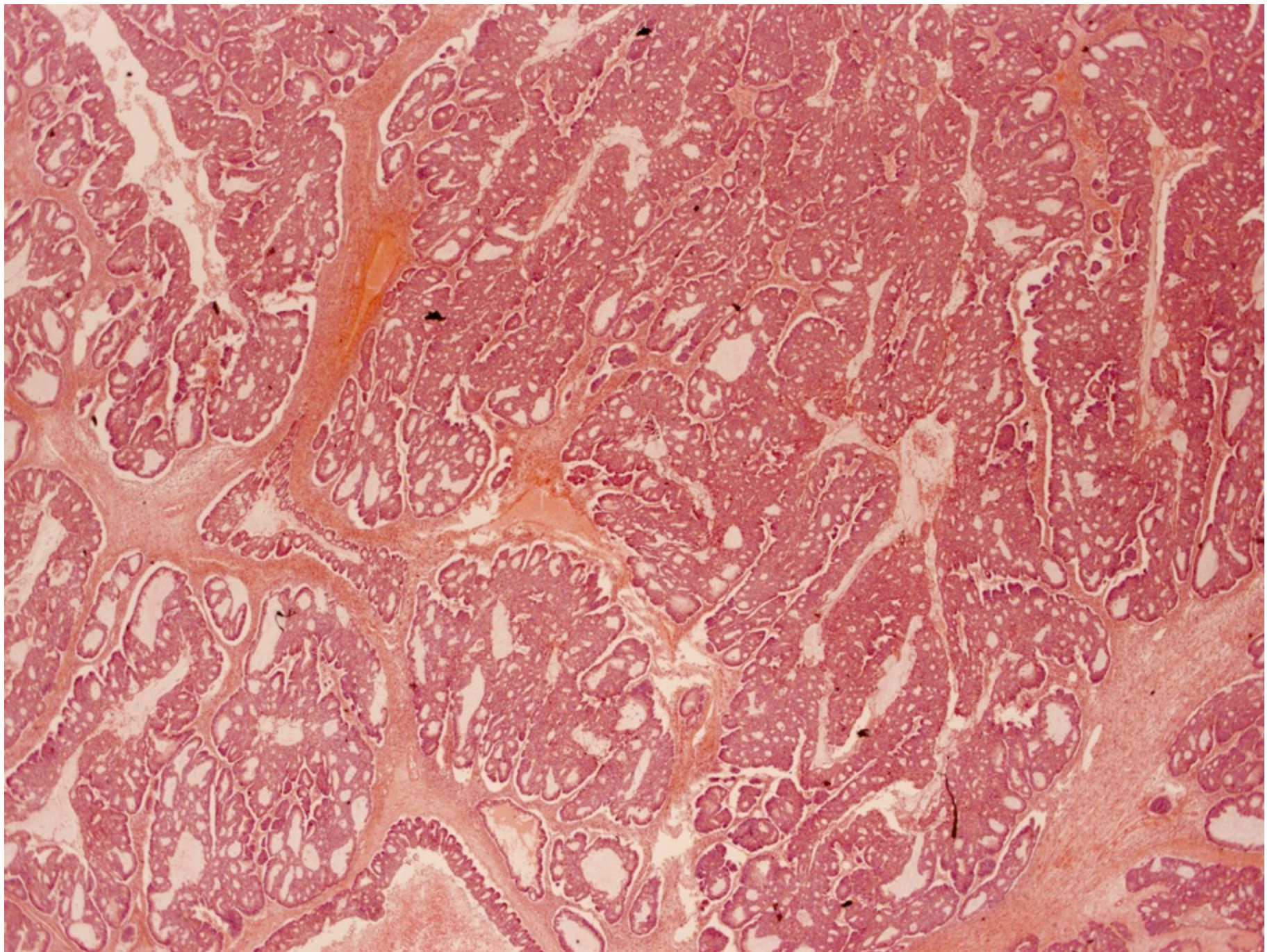
- 4% CRC have ovarian mets
- Most commonly misinterpreted even in presence of known CRC
- May occur years after diagnosis, simultaneously or before CRC becomes clinically apparent
- Ovarian tumour discovered before CRC in 5% cases
- Metastatic mucinous tumours are the commonest non-sex cord tumours to show endocrine manifestations

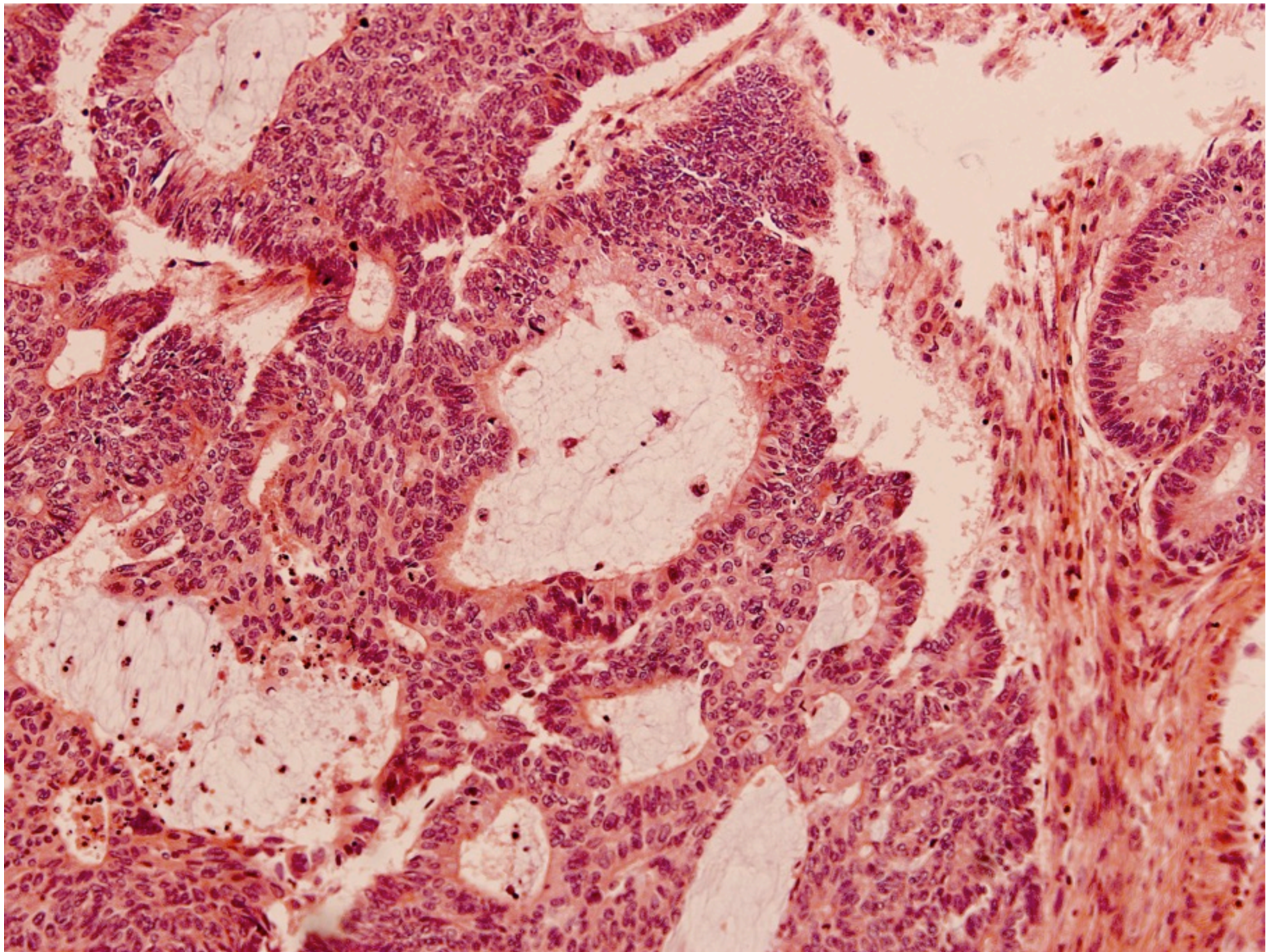
Metastatic CRC

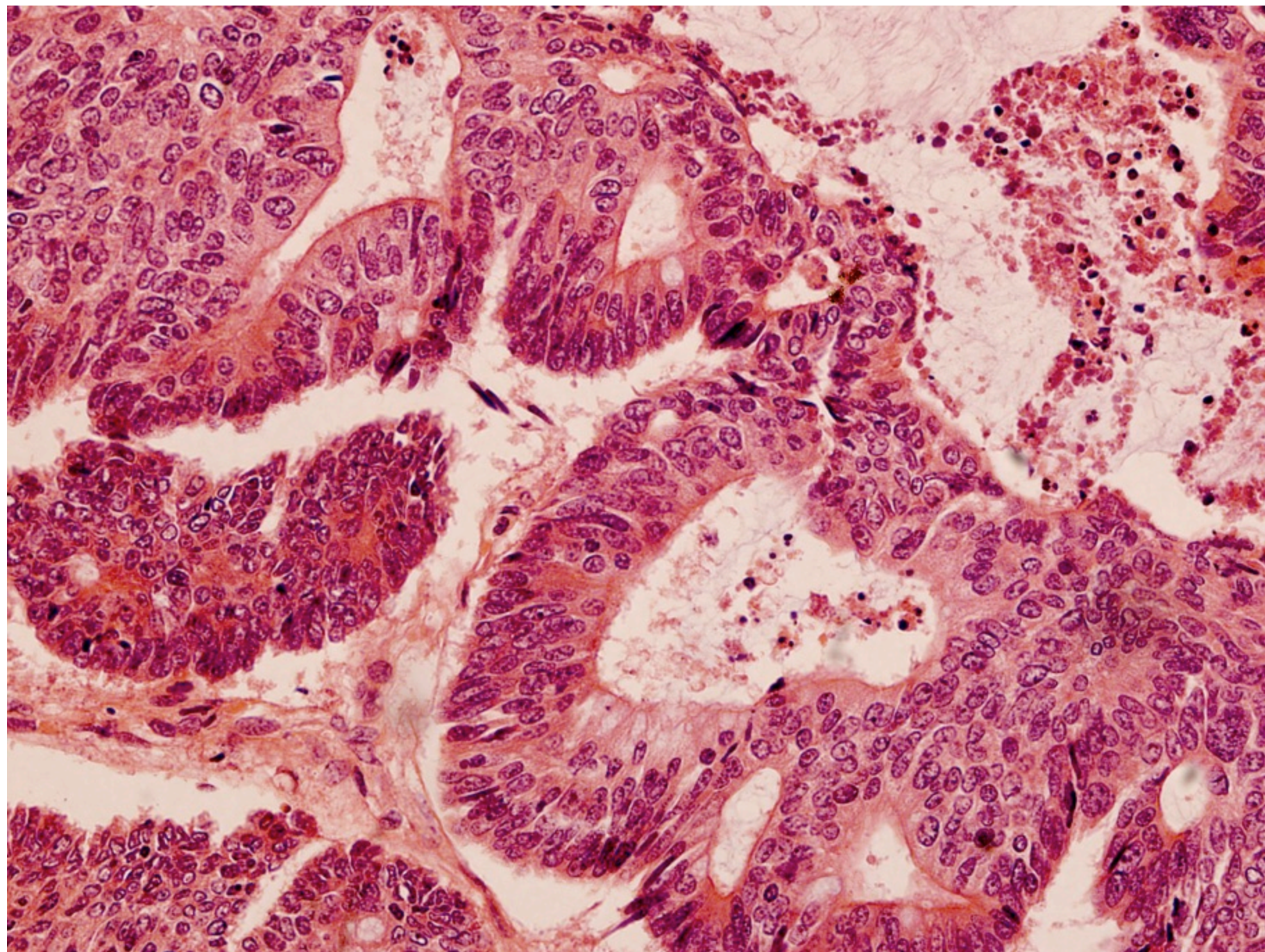
- Multinodular growth pattern
- Varying sized glands in garland pattern
- Central 'dirty' necrosis
- Segmental necrosis of lining
- Cells are columnar with stratified nuclei, moderate to severe atypia, high mitosis, interspersed goblet cells
- IHC CK7-, CK20+, CDX2+, CEA+

Case 25, 11S16856

68F, complex ovarian mass, CA125 320







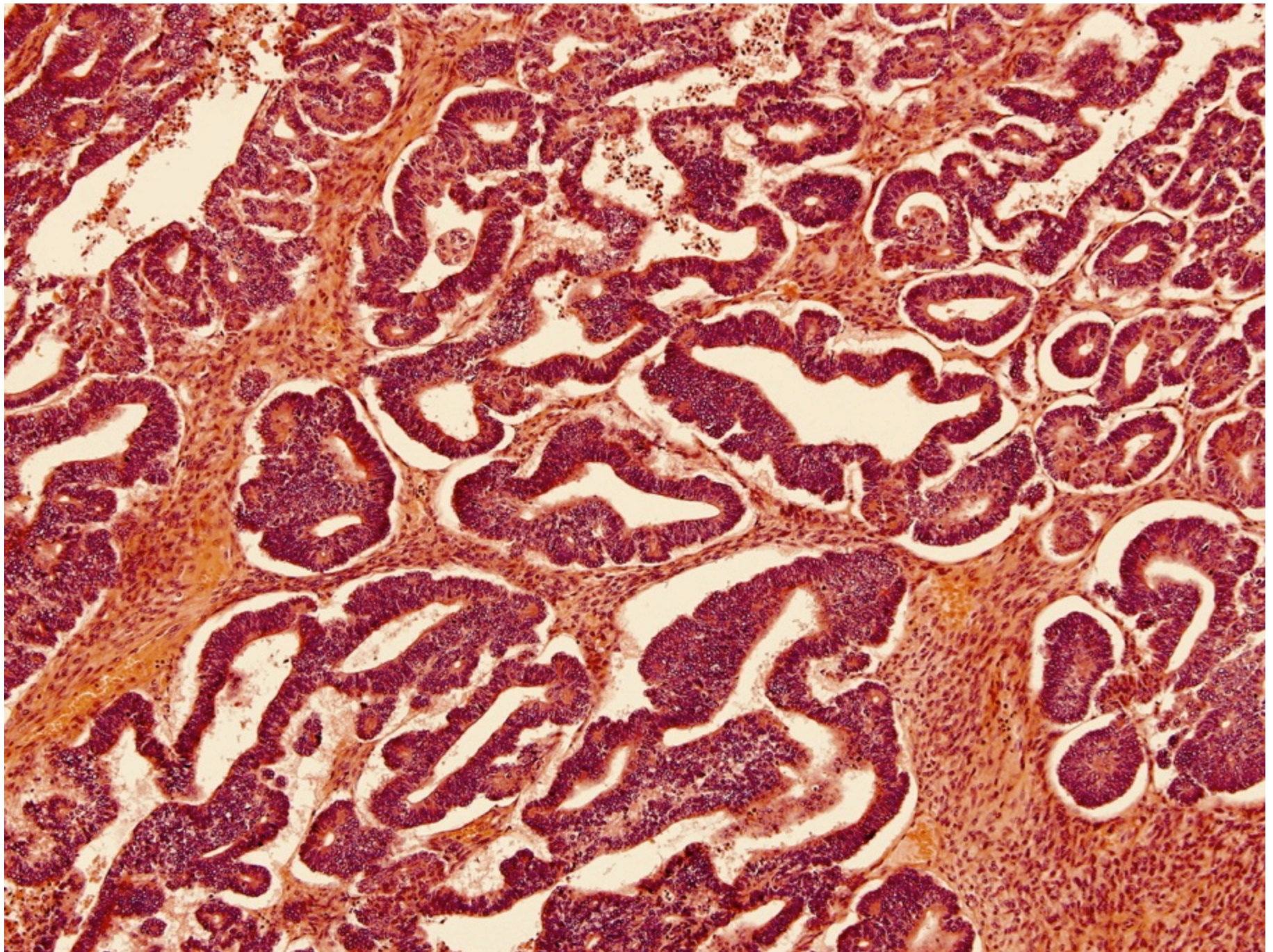
Metastatic appendiceal carcinoma

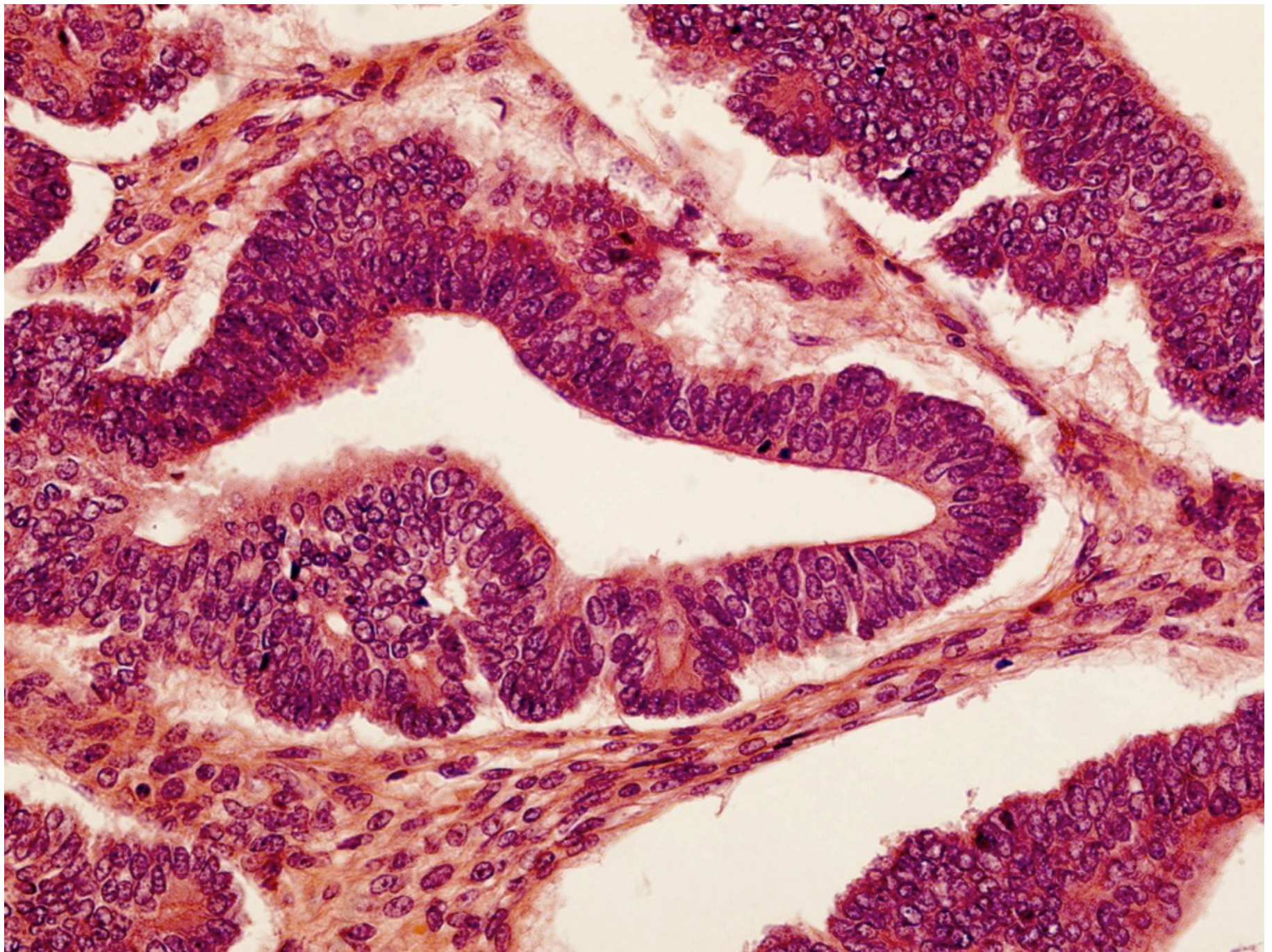
Differential diagnosis of metastatic carcinomas (especially intestinal):

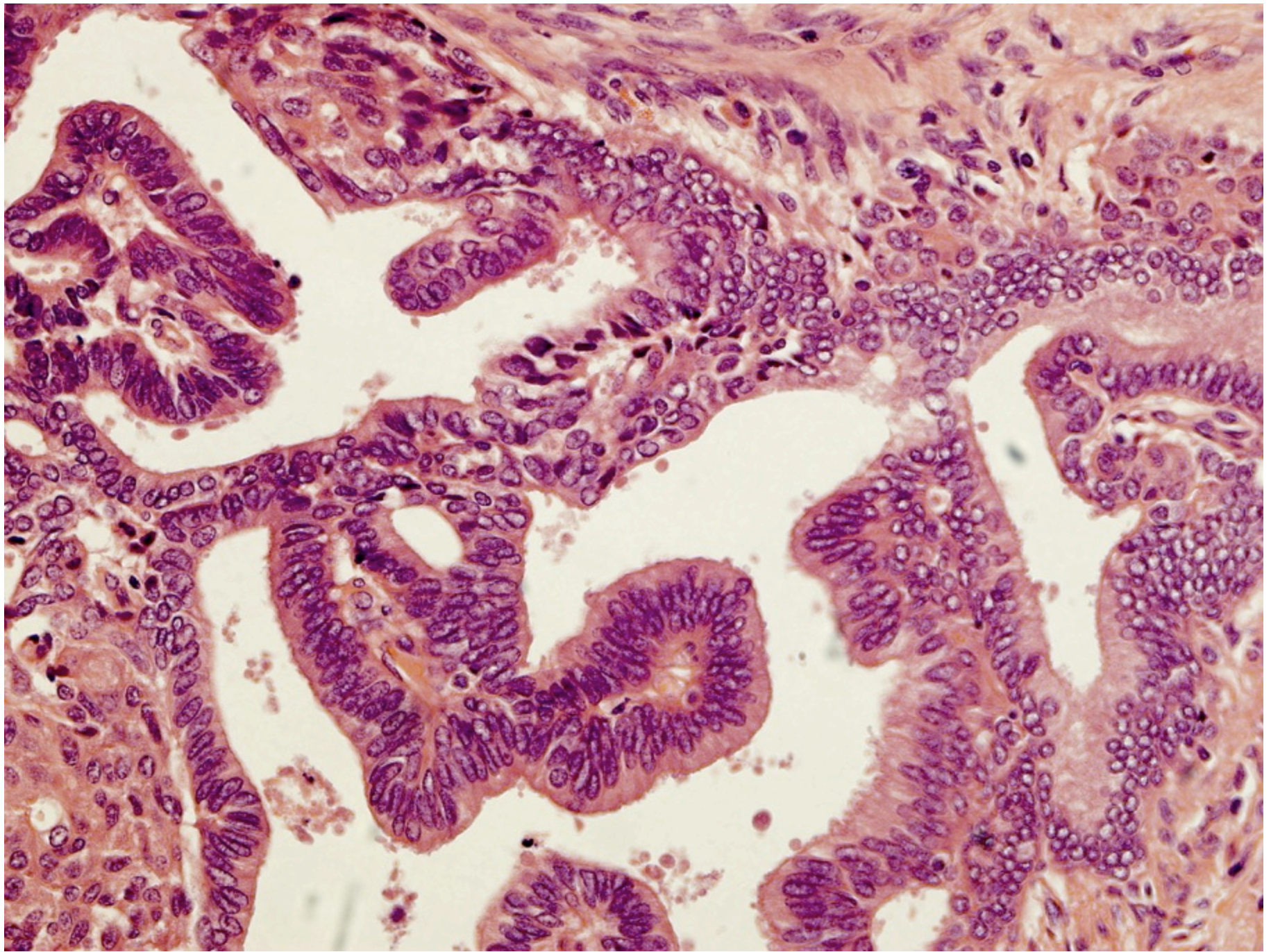
- **ENDOMETRIOID** Ca (growth pattern, squamous metaplasia, low grade nuclei, adenofibromatous areas or endometriosis, synchronous endometrial Ca, IHC)
- Primary mucinous Ca
- Clear cell Ca

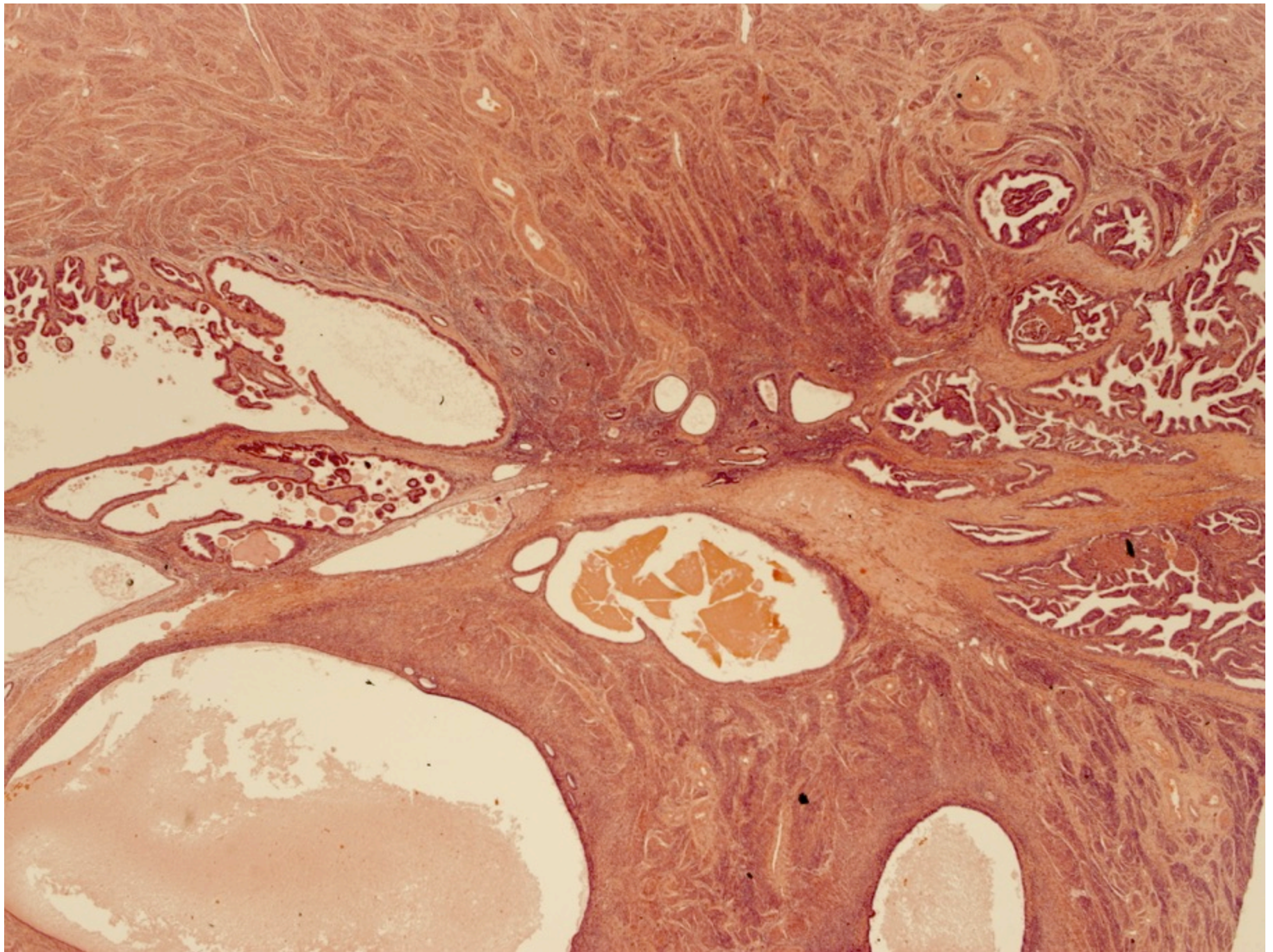
Case 9, 11S19333

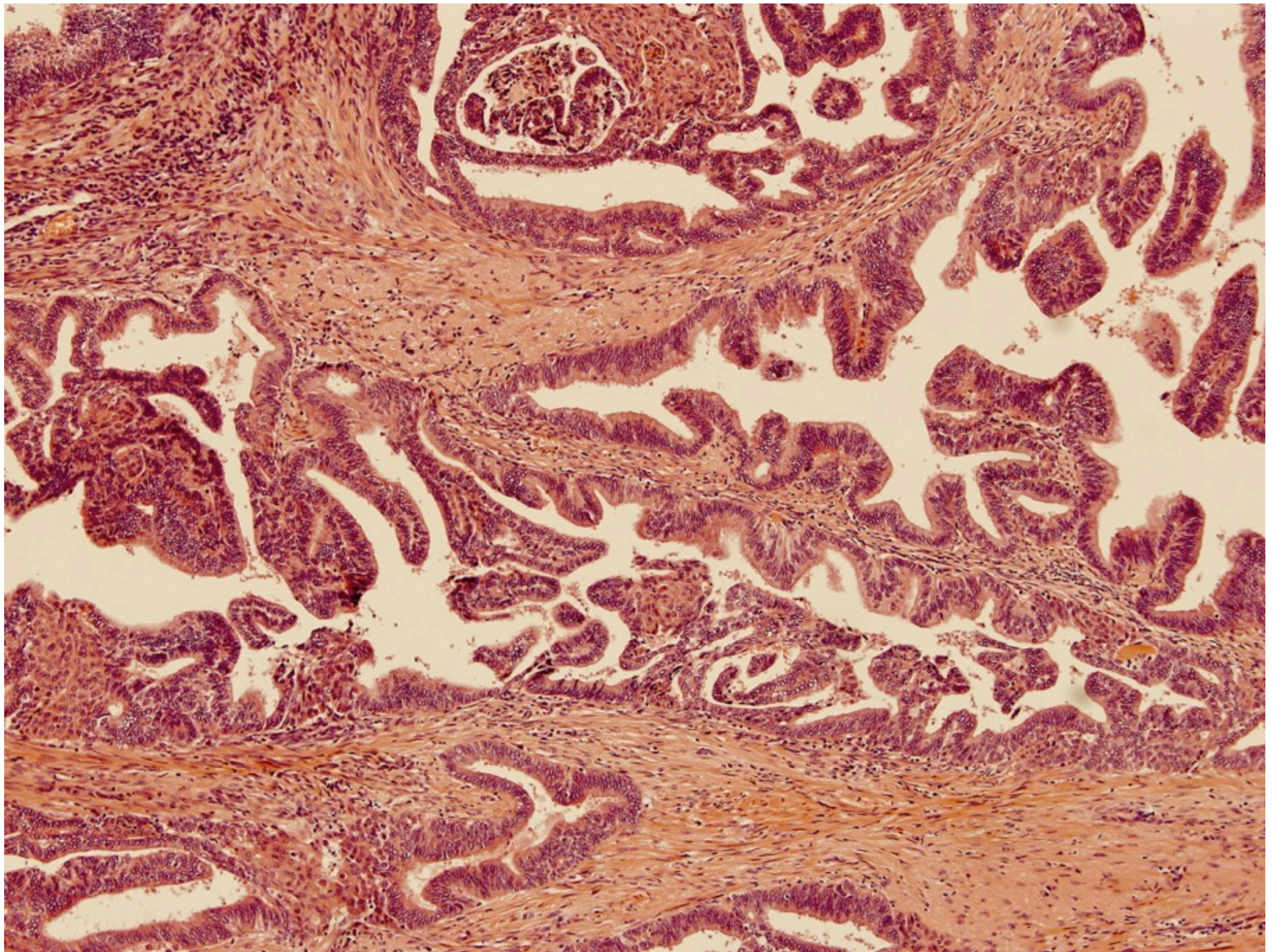
55F, right ovarian mass, likely Ca. Also section from uterus











Primary endometrioid ovarian Ca

- Identical to endometrial counterparts
- Nuclear features proportionate to architecture
- Squamous metaplasia
- Often confluent or expansile invasion; can be misdiagnosed as borderline
- Background endometriosis or adenofibroma
- Synchronous endometrial carcinoma or atypical hyperplasia (15-20%)

Primary endometrioid ovarian Ca

- Variety of patterns:
 - Secretory
 - Clear/pale cells
 - Sex cord-like pattern (trabeculae, Call-Exner-like)
 - Sertoliform
 - Spindle cells (DD MMMT)
 - YST component

Synchronous vs metastatic carcinoma of ovary and endometrium

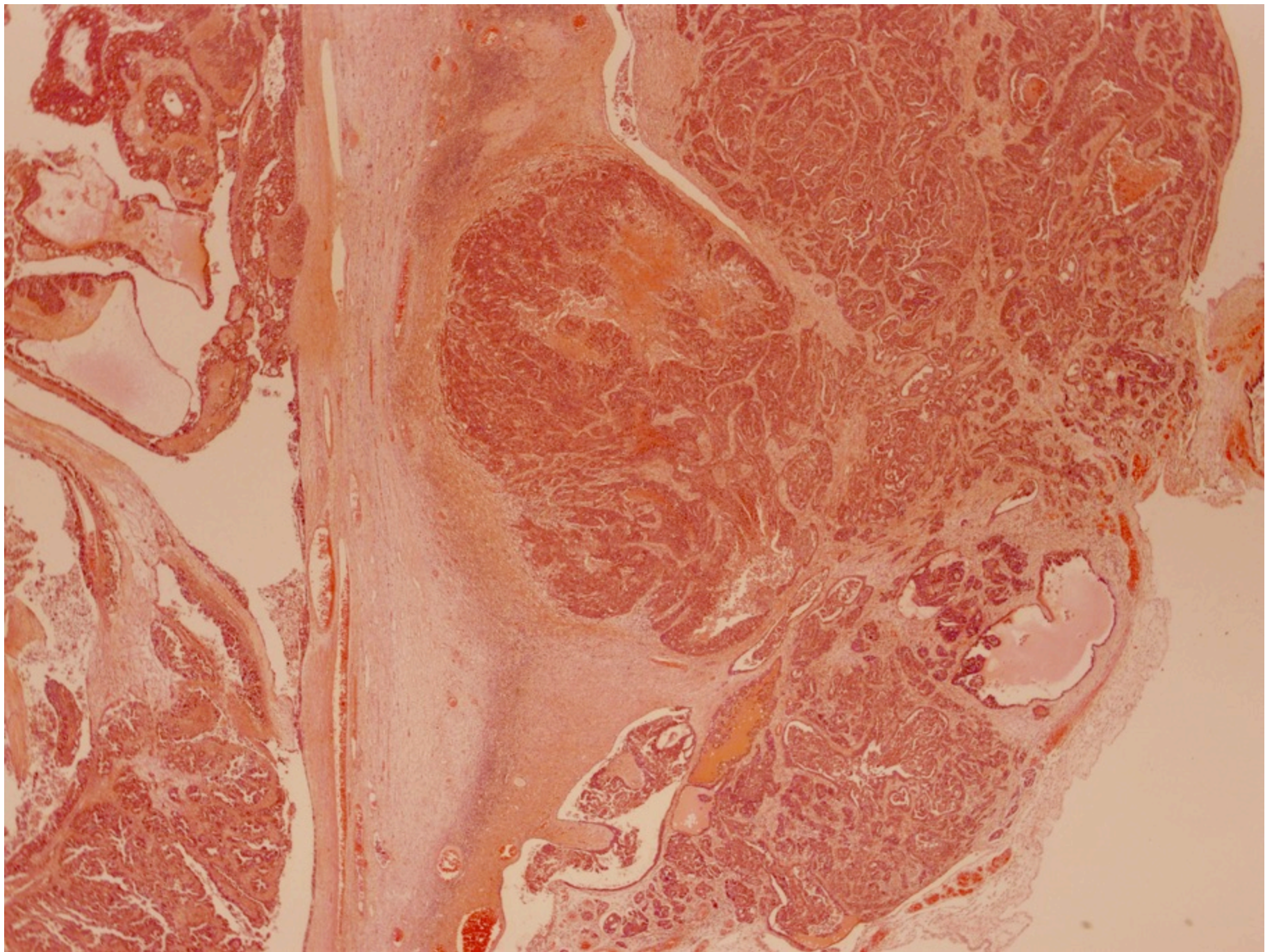
- Features favouring metastasis from endometrial
 - Histologically similar
 - Large endometrial – small ovarian
 - Atypical hyperplasia
 - Deep myoinvasion
 - LVSI in myometrium
 - Other extrauterine spread
 - Metastatic features of ovarian tumour

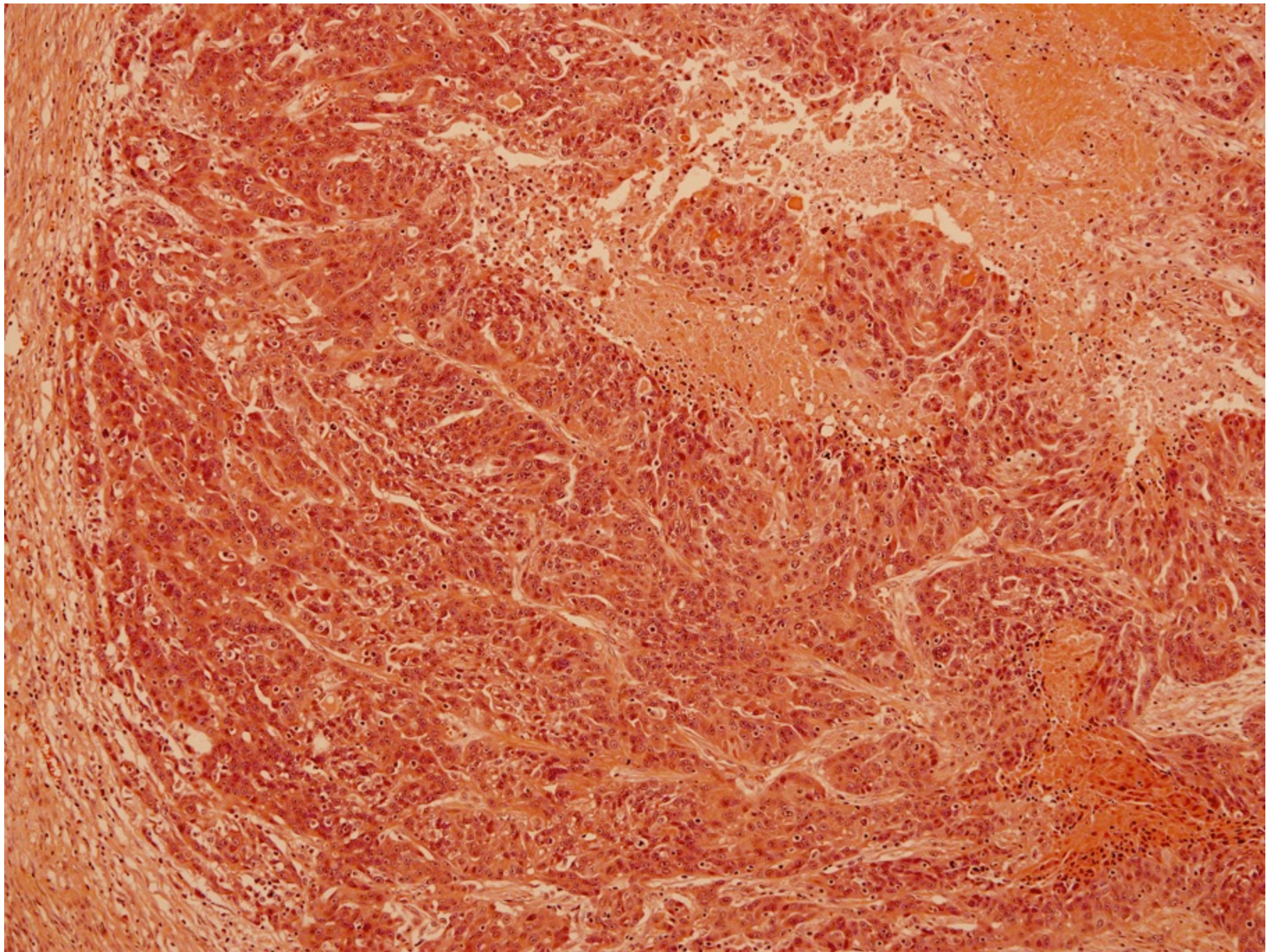
Synchronous vs metastatic carcinoma of ovary and endometrium

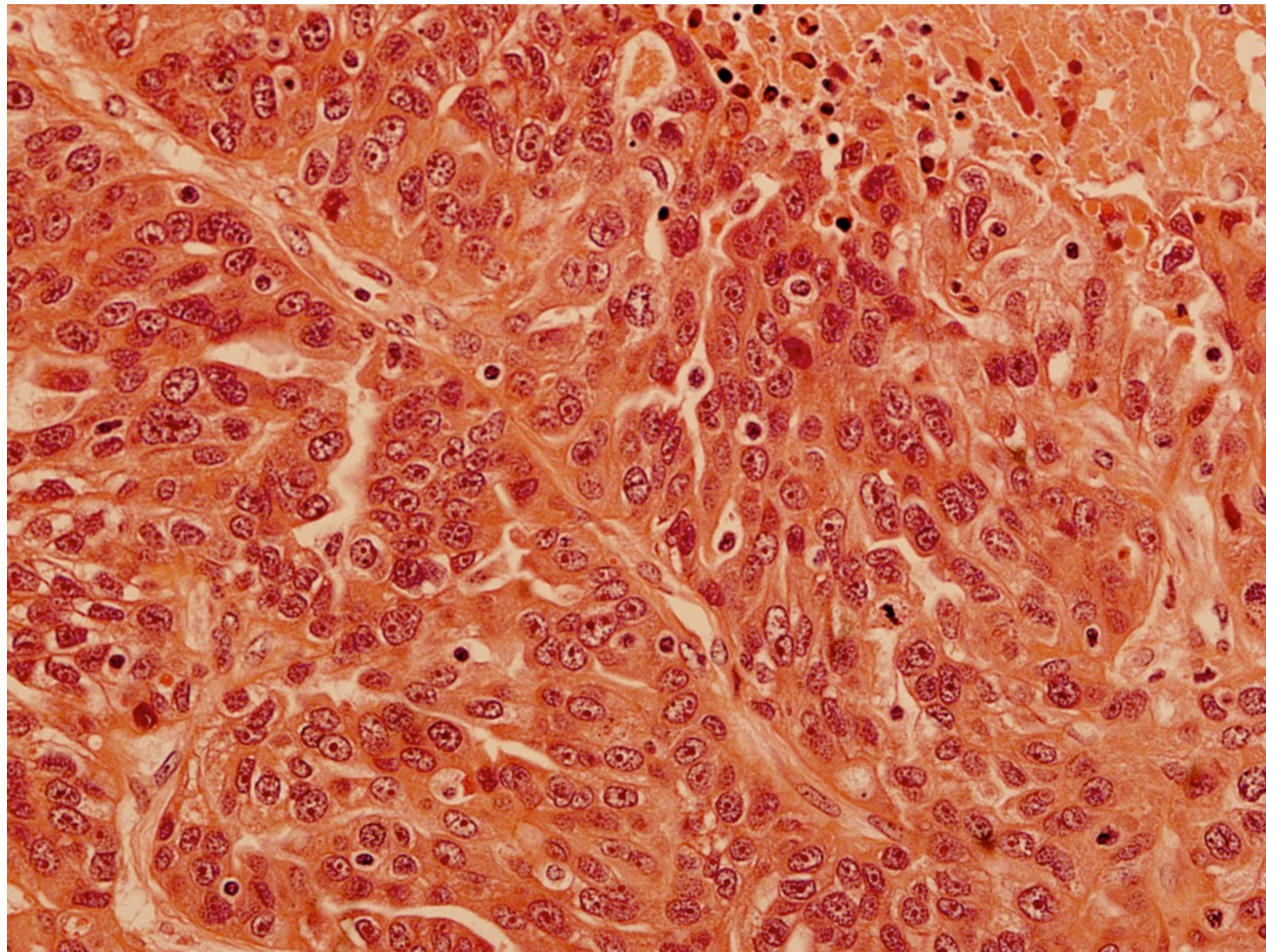
- Features favouring synchronous tumours
 - Histologically dissimilar
 - Superficial endometrial tumour without deep myoinvasion
 - No LVSI in myometrium
 - Atypical hyperplasia
 - No other extrauterine spread
 - Primary features of ovarian tumour – unilateral, parenchymal, no surface/hilar involvement, no LVSI
 - Background endometriosis

Case 17, 11S21856

57F, malignant looking bilateral ovarian masses,
CA125 3333







High grade serous ovarian ca

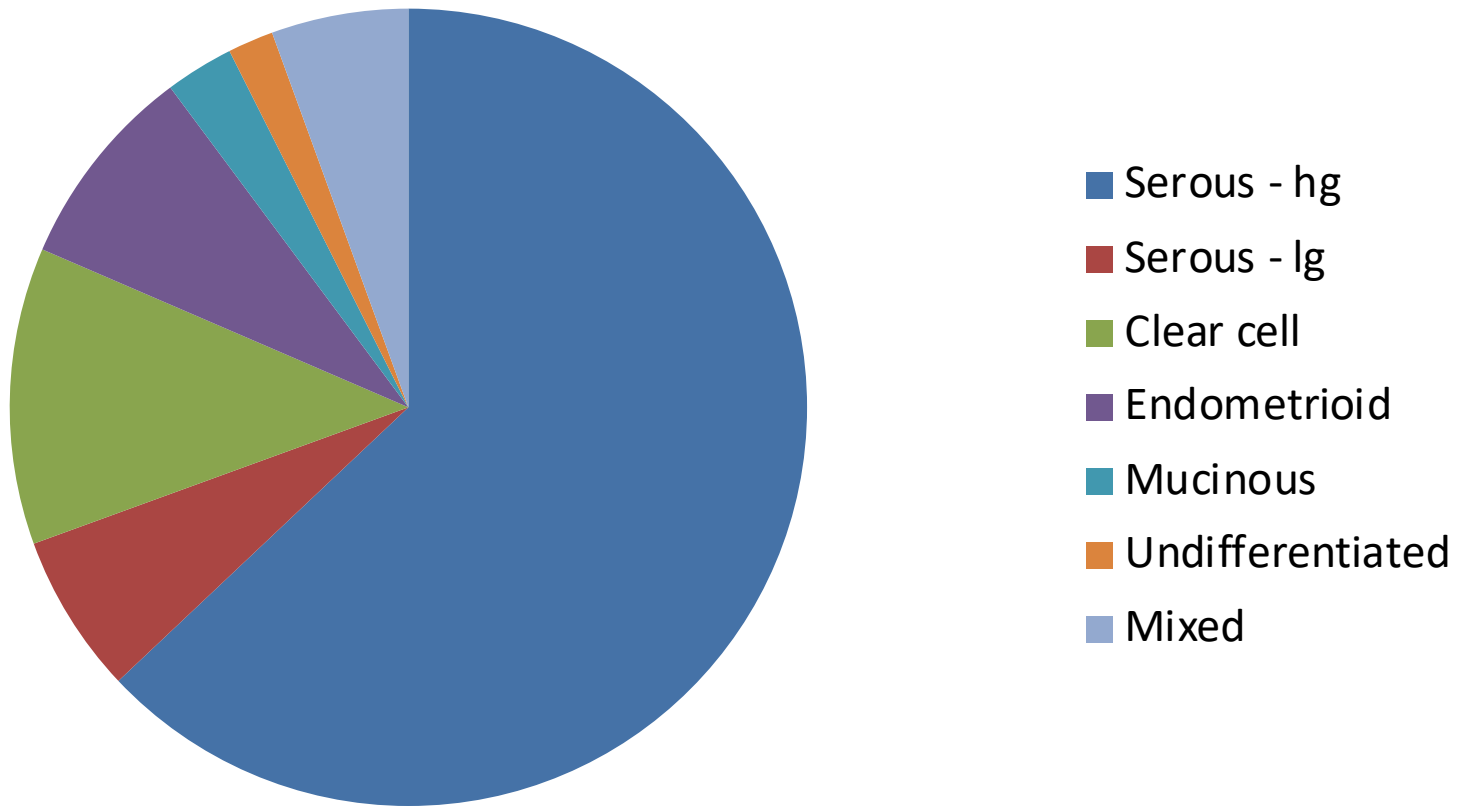
- Commonest ovarian malignancy
- Usually stage III (55%) or IV (18%) at presentation
- Obviously malignant but very variable appearances
- Typically: solid-cystic, papillary, high grade cytological features, psammoma bodies

HGSOC – Differential diagnosis

- SBT and LGSOC
- Endometrioid ca, especially if papillary ('villoglandular' or small non-villous papillae)
- Papillary CCC
- Metastatic USC
- Metastatic mesothelioma
- Metastatic breast Ca

Ovarian Cancer

Relative incidence



Ovarian Cancer – New FIGO staging

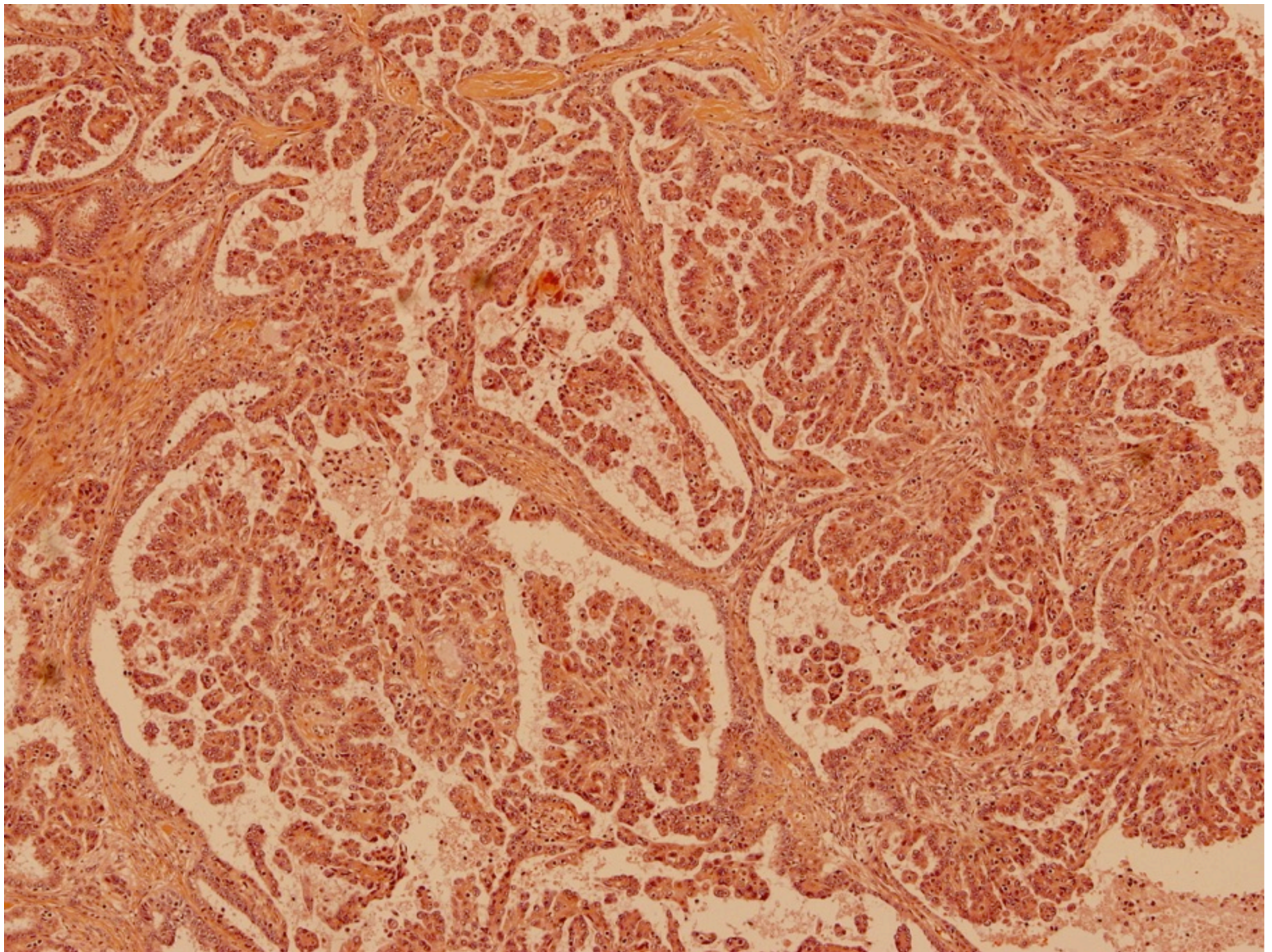
- Unified staging system for Ov, FT and PPC
- 5 major subtypes of carcinoma: HGSC, LGSC, CCC, EC, MC
- Remainder: Other, cannot be classified, malignant germ cell tumour, potentially malignant sex cord stromal tumour
- Assign site of origin: Ov, FT, Peritoneal, Undesignated

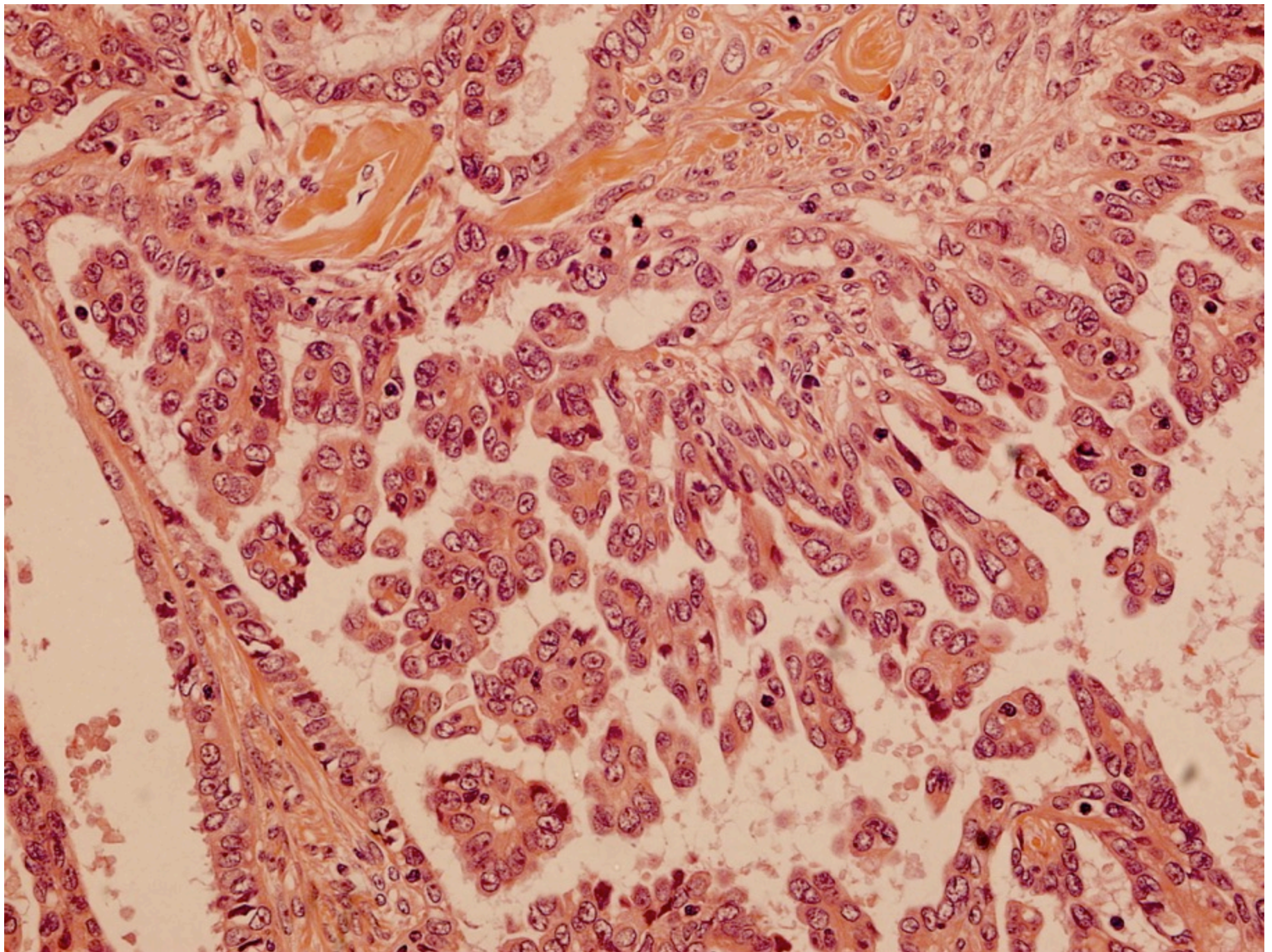
Existing FIGO Stage Group	2013 Description
Stage 1	Stage 1: Tumour confined to ovaries or fallopian tube(s)
IA	IA: Tumour limited to 1 ovary (capsule intact) or fallopian tube; no tumour on ovarian or fallopian tube surface; no malignant cells in the ascites or peritoneal washings
IB	IB: Tumour limited to both ovaries (capsules intact) or fallopian tubes; no tumour on ovarian or fallopian tube surface; no malignant cells in the ascites or peritoneal washings
IC	(Stage 1C) Tumour limited to 1 or both ovaries or fallopian tubes, with any of the following: IC1: Surgical spill IC2: Capsule ruptured before surgery or tumour on ovarian or fallopian tube surface IC3: Malignant cells in the ascites or peritoneal washings
Stage 2	(Stage 2) Tumour involves 1 or both ovaries or fallopian tubes with pelvic extension (below pelvic brim) or primary peritoneal cancer
IIA	IIA: Extension and/or implants on uterus and/or fallopian tubes and/ or ovaries
IIB	IIB: Extension to other pelvic intraperitoneal tissues
HC	DO NOT USE
Stage 3	Stage 3: Tumour involves 1 or both ovaries or fallopian tubes, or primary peritoneal cancer, with cytologically or histologically confirmed spread to the peritoneum outside the pelvis and/or metastasis to the retroperitoneal lymph nodes
IIIA	IIIA1: Positive retroperitoneal lymph nodes only (cytologically or histologically proven) IIIA1(i): Metastasis up to 10 mm in greatest dimension IIIA1(ii) Metastasis more than 10 mm in greatest dimension IIIA2: Microscopic extrapelvic (above the pelvic brim) peritoneal involvement with or without positive retroperitoneal lymph nodes
IIIB	IIIB: Macroscopic peritoneal metastasis beyond the pelvis up to 2 cm in greatest dimension, with or without metastasis to the retroperitoneal lymph nodes
IIIC	IIIC: Macroscopic peritoneal metastasis beyond the pelvis more than 2 cm in greatest dimension, with or without metastasis to the retro- peritoneal lymph nodes (includes extension of tumour to capsule of liver and spleen without parenchymal involvement of either organ)
Stage 4	Stage 4: Distant metastasis excluding peritoneal metastases
IV	IVA: Pleural effusion with positive cytology IVB: Parenchymal metastases and metastases to extra-abdominal organs (including inguinal lymph nodes and lymph nodes outside of the abdominal cavity)

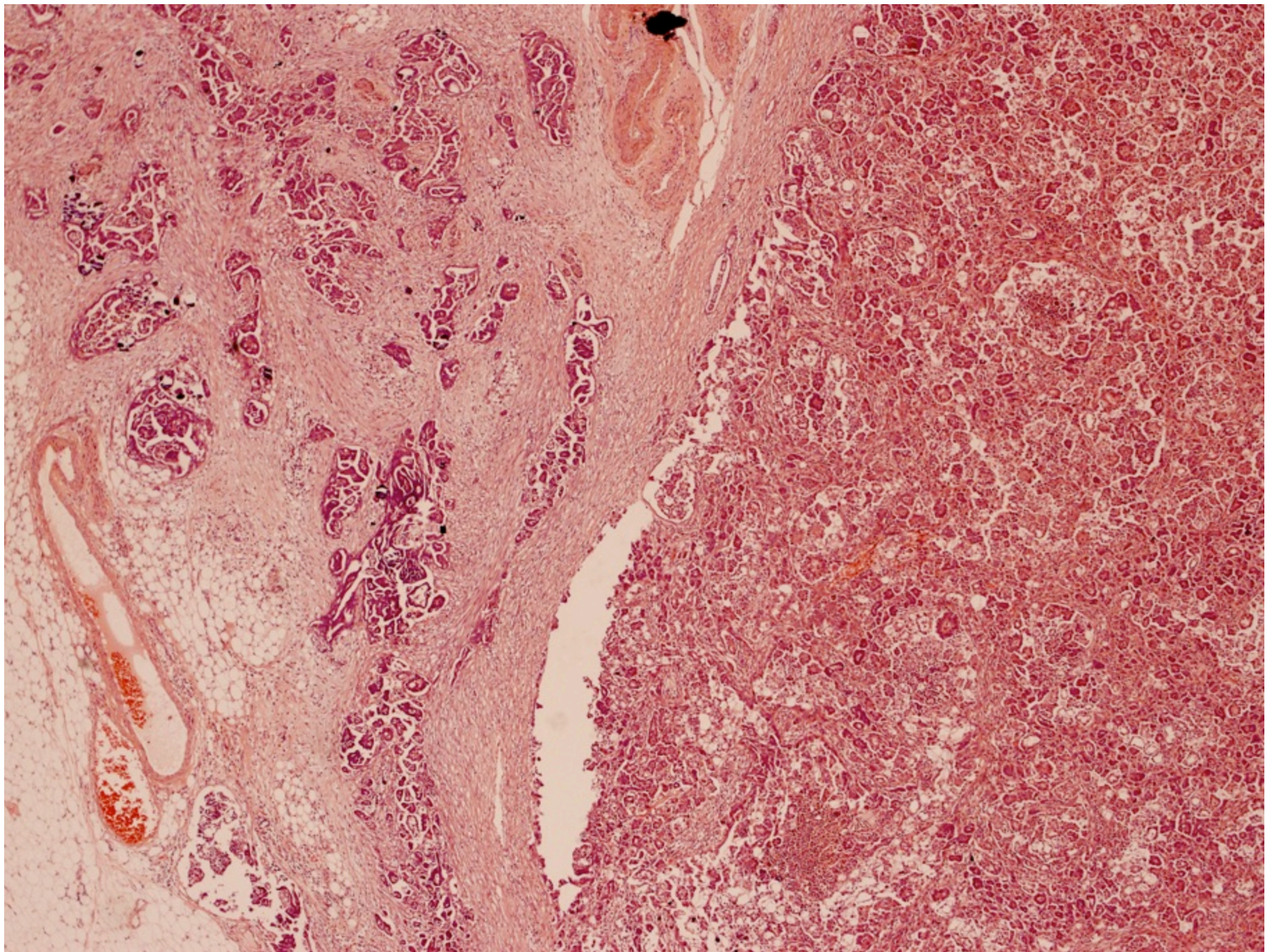
Case 15, 11S7581

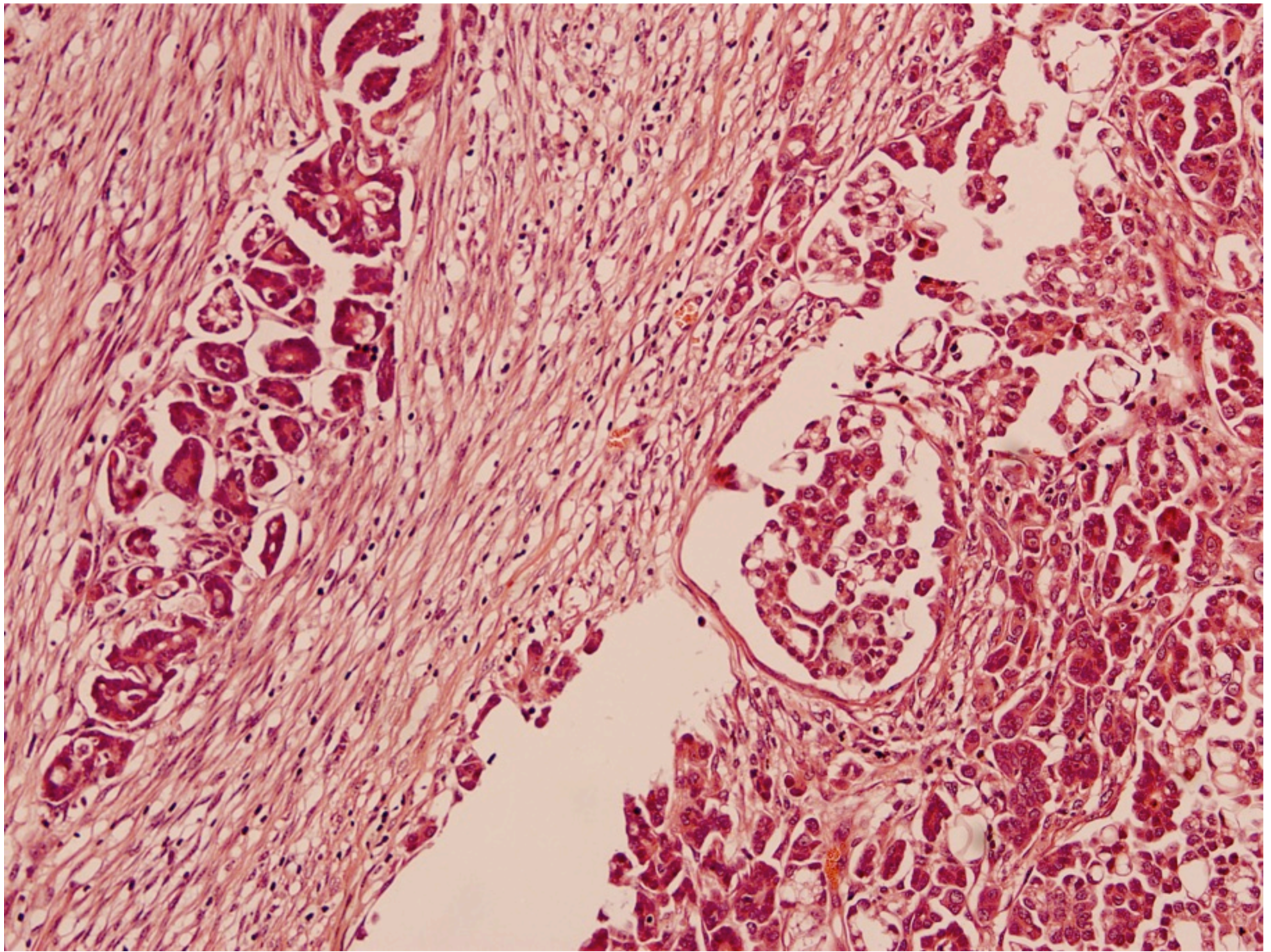
42F, known ovarian tumour

Sections from ovary and omentum







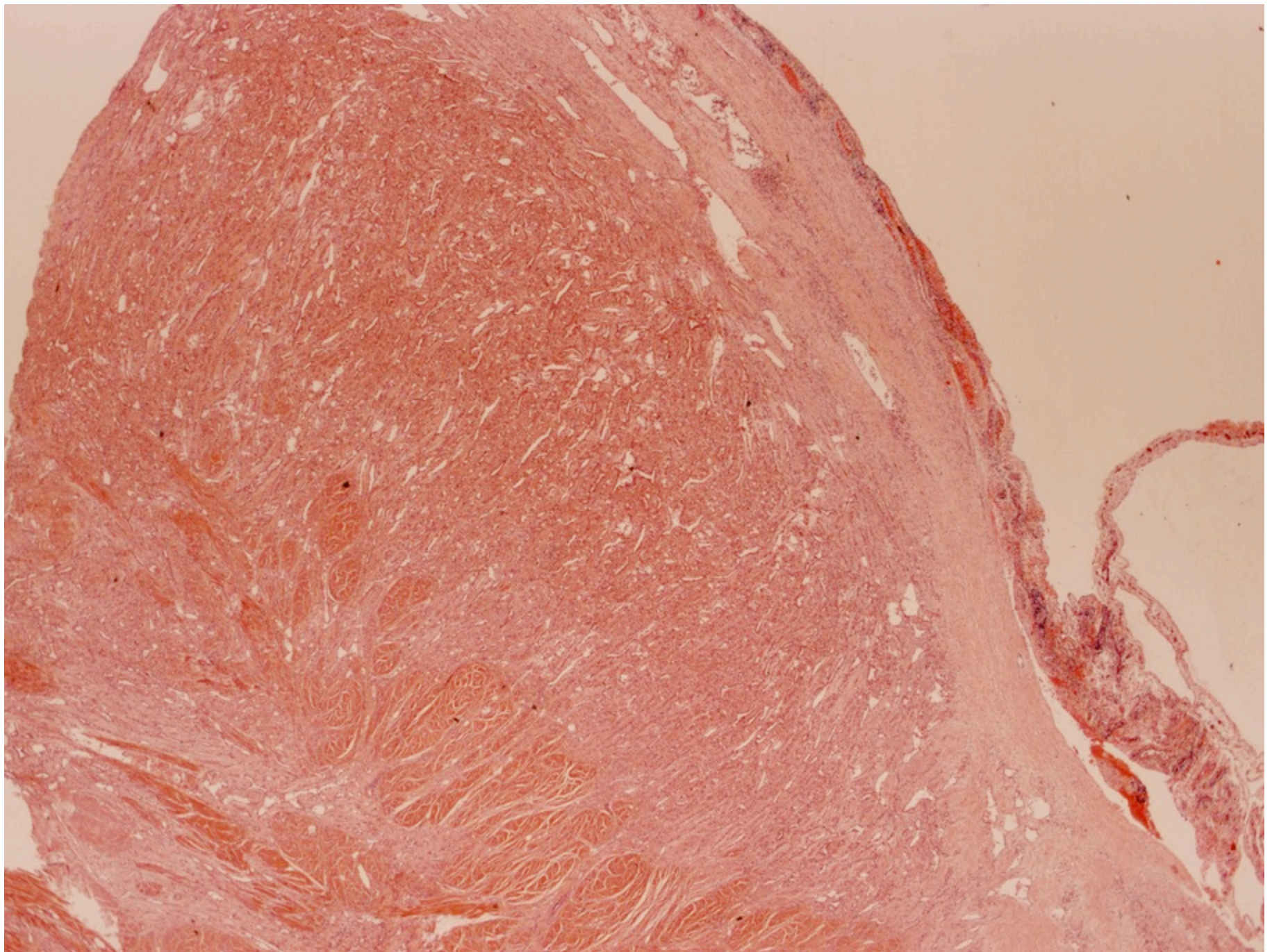


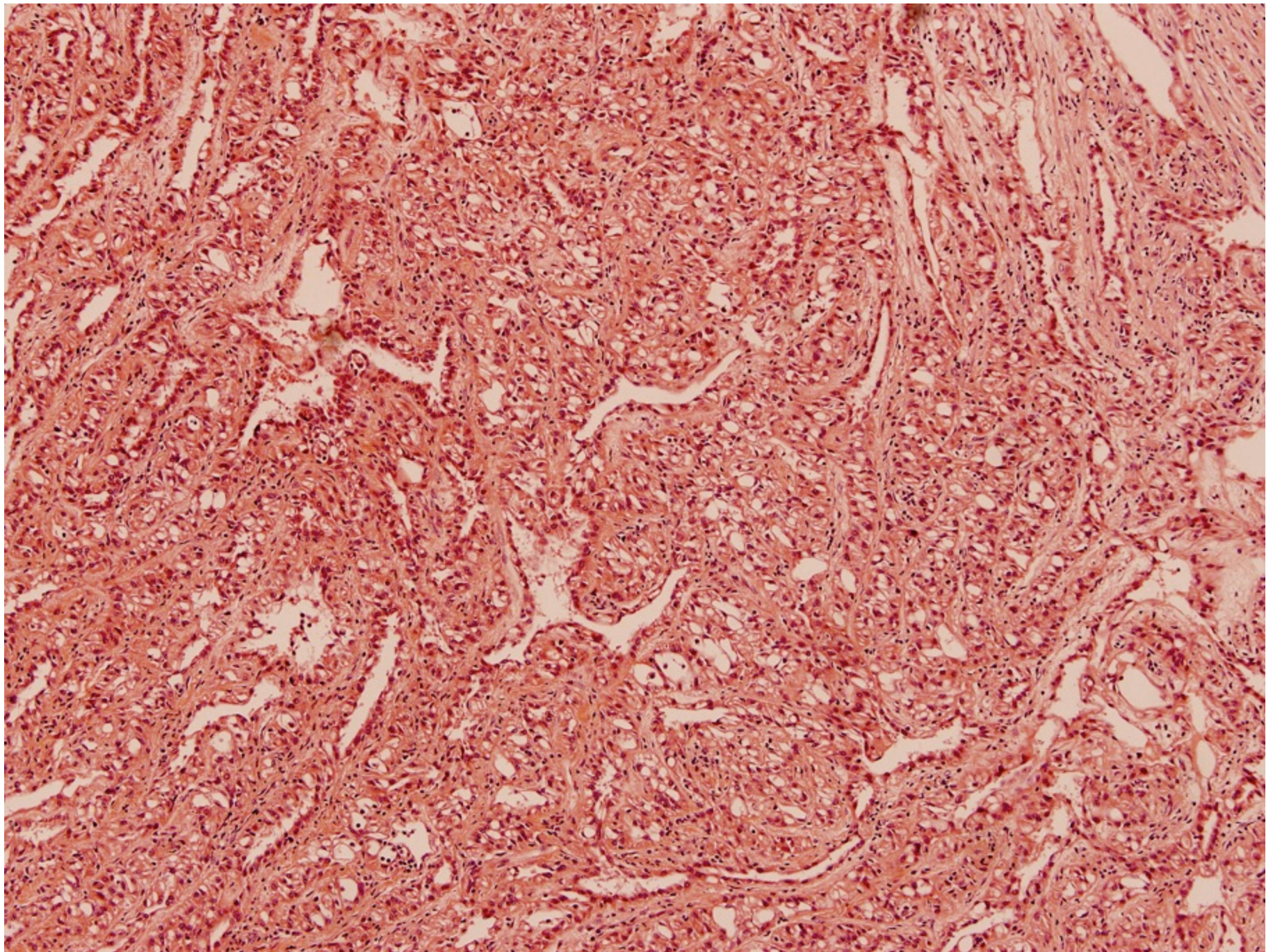
Low grade serous ovarian ca

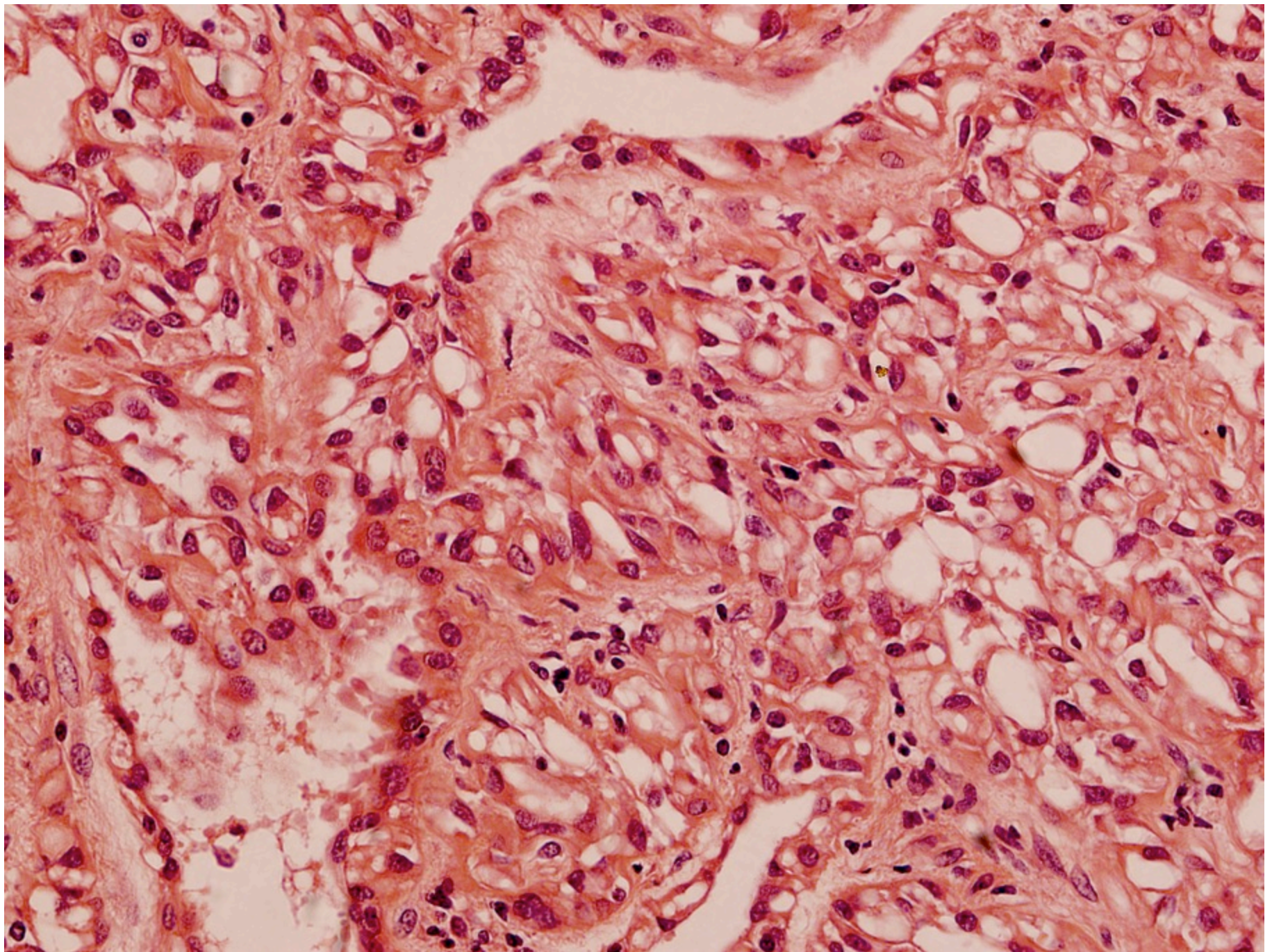
- Uncommon compared with HGSOC
- Younger age
- Distinguishing features: nuclear uniformity (mild to moderate atypia and <3-fold variation in nuclear size); low mitotic activity is a secondary feature (usually <12/10 hpf)
- Background of SBT
- Includes invasive micropapillary and psammocarcinoma (most pathologists do not label noninvasive micropapillary tumours as carcinoma but as SBT with mp pattern)
- IHC (to distinguish from HGSOC): p53, p16, Ki67, bcl2, HER2/neu, c-kit

Case 20, 10S39516

30F, laparoscopic myomectomy





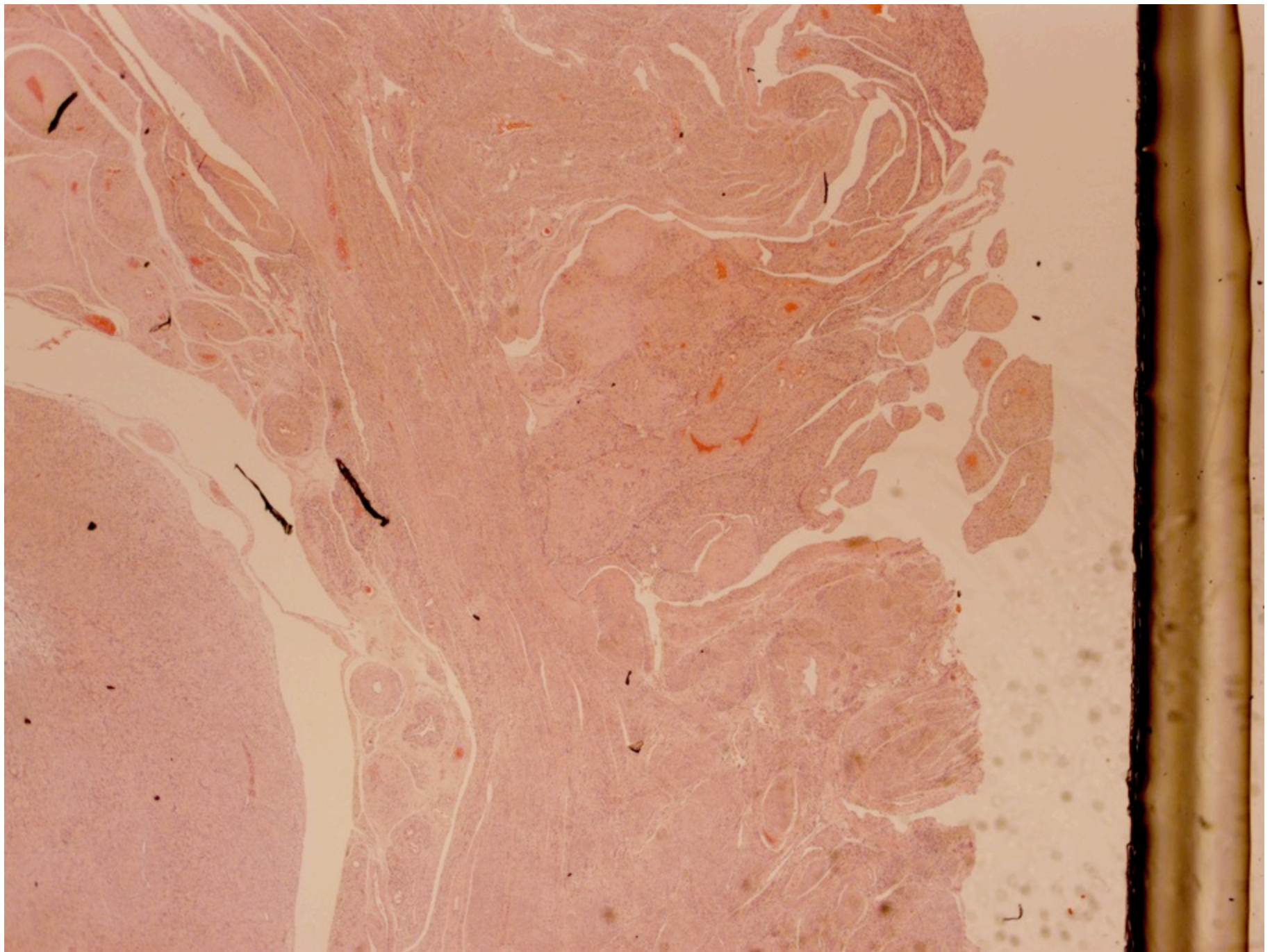


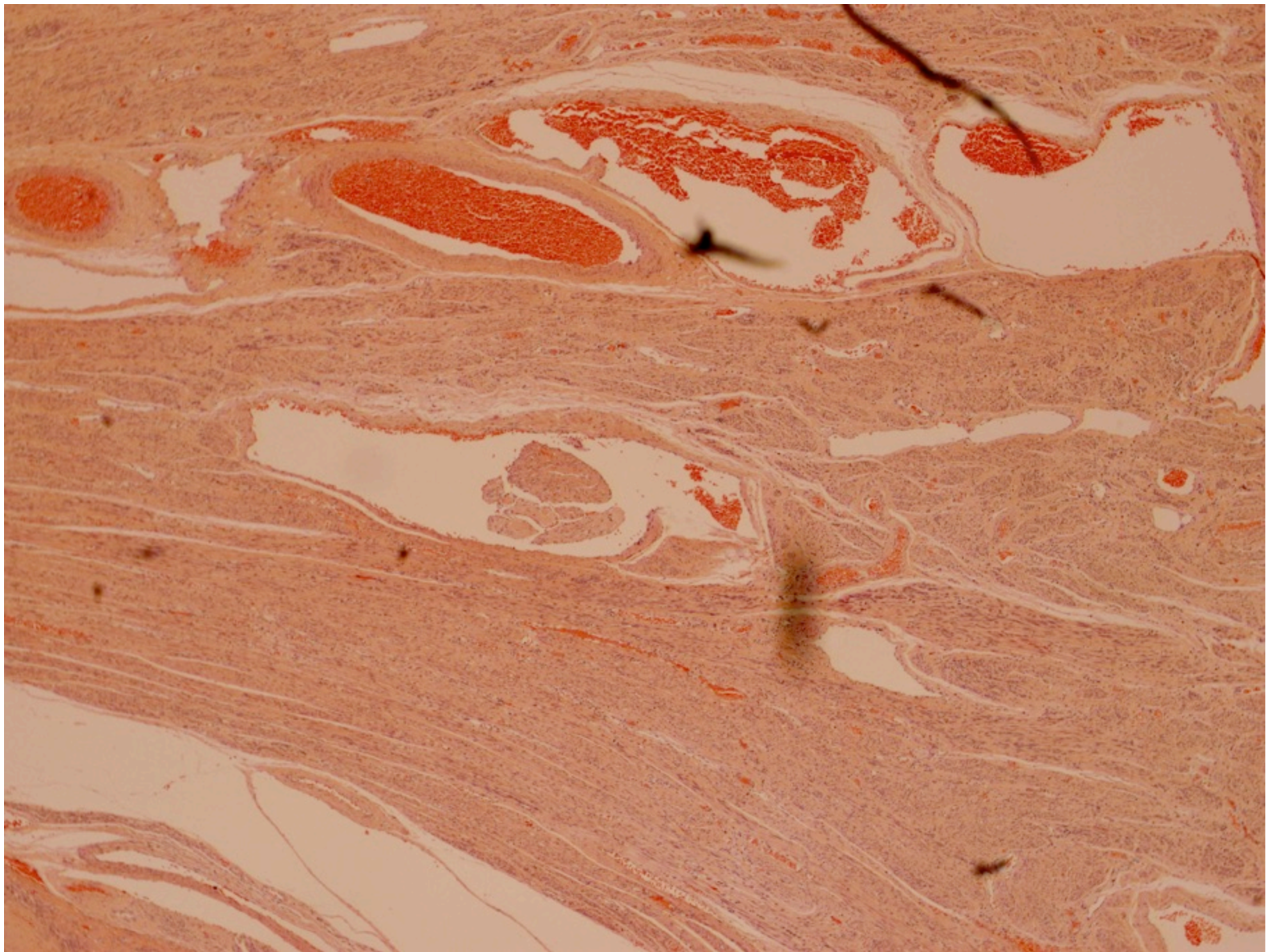
Adenomatoid tumour

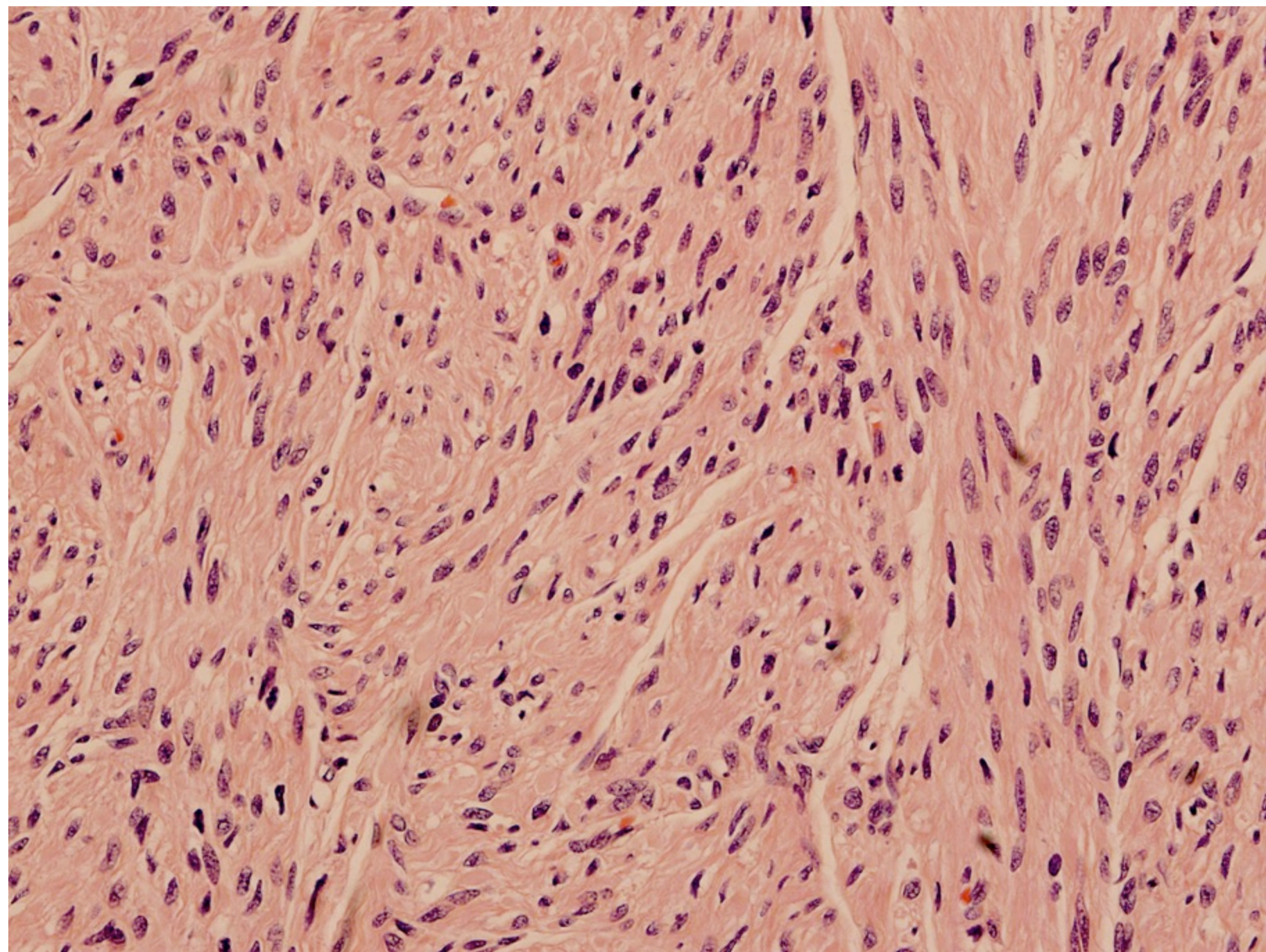
- Benign tumours of mesothelial origin
- Usually incidental finding
- Solitary, subserosal, myometrial masses, close to cornu, less circumscribed than leiomyoma
- Bland mesothelial cells in adenoid, angiomatoid, solid, cystic or papillary patterns
- Separated by hyperplastic smooth muscle
- DD: leiomyoma, vascular tumours, metastatic adenoca, peritoneal inclusion cysts (serosal NOT myometrial, inflammatory cells +)

Case 18, P933/10

45F, uterine mass growing into IVC







Intravenous leiomyomatosis

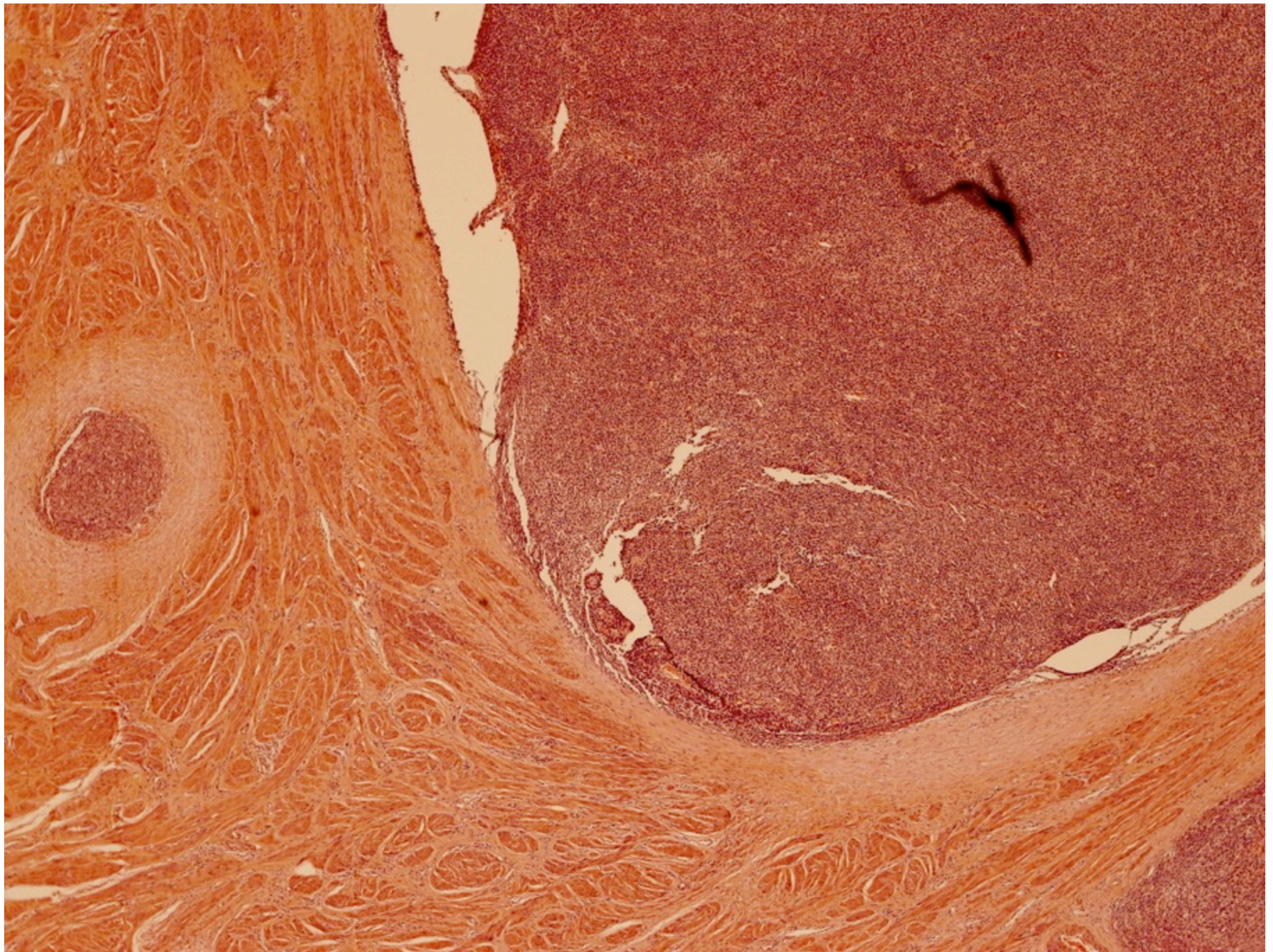
- Uncommon
- Intravascular growth outside the boundaries of leiomyoma
- Usually unremarkable but occasionally leiomyoma variant
- Multinodular, may be worm-like, often not obvious macroscopically
- Intravascular tumour has lobulated, clefted contour, shows hydropic change, hyalinisation, thick-walled blood vessels

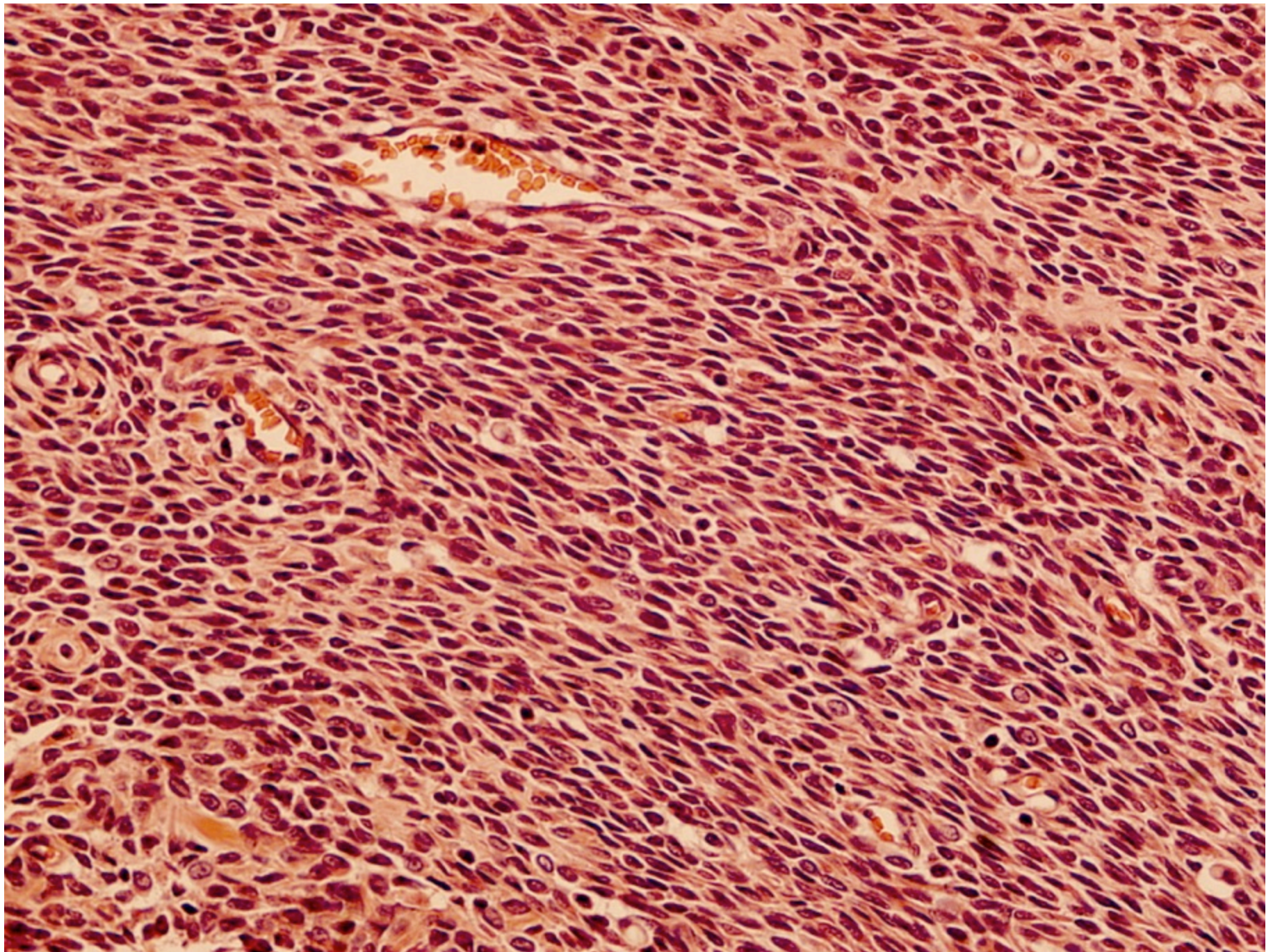
IVL - DD

- Cleft-like spaces in usual leiomyoma
- LMS
- ESS
- Leiomyoma with vascular invasion
- Leiomyoma with perinodular hydropic change and cotyledonoid pattern

Case 13, P1000/10

50F, uterine tumour with pelvic and para-aortic lymph node metastasis





Endometrial stromal sarcoma (Low grade ESS)

- 10-15% of uterine malignant mesenchymal tumours
- Typical gross appearance of worm-like plugs of intravascular tumour
- Cellular tumour, uniform, oval to fusiform cells with characteristic arteriolar network resembling stroma of proliferative phase endometrium
- Mitotic rate usually $<3/10$ hpf but may be higher
- IHC: CD10+, actin +, desmin +/-, caldesmon –
- Variations: foam cells, collagenisation, myxoid change, smooth muscle diffn, sex-cord-like elements, glands, epithelioid cells

ESS - DD

- ESN – rare, only if entire lesion and margins present for evaluation
- Highly cellular leiomyoma
- Stroma-rich adenomyosis; stromal endometriosis; usual adenomyosis
- Adenosarcoma
- UTROSCT: pure or predominant epithelioid sex cord-like element, variable stroma

The Clinicopathologic Features of *YWHAE-FAM22* Endometrial Stromal Sarcomas: A Histologically High-grade and Clinically Aggressive Tumor

Cheng-Han Lee, MD, PhD,† Adrian Mariño-Enriquez, MD,* Wenbin Ou, PhD,* Meijun Zhu, PhD,* Rola H. Ali, MD,† Sarah Chiang, MD,‡ Frédéric Amant, MD,§ C. Blake Gilks, MD,† Matt van de Rijn, MD, PhD,|| Esther Oliva, MD,‡ Maria Debiec-Rychter, MD,¶ Paola Dal Cin, PhD,* Jonathan A. Fletcher, MD,* and Marisa R. Nucci, MD**

Am J Surg Pathol 2012; **36**: 641–653

Cyclin D1 as a Diagnostic Immunomarker for Endometrial Stromal Sarcoma With *YWHAE-FAM22* Rearrangement

Cheng-Han Lee, MD, PhD,† Rola H. Ali, MD,*† Marjan Rouzbahman, MD,‡ Adrian Marino-Enriquez, MD,§ Meijun Zhu, PhD,§ Xiangqian Guo, PhD,|| Alayne L. Brunner, PhD,|| Sarah Chiang, MD,¶ Samuel Leung, MSc,*† Nataliya Nelnyk, MSc,# David G. Huntsman, MD,# C. Blake Gilks, MD,*† Torsten O. Nielsen, MD, PhD,*† Paola Dal Cin, PhD,§ Matt van de Rijn, MD, PhD,|| Esther Oliva, MD,¶ Jonathan A. Fletcher, MD,§ and Marisa R. Nucci, MD,§*

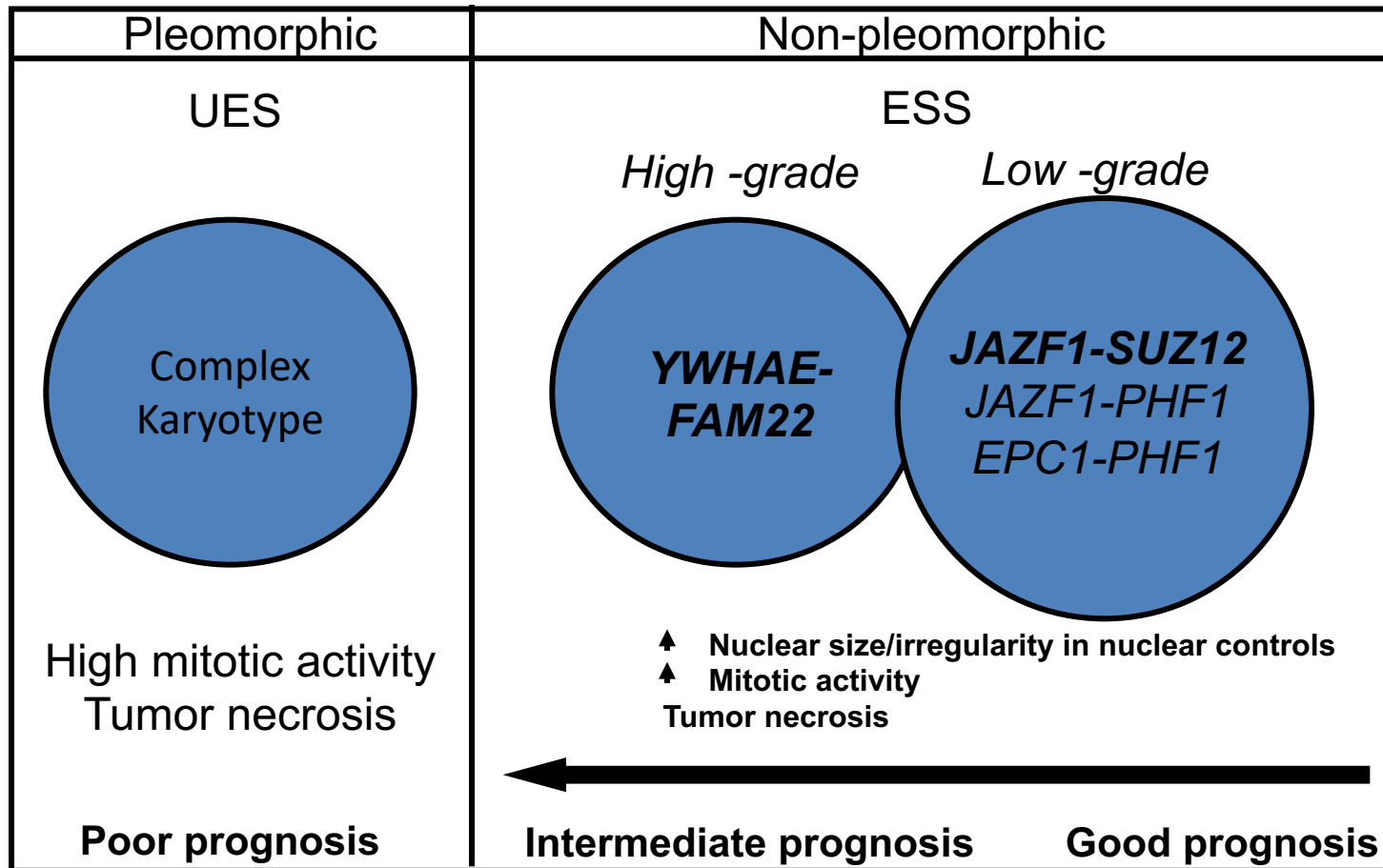
Am J Surg Pathol 2012; **36**: 1562–1570

Endometrial stromal sarcoma

- Varied histologic patterns
- Genetically heterogeneous
 - 50 to 60% t(7;17)(p15;q21) JAZF1-SUZ12 genetic fusion
 - Classic low grade morphology
 - YWHAE-FAM22 fusion t(10;17) (q22;p13)
 - ESS and in a subset of clear cell sarcoma of the kidney

Histological features ESS-HG

- Extensive permeative growth through myometrium
- Invasion into outer half of myometrium
- Vascular invasion seen in all cases
 - Round cells only or mixture of round and spindled cells
 - Nested growth pattern
 - Delicate stromal capillary network separating nests
 - Round cells x 4 to x 6 size of lymphocytes
 - Nuclear membrane irregular and angulated
 - High mitotic rate >10MF/10HPF to 77 MF/10HPF
 - Tumour cell necrosis

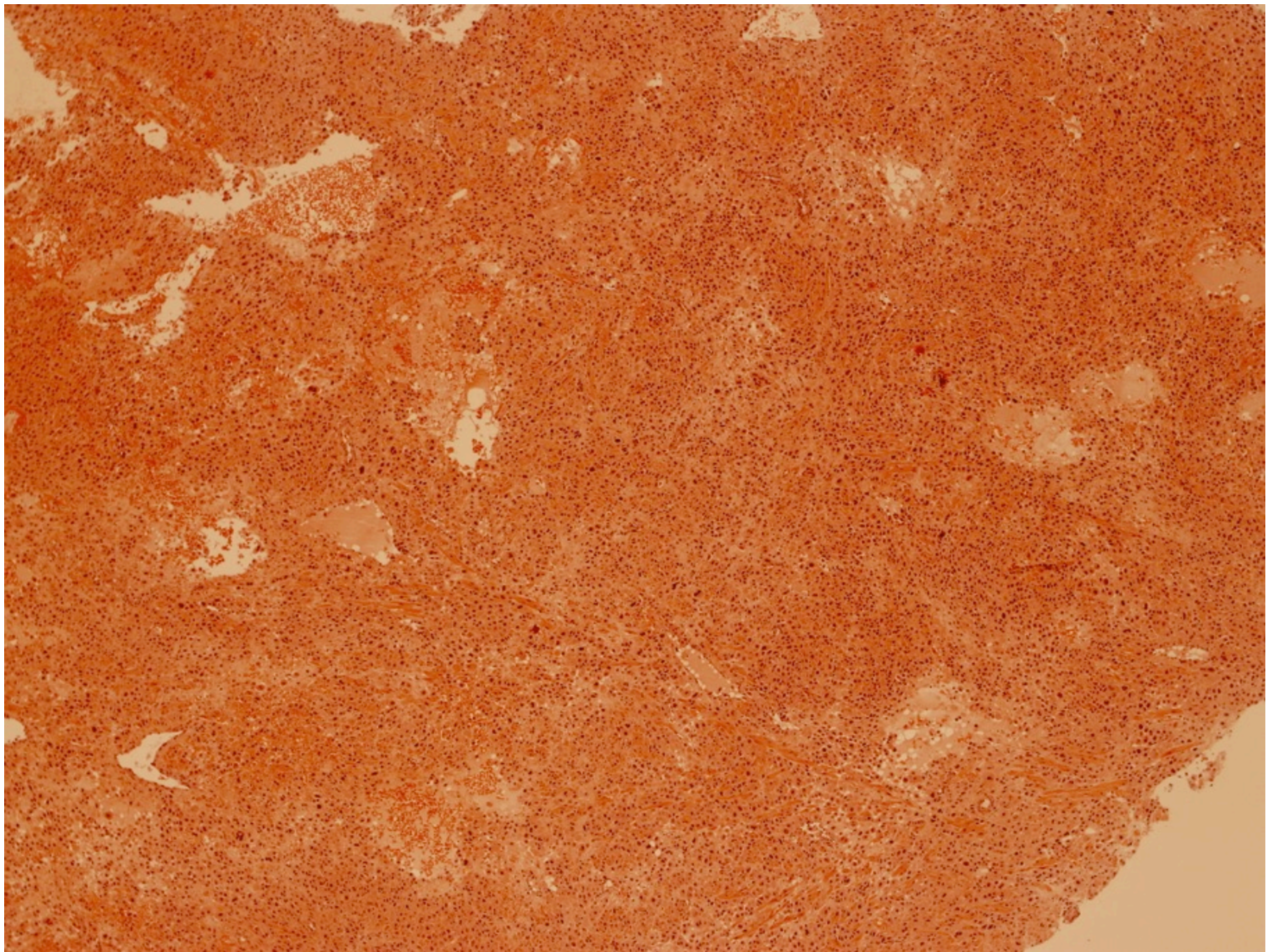


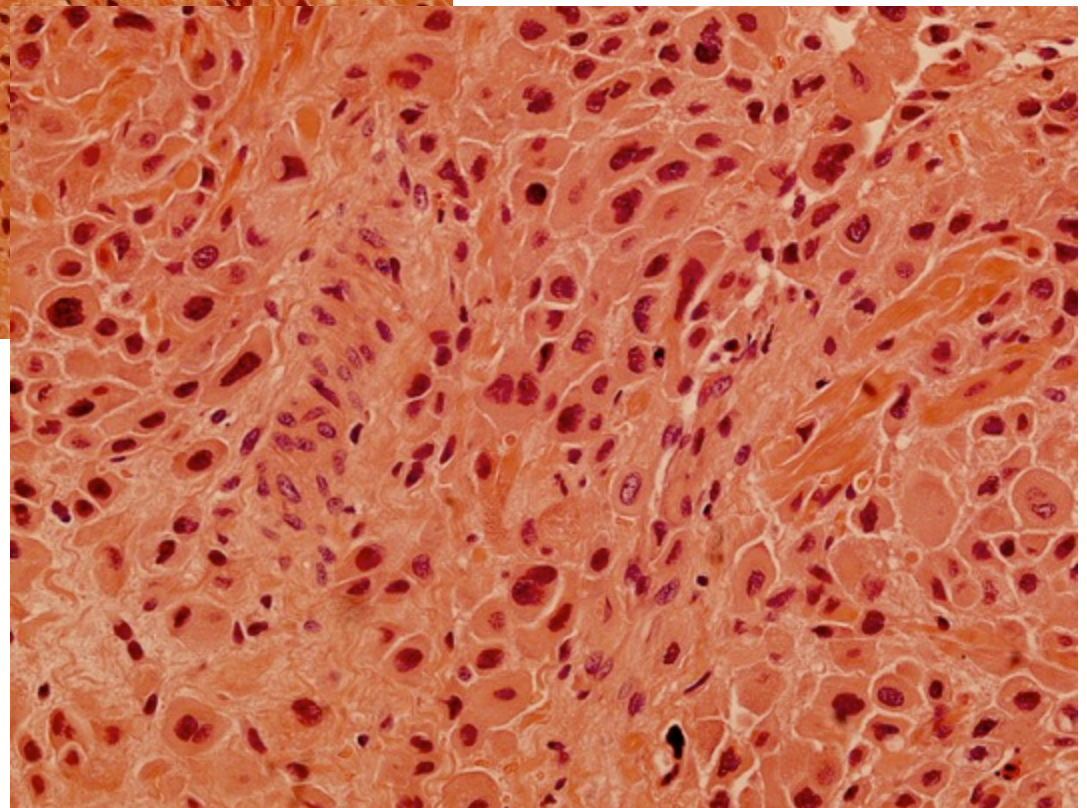
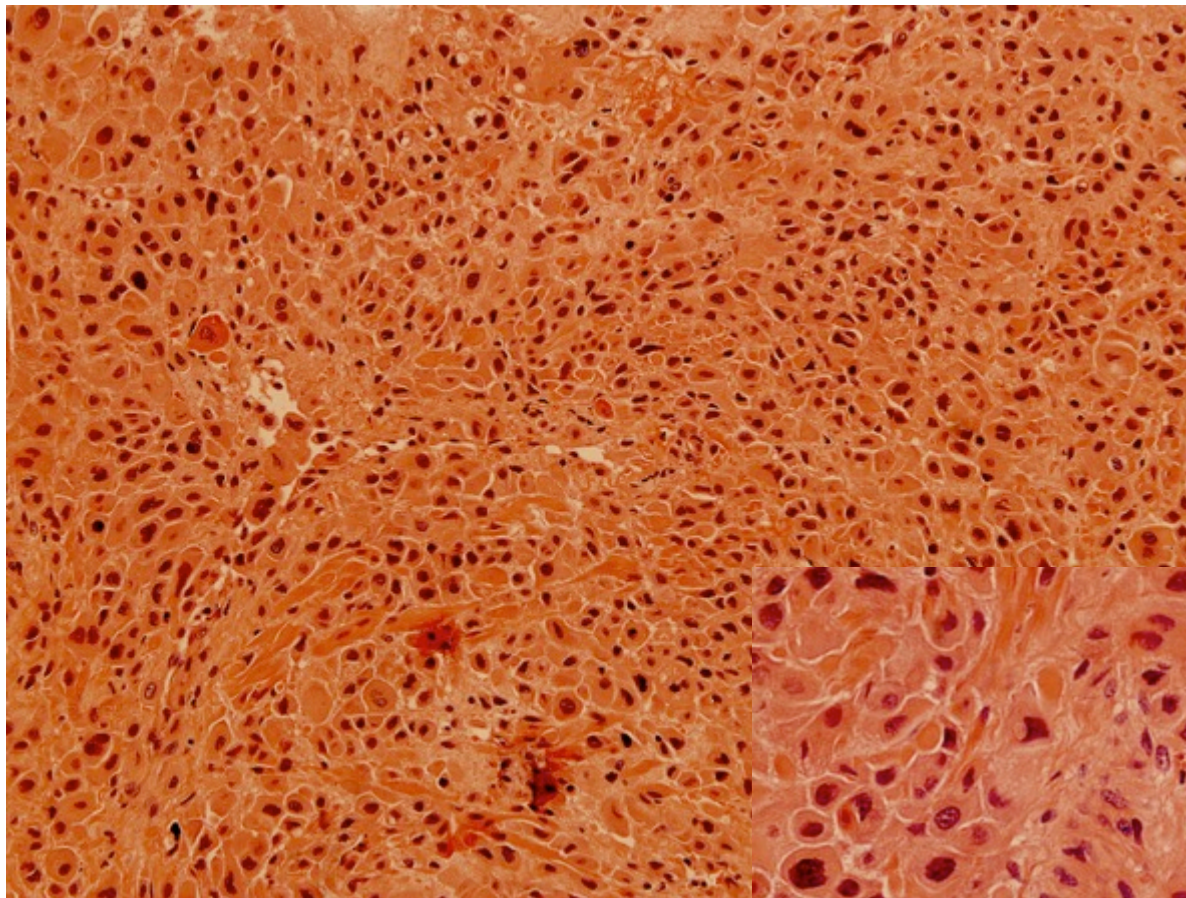
Proposed classification for pure uterine sarcomas

Am J Surg Path Vol 36, No 5, May 2012

Case 10, 08S14884

37F, previous miscarriage, slow rise in HCG, not responding to MTX





Placental site trophoblastic tumour

- Reproductive age
- Usually h/o abortion or normal pregnancy
- Amenorrhea, bleeding, raised HCG
- Occasionally present due to metastasis or endocrine manifestations
- Polypoid endometrial necrotic mass, infiltrates myometrium and cervix

Placental site trophoblastic tumour

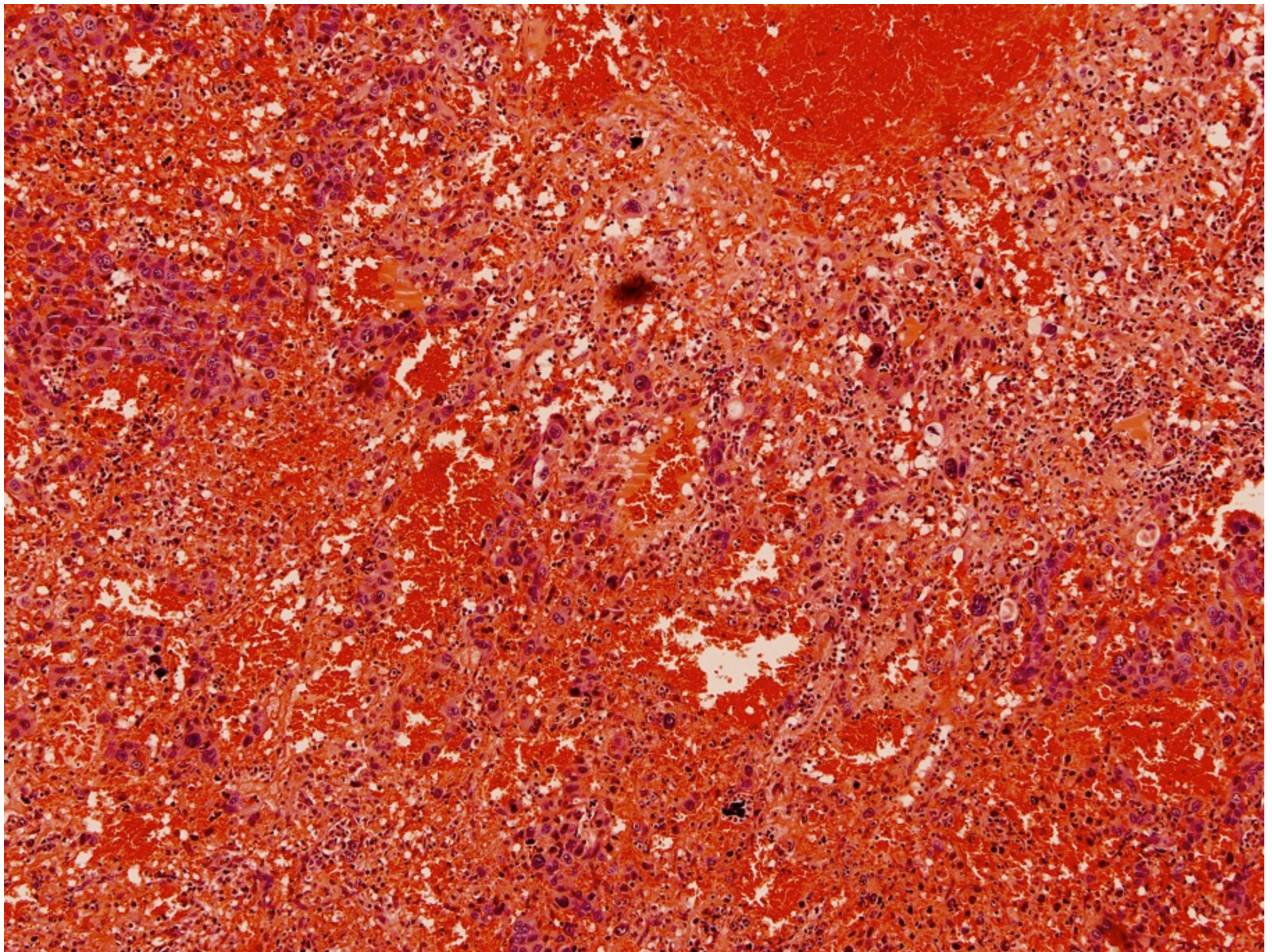
- Monotonous tumour cells, polygonal, moderate eosinophilic or amphophilic cytoplasm
- Most cells mononuclear, scattered cells binucleate or multinucleate resembling syncytiotrophoblast
- Vascular involvement typical: tumour cells infiltrate, line and plug vessels
- Deposition of fibrinoid material
- CK, hPL, Mel-CAM, inhibin +, HCG focal and weak (strong in syncytiotrophoblastic cells)

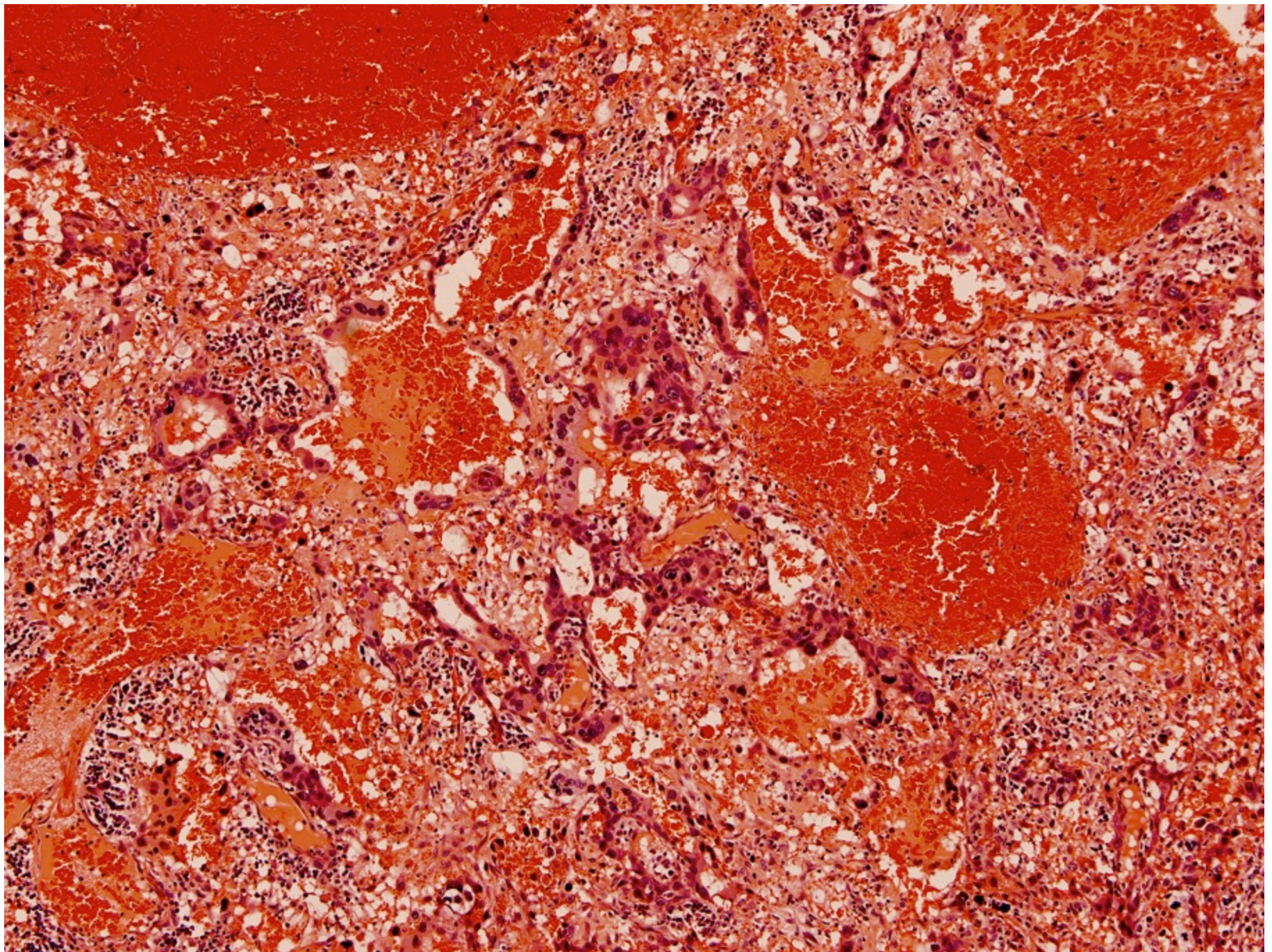
PSTT - DD

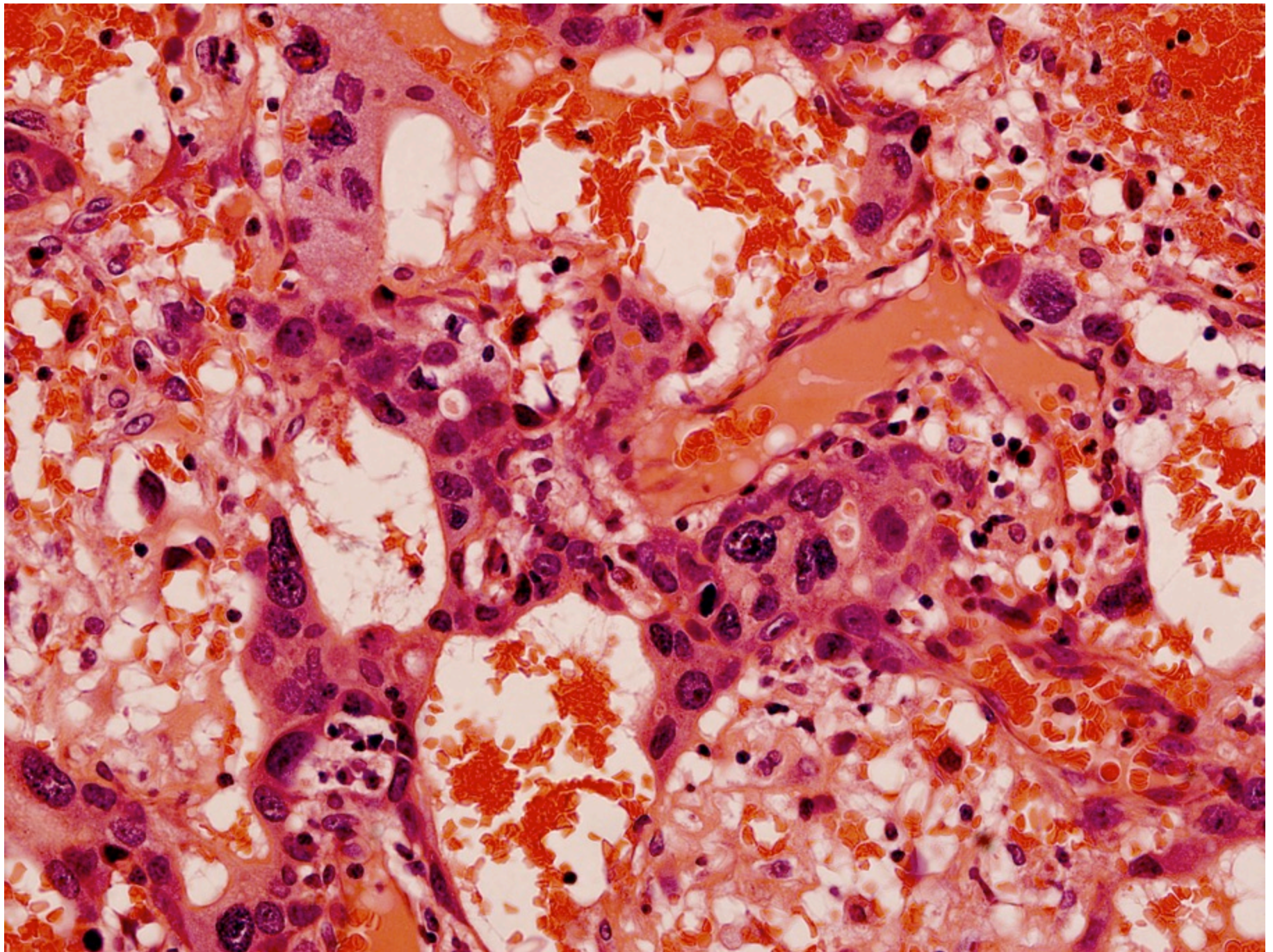
- Other trophoblastic lesions: exaggerated placental site reaction, placental site nodule, ETT, choriocarcinoma
- Epithelioid LMS
- Poorly diff Ca, CCC, SCC
- Melanoma

Case 16, 11S11405

58F, biopsy from uterine mass





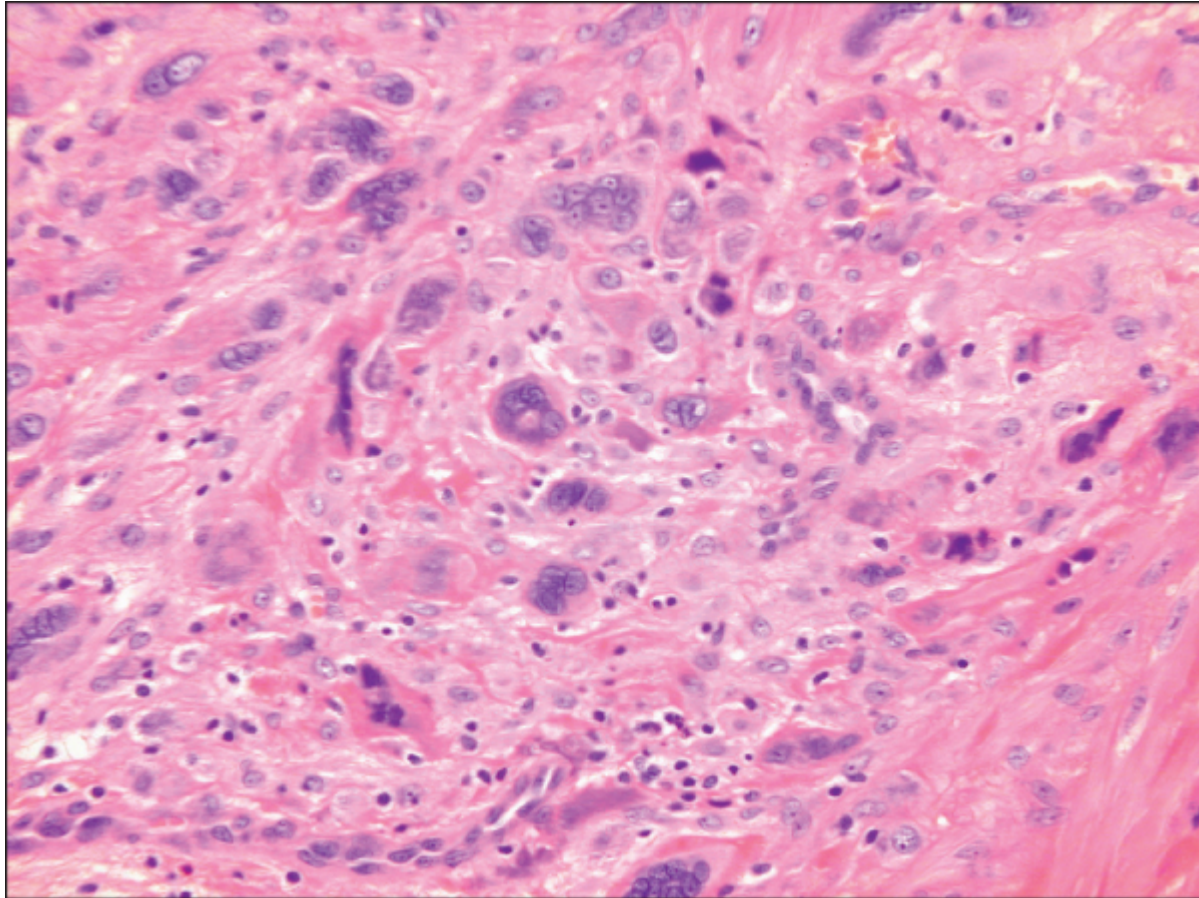


Malignant trophoblastic tumour with PSTT and choriocarcinoma features

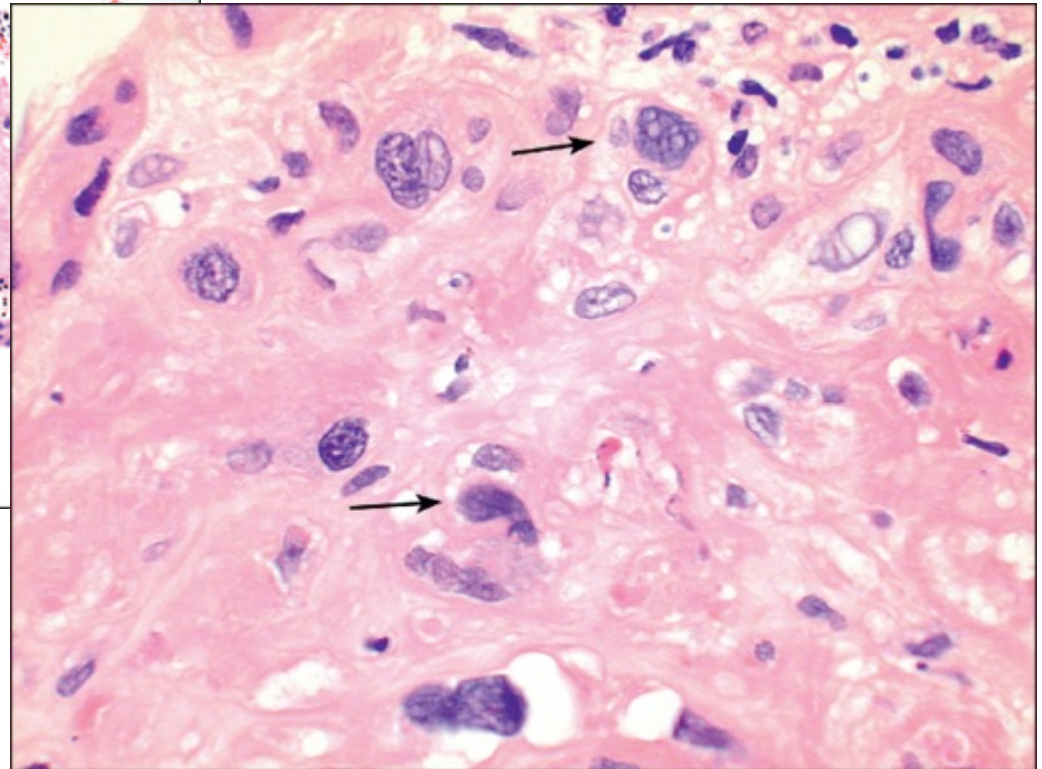
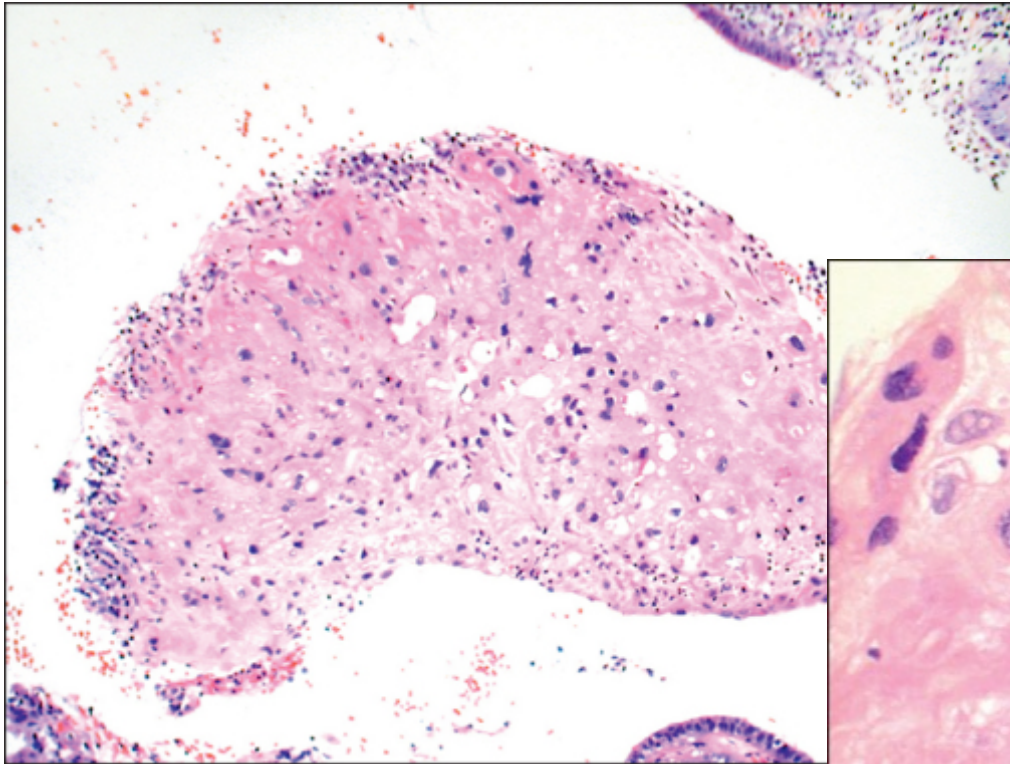
Types of trophoblast and trophoblastic lesions

Villous	Cytotrophoblast	Hydatidiform mole, invasive mole, Choriocarcinoma
	Syncytiotrophoblast	
Intermediate	Villous	
	Implantation site	Exaggerated placental site, PSTT
	Chorionic	Placental site nodule, ETT

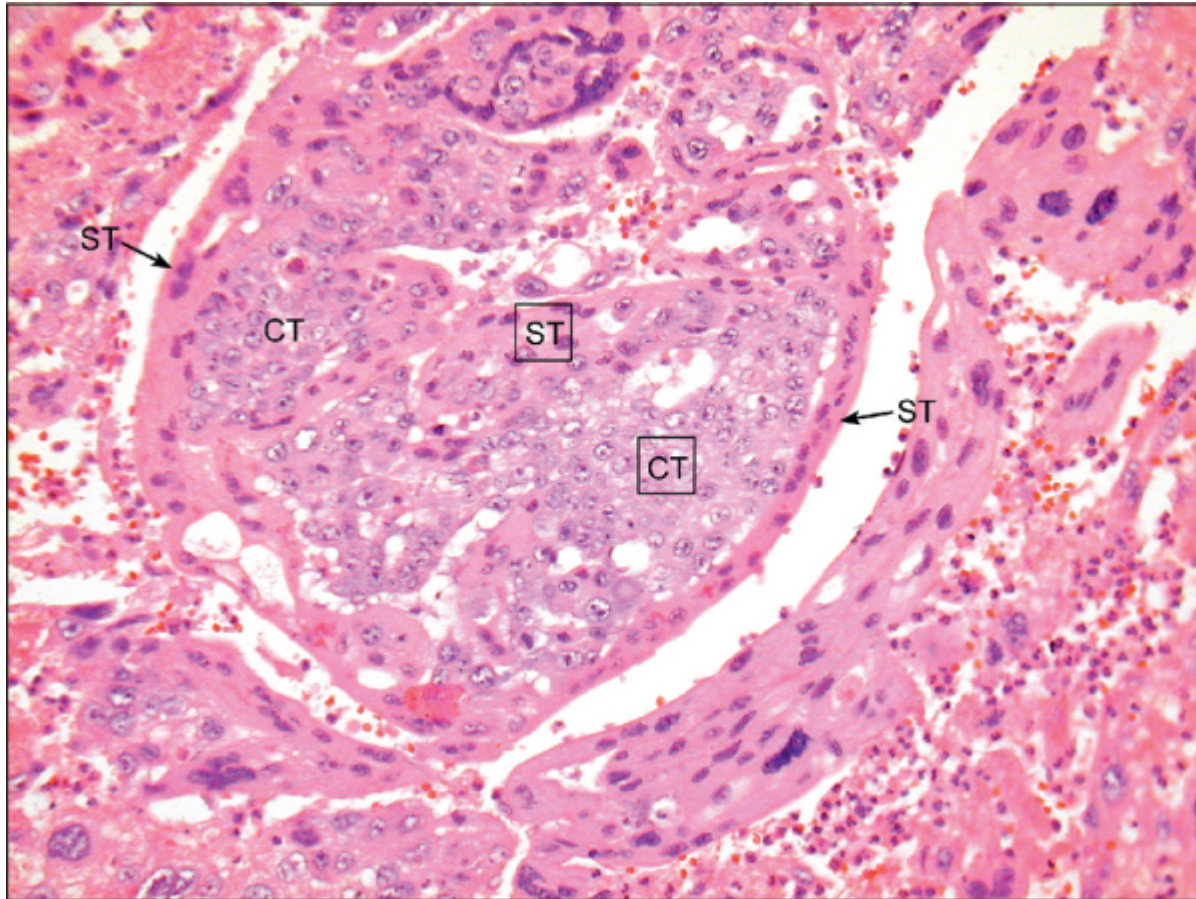
Exaggerated placental site



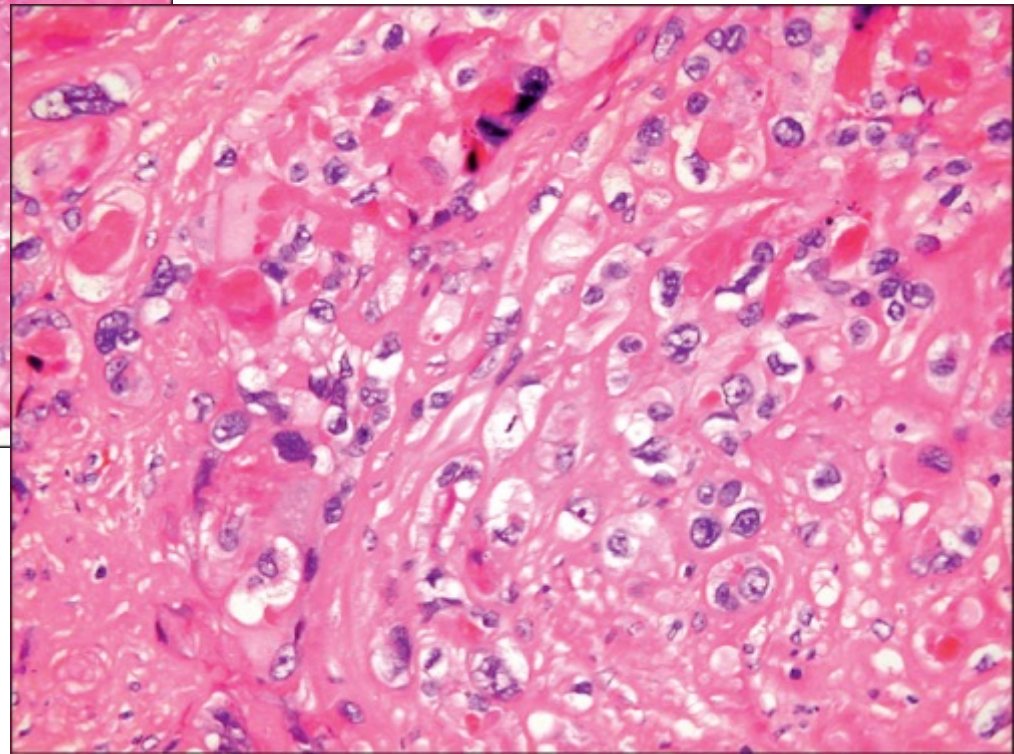
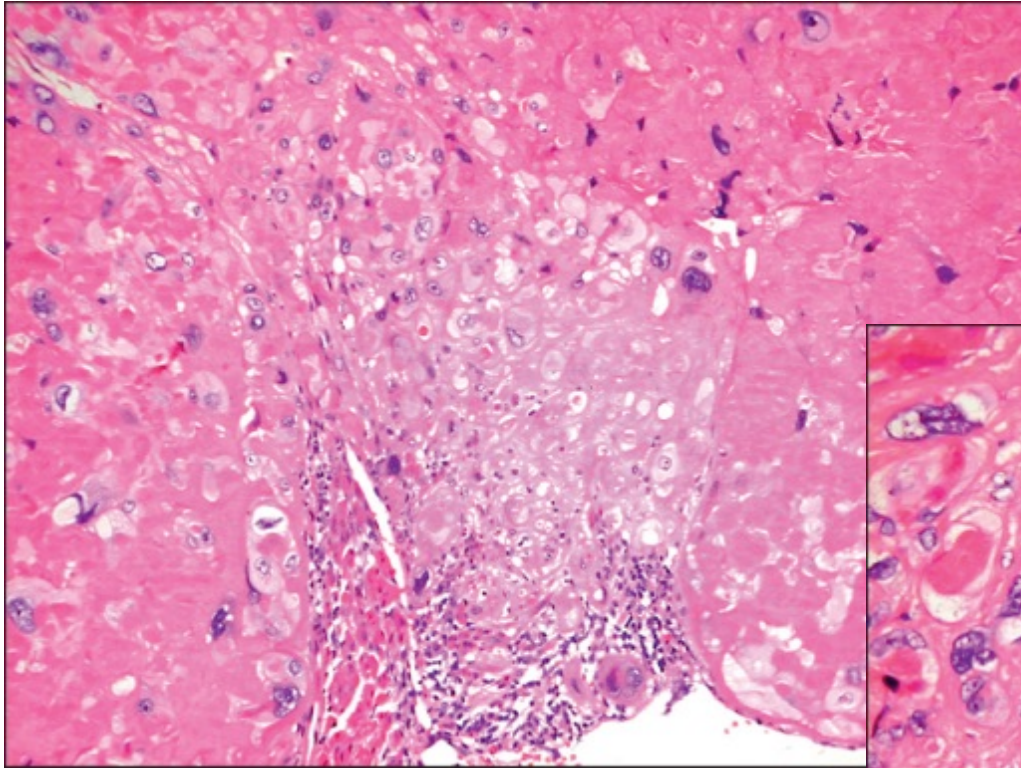
Placental site nodule



Choriocarcinoma

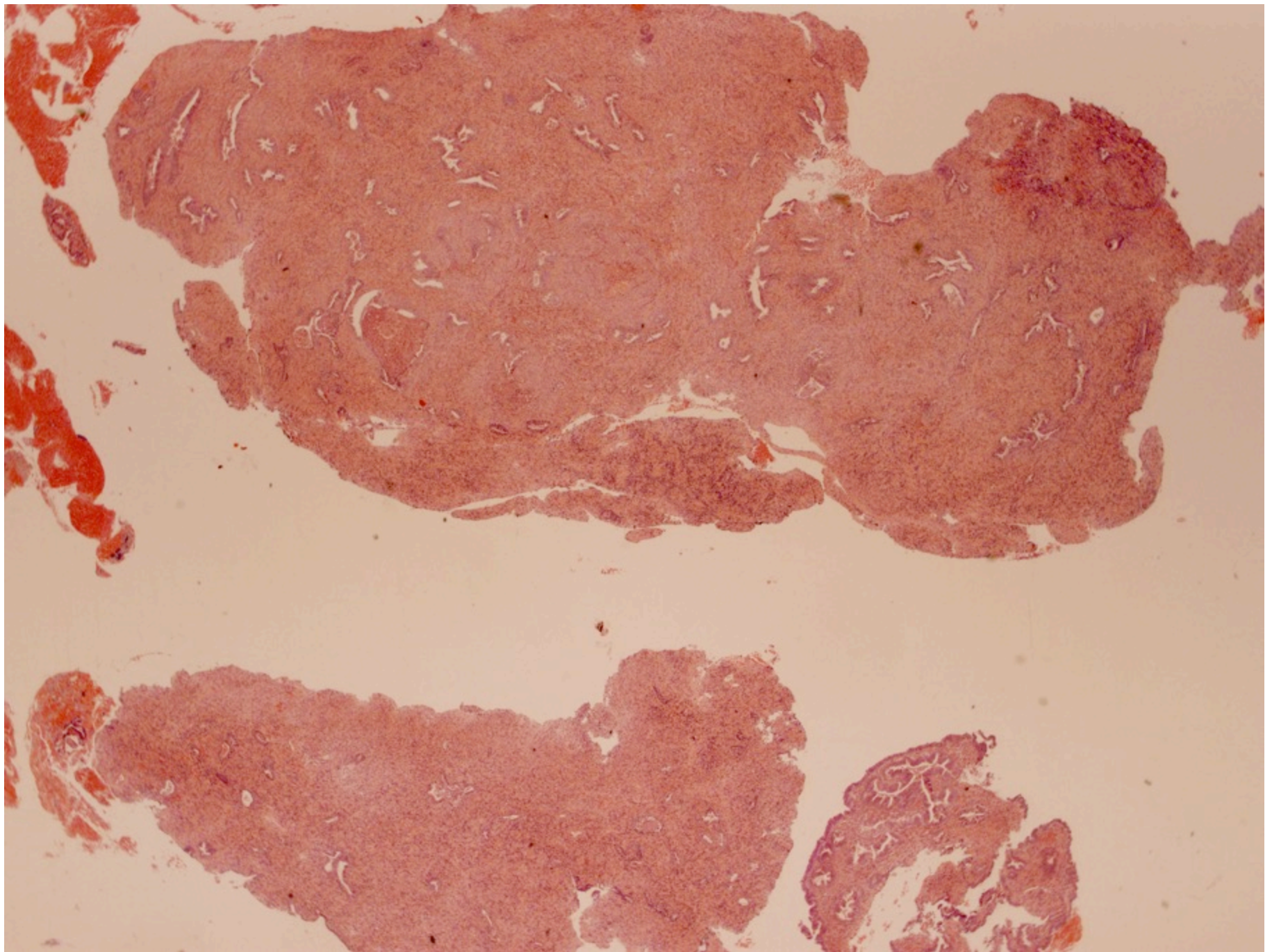


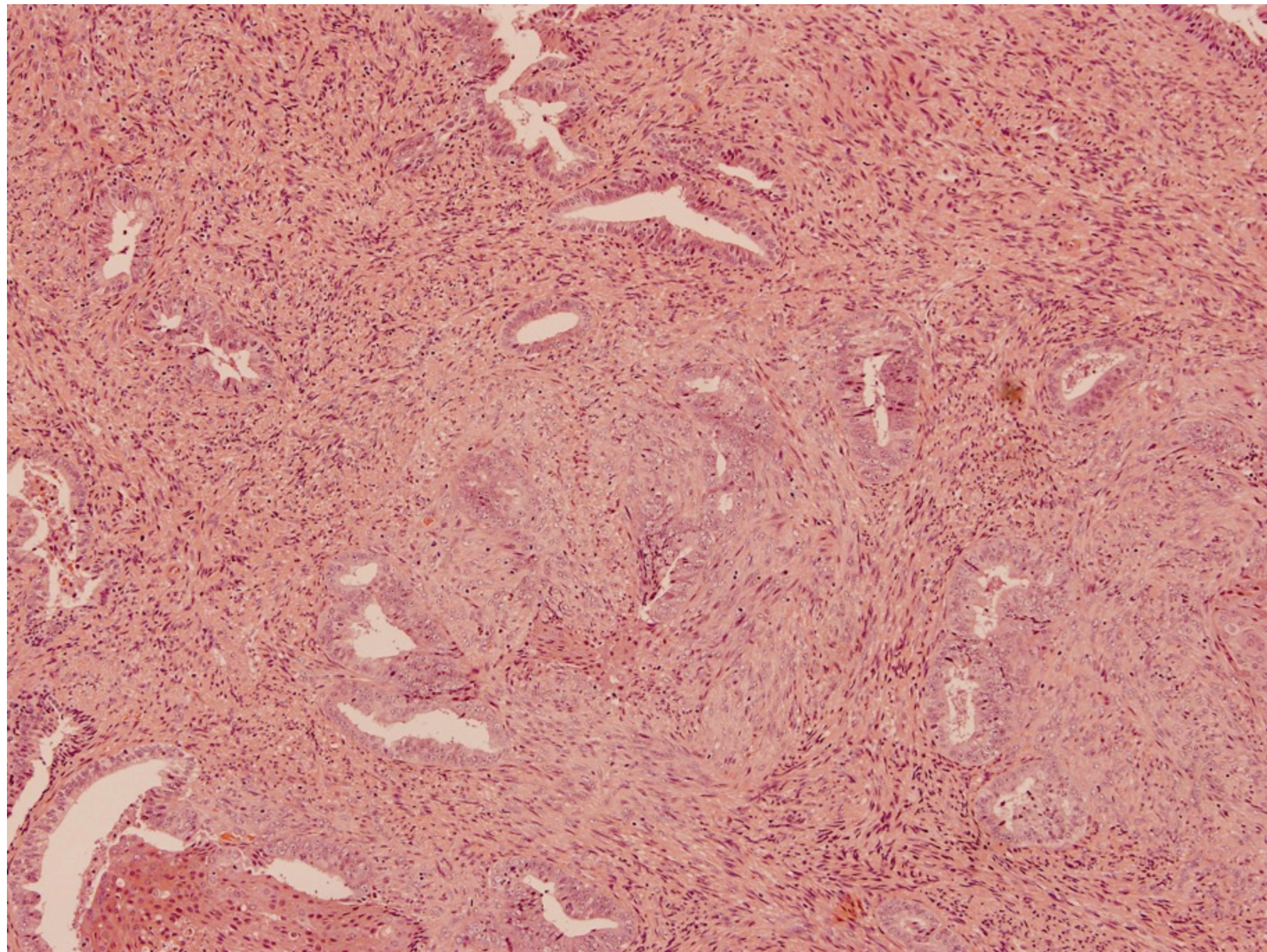
Epithelioid trophoblastic tumour

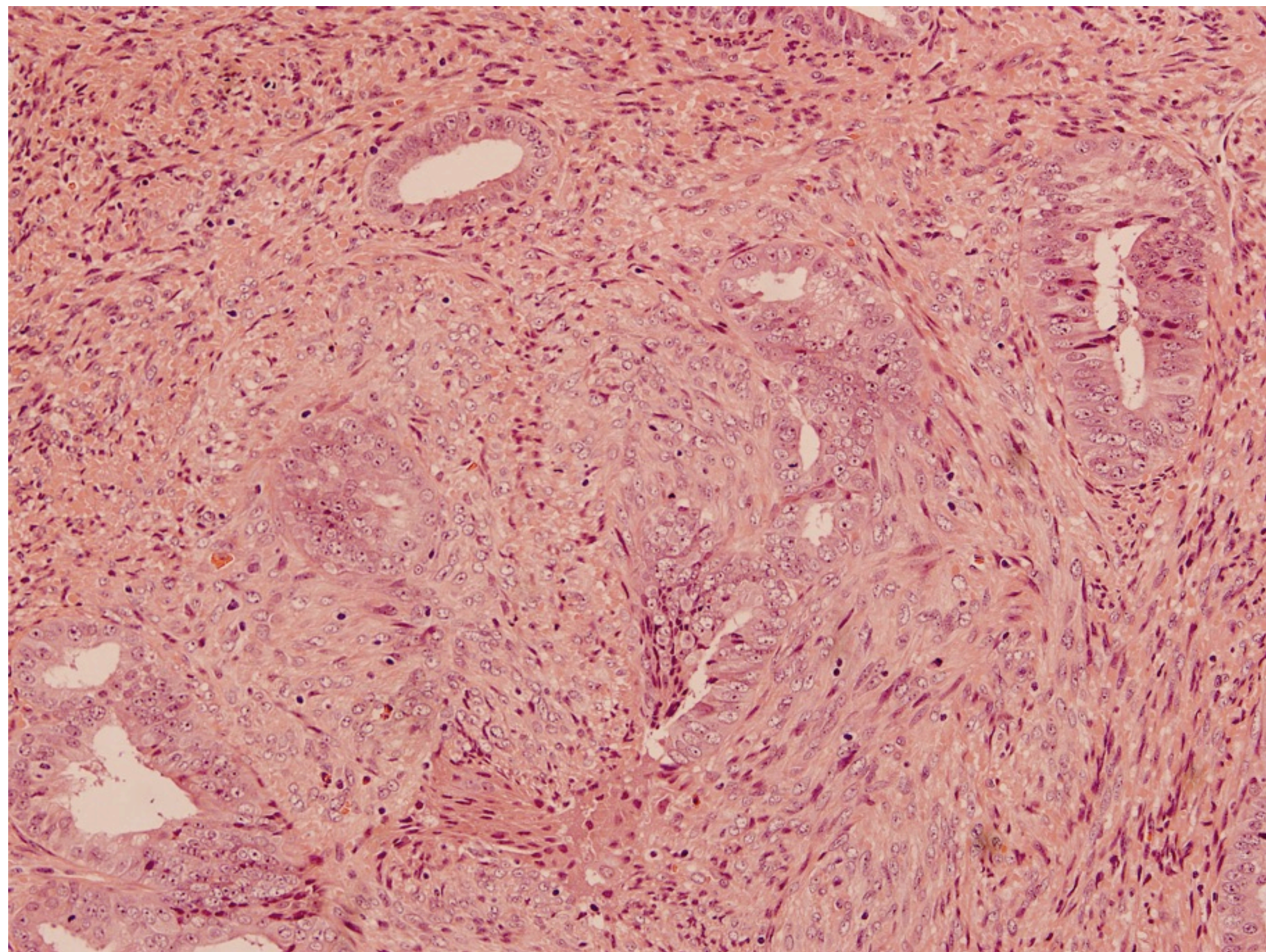


Case 22, 11S1025

42F, dysfunctional bleeding and thickened endometrium







Atypical polypoid adenomyoma

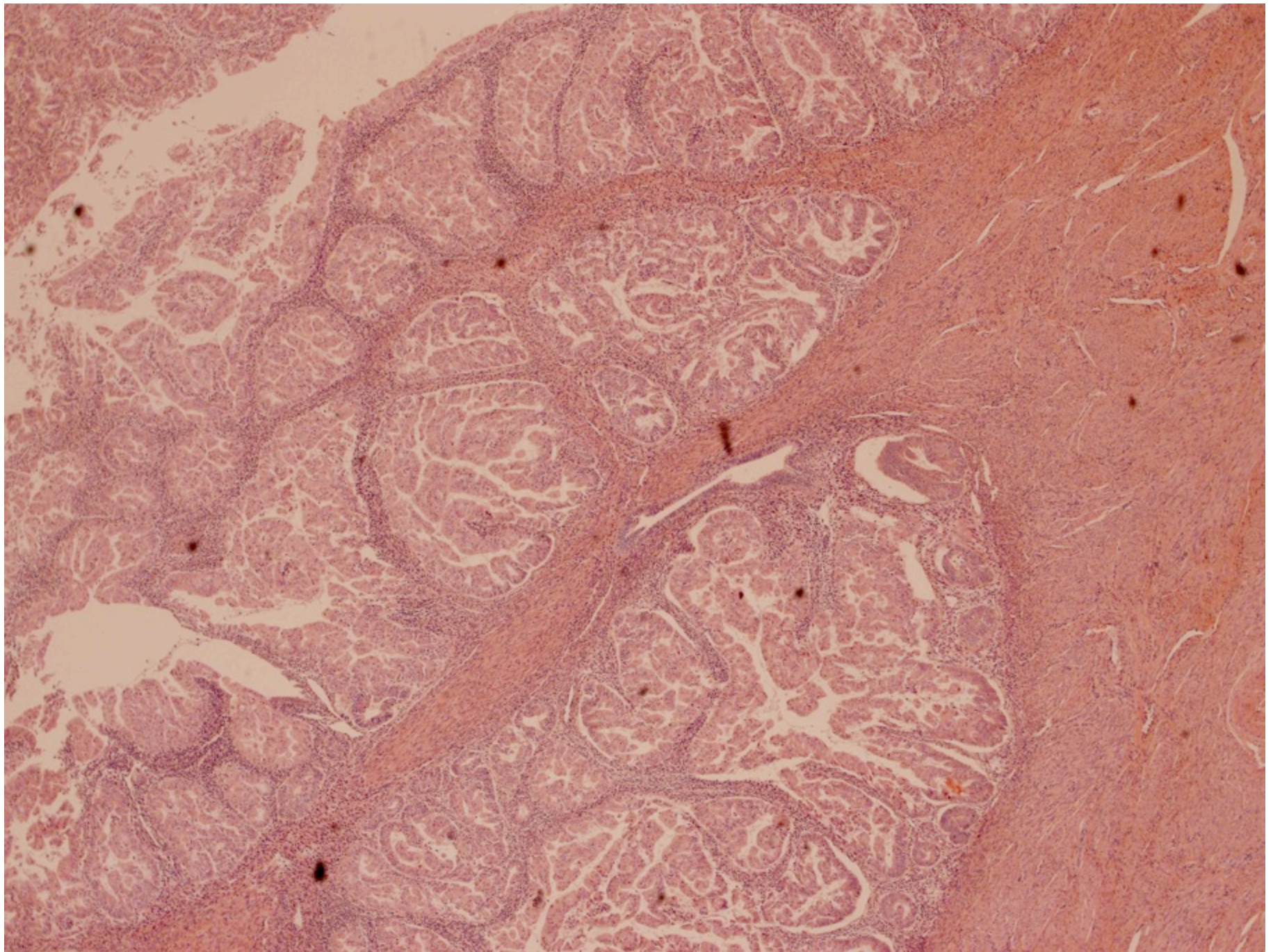
- Reproductive age
- Usually isthmic
- Sessile or pedunculated
- Endometrioid glands, architecturally and cytologically atypical
- Muscular or fibromyomatous stroma
- Squamous morules
- Mostly benign with risk of recurrence if incompletely removed
- Marked atypia (indistinguishable from carcinoma) is associated with myoinvasion (APA-LMP)

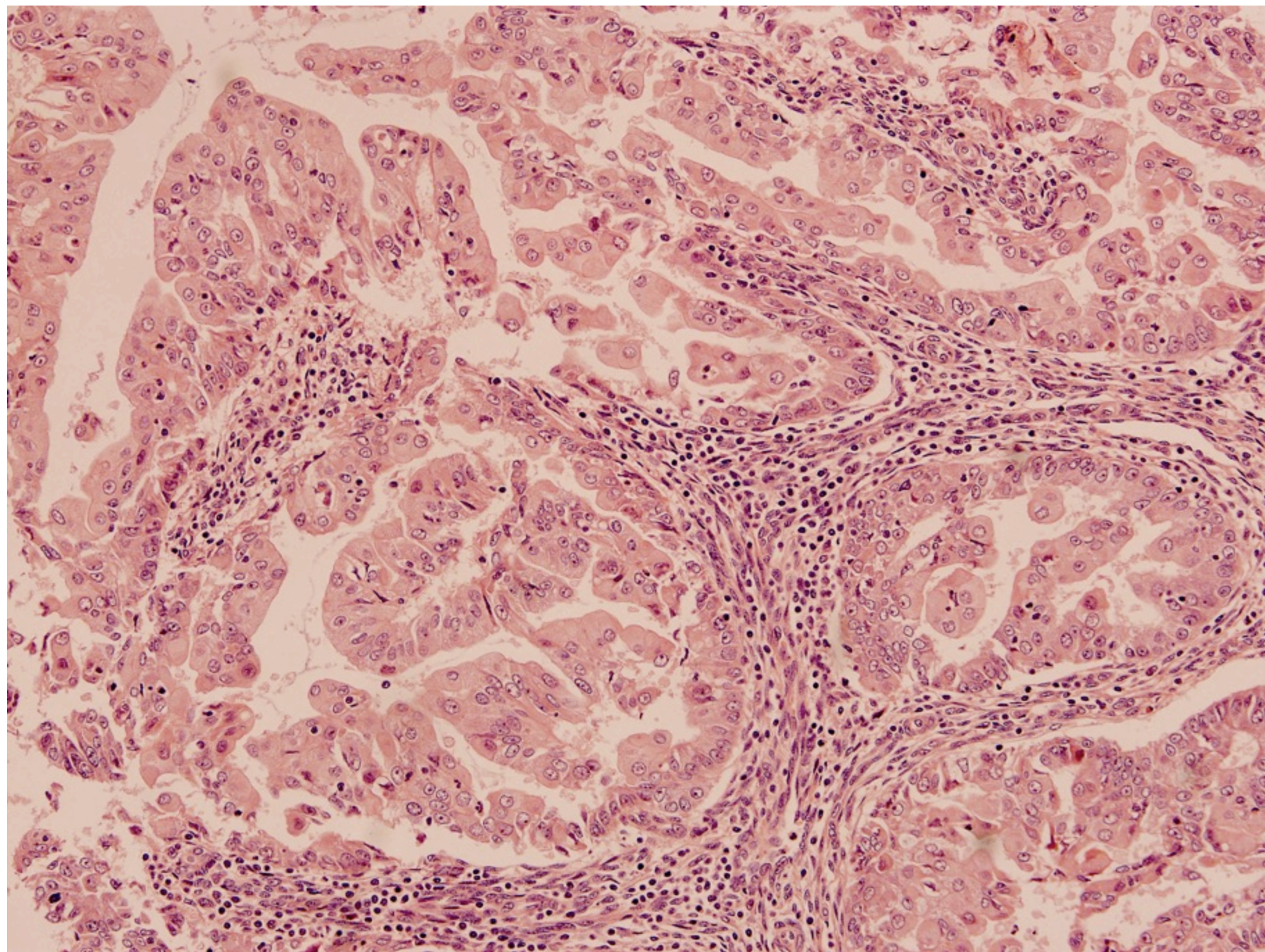
APA - DD

- Endometrioid or endocervical adenocarcinoma, myoinvasion
- Adenosarcoma
- MMMT
- Typical adenomyoma

Case 24, 11S19697

37F, hysterectomy for complex atypical hyperplasia



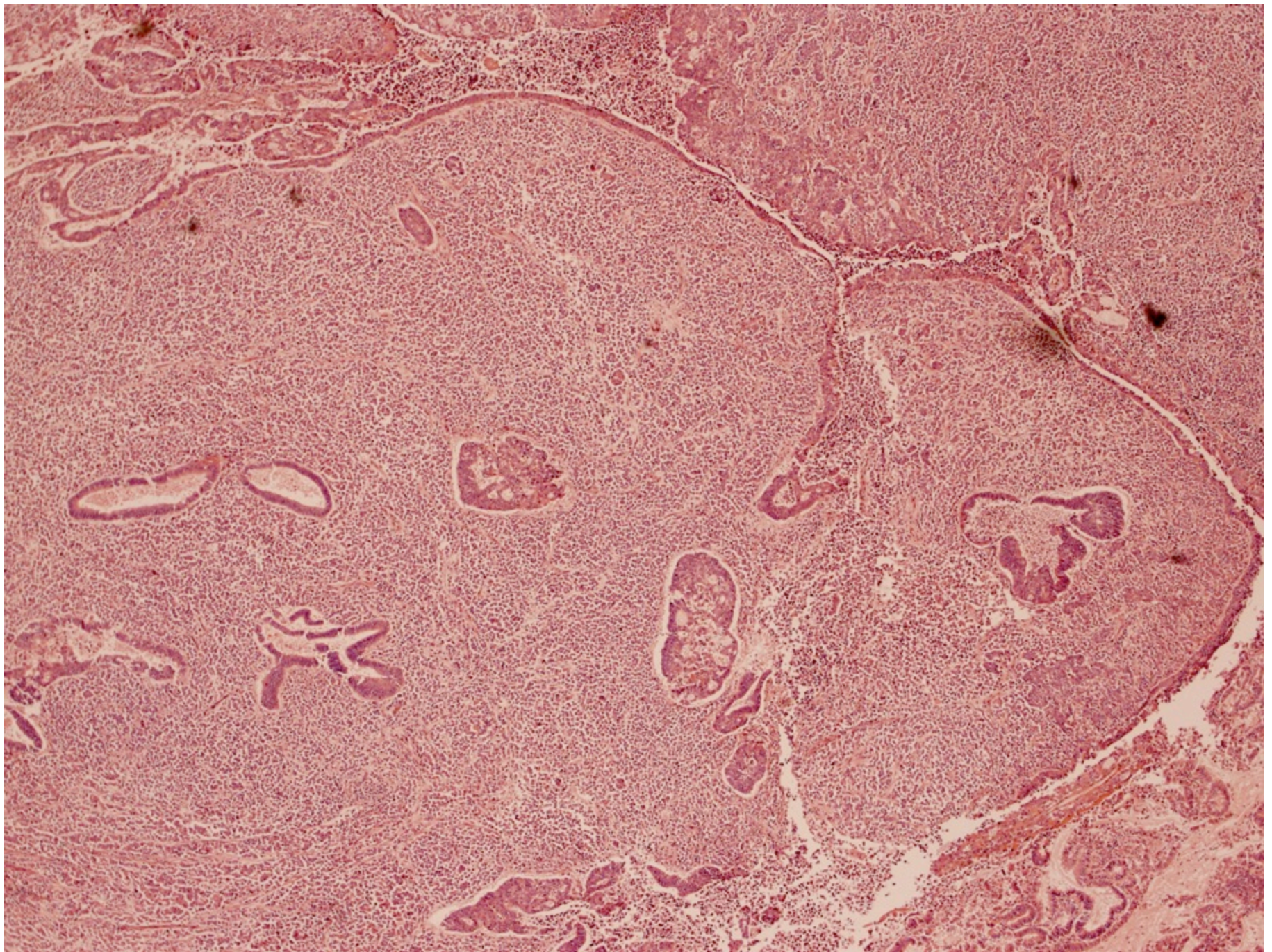


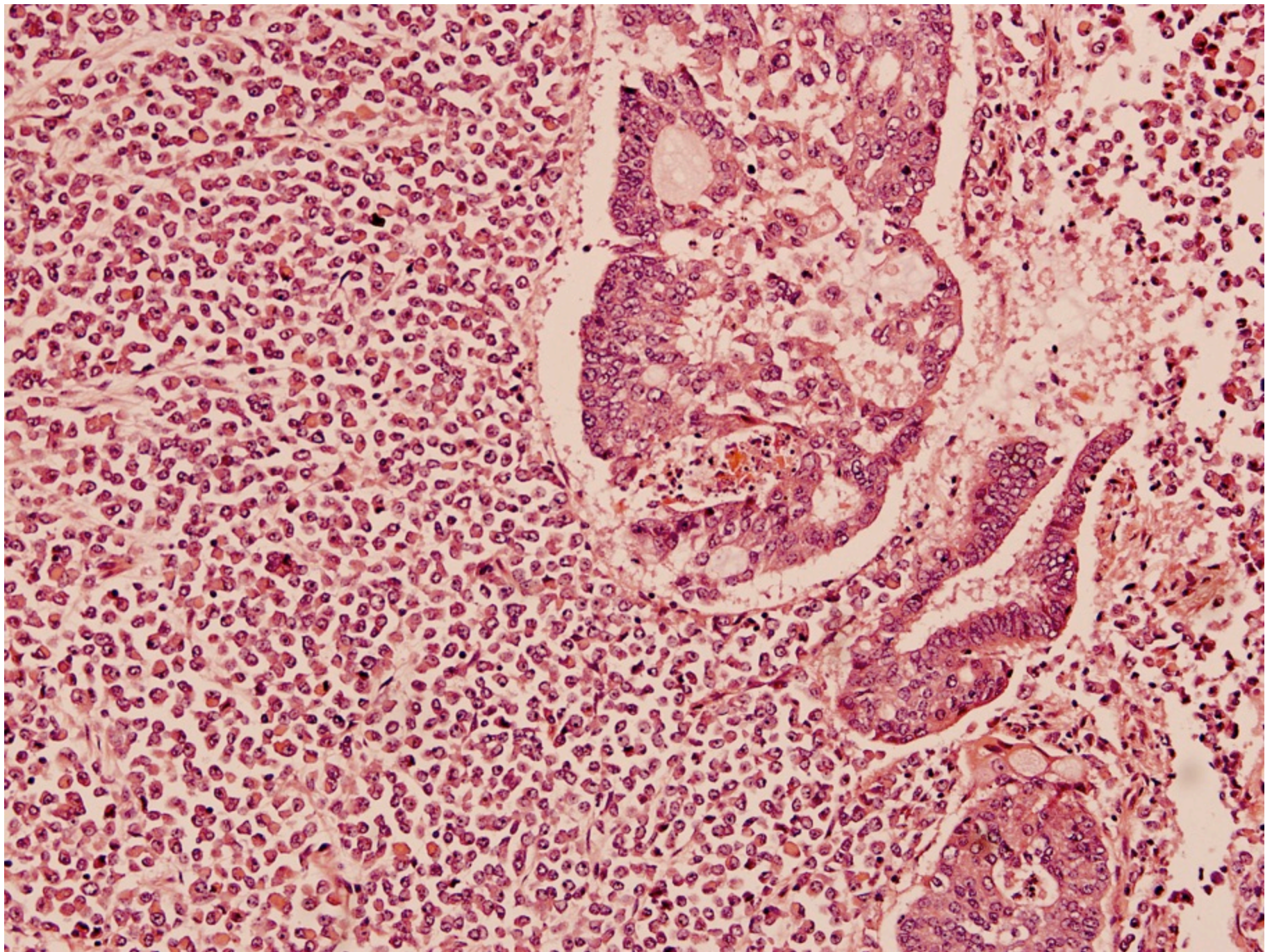
Endometrioid carcinoma with small non-villous papillae

- 8% of endometrioid carcinomas in one series
- Small papillae within glands or over surface of otherwise typical endometrioid carcinoma
- Tufts and buds of cells with abundant eosinophilic cytoplasm and bland nuclear features
- DD: USC – low grade nuclear features, typical endometrioid carcinoma in places

Case 23, 11S19329

57F, uterine tumour





Undifferentiated endometrial carcinoma

- Absence of glandular or neuroendocrine differentiation
- Sheets of polygonal cells, may be plasmacytoid or rhabdoid
- Moderate atypia, frequent mitosis
- May be admixed with endometrioid component (mixed or dedifferentiated: NOT G3 endometrioid)
- IHC disappointing: usually negative for keratin (CK18+), focal EMA

Undiff Ca - DD

- G3 endometrioid carcinoma
- MMMT
- Sarcoma
- Neuroendocrine tumour: this should have strong staining for one or more NE markers

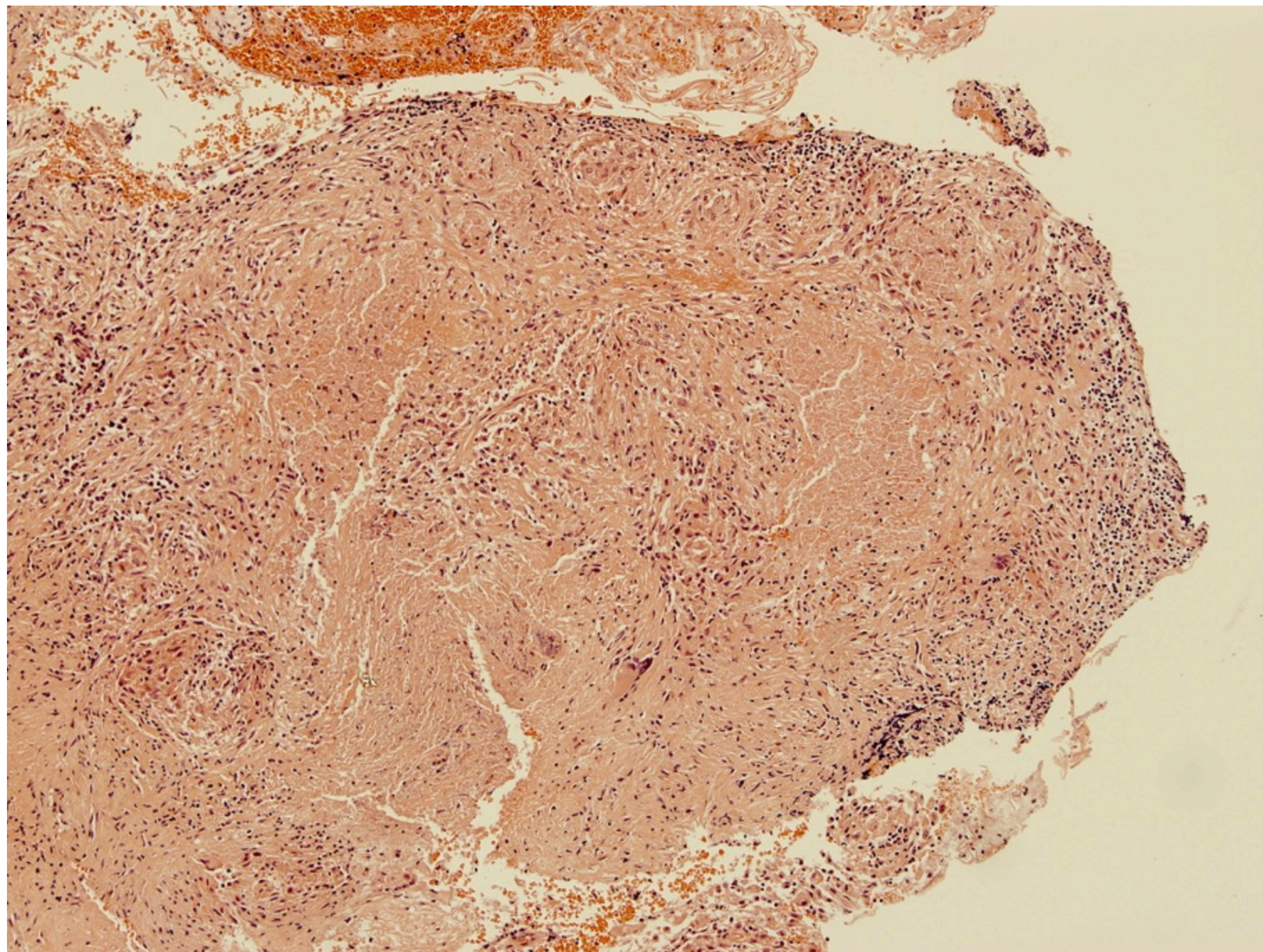
Prognosis worse than endometrioid carcinoma; usually high stage at presentation, aggressive behaviour

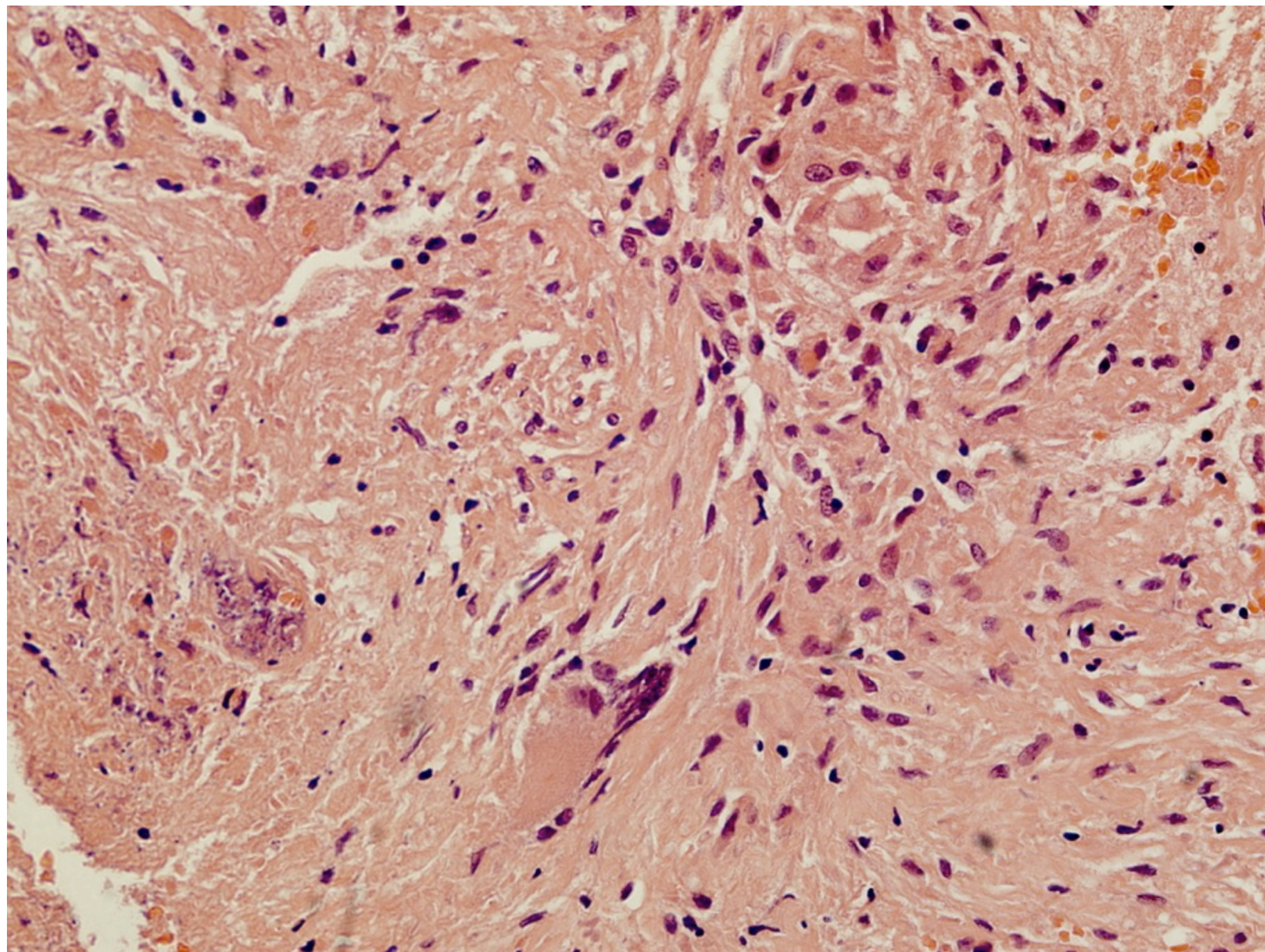
LS-related EC morphology

- Isthmic location
- Tumour infiltrating lymphocytes/heavy lymphoid infiltrate
- Mixed/ambiguous morphology
- Undifferentiated/de-differentiated

Case 7, 10S16762

27F, being investigated for infertility

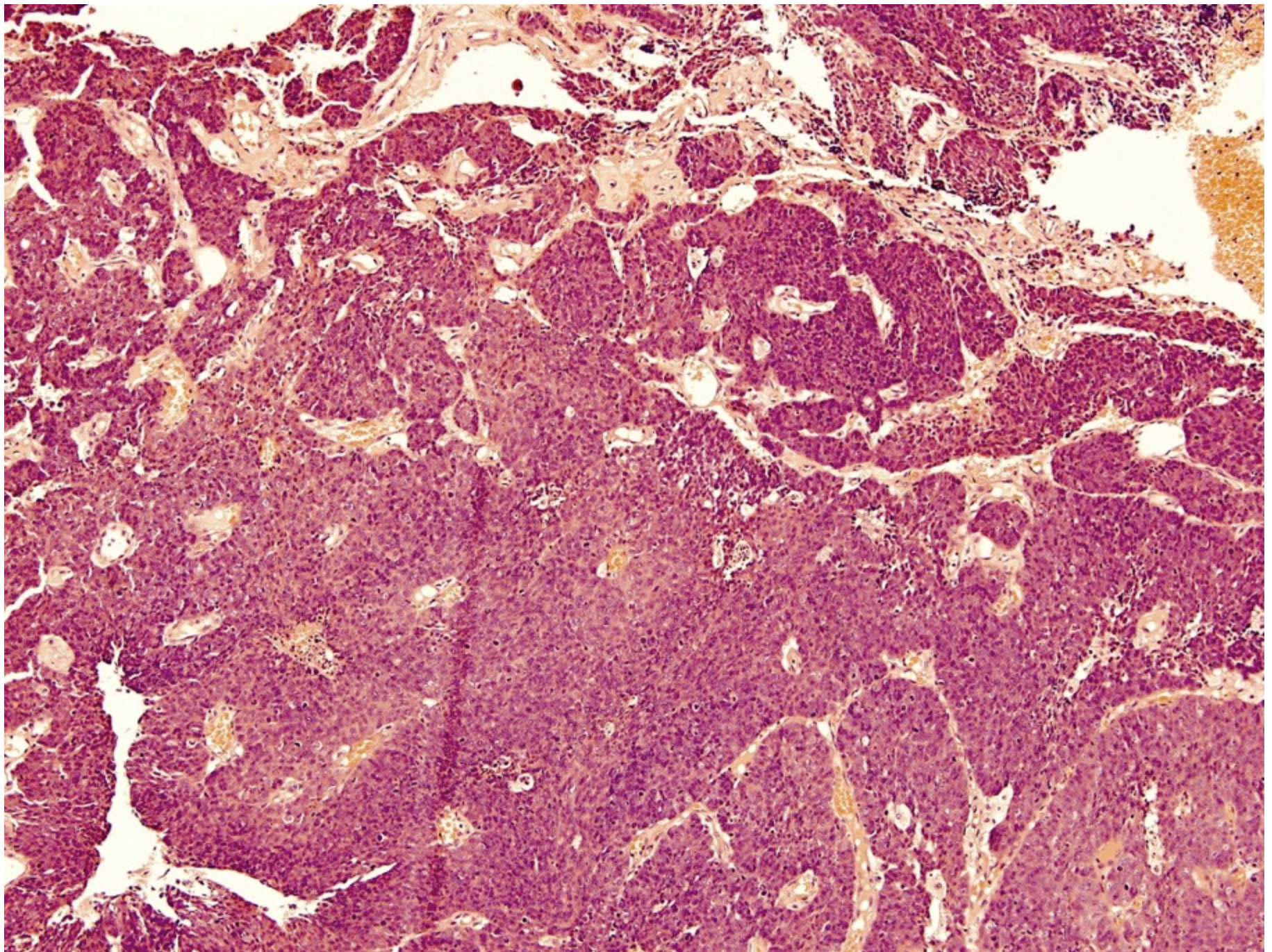


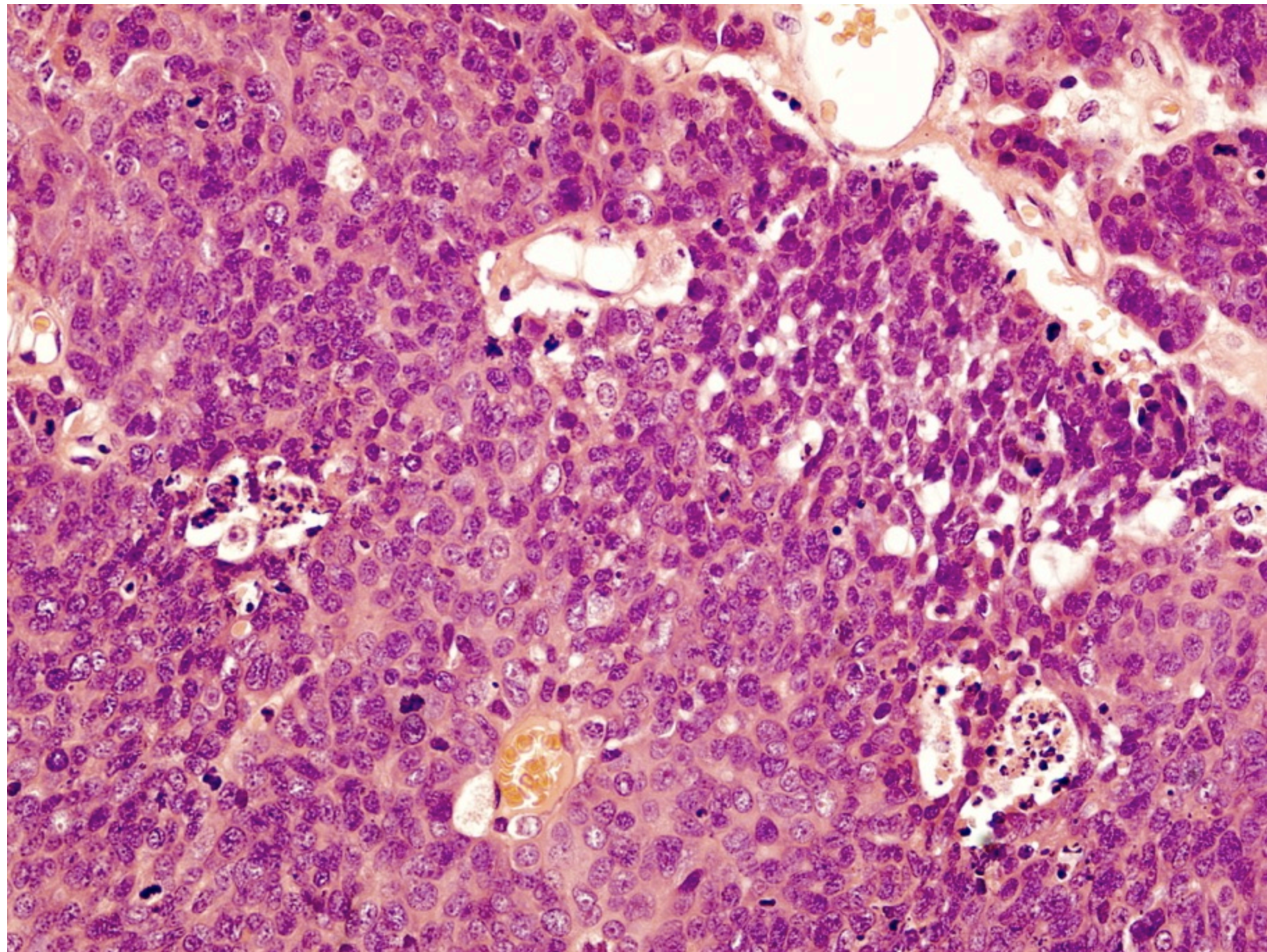


Tuberculosis

Case 4, 11S19340

81F, friable exophytic cervical tumour



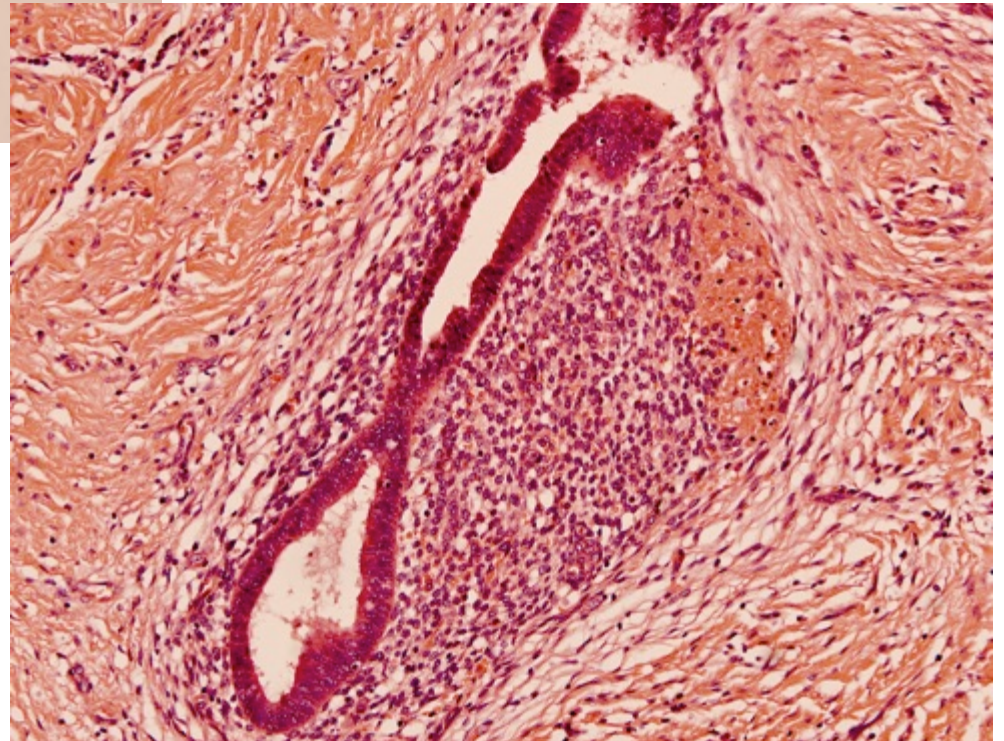
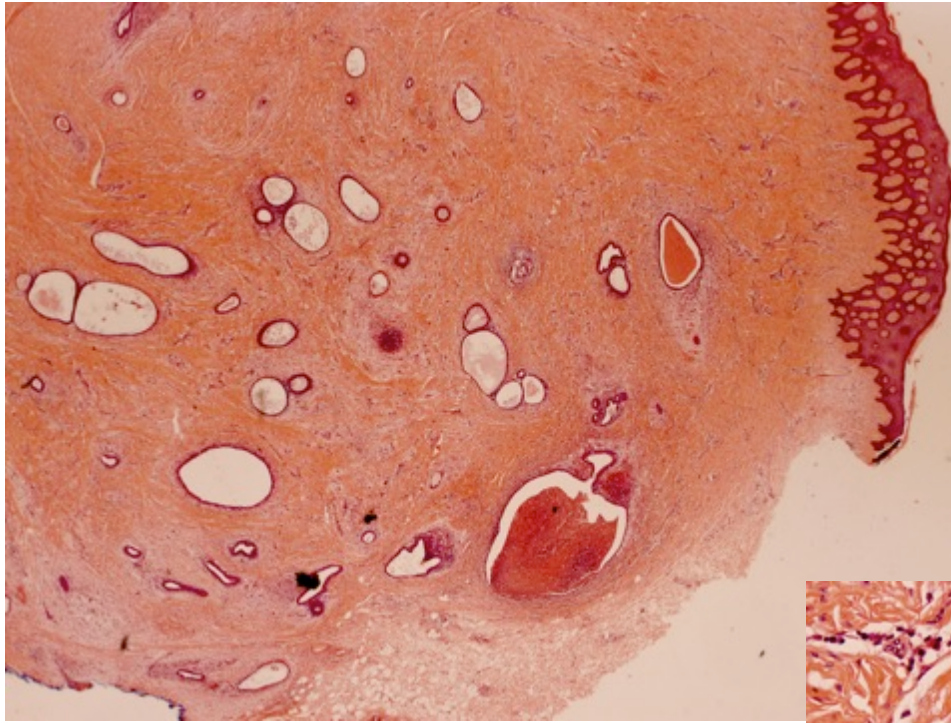


Large cell neuroendocrine carcinoma with adenocarcinomatous component

- Less common than small cell ca (0.6% of all cx ca)
- 21-76 years
- Insular, trabecular, solid
- Extensive necrosis
- Large tumour cells with eosinophilic cytoplasm, pleomorphic nuclei, prominent nucleoli
- High mitotic activity
- IHC: chromogranin and/or synaptophysin +
- Easily mistaken for SCC or adenocarcinoma
- Prognosis similar to small cell ca; similar management

Case 1, 11S16795

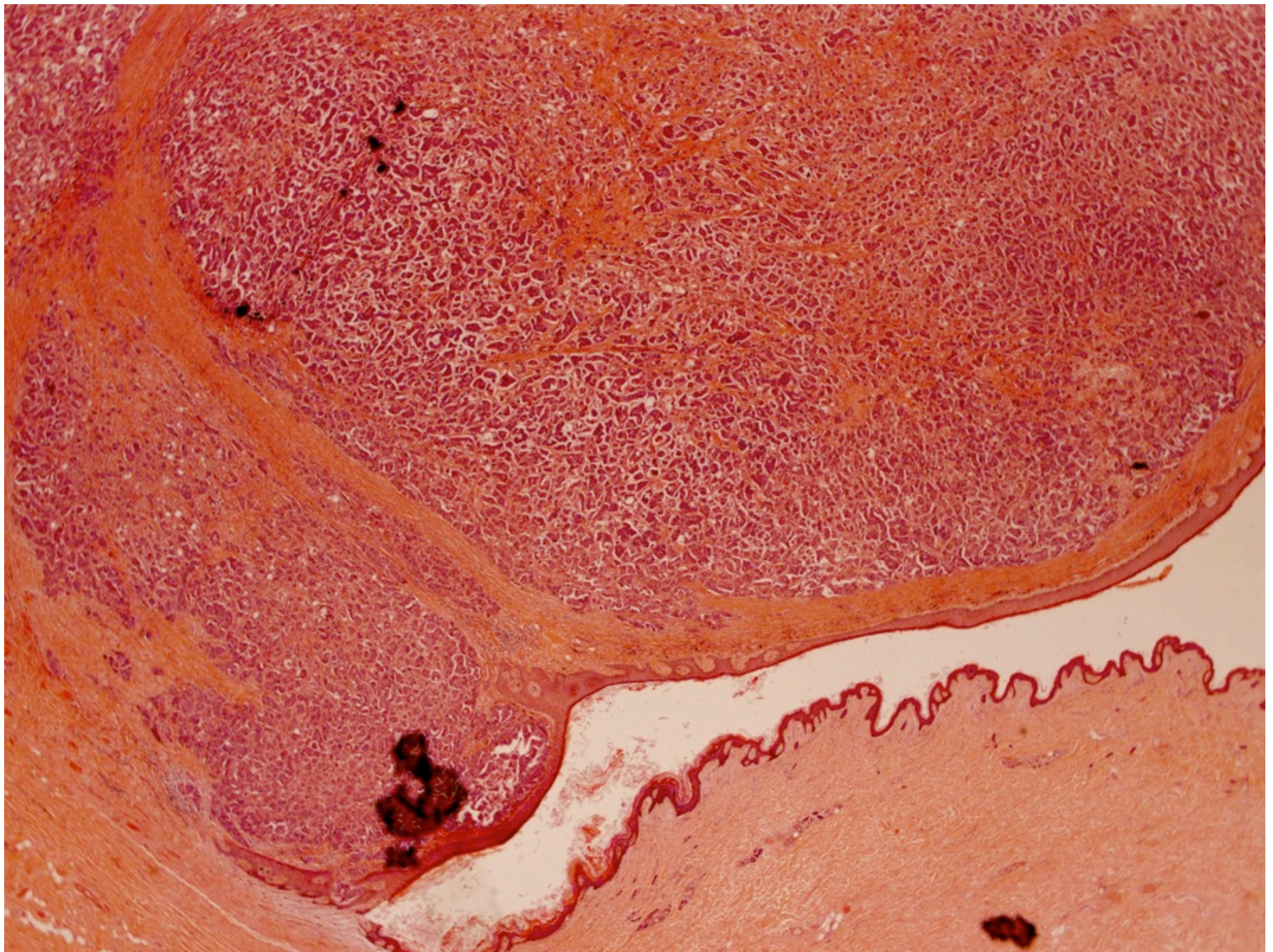
35F, umbilical lesion

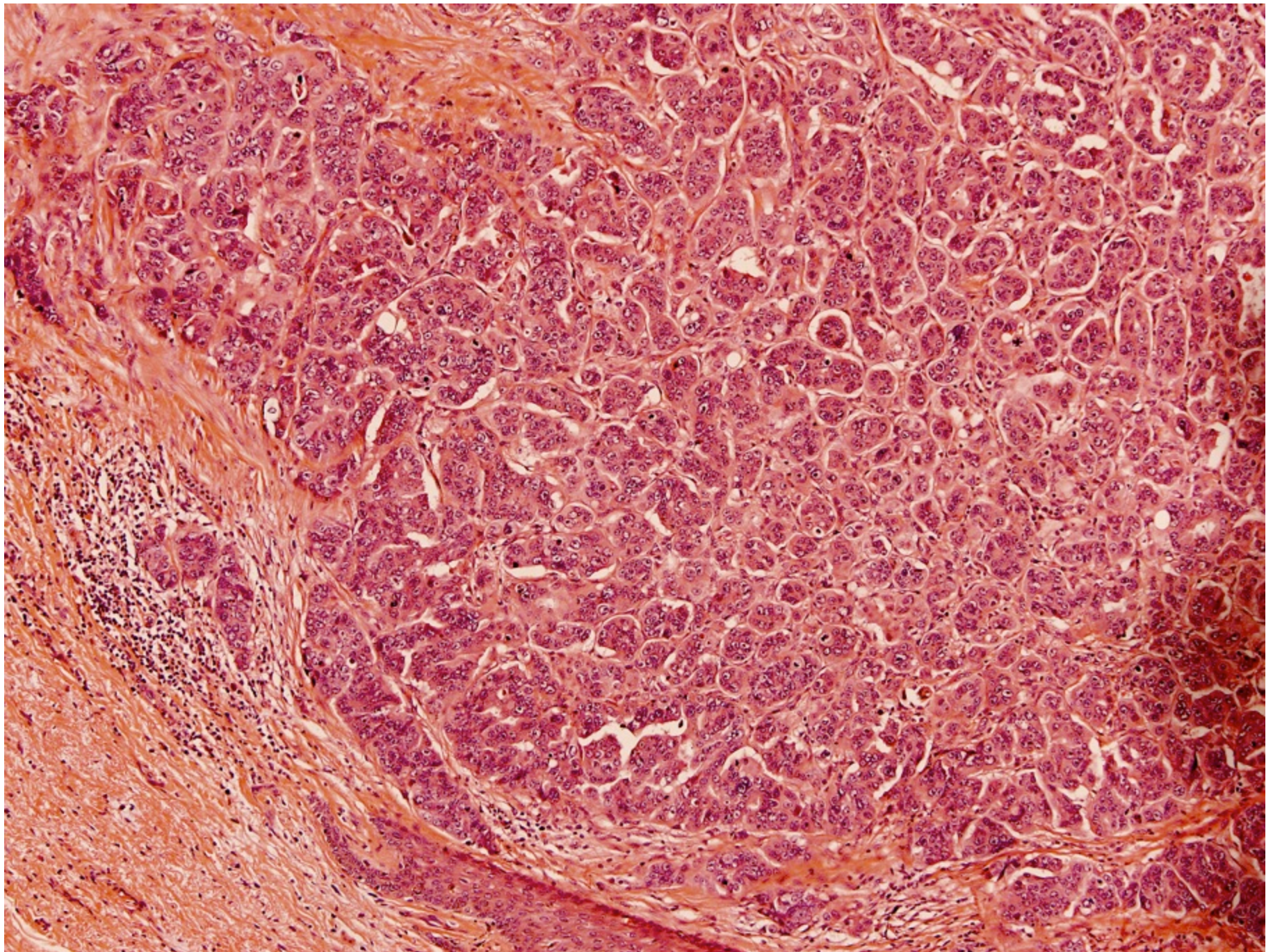


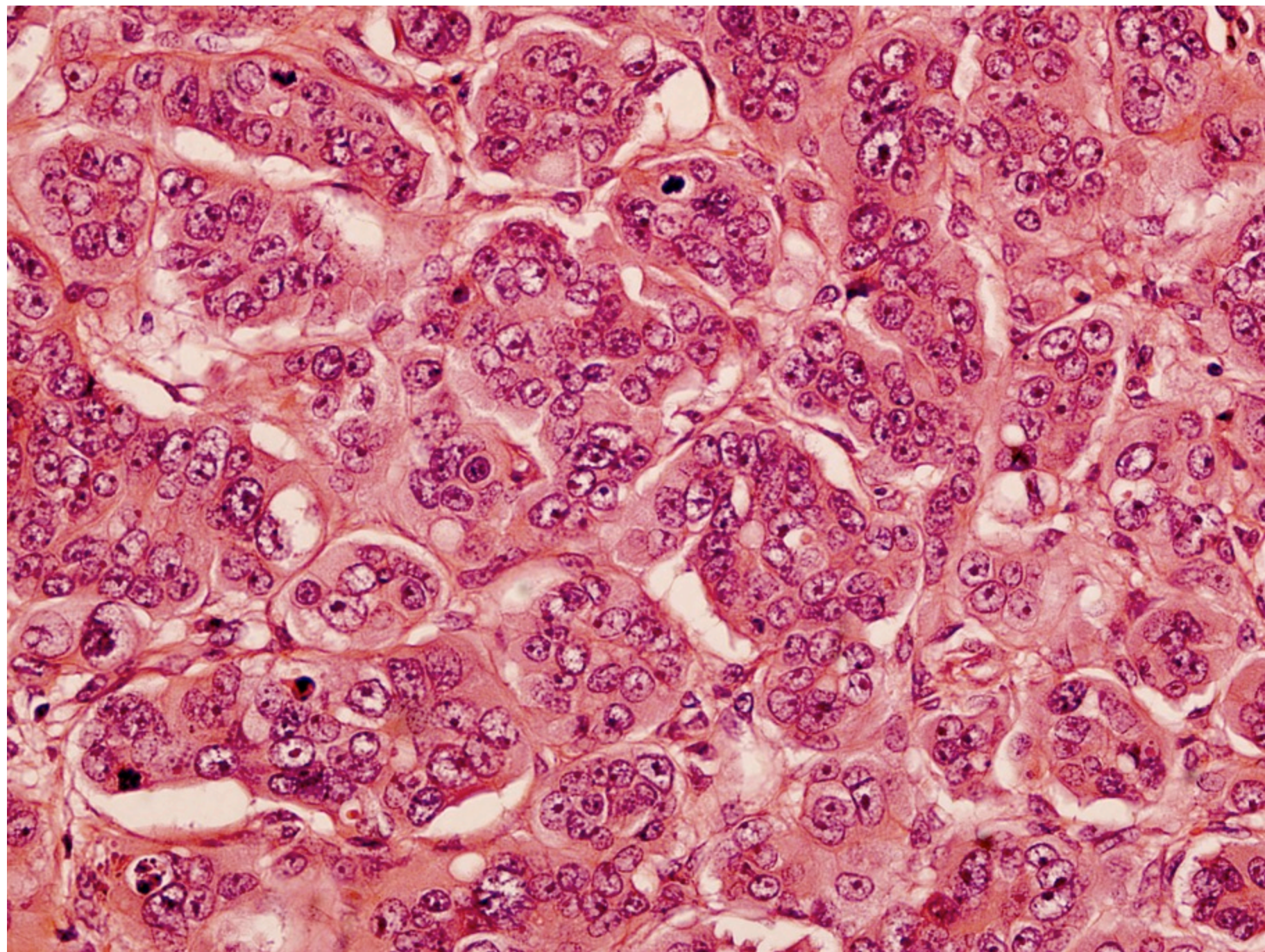
Endometriosis

Case 26, H4925/11

68F, umbilical lesion







Sister Joseph nodule