Disclosures
January 8, 2018

Dr. Jeffrey Simko has disclosed that he has financial relationships with the following commercial interests: 3D biopsy (stock ownership), 3scan (stock ownership), and GenomeDX (consultant). South Bay Pathology Society has determined that these relationships are not relevant to the clinical case being presented.

The following planners and faculty had no financial relationships with commercial interests to disclose:

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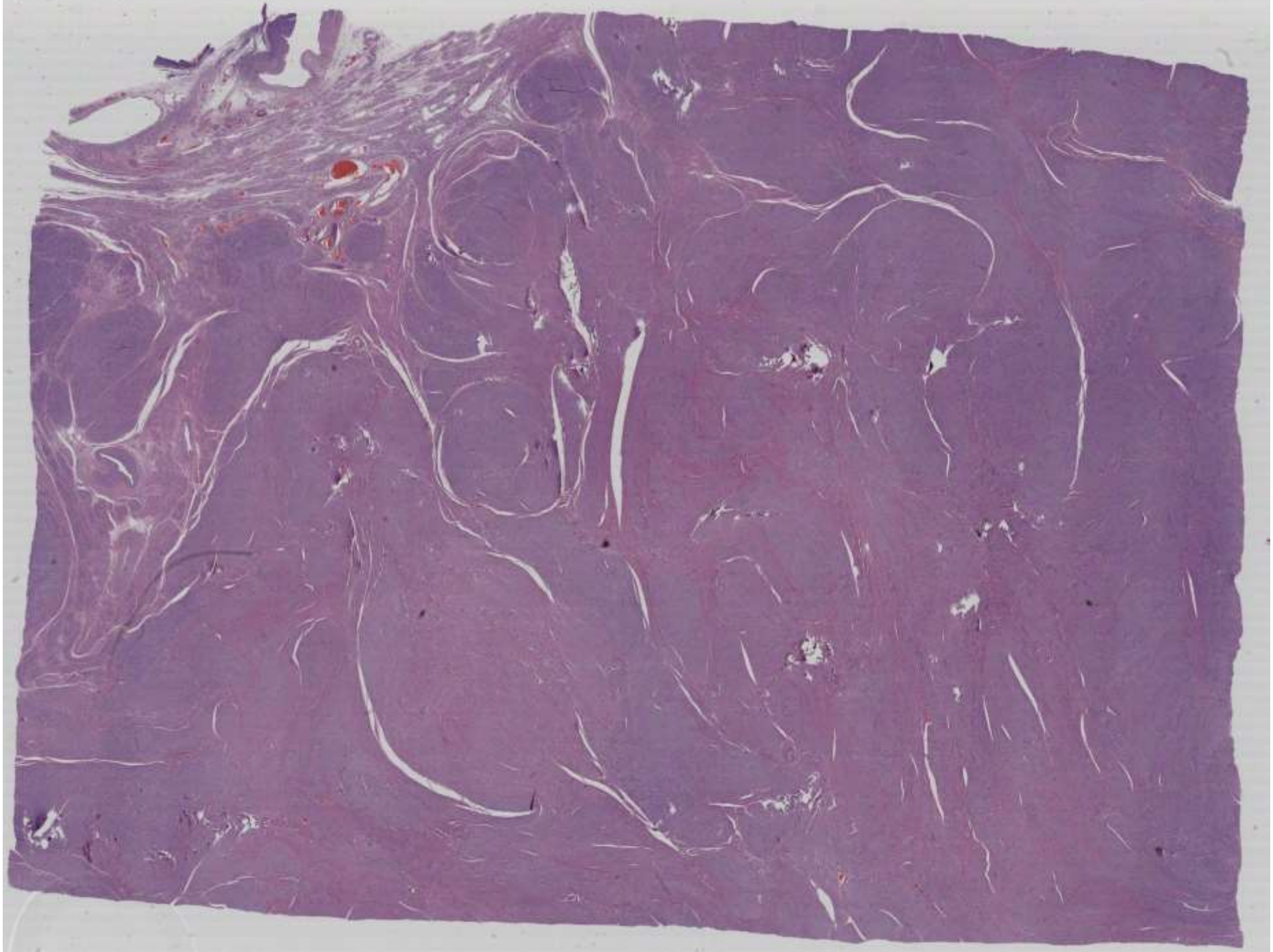
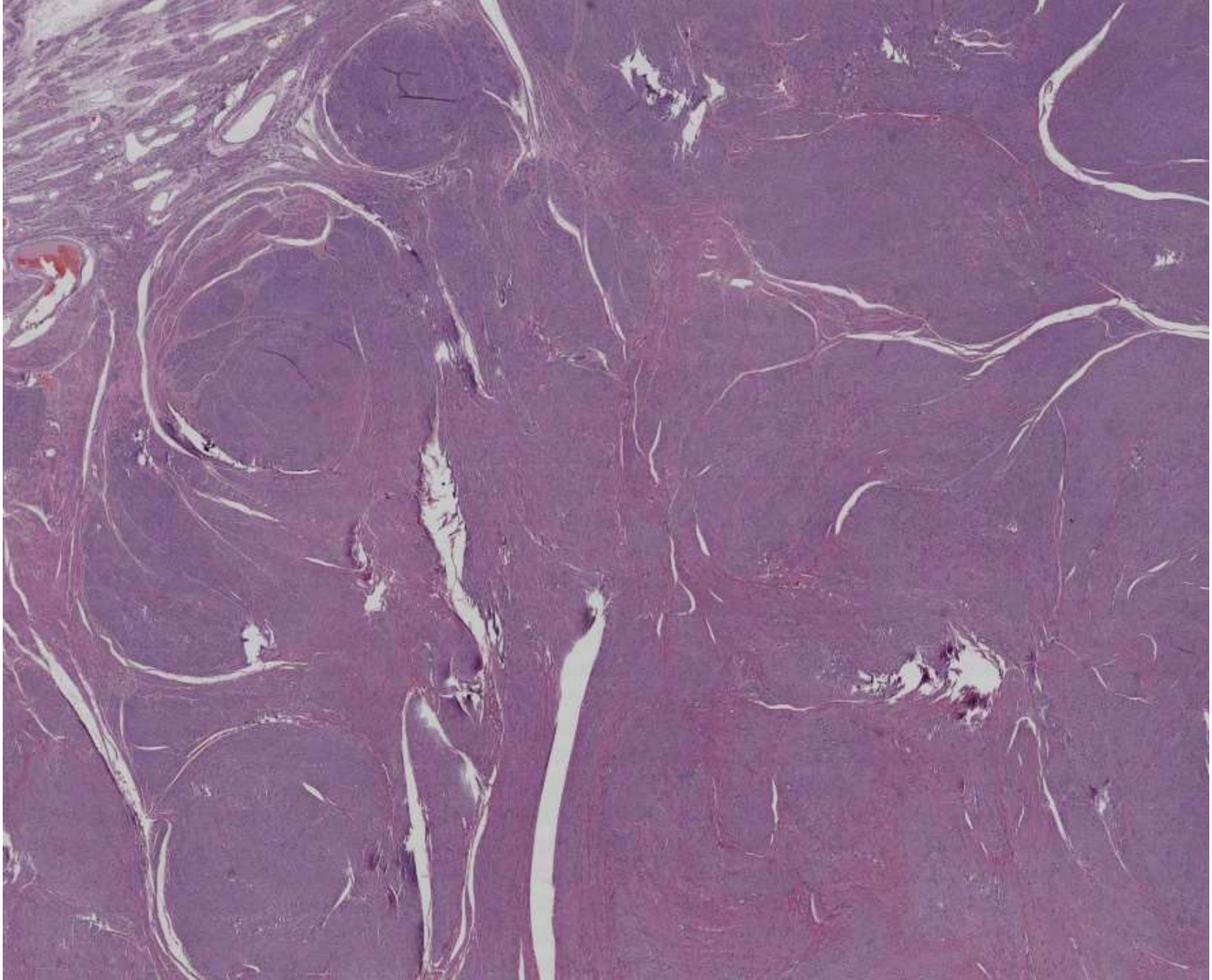
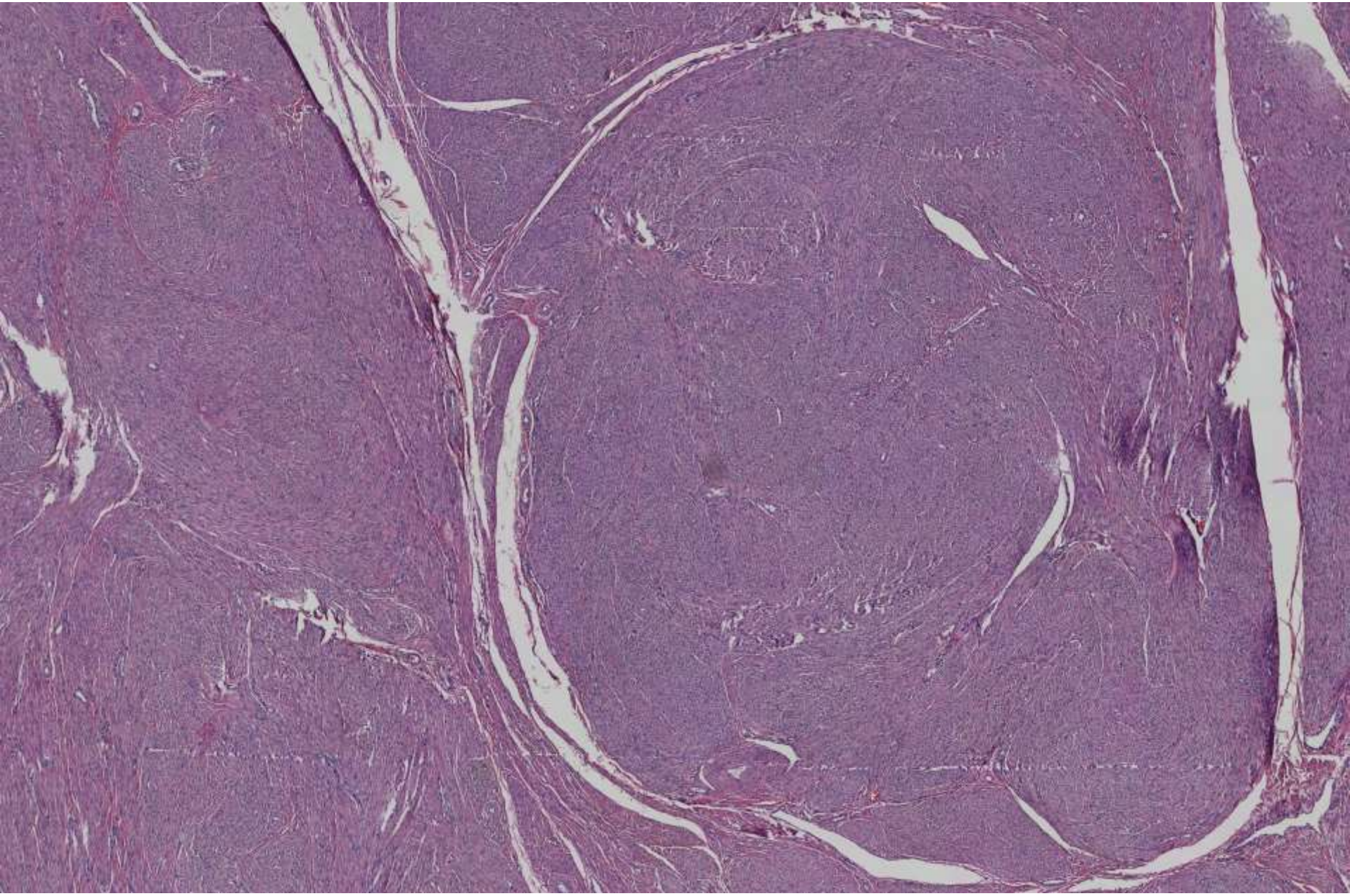
6231
(scanned slide available)

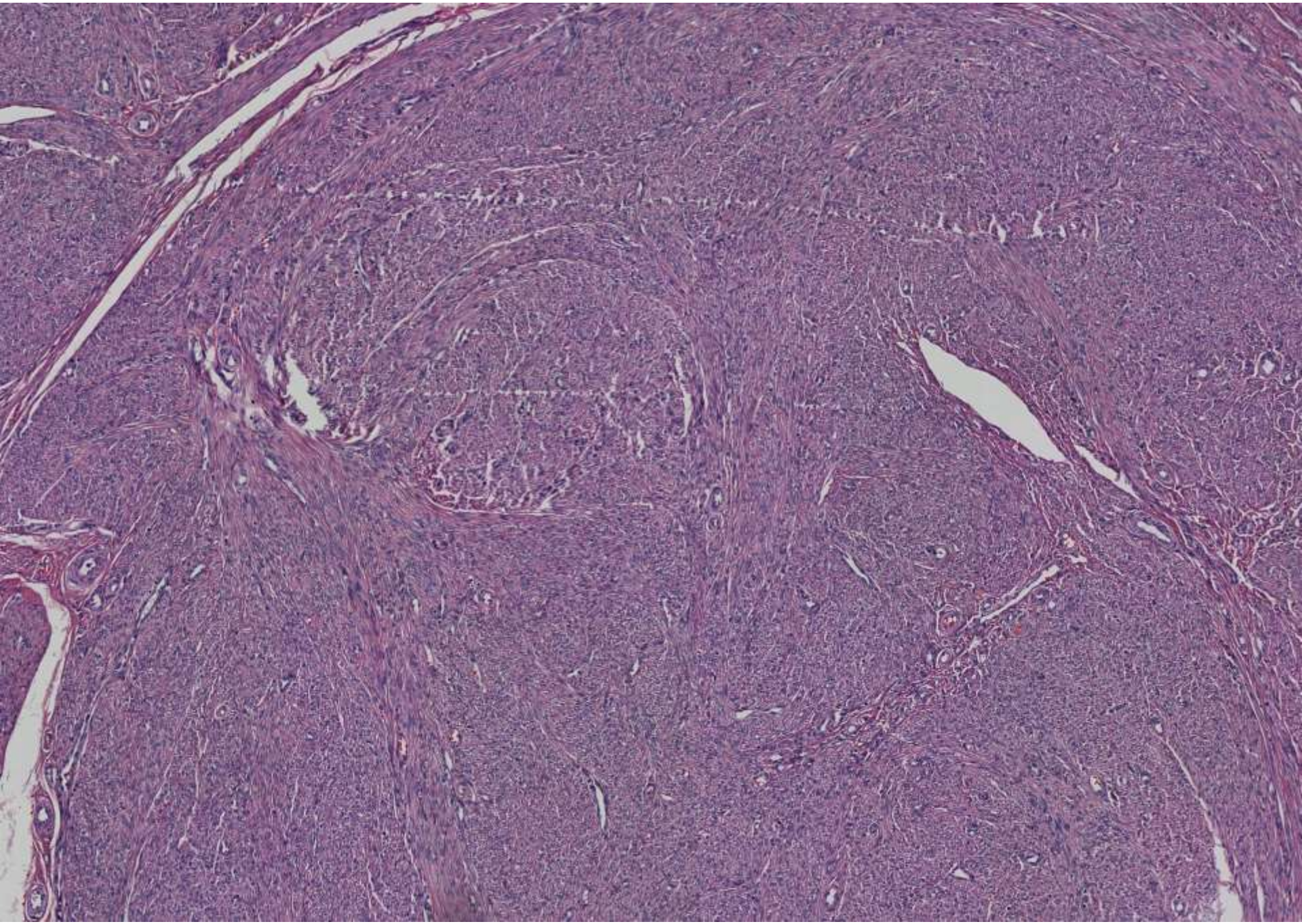
Mahendra Ranchod; Good Samaritan Hospital

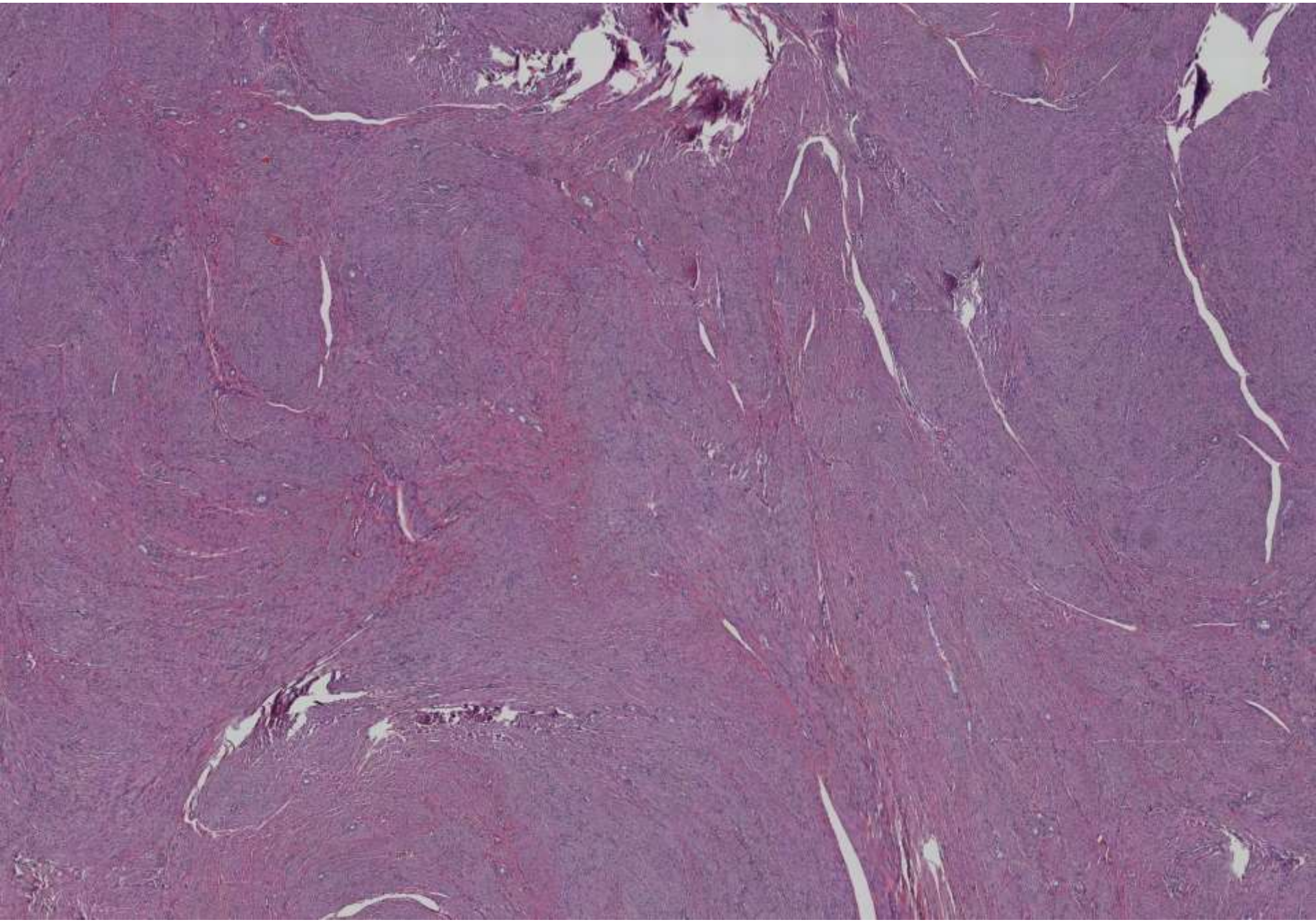
35-year-old female with clinical diagnosis of leiomyomas. Uterus enlarged (300g) with diffuse thickening of myometrium.

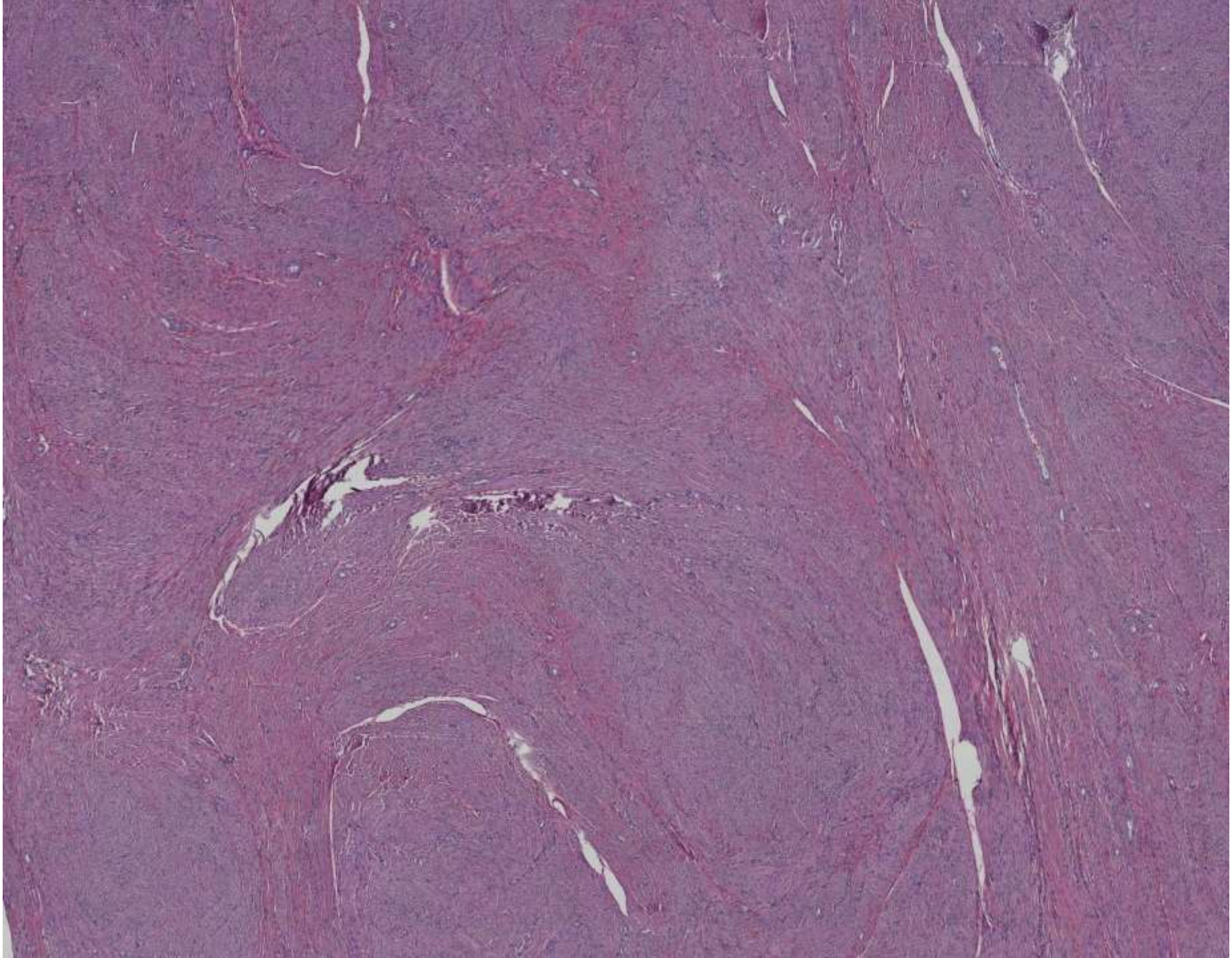


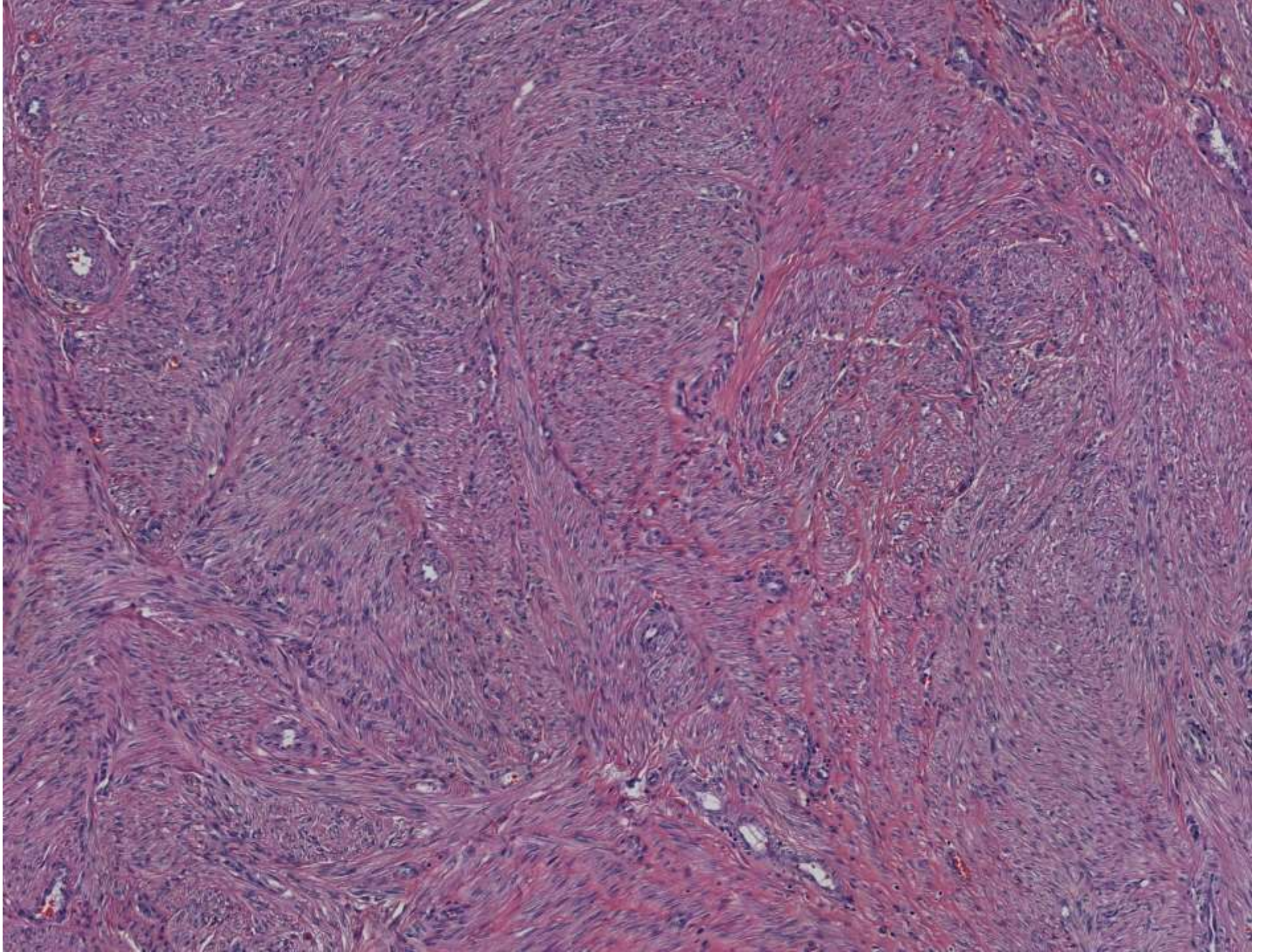


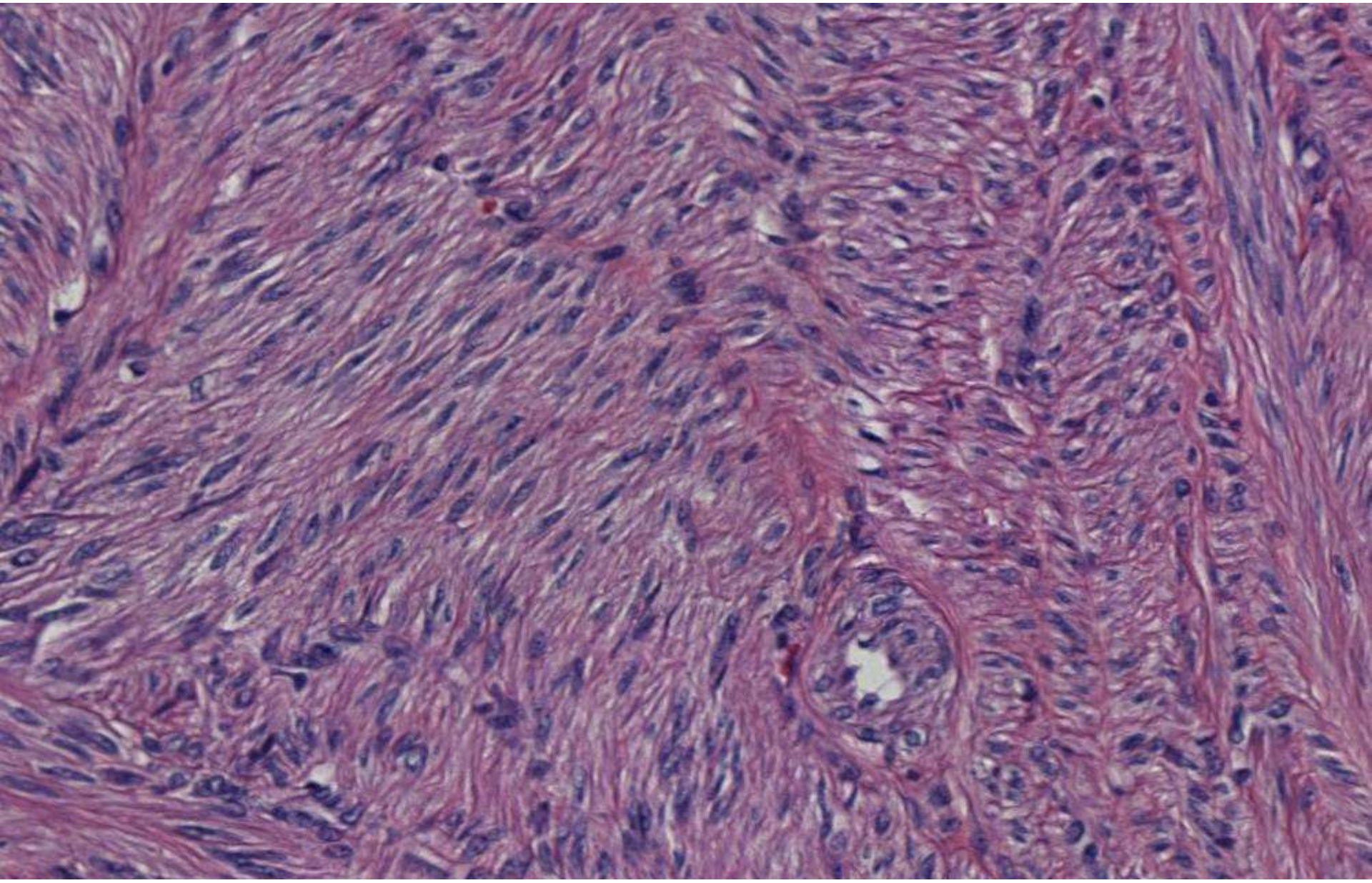


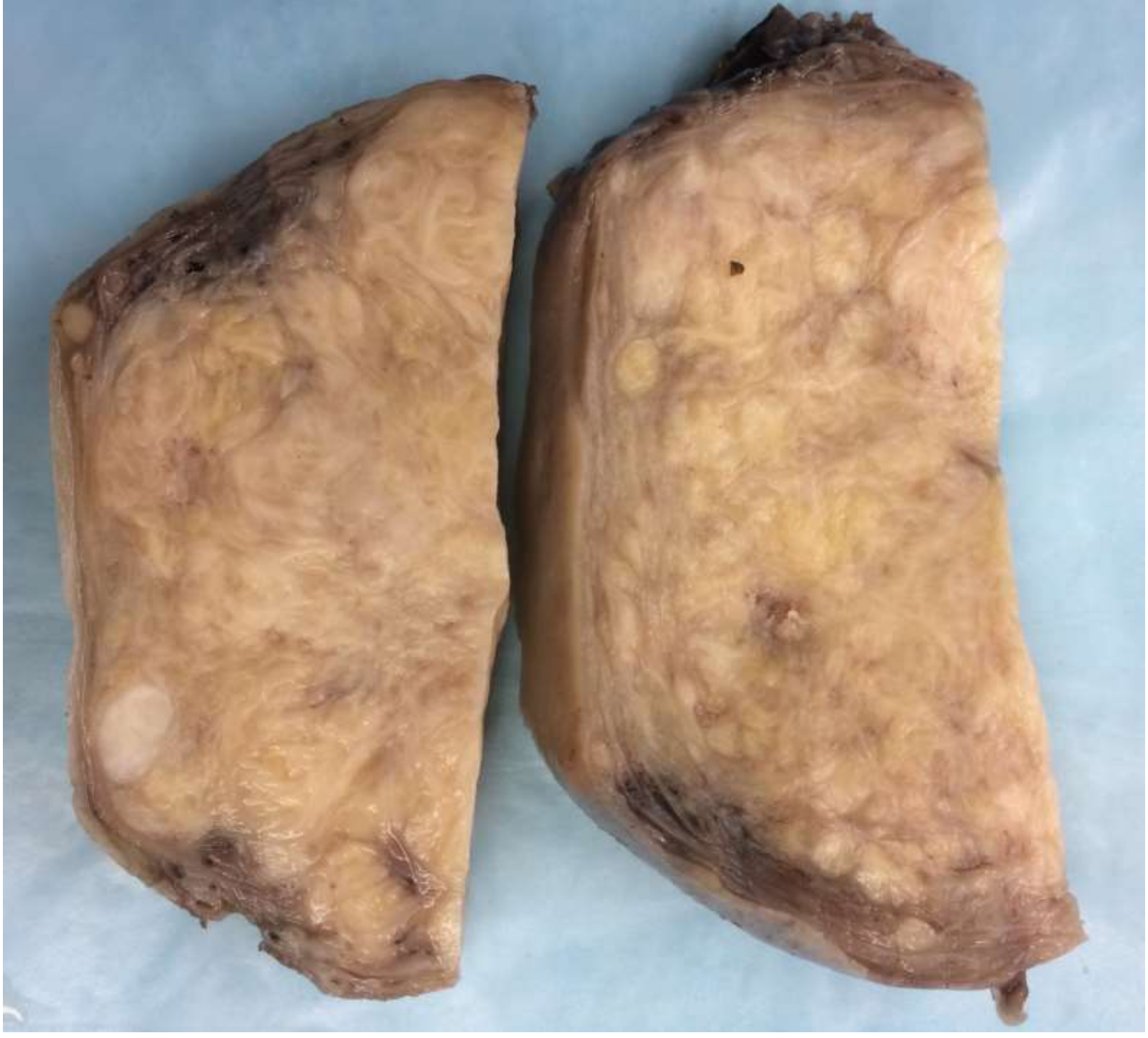












Diffuse Leiomyomatosis

Clinical:

- **Premenopausal women**
- **Uterine bleeding**
- **Enlarged uterus**

Pathology:

- **Diffuse, symmetrical thickening of myometrium, with sparing of cervix**
- **Serosa may show subtle nodularity**
- **Innumerable confluent leiomyomas**

Diffusely enlarged uterus due to benign lesions

Adenomyosis

Idiopathic hypertrophy (>120g)

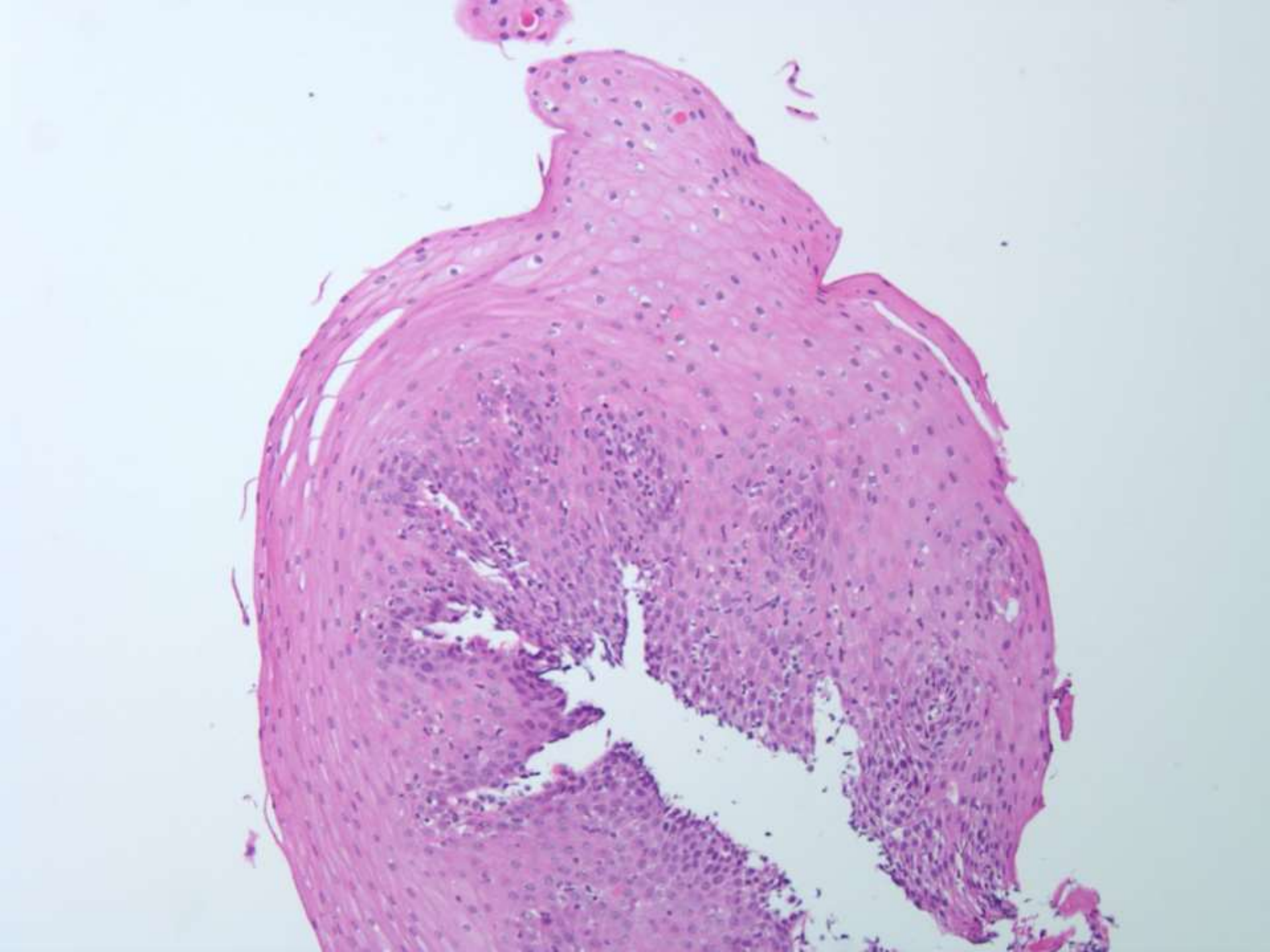
Diffuse leiomyomatosis

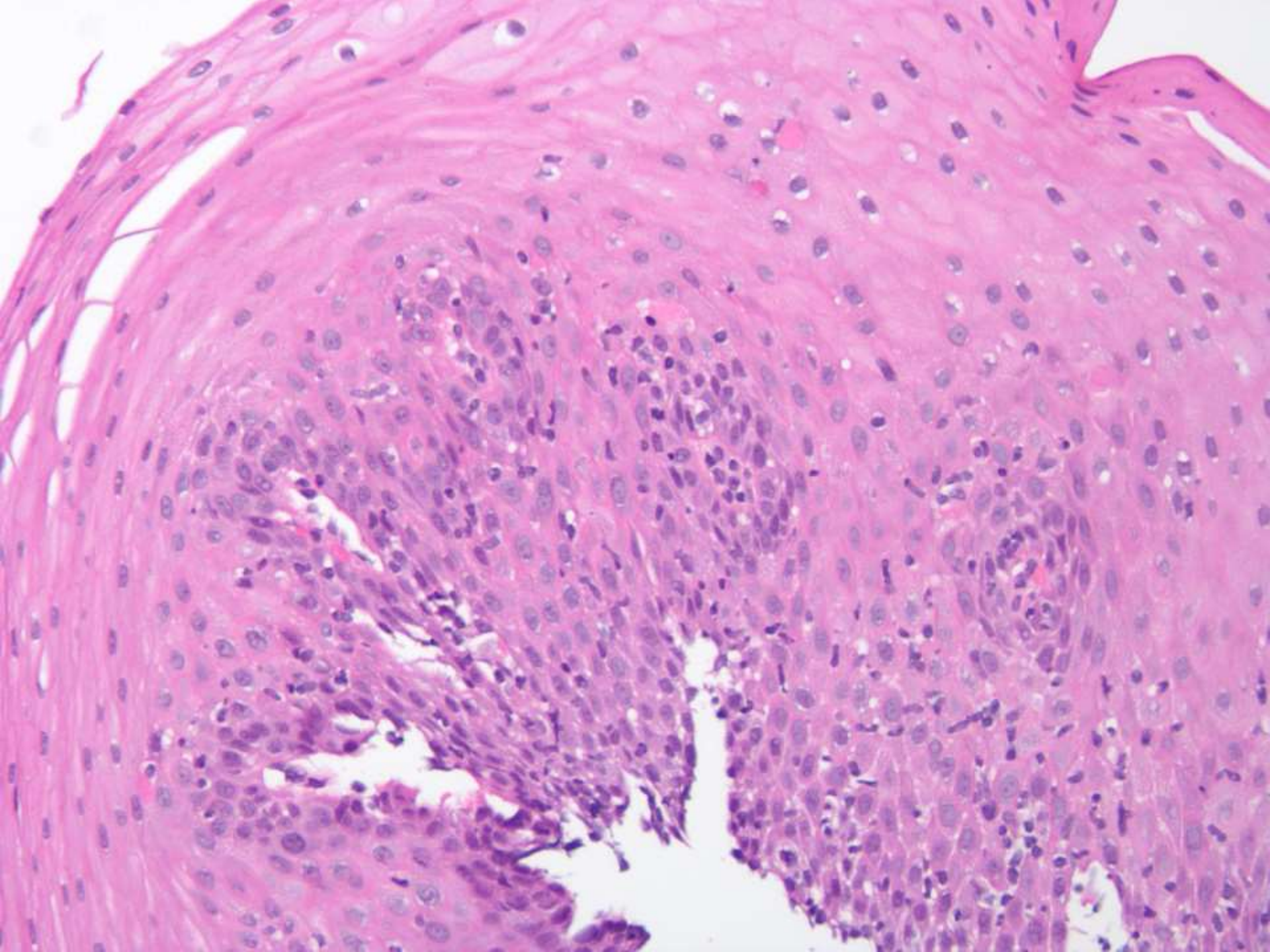
(Transient hypertrophy of pregnancy)

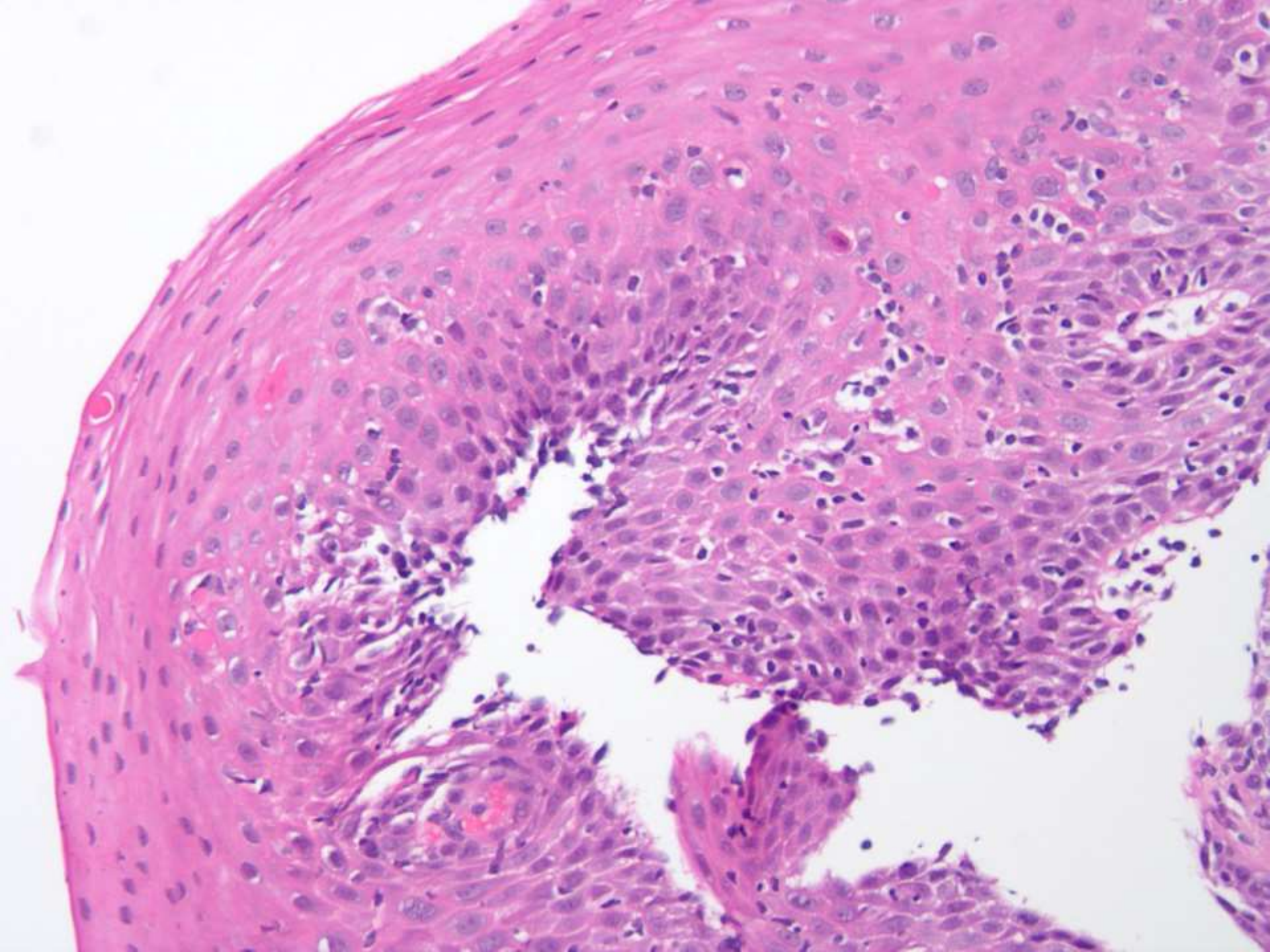
6232

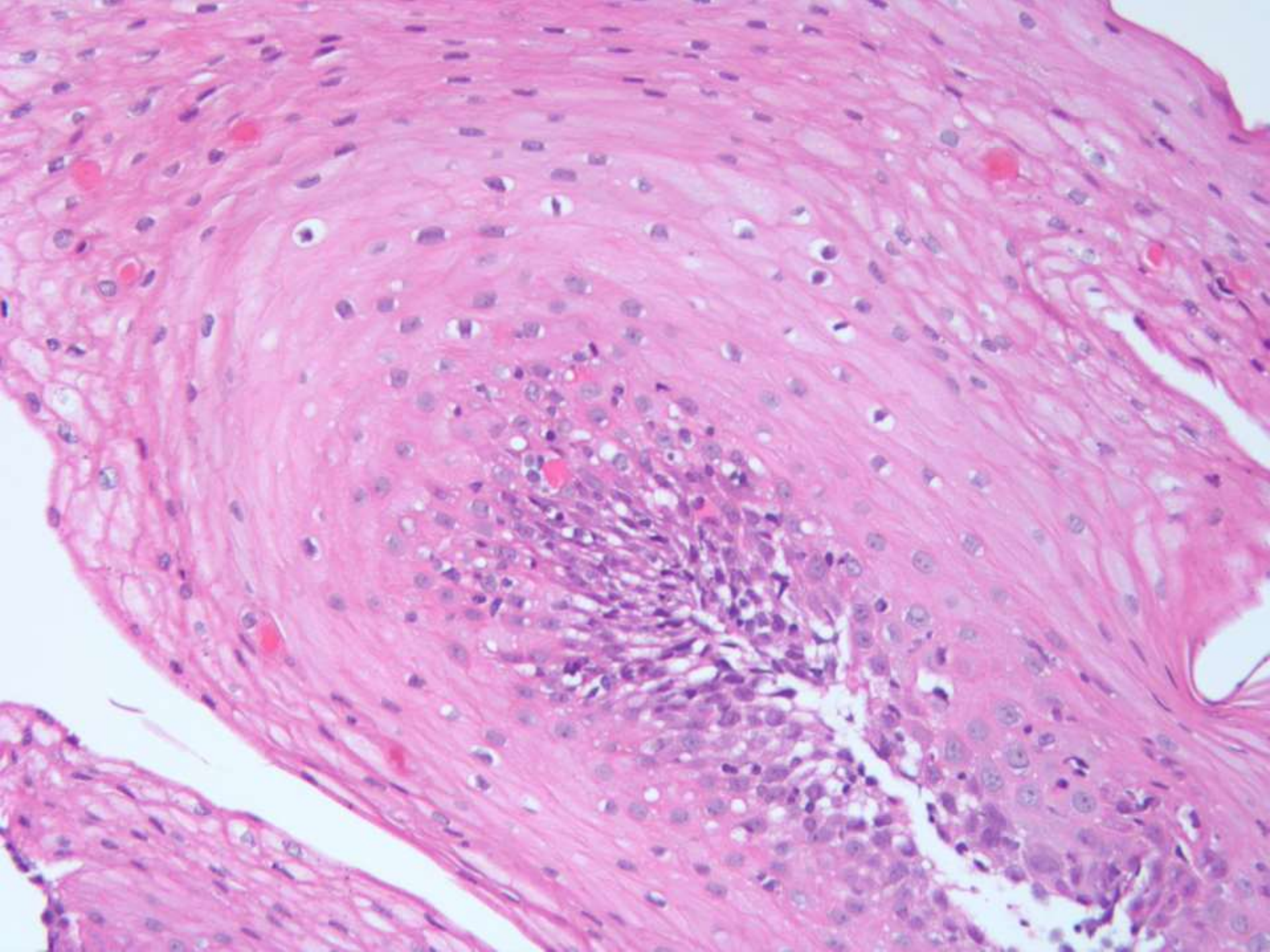
Charles Lombard; El Camino Hospital

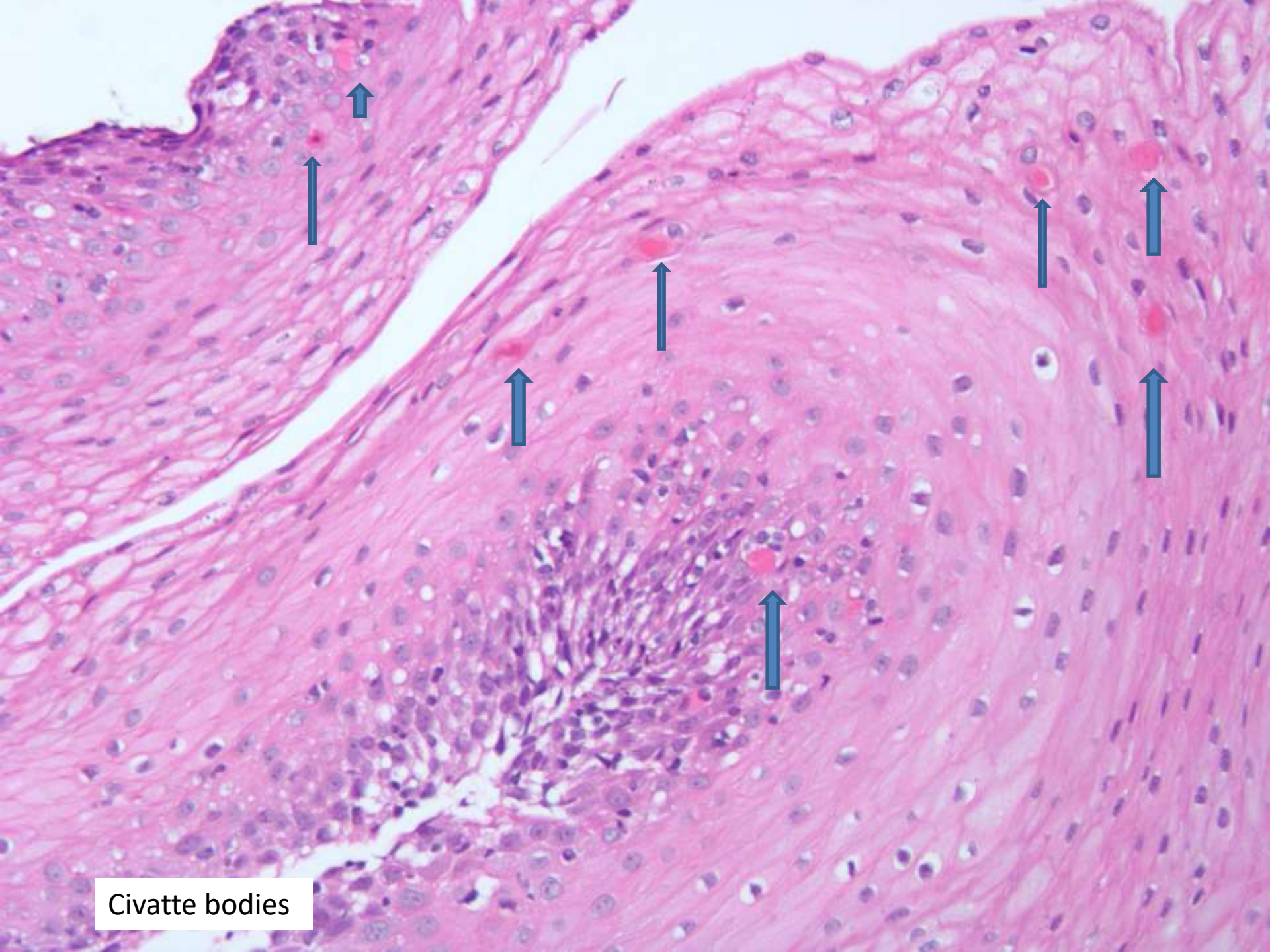
69-year-old female with dysphagia, esophageal biopsy performed.










Civatte bodies

Esophageal Lichen Planus

- Lichen Planus- autoimmune skin condition, at times associated with meds or Hep C
- Major preponderance female>males, often middle aged (as opposed to EE)
- Skin manifestation occur in 0.5-2% of population, also occurs in oral cavity, genitalia, hair/nails
- Esophageal involvement uncommon, majority of cases have extraesophageal involvement concomitantly.
- Esophageal involvement is underrecognized, mean time to delay in diagnosis is 27 months

UCSF with review Of Literature

Table I. Patient characteristics

Total No. of patients	72
No. of patients where sex reported	63
F	55 (87%)
M	8 (13%)
F:M	6.9:1
No. of patients where age reported	45 (43 F, 2 M)
Age at time of diagnosis, y	22-85
Median age of F patients, y	61.9
Median age of M patients, y	29.5

Table II. Associated symptoms in patients with esophageal lichen planus

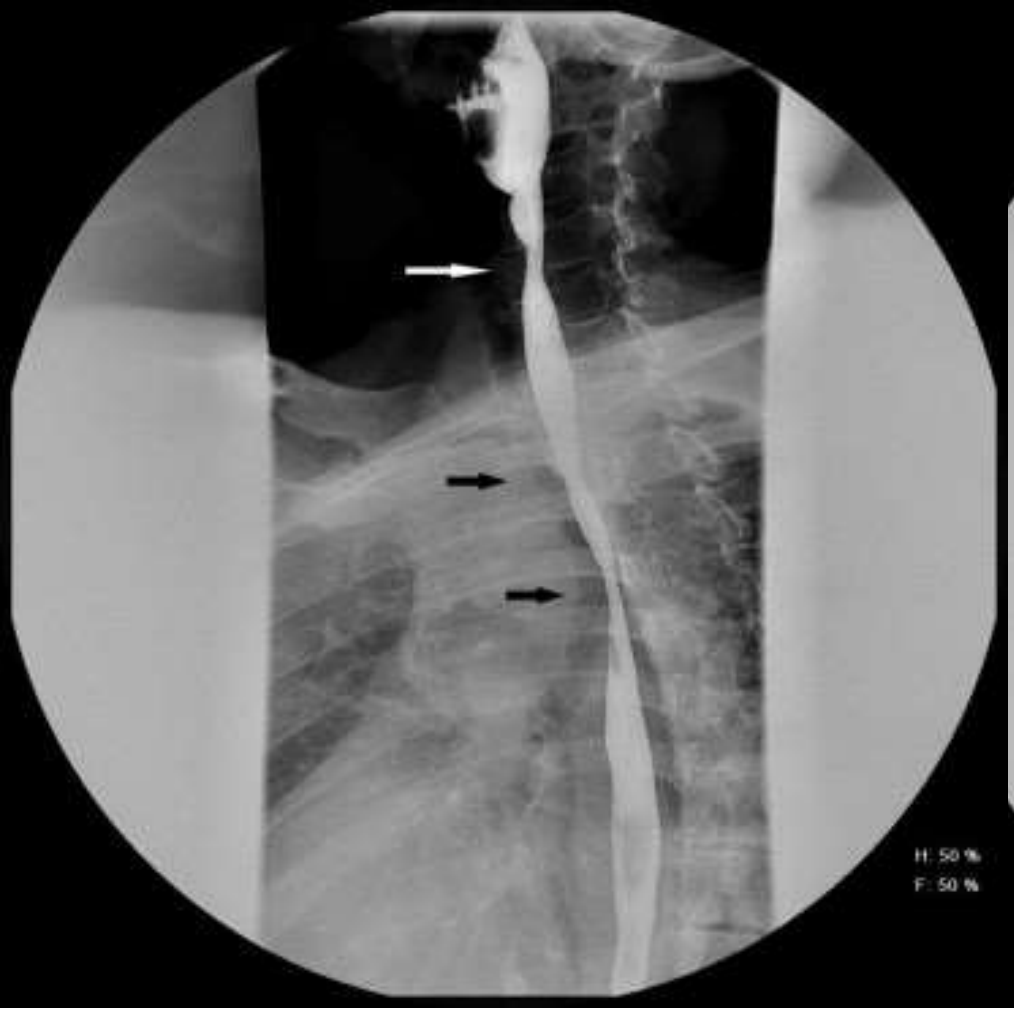
Esophageal symptoms reported	72/72 (100%)
Dysphagia	58/72 (81%)
Odynophagia	17/72 (24%)
Asymptomatic	12/72 (17%)
Weight loss	10/72 (14%)
Heartburn	6/72 (8%)
Regurgitation	2/72 (3%)
Choking	1/72 (1%)
Hoarseness	1/72 (1%)

UCSF with review of literature:

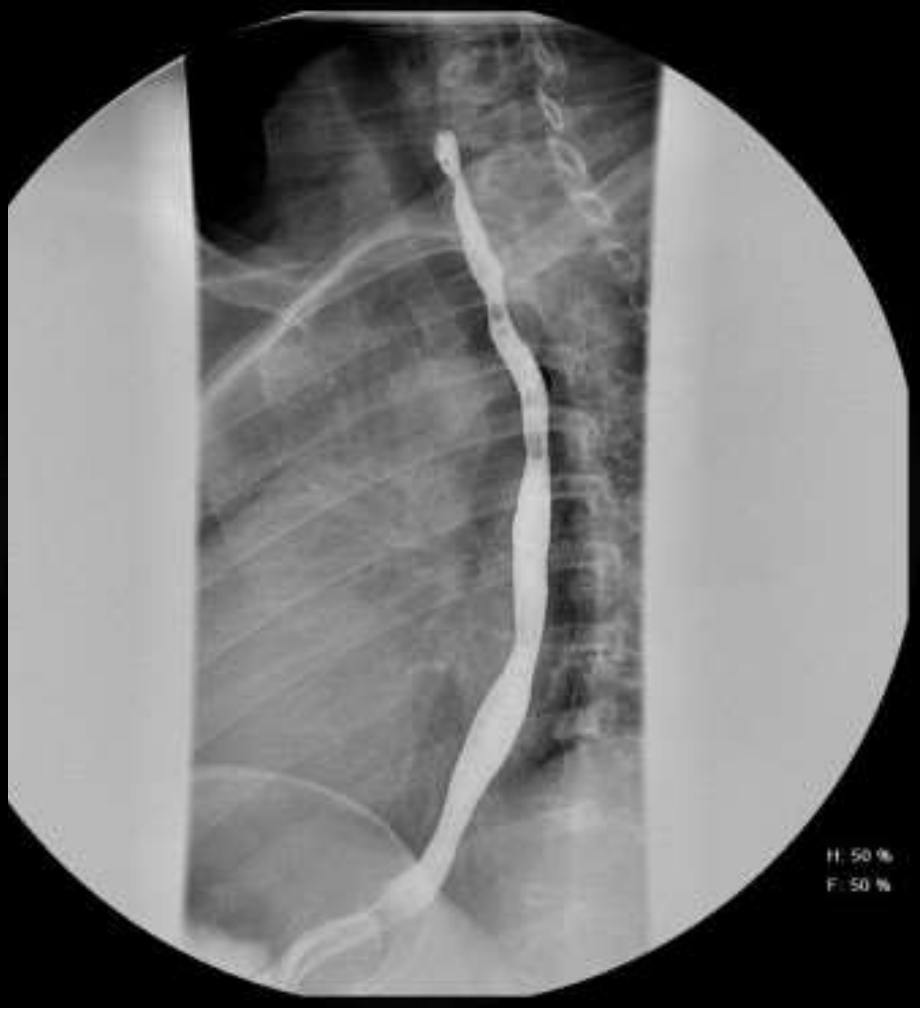
Table III. Presence of extraesophageal lichen planus

Extraesophageal lichen planus found*	71/72 (99%)
Oral	63/71 (89%)
Vulvovaginal/anogenital	30/71 (42%)
Cutaneous	27/71 (38%)
Scalp	5/71 (7%)
Nails	2/71 (3%)
Ocular	1/71 (1%)
Location not specifically stated	1/71 (1%)

*Presence or absence of extraesophageal lichen planus was discussed in all 72 patients.



Esophagogram demonstrating multiple Strictures (arrows) in a patient with Lichen Planus



Esophagogram demonstrating diffusely narrowed esophagus consistent with Small caliber esophagus in a patient With Lichen Planus

Esophageal Lichen Planus

- Endoscopic appearance

Rings

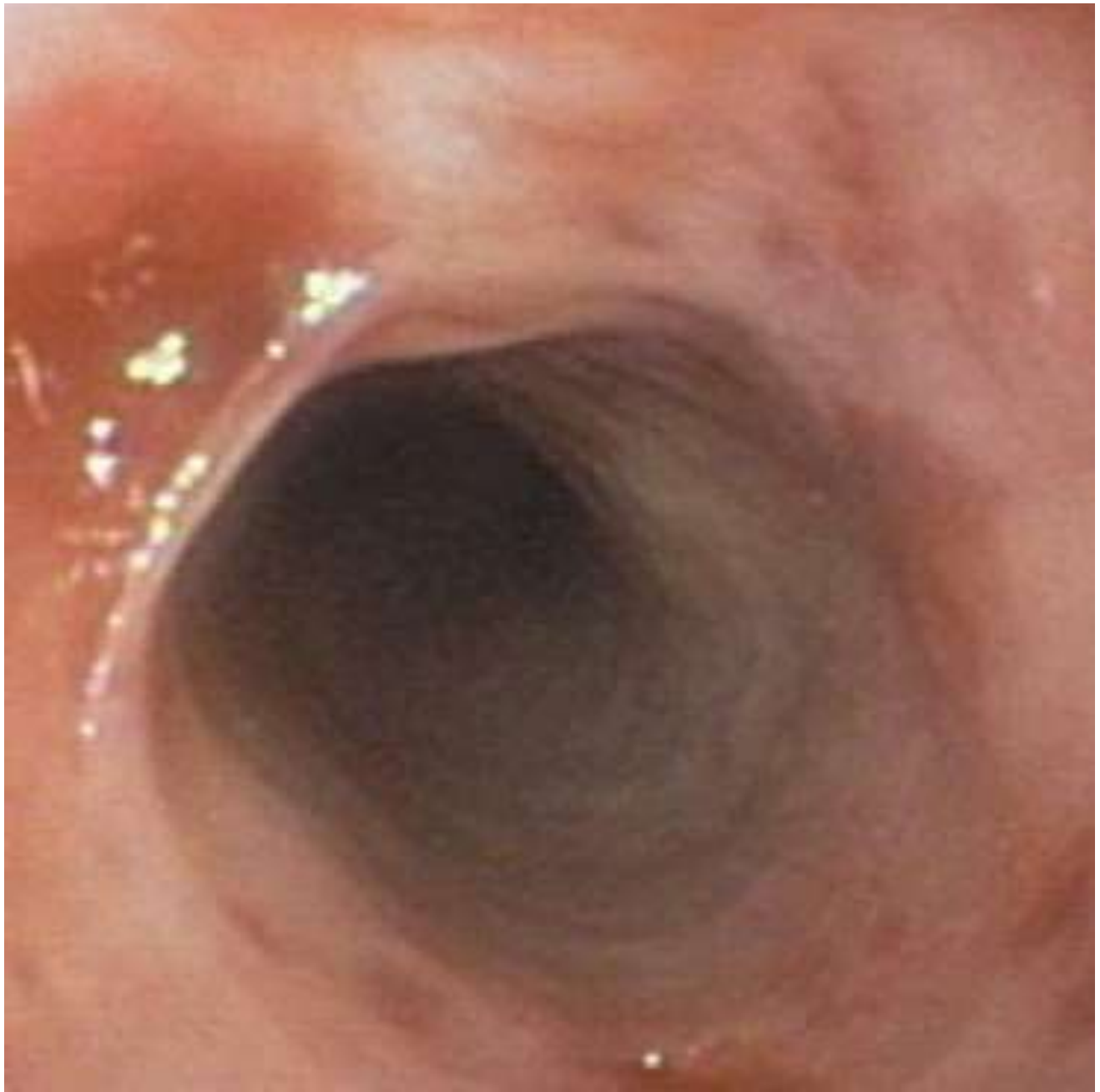
Esophageal sloughing

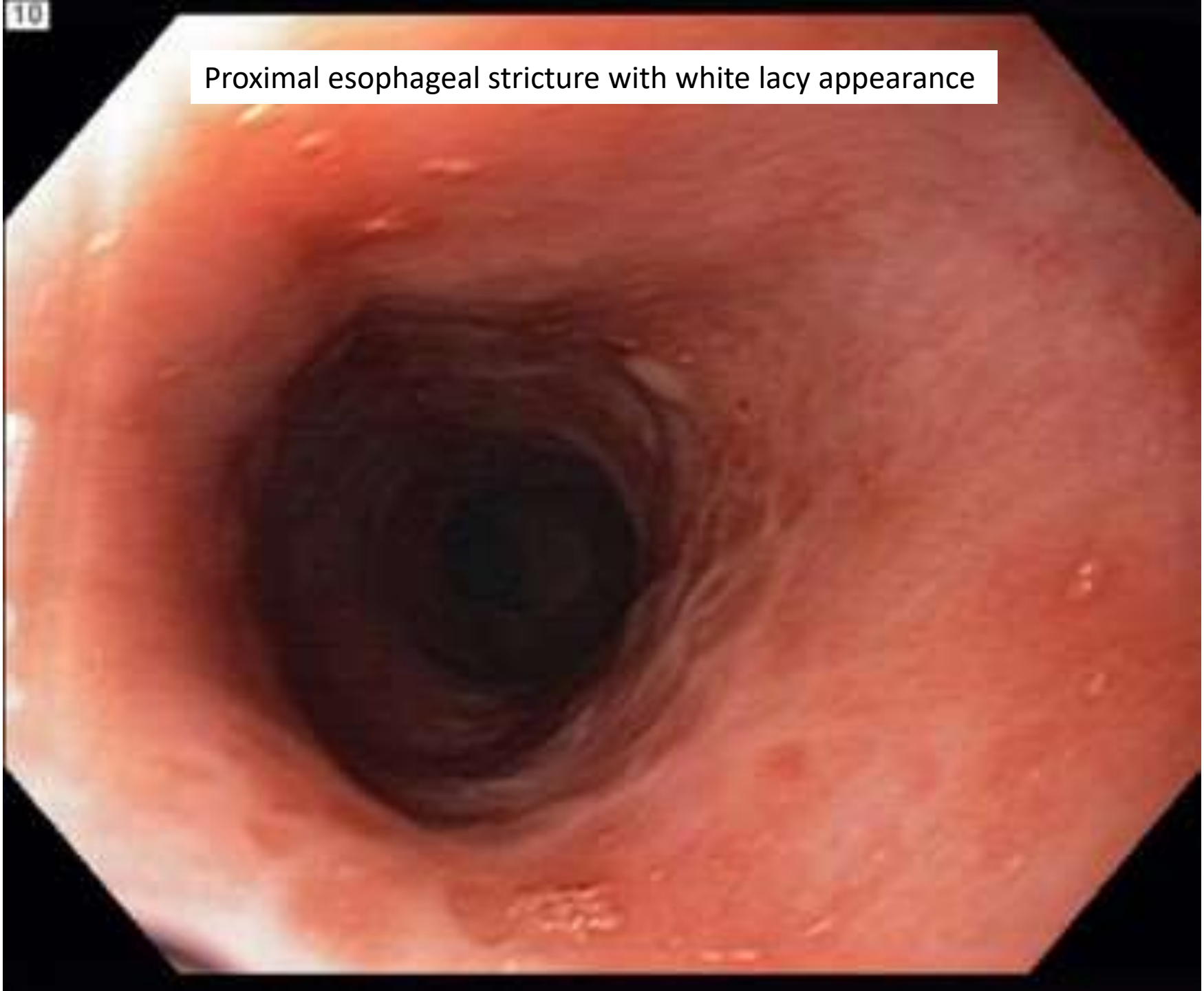
“Tissue paper” mucosa

Often spares GE junction

LOOKS like EE

Proximal esophageal web and stricture with white discoloration, mucosal thickening, Superficial ulceration, and subtle ringed appearance

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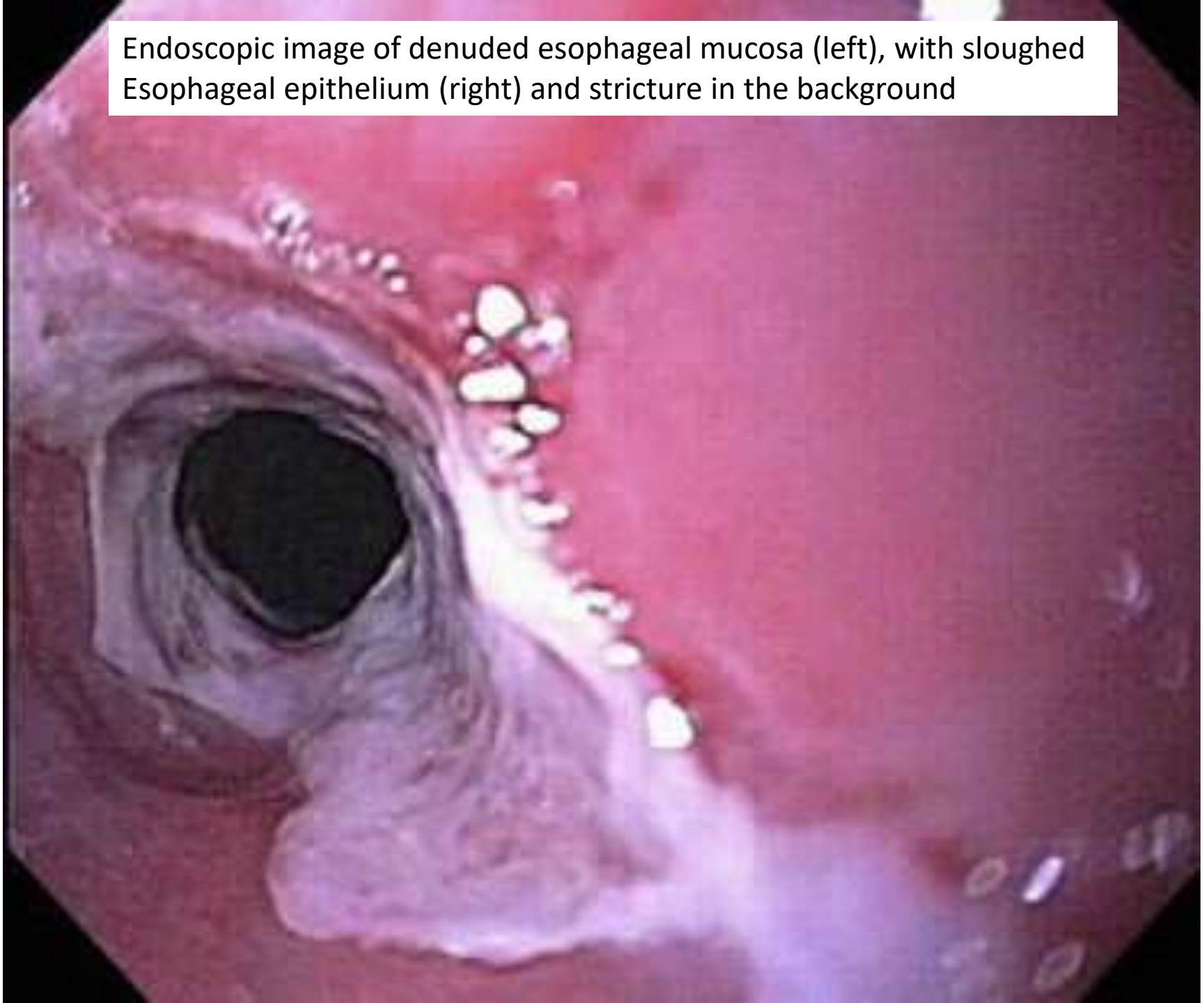
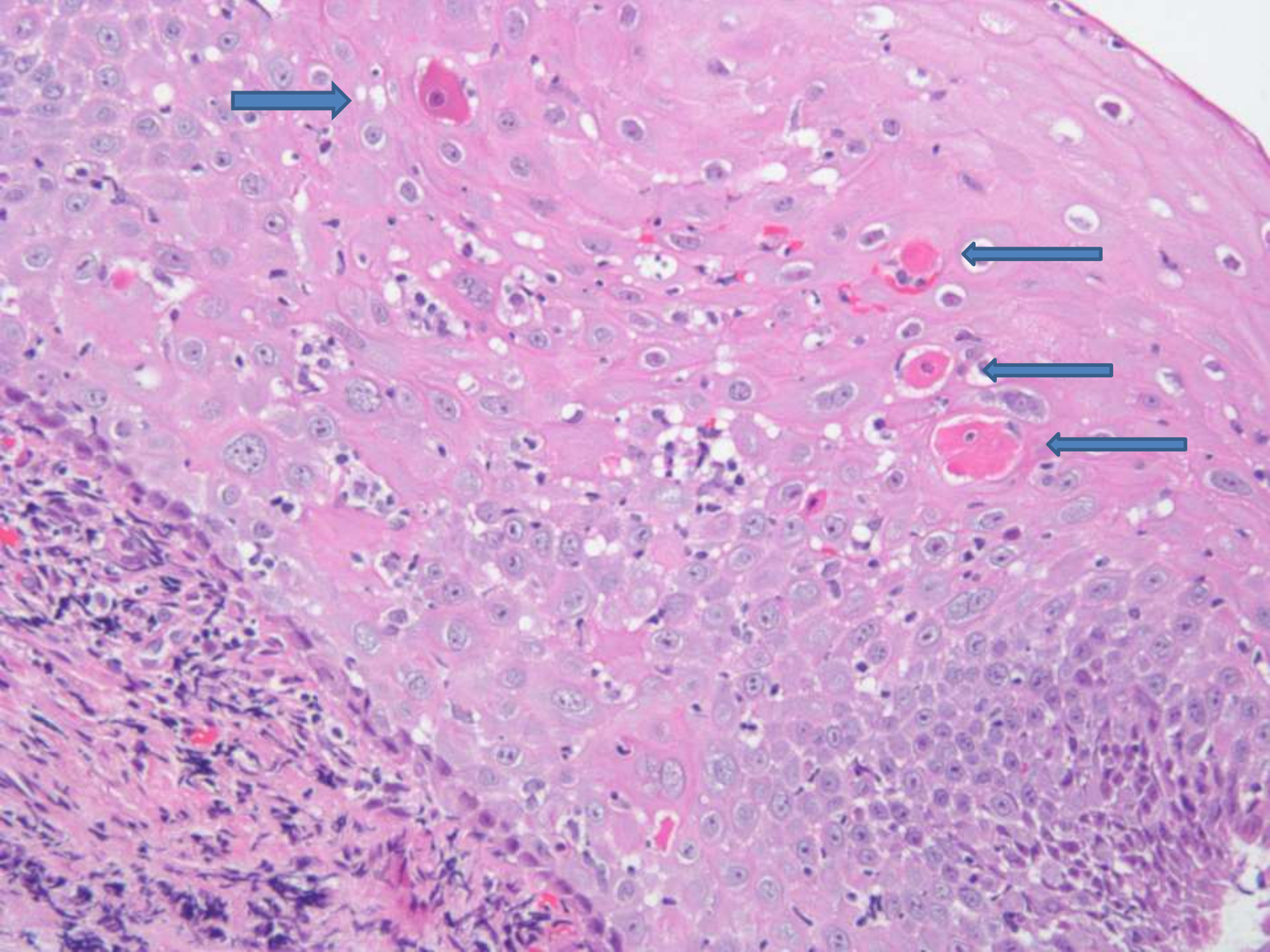
Proximal esophageal stricture with white lacy appearance

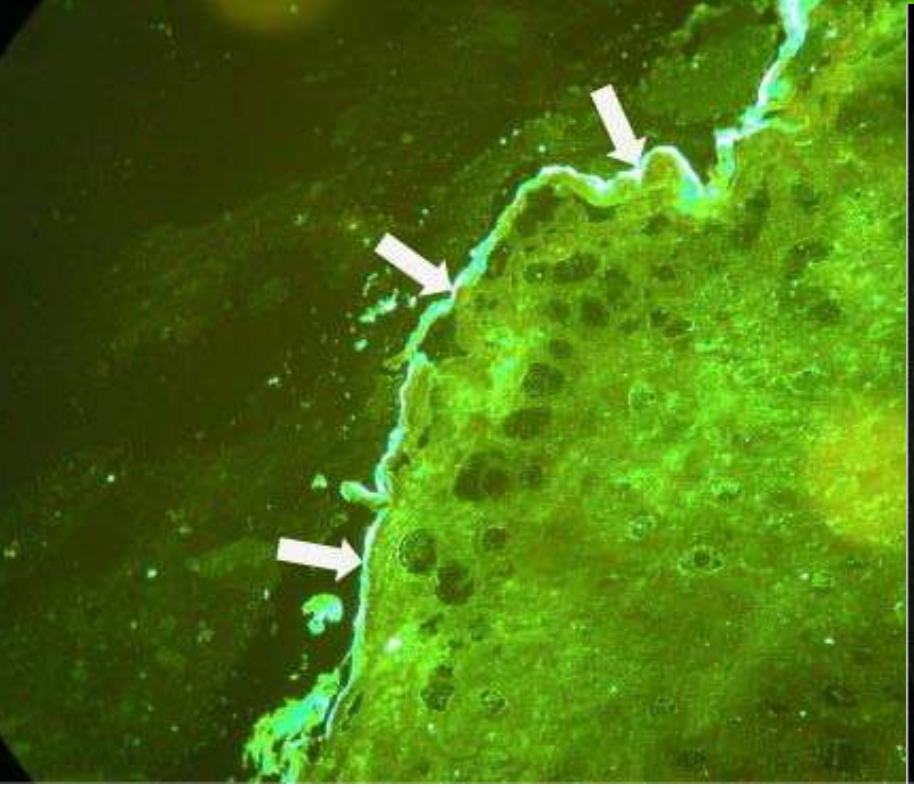


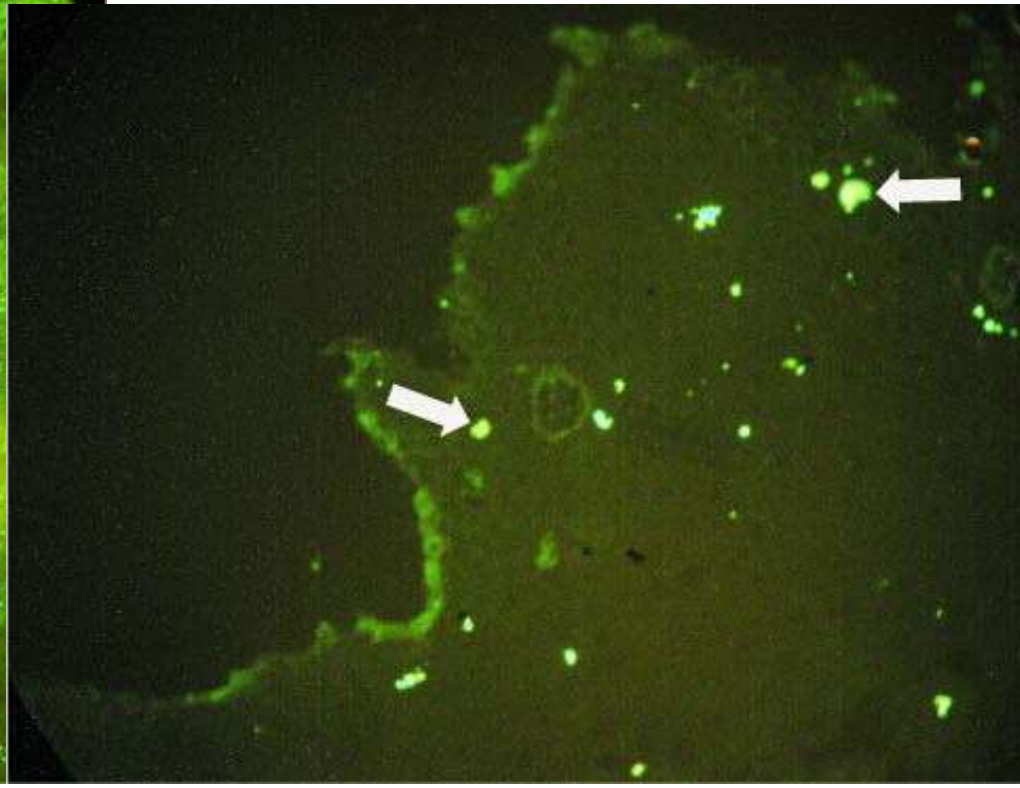
Endoscopic image of denuded esophageal mucosa (left), with sloughed Esophageal epithelium (right) and stricture in the background

Esophageal Lichen Planus Histologic features

- Band of inflammation (predominatly lymphocytic with involvement of epithelium and lamina propria
- Epithelium may be acanthotic, atrophic or a combination
- Characteristic Civatte bodies are scattered throughout the epithelium and are considered a diagnostic criteria for esophageal LP







“Shaggy fibrinogen deposits at Basement membrane

Ig M staining of Civatte bodies

Esophageal Lichen Planus

- Differential Dx

- Eosinophilic Esophagitis
- Lymphocytic Esophagits
- GERD
- Infectious/Fungal Esophagitis

Esophageal Lichen Planus

- Treatment
  - Topical steriods (fluticasone)
  - Systemic steriods
  - Esophageal dilatation
  - Intralesional steroid injection

Cancer risk

Multiple cases of concomitant squamous cell carcinoma have been reported, probably reasonable to survey endoscopically

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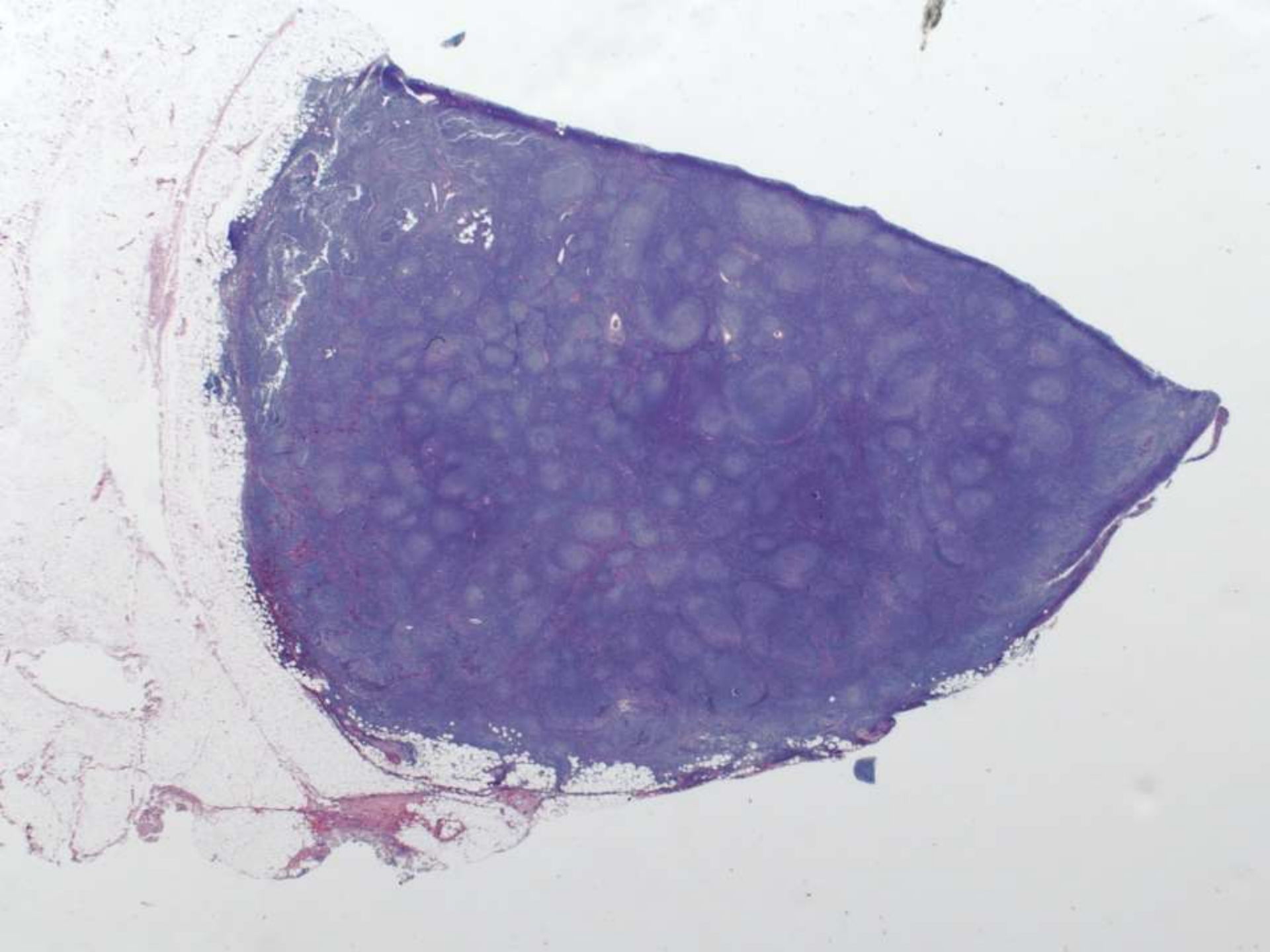
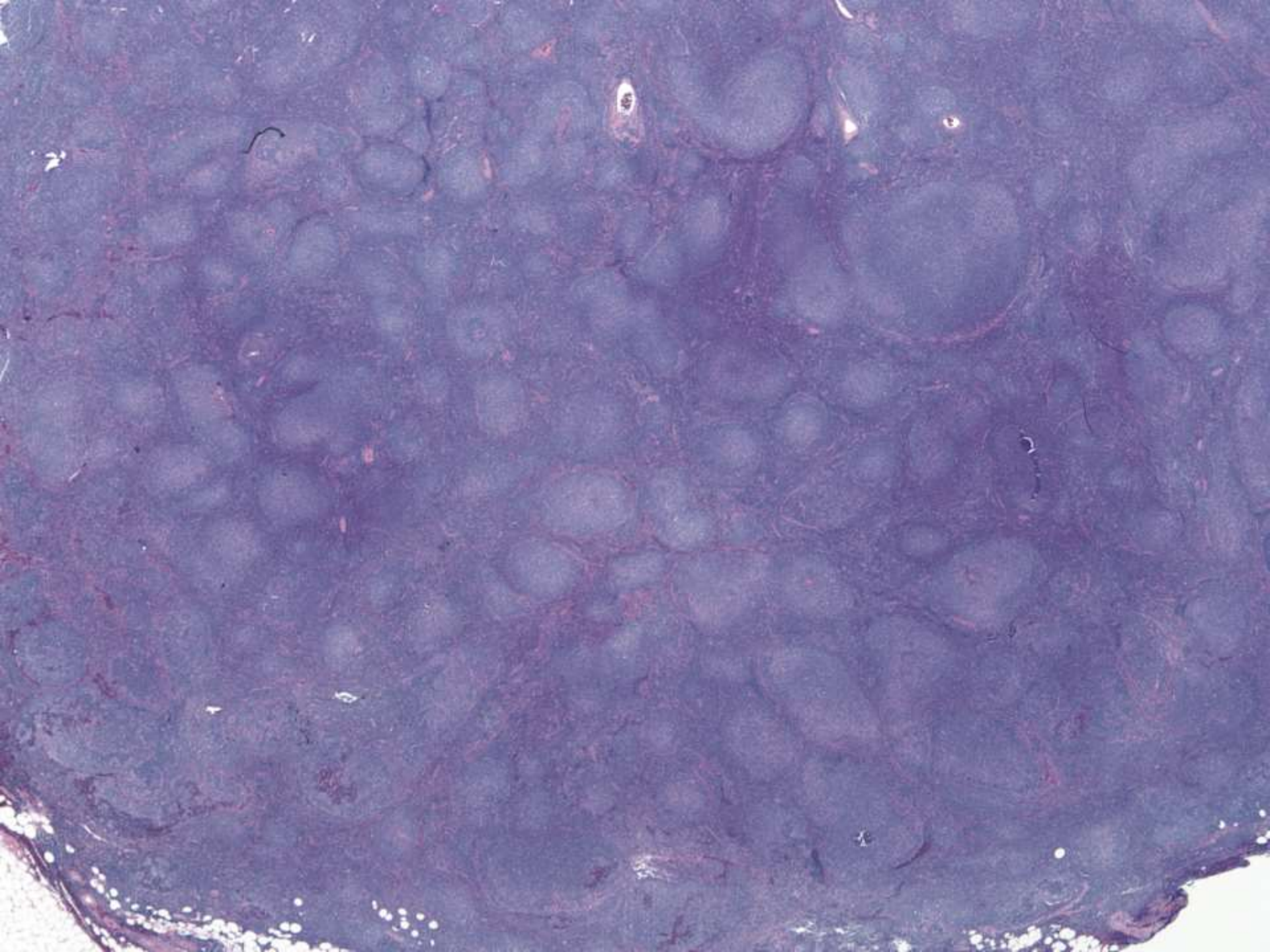
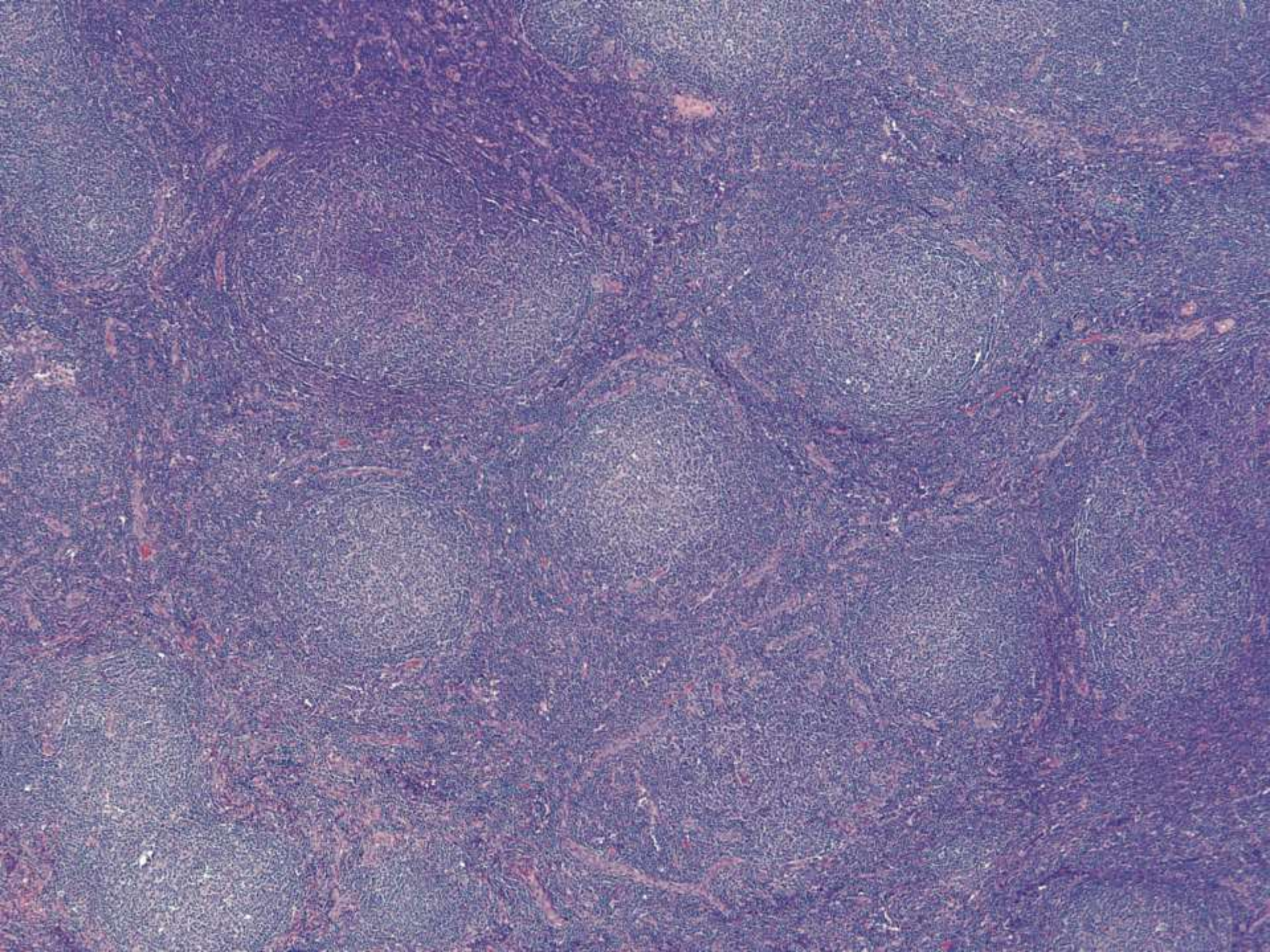
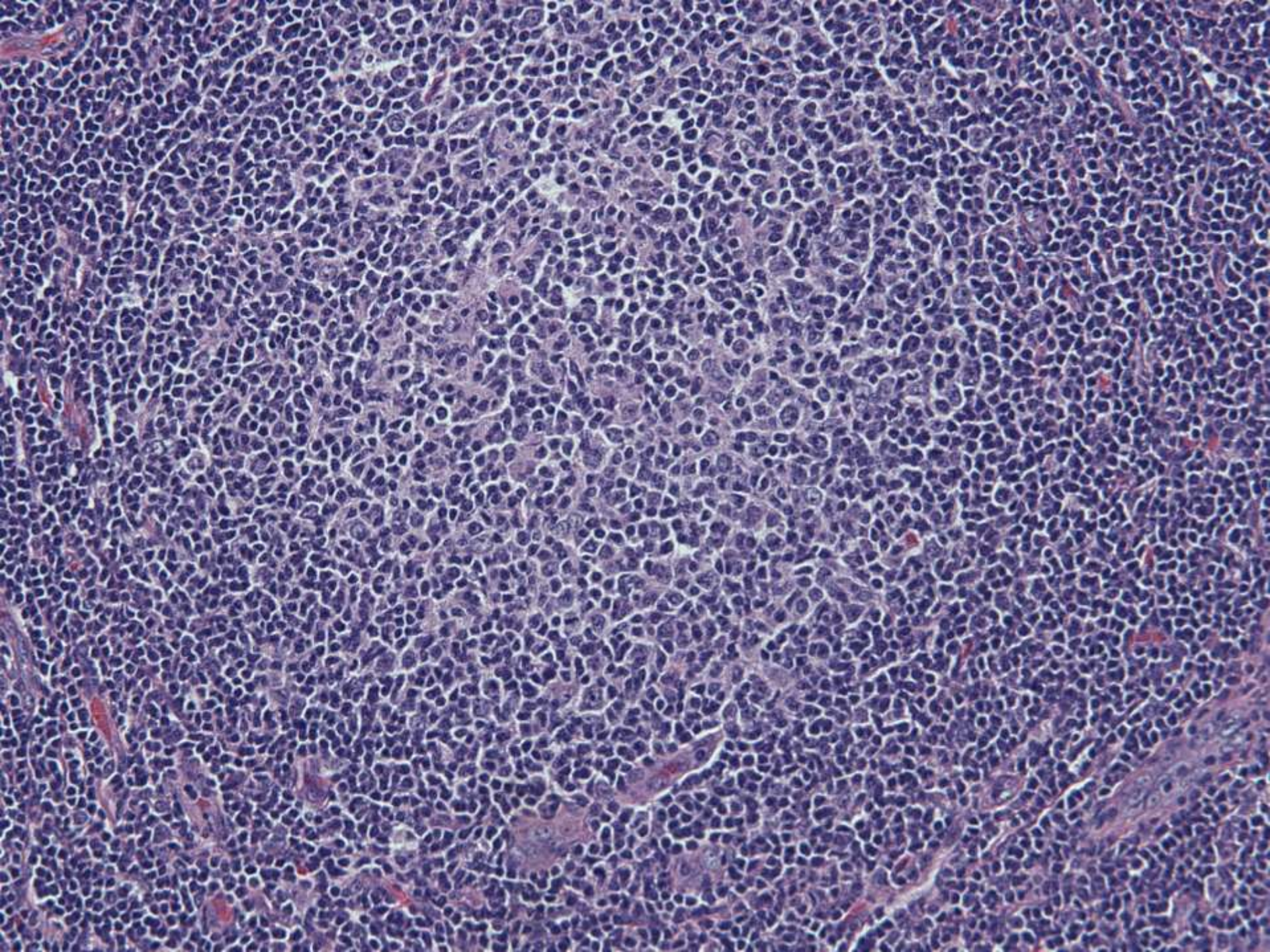
Sebastian Fernandez-Pol/Yaso Natkunam; Stanford

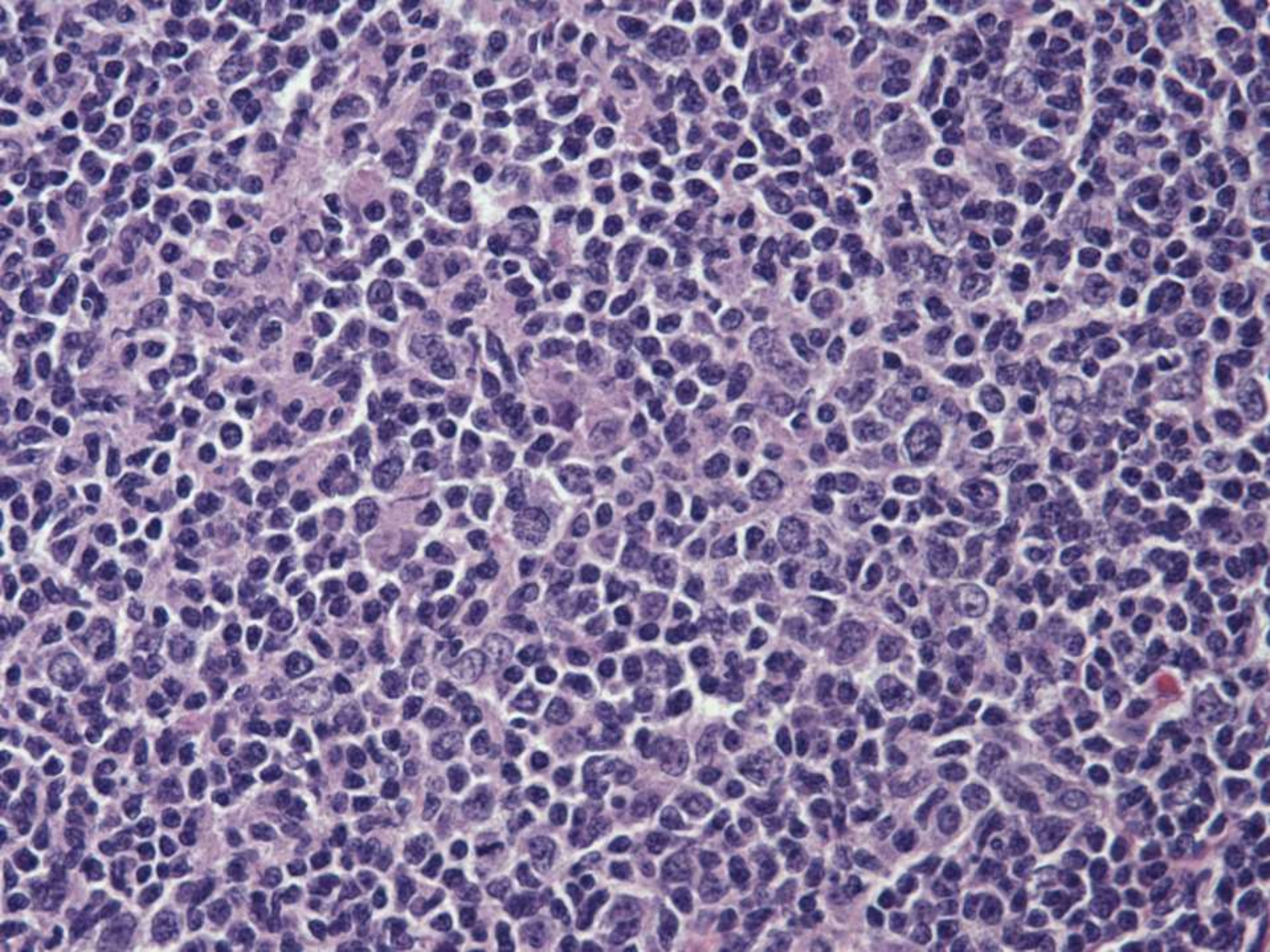
49-year-old female with an atypical lymphoid infiltrate of the left upper back, now with an enlarged PET positive right inguinal lymph node measuring 2.5cm.

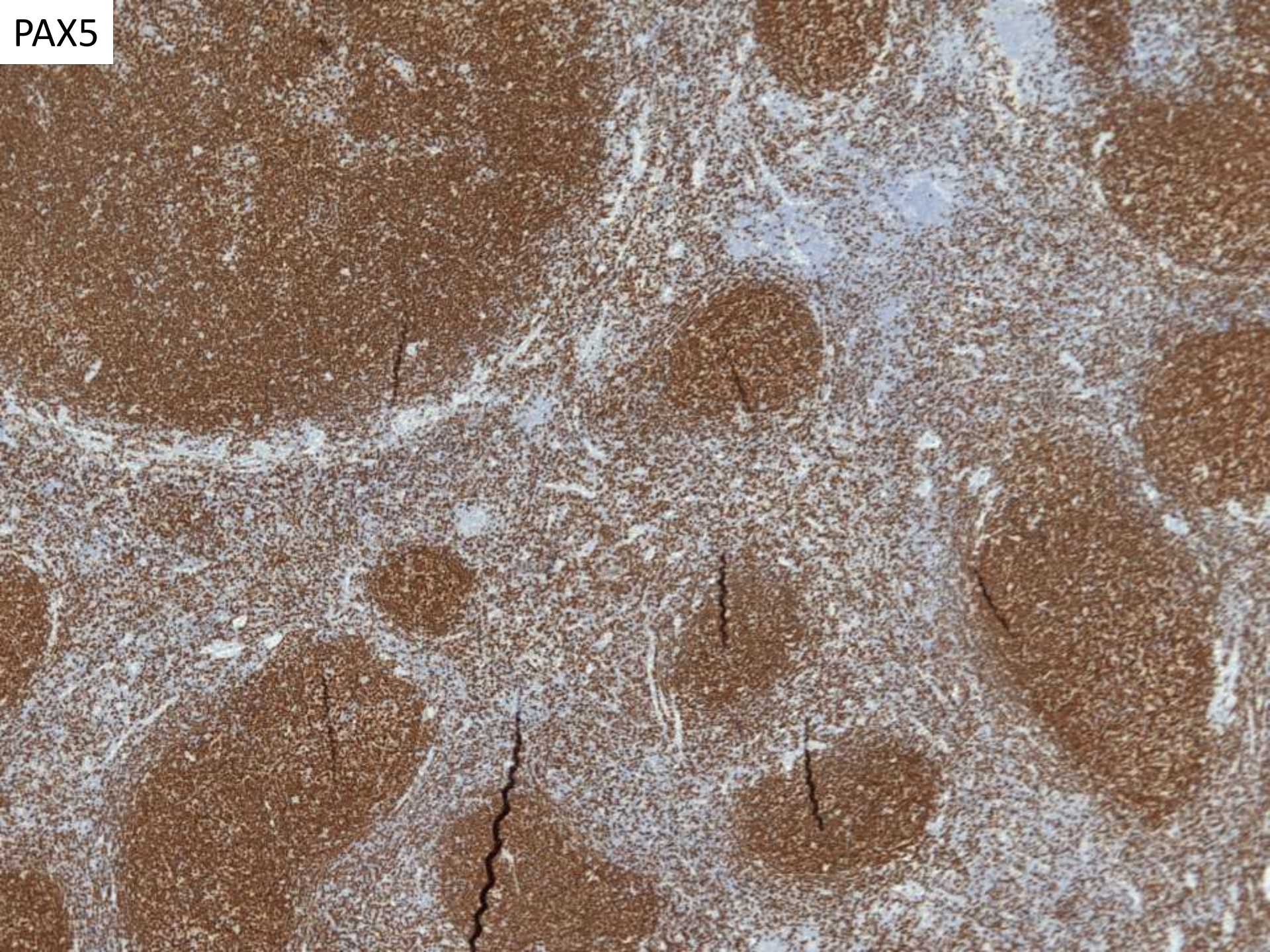


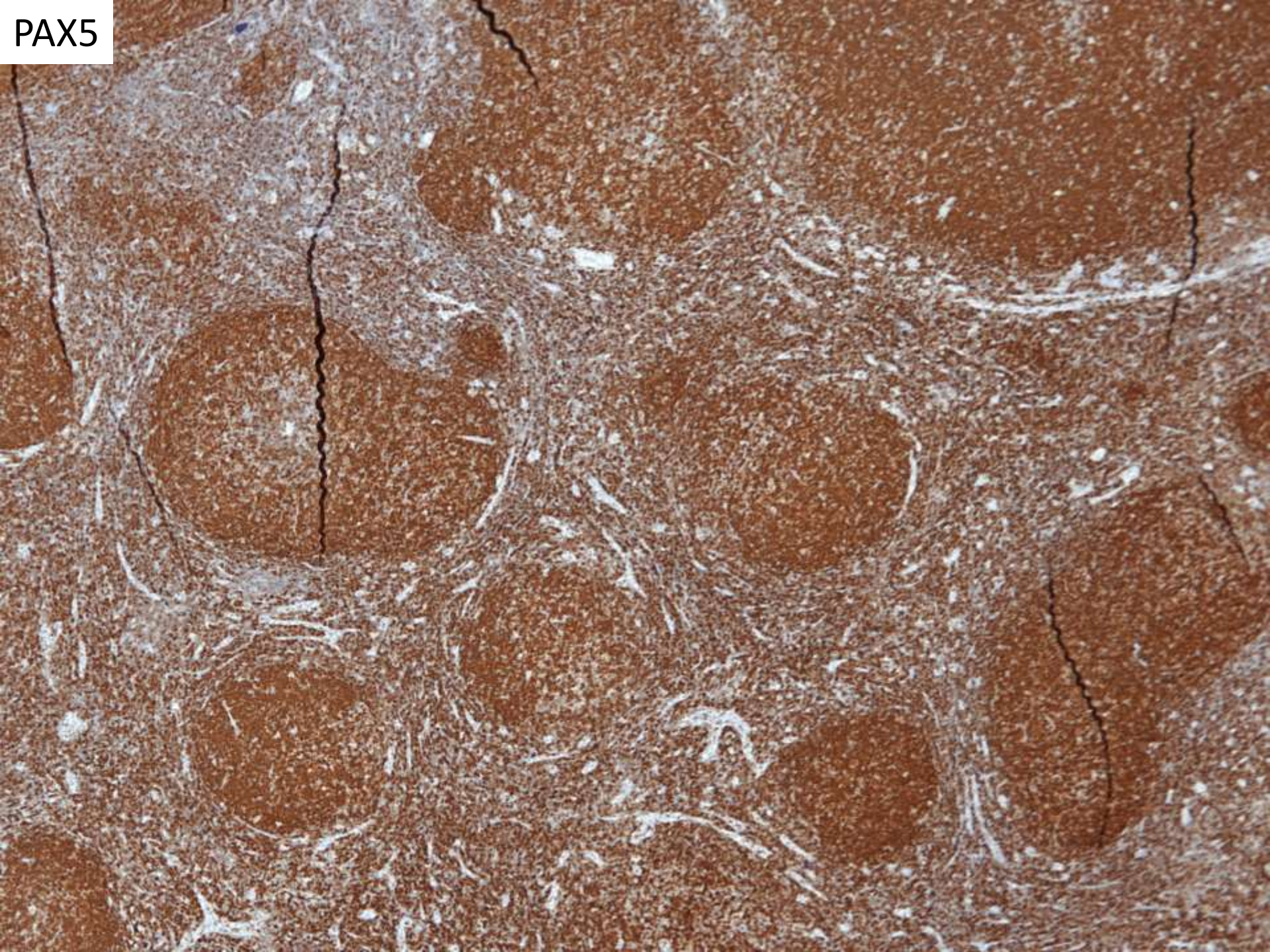









PAX5

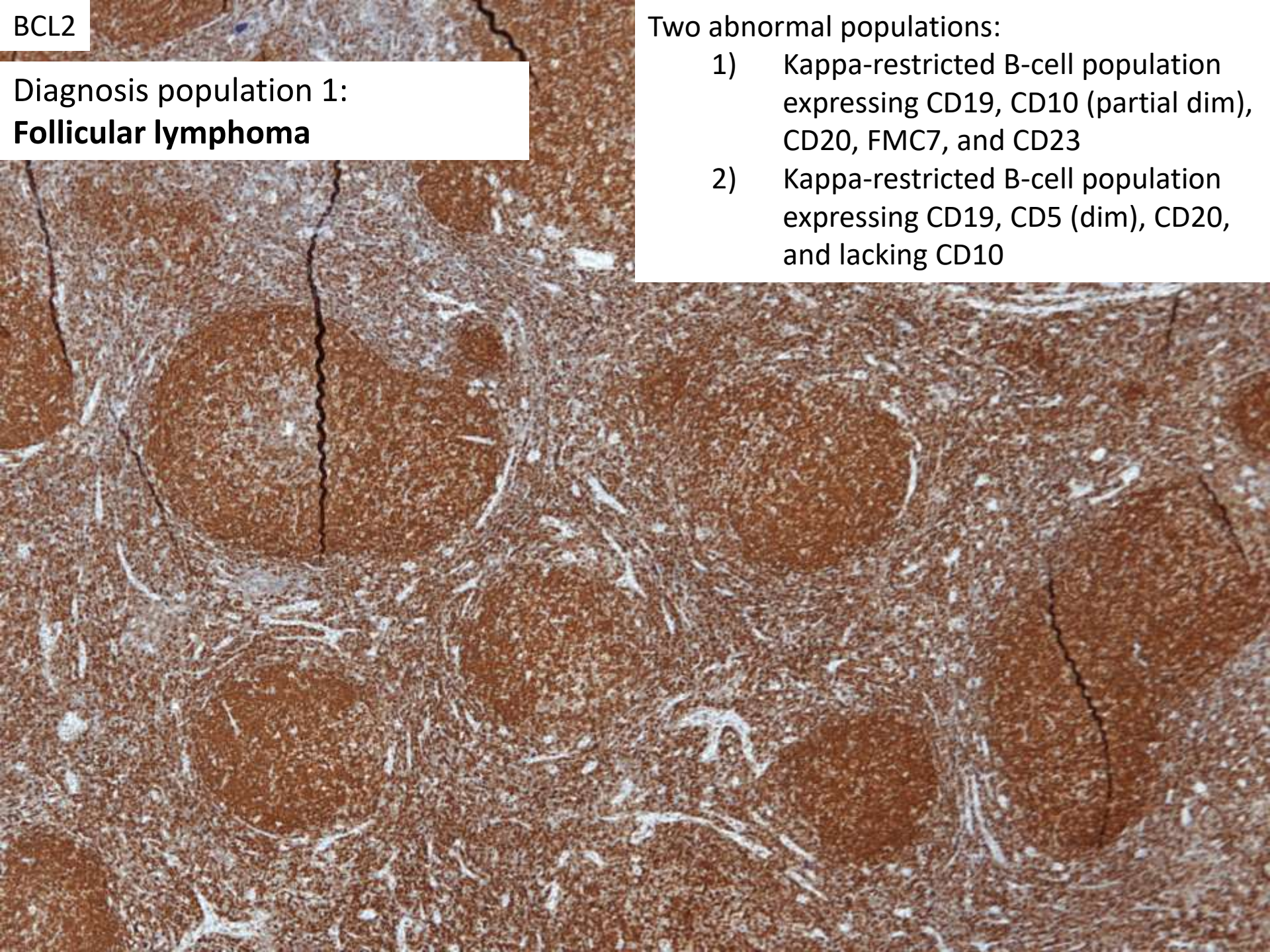

PAX5

Flow cytometry

- Two abnormal populations:
  1) Abnormal kappa-restricted B-cell population expressing CD19, CD10 (partial dim), CD20, FMC7, and CD23
  2) Abnormal kappa-restricted B-cell population expressing CD19, CD5 (dim), CD20, and lacking CD10

Flow cytometry

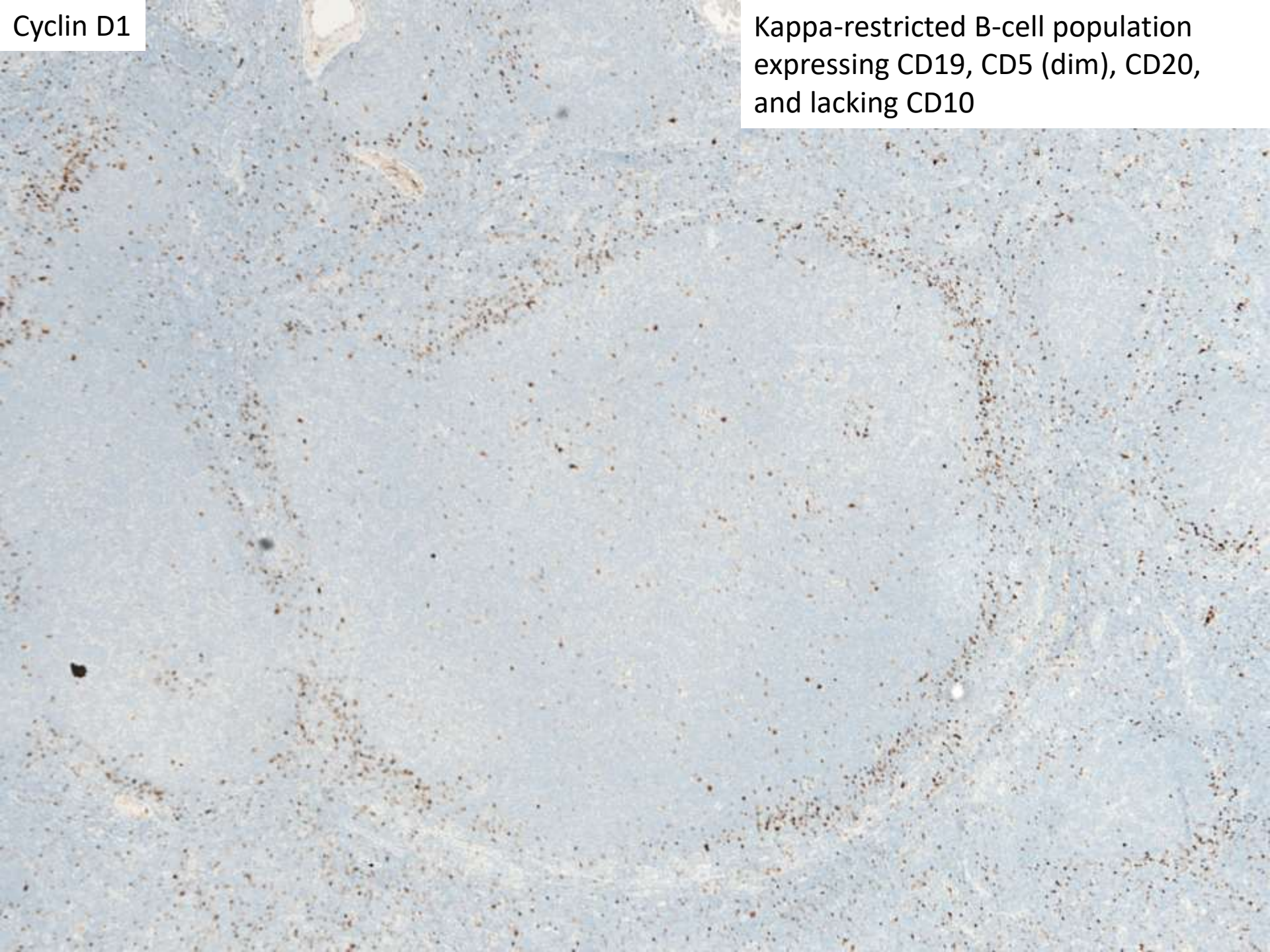
- Two abnormal populations:
  1) **Abnormal kappa-restricted B-cell population expressing CD19, CD10 (partial dim), CD20, FMC7, and CD23**
  2) Abnormal kappa-restricted B-cell population expressing CD19, CD5 (dim), CD20, and lacking CD10

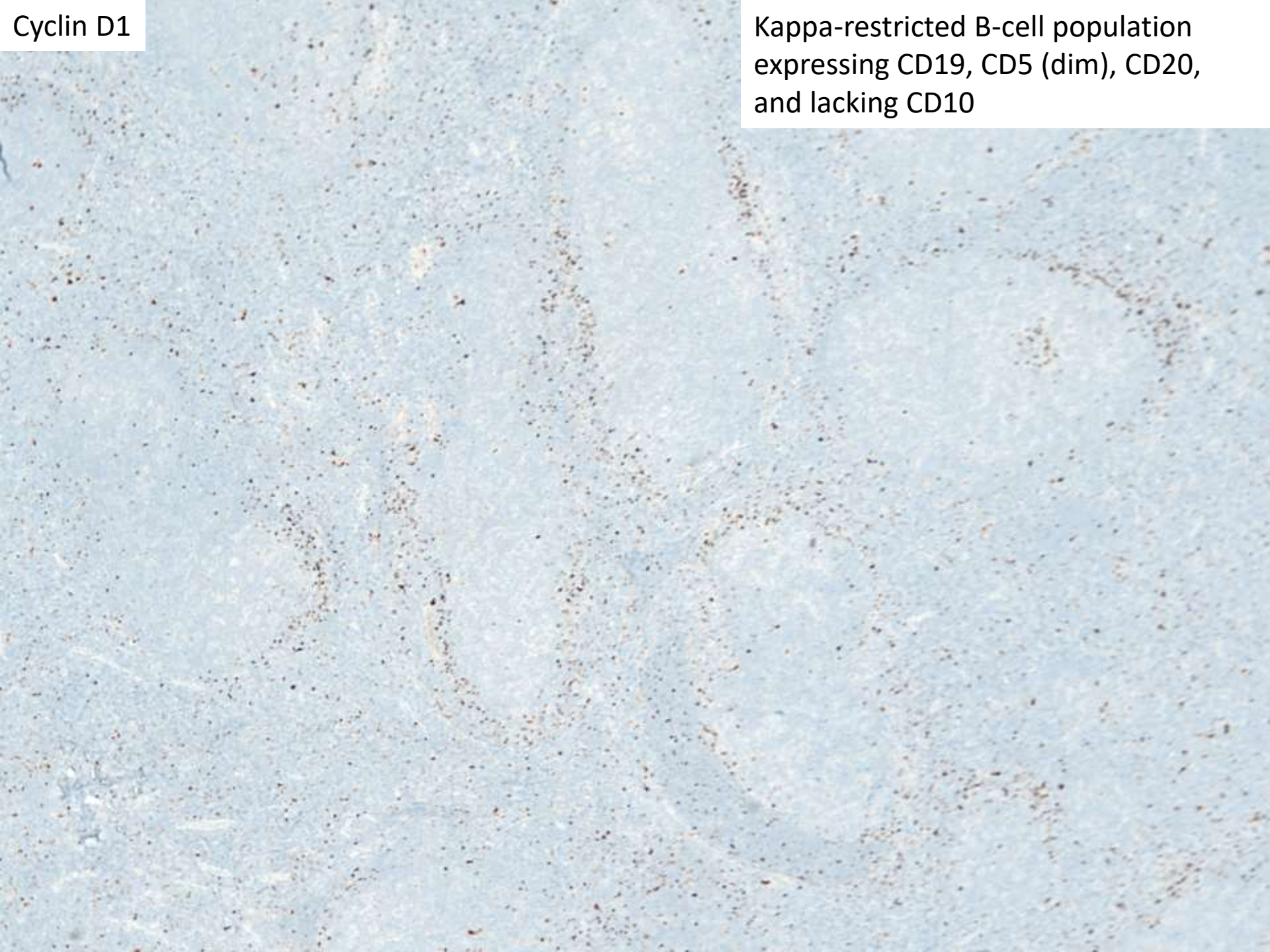


Diagnosis population 1:
Follicular lymphoma

Two abnormal populations:

1) Kappa-restricted B-cell population expressing CD19, CD10 (partial dim), CD20, FMC7, and CD23
2) Kappa-restricted B-cell population expressing CD19, CD5 (dim), CD20, and lacking CD10

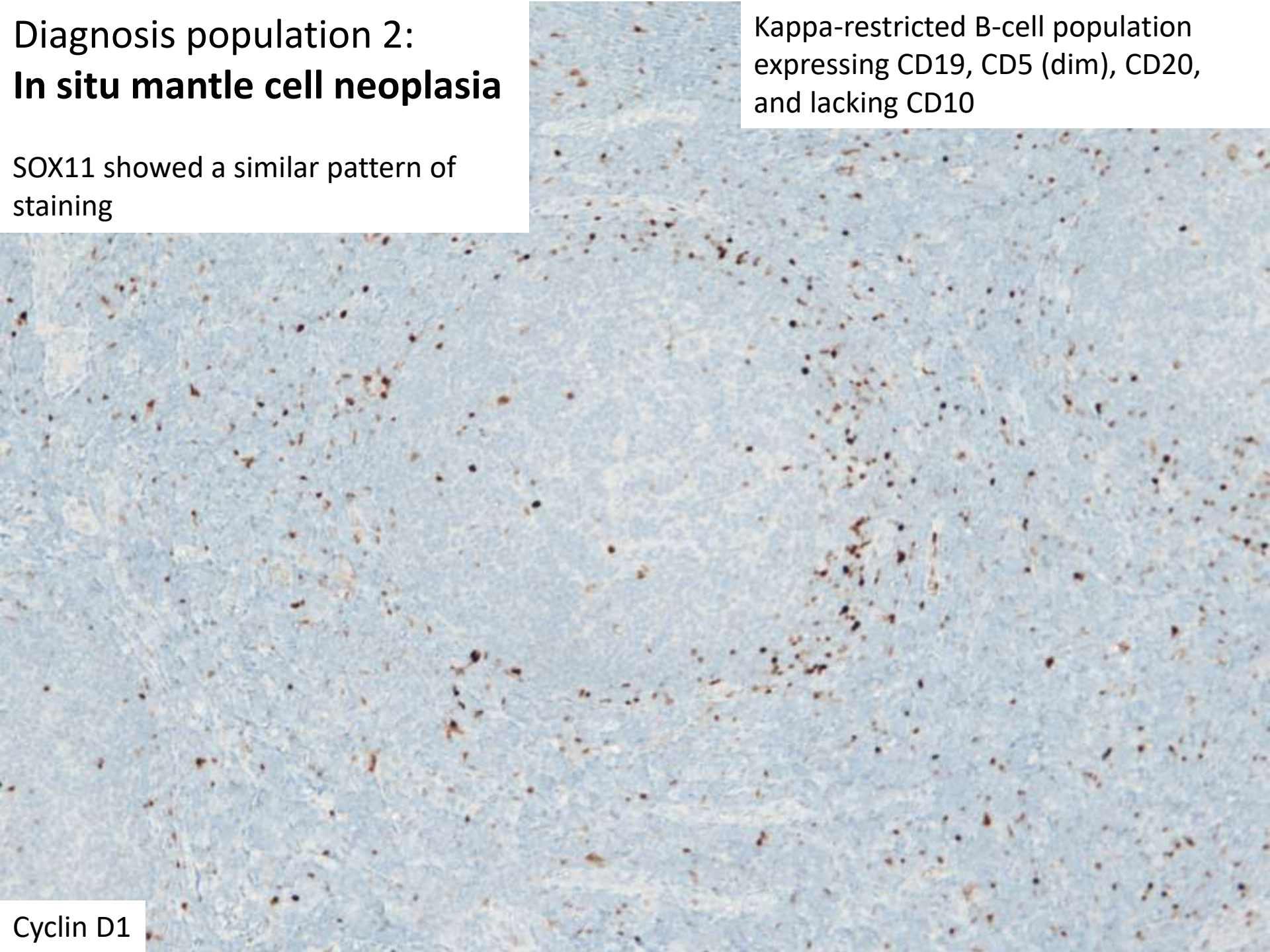

Cyclin D1
Kappa-restricted B-cell population expressing CD19, CD5 (dim), CD20, and lacking CD10


Cyclin D1
Kappa-restricted B-cell population expressing CD19, CD5 (dim), CD20, and lacking CD10

Diagnosis population 2:
In situ mantle cell neoplasia

SOX11 showed a similar pattern of staining

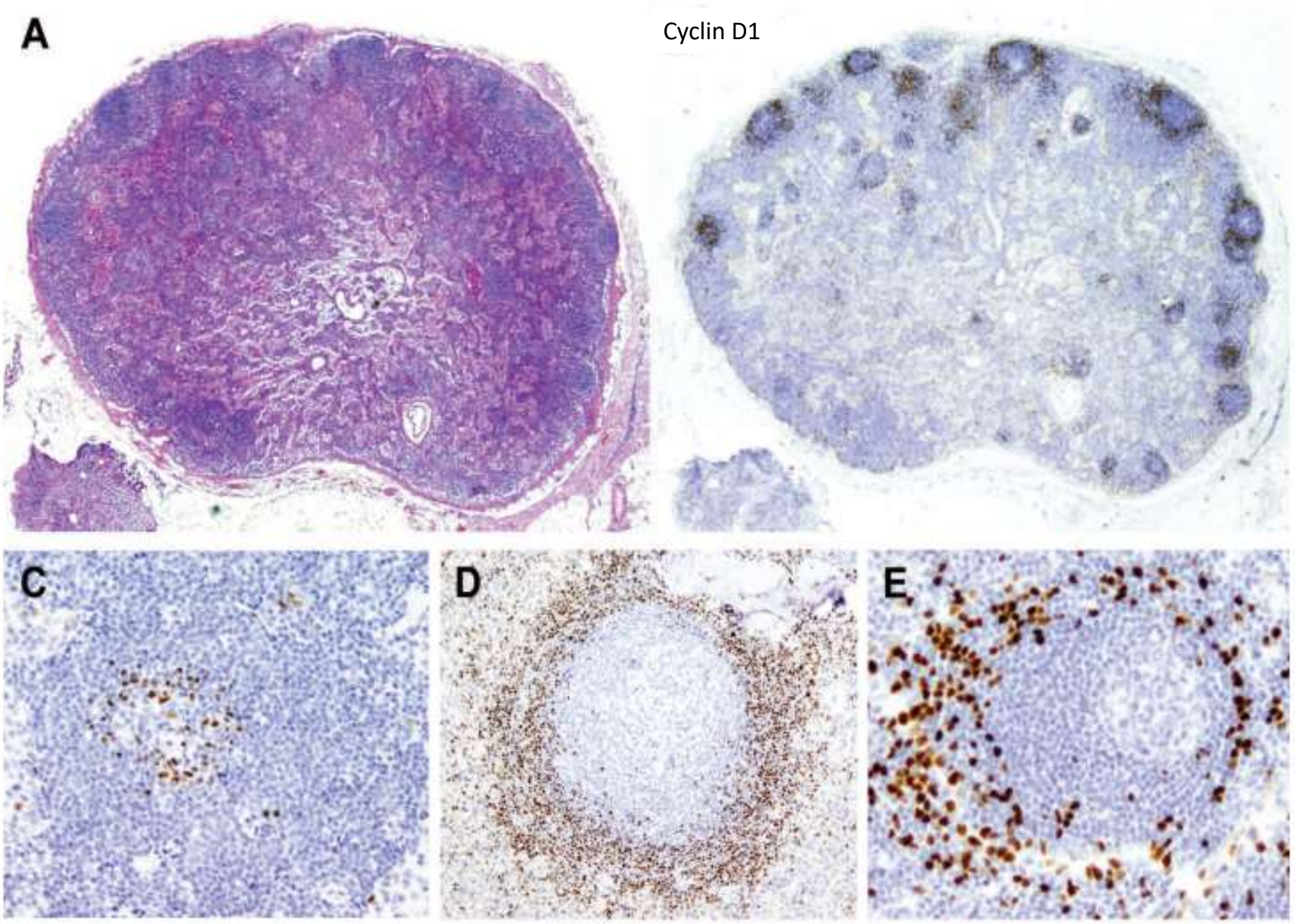
Kappa-restricted B-cell population expressing CD19, CD5 (dim), CD20, and lacking CD10



Cyclin D1

In situ mantle cell neoplasia

- Previously referred to as in situ mantle cell lymphoma
- Defined as otherwise hyperplastic-appearing lymphoid tissue (nodal or extranodal) with cyclin D1-positive lymphoid cells with CCND1 rearrangements restricted to the mantle zones
- Very rare
  - 1292 consecutively submitted lymph nodes of 131 patients were stained with cyclin D1 and in situ mantle cell neoplasia was not identified in any case (Adam et al 2012)



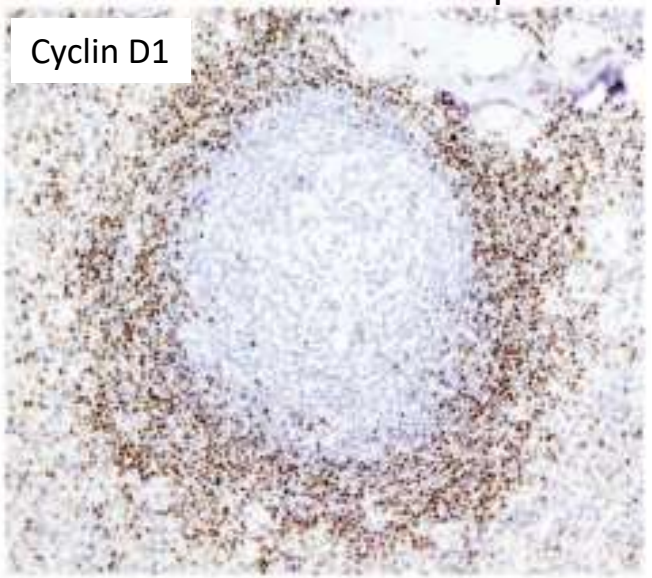
Carvajal-Cuenca A, Sua LF, Silva NM, et al. In situ mantle cell lymphoma: clinical implications of an incidental finding with indolent clinical behavior. Haematologica. 2012;97(2):270–278.

In situ mantle cell neoplasia

Differential diagnosis

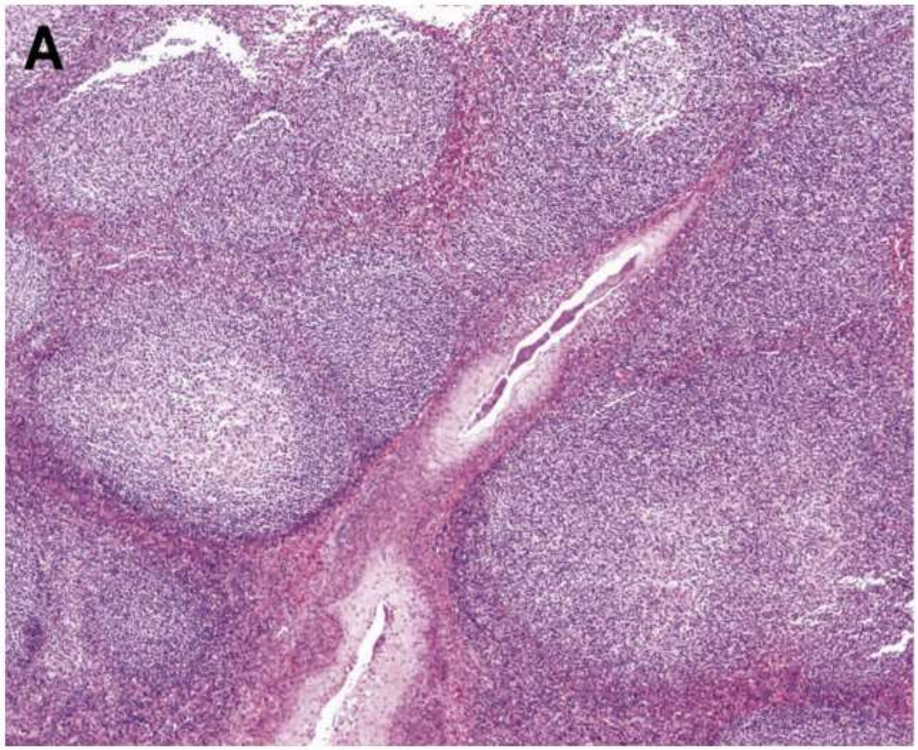
- *Mantle cell lymphoma with a mantle zone growth pattern*
  - One pattern of mantle cell lymphoma (others include nodular and diffuse)
  - Mantle zones are markedly expanded and focally fused between adjacent follicles.
  - Architecture of the lymphoid tissue is still largely preserved but with focal effacement, more numerous, crowded, involved follicles and marked reduction of the interfollicular space
  - The mantle zones are usually expanded
  - **Cyclin D1-positive cells are densely packed and replace virtually all the mantle zone cells**

In situ mantle cell neoplasia



Differential diagnosis

- *Mantle cell lymphoma with a mantle zone growth pattern*



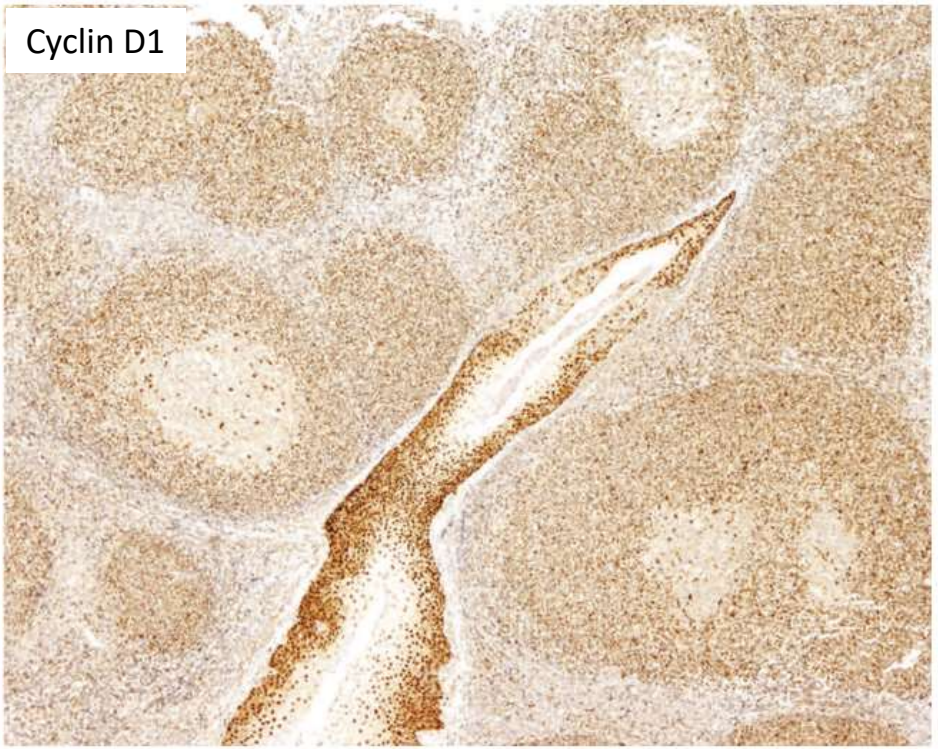


Table 1. Clinical features, follow-up and histopathological findings in *in situ* MCL lesions.

Case no	Sex	Age	Site of biopsy	Other sites	Biopsy indication	BM	PB	Management	Follow-up	Status	CD5	Composite lymphoma	Other associated pathology
SOX11-negative cases													
1[9]	F	29	LN, inguinal	LN, axillary	Multiple LN	Yes	Yes (2.6 10⁹/L)	W&W	19.5 y	AWD (PB)	-*		
2	F	42	LN, cervical		Enlarged LN, history of CA	No	No	W&W	1y	AND	-		Breast cancer
3[10]	F	70	LN, sub-mandibular		Enlarged LN	Yes	Yes (3.1 10⁹/L)	W&W	12y	AWD (PB)	-		Granulomas (non-specific)
4[11]	F	72	LN, cervical		Enlarged LN, history of CA		No	Radiotherapy	2y	AND	+	NMZL	Breast cancer
5	F	78	Lacrimal gland		Enlarged lacrimal gland	No	No				+	eMZL	
6[12]	F	84	Spleen		Multiple nodules, history of CA		No	W&W	1.4 y	Dead Unrelated	-	FL	Colorectal cancer
7	M	42	LN, supra-clavicular		Enlarged LN	No		Radiotherapy	1.7y	AND	-		Castleman disease
8	M	59	LN, cervical		Enlarged LN, history of CA	No	No	W&W	5 y	AND	-		Papillary thyroid cancer
9	M	58	Intestine			Yes	No	Chemotherapy	1.4 y	AND	+		
SOX11-positive cases													
10[13]	F	42	LN, axillary/ inguinal, GIT (minimal)	LN, cervical, iliac	Multiple LN	No	No	Chemotherapy	6 y	AND	+		
11	F	65	LN		Enlarged LN	Yes		Chemotherapy	0.5 y	AND	-		Granulomas (non-specific)
12[13]	M	65	Appendix		Appendicitis			W&W	4 y	Overt MCL	+		
13	M	66	LN, pelvic		Enlarged LN, history of CA					Overt MCL **	+		Prostate cancer
14	M	68	LN, mediastinal		Enlarged LN			W&W	1y	AWD	ND		
15[14]	M	70	LN, cervical		Enlarged LN		No	W&W	4 y	Overt MCL***	-		
16	M	82	Oropharynx		Enlarged LT, history of CLL		Yes, both CLL and MCL	W&W	3y	AWD	+	CLL/SLL	
SOX11 not performed													
17	M	82	LN		Enlarged LN, history of CLL	No, only CLL	No, only CLL	Chemotherapy	1.5	AND	+	CLL/SLL	

Carvajal-Cuenca et al

Summary for in situ mantle cell neoplasia

- Lymph nodes should otherwise look reactive
- If the mantle zones are expanded and consist entirely of cyclin D1-positive cells, consider the diagnosis of mantle cell lymphoma with a mantle zone growth pattern
- Not an obligate precursor to lymphoma but shouldn’t be ignored
- Patients should be monitored for development of lymphoma, which happens in a small fraction of cases

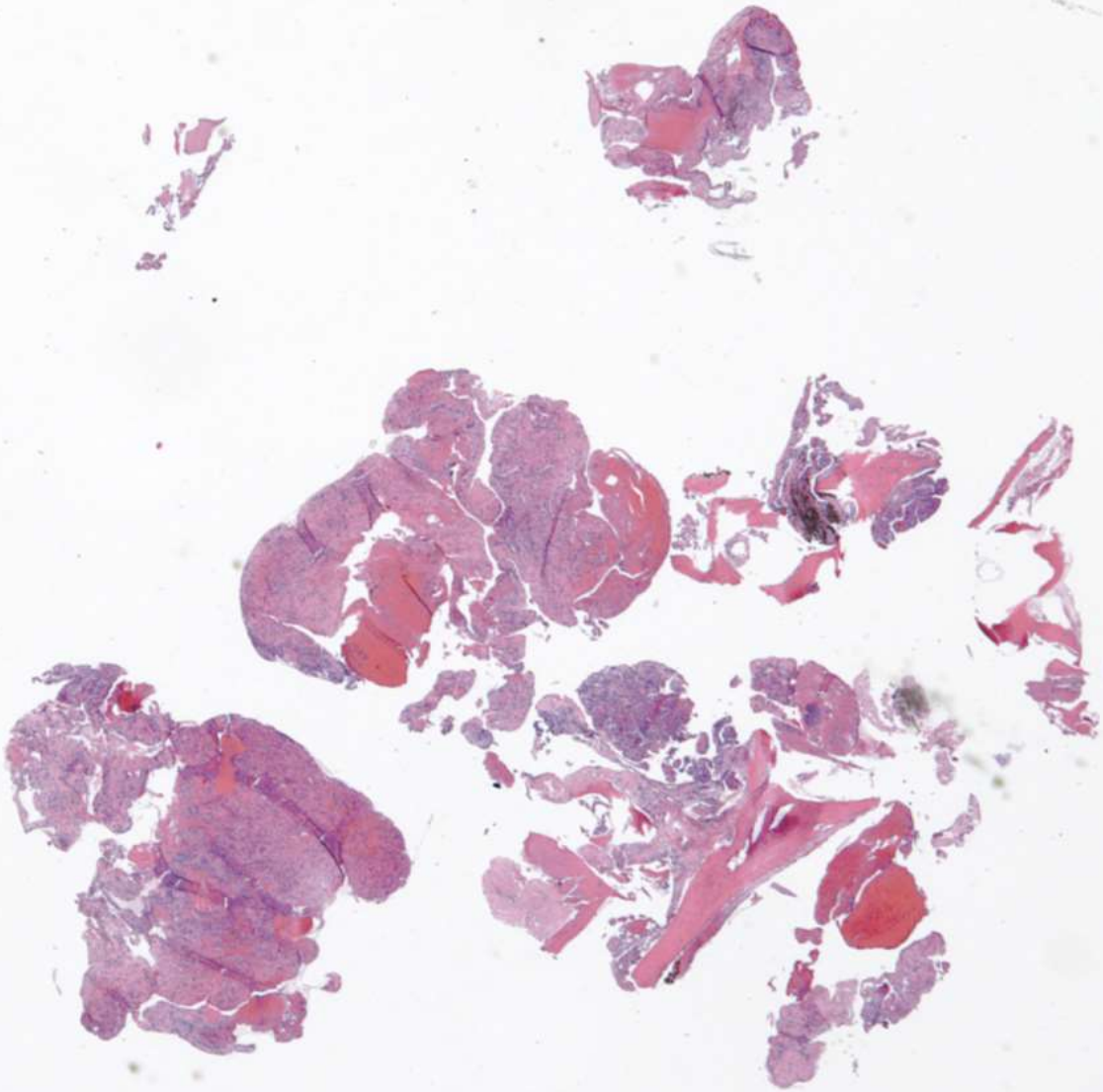
References

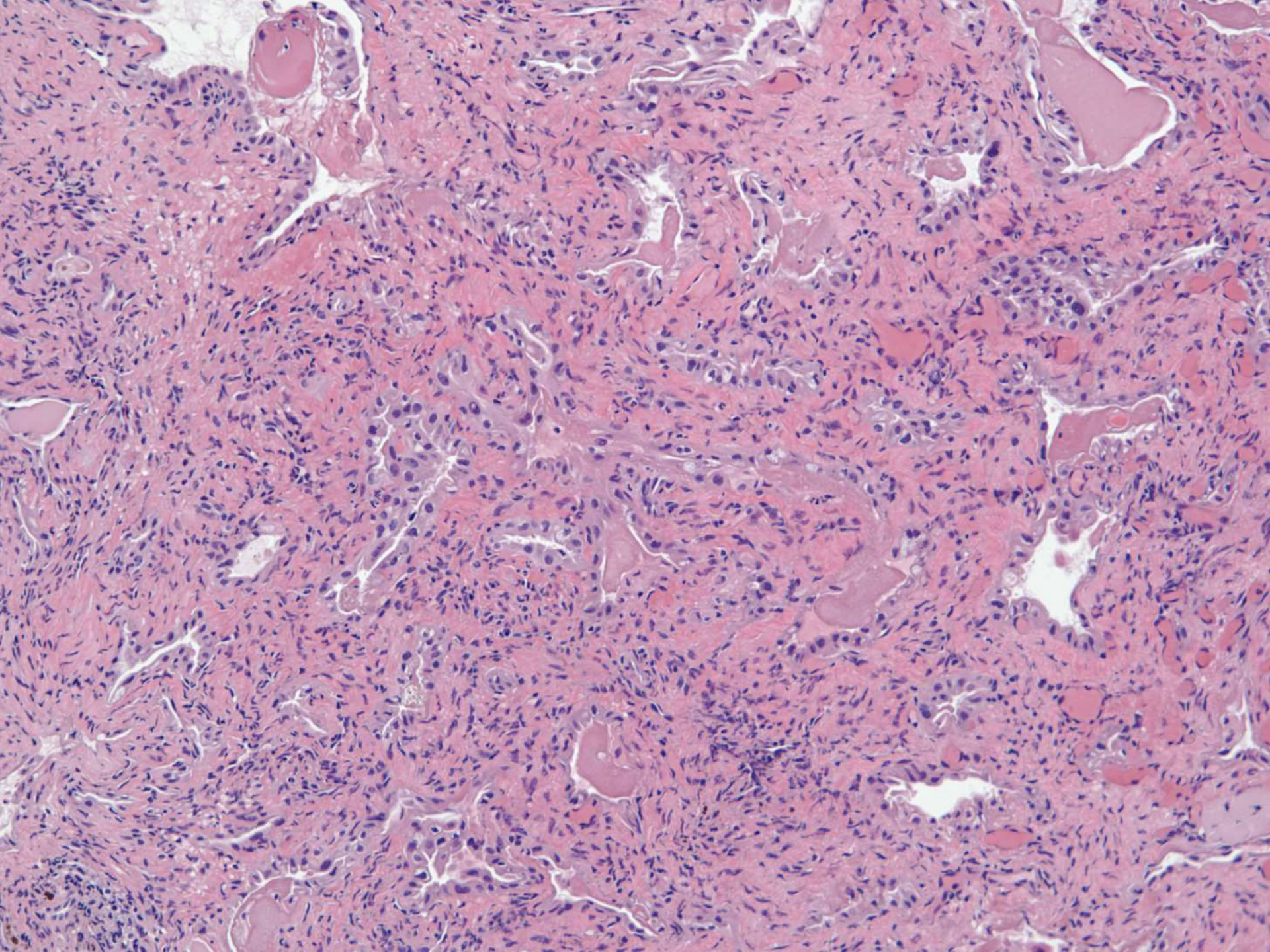
- Carvajal-Cuenca A, Sua LF, Silva NM, et al. In situ mantle cell lymphoma: clinical implications of an incidental finding with indolent clinical behavior. Haematologica. 2012;97(2):270–278.
- Adam P, Schiefer A-I, Prill S, et al. Incidence of preclinical manifestations of mantle cell lymphoma and mantle cell lymphoma in situ in reactive lymphoid tissues. Mod Pathol. 2012;25:1629-1636.
- Swerdlow SH, Campo E, Pileri SA et al. The 2016 revision of the World Health Organization classification of lymphoid neoplasms. Blood 2016;127:2375–2390.

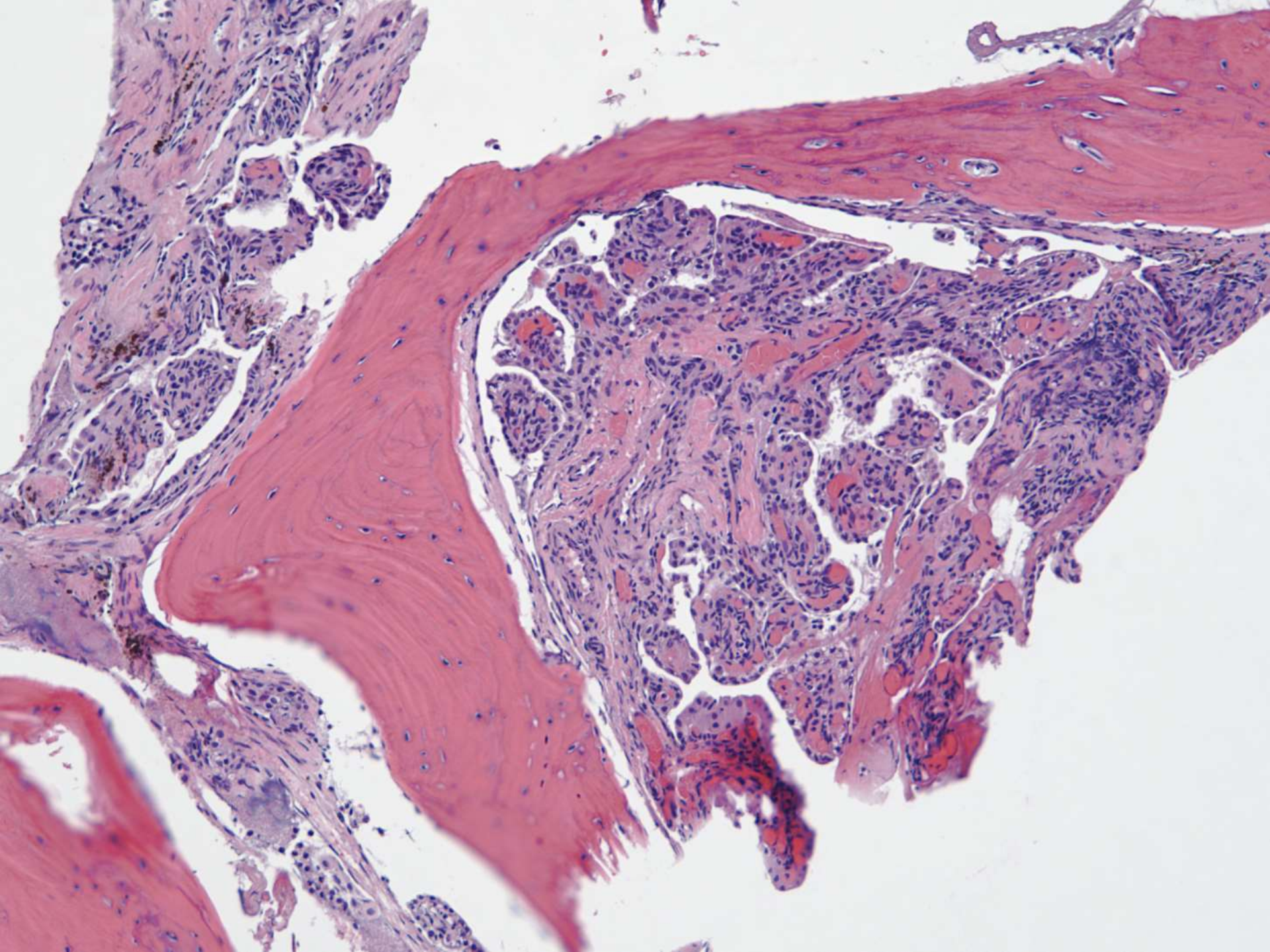
6234

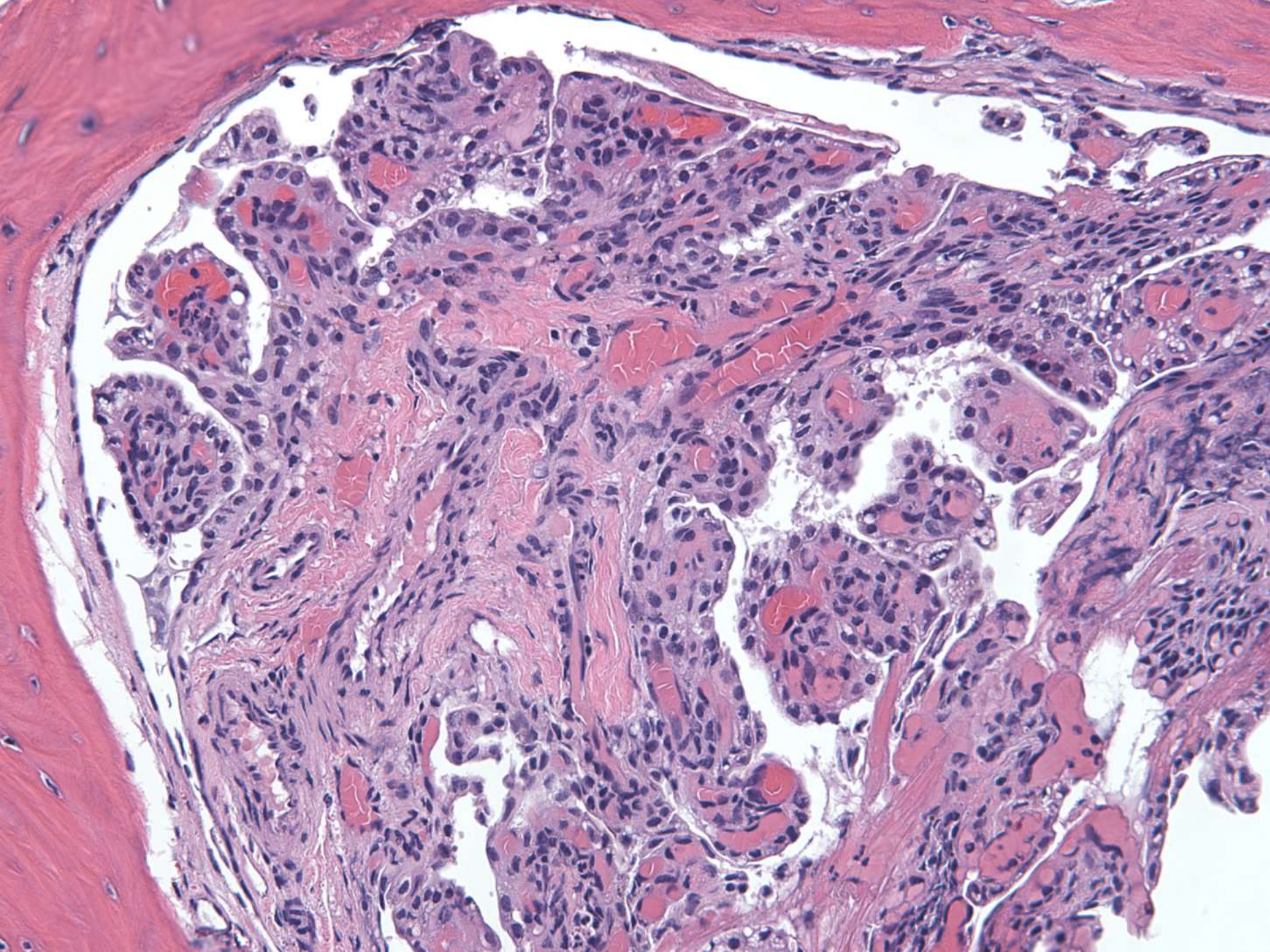
Erna Forgo/Jonathan Lavezo/Hannes Vogel; Stanford

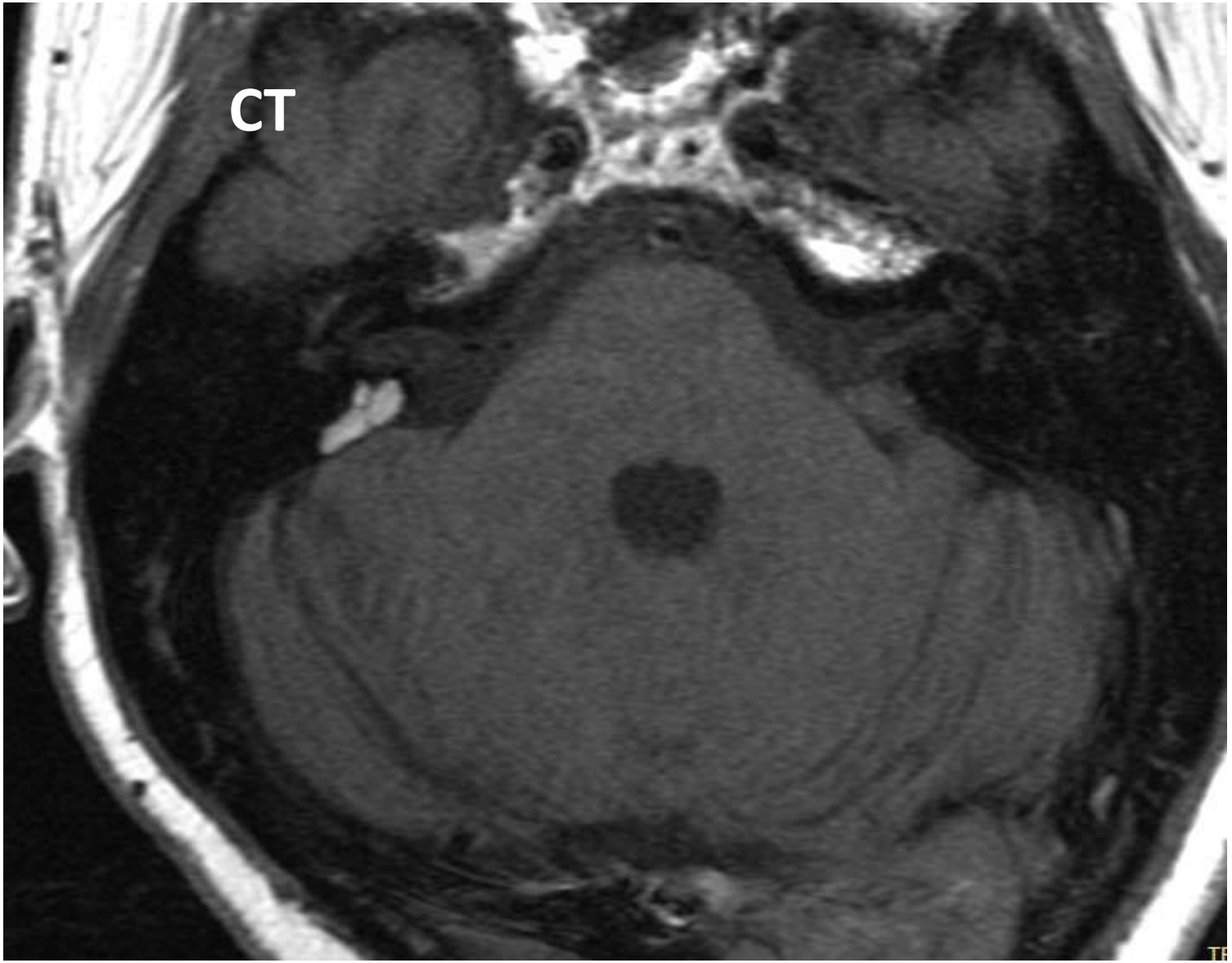
67-year-old female with decreasing hearing, worsening imbalance and vertigo. MRI showed 11x5x7mm right temporal bone lesion.







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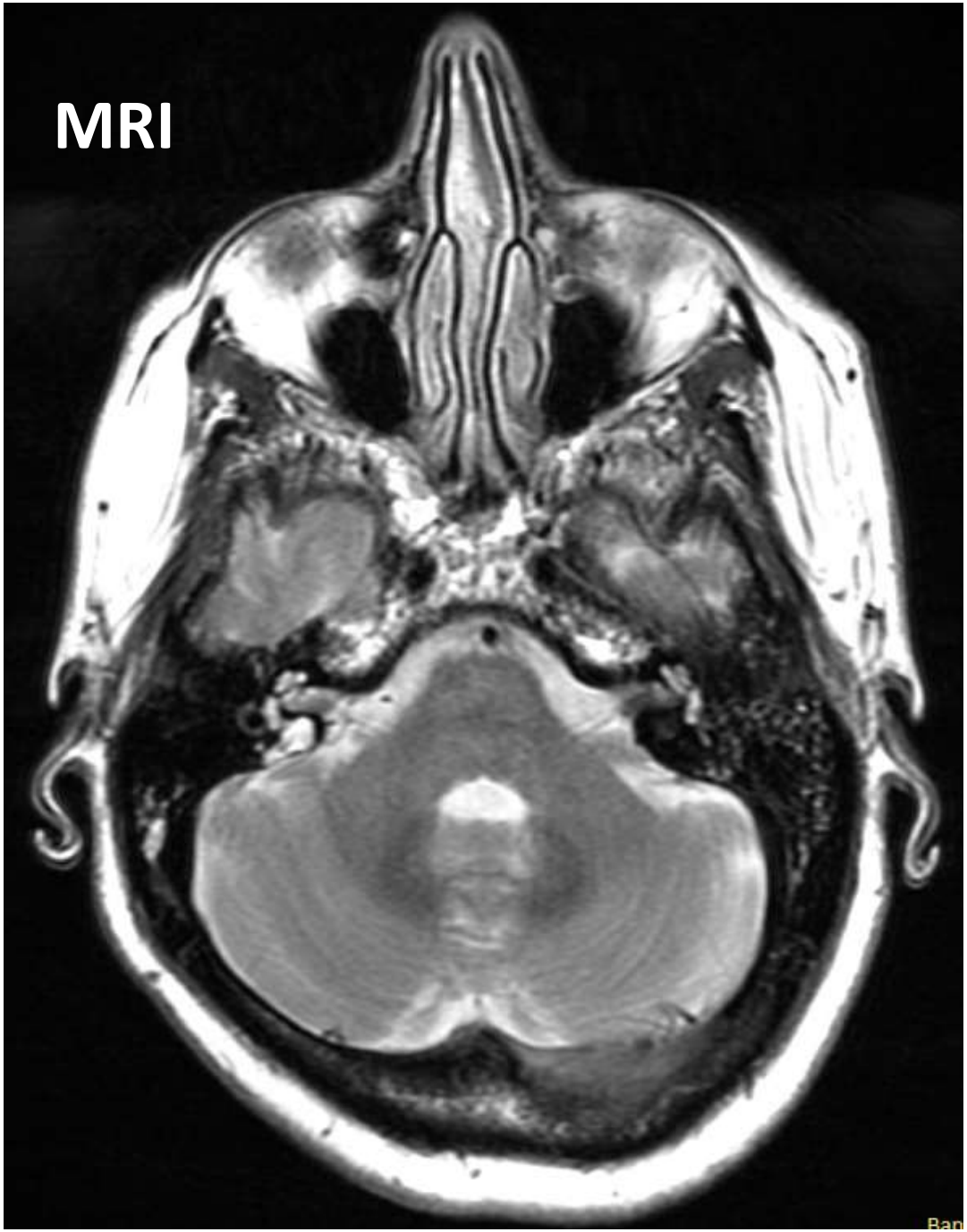
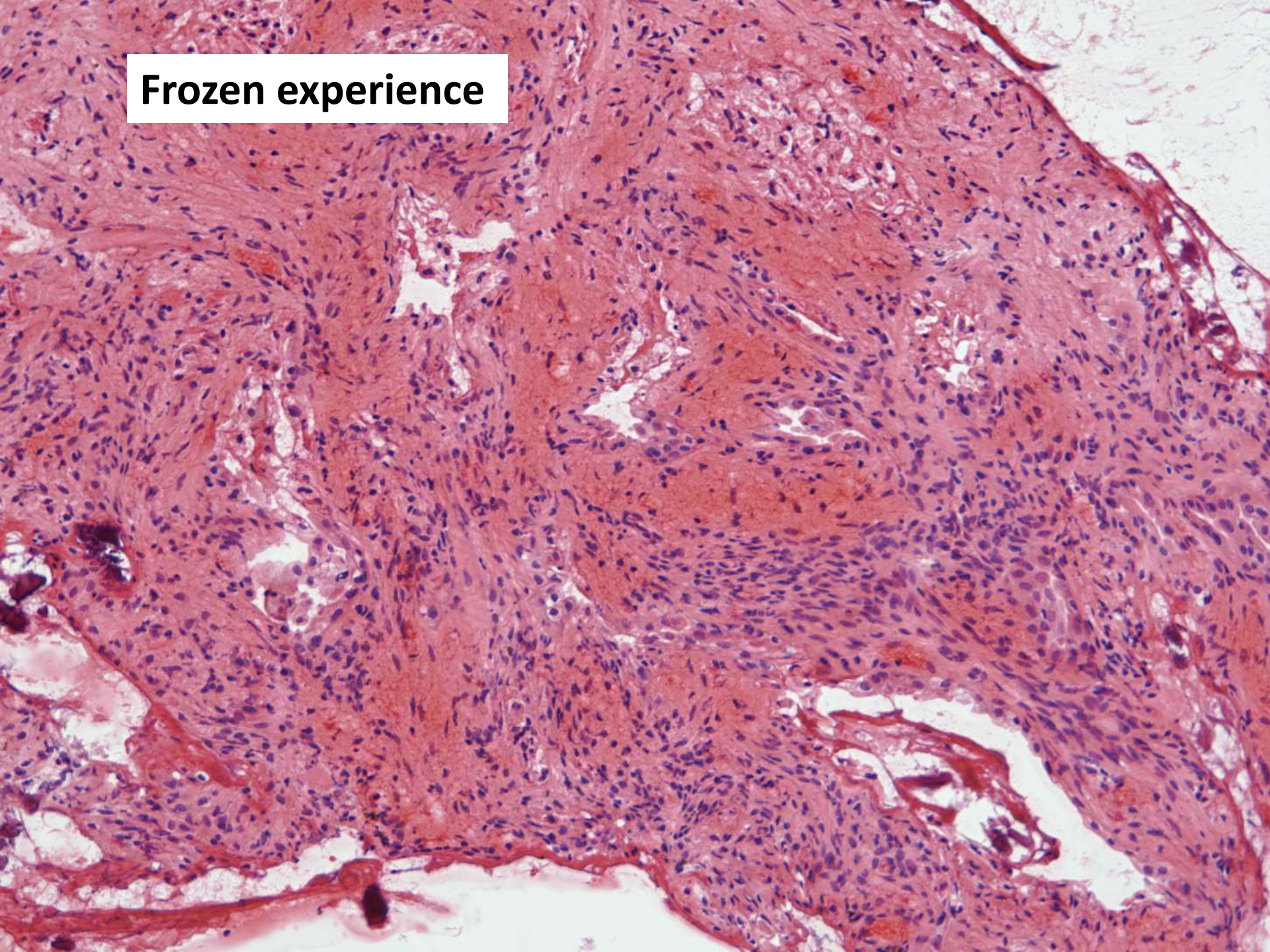
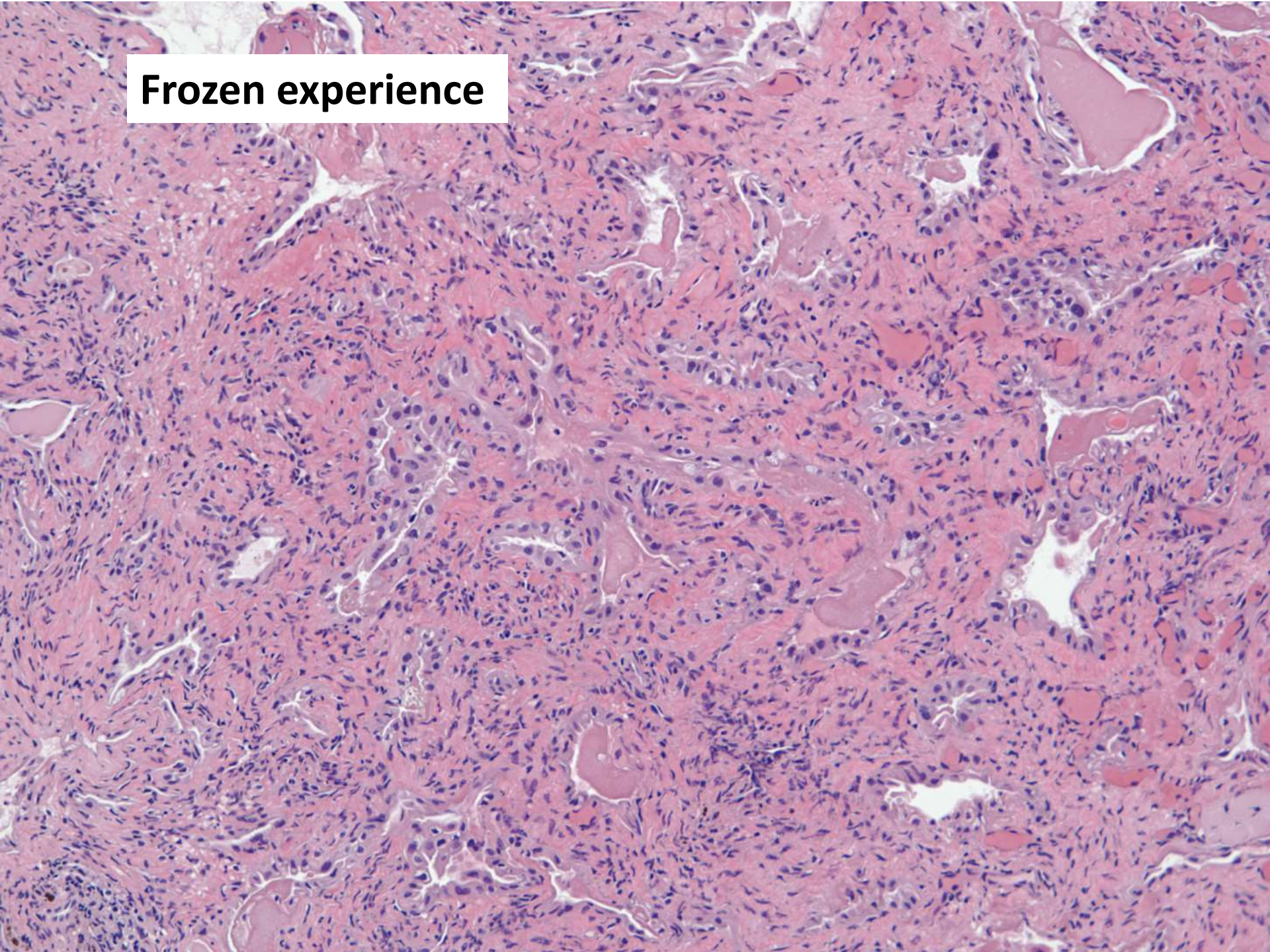
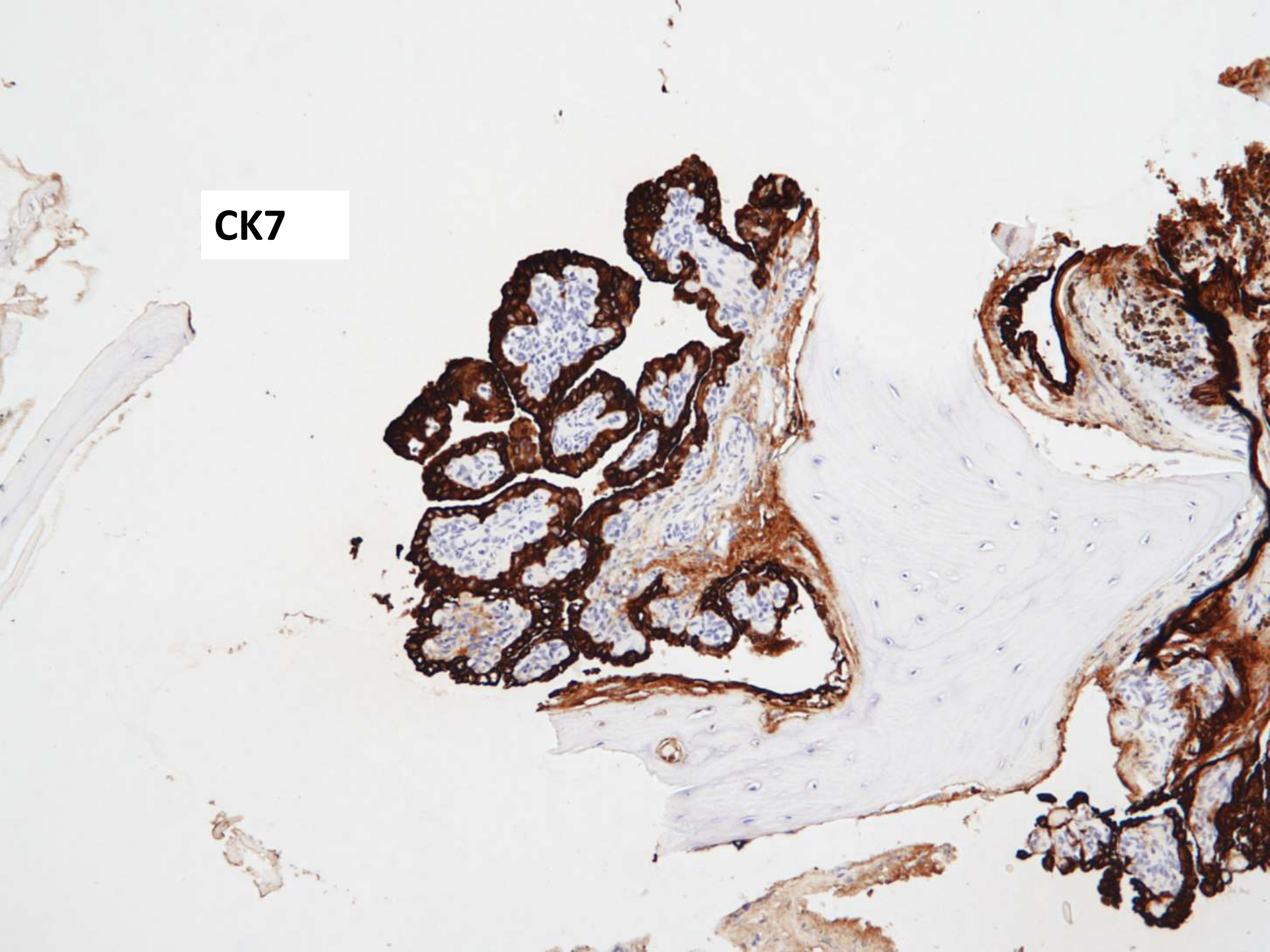

MRI

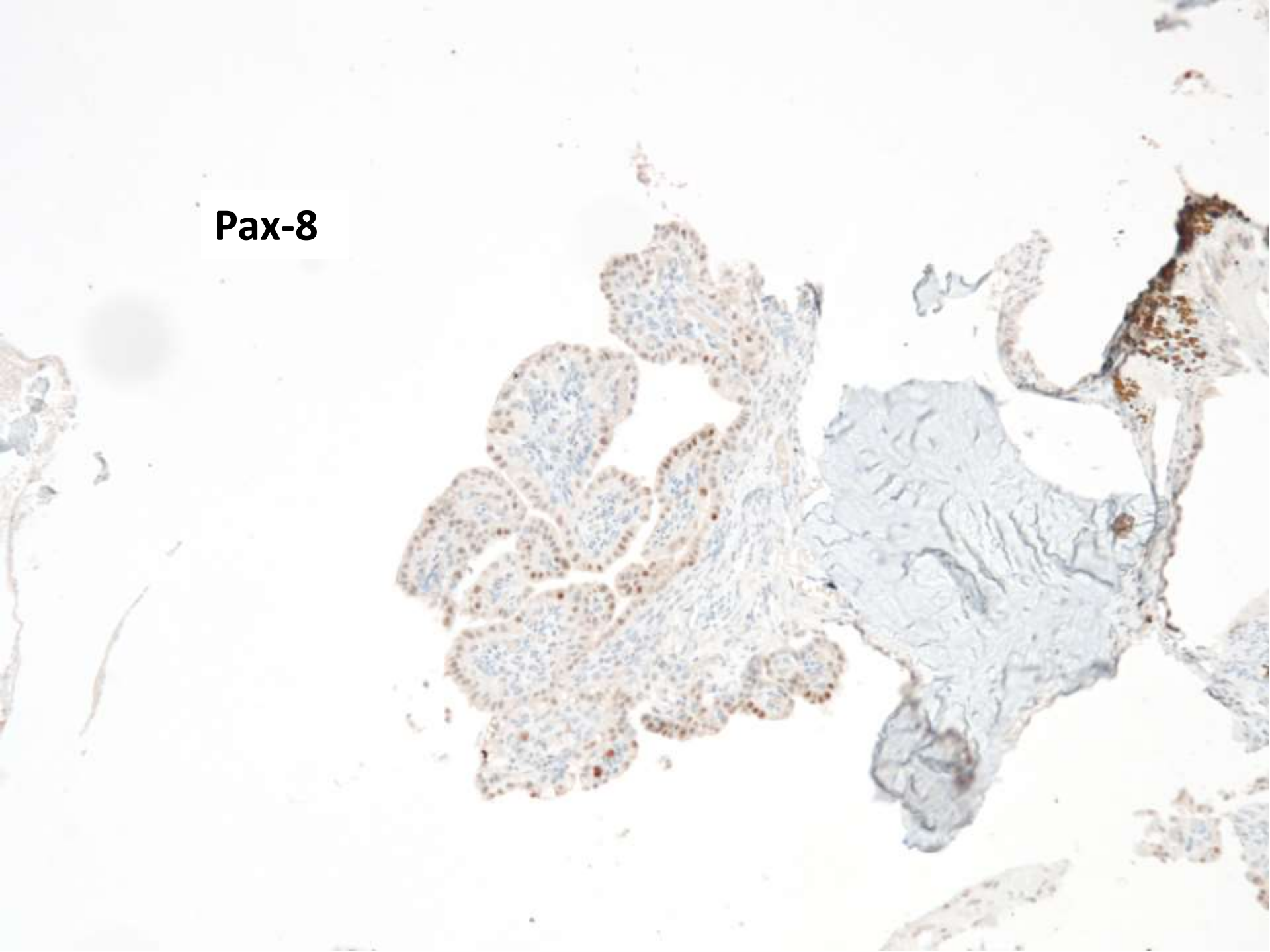

Frozen experience


Frozen experience

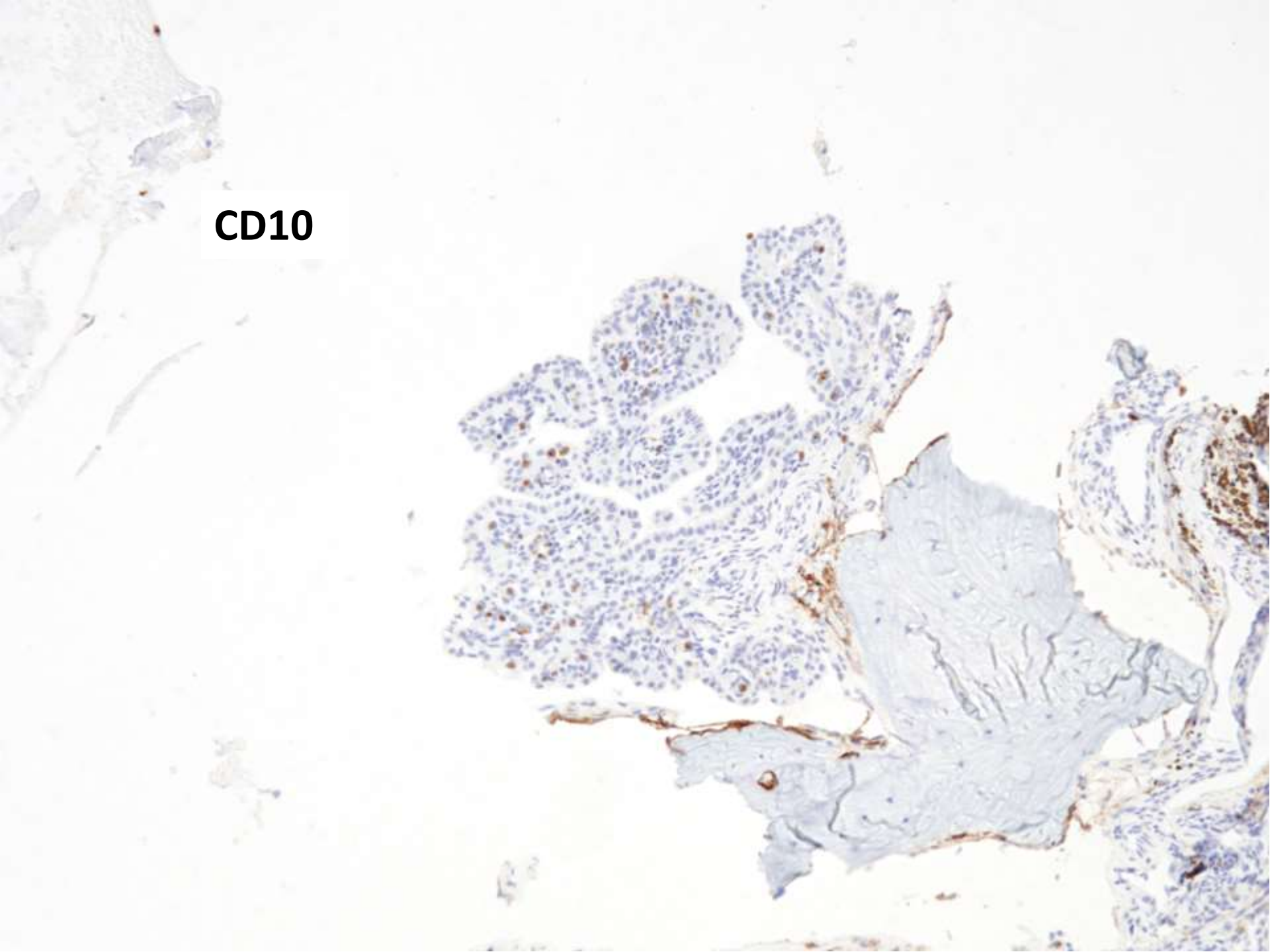
Differential Diagnosis

- Glomus jugulare tumor
- Paraganglioma
- Choroid plexus papilloma
- Endolymphatic sac tumor
- Ceruminous adenoma
- Middle ear adenoma
- Middle ear adenocarcinoma
- Metastatic renal cell carcinoma
- Metastatic papillary thyroid carcinoma


CK7

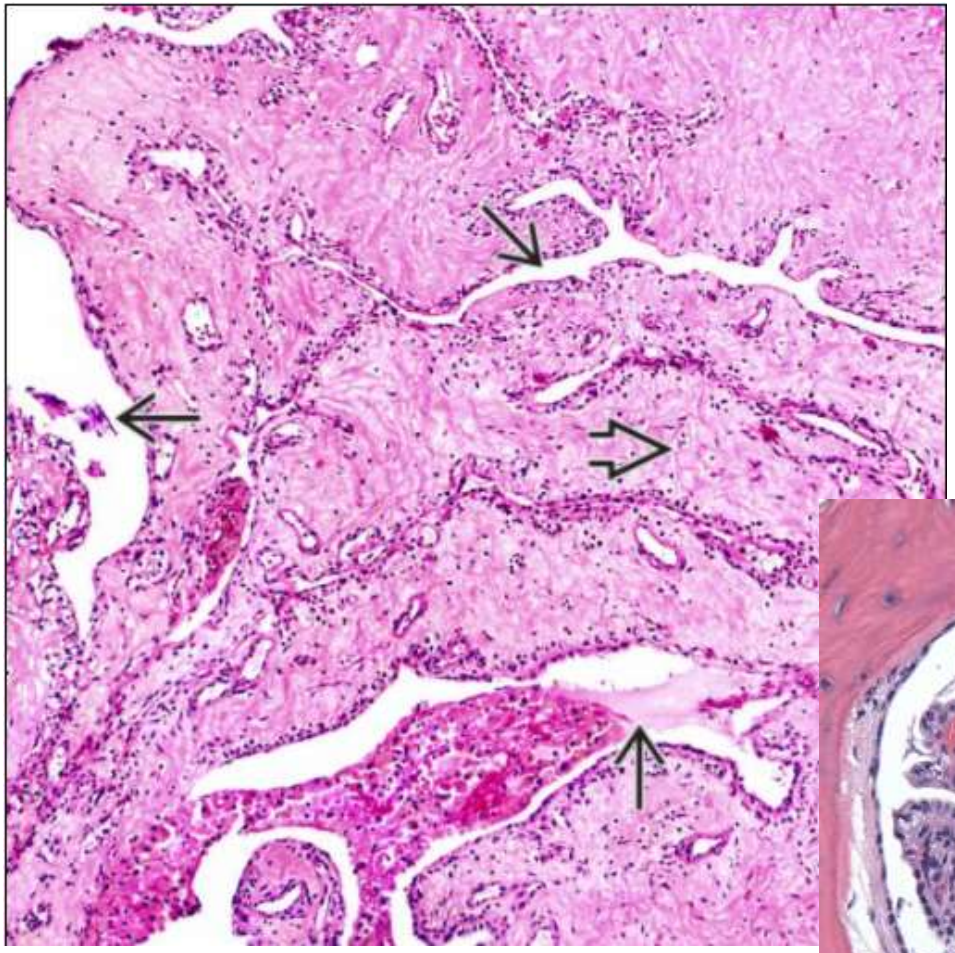

Pax-8

CD10

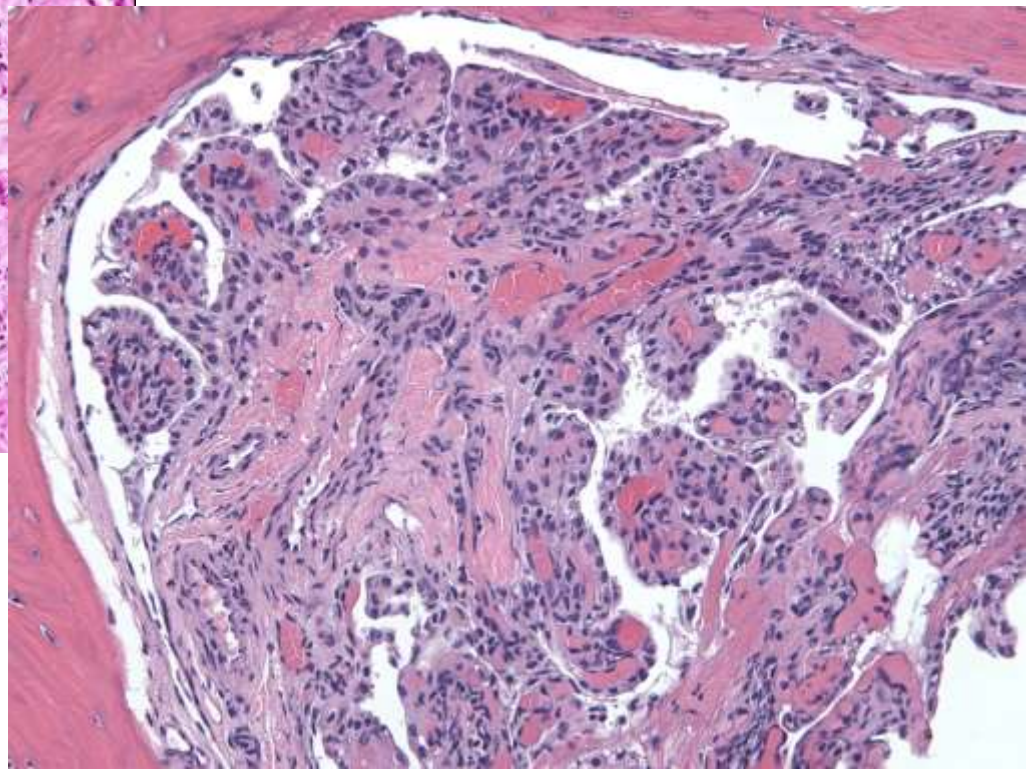


Endolymphatic Sac Tumor

- Unencapsulated, destructive, papillary epithelial neoplasm arising within endolymphatic sac
- Mean age: 30-40 years; M=F
- Associated with von Hippel-Lindau syndrome
- Symptoms usually present for years, progressive
- Mean size: 2cm, up to 10cm
- Bone invasion and remodeling
- Treatment: surgical excision with attempt at hearing preservation



Endolymphatic sac



Endolymphatic sac tumor

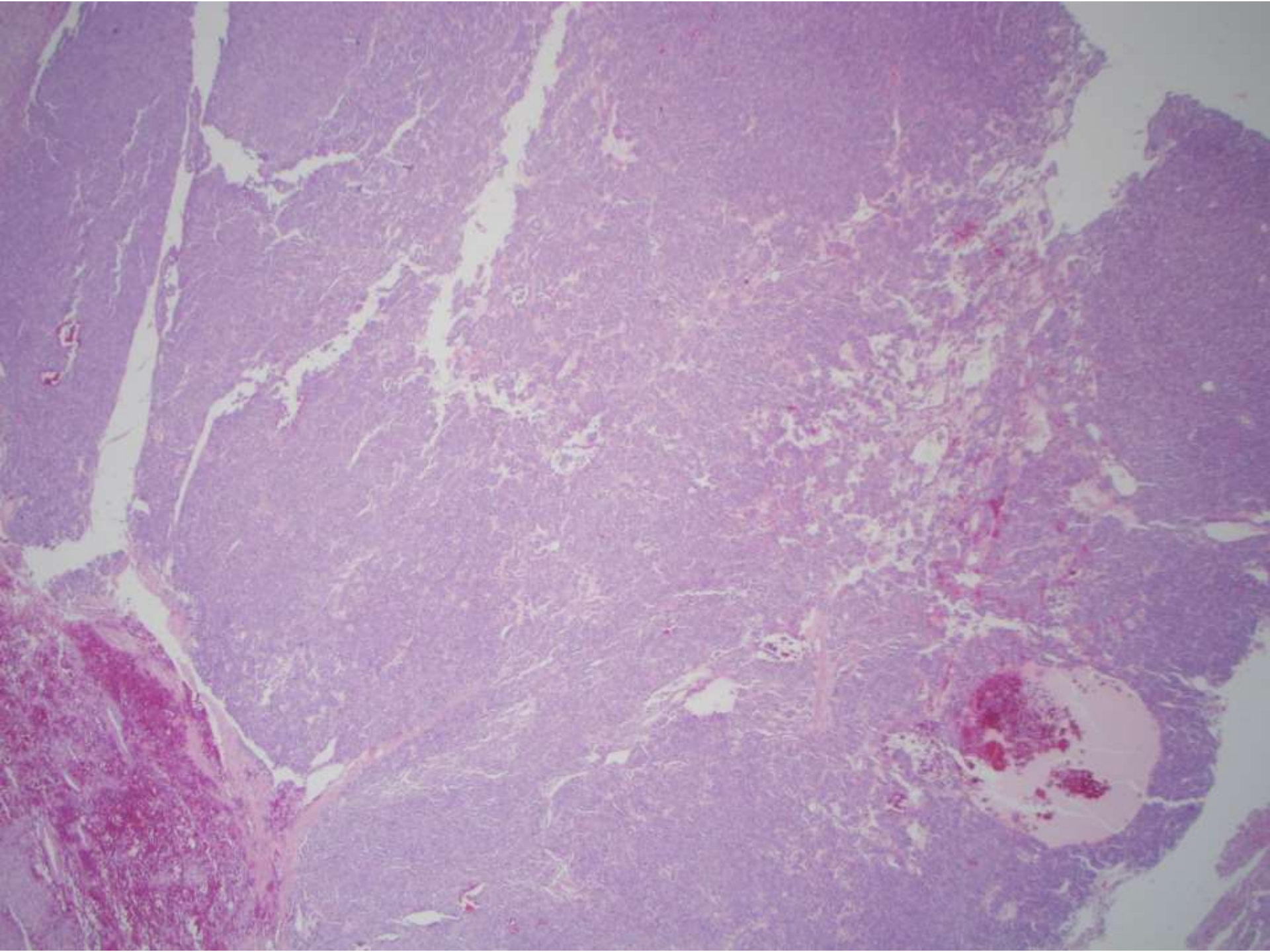
Follow Up

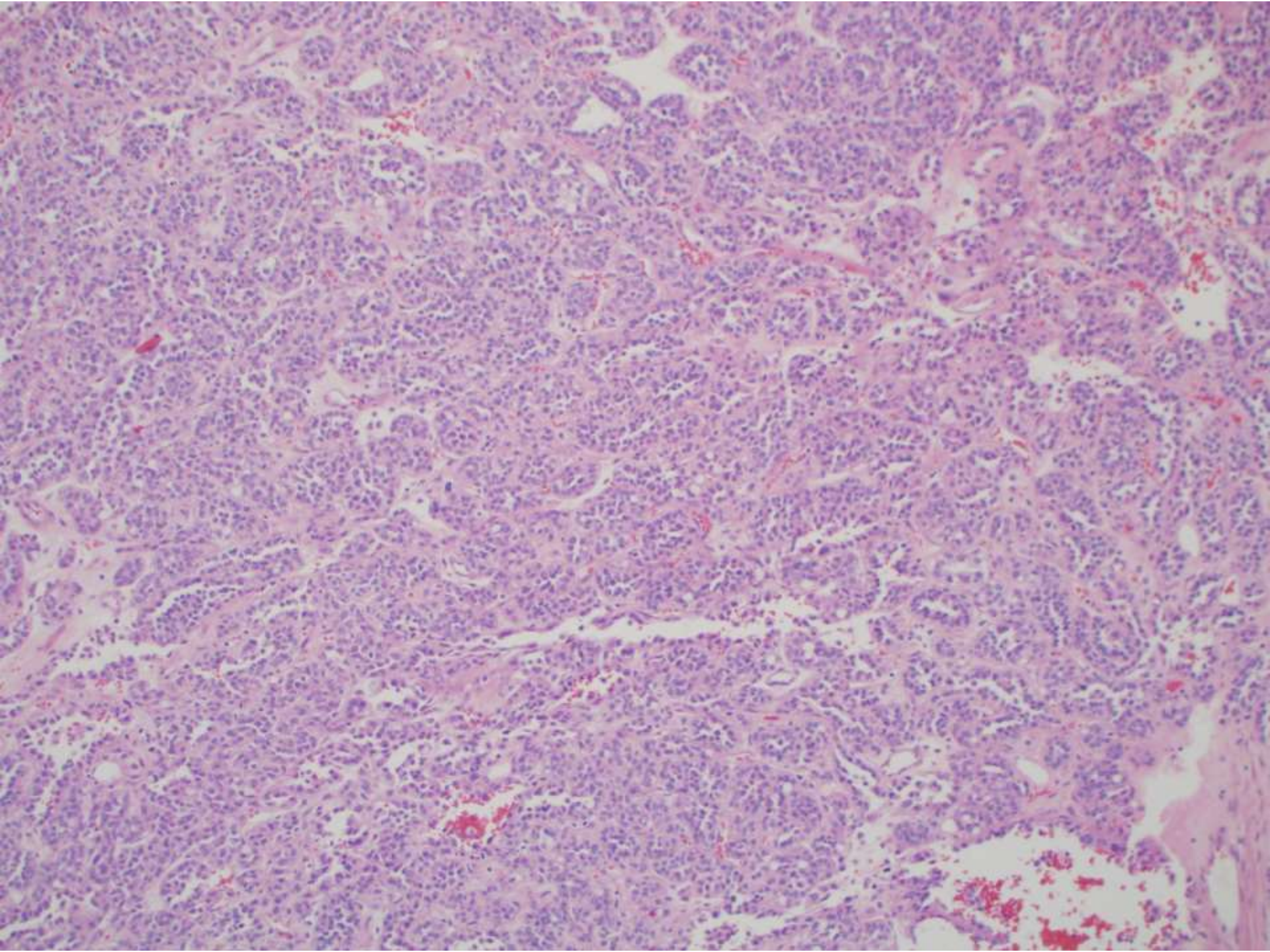
- 1 week post-op:
  - Echoing and ringing on the R side has resolved, no headaches
  - Gait and proprioception deficits still ongoing, but dramatically less compared to pre-op
  - Energy and appetite back to baseline
  - Surgical wound healing well
- MRI in April

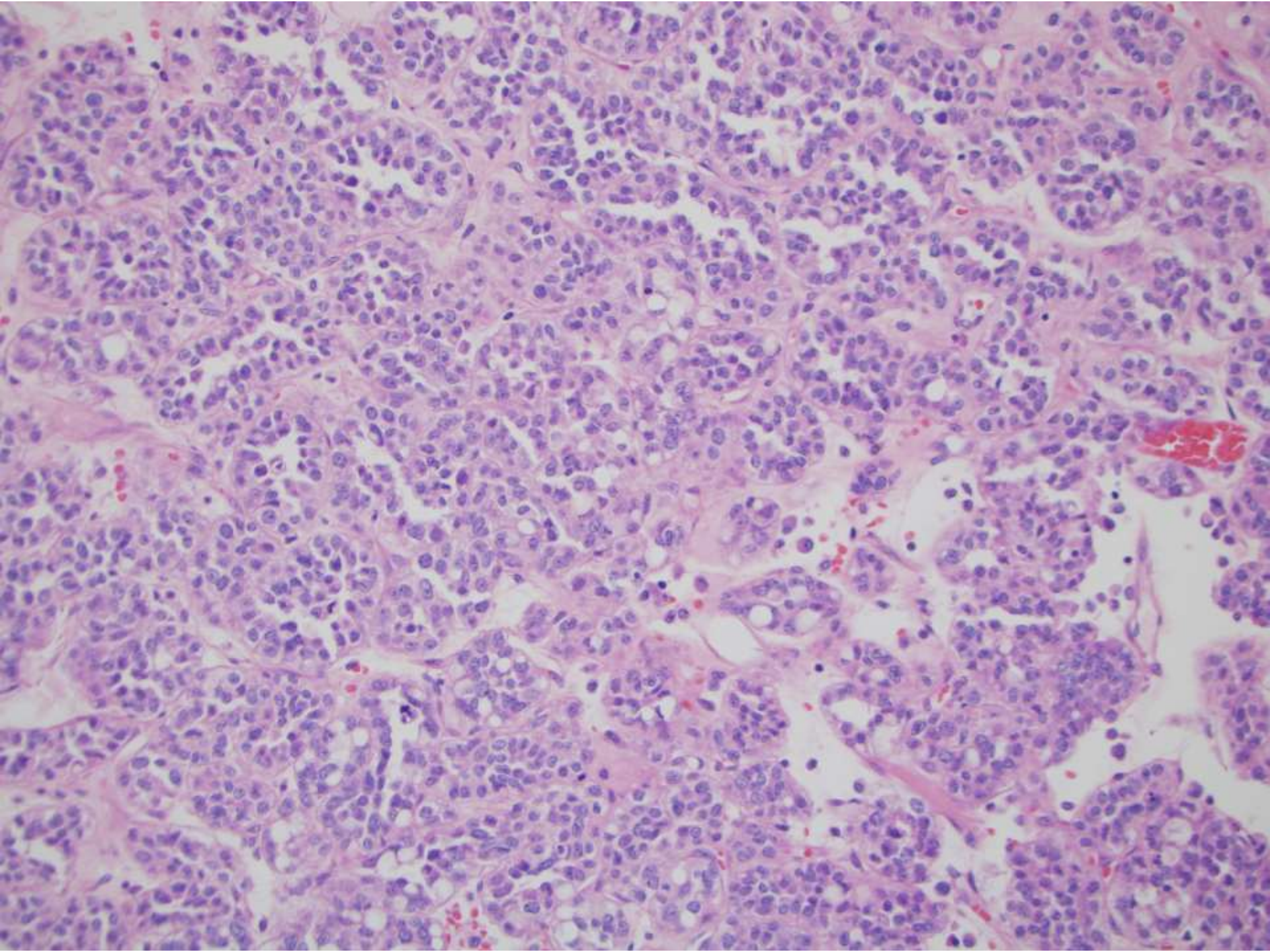
6235

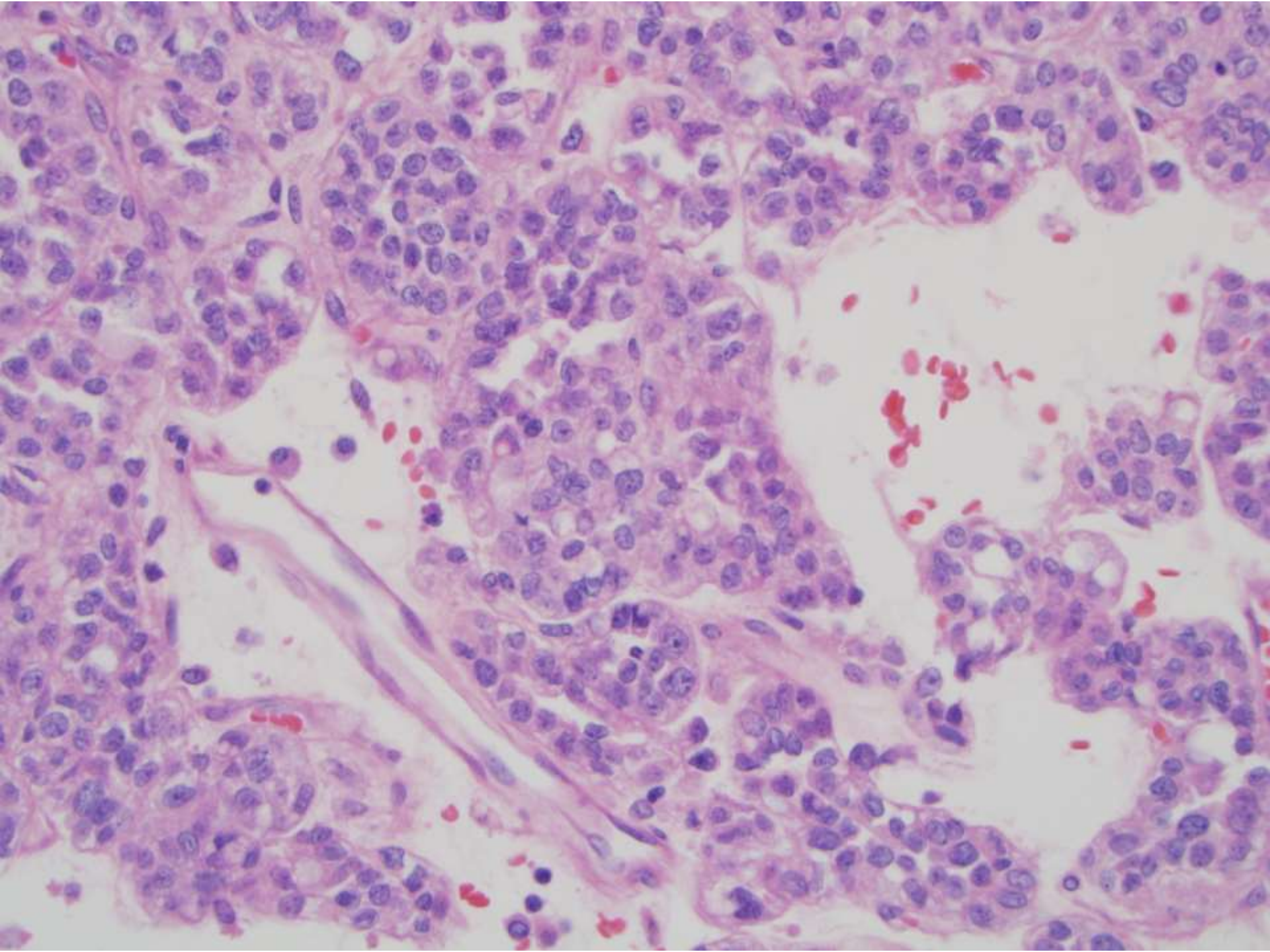
Emily Chan/Jeff Simko; UCSF

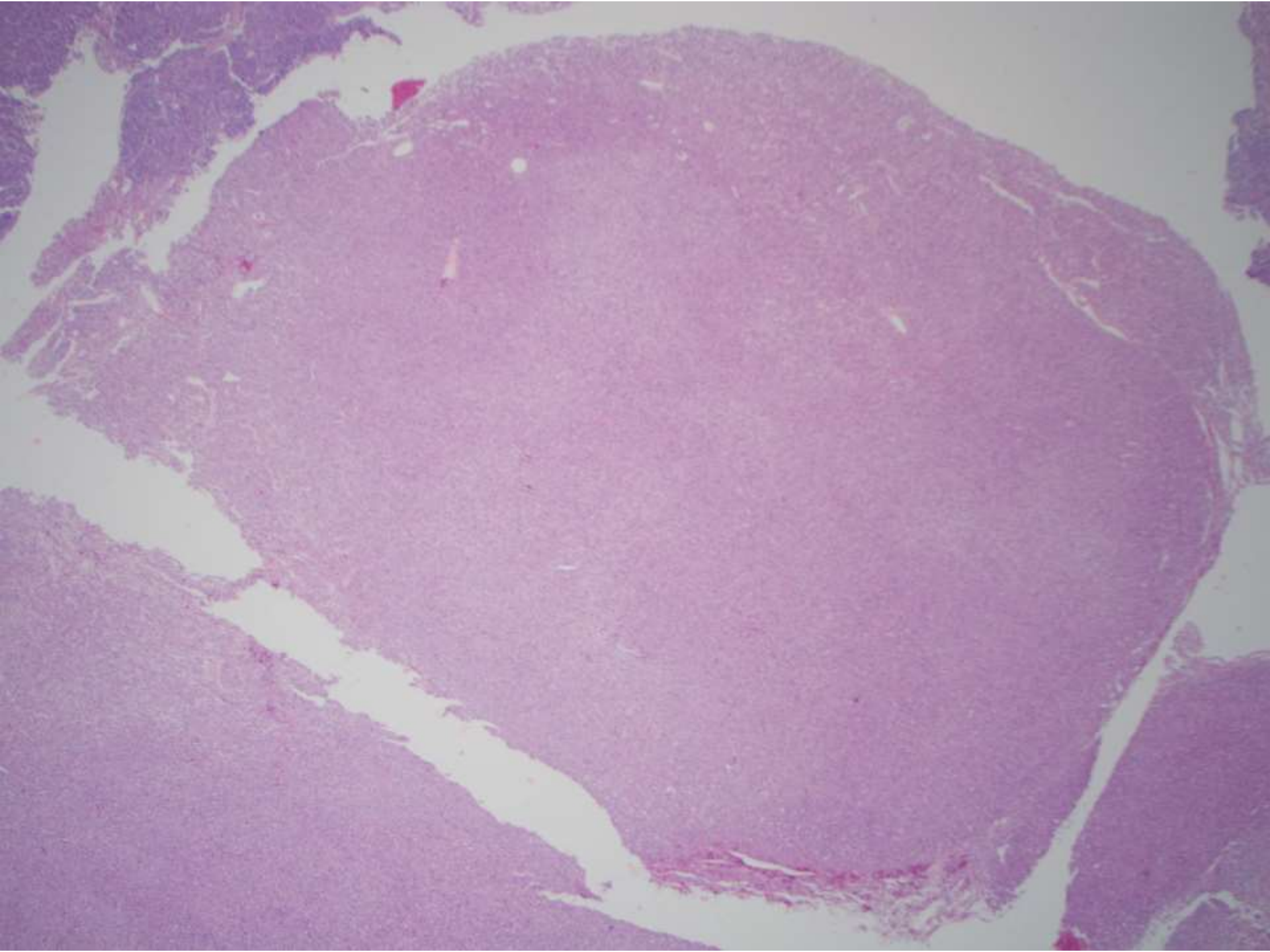
35-year-old female with 13cm right renal mass resected in 2009, now with left femur mass. Slide submitted is from right renal mass.

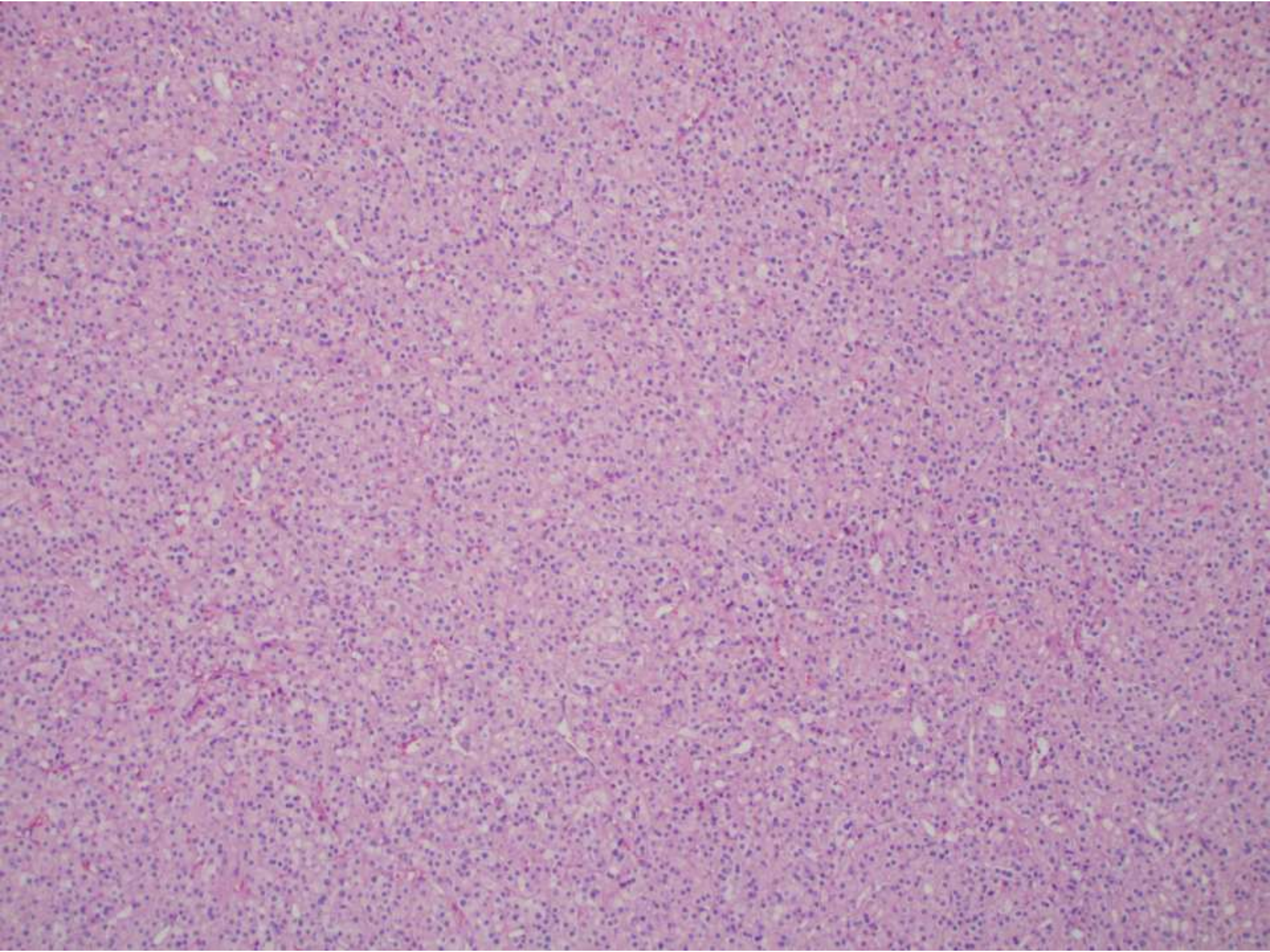


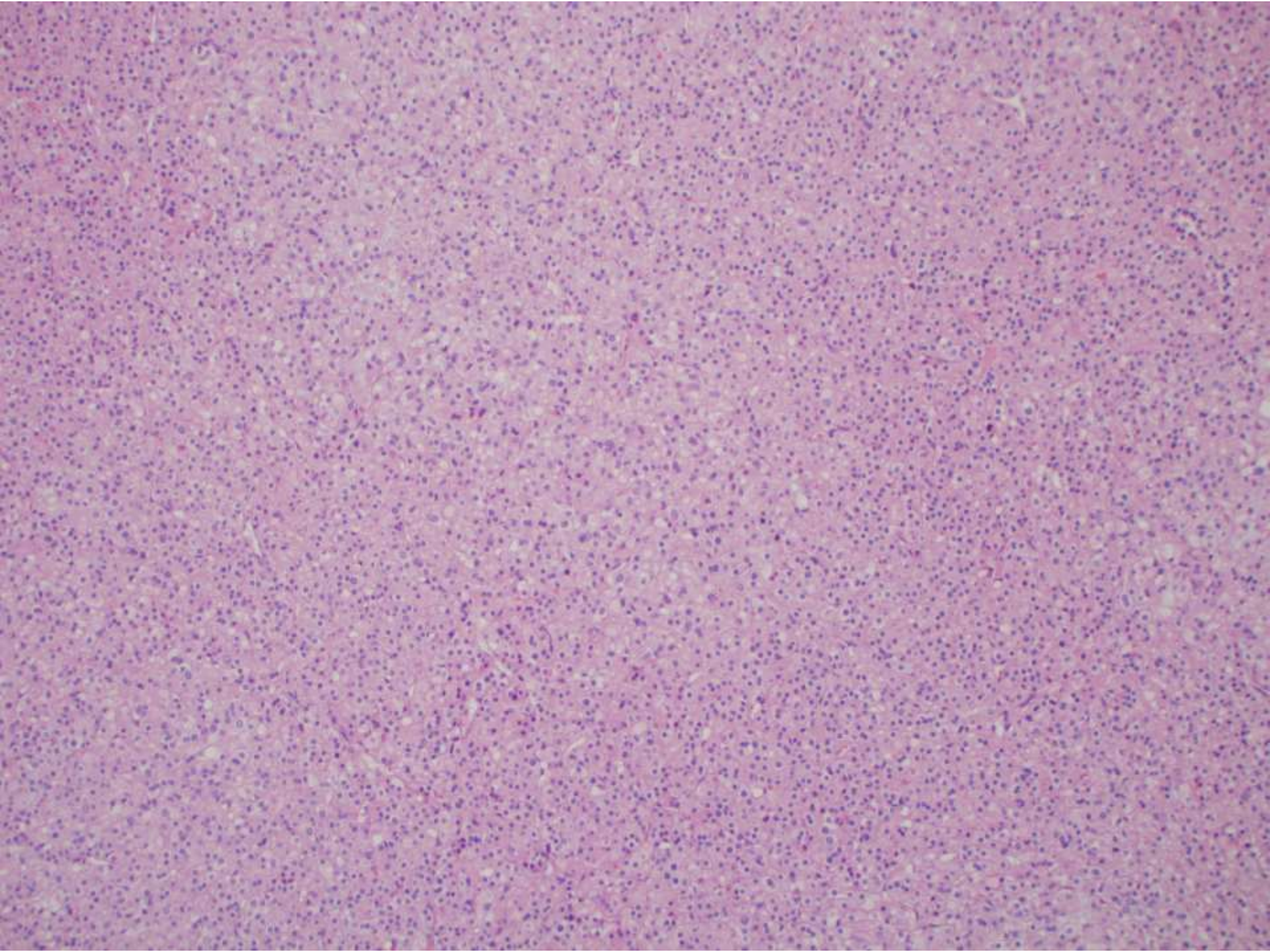


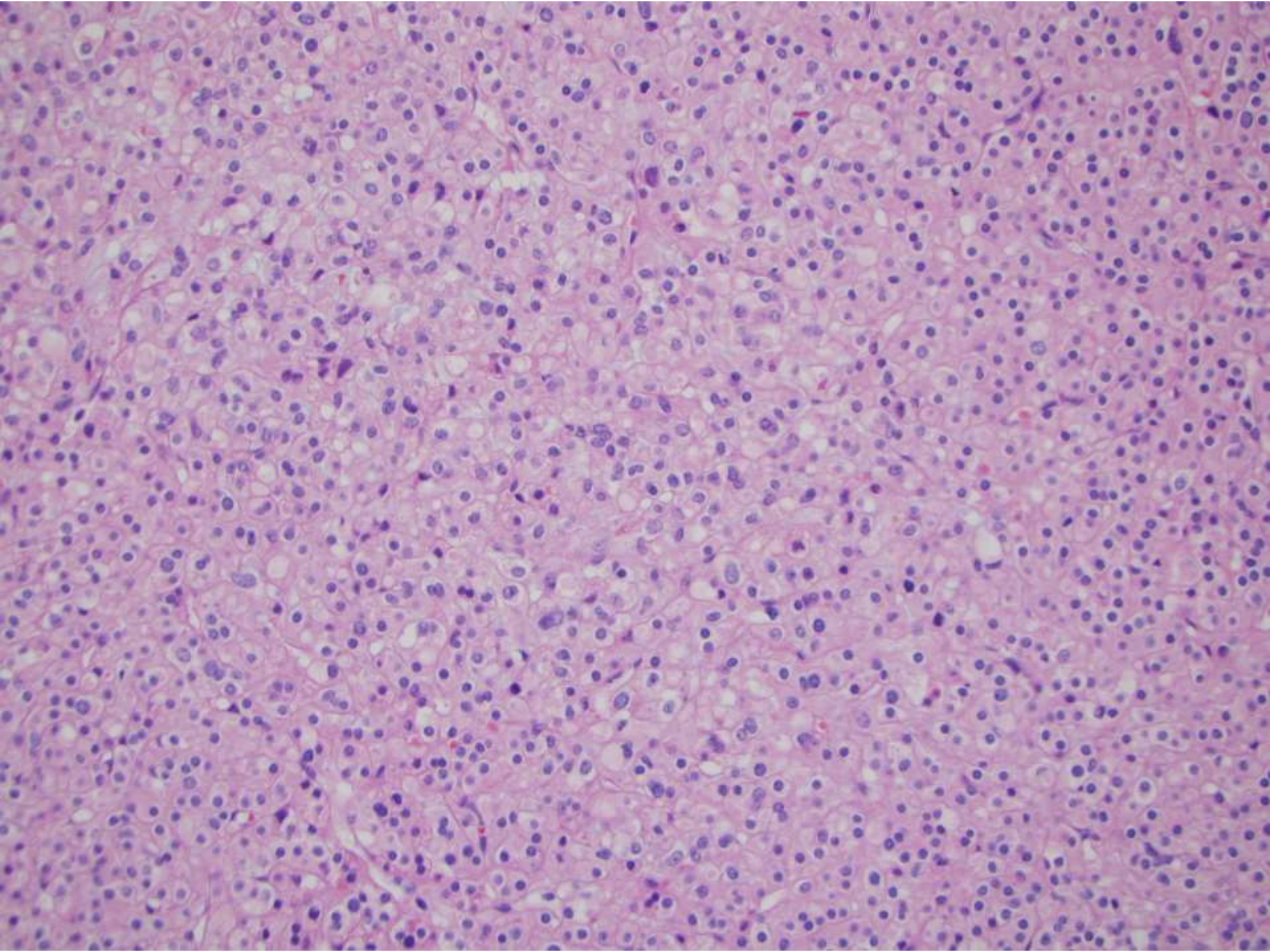


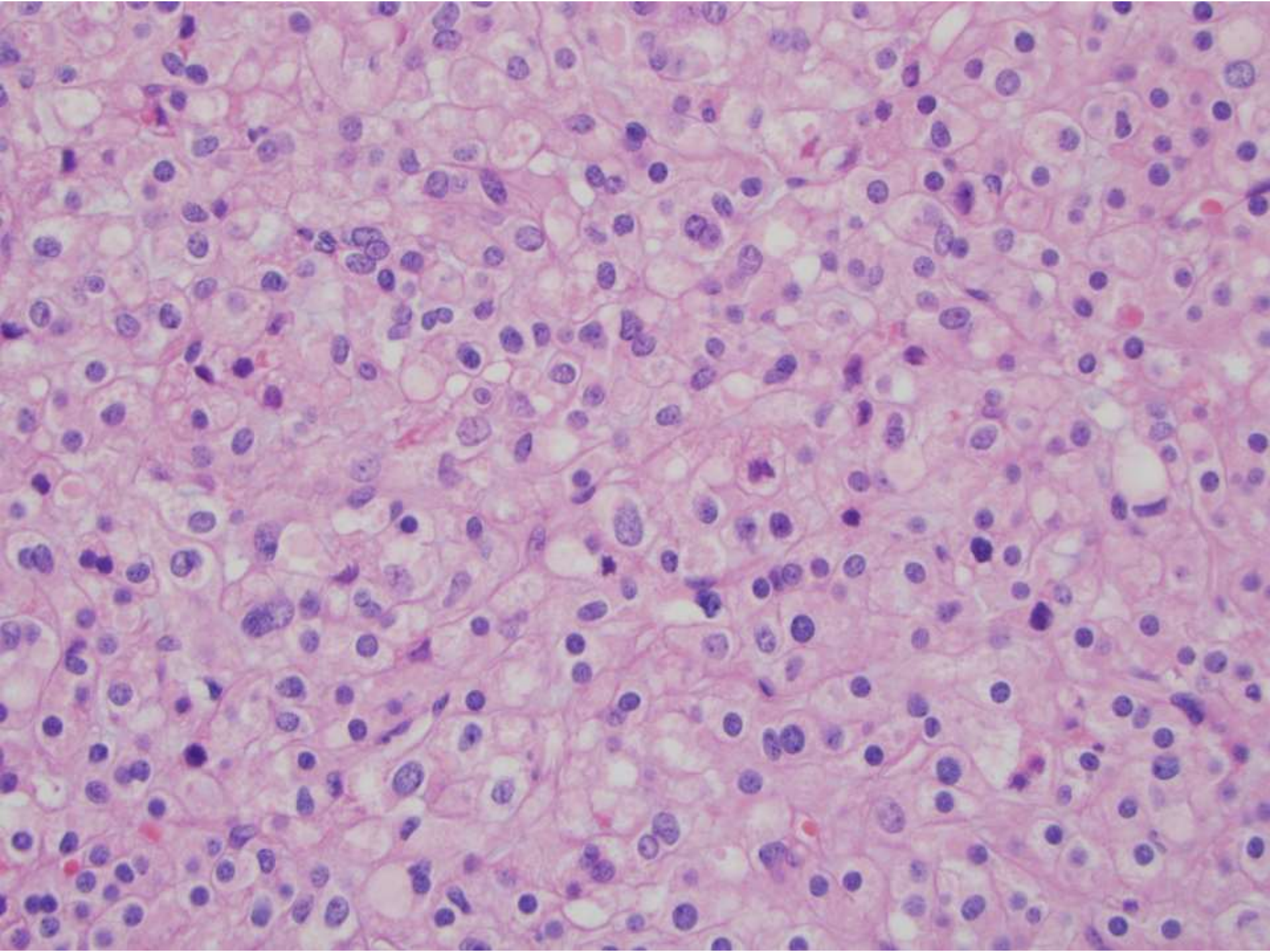












35 year old woman with a 13 cm renal mass resected in 2009, now with a left femur mass

South Bay Meeting

Jan 8, 2018

Emily Chan, Surgical Pathology Fellow

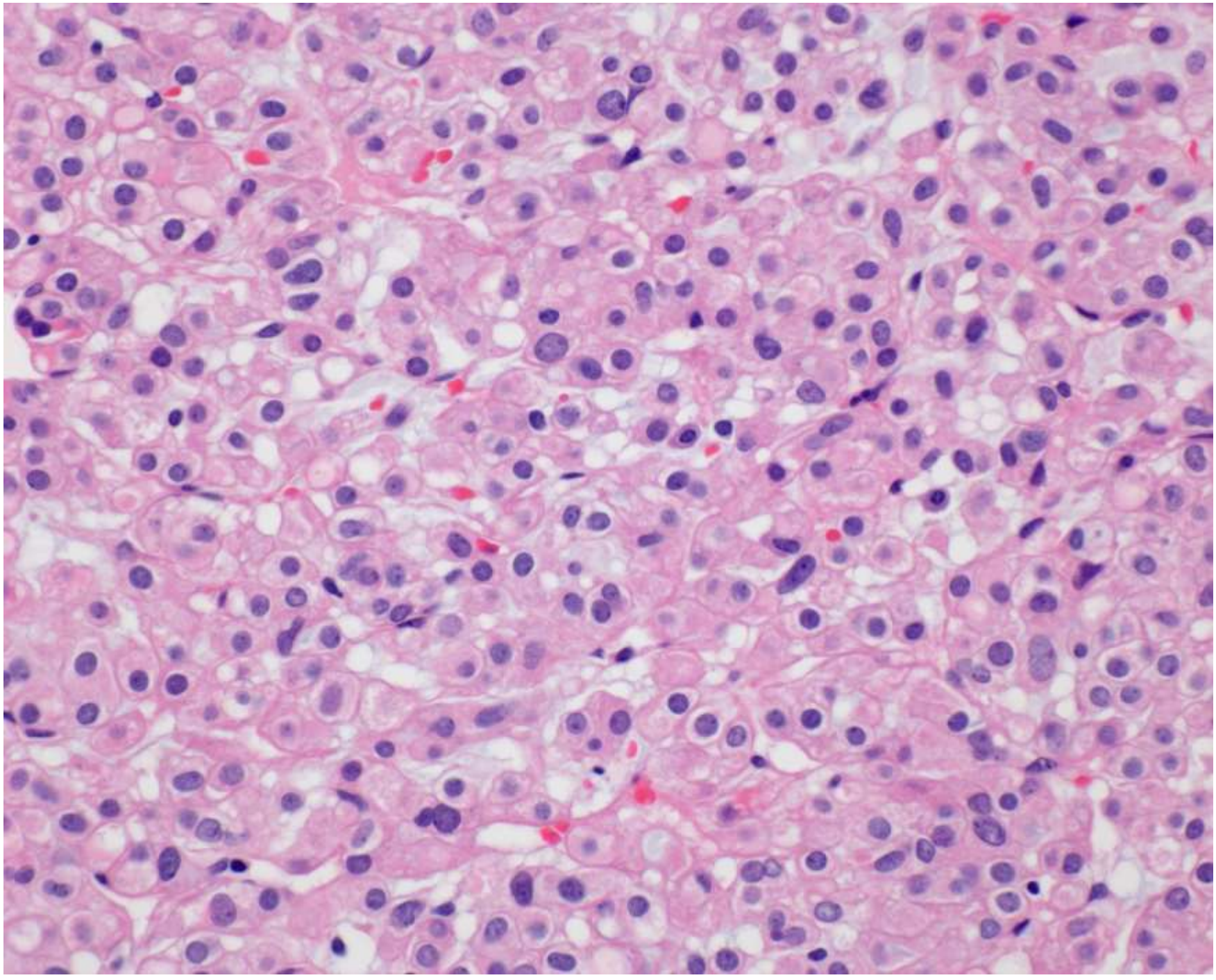
Dr. Jeff Simko

UCSF

Patient history

- 2009: 27 years old woman presents with large mass that was grossly replacing adrenal gland and infiltrating kidney

- 2017: 8 years later, she presents with a metastasis to her left femur



Differential Diagnosis:

- A “pink” renal tumor
  - Clear cell RCC, granular variant
  - Chromophobe RCC (eosinophilic variant)
  - Papillary RCC
  - Hybrid oncocytic tumor
  - Hereditary leiomyomatosis and RCC
  - MiT family translocation RCC
  - AML (epithelioid predominant)
  - **Succinate dehydrogenase deficient RCC**
- Adrenocortical carcinoma

Am J Surg Pathol Dec 2014

Succinate Dehydrogenase (SDH)-deficient Renal Carcinoma: A Morphologically Distinct Entity

A Clinicopathologic Series of 36 Tumors From 27 Patients

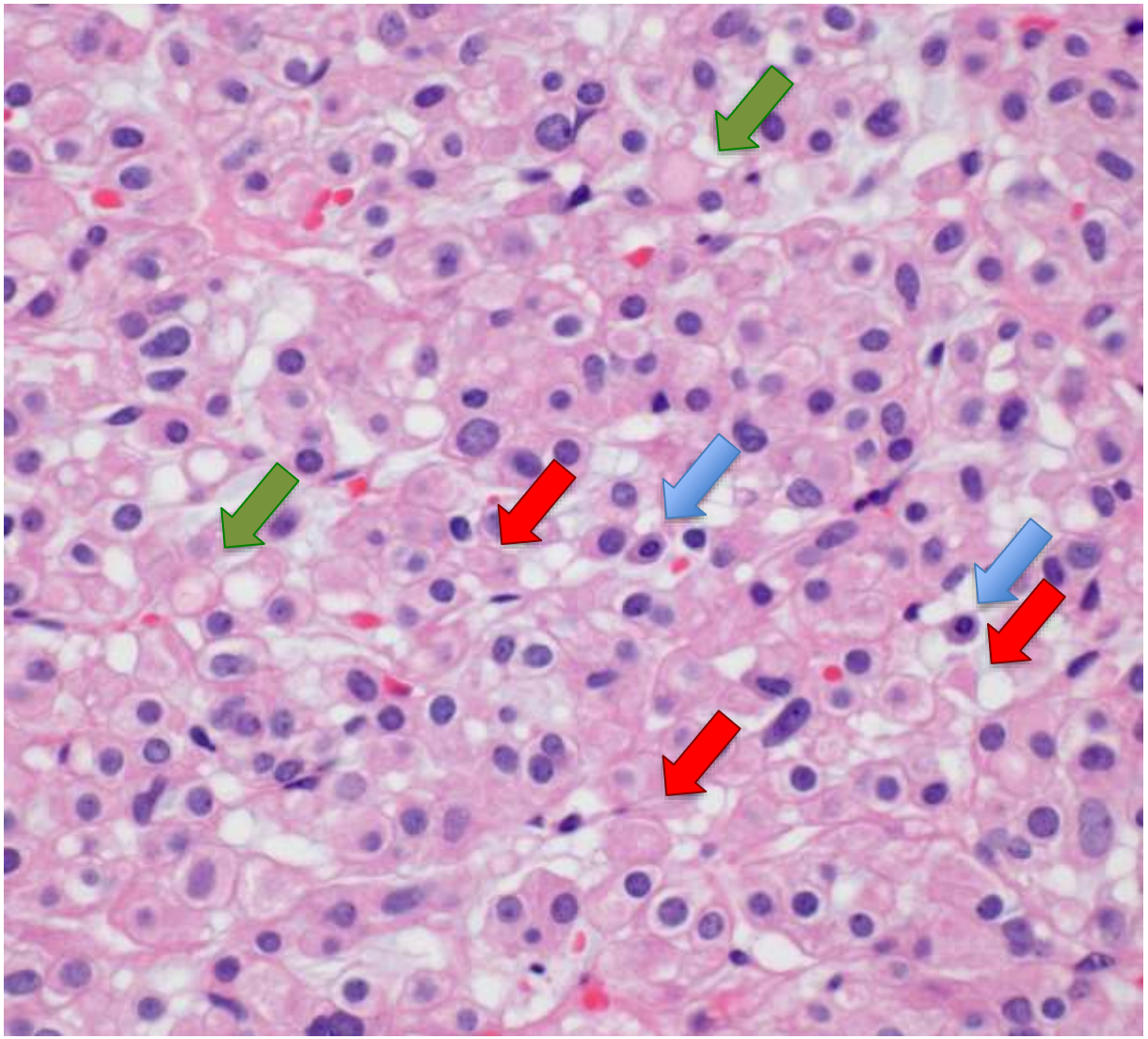
Anthony J. Gill, MD, FRCPA,†‡ Ondrej Hes, MD,§ Thomas Papathomas, MD,‖ et al*

Modern pathology 2015

Succinate dehydrogenase-deficient renal cell carcinoma: detailed characterization of 11 tumors defining a unique subtype of renal cell carcinoma

Sean R Williamson[1], John N Eble[2], Mahul B Amin[3], Nilesh S Gupta[1], Steven C Smith[3], Lynette M Sholl[4], Rodolfo Montironi[5], Michelle S Hirsch[4] and Jason L Hornick[4]

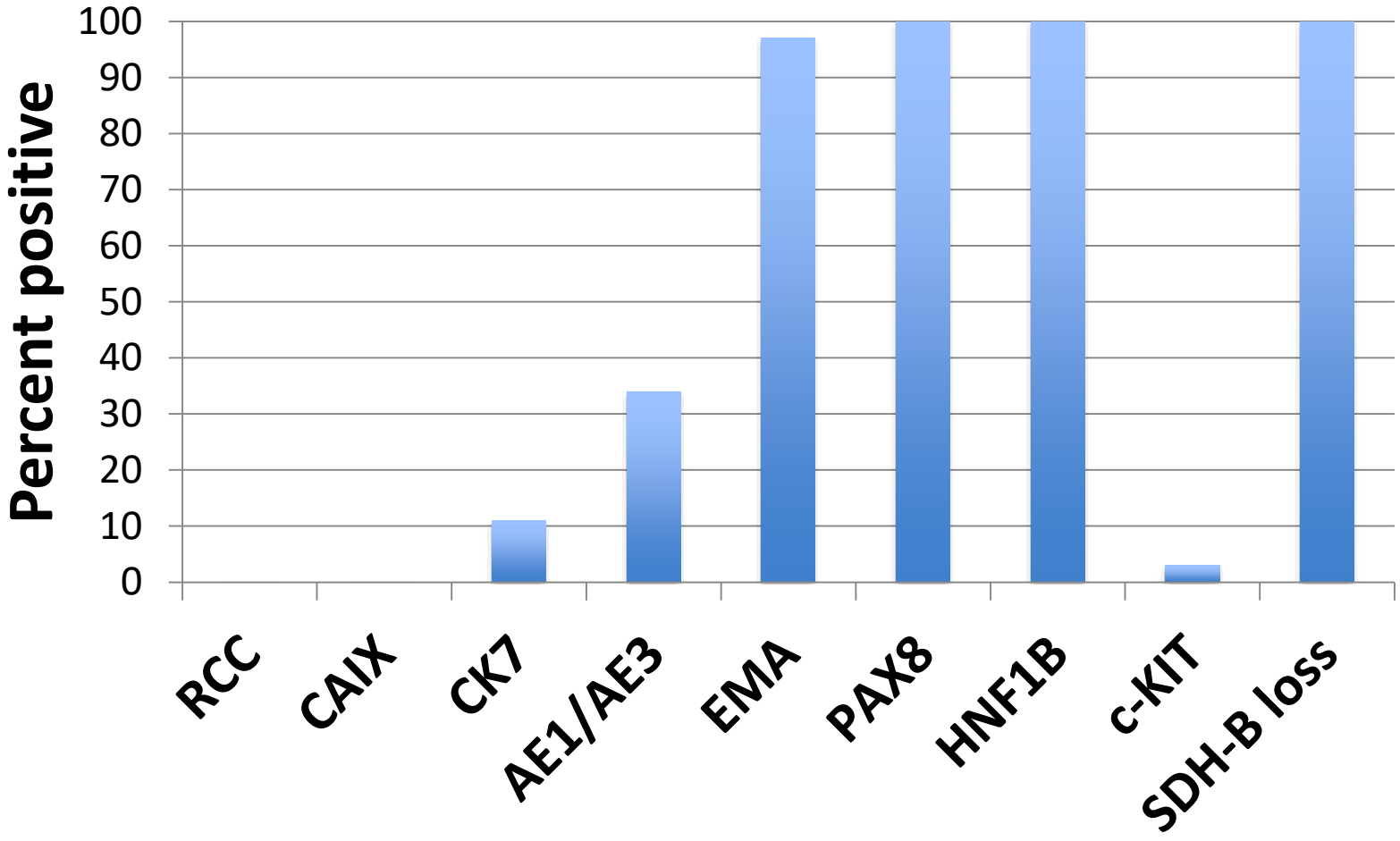
SDH-deficient RCC



Key features:

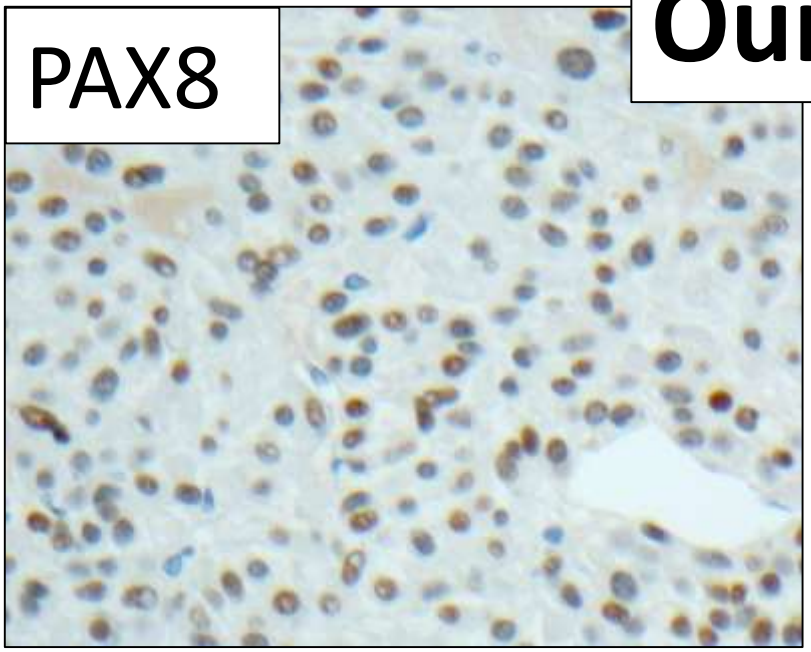
- Pink
- Low grade nuclei
- Clear vacuoles
- Eosinophilic globules
- Mast cells
- Entrapped tubules
- Solid architecture

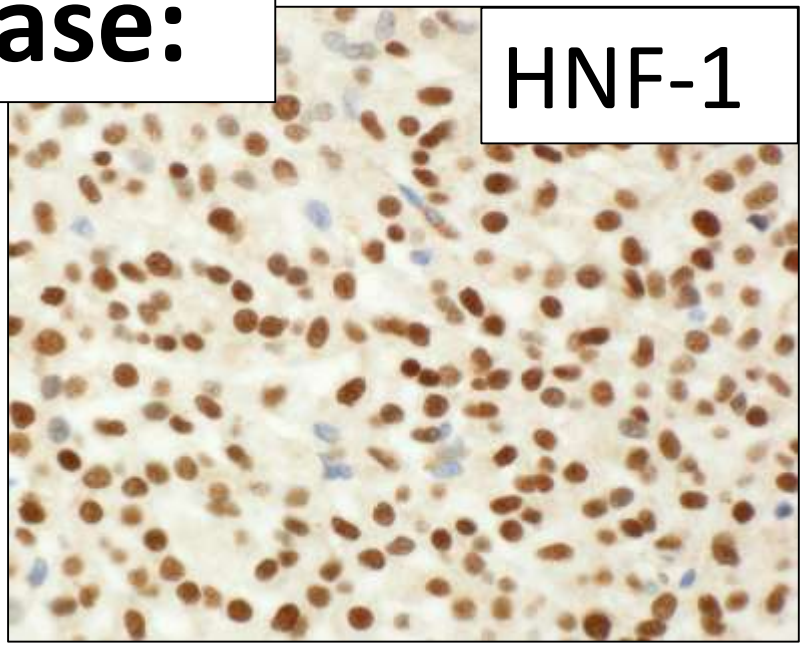
SDH-deficient RCC IHC profile

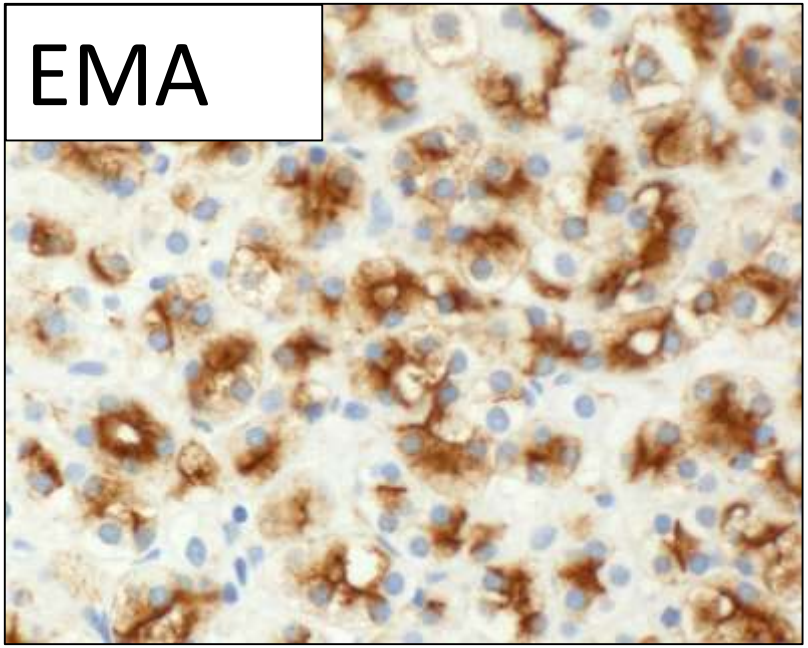


Based on review of Gill et al Am J Surg Pathol 2014 and Williamson et al Mod Pathol 2015

Our case:







Negative stains:

- CAIX
- Pankeratin
- MelanA (+/-)
- HMB45
- Synaptophysin
- CD10
- TFE3
- Inhibin (+/-)
- SF1
- D2-40
- FH stain is retained

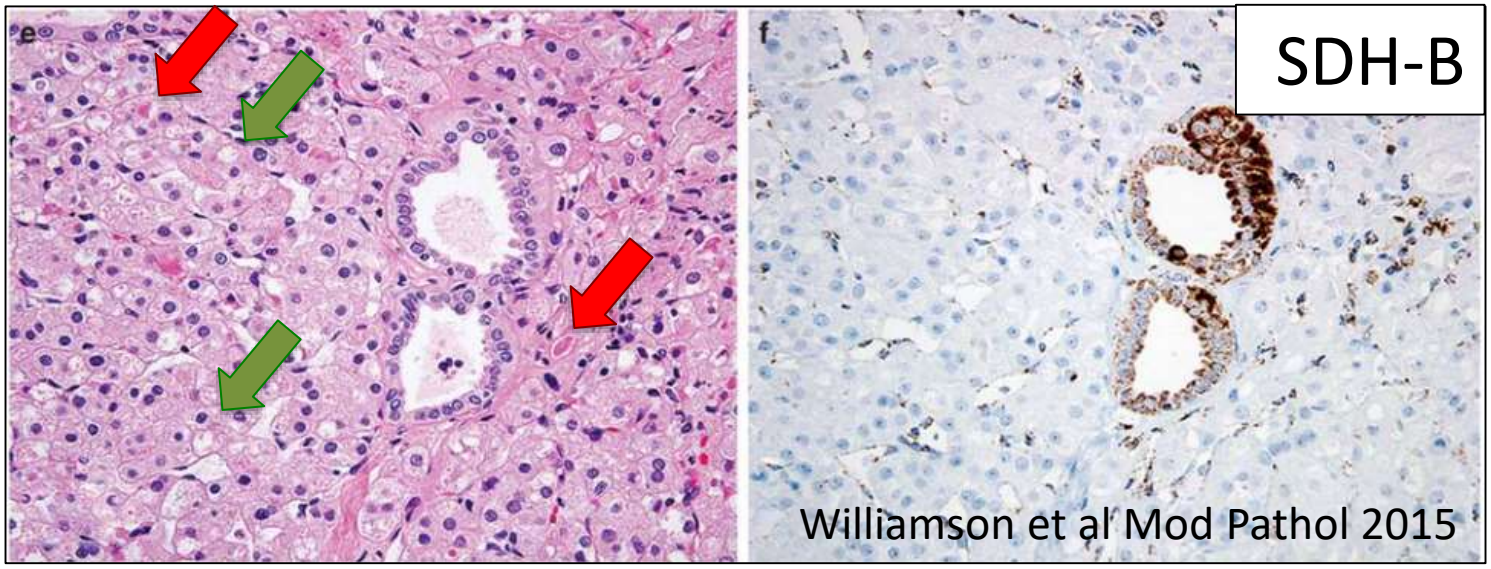
Our diagnosis: Renal cell carcinoma, unclassified

- Suggested SDH-deficient RCC and recommended testing for SDHB to confirm
- Invitae laboratory germline testing (cheek swab) showed a “Pathogenic variant identified in SDHB”:

  c.136C>T(p.Arg46*)

SDH-deficient RCC

- New entity in 2016 WHO classification of RCC
- “Defined by loss of IHC expression of SDHB”
- Presents in young adulthood, median age 35
- Most low grade, but some have been reported to behave in aggressive fashion



Mutations in SDH-B

- Germline mutations are associated with a hereditary autosomal dominant tumor syndrome:
  - SDH-deficient paraganglioma/pheochromocytoma
  - SDH-deficient gastrointestinal stromal tumor
  - SDH-deficient RCC

- Non-hereditary/sporadic mutations seen in:
  - Carney triad (SDH-deficient paraganglioma, SDH-deficient GIST, and pulmonary chondroma)
  - Pituitary adenoma

Recent review by Gill AJ. Histopathology December 2017

Summary

- Consider SDH-deficient RCC in the differential diagnosis of a renal tumors with “pink” cytoplasm (intracytoplasmic vacuoles and inclusions)
- Think about SDH-deficient RCC in a young patient
- Recommend genetic testing/counseling and long term surveillance for other SDH-deficient neoplasms (paraganglioma/pheochromocytoma and SDH-deficient GIST)

Linguistic and cultural competency

Renal Cell Carcinoma

Carcinoma de celulas renales

Carcinome à cellules rénales

Nierenzellkarzinom

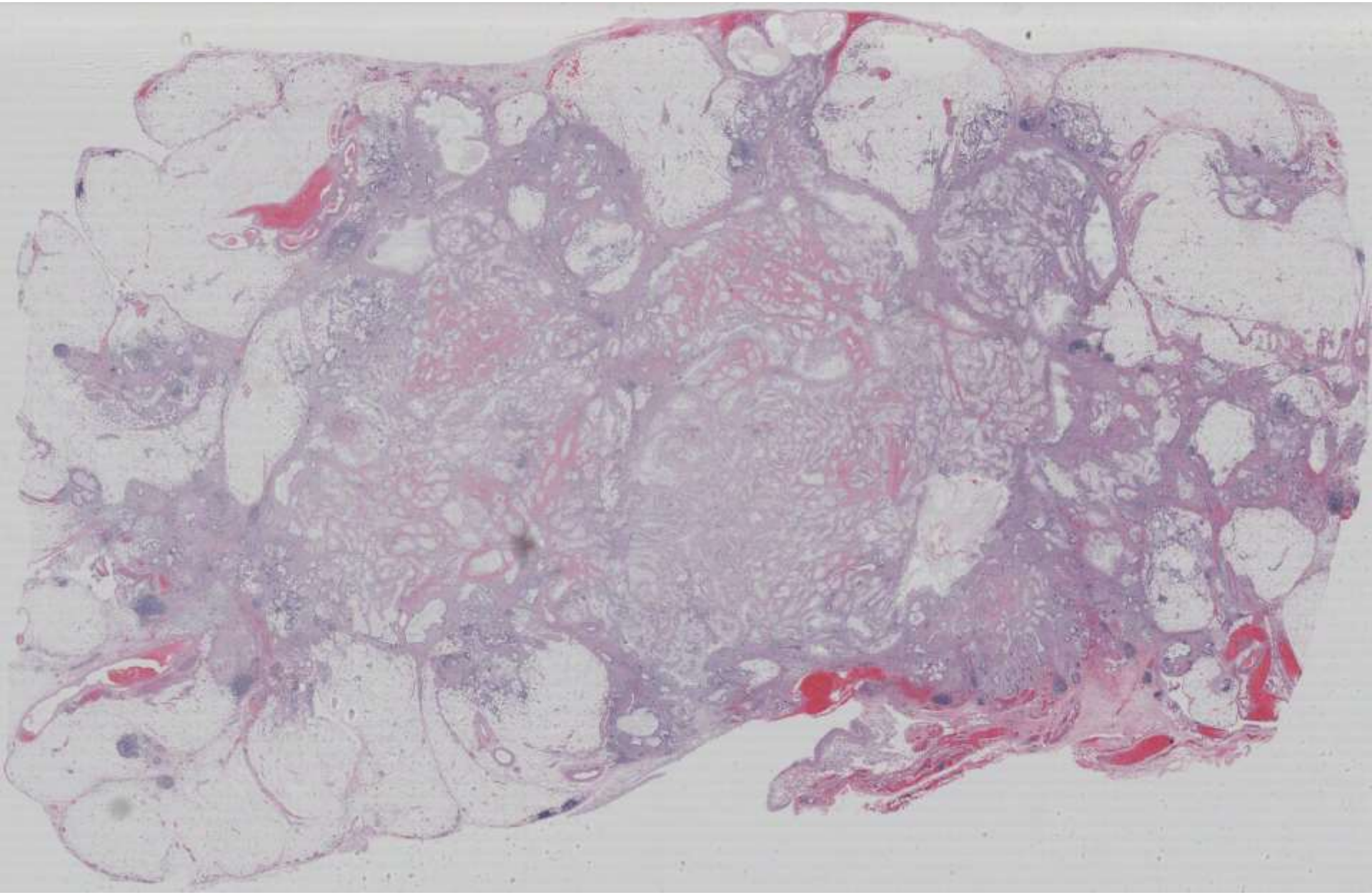
肾细胞癌

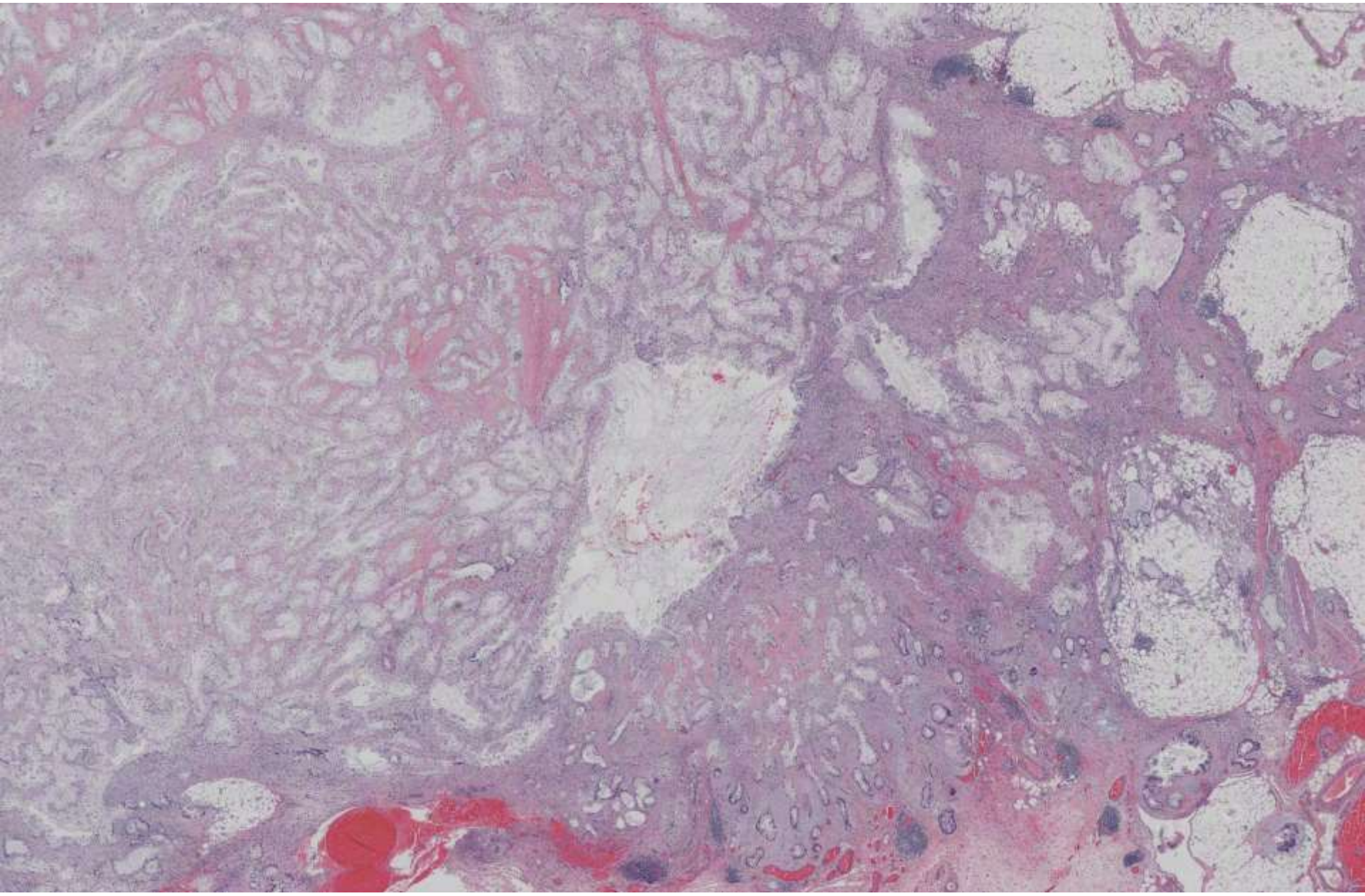
มะเร็งเซลล์ไต

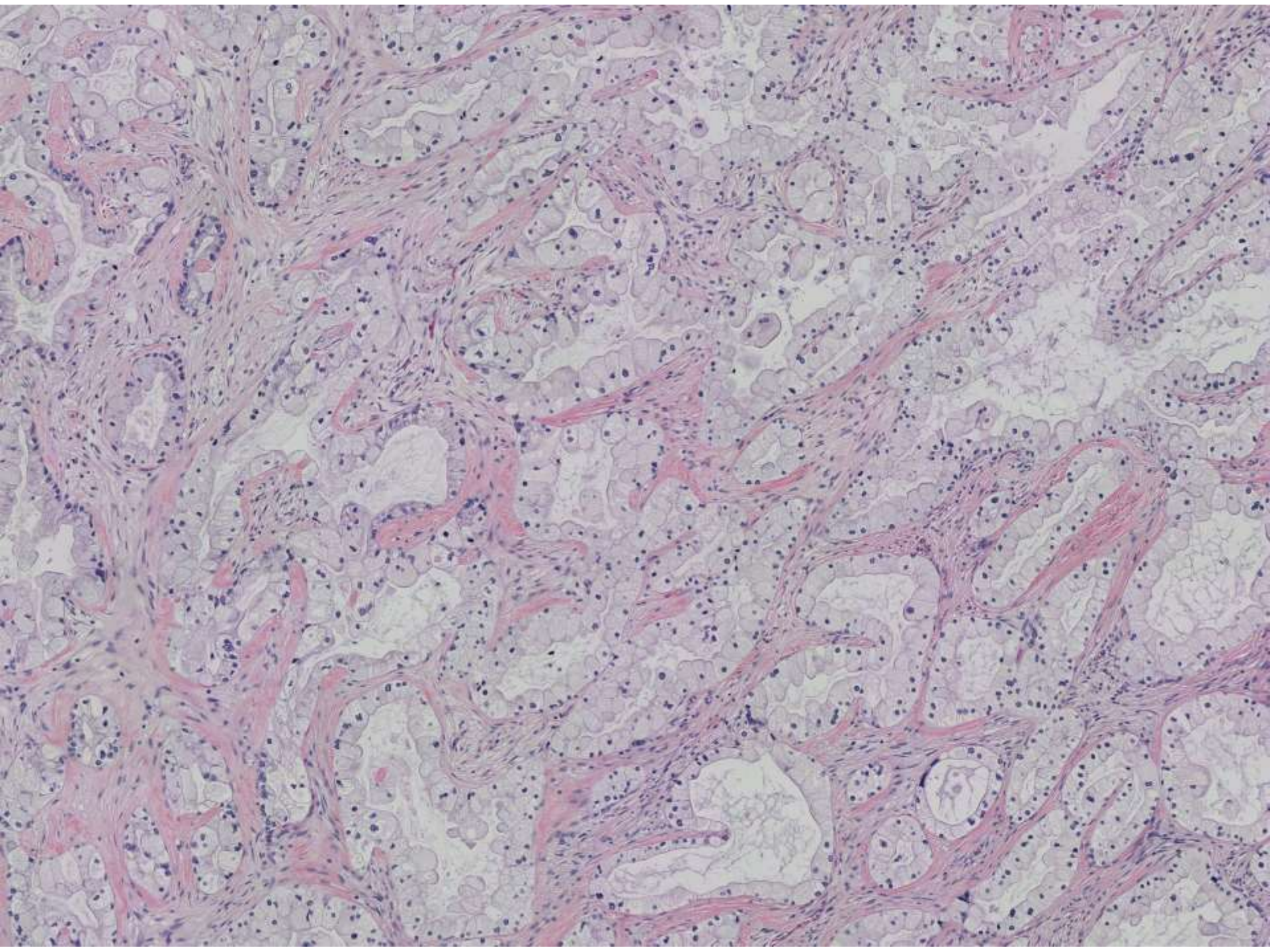
6236
(scanned slide available)

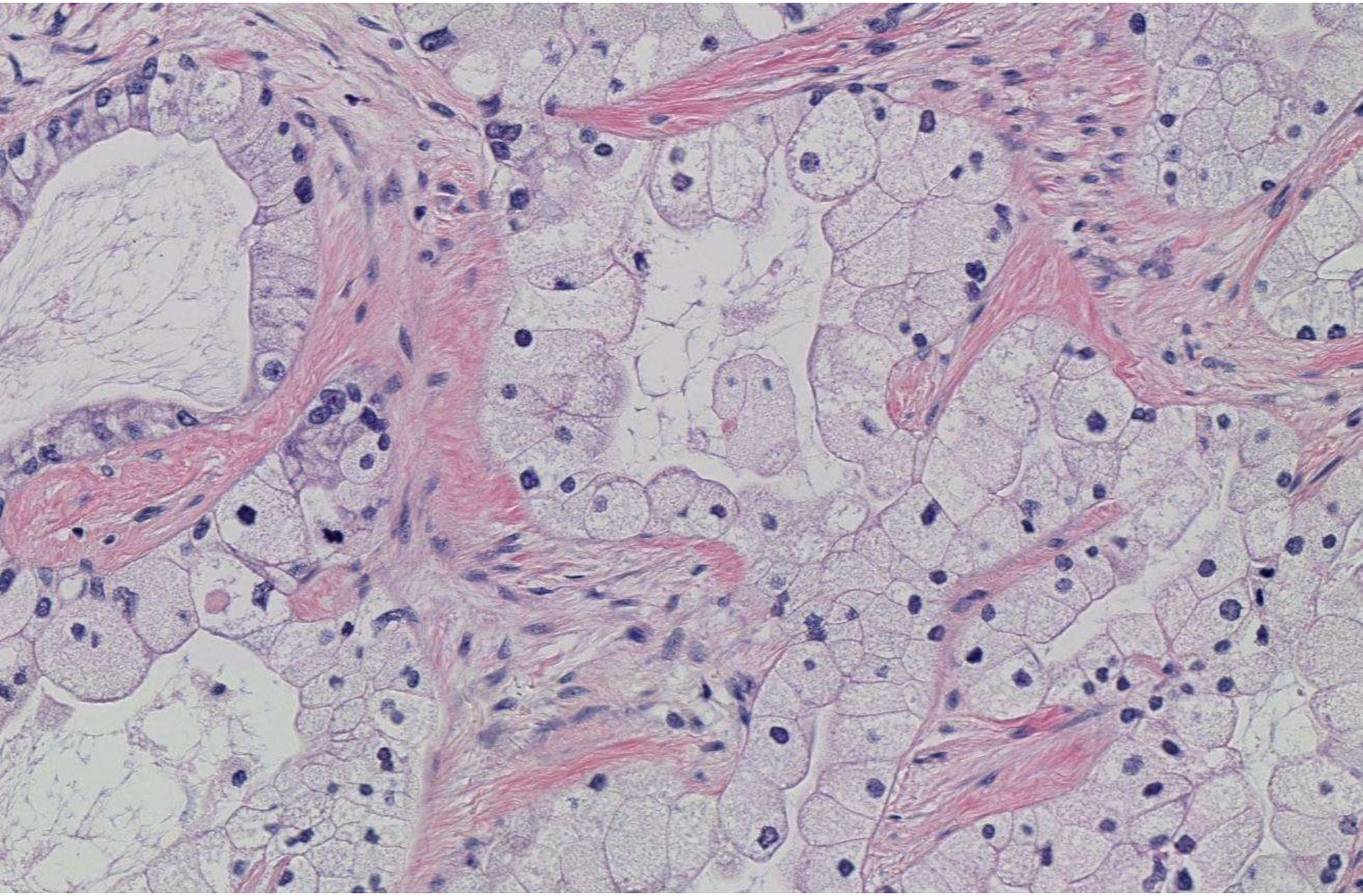
Emily Chan/Charles Zaloudek; UCSF

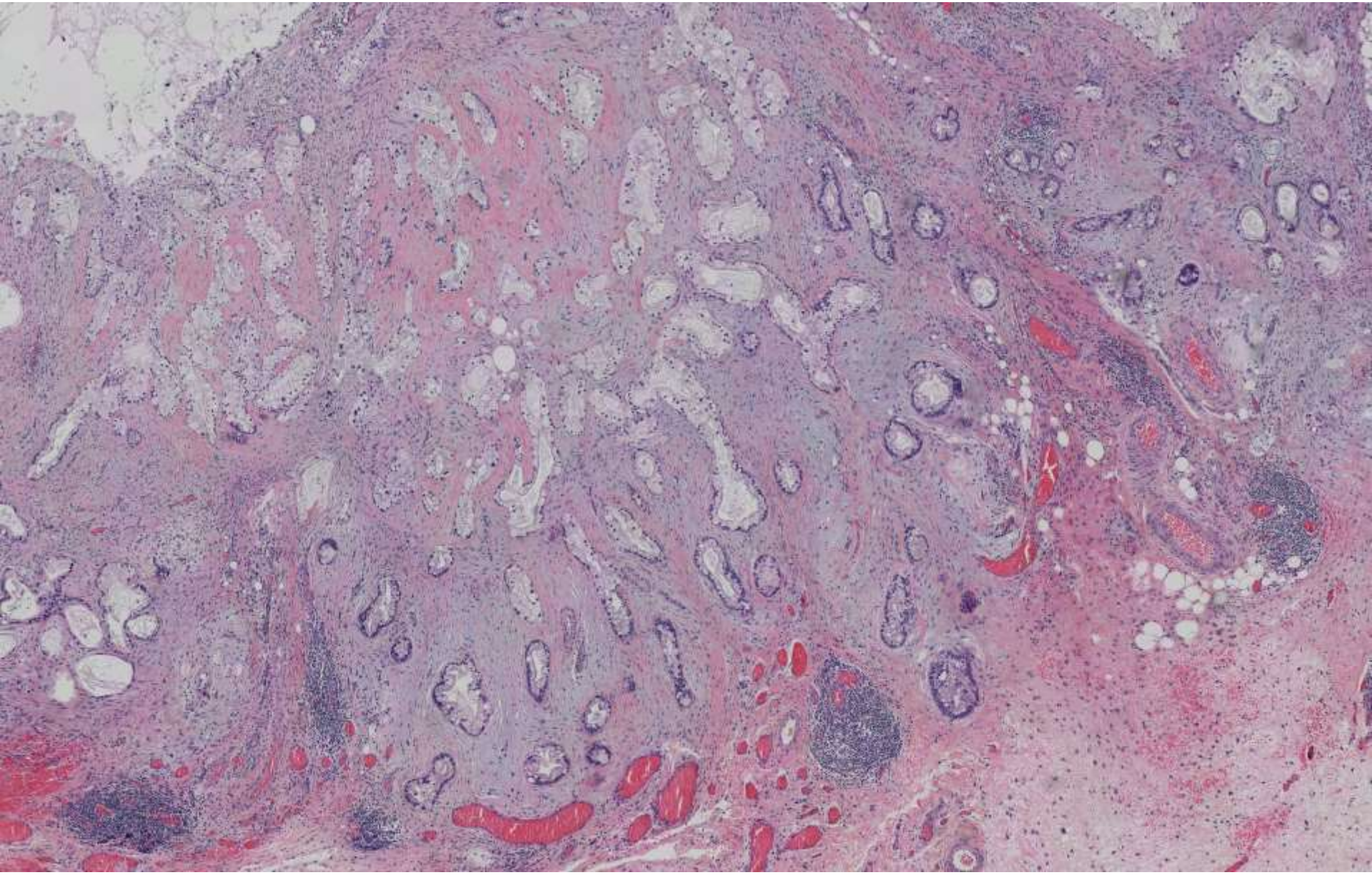
54-year-old female with pelvic mass.
Section from omentum submitted.

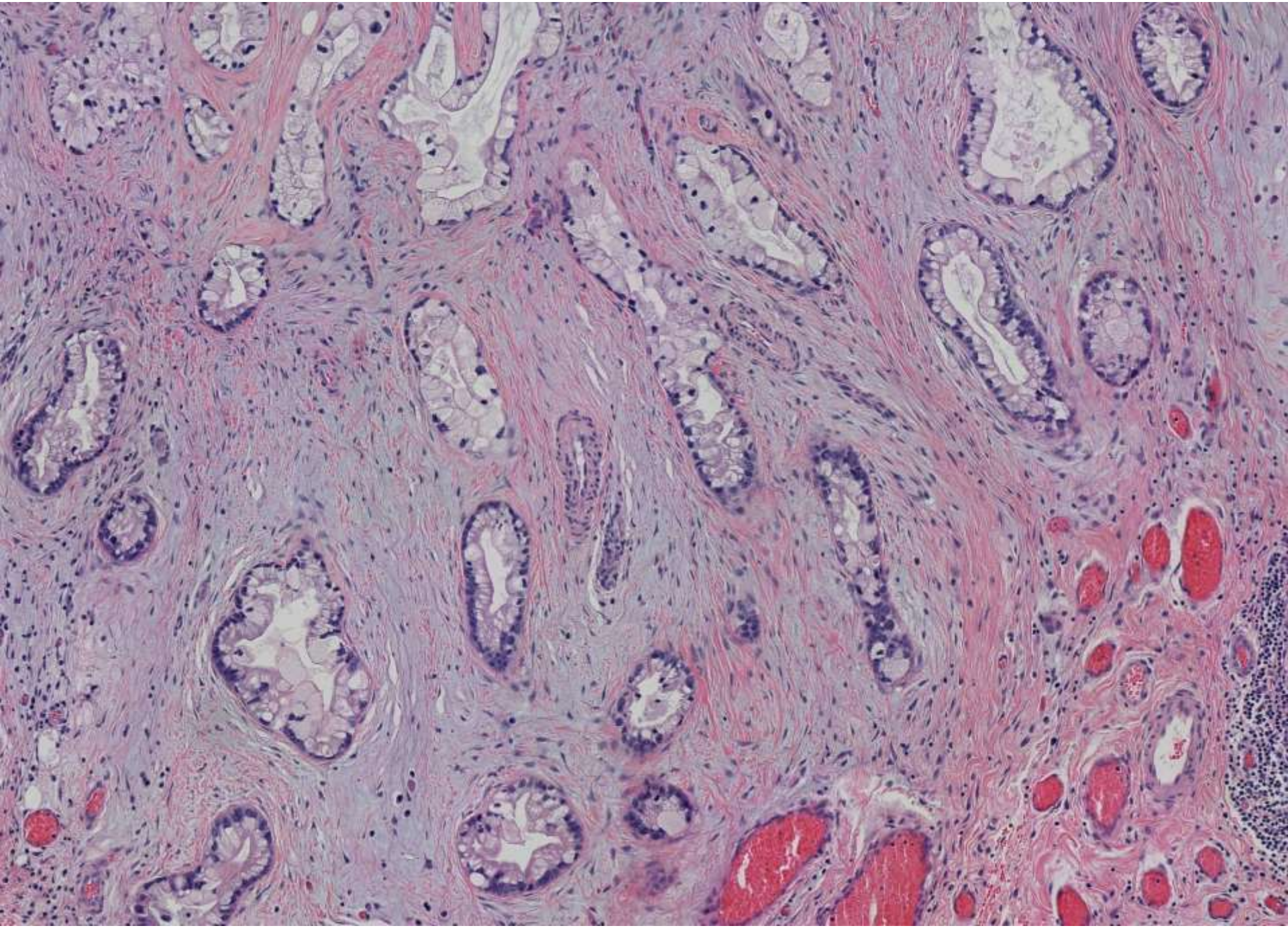


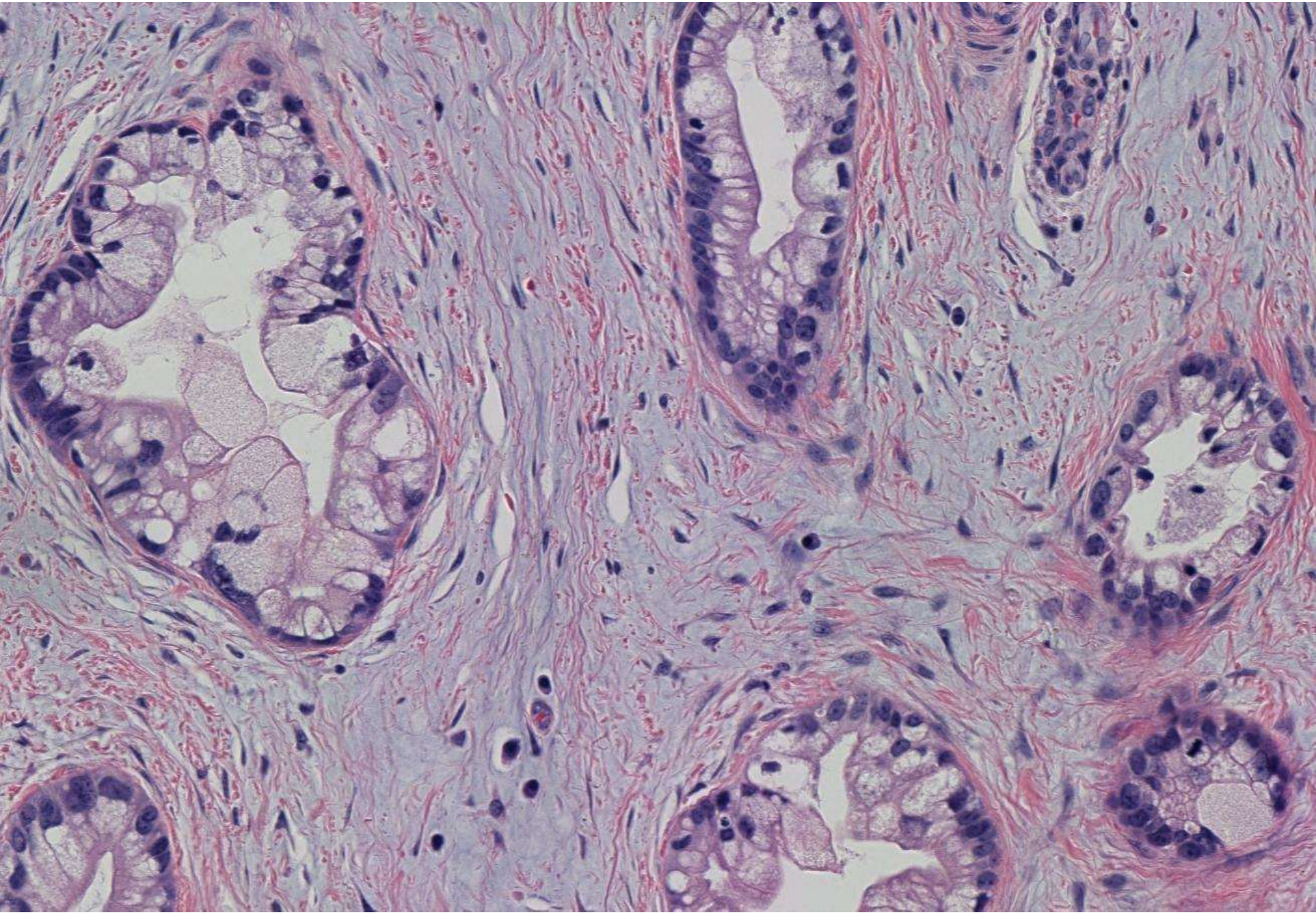


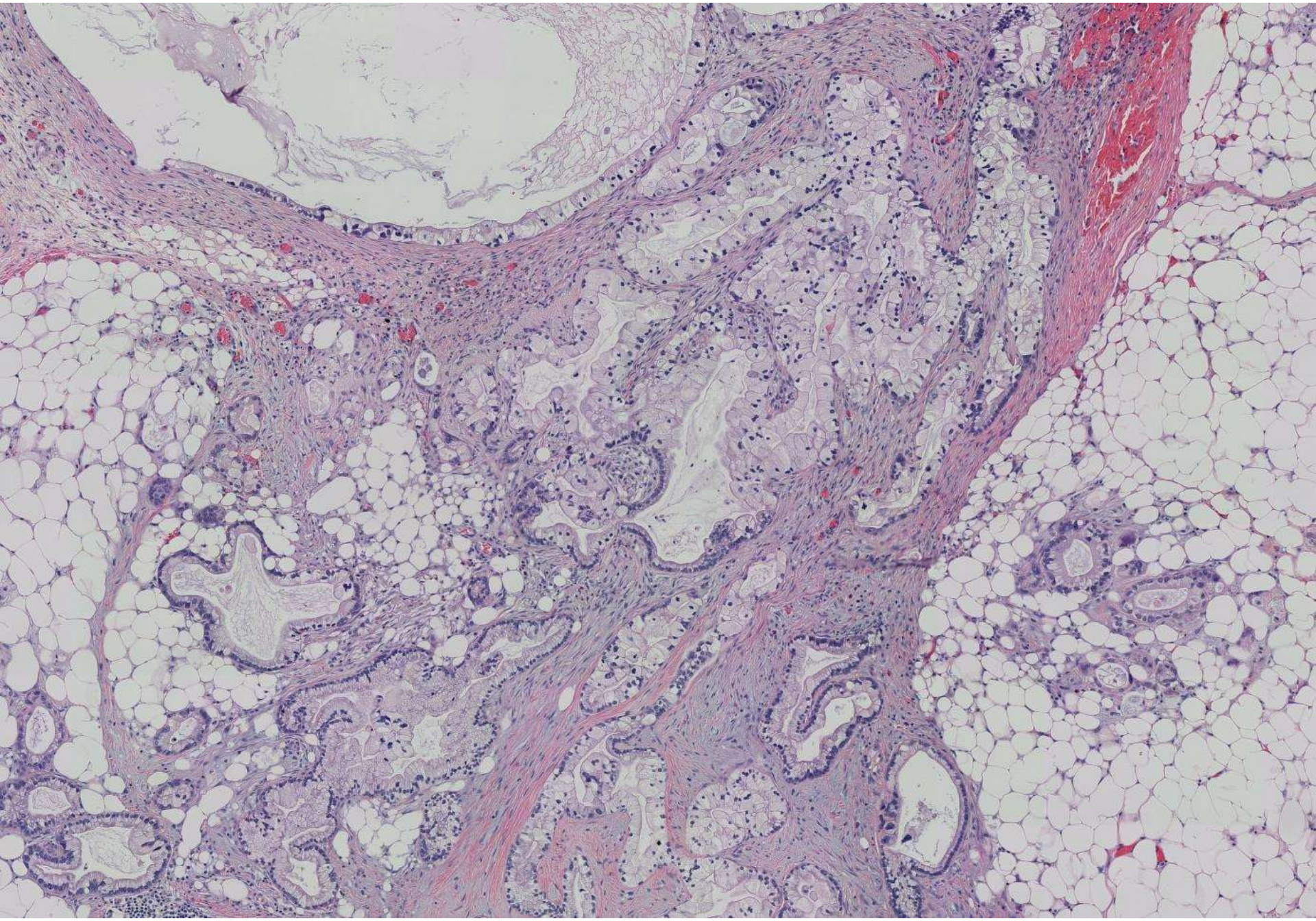


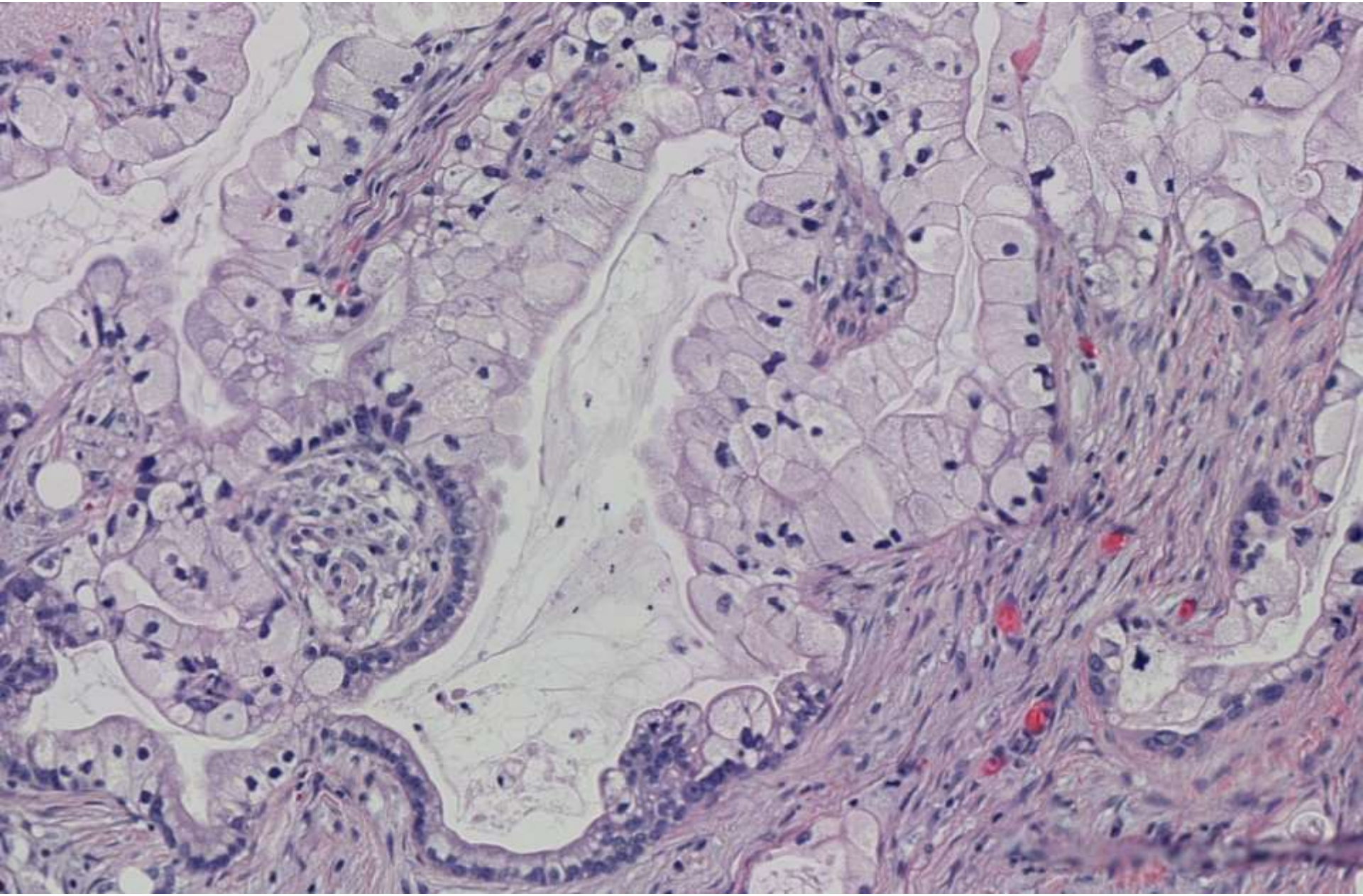












54 year-old woman with a pelvic mass

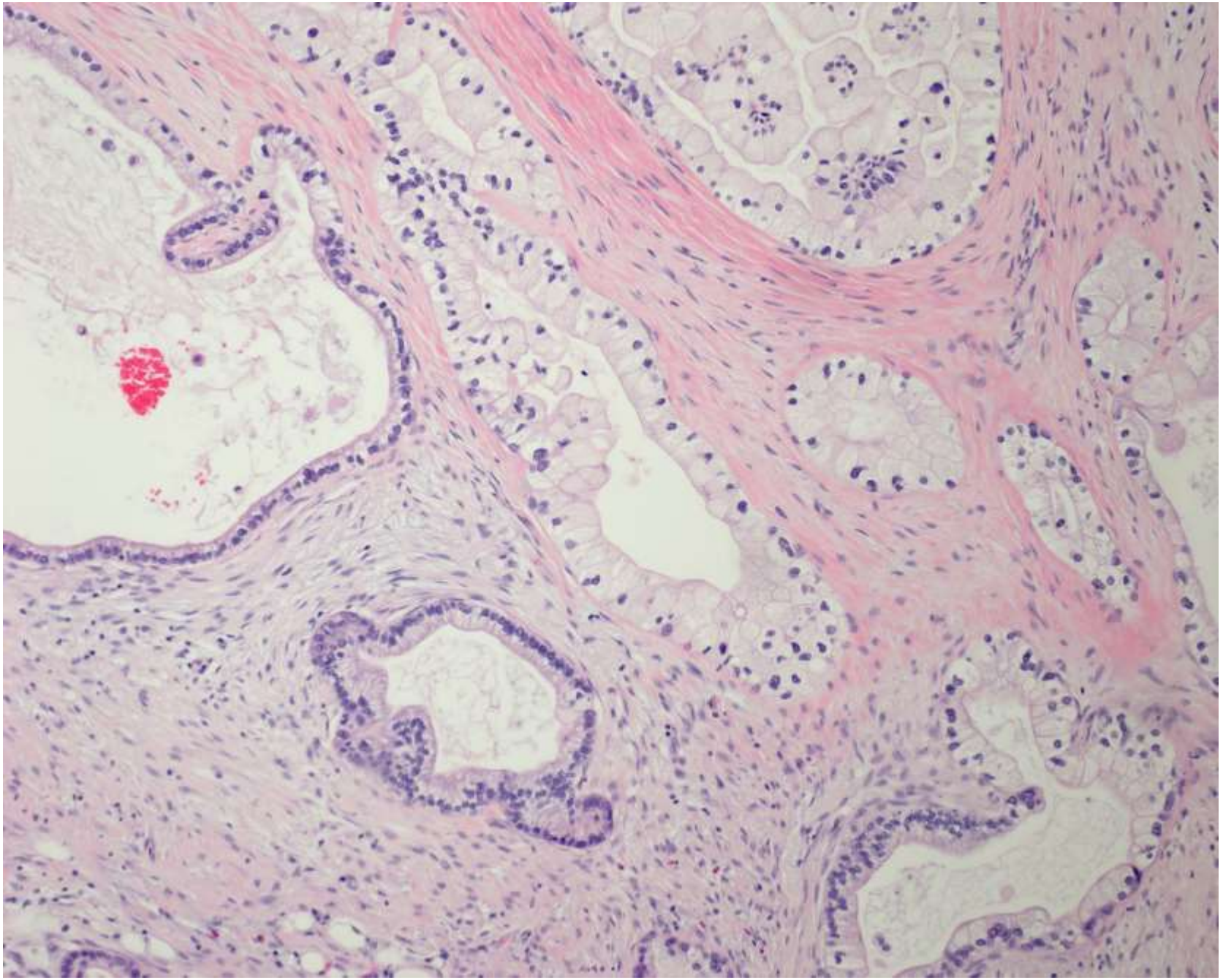
South Bay Meeting

January 8, 2018

Emily Chan, Surgical Pathology Fellow

Dr. Charles Zaloudek

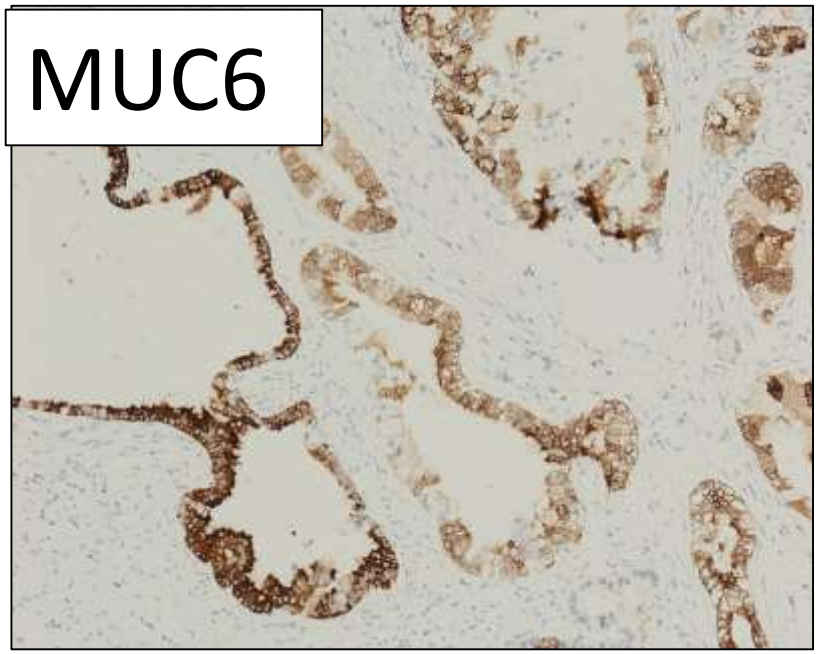
UCSF



Differential Diagnosis

- Metastasis from a primary ovarian mucinous tumor
- Metastatic mucinous adenocarcinoma of gastrointestinal origin
- Metastatic endocervical adenocarcinoma, gastric or intestinal type

Our case:



Additional positive stains:
- CK7

Negative stains:
- ER
- CK20
- SATB2
- CDX2
- p16

Diagnosis: Metastatic endocervical adenocarcinoma, gastric type

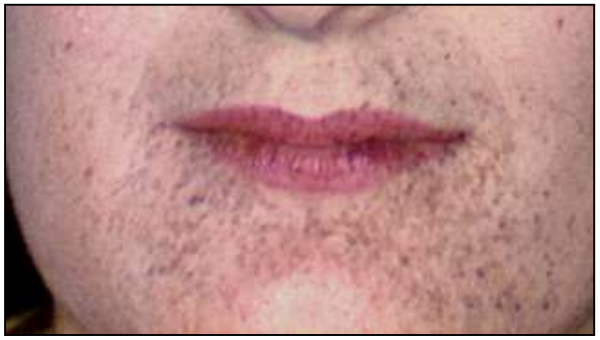
Mucinous endocervical adenocarcinoma, gastric type

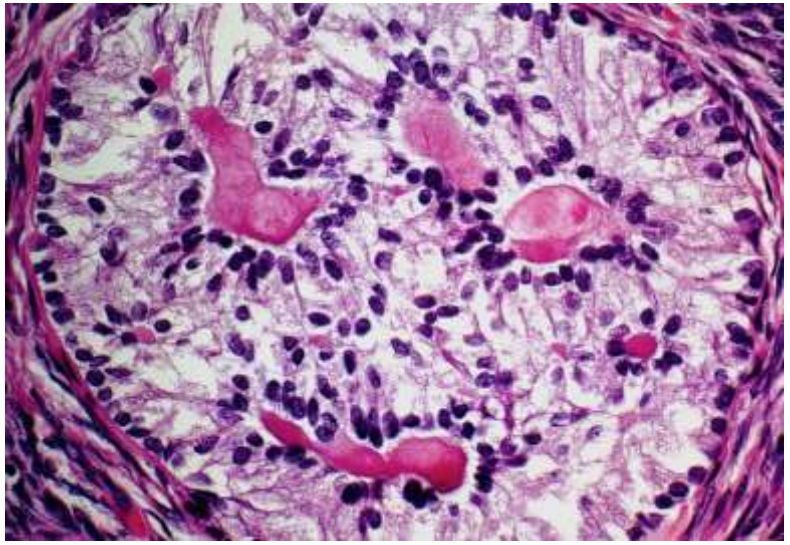
- Mucinous adenocarcinoma with gastric type differentiation
- Well-differentiated form: minimal deviation adenocarcinoma (adenoma malignum)
- Not associated with high risk HPV
- Positive for markers of pyloric gland mucins (MUC6, HIK1083), CK7, p53, and CEA
- Can be associated with Peutz-Jeghers syndrome

Recent review, Talia and McCluggage, Pathology 2017

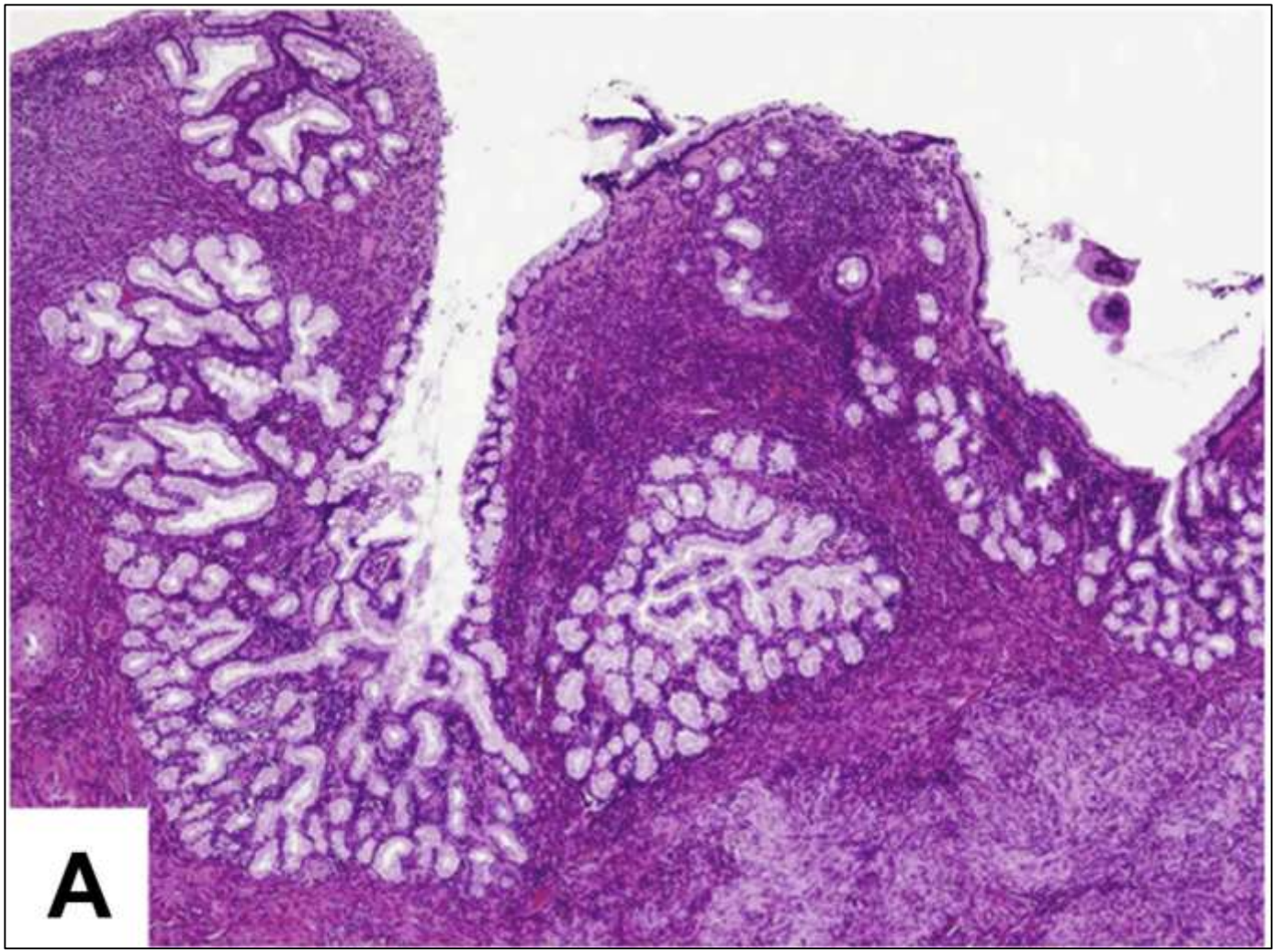
Peutz-Jeghers Syndrome

- Mutations in STK11 (tumor suppressor gene)
- Mucocutaneous lesions of hands and feet
- Gastrointestinal hamartomatous polyps
- Predisposition to both benign and malignant tumors of GI tract, breast, ovary, uterine cervix, and testis





Presumed precursor lesion:
Lobular endocervical glandular hyperplasia, LEGH



Recent review, Talia and McCluggage, Pathology 2017

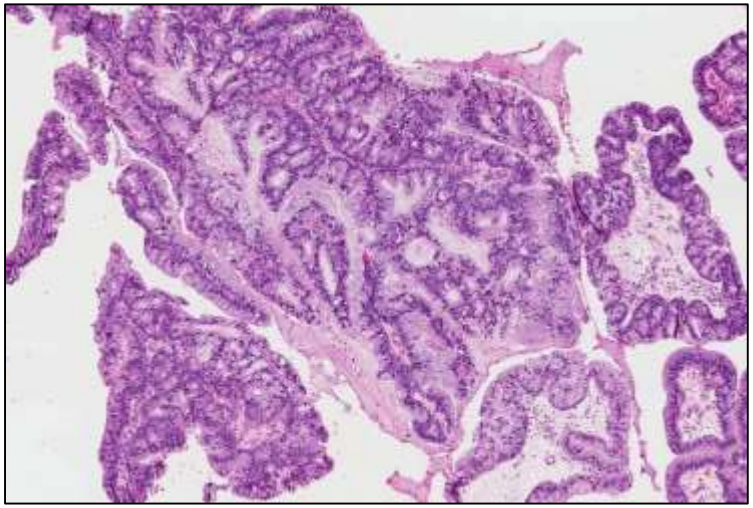
Endocervical adenocarcinoma: gastric type vs usual type

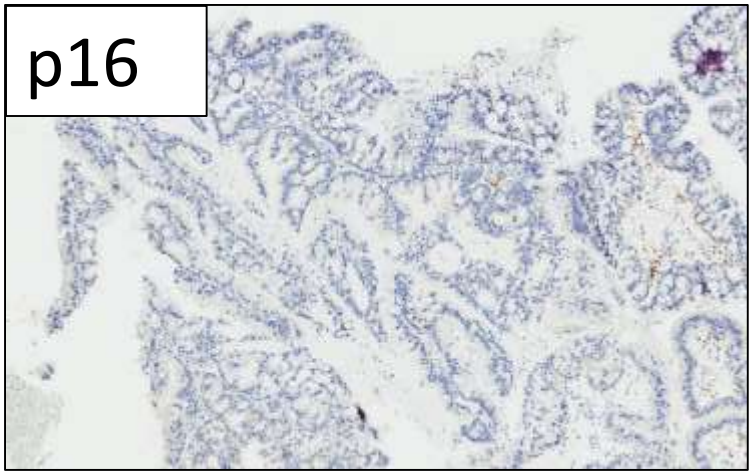
	Gastric type	Usual type
Precursor lesion	LEGH	AIS
Location	Upper endocervical canal	Transformation zone
HPV associated	No	Yes
p16 IHC	Negative or focal	Diffusely positive
Presentation	Often at high stage	Low stage
Survival at 5 years (all stages)	42%	91%
Survival at 5 years (stage I only)	62%	95%

Summarized from Karamurzin YS et al. Am J Surg Pathol. 2015

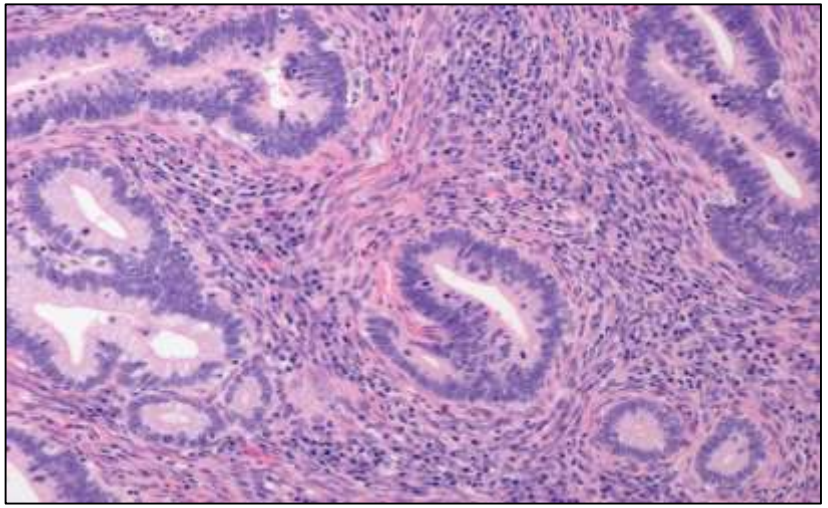
Endocervical adenocarcinoma

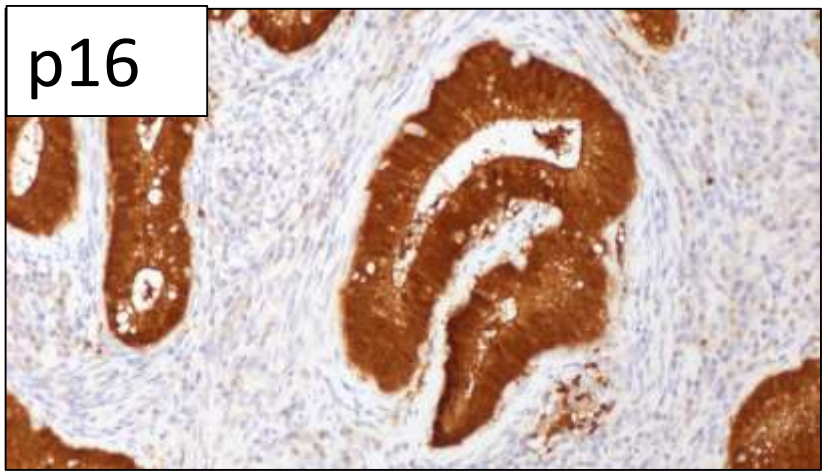
Gastric type



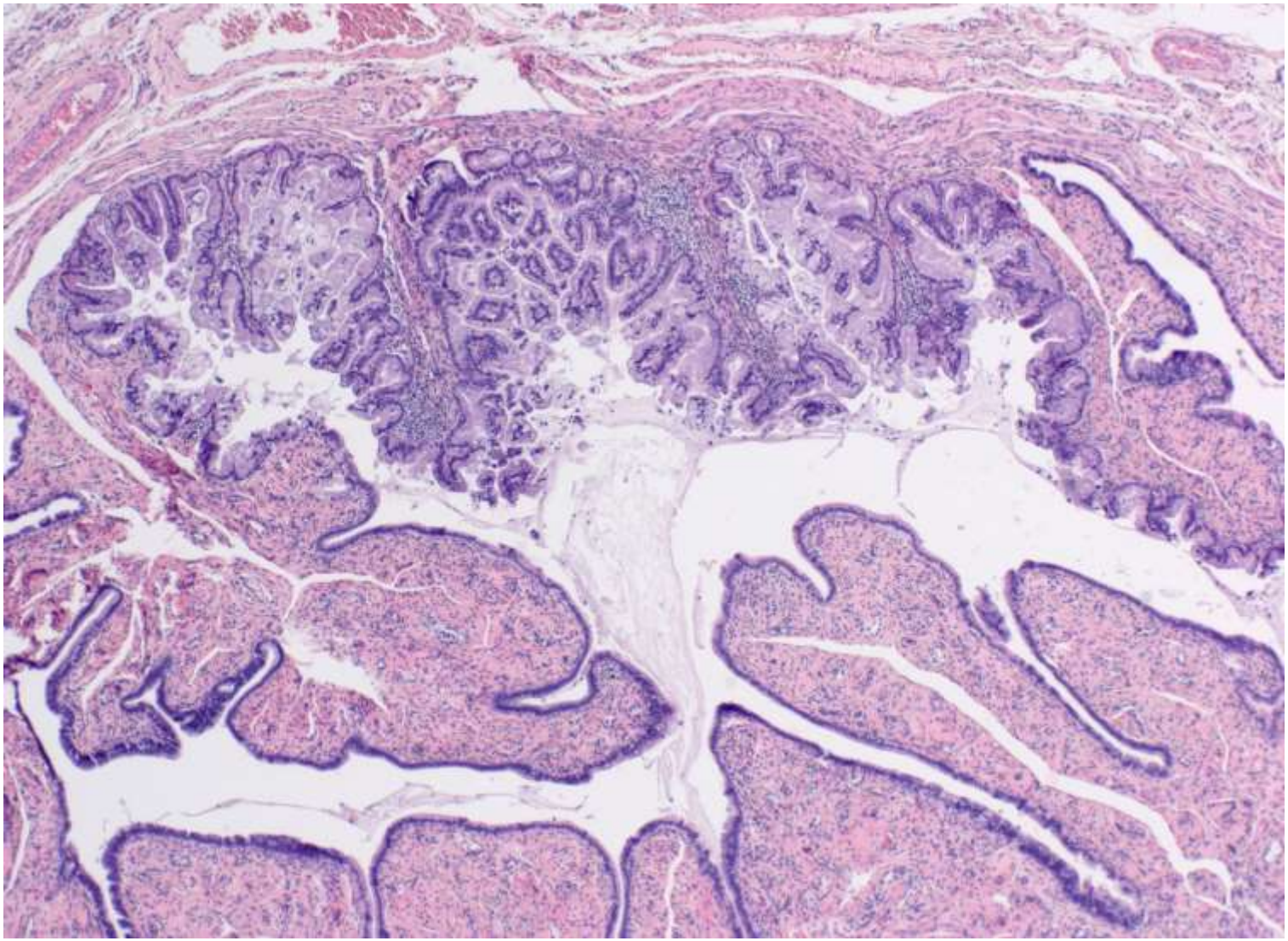


Usual type





Fallopian tube in the same case



Nongynecologic Metastases to Fallopian Tube Mucosa

A Potential Mimic of Tubal High-grade Serous Carcinoma and Benign Tubal Mucinous Metaplasia or Nonmucinous Hyperplasia

Joseph T. Rabban, MD, MPH, Poonam Vohra, MD, and Charles J. Zaloudek, MD

Am J Surg Pathol 2015

Primary Origin of Tubal Metastasis (n)
Colorectal adenocarcinoma (35)
Gastric adenocarcinoma (9)
Pancreatic adenocarcinoma (5)
Gallbladder/bile duct adenocarcinoma (3)
Upper GI or pancreaticobiliary origin, not further classified (8)
Low-grade appendiceal mucinous neoplasm (9)
High-grade appendiceal adenocarcinoma (3)
Neuroendocrine tumor of intestinal origin (4)
Invasive ductal breast cancer (9)
Invasive lobular breast cancer (6)
Lymphoma (5)
Peritoneal mesothelioma (2)
Urinary bladder carcinoma (1)
Gastrointestinal stromal tumor (1)

Nongynecologic Metastases to Fallopian Tube Mucosa

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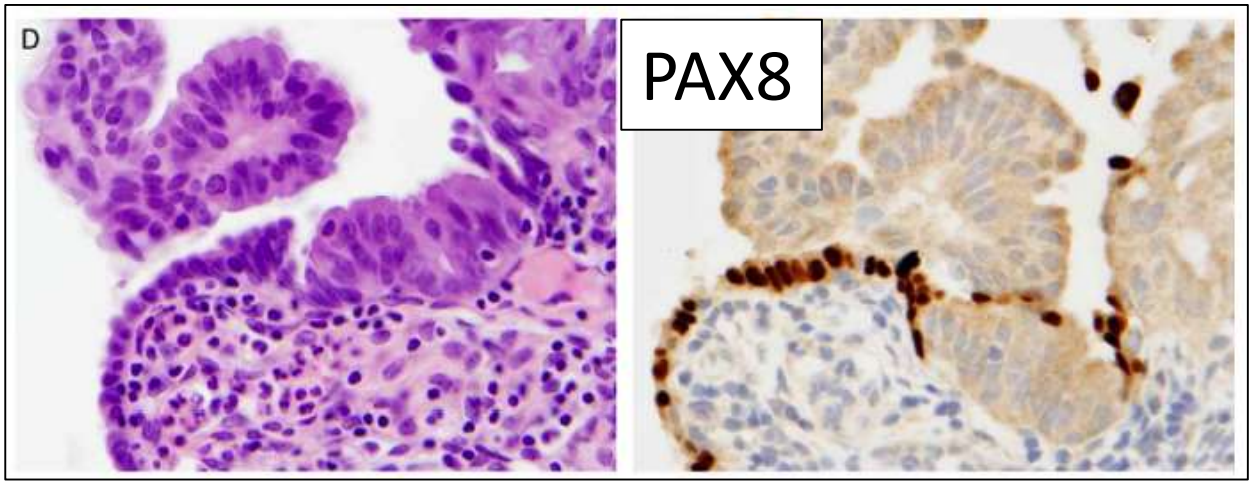
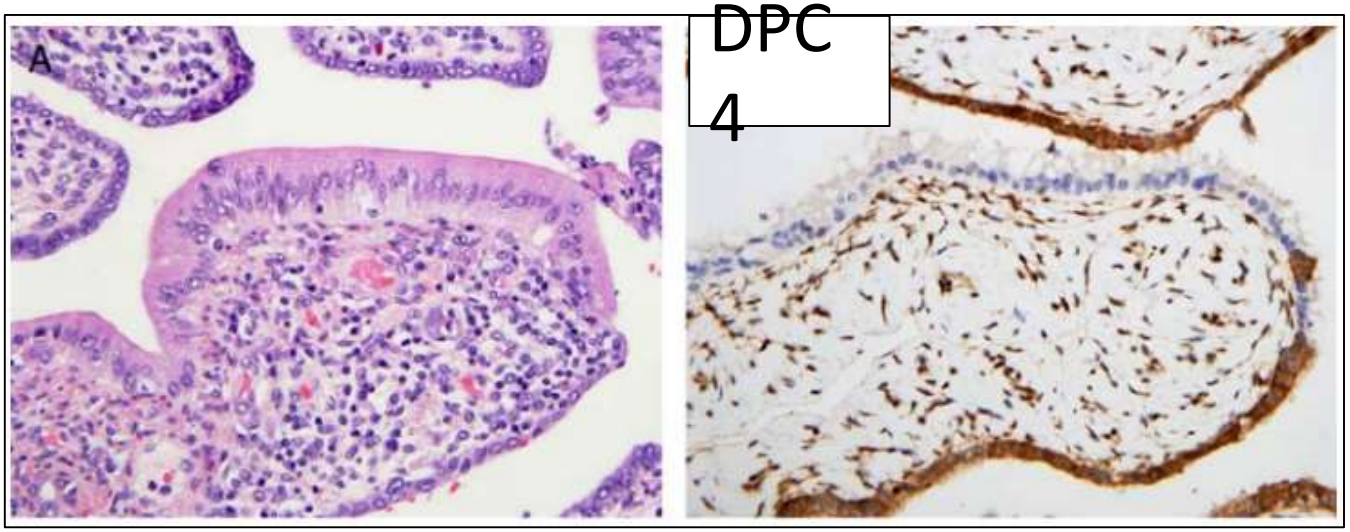
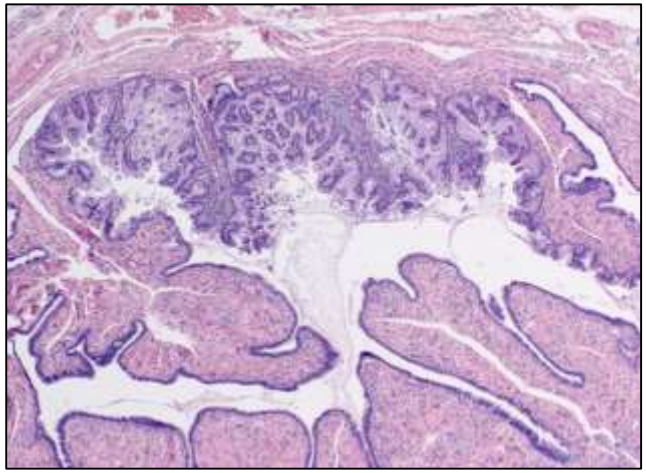
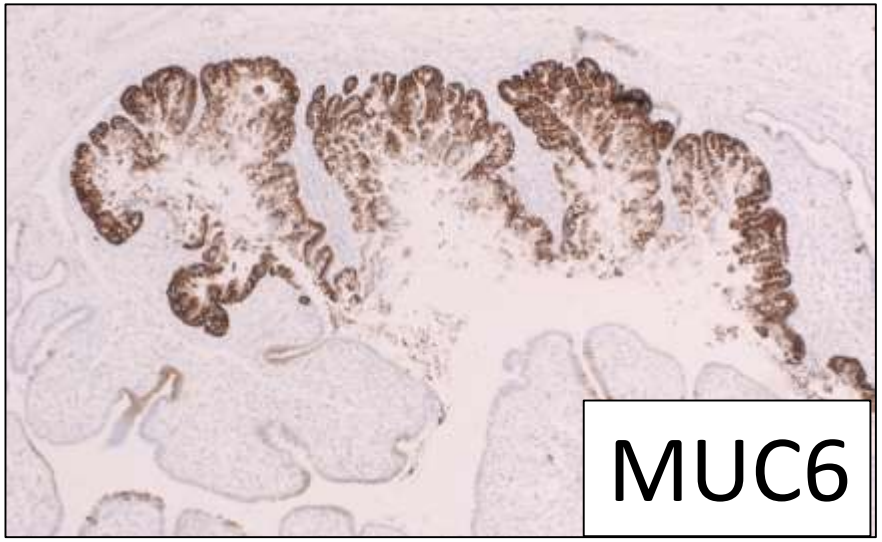


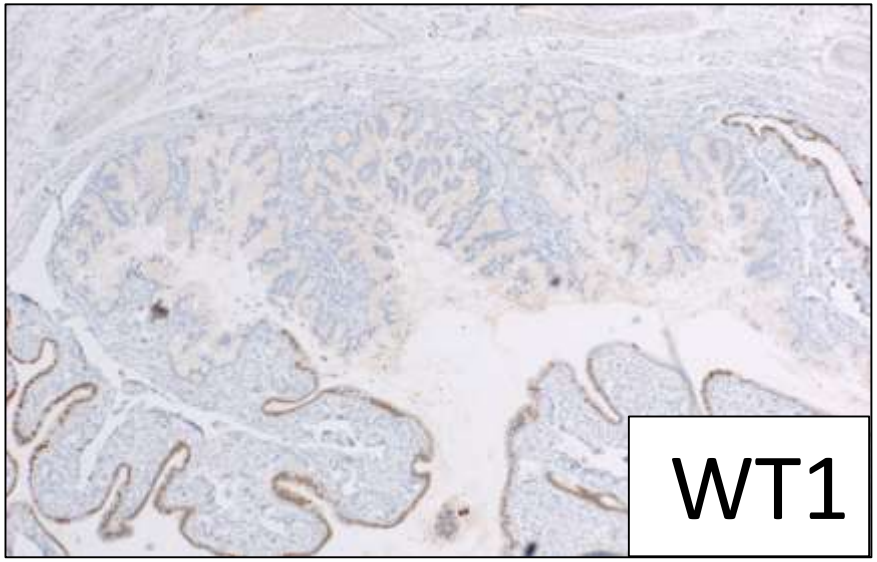


Fallopian tube IHC in our case





Consistent with metastatic gastric type endocervical adenocarcinoma



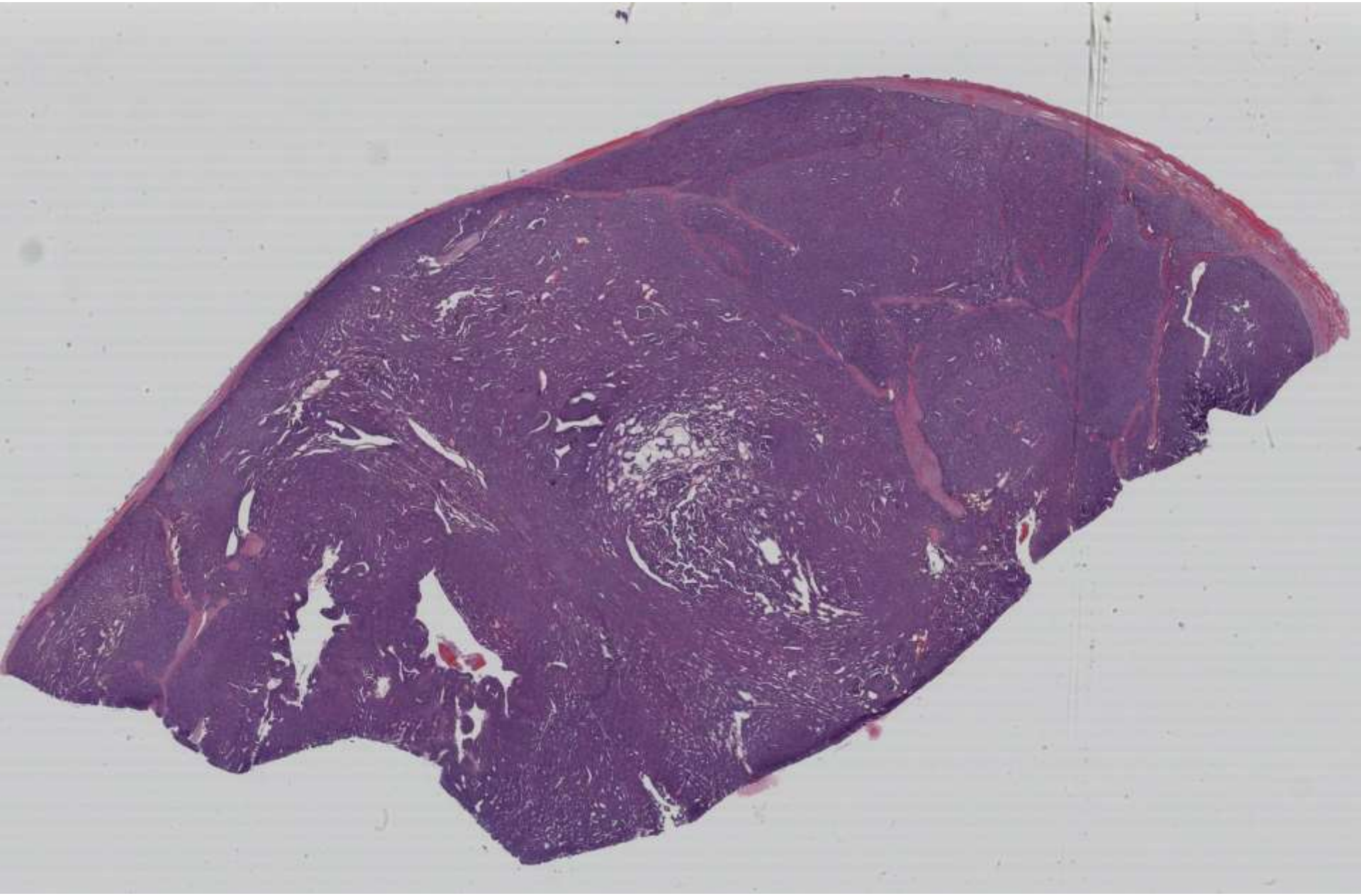
Take-home points

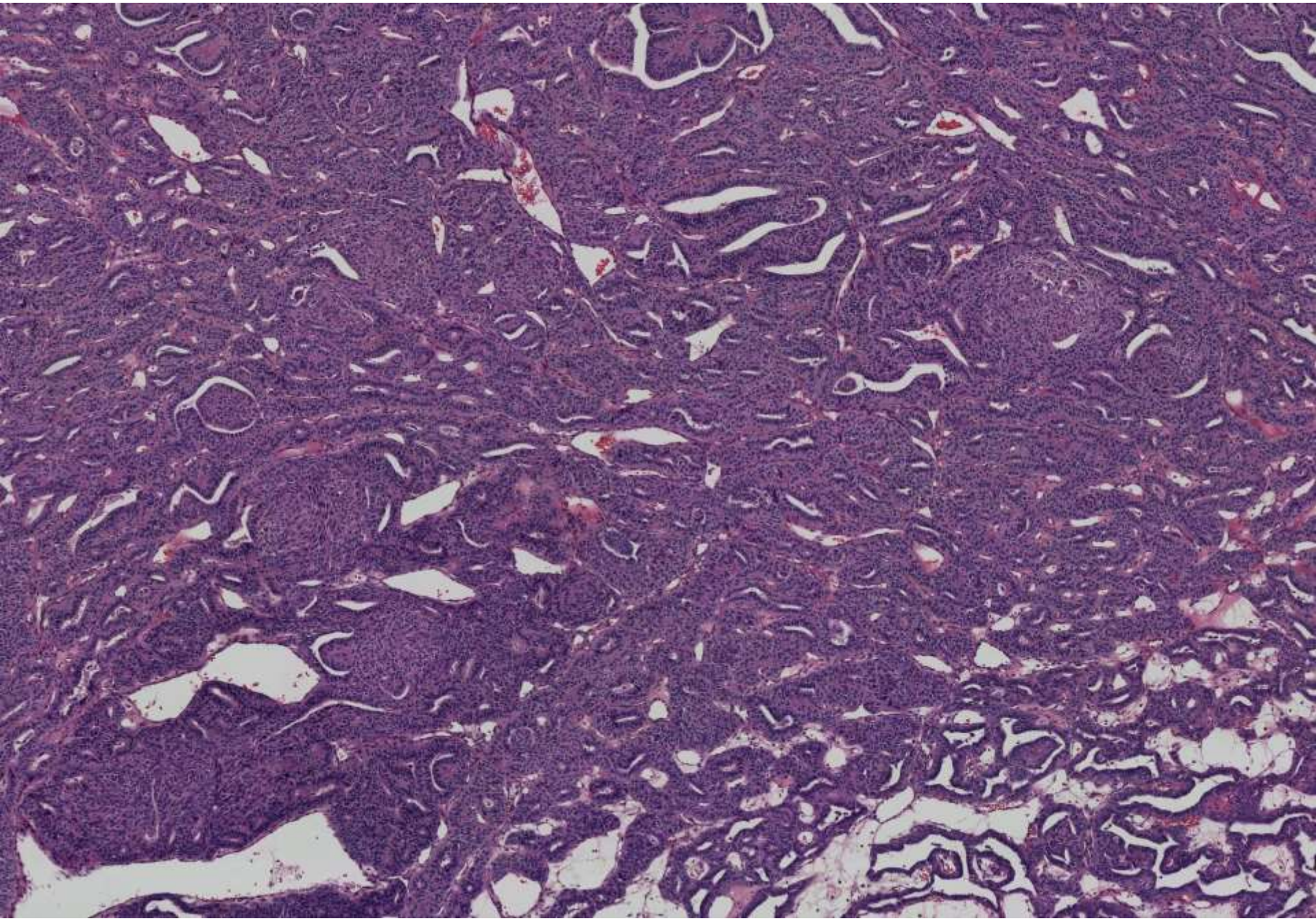
- Think about gastric type endocervical adenocarcinoma when presented with a pelvic mass showing mucinous features
- Recognize non-HPV associated endocervical adenocarcinomas and their aggressive nature
- Raise consideration for genetic counseling/testing for Peutz-Jeghers syndrome
- Beware of potential mimics of STIC and benign tubal mucinous metaplasia in fallopian tubes

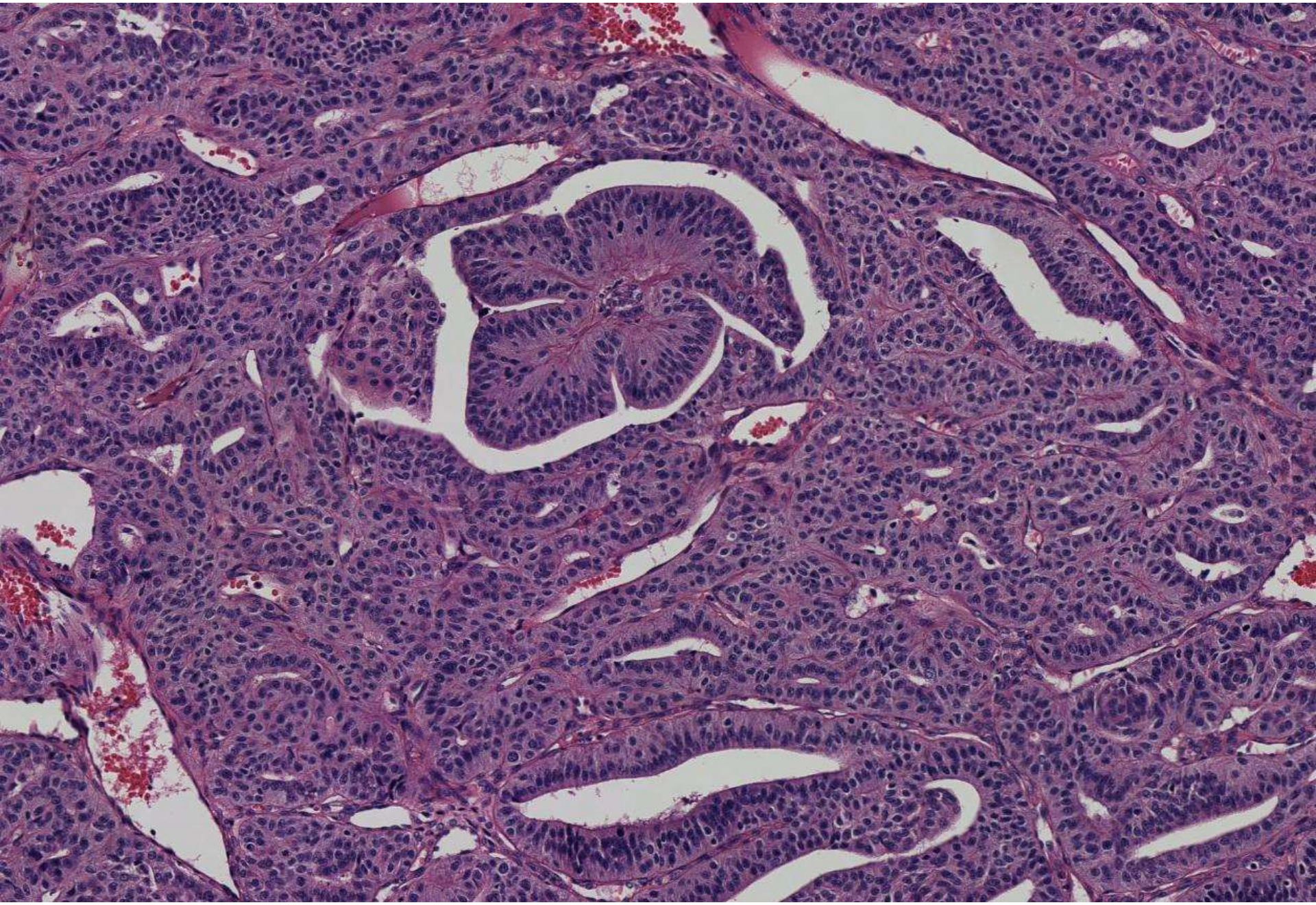
6237
(scanned slide available)

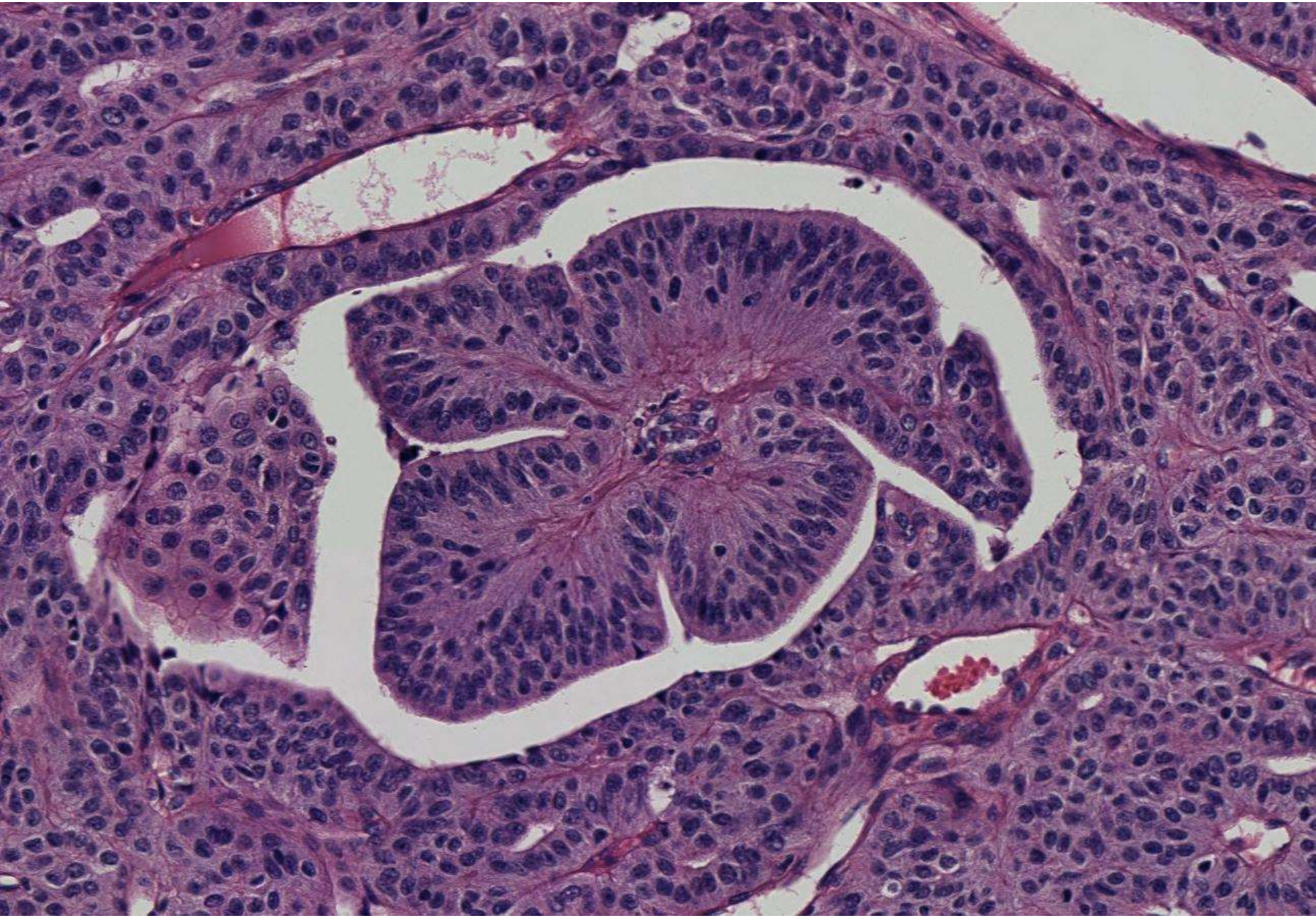
Grant Nybakken; Kaiser Santa Clara

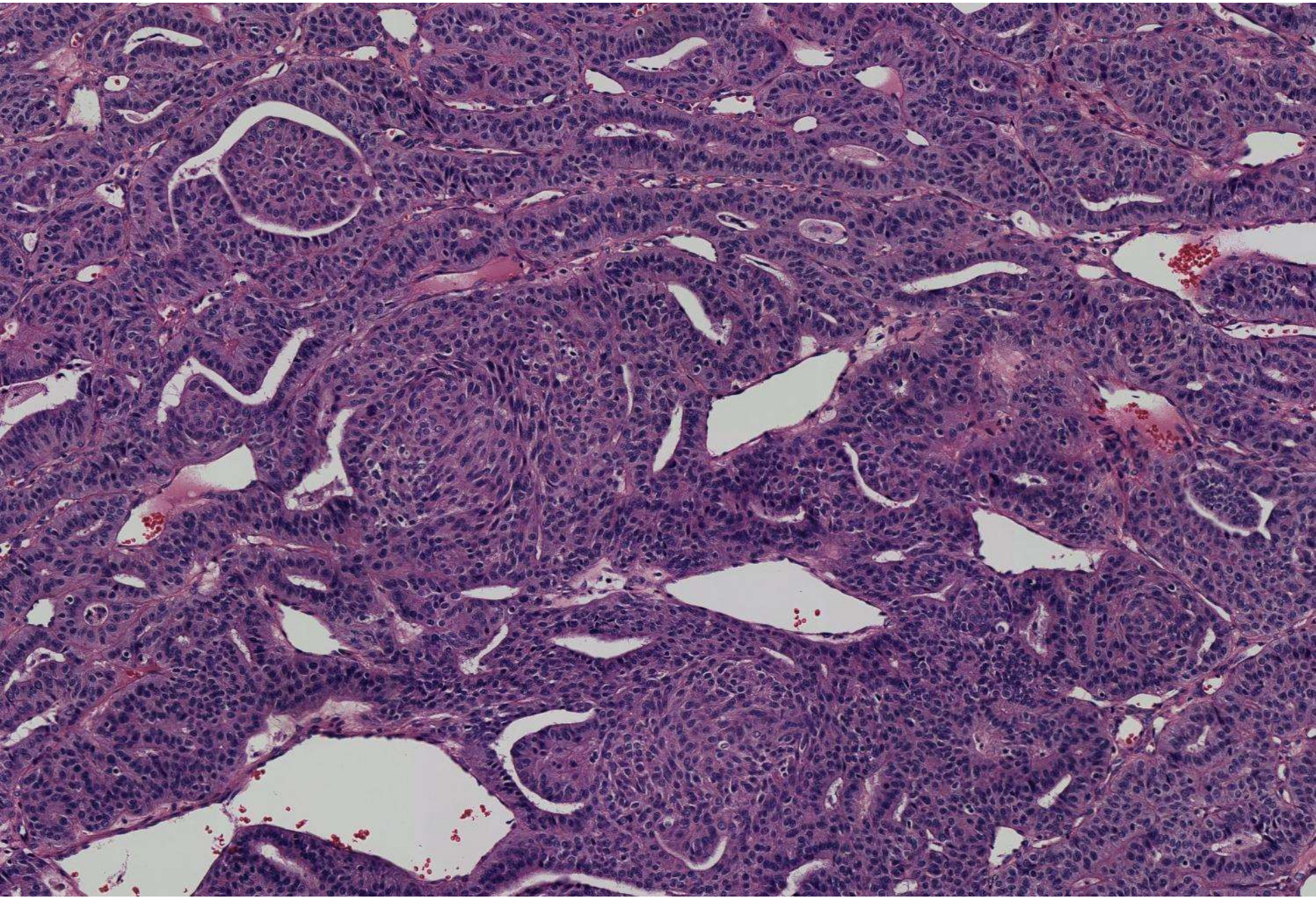
21-year-old with thyroid nodule.

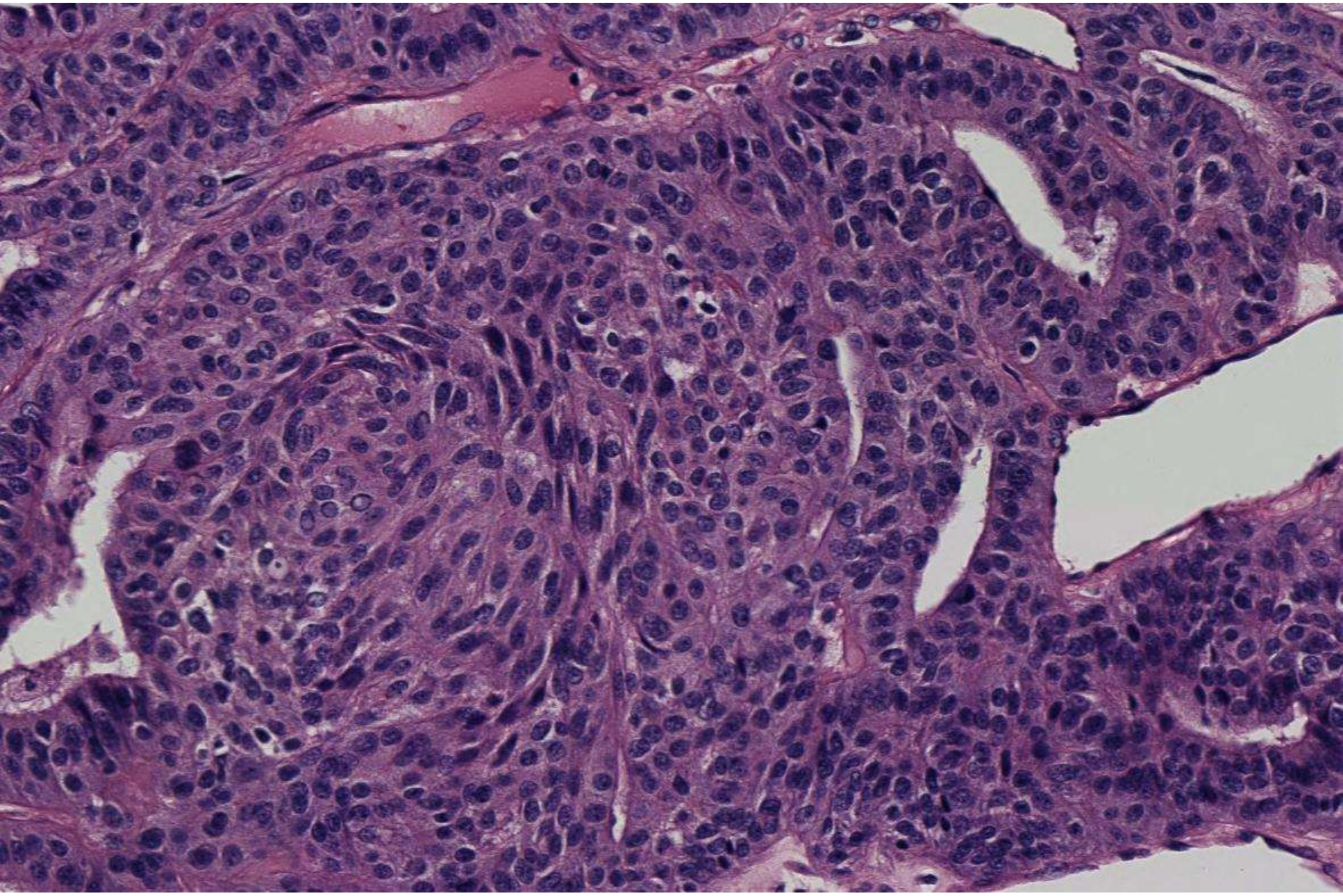


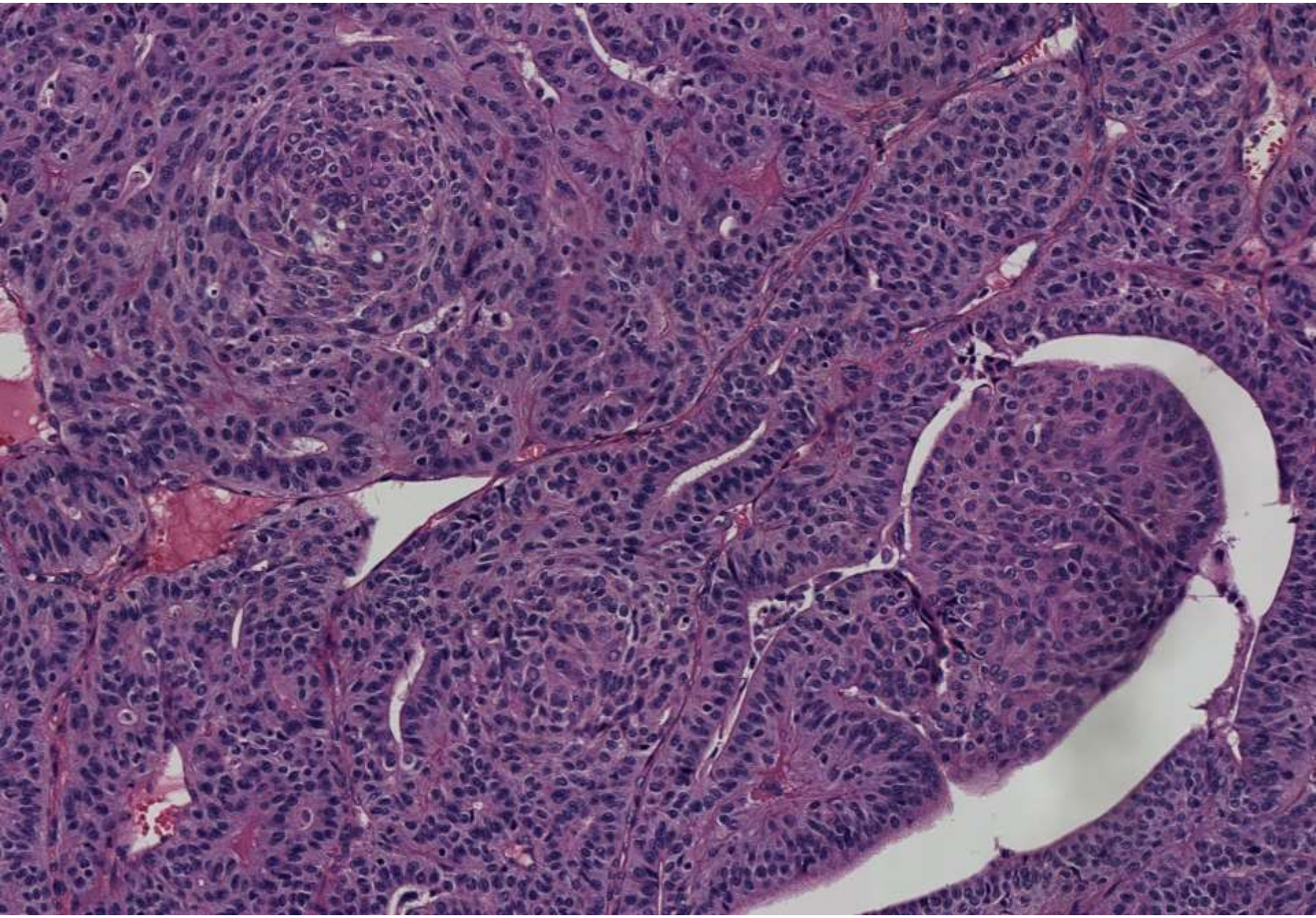


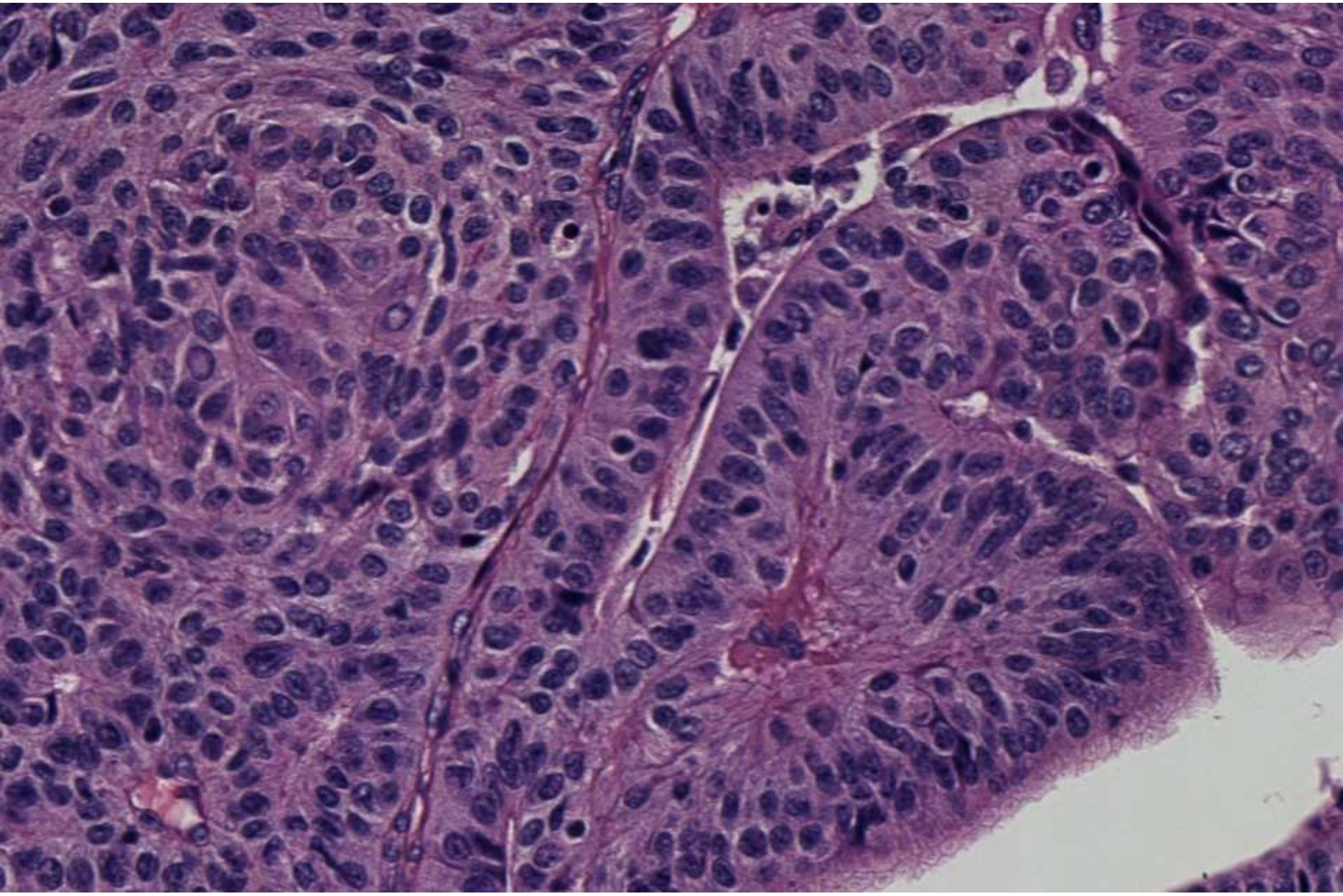


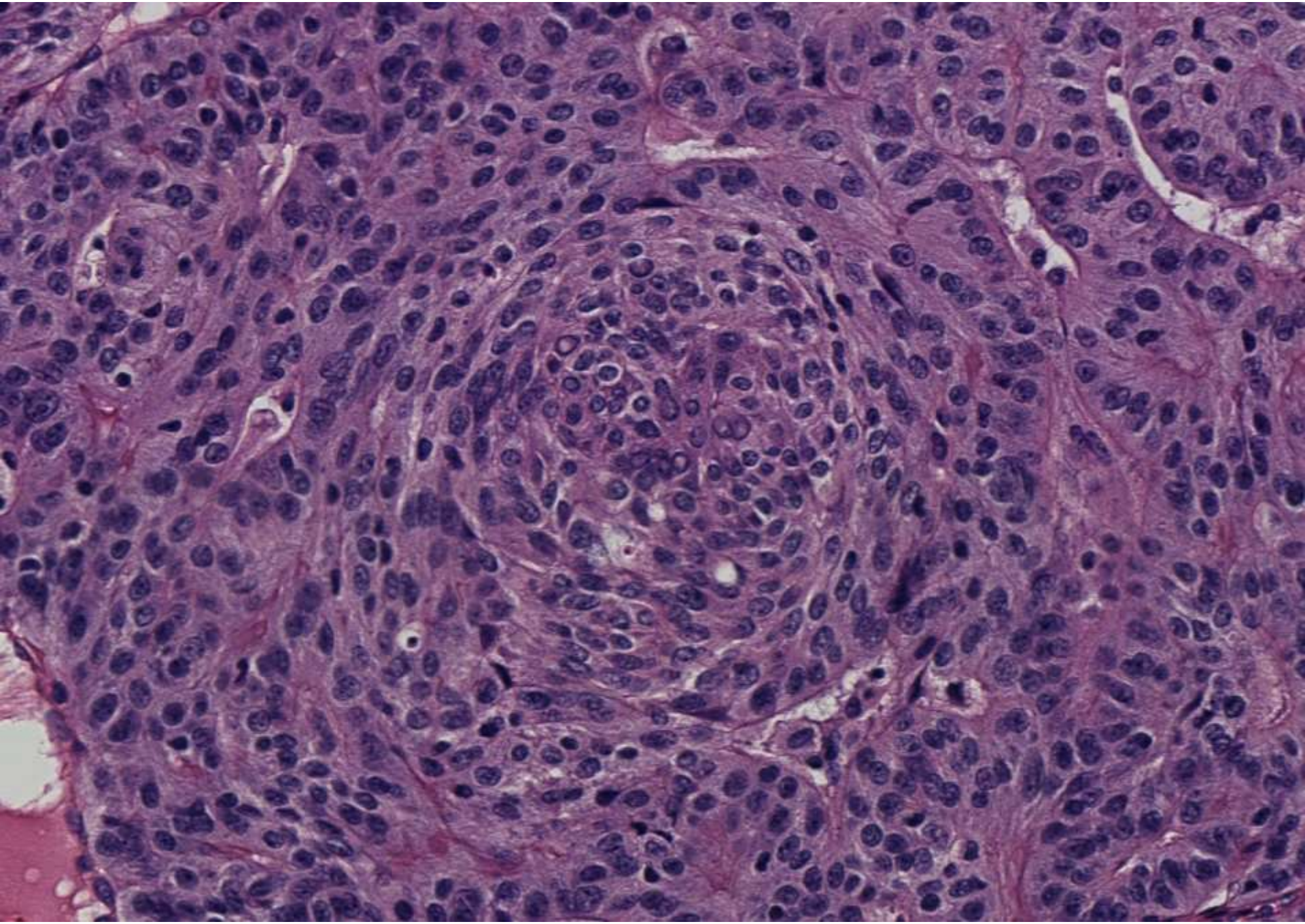


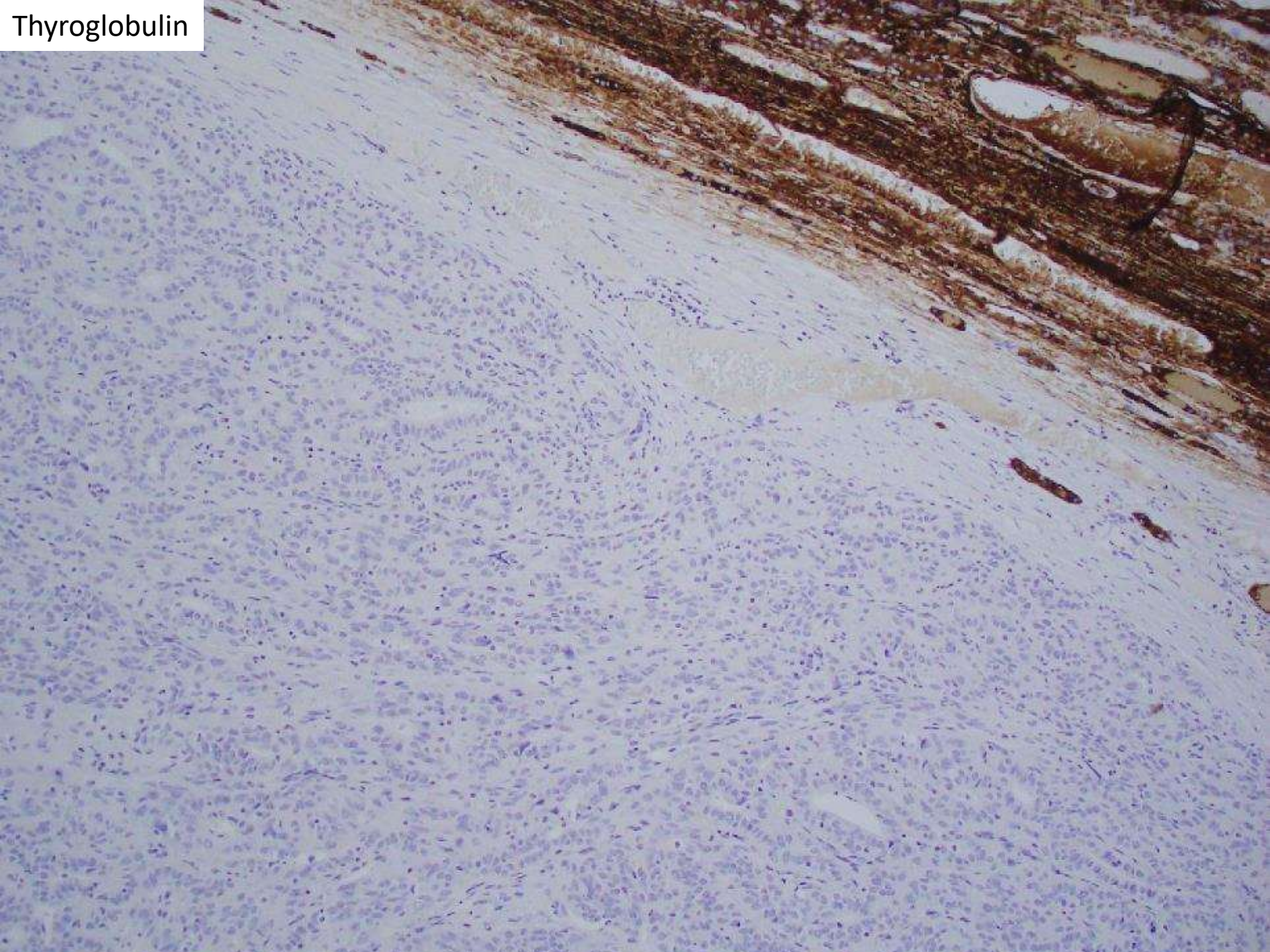


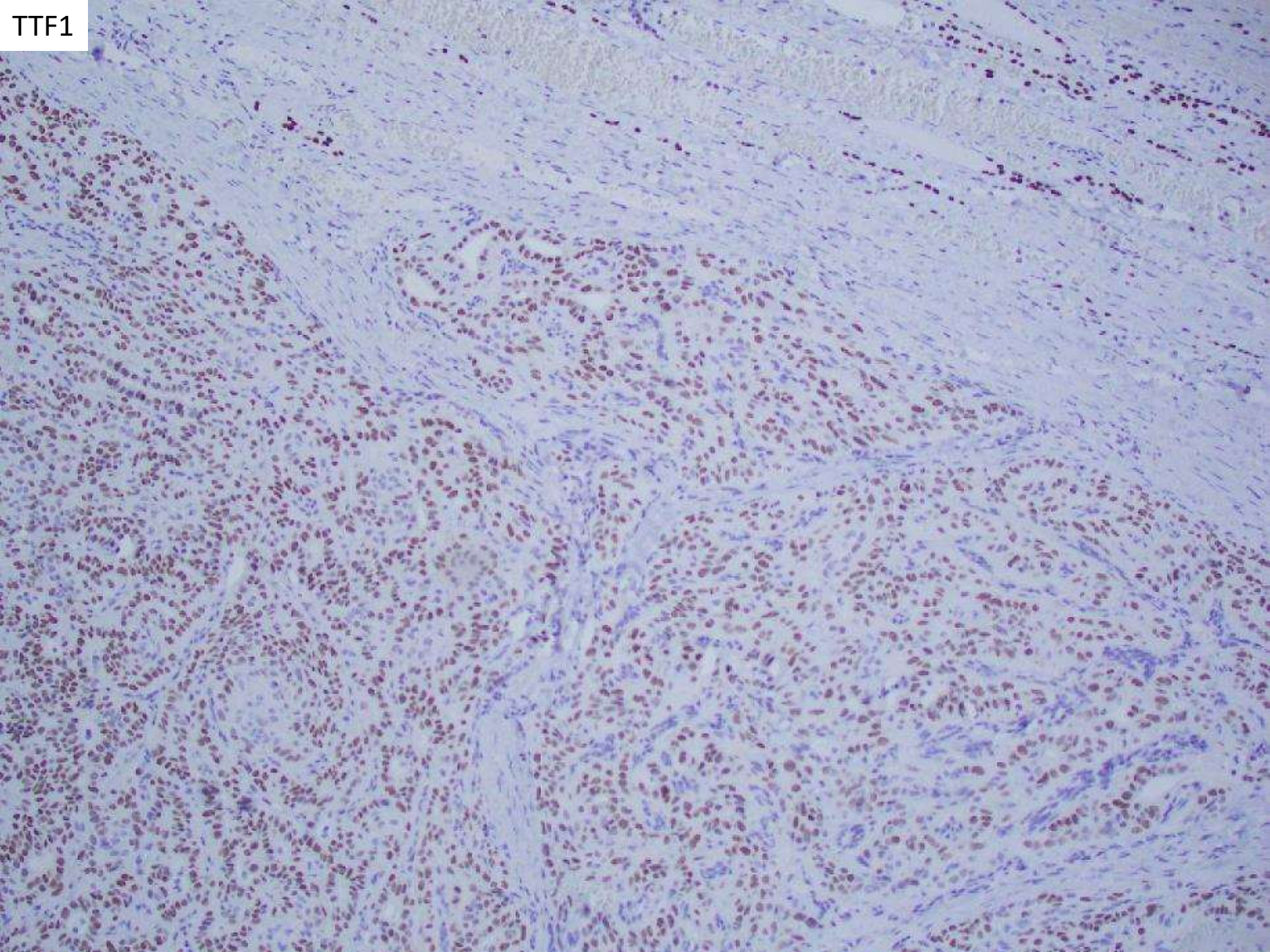


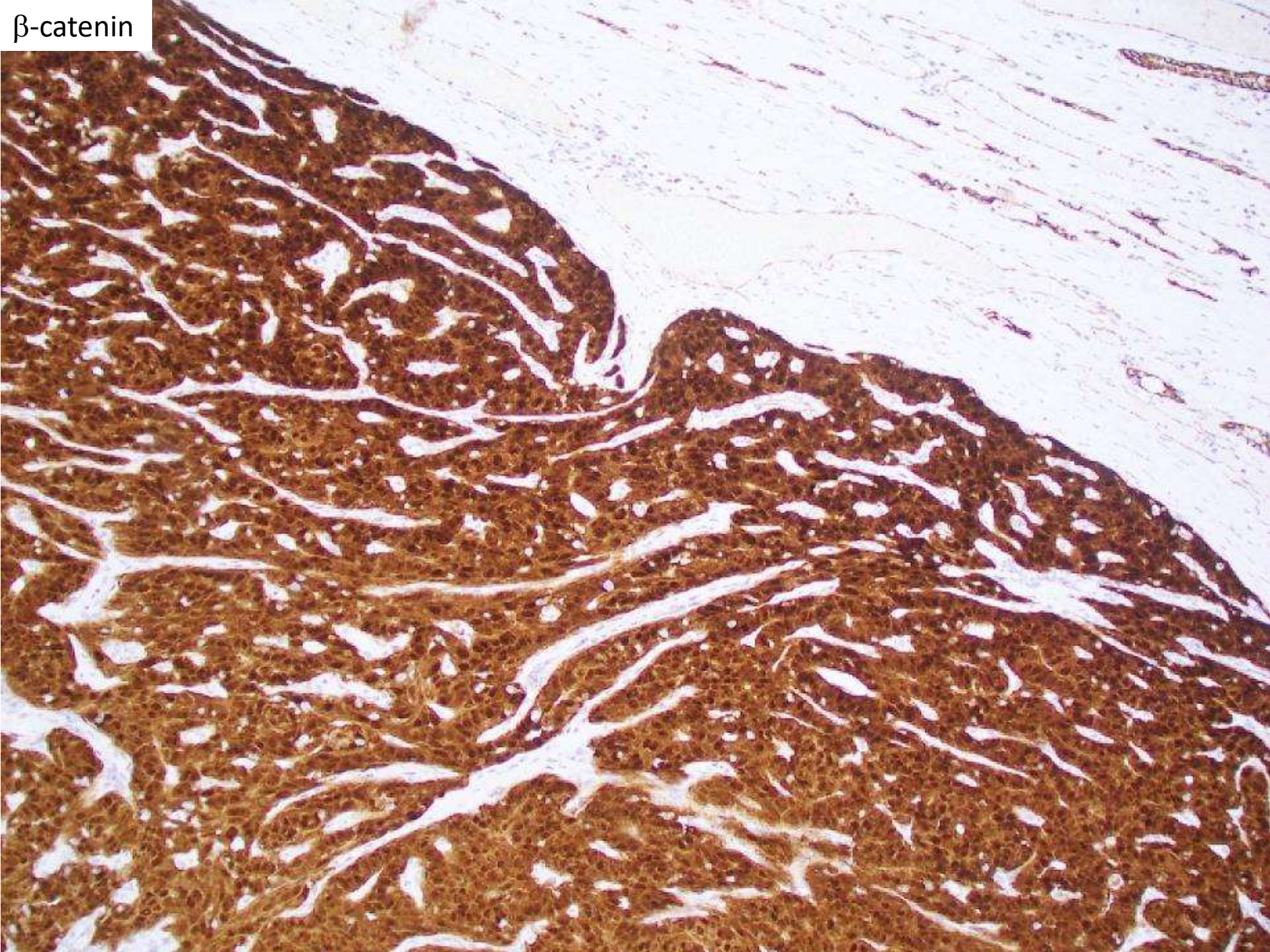







Thyroglobulin


TTF1


β-catenin

Final Diagnosis

Thyroid, Left, Lobectomy

--Papillary thyroid carcinoma, cribriform-morular variant

Cribriform-Morular Variant of PTC

- Rare, often young women in 20s
- Don’t have BRAF mutations, APC mutations instead
- More indolent than general PTC
- Often associated with familial adenomatous polyposis (~50%), suggest testing in your report

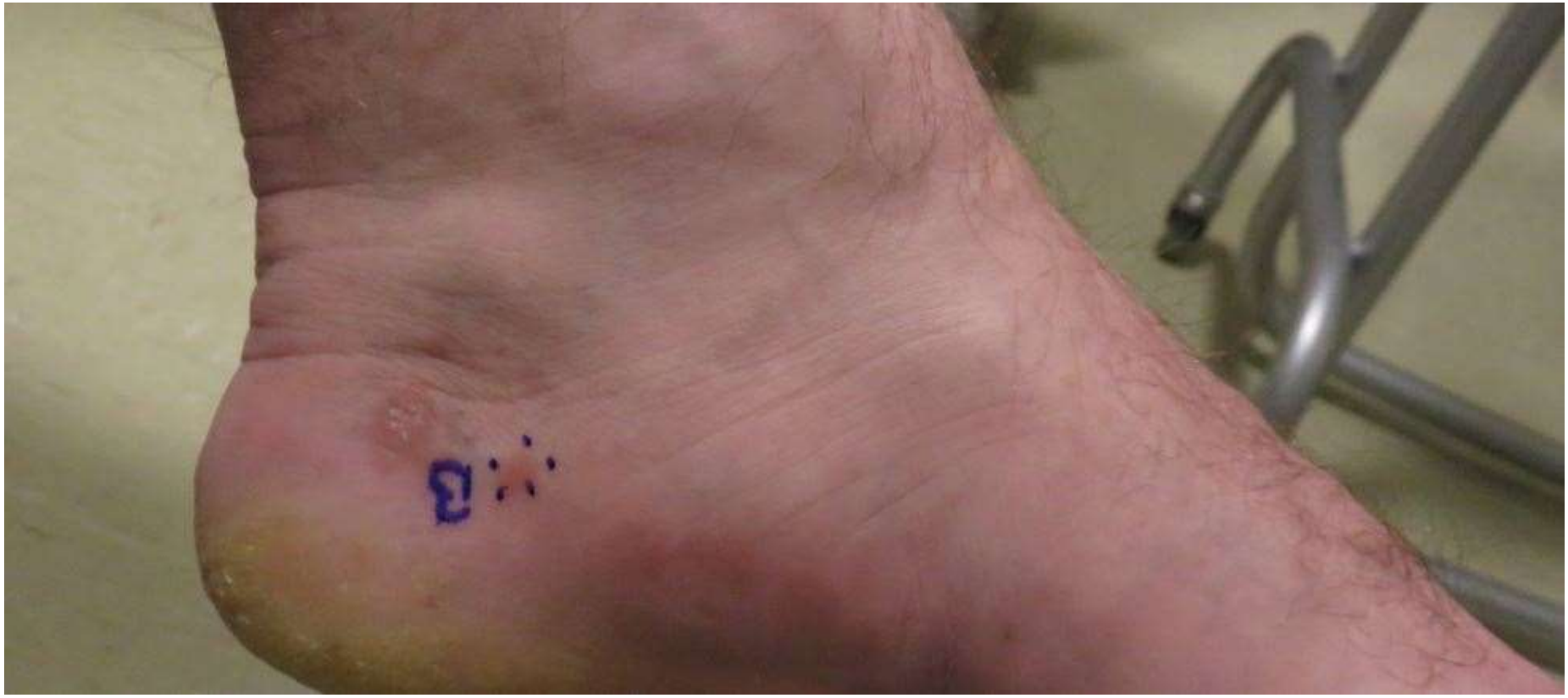
Our Patient

- No family history in chart, no history of FAP, but…
- Father has ulcerative colitis and had a colectomy in his 20s with polyps
- Brother died of hepatocellular carcinoma (?hepatoblastoma)
- Testing was positive for an APC mutation

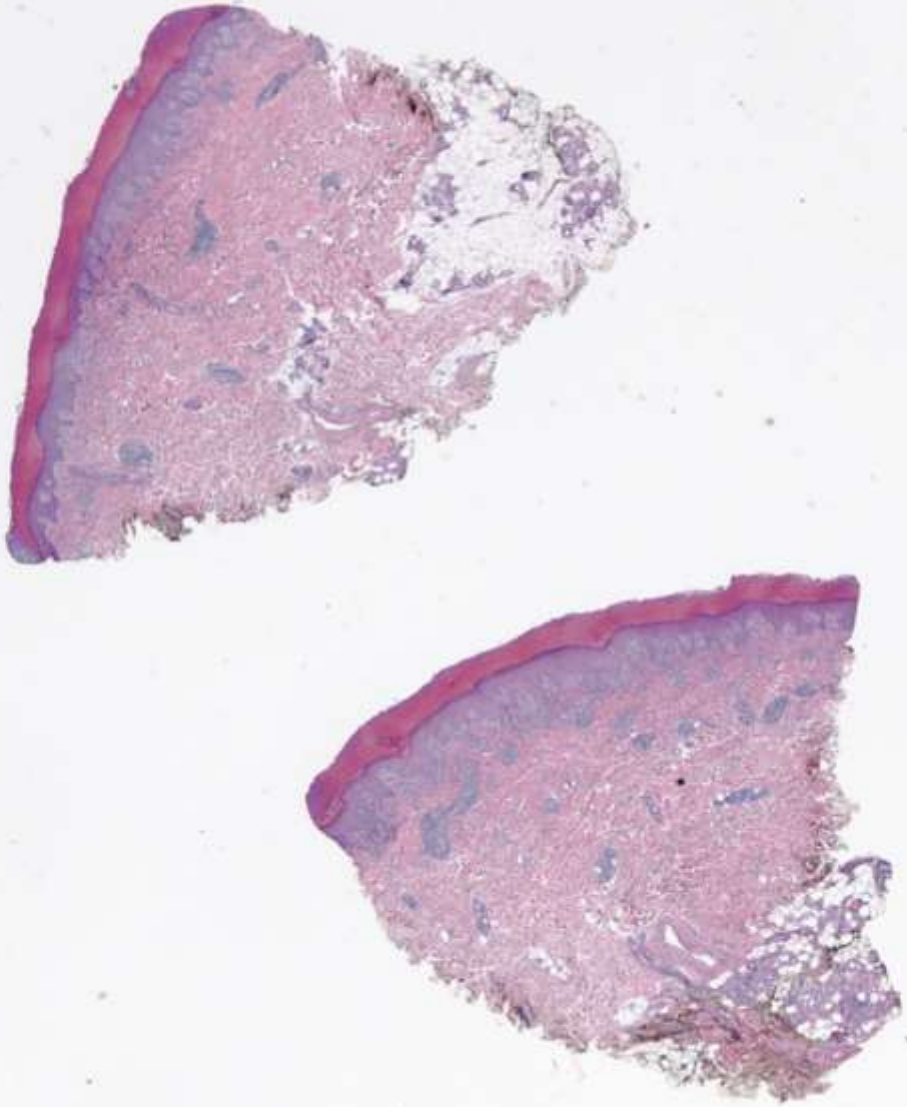
6238

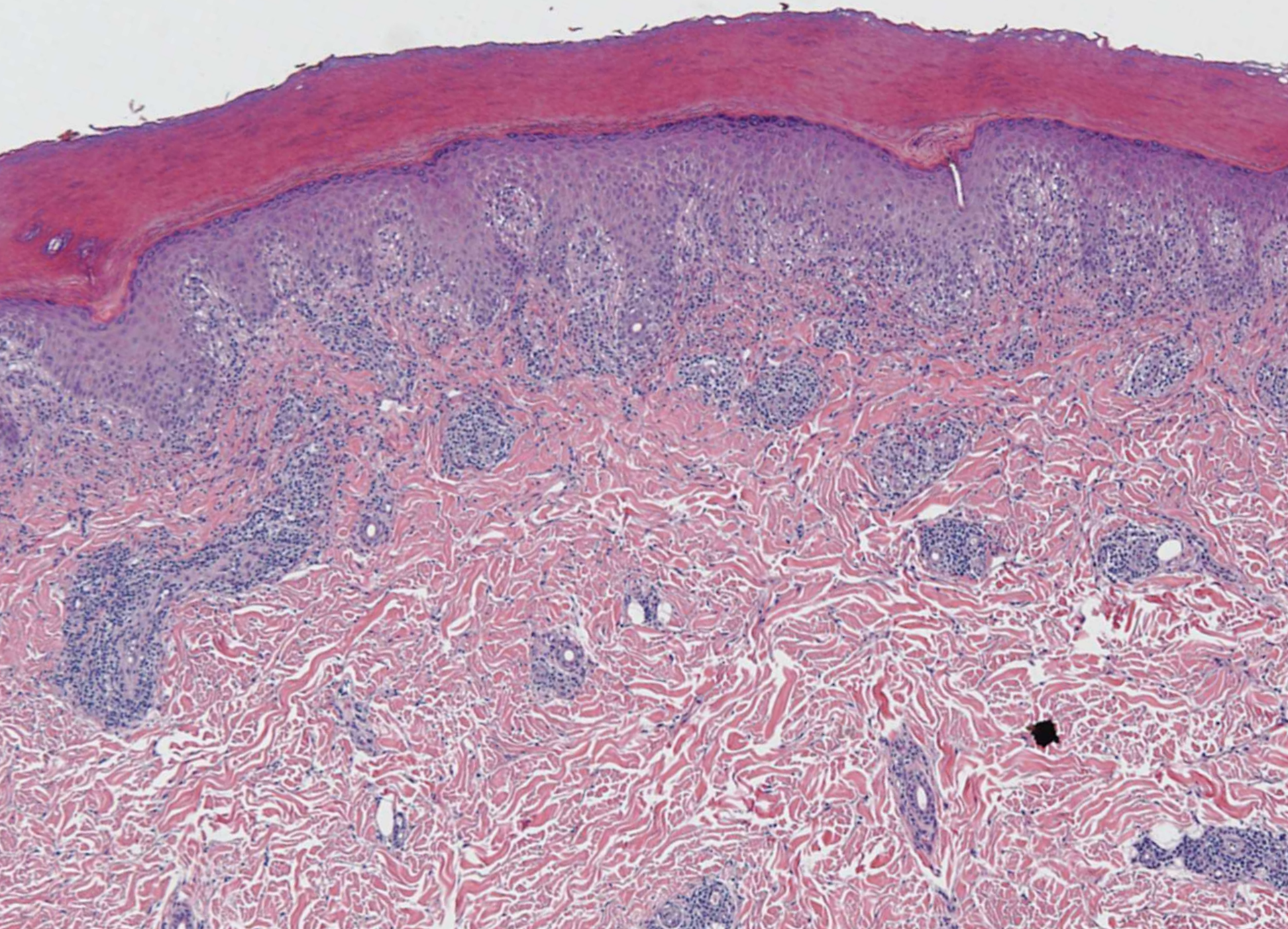
Erna Forgo/Christine Louie; Stanford/Palo Alto VA

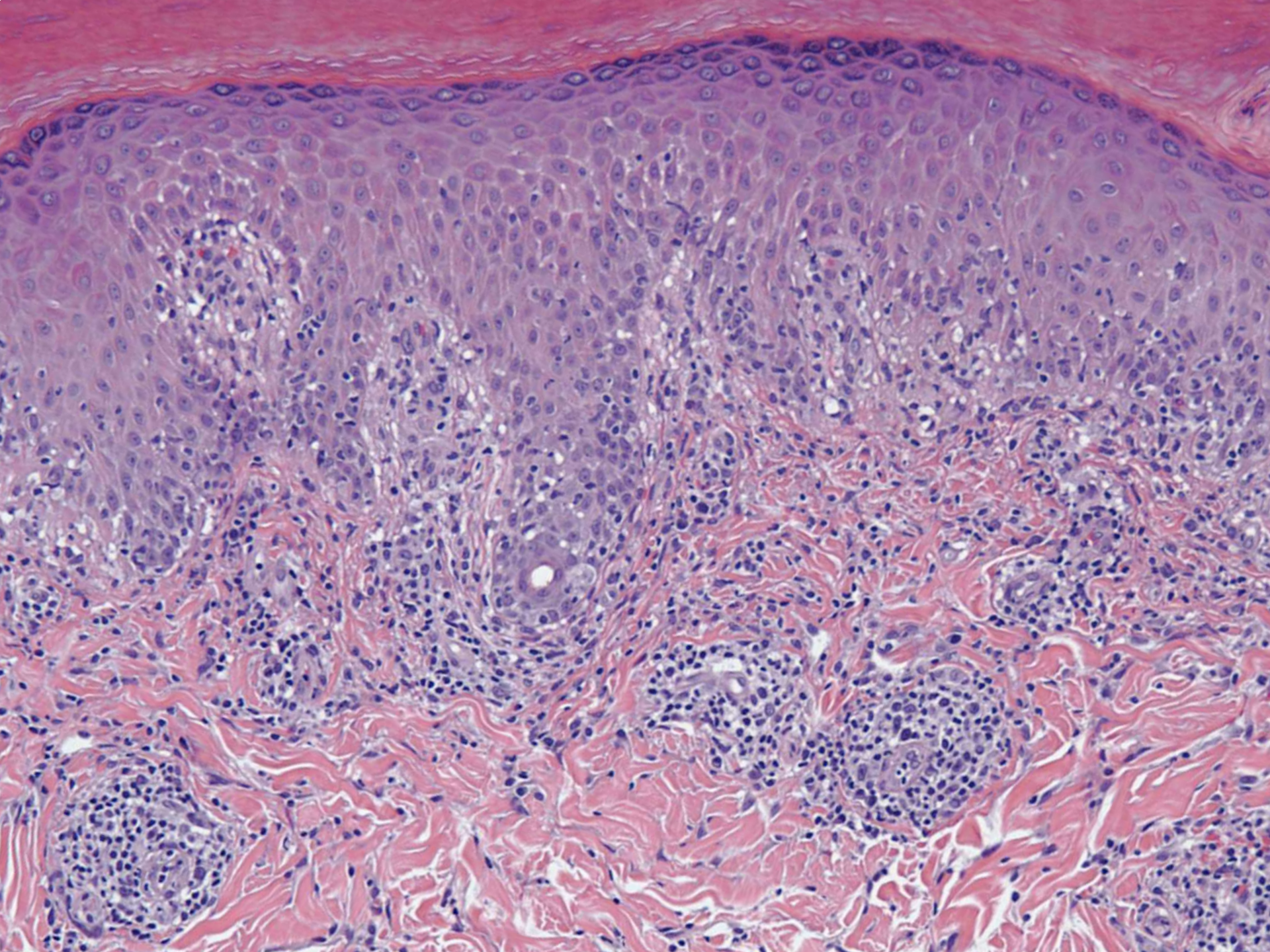
39-year-old male with asymptomatic bilateral rash on feet with scaly plaques and pseudovesicles for 1.5 years. Denies travel, sick contacts, drug use. Urine tox and HIV screening are negative. PASd stain is negative.

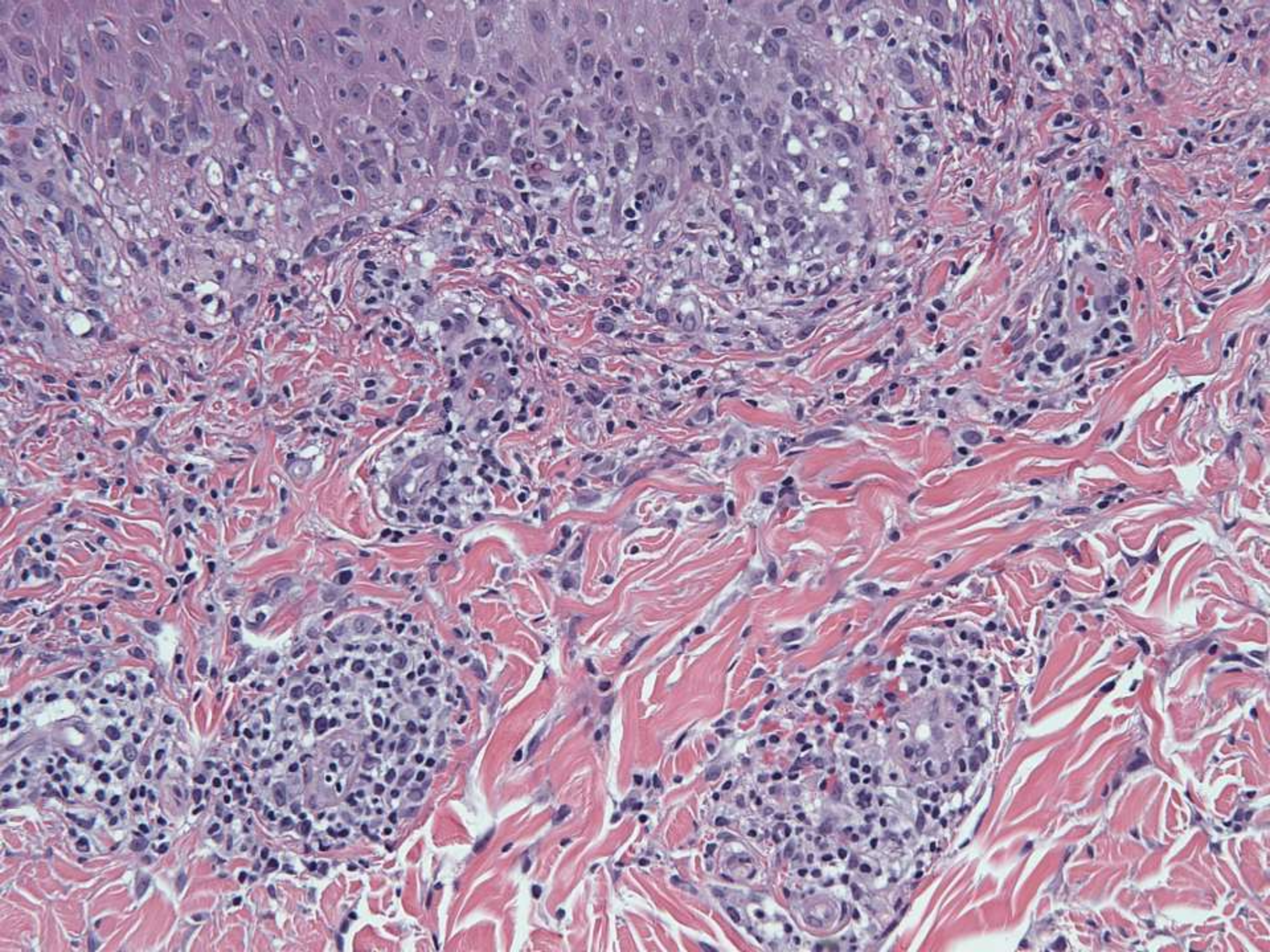


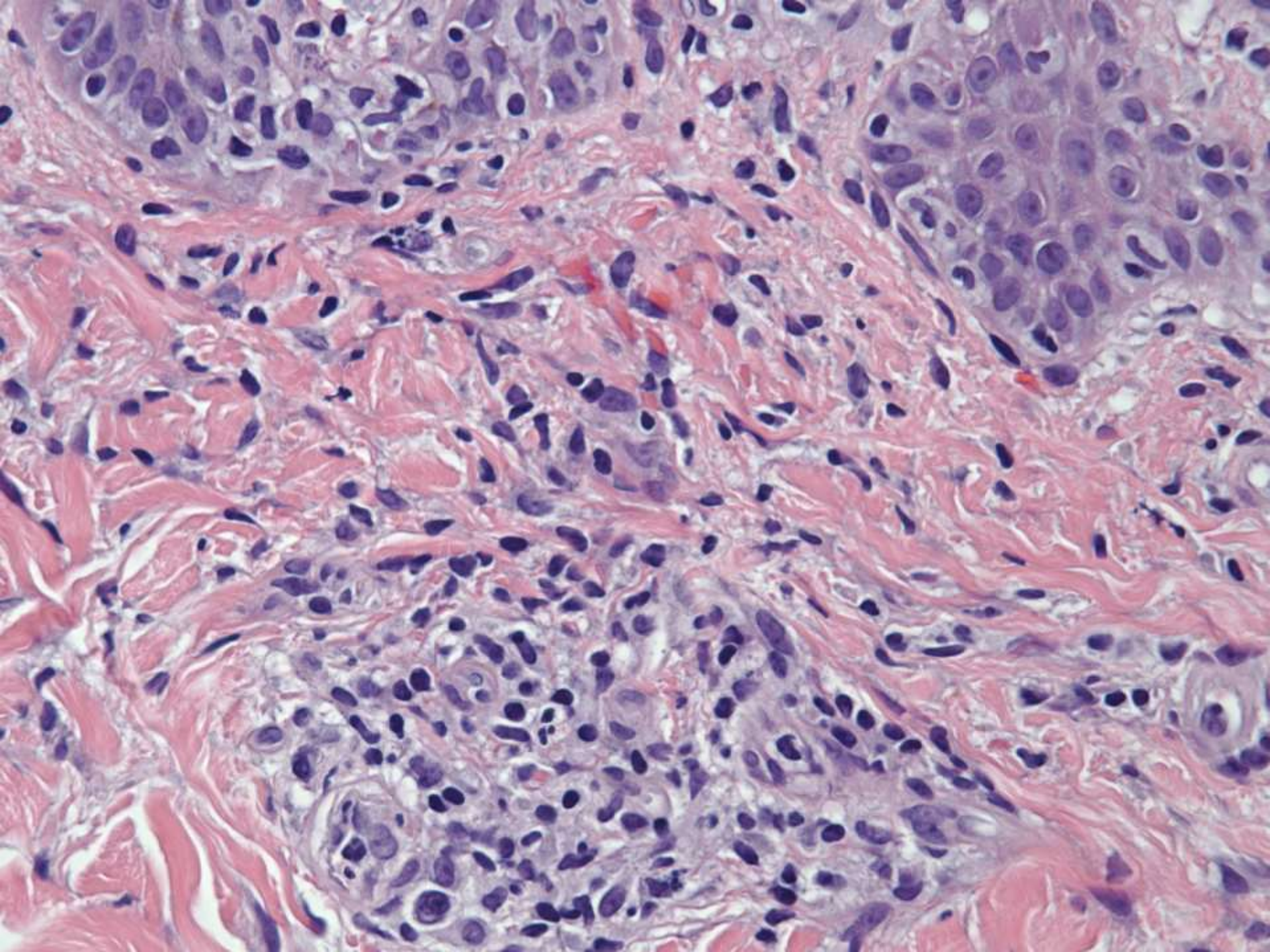
Clinical differential: viral exanthem, morbilliform drug reaction, urticaria, ID reaction to tinea, dyshidrosis, and eczematous dermatitis

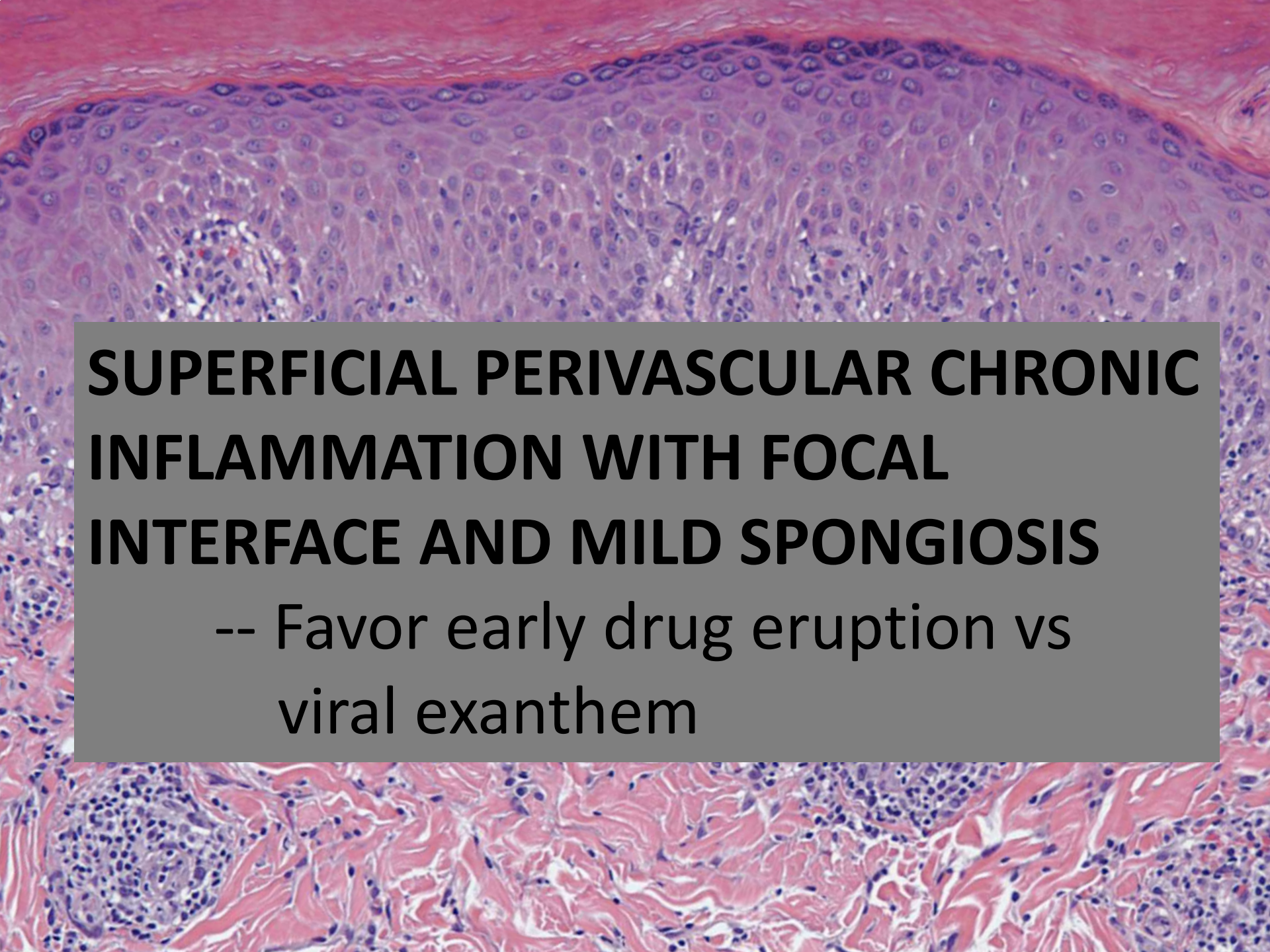












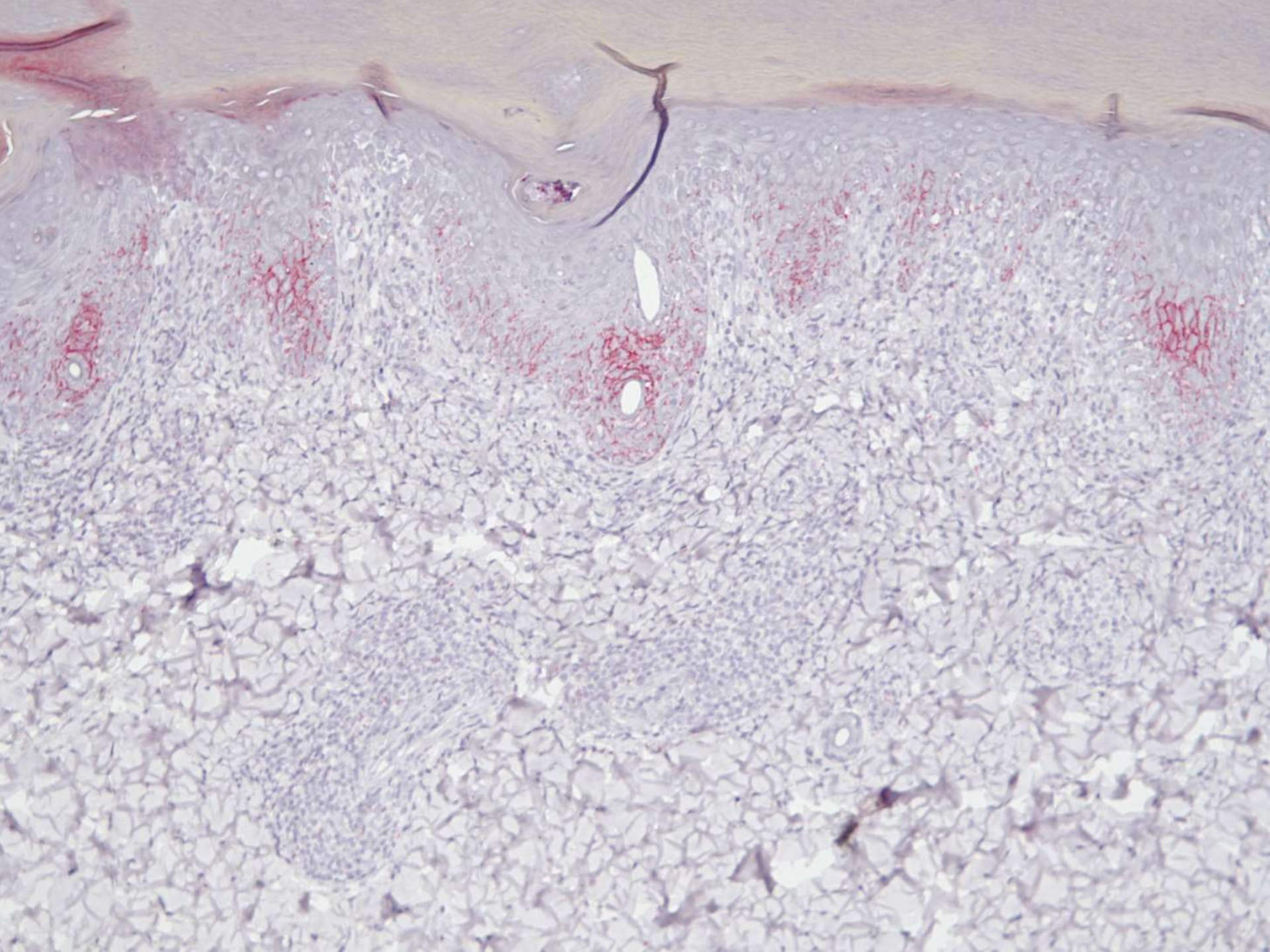
SUPERFICIAL PERIVASCULAR CHRONIC INFLAMMATION WITH FOCAL INTERFACE AND MILD SPONGIOSIS

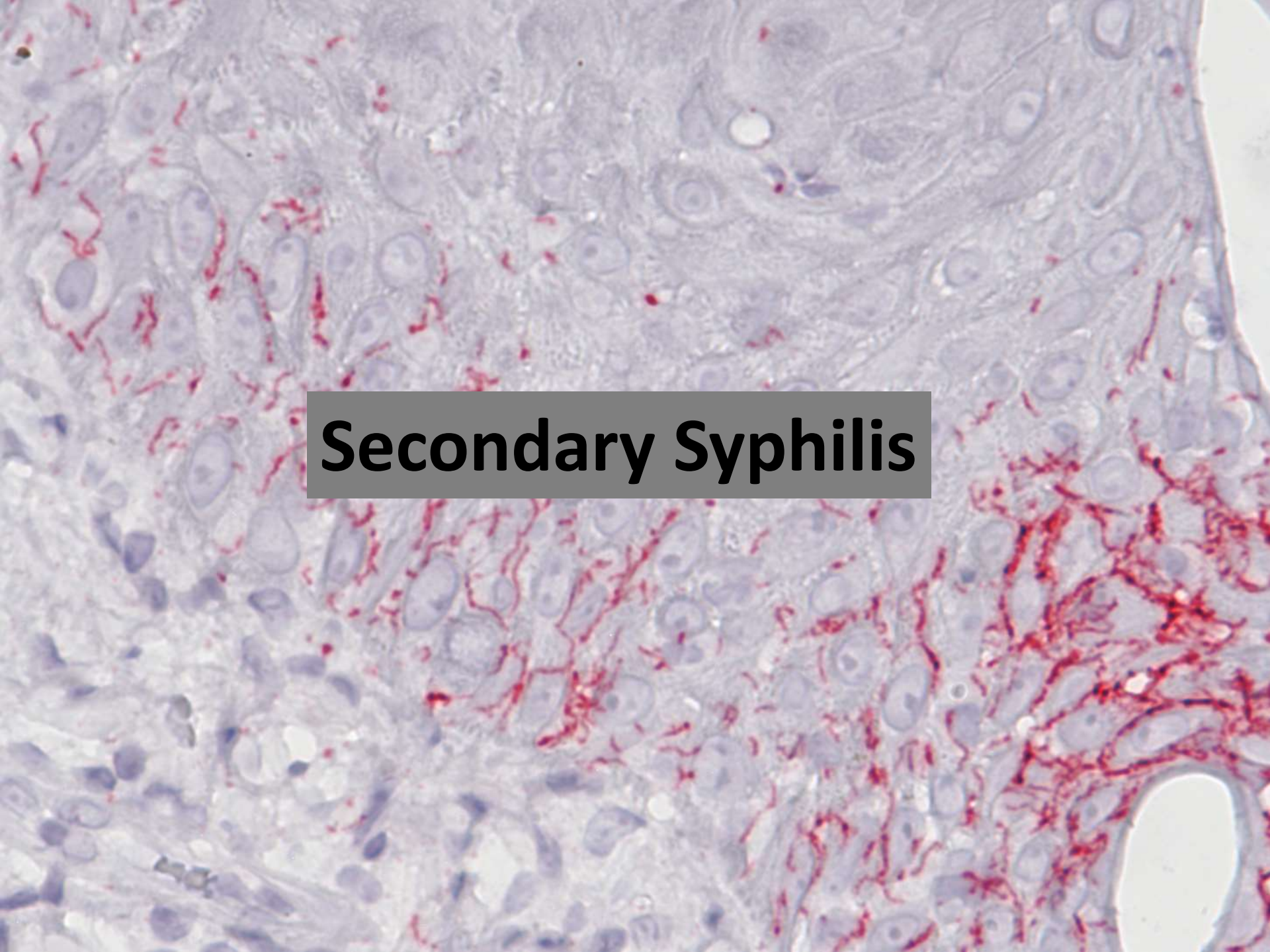
-- Favor early drug eruption vs viral exanthem

Follow-up

- Dermatologic Treatment: oral prednisone
- Urine tox screen: negative
- HIV Ab screen: non-reactive

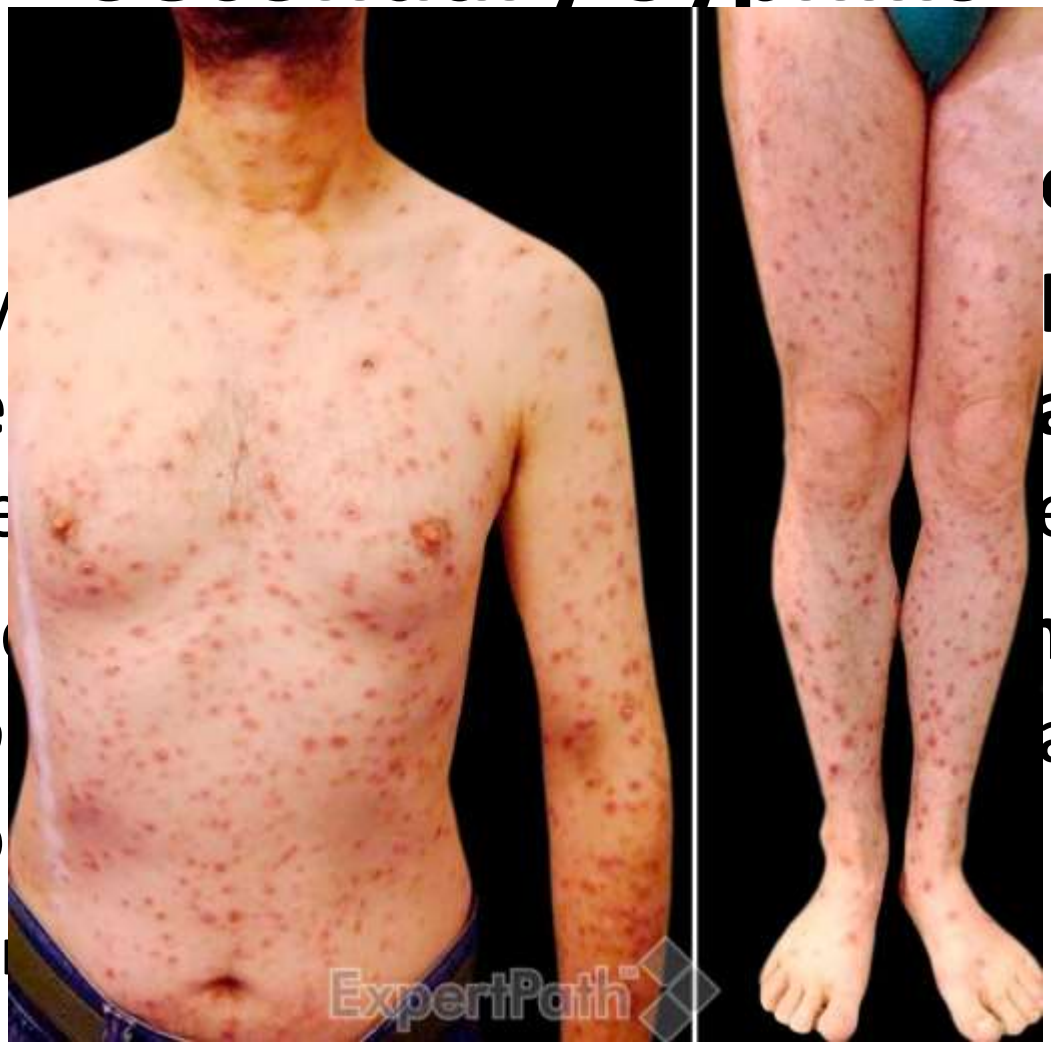
- Syphilis ELISA: **Positive** (>10, ref range: 0-1.2)
- RPR: **1: 256** (H)
- No prior report of chancre




Secondary Syphilis

Secondary Syphilis

- Occurs **cre**
- Usually **hes or plaque alms and soles**, e ere
- **Hemat mination** of *Trep* ation of microo
  - Occu



Variable Presentation

- Early (10%)
  - **Generalized eruption**, nonpruritic, roseola-like, discrete **macules**, initially distributed on **flanks and shoulders**
- Late (70%)
  - **Generali** **mous eruptions** more infi d
  - Annular |
- Localized s eponemes)
  - **Palms ar** **ques** with collarette
  - **Anogenit** genital warts
  - **Seborrheic area**: "Corona veneris" along hairline
- Hypopigmented macules, mainly on neck

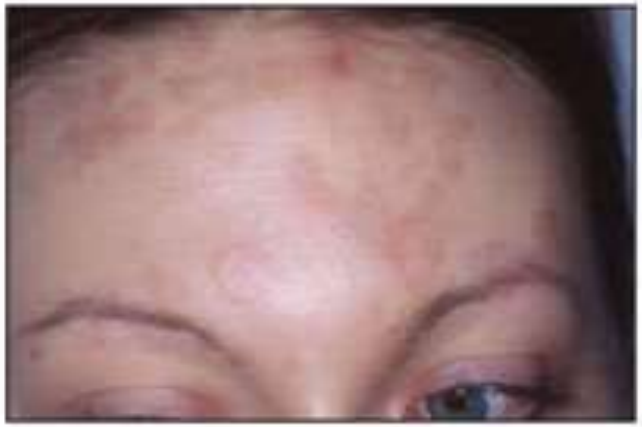
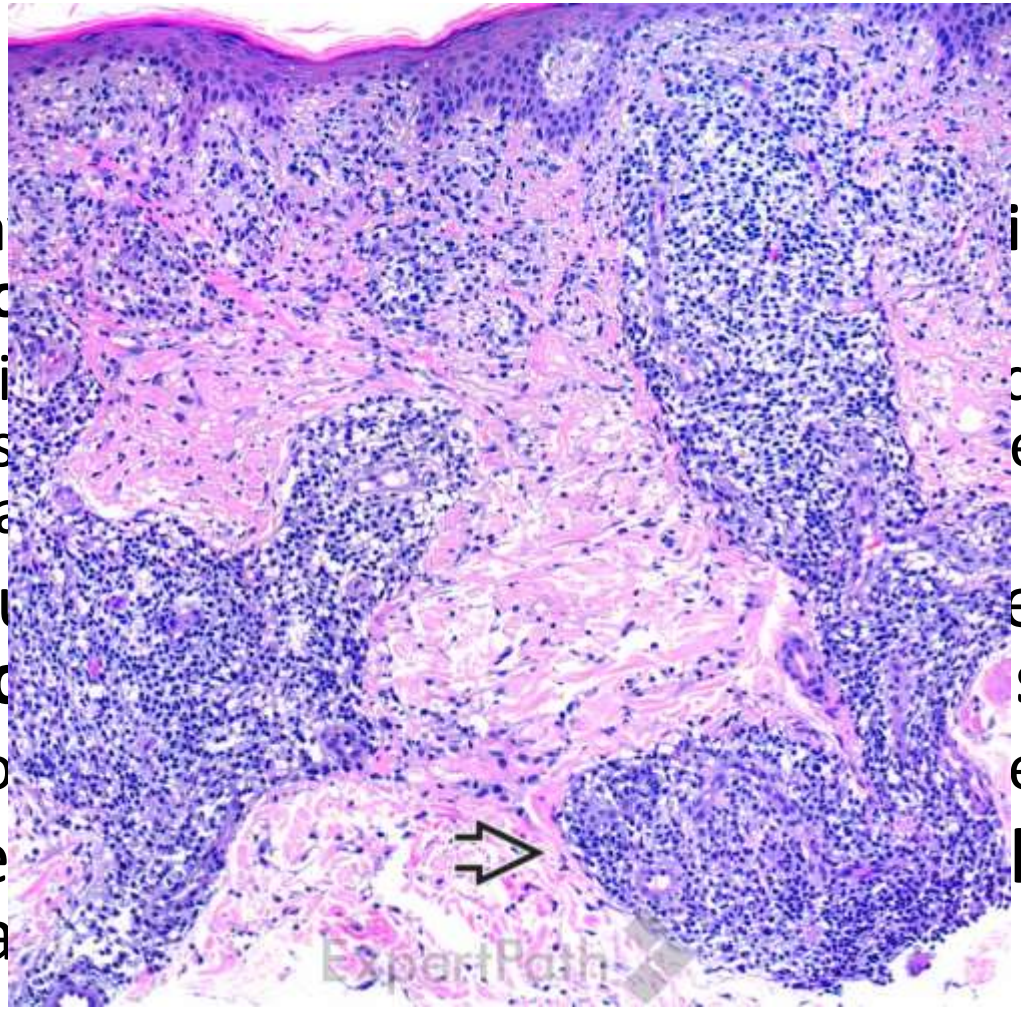


Fig. 5. Secondary syphilis with corona veneris.

Histologic Features



- Variable
  - Can ha **iosis, lichenc**
  - Someti d and psorias e lichenoid and gra
- Perivascu ed with **plasma c s**
  - Intraco e cases
- Infiltrate **llary dermis** a

“Great Simulator”

- Lichen planus
- Psoriasis
- Pityriasis lichenoides
- Psoriasiform drug reactions
- Lichenoid hypersensitivity reaction

- Presentation is highly variable… so **clinical history is key!**

Follow Up

- 3 injections of IM penicillin, q1/week
  - Rash disappeared after first IM penicillin injection
- Syphilis screen will be repeated at 6 months

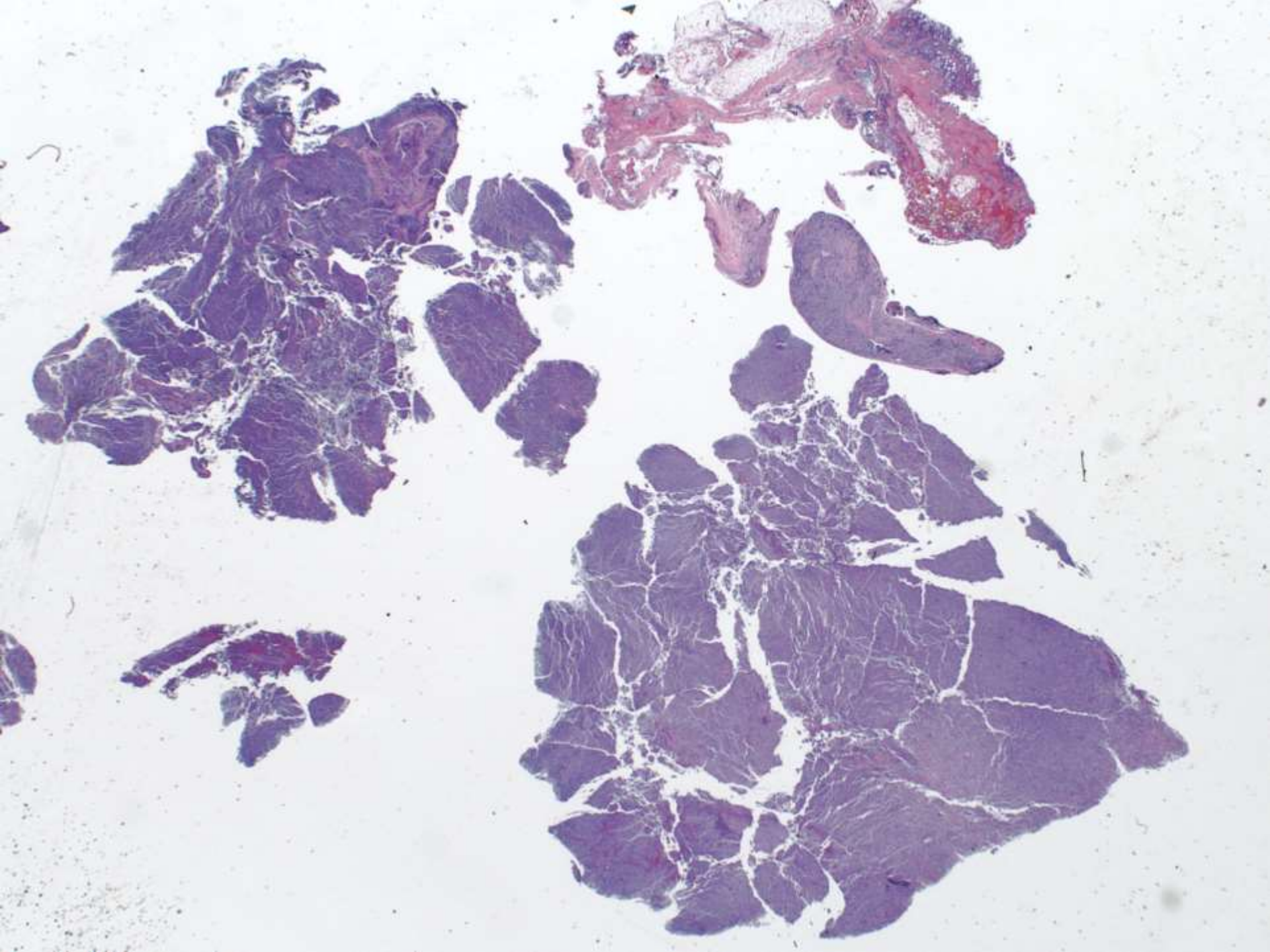
6239

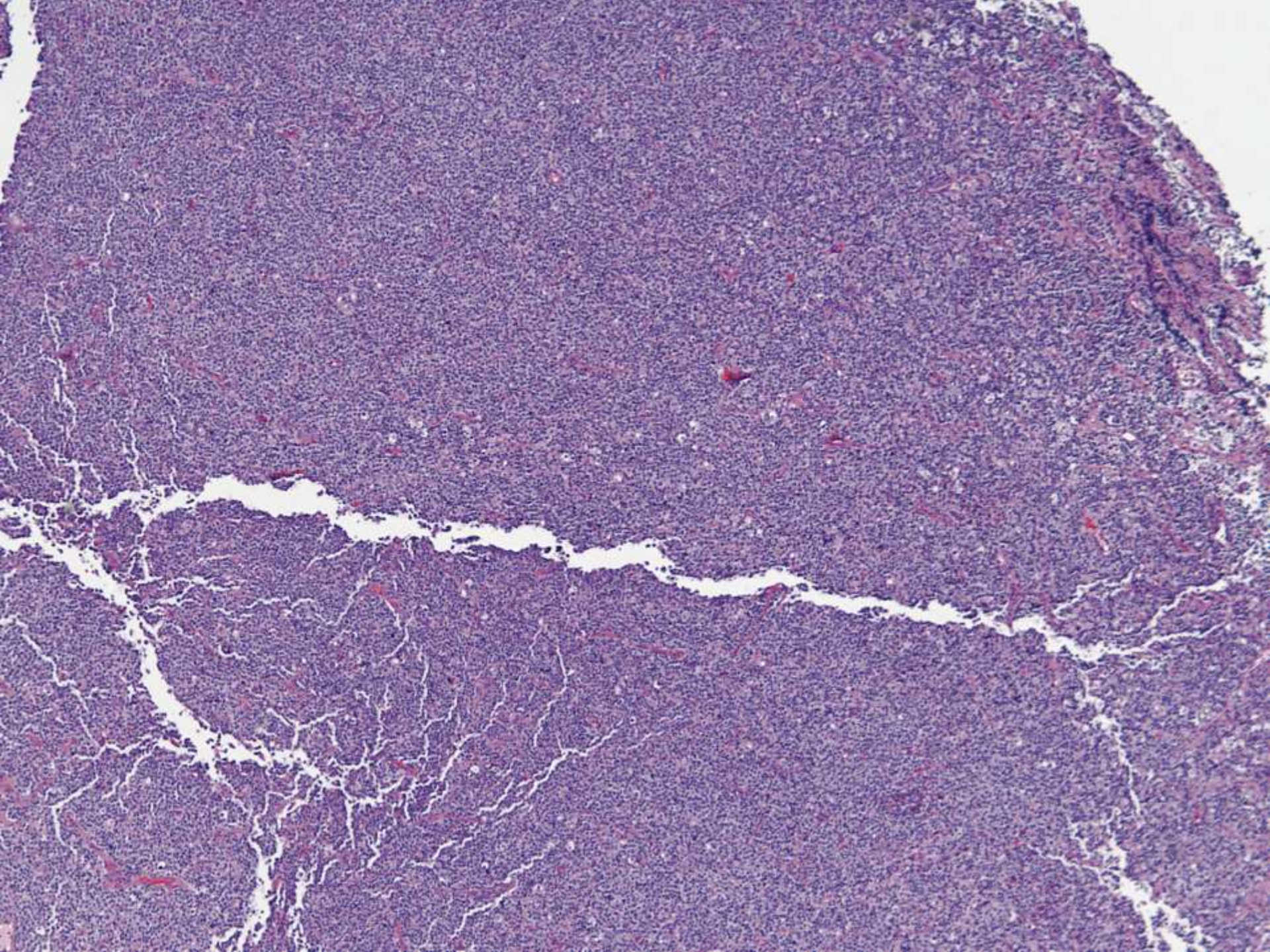
Josh Menke/Yaso Natkunam; Stanford

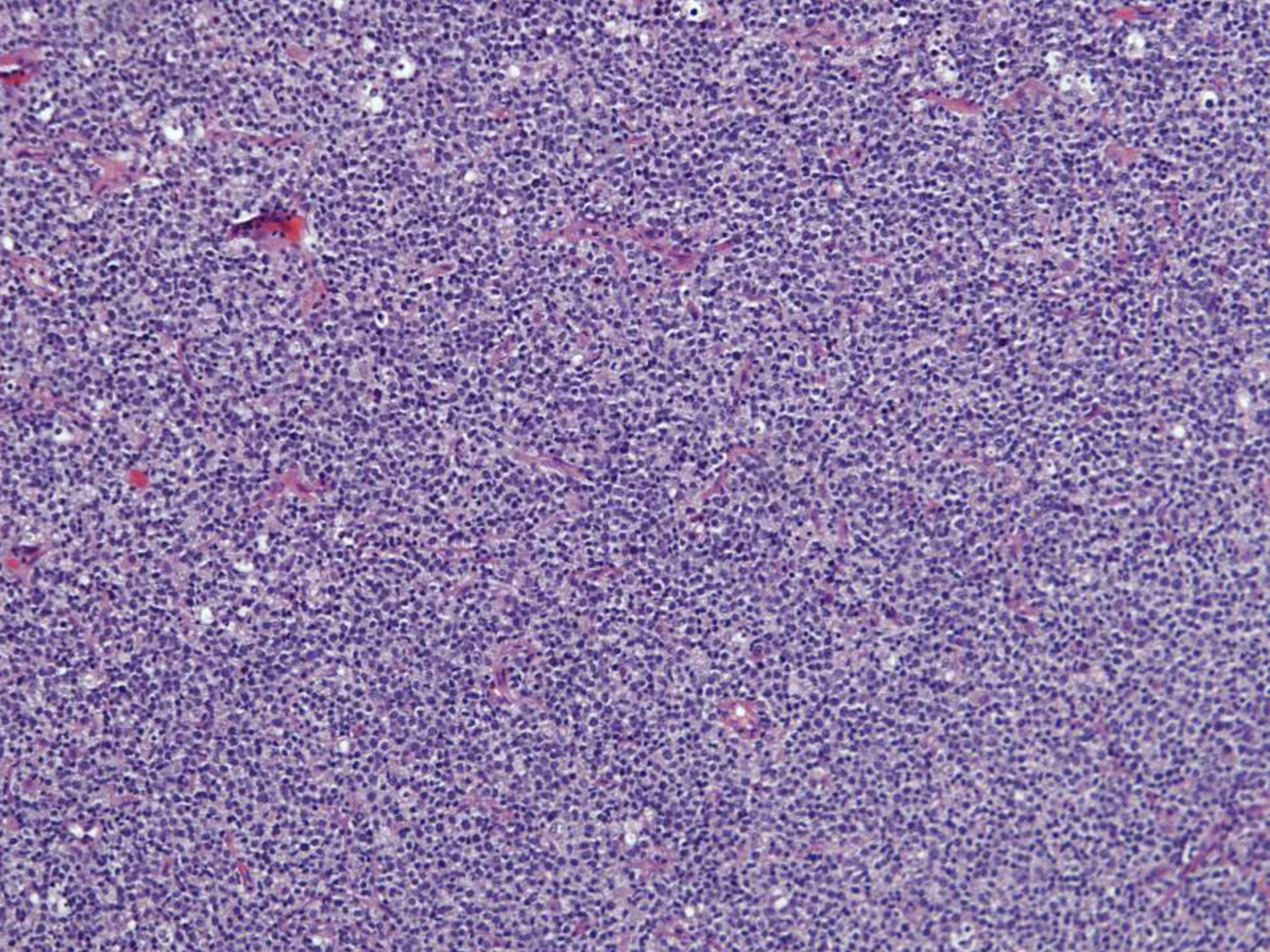
74-year-old male with left neck mass that has SUV of 22.

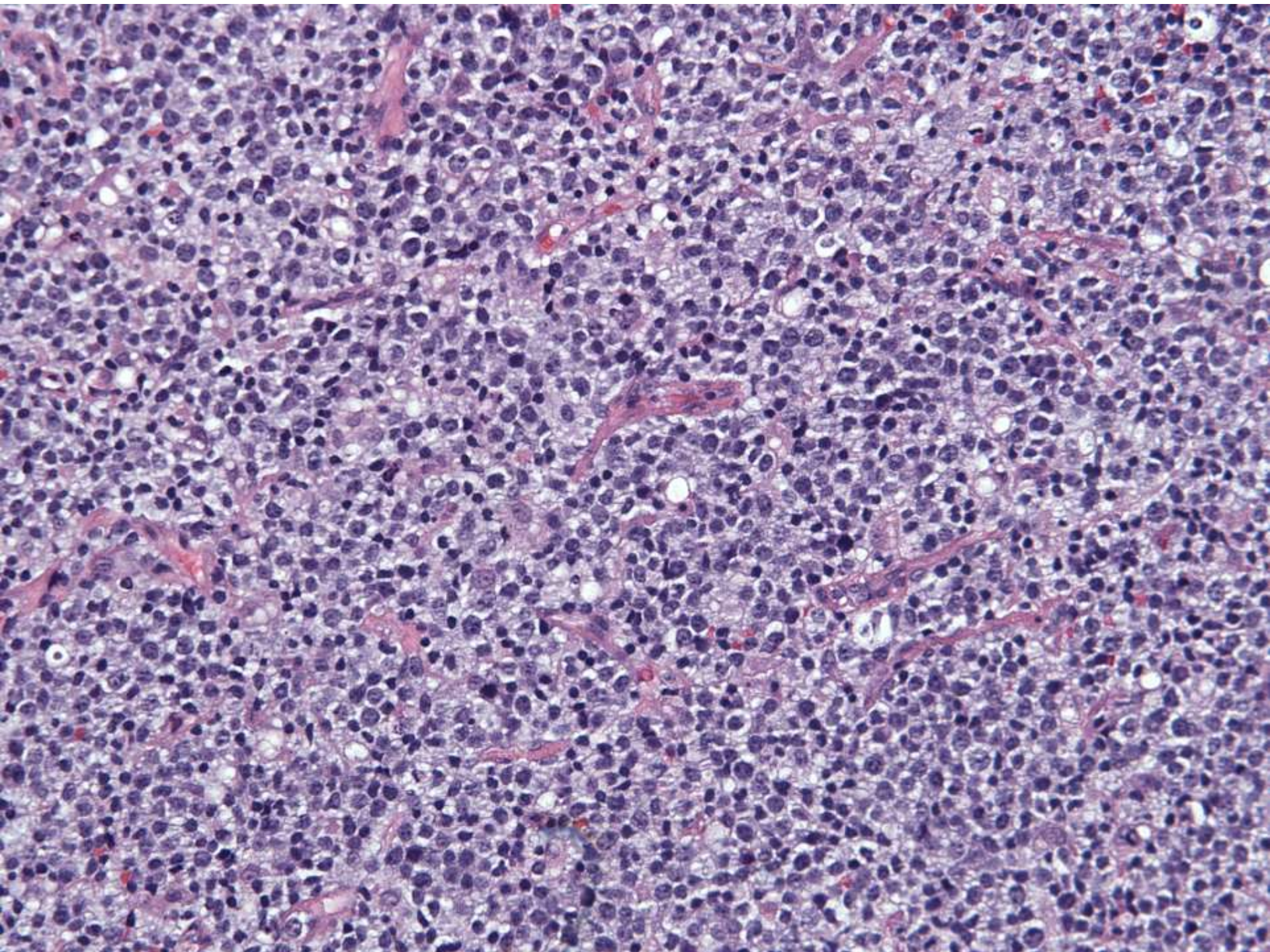
History

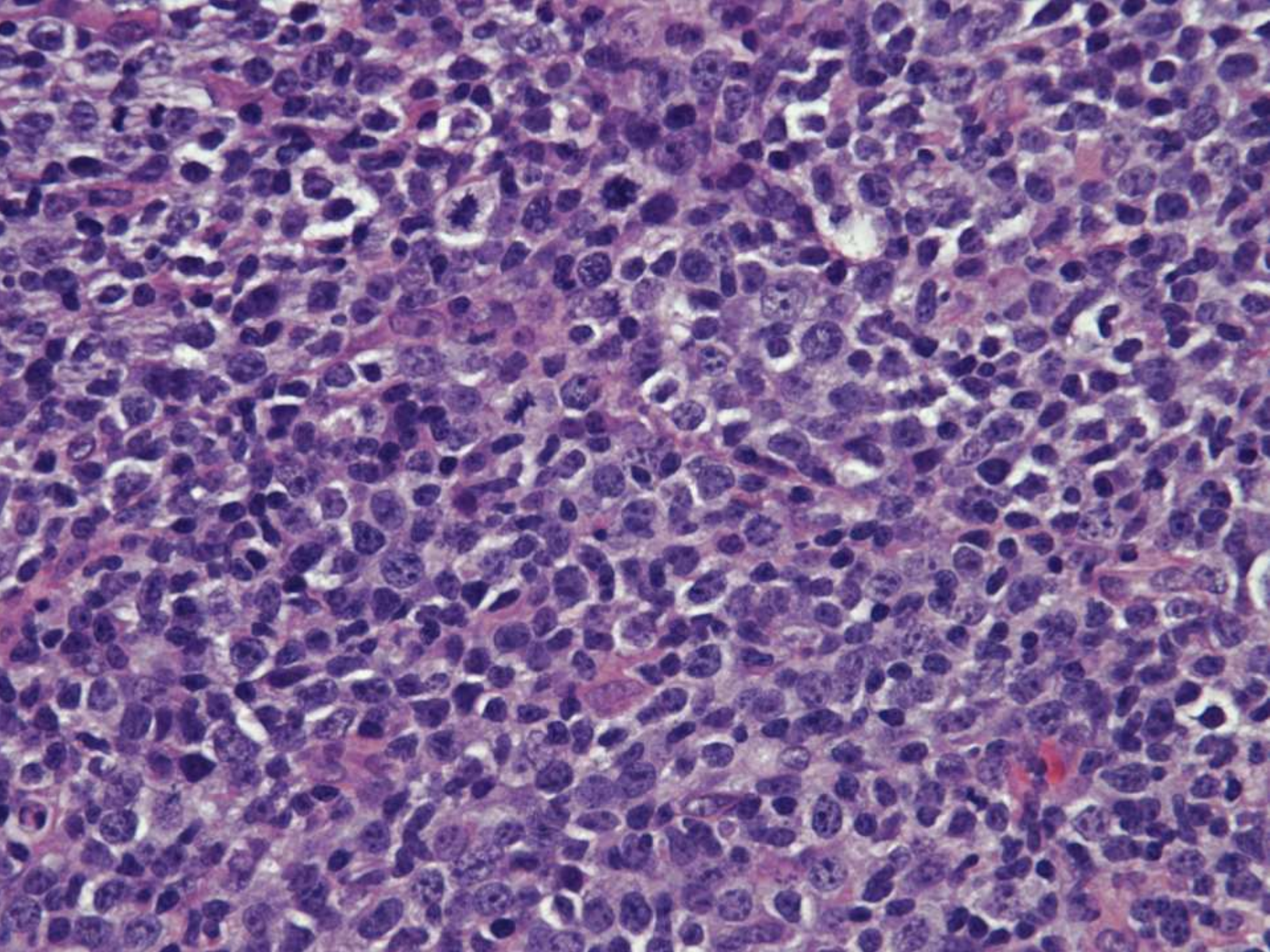
- 74 year old man with a left neck mass that has a SUV of 22

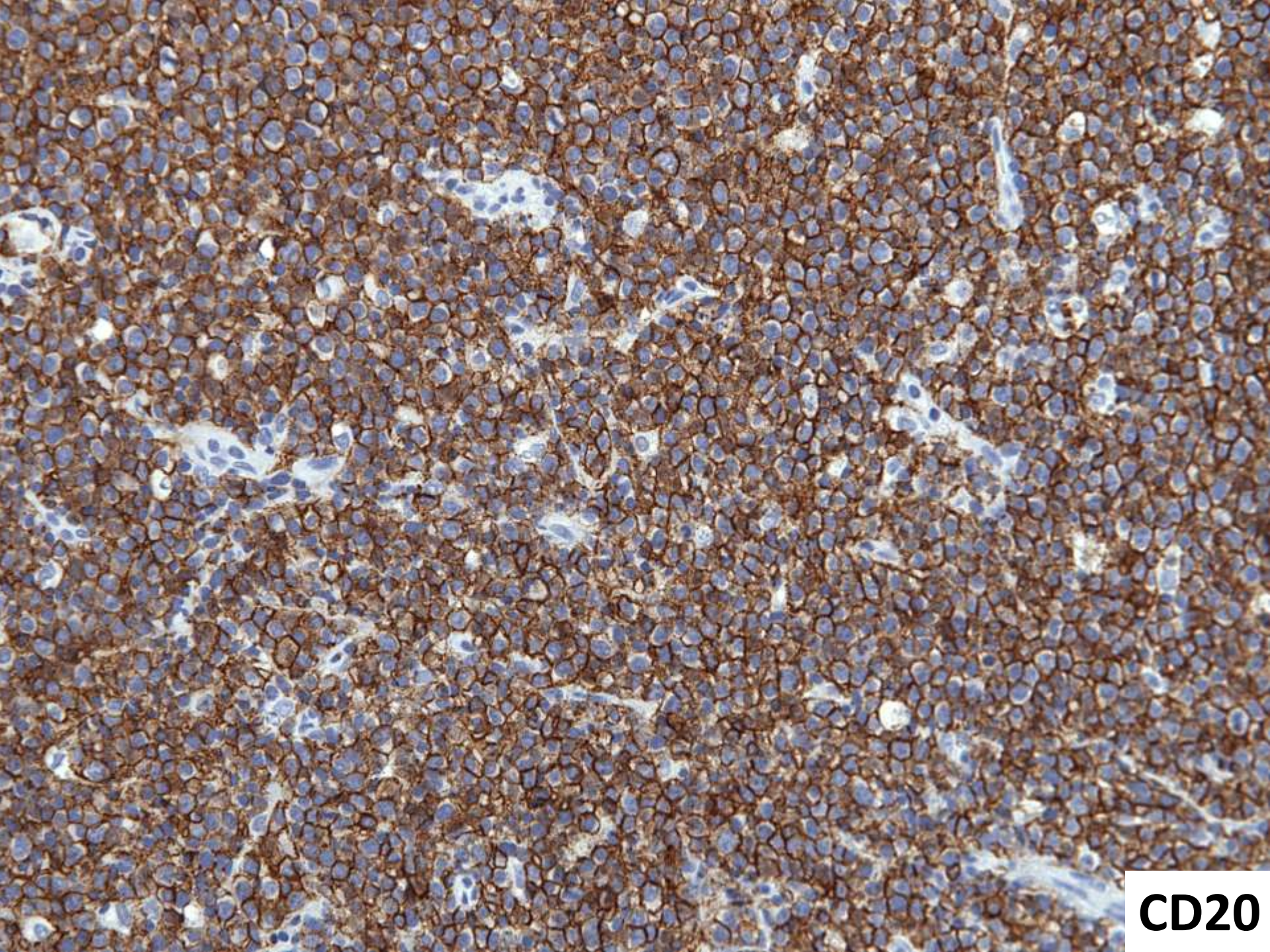


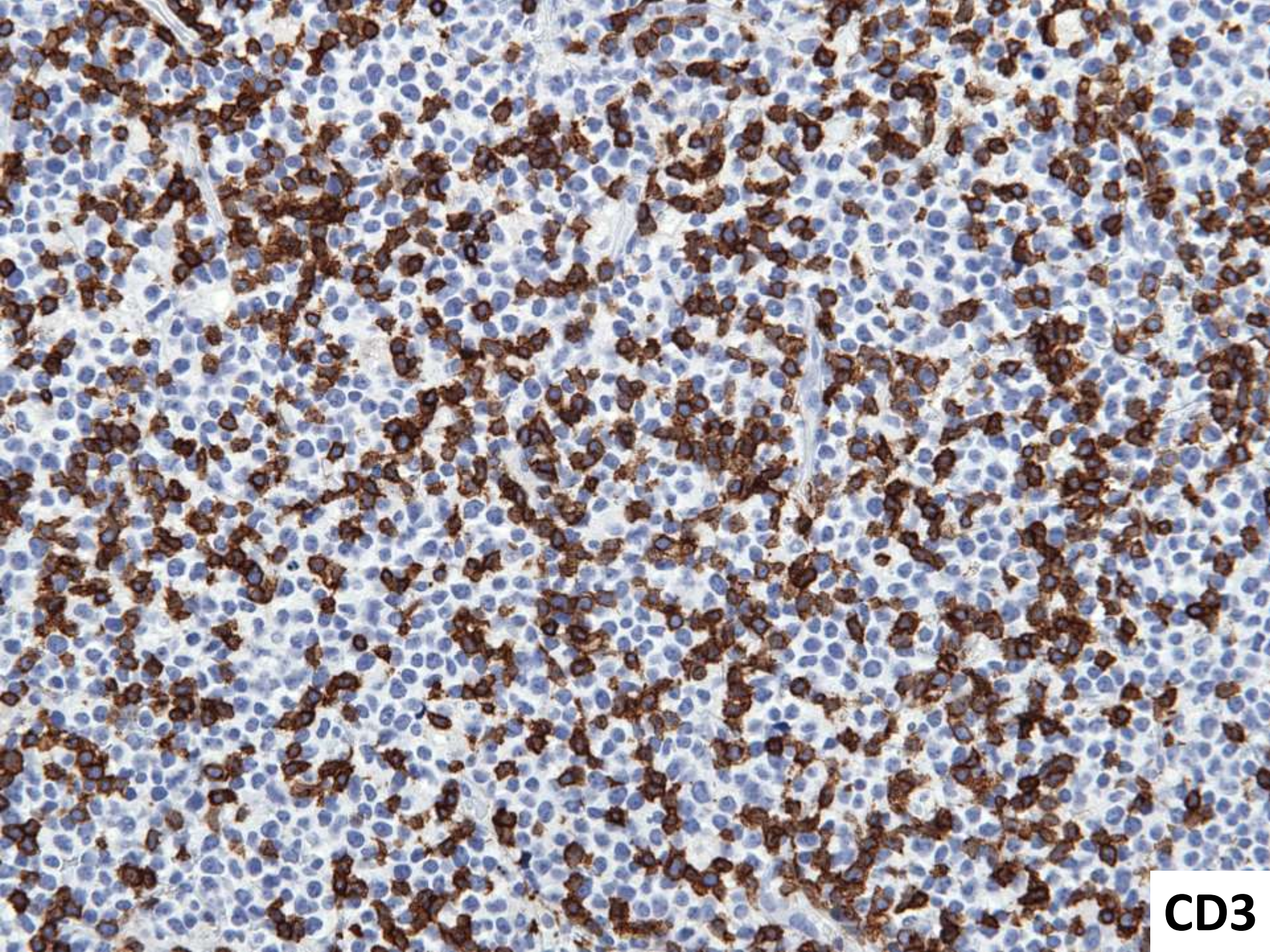


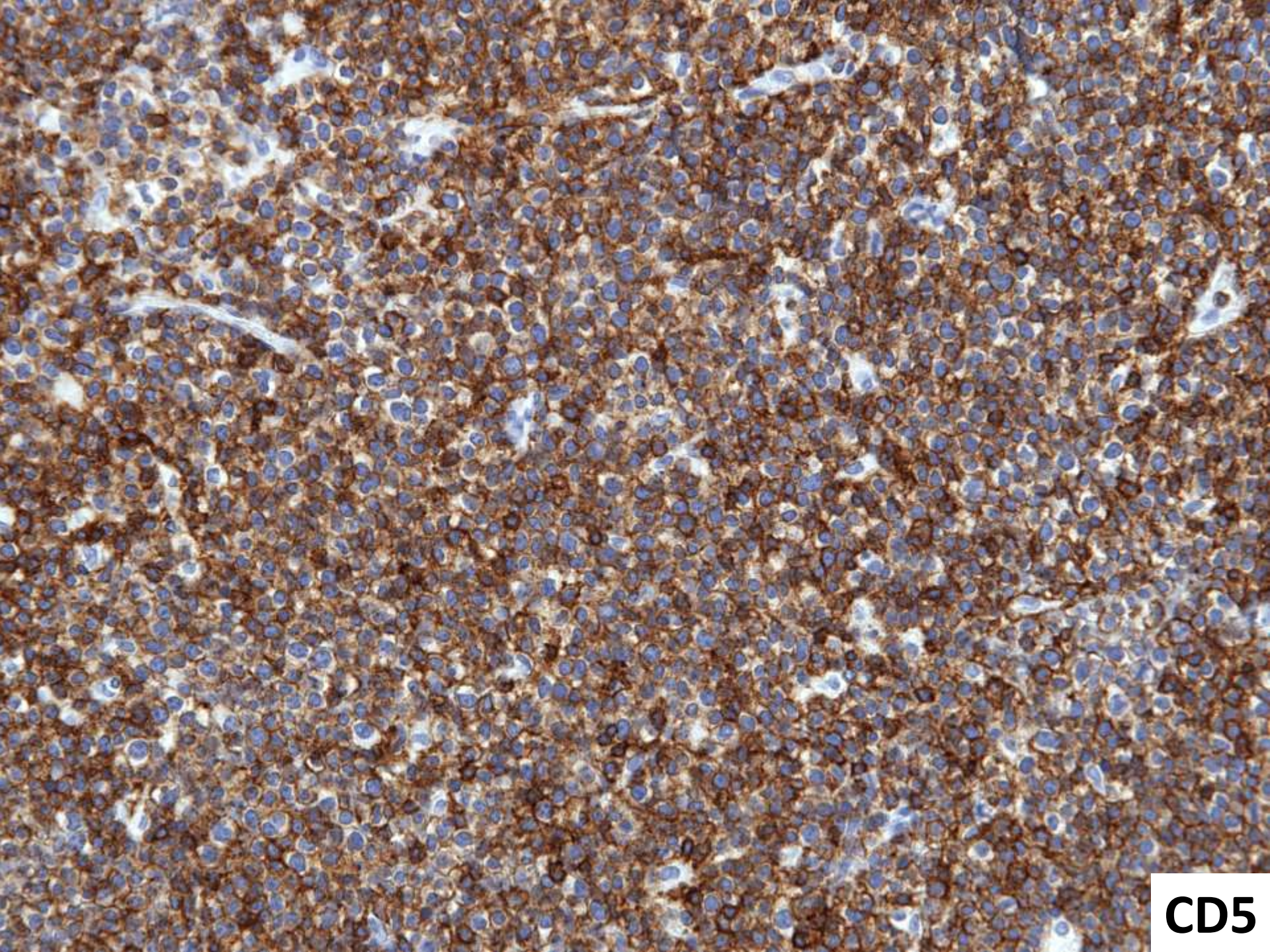


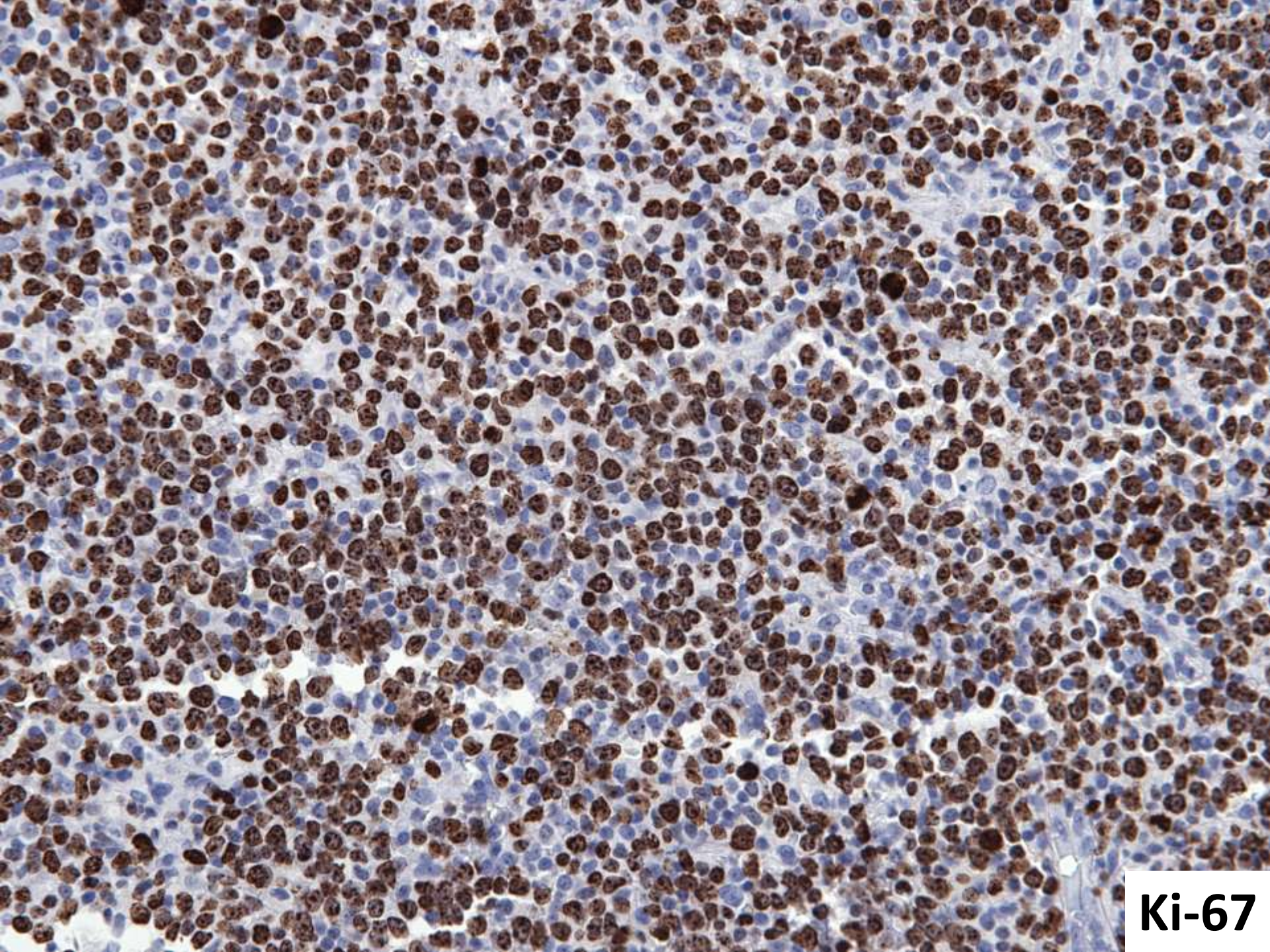


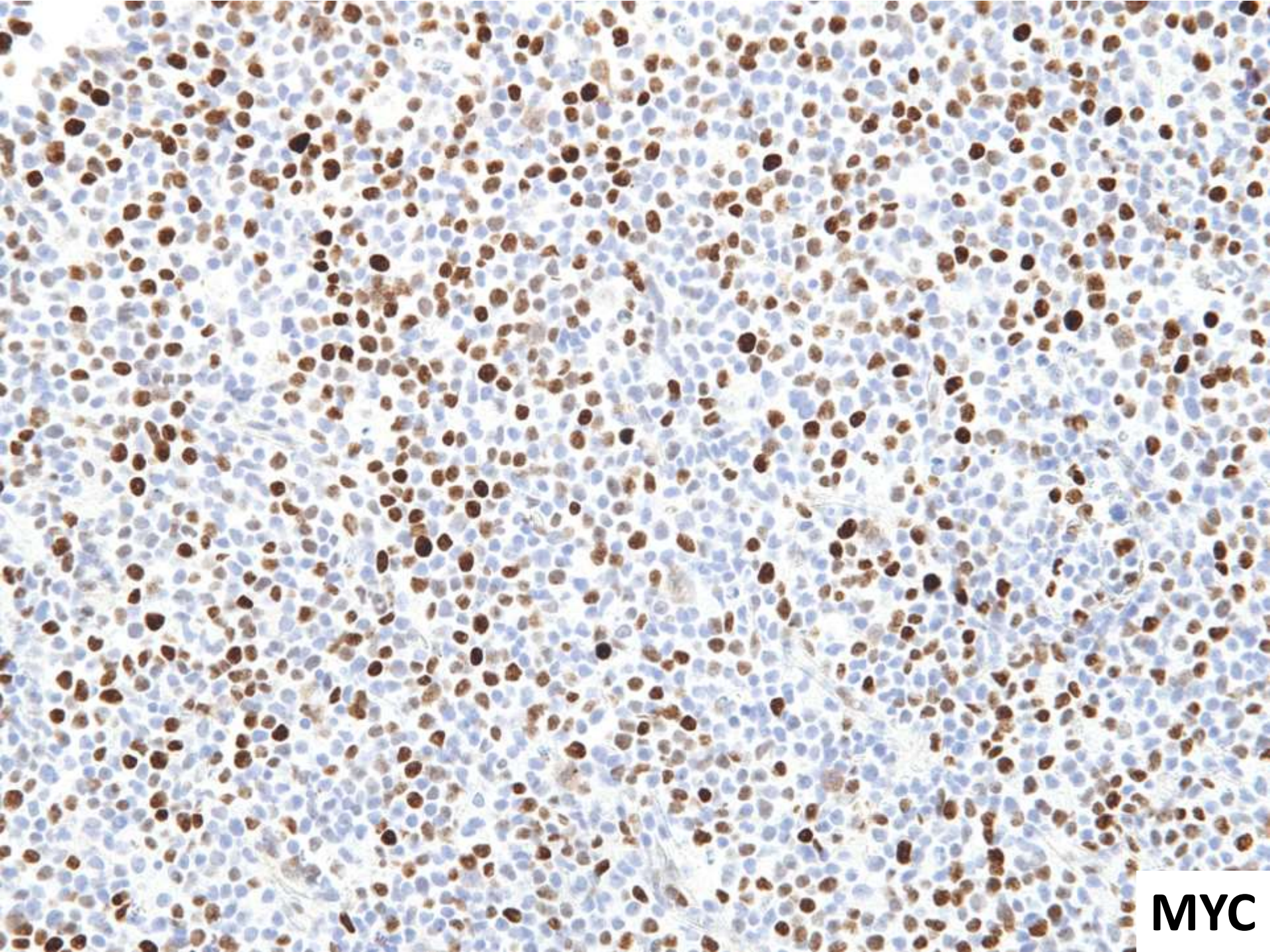


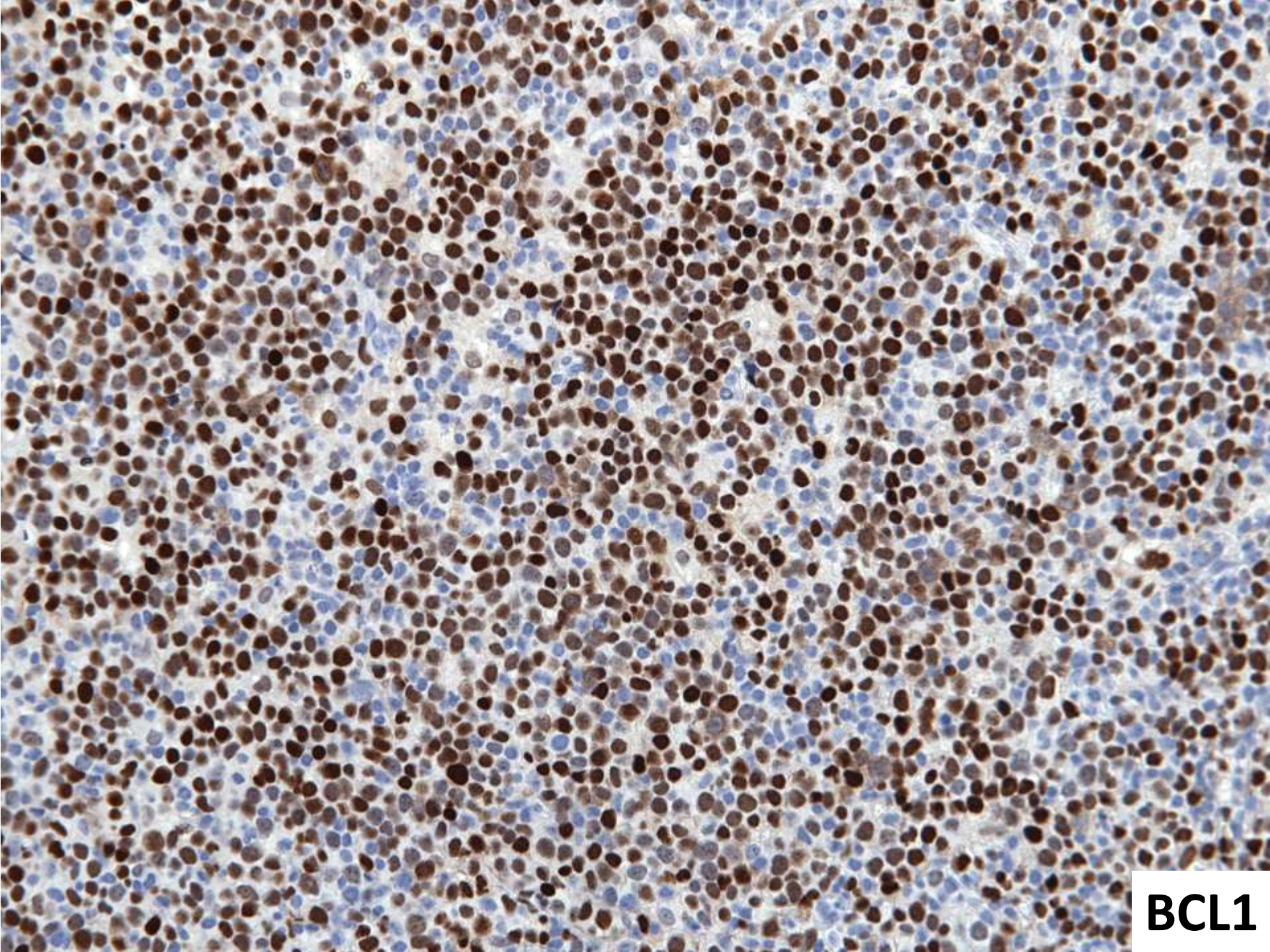

CD20


CD3


CD5


Ki-67


MYC


BCL1

South Bay Case

Joshua Menke
Yaso Natkunam

Diagnosis

- Diffuse large B-cell lymphoma arising from CLL/SLL (“Richter’s transformation”)

Differential diagnoses

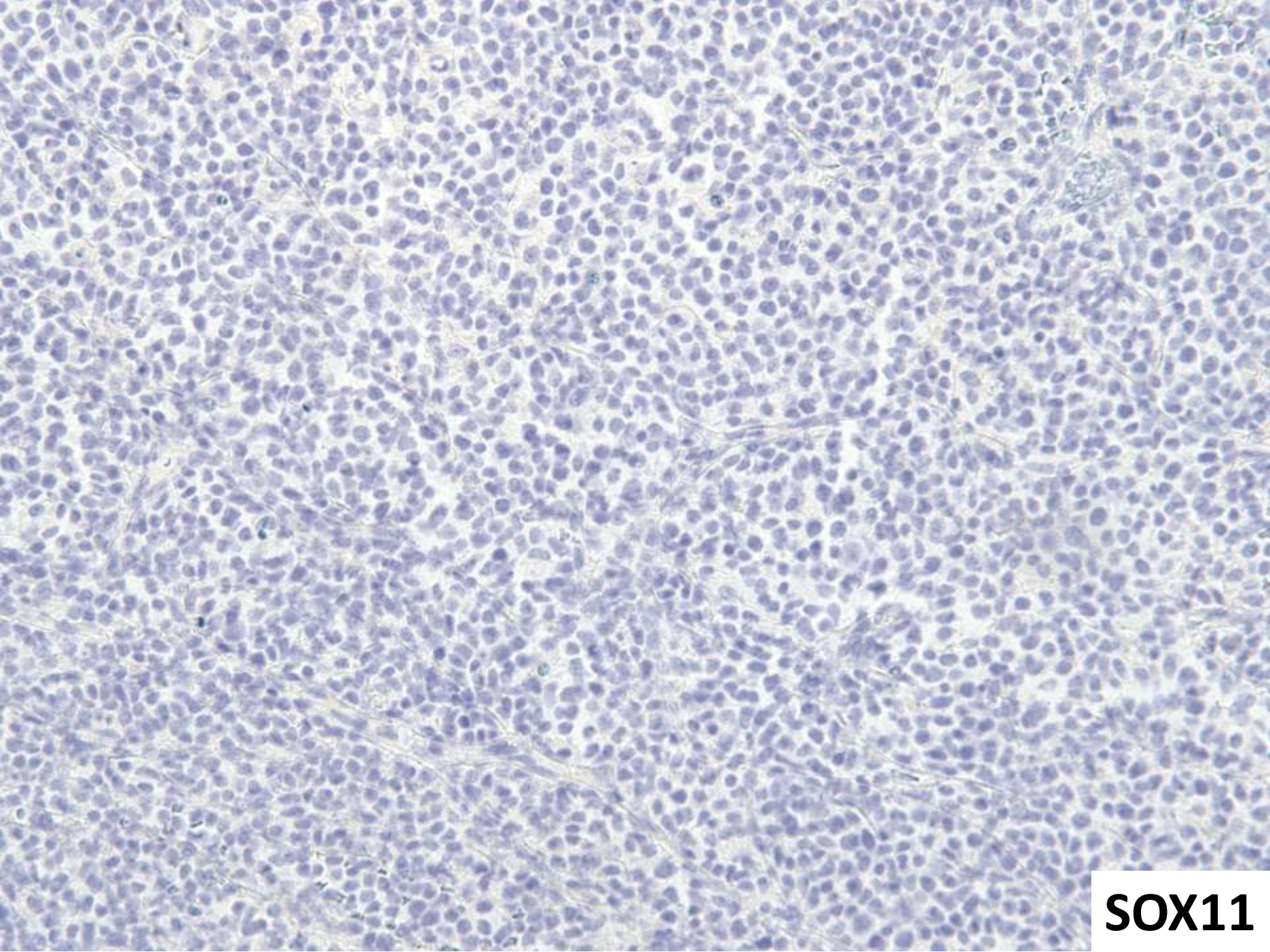
- Pleomorphic mantle cell lymphoma (MCL)
- *De novo* CD5-positive diffuse large B-cell lymphoma (DLBCL)
- Paraimmunoblastic variant of chronic lymphocytic leukemia (CLL)

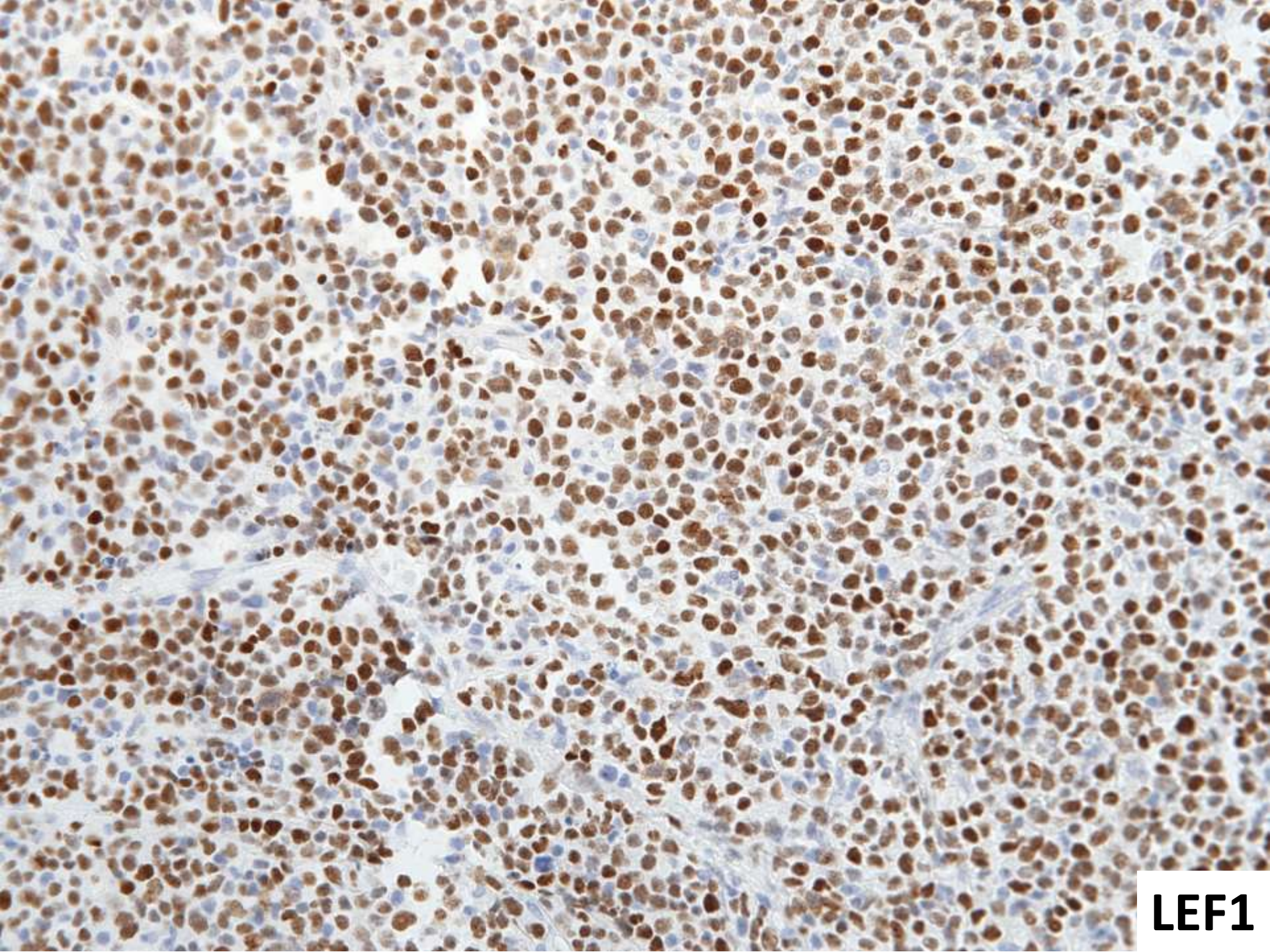
Additional history

- CLL/SLL involving 10-20% of the bone marrow
- FISH on bone marrow demonstrated del 13q and del 11q
- Status post therapy

Additional immunostains

- CD10 negative, BCL6 and MUM1 positive
  - Activated B-cell (post-germinal center) phenotype
- BCL2 positive
- CD30 positive, focal
- EBER negative


SOX11


LEF1

FISH on lymph node

- *CCND1/IgH* dual color, dual fusion probe was negative for t(11;14)
- Deletions of 13q14(*DLEU1*) and *TP53*/17p13 were detected
- *BCL2, BCL6,* and *MYC* breakapart FISH were negative

Ruling out pleomorphic MCL

- Absence of SOX11
- Absence of t(11;14)
- Presence of LEF1 (0-9% of MCL [1,2])

1. Tandon B, et al. Mod Pathol. 2011
2. O'Malley DP, et al. Ann Diagn Pathol. 2017

Ruling out *de novo* DLBCL

- History of CLL
- CD5 coexpression
- Expression of LEF1 [1]
- 13q14 deletion by FISH
- Diffuse cyclin D1 expression

1. Tandon B, et al. Mod Pathol. 2011

Ruling out CLL

- Large pleomorphic cells
- No intermixed prolymphocytes and small lymphocytes

Cyclin D1 expression in lymphoma

- Mantle cell lymphoma
- Plasma cell myeloma

} Associated with t(11;14)

- Hairy cell leukemia
- Diffuse large B-cell lymphoma, *de novo* and Richter's transformation
- Chronic lymphocytic leukemia/small lymphocytic lymphoma proliferation centers

Cyclin D1 in DLBCL

- In one large study, cyclin D1 positivity was found in 10/66 (15%) cases of unselected *de novo* DLBCL and in 2/11 (18%) cases of Richter's transformation (RT)
- RT cases had higher rate of cyclin D1 expression (70% and 80%) compared to *de novo* DLBCL (20% on average)
- All cases had activated B-cell phenotype
- All were t(11;14) and *MYC* FISH negative

Vela-Chávez T, et al. Leuk Lymphoma. 2011.

Cyclin D1 in CLL/SLL

- In one study, 10 of 50 (20%) of CLL/SLL proliferation centers expressed cyclin D1
  - Weak to moderate staining, majority of cells were negative, no staining outside proliferation centers
- 0/5 cases had *CCND1* translocations or gains
- 0/5 cases had SOX11 expression

Gradowski JF, et al. American Journal of Clinical Pathology. 2012.

References

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2. O'Malley DP, Lee JP, Bellizzi AM. Expression of LEF1 in mantle cell lymphoma. Ann Diagn Pathol. 2017 Feb;26:57-59. PMID: 28038713.
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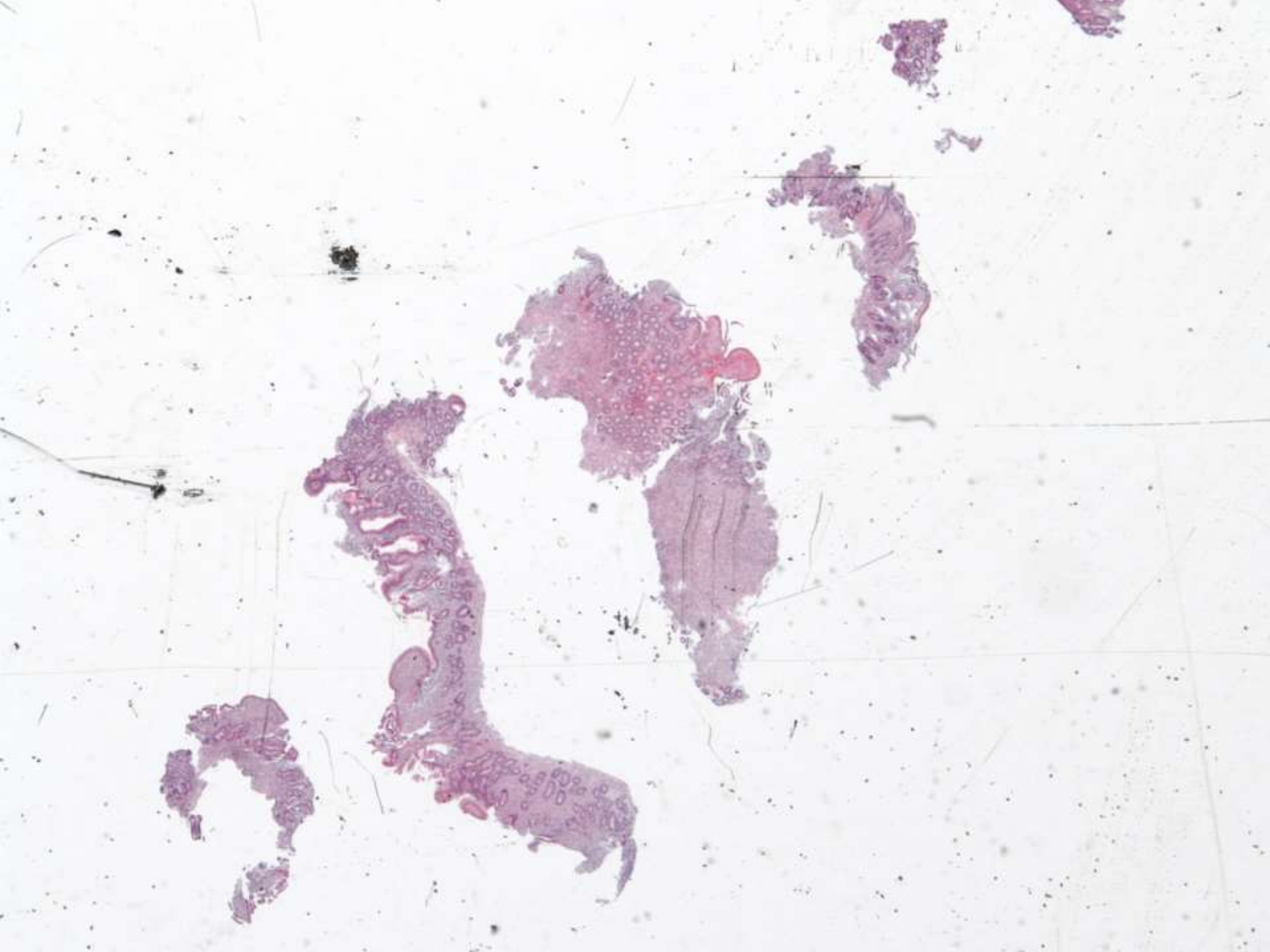
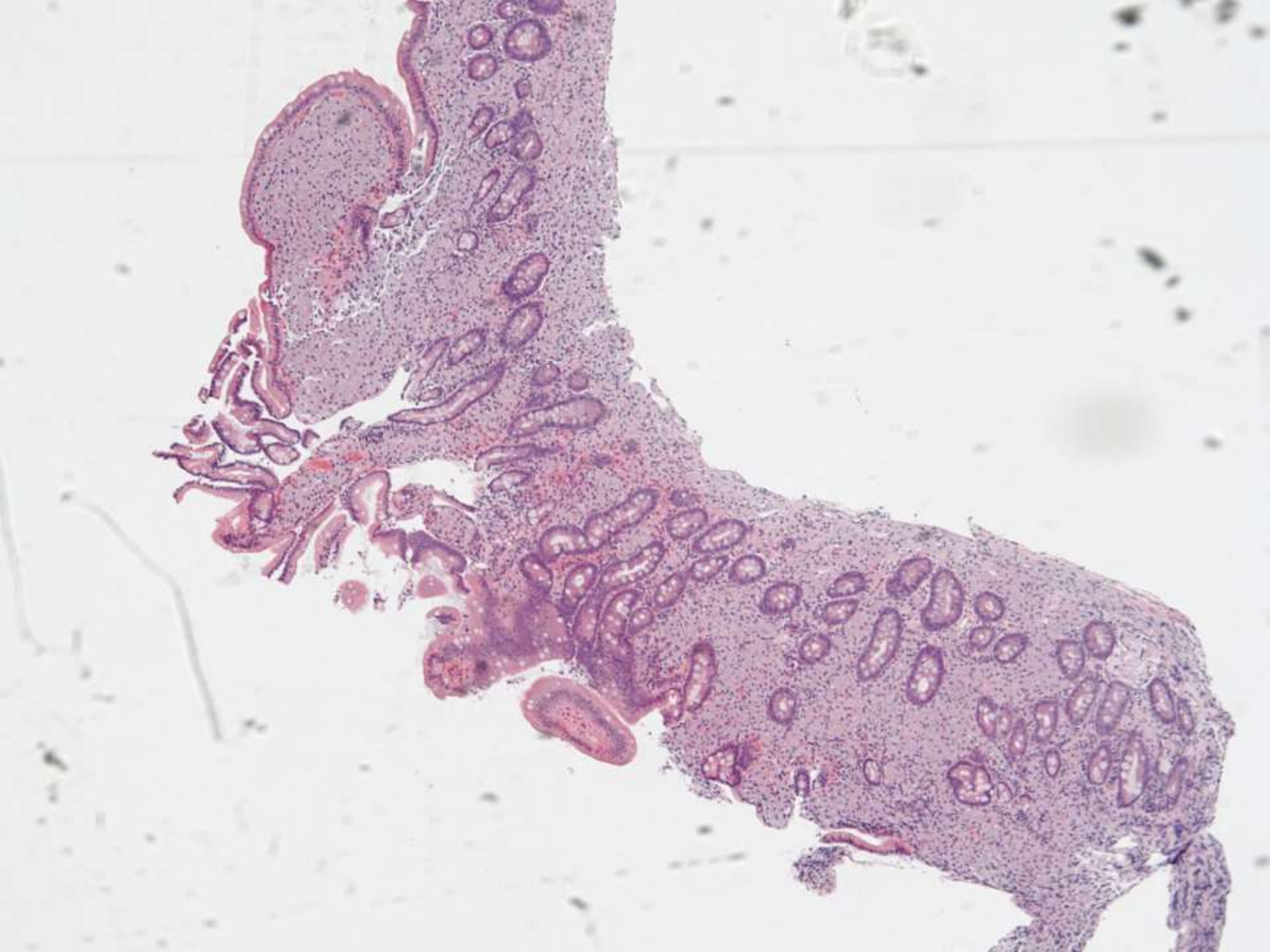
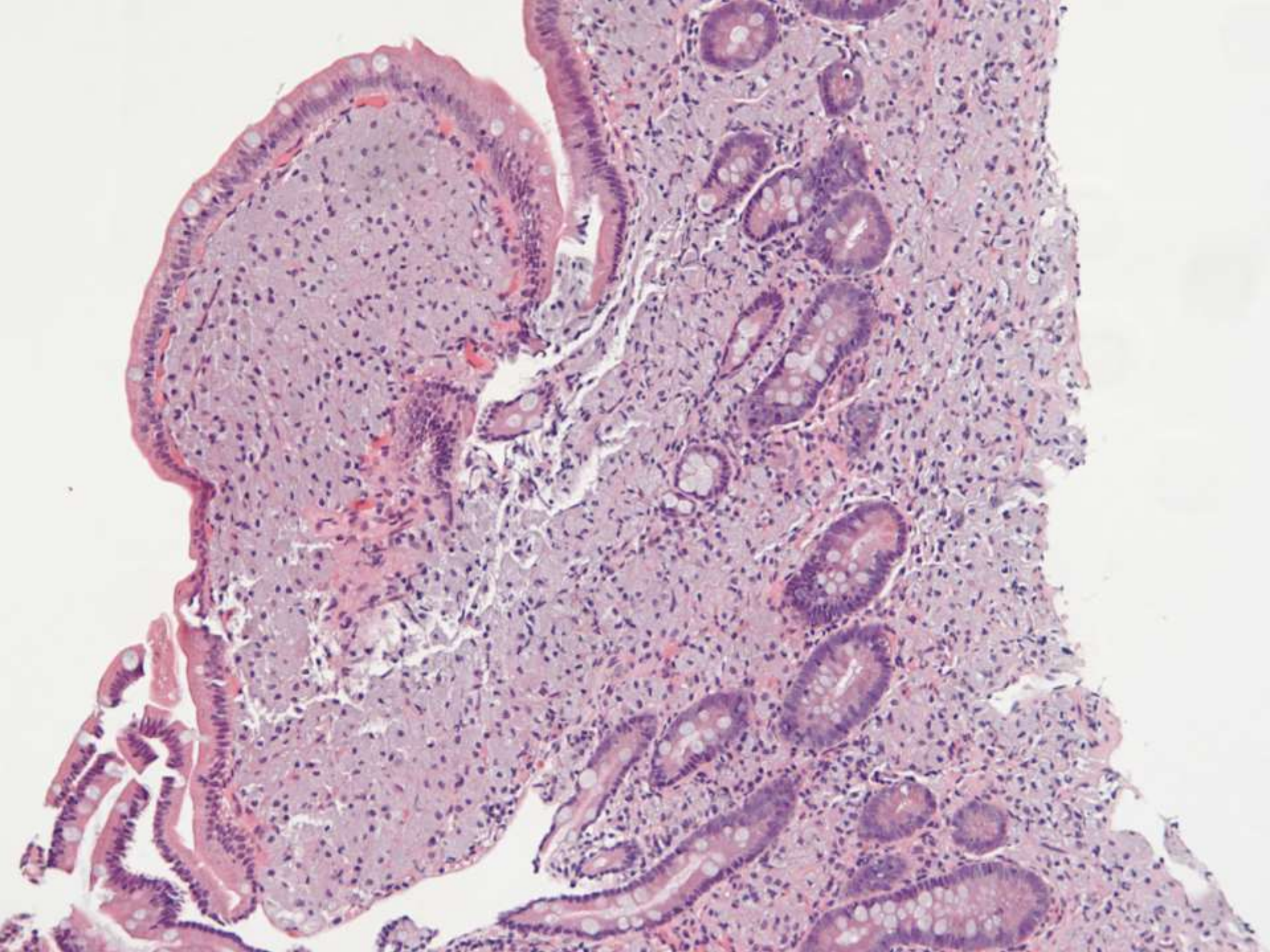
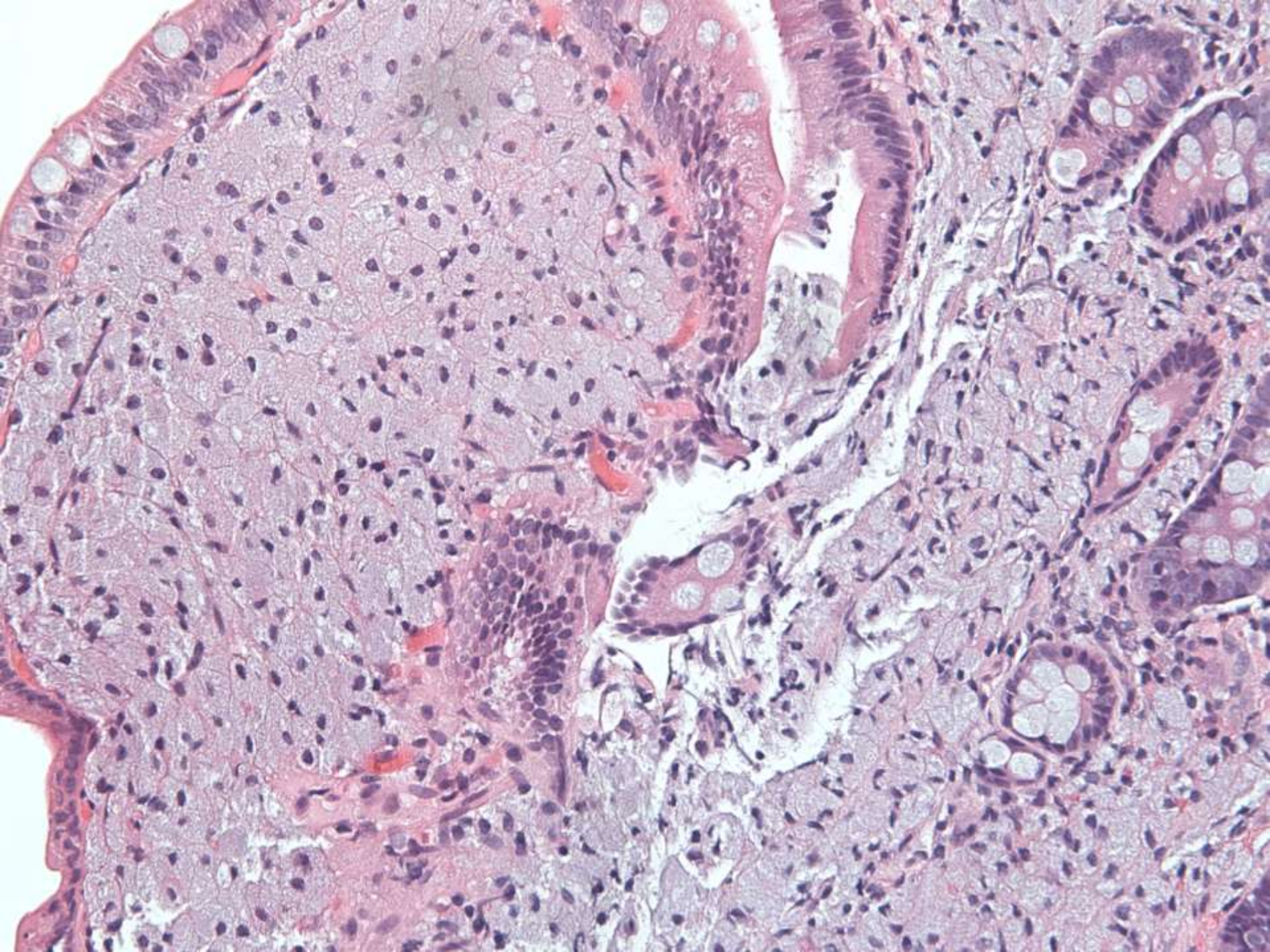
David Bingham; Stanford

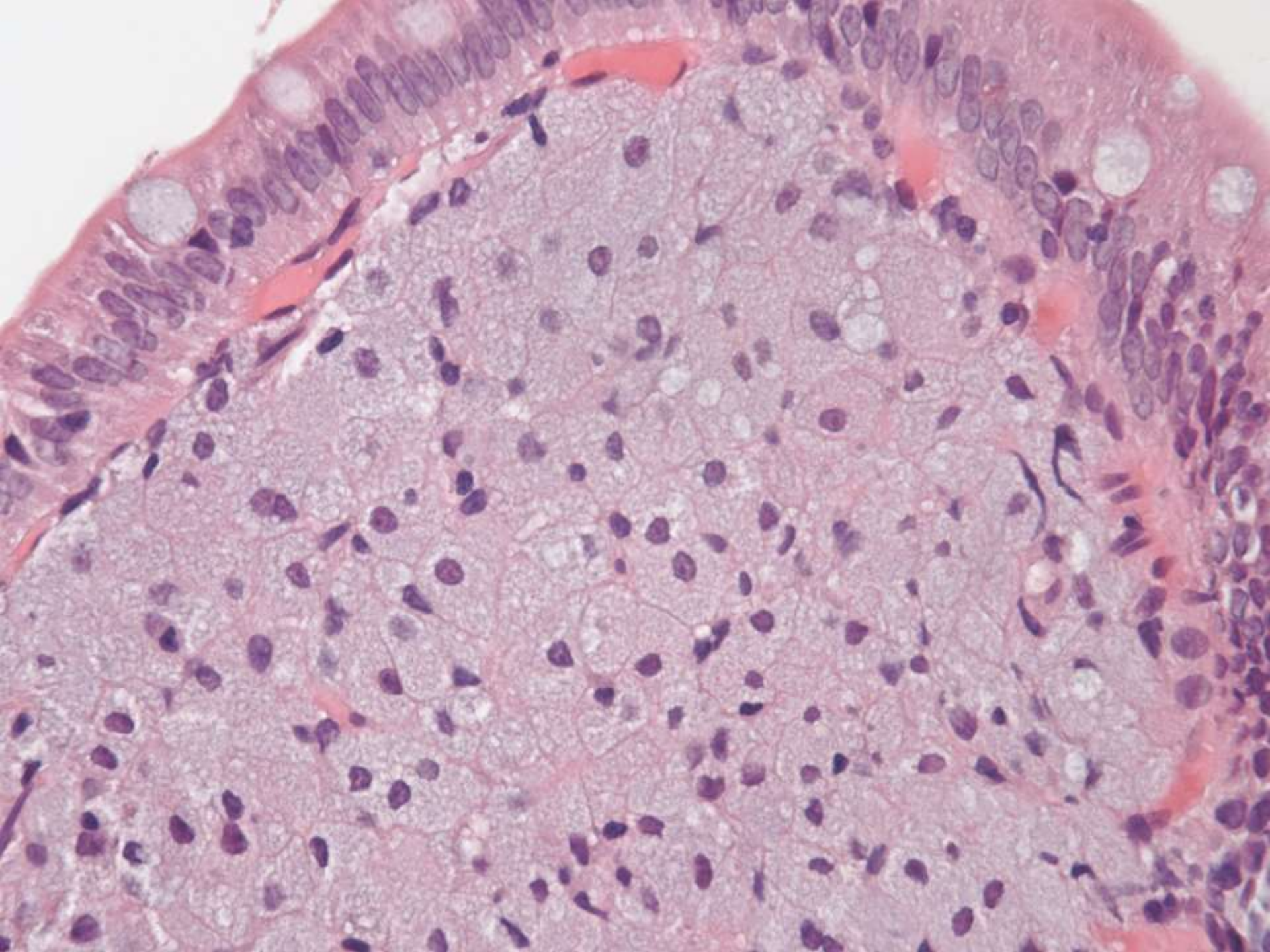
32-year-old male with vomiting diarrhea, and duodenal lesions.

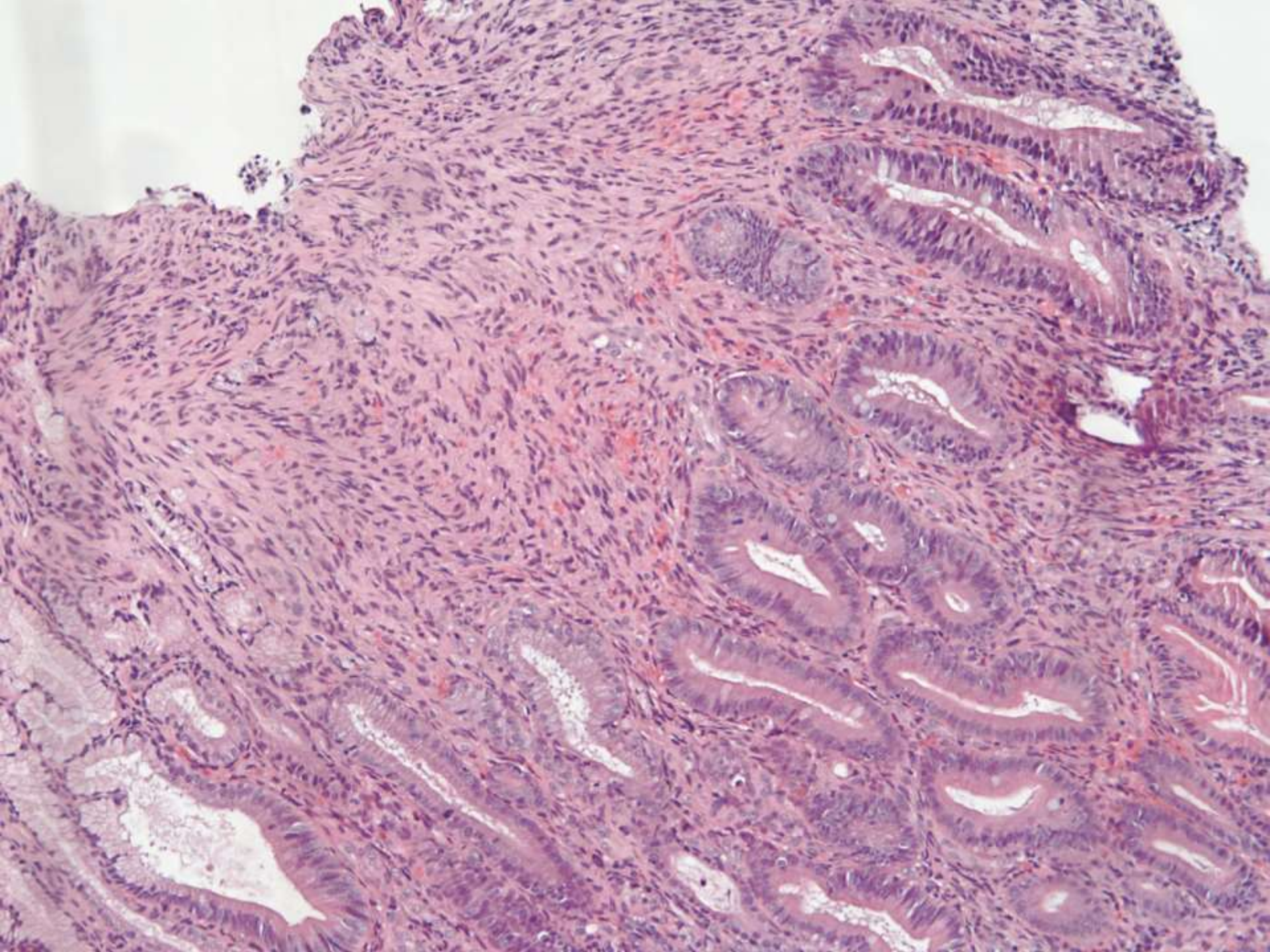


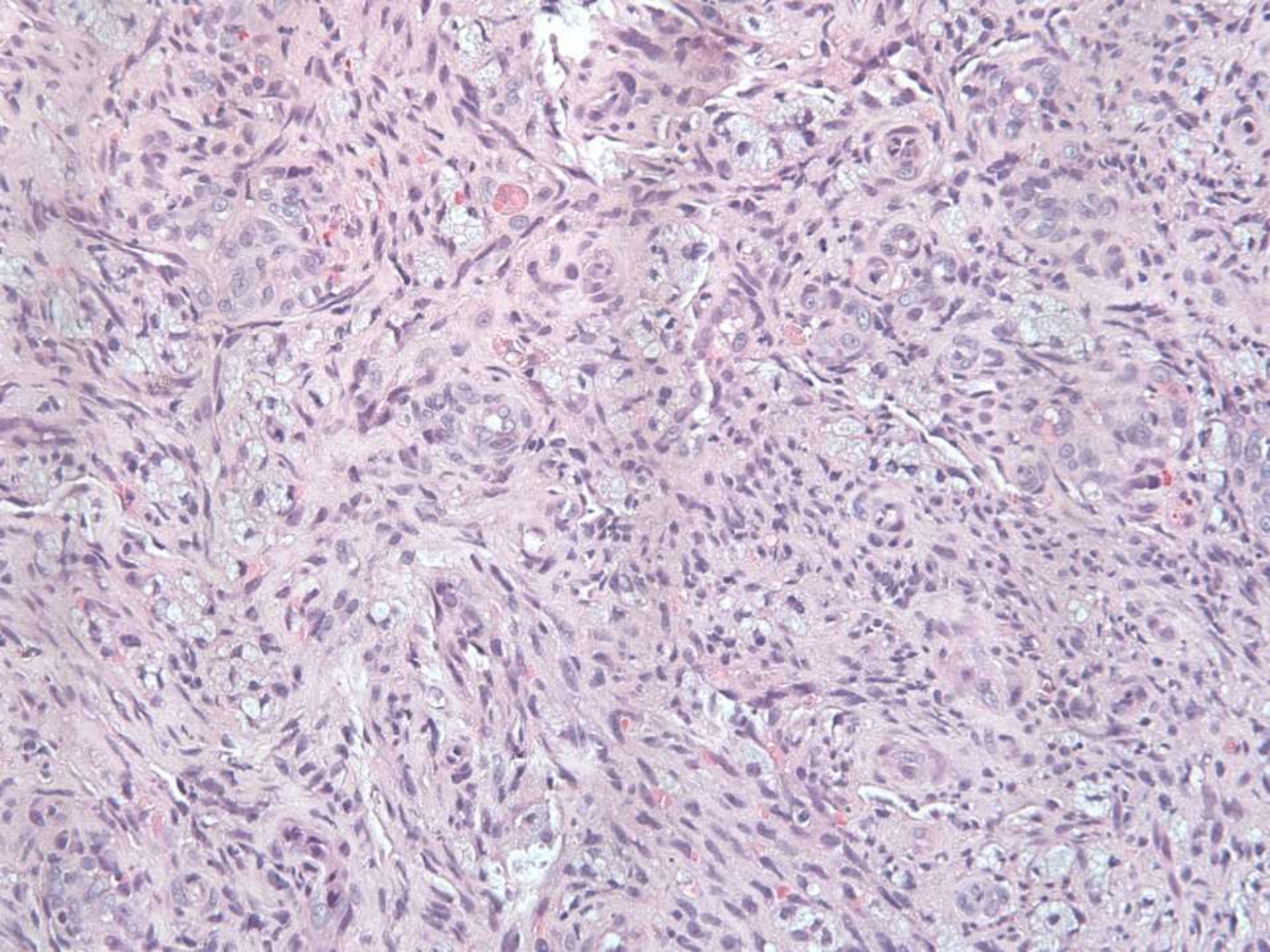


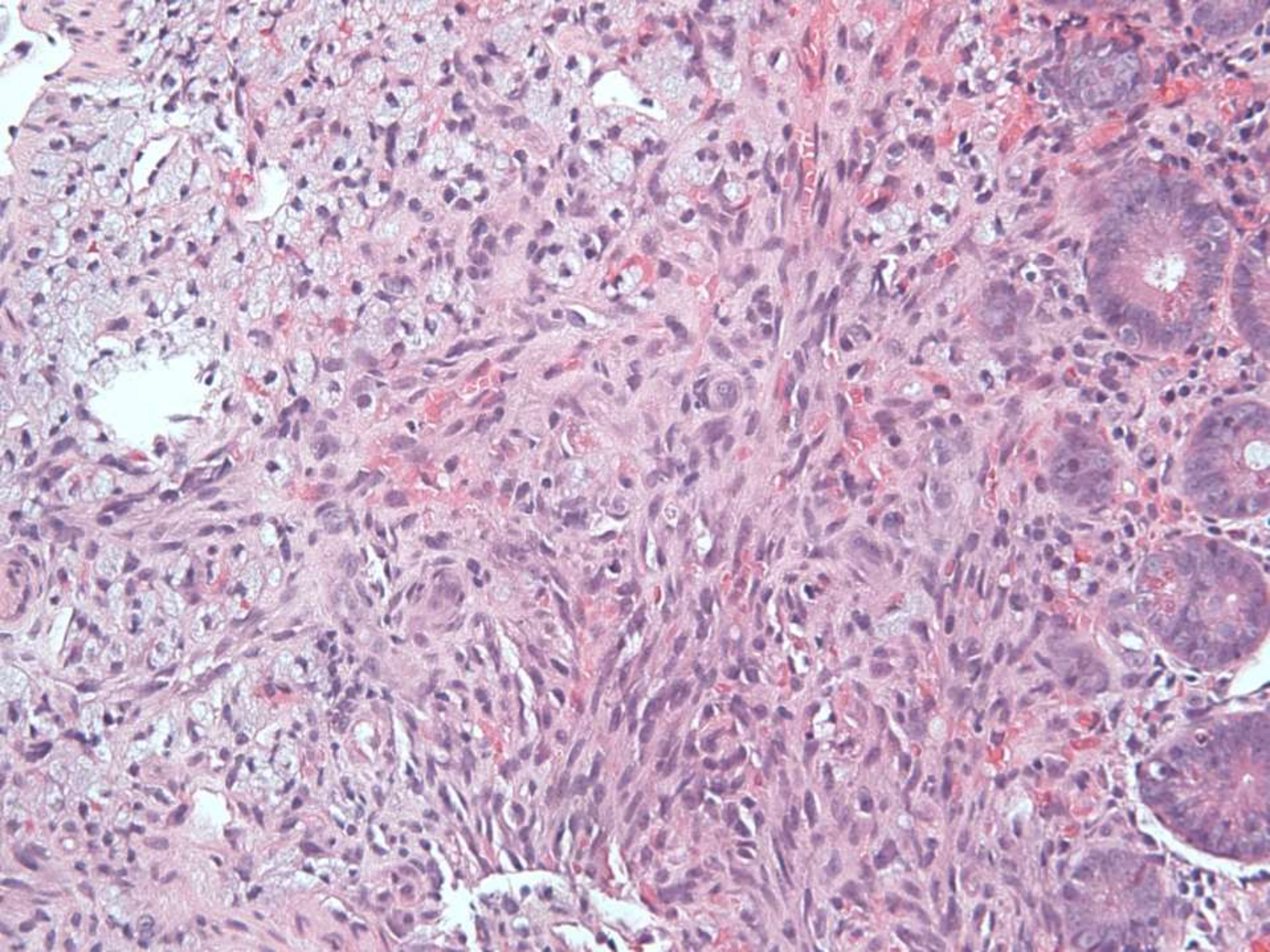


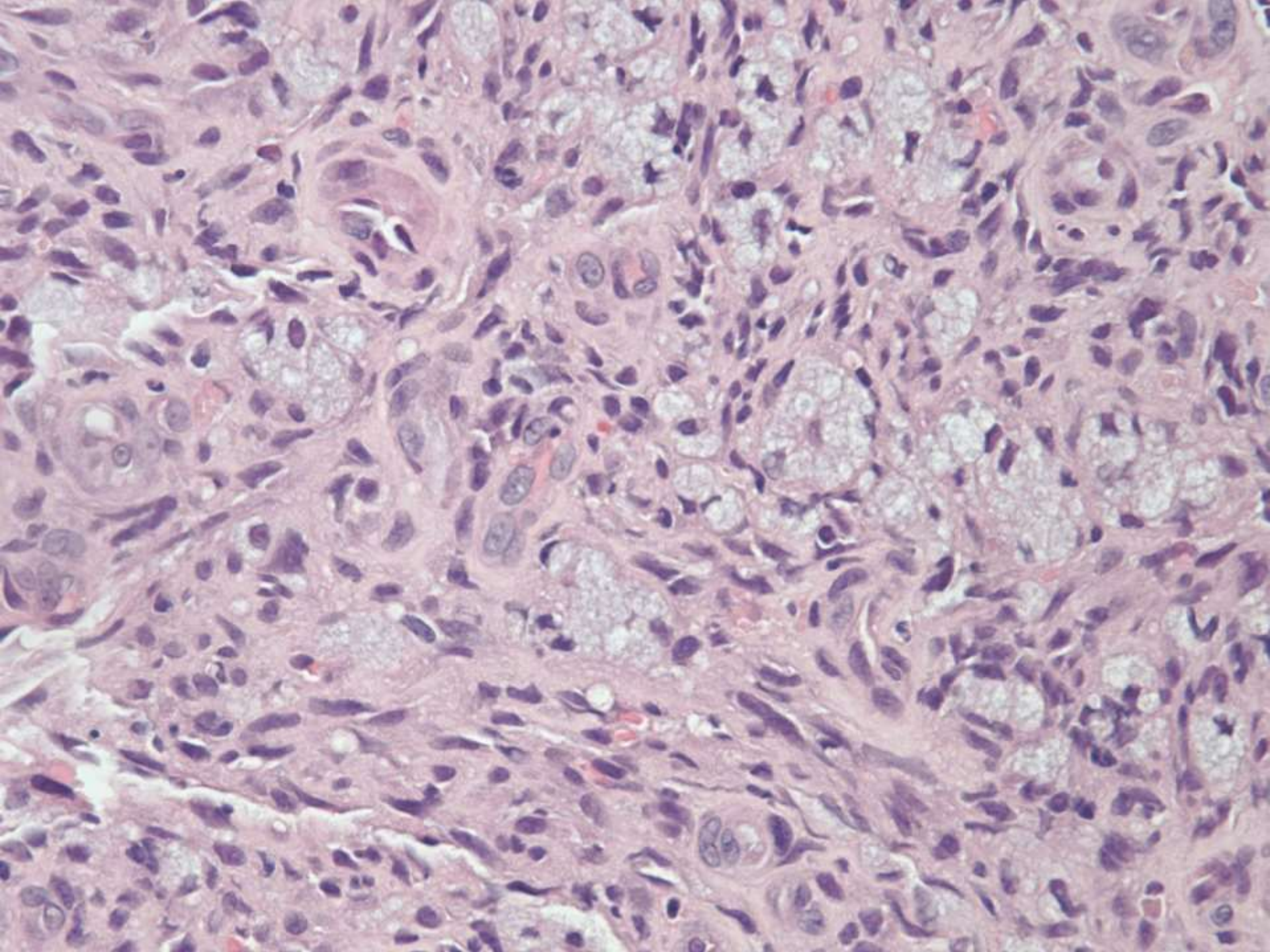








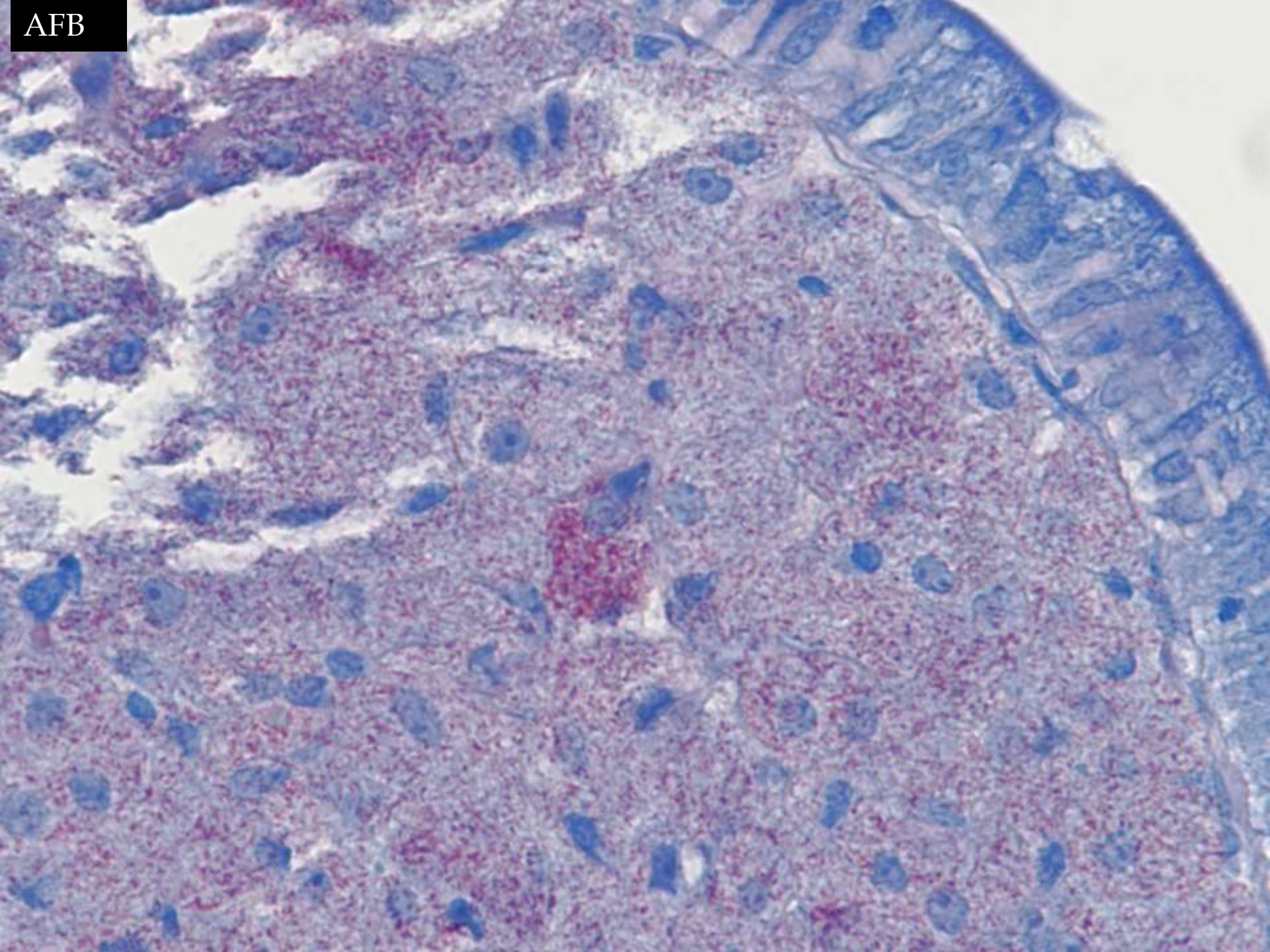


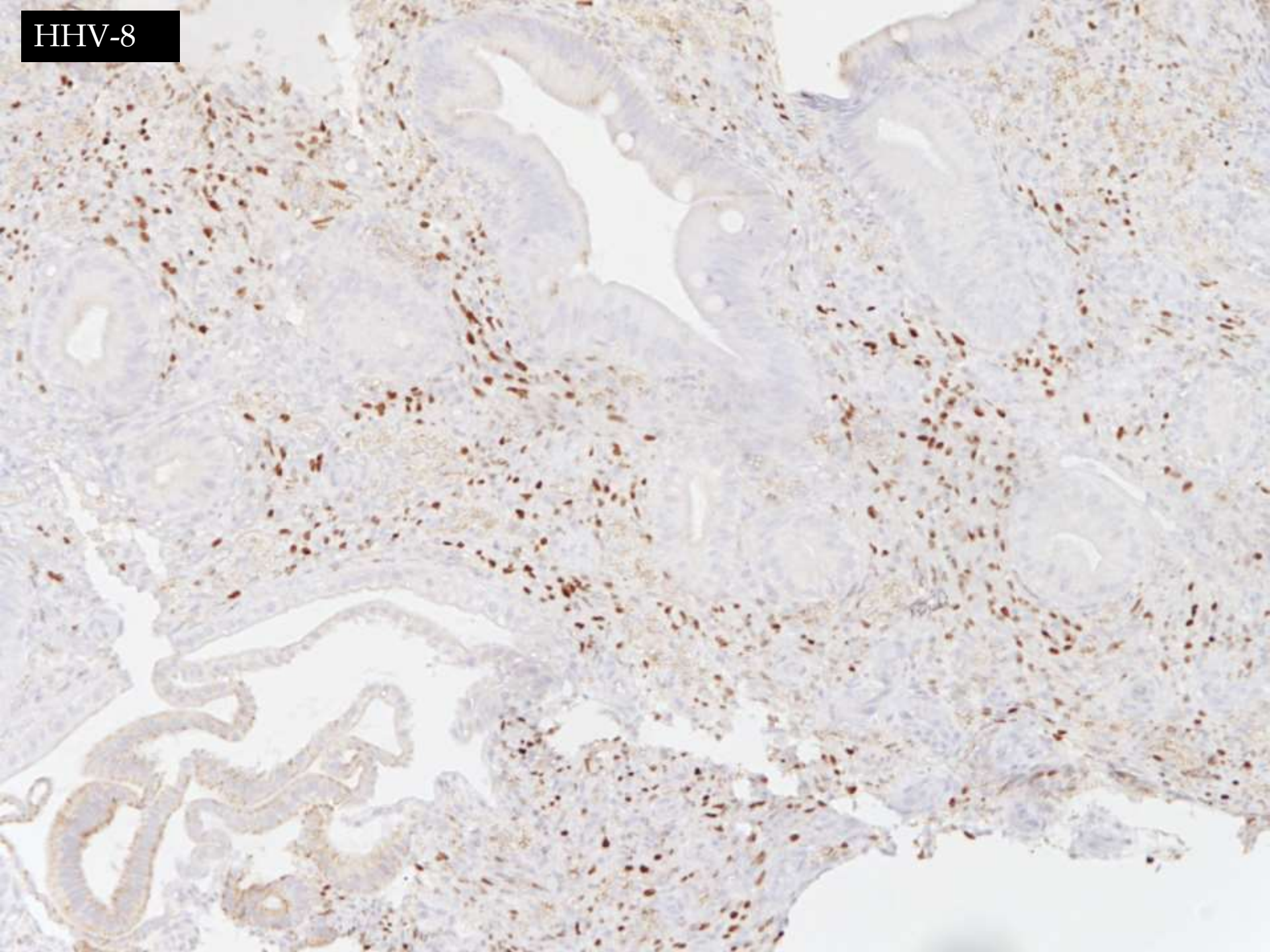


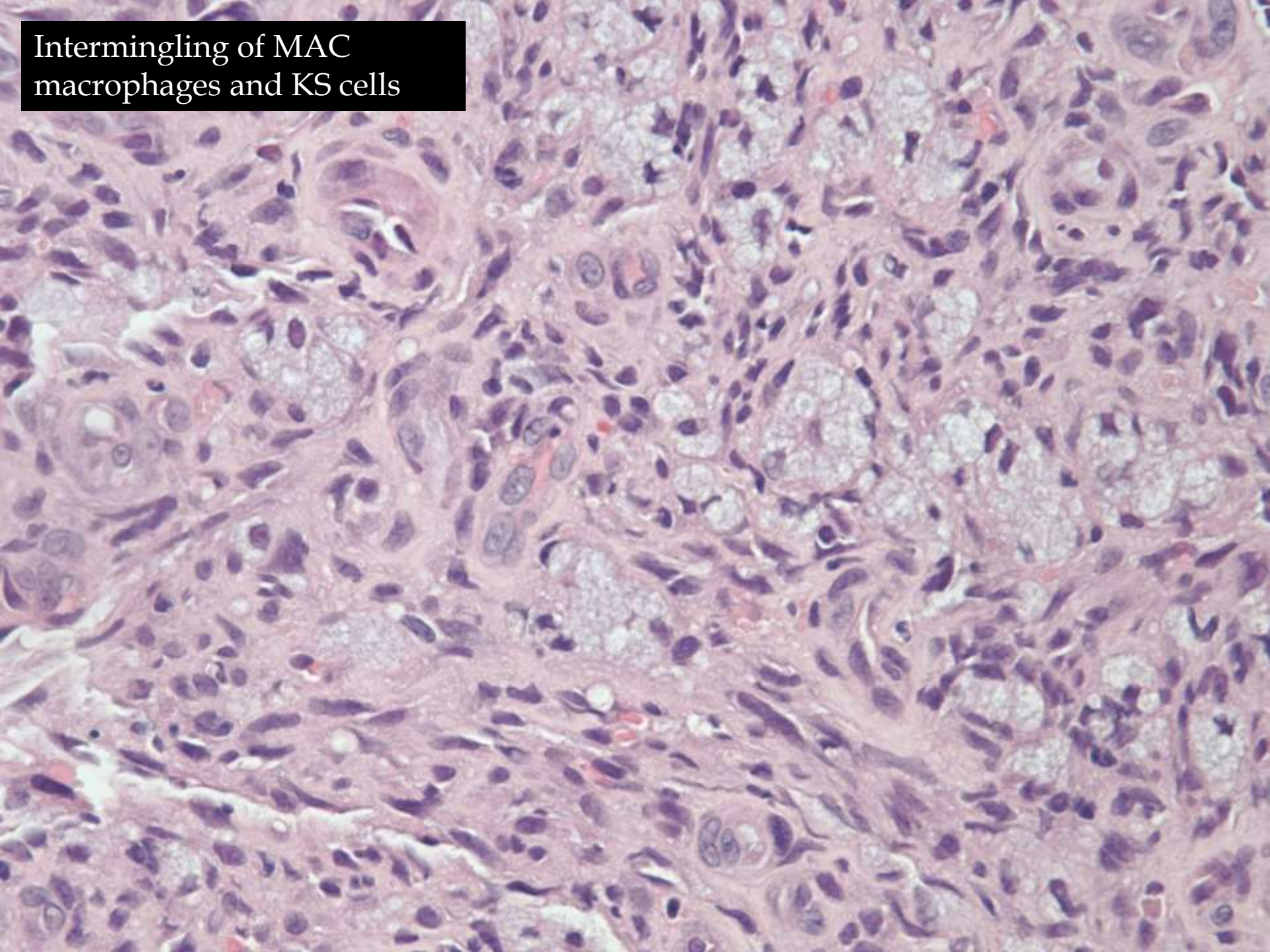
MYCOBACTERIUM AVIUM COMPLEX AND KAPOSI'S SARCOMA

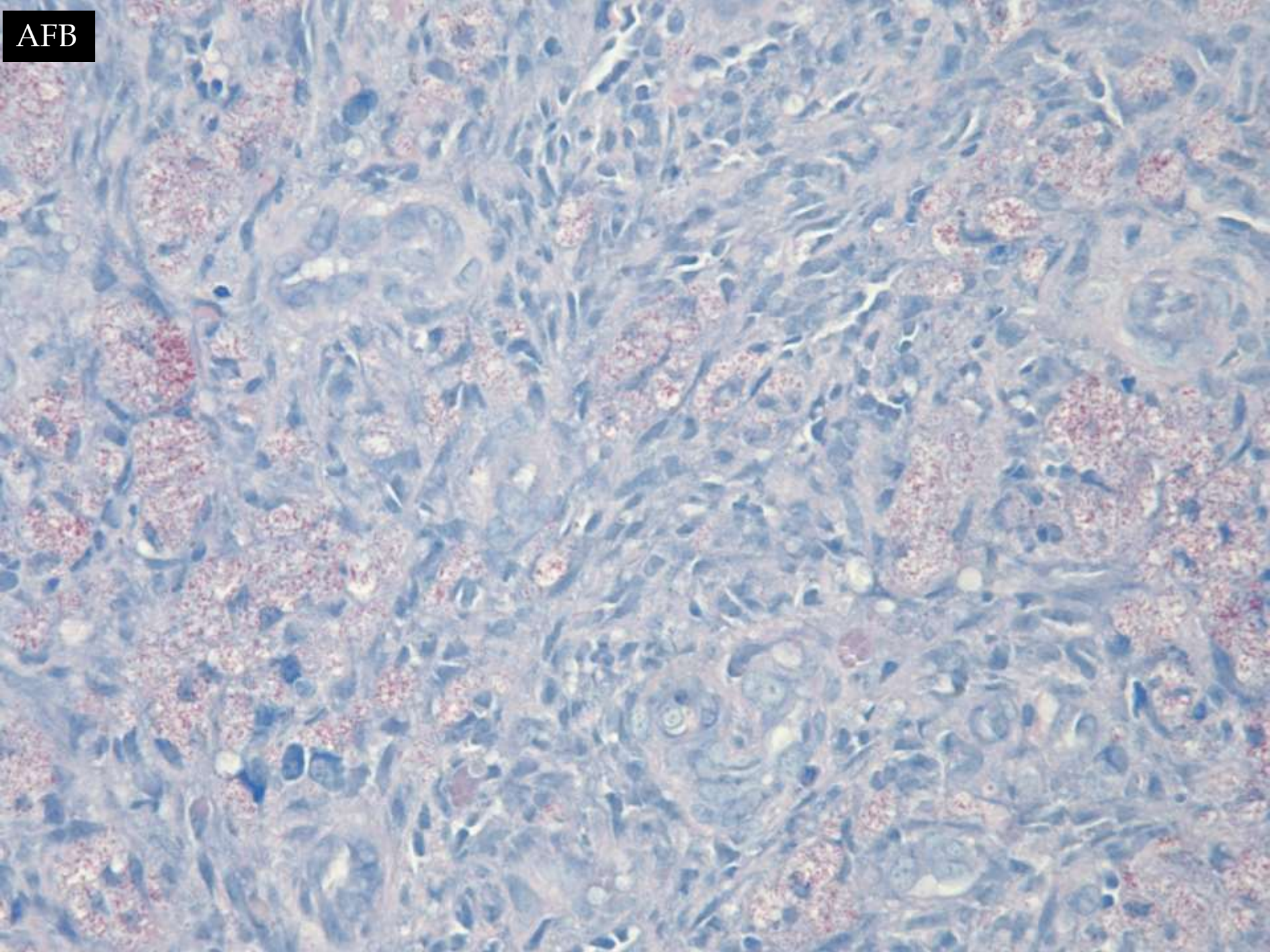
Additional hx: HIV with AIDS

- Skin KS
- Systemic MAC
- CD4 count <10
- Viral load 600K


AFB


HHV-8


Intermingling of MAC
macrophages and KS cells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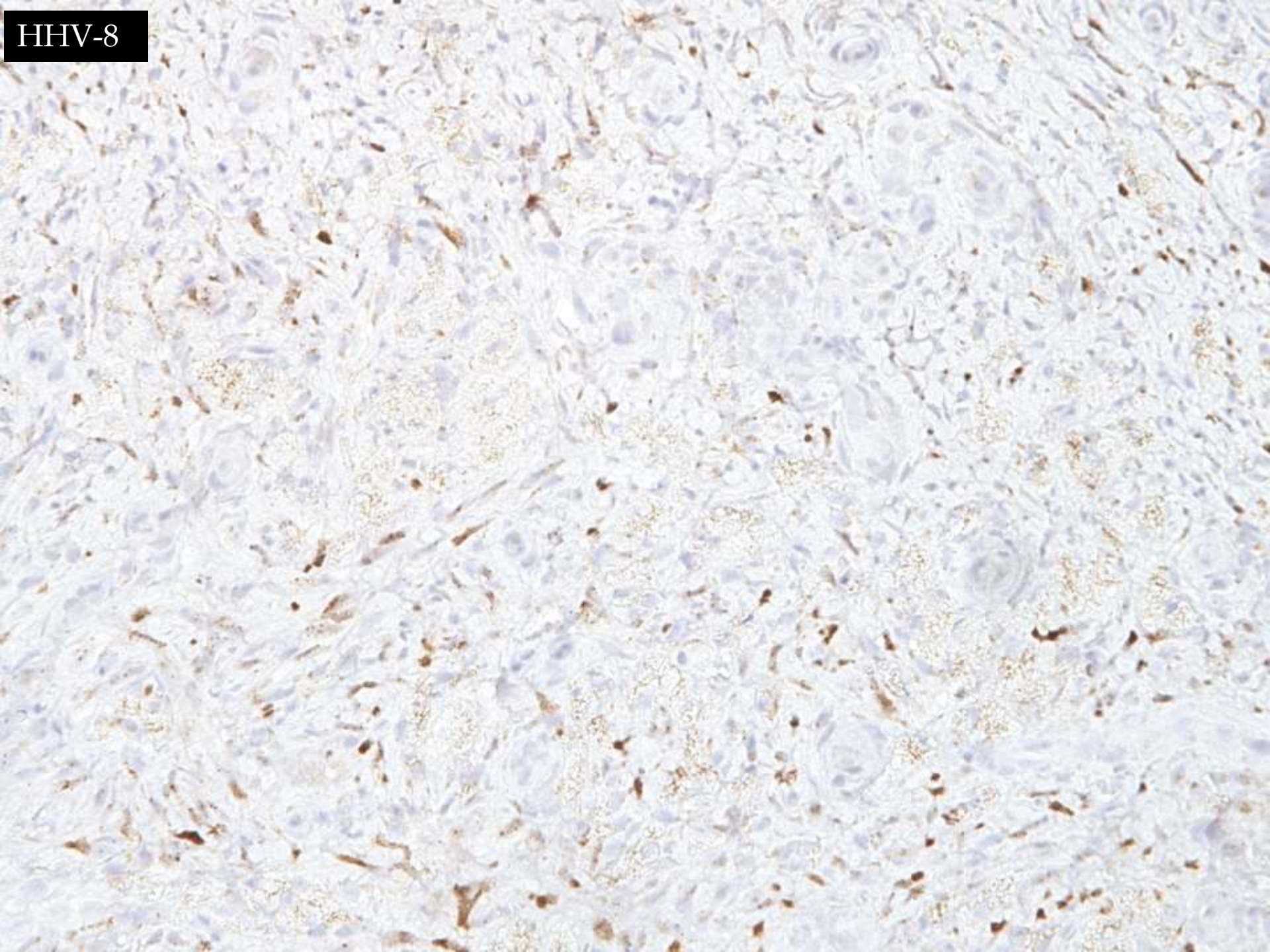
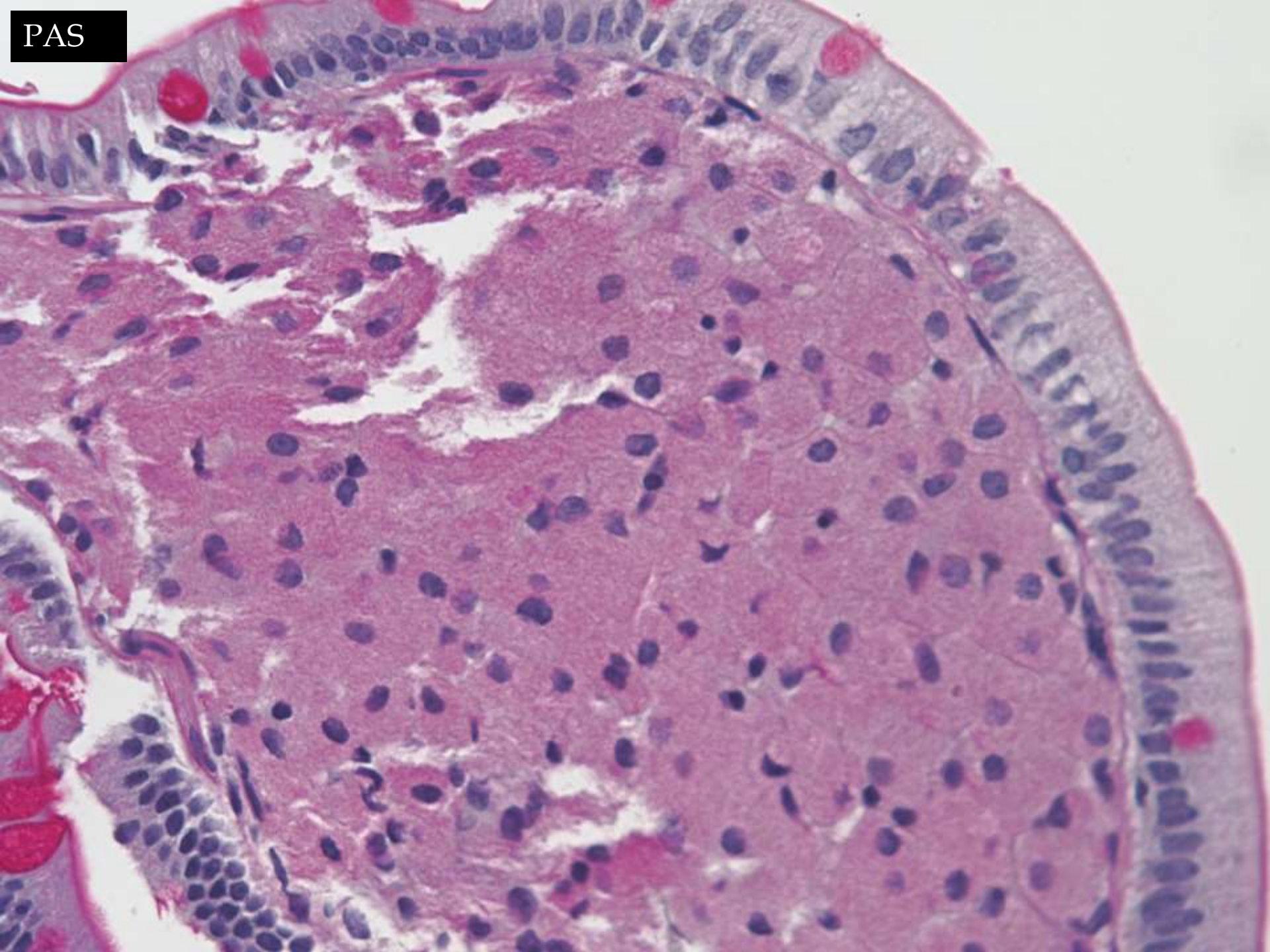
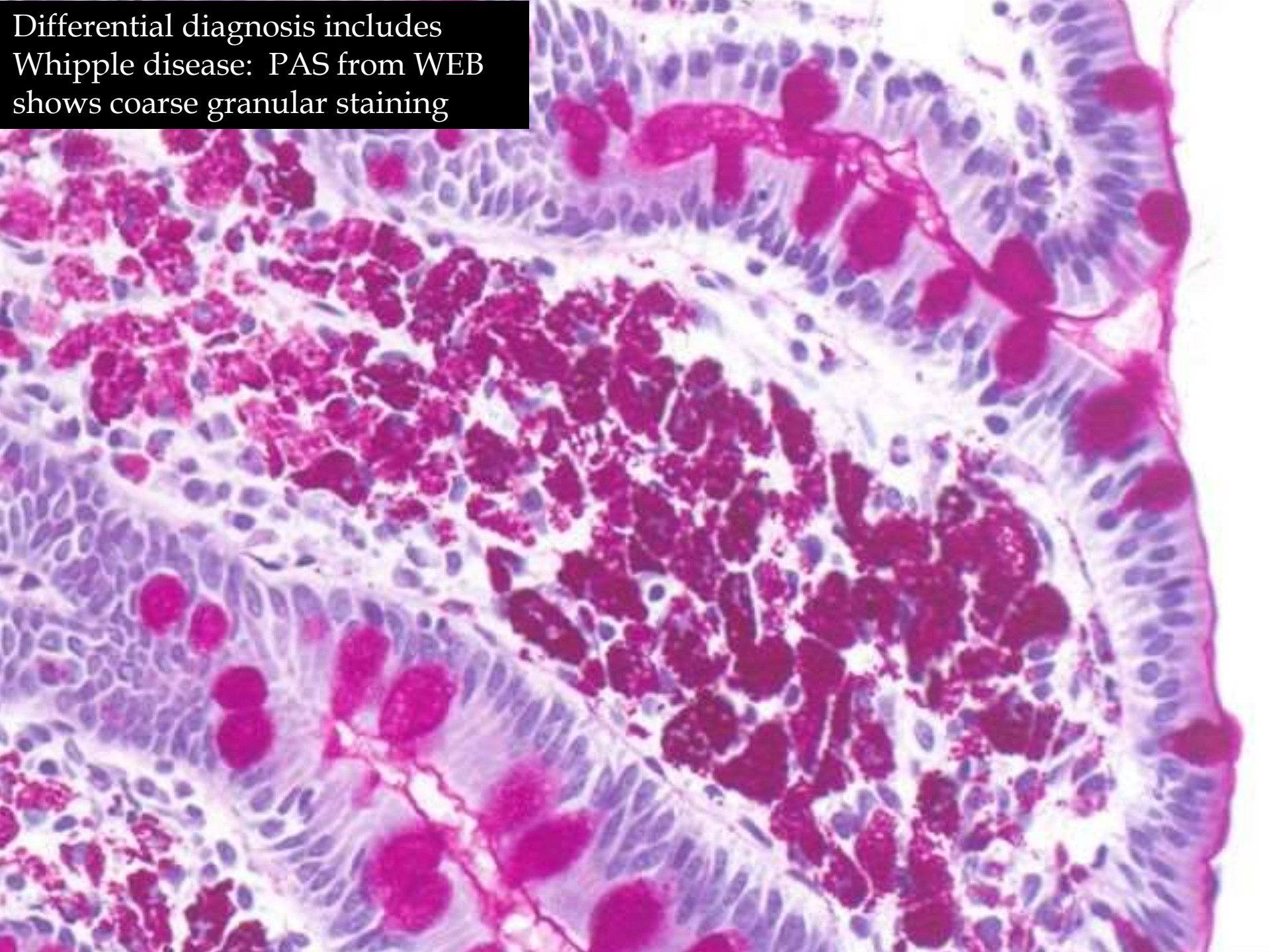

HHV-8


PAS


Differential diagnosis includes
Whipple disease: PAS from WEB
shows coarse granular staining

Take home messages

- KS is multifocal systemic disease which only rarely kills patients
- KS histologically diagnosed by spindled endothelial cells with slit-like spaces and extravasated red cells
- IPOX positive for HHV8 (herpes virus 8)
- KS treated by boosting immune system w cART (combination antiretroviral therapy) get CD4 count up!

Take home messages

- MAC in differential diagnosis of foamy histiocytes in immunocompromised hosts
- AFB positive
- Whipple disease has coarse PAS staining
- Xanthoma and muciphages are AFB-negative
- In immunocompromised hosts if you see one organism, don't stop! keep looking for others!