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

Presenters:

Nabeen Nayak, MD
Sunny Kao, MD
David Levy, MD
Megan Troxell, MD, PhD
John Higgins, MD
Ankur Sangoi, MD
Dean Fong, DO
Zhen Yan, MD, PhD
Sanjay Kakar, MD
Charles Lombard, MD
Chieh-Yu Lin, MD, PhD

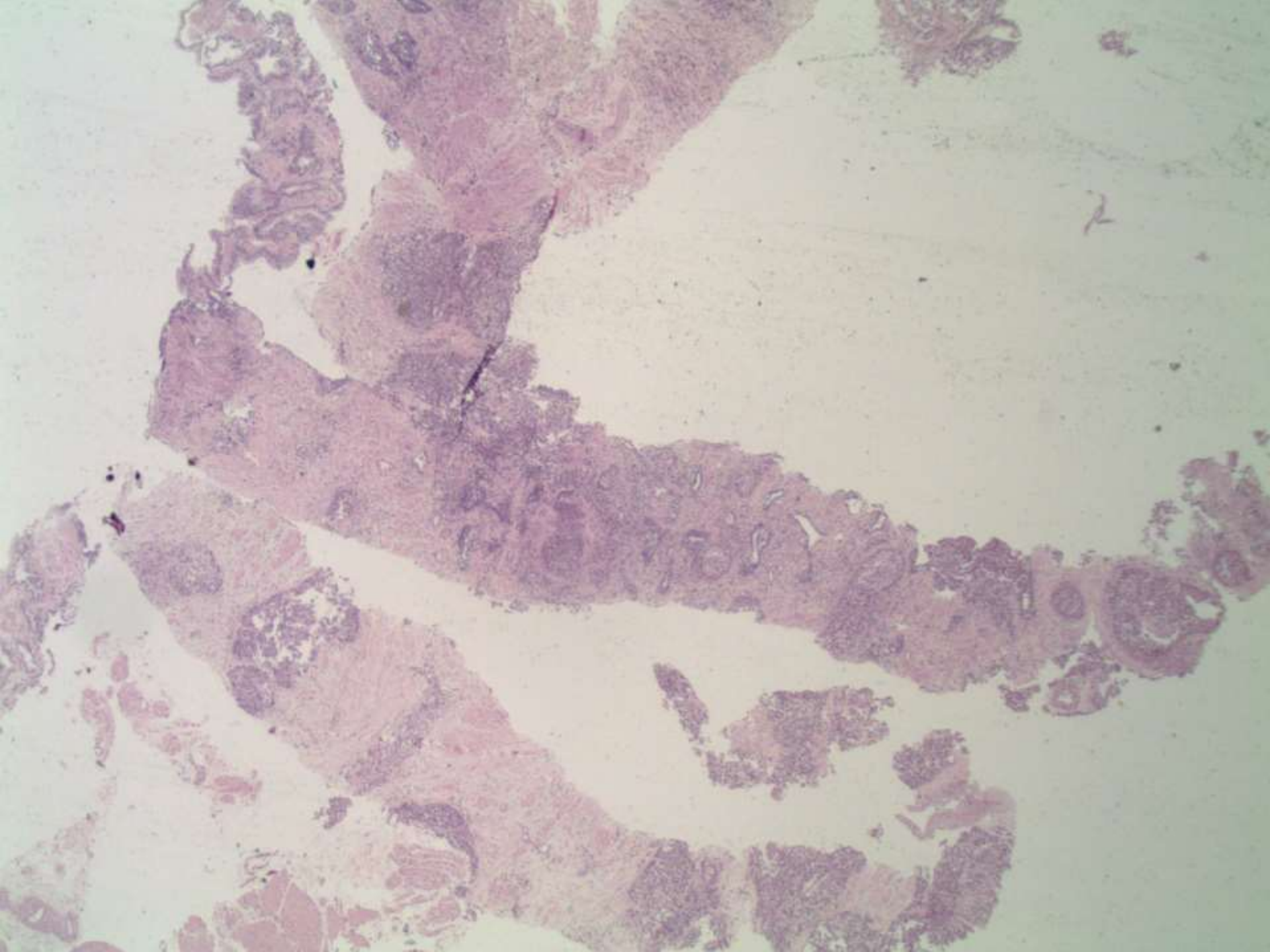
Activity Planners:

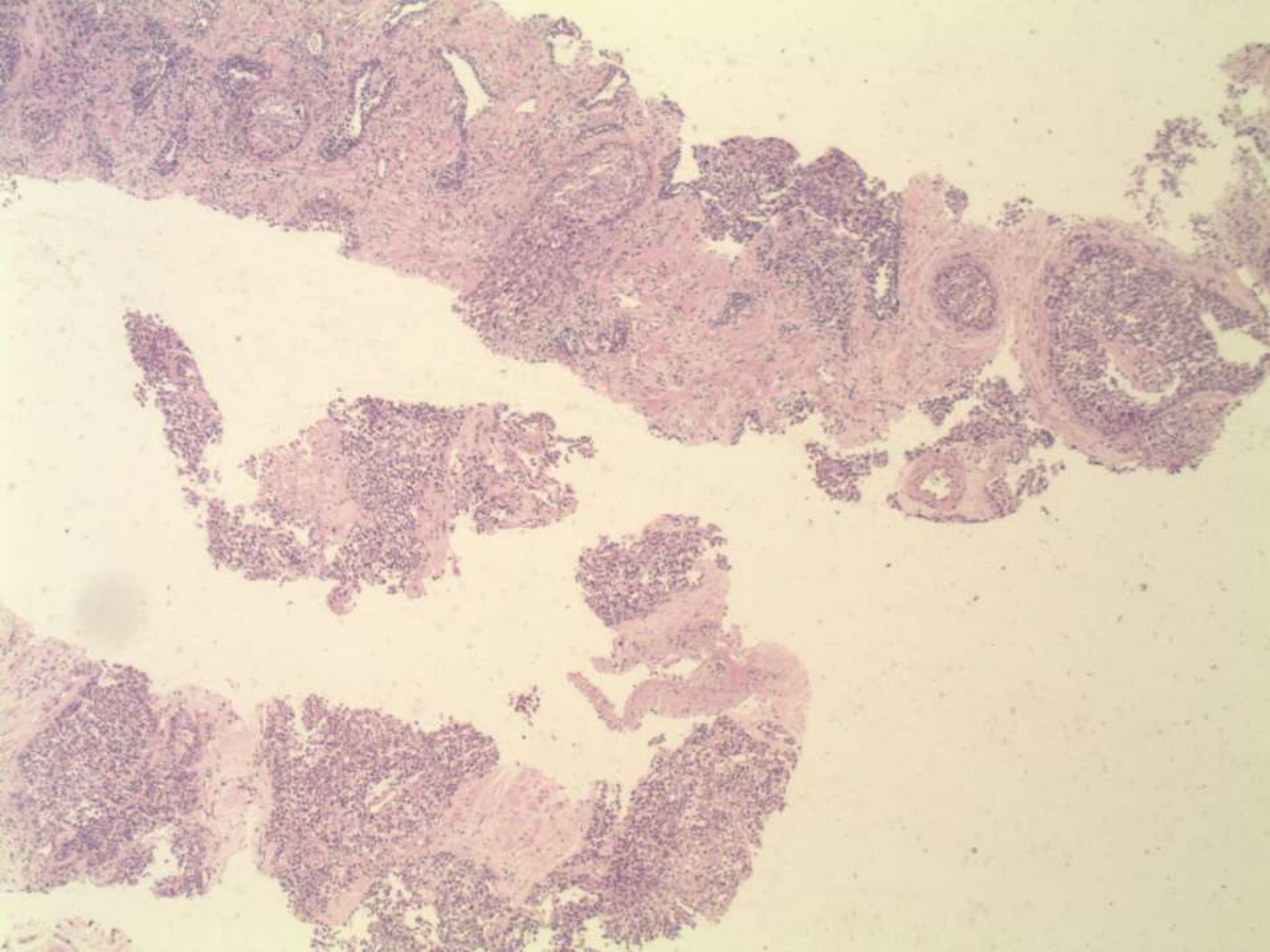
Kristin Jensen, MD
Ankur Sangoi, MD

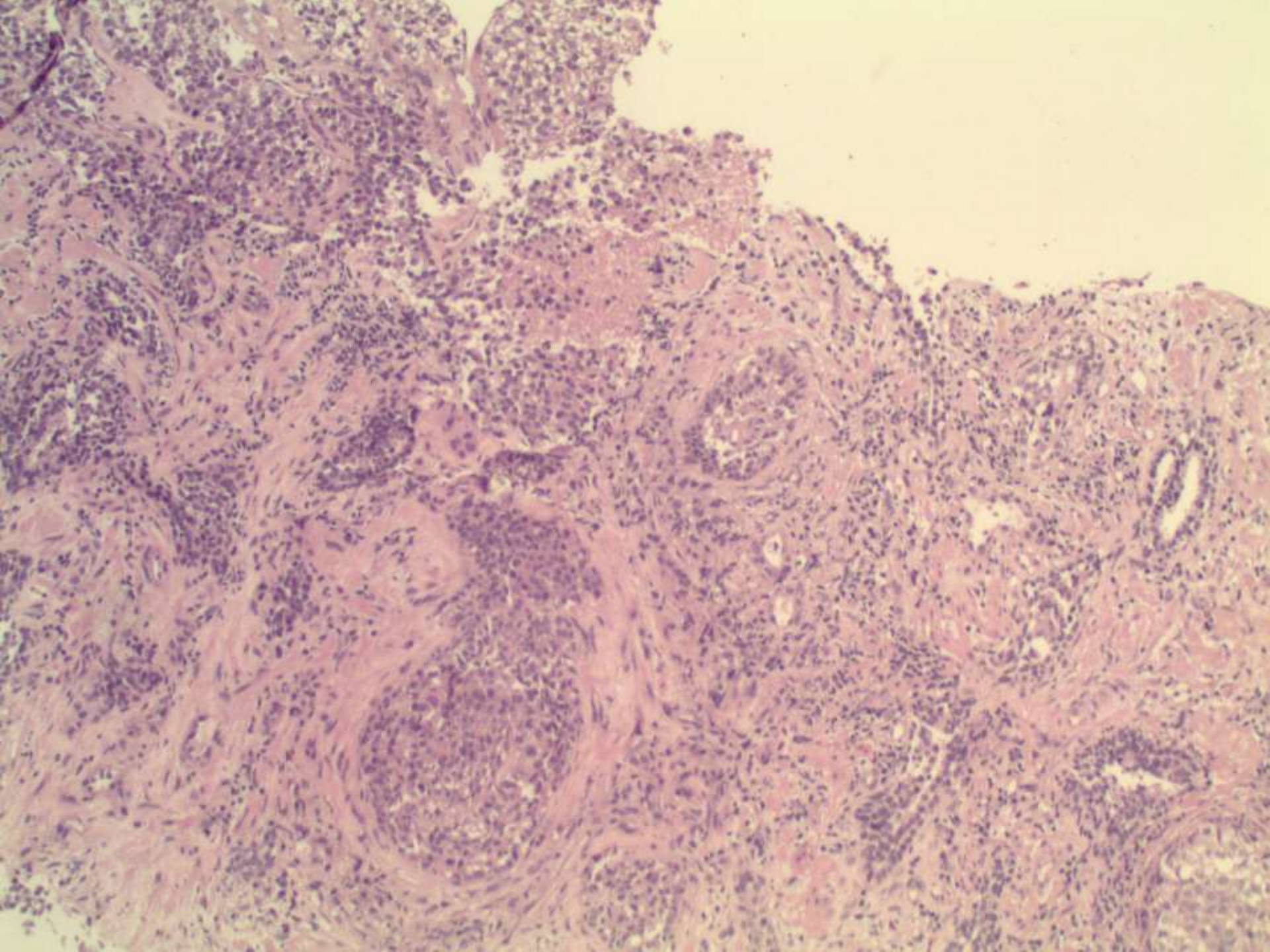
SB 6071

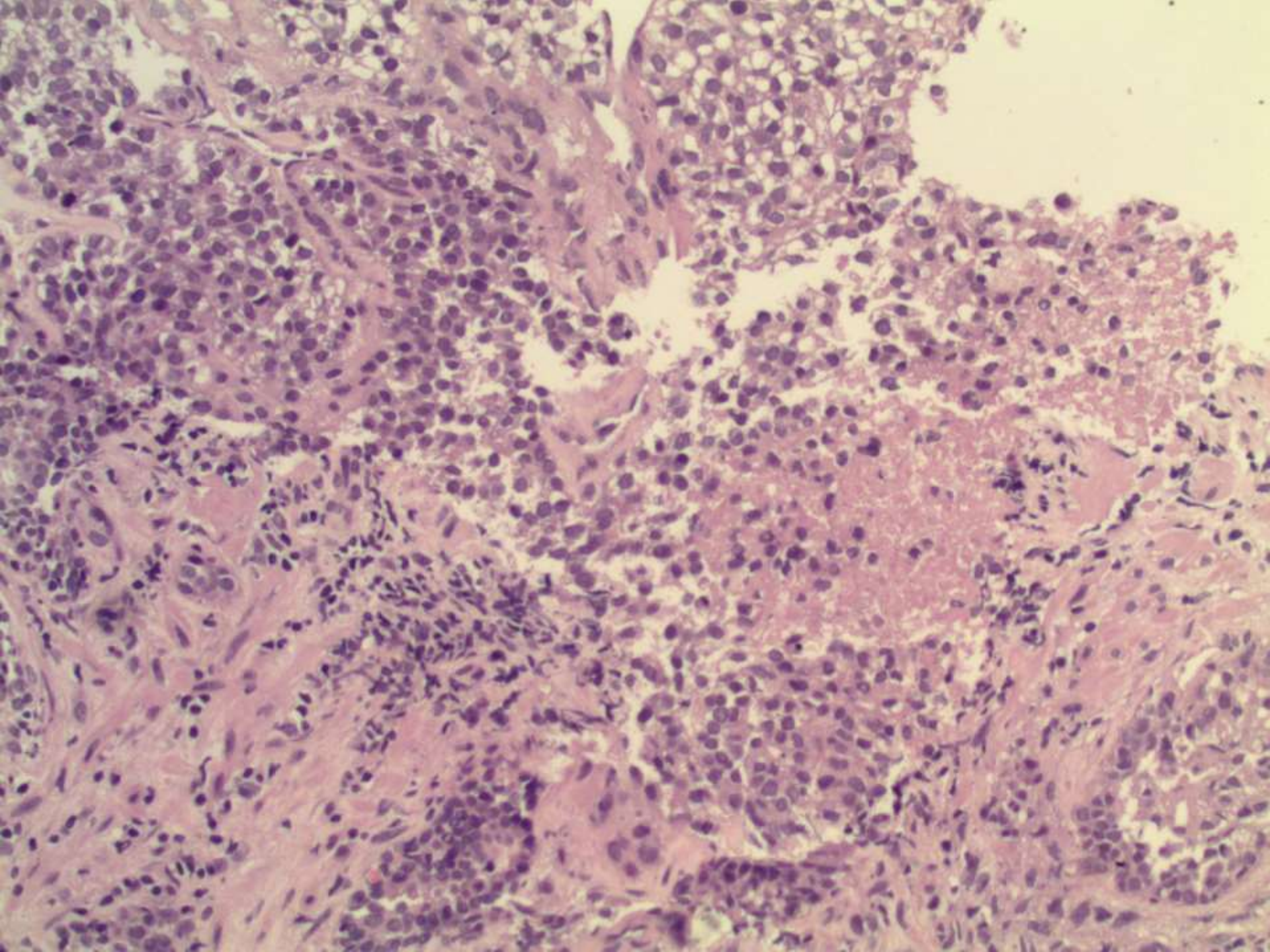
Nabeen Nayak; Sir Ganga Ram Hospital, New Delhi

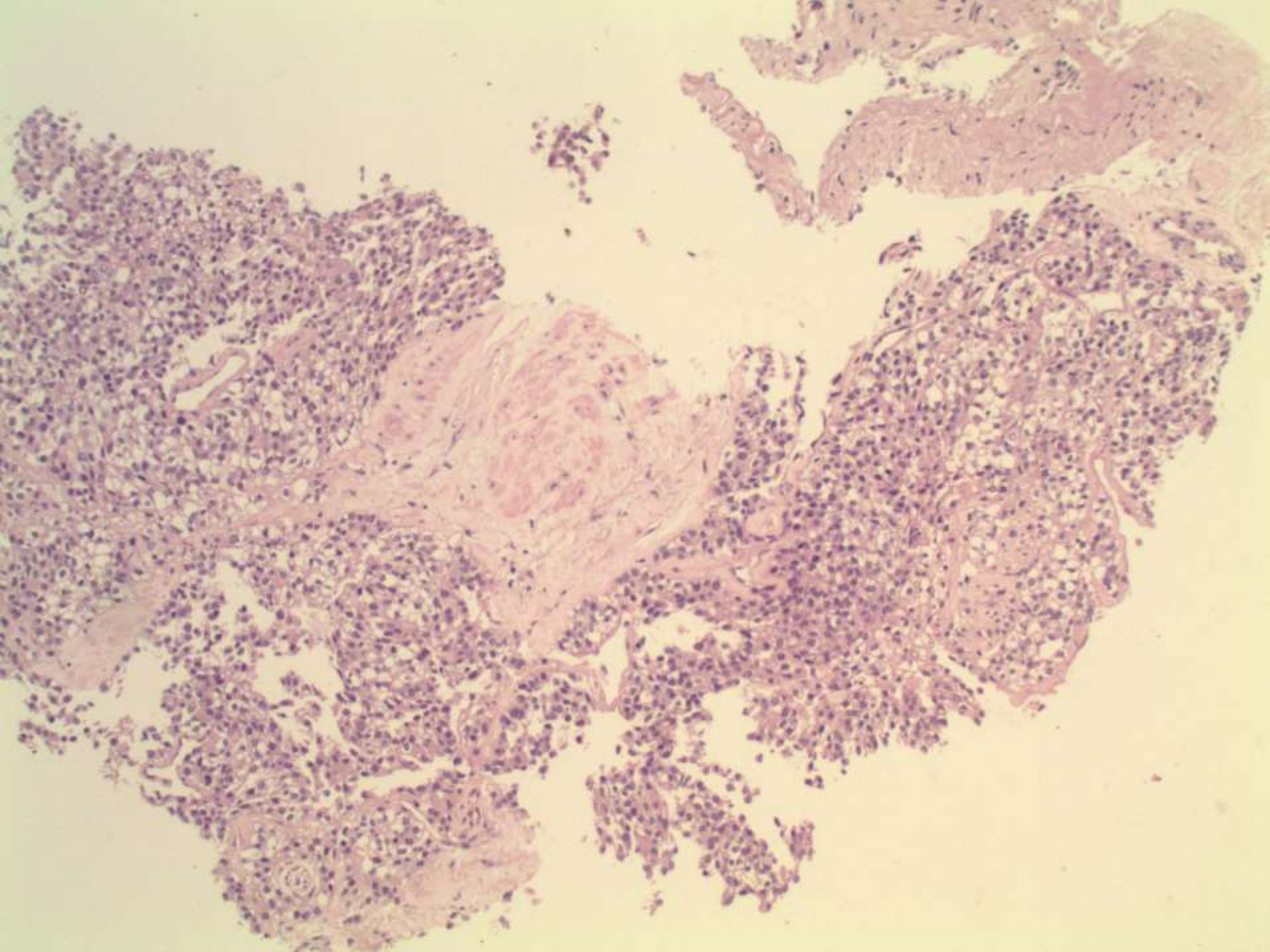
45-year-old male with urinary obstruction and hard nodular prostate.

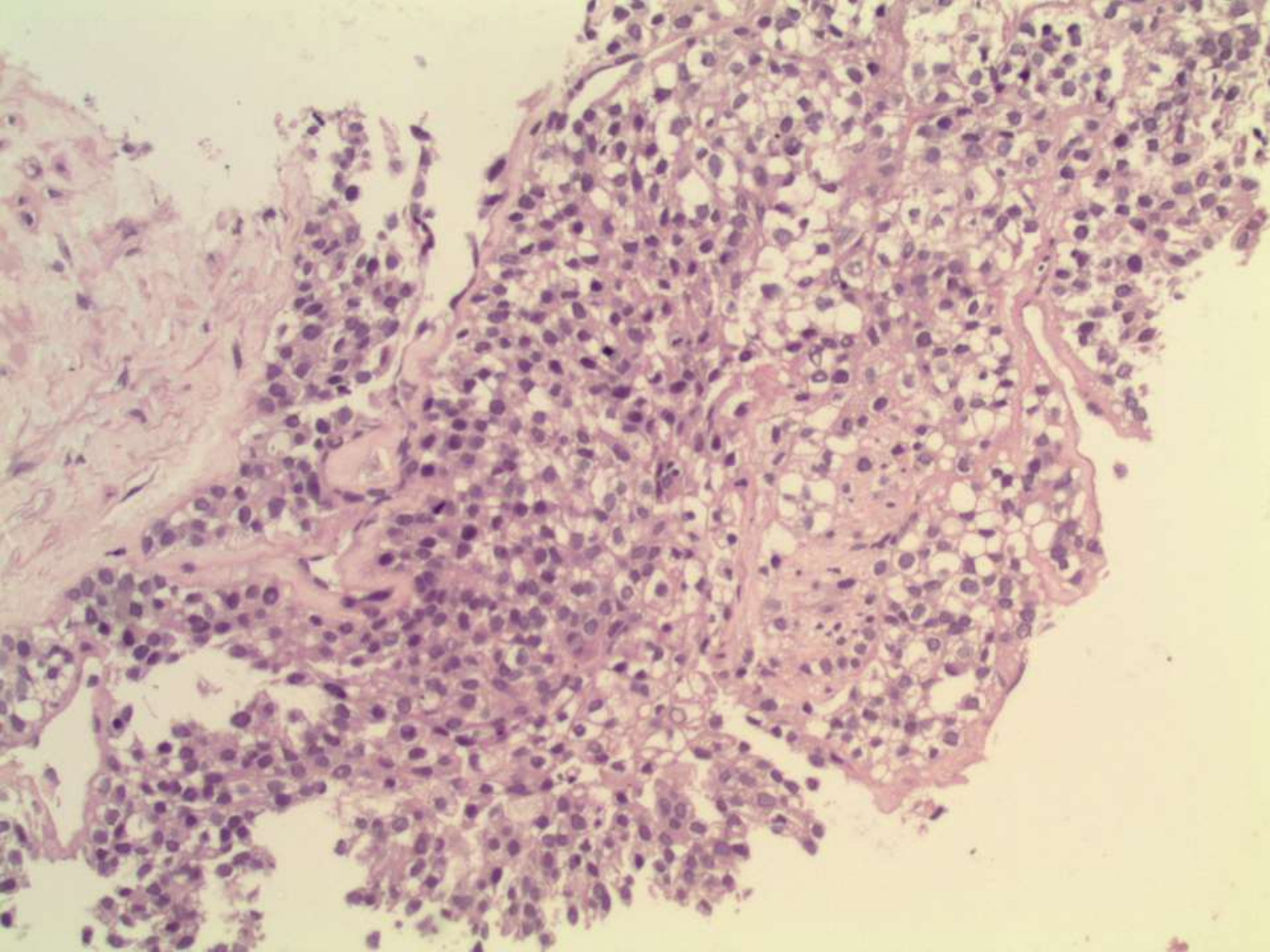


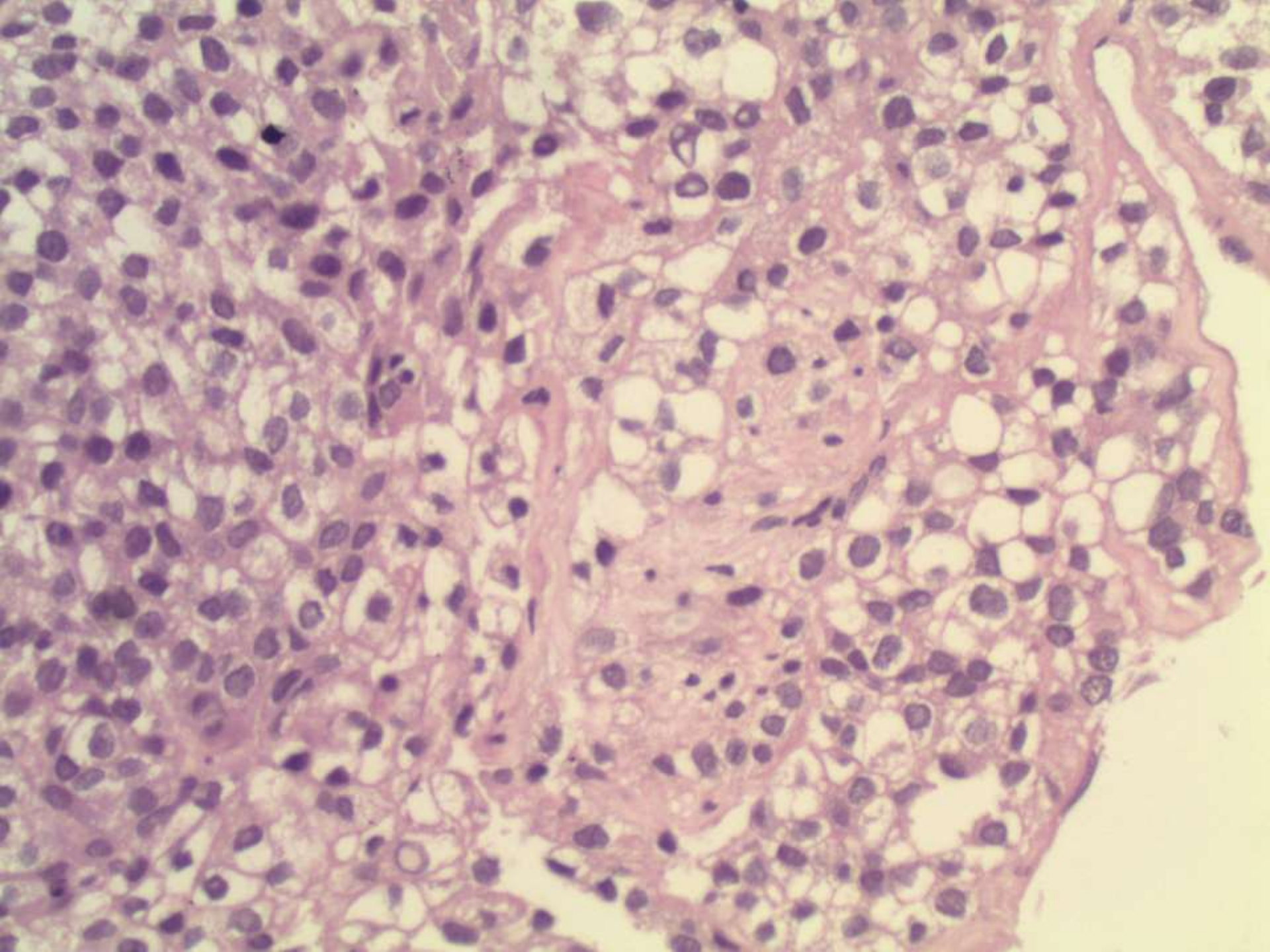


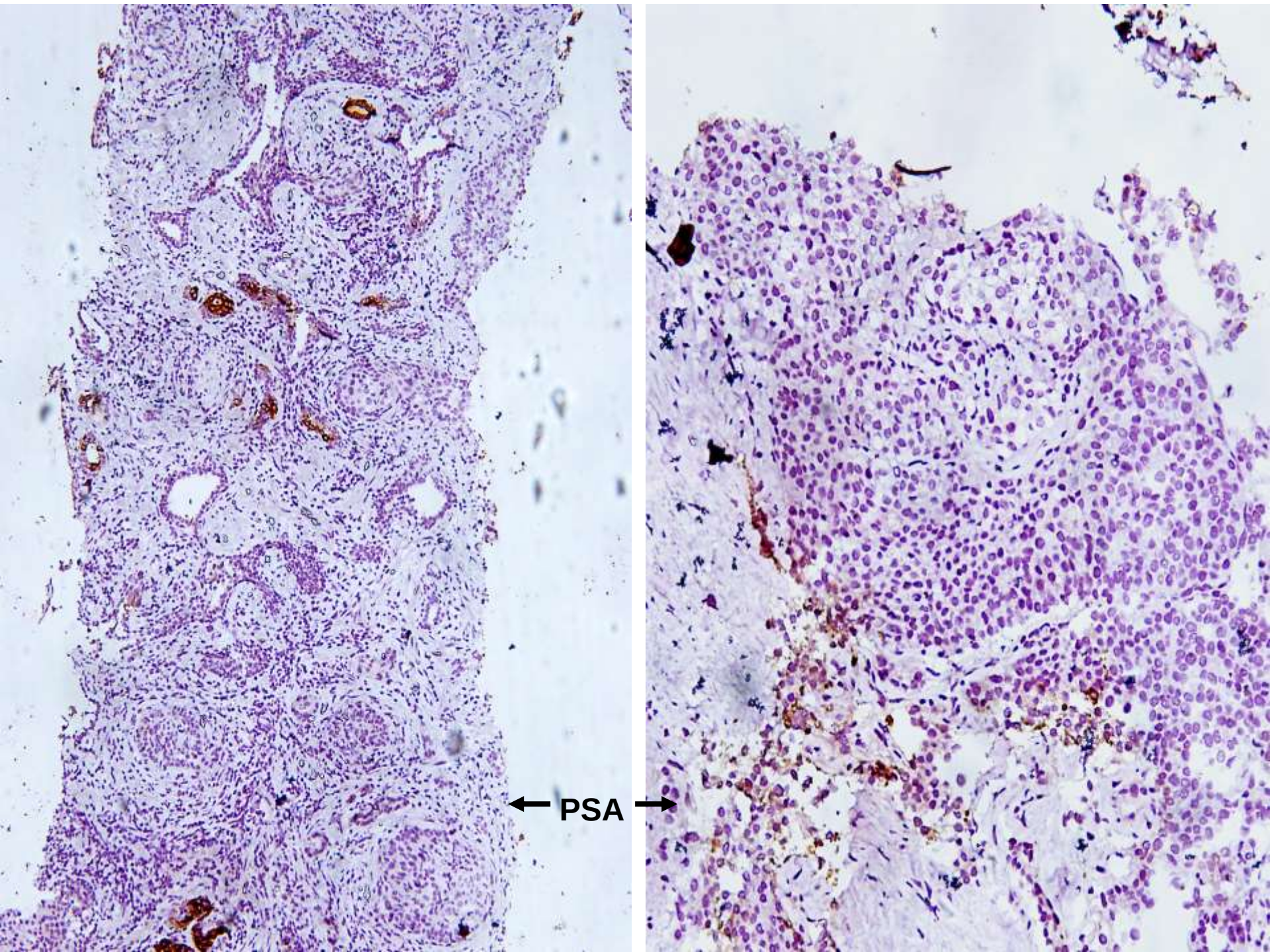










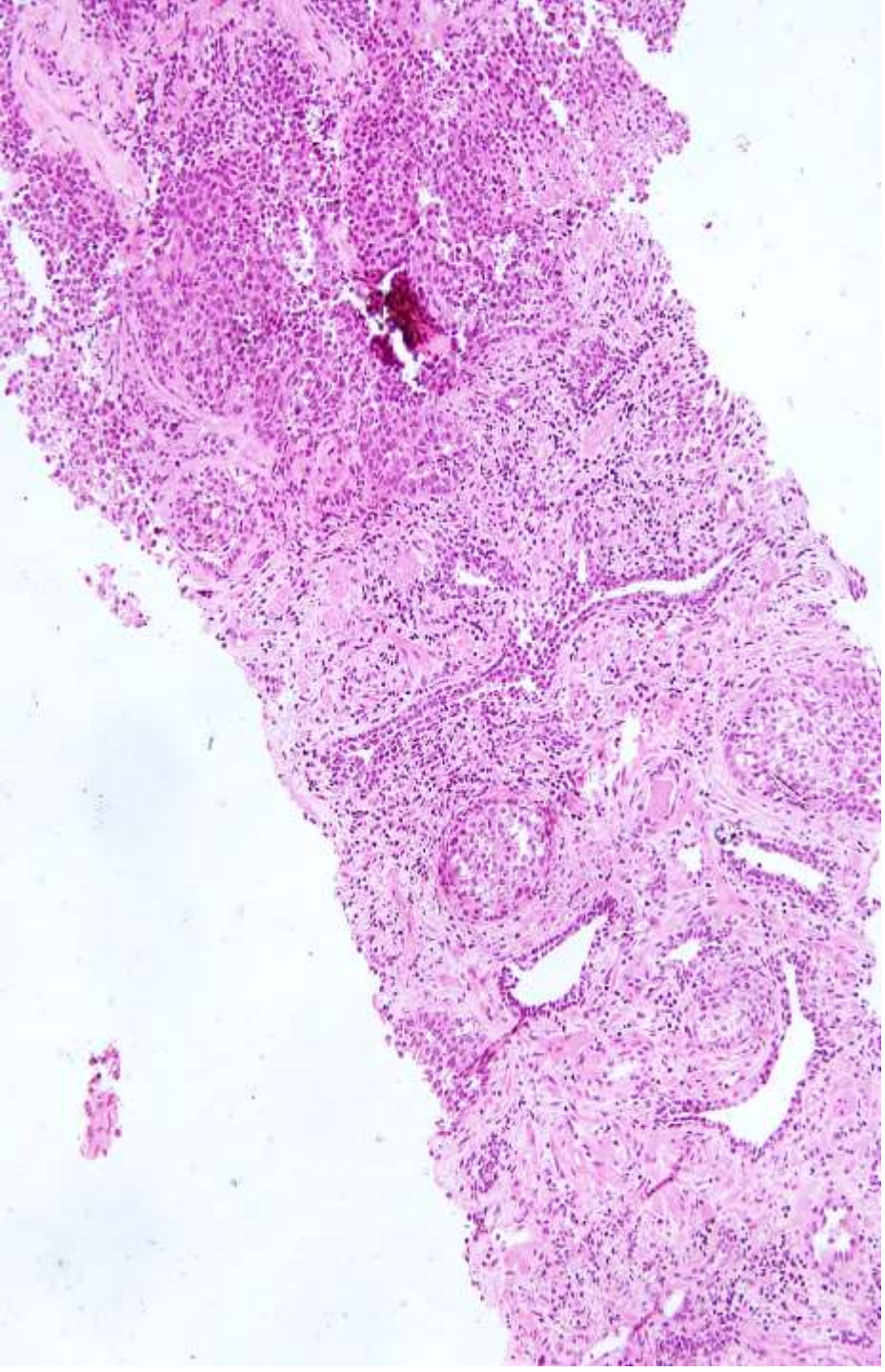

PSA

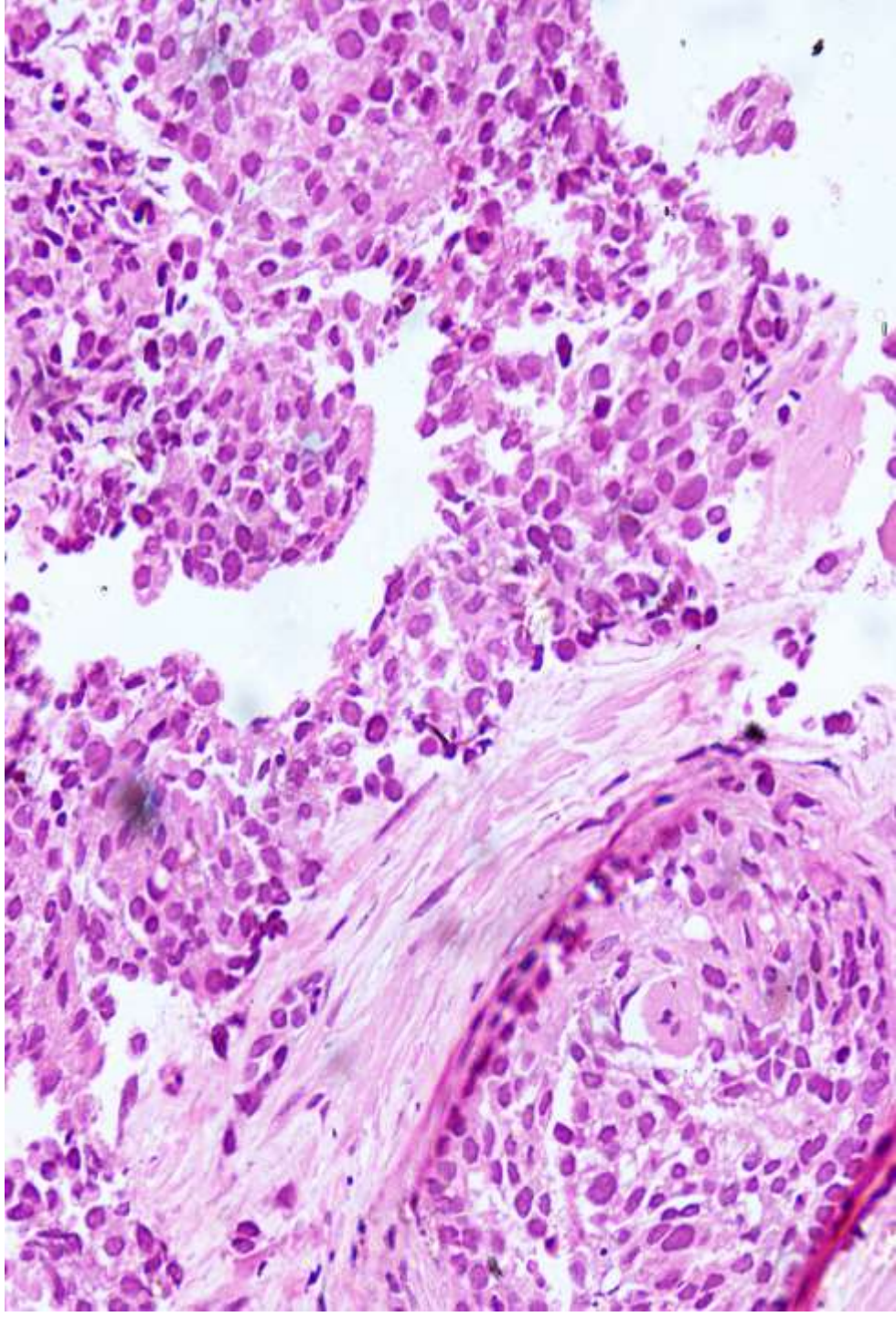
- This tumor in the prostate is unreactive to PSA and unlikely to be prostatic adenocarcinoma.

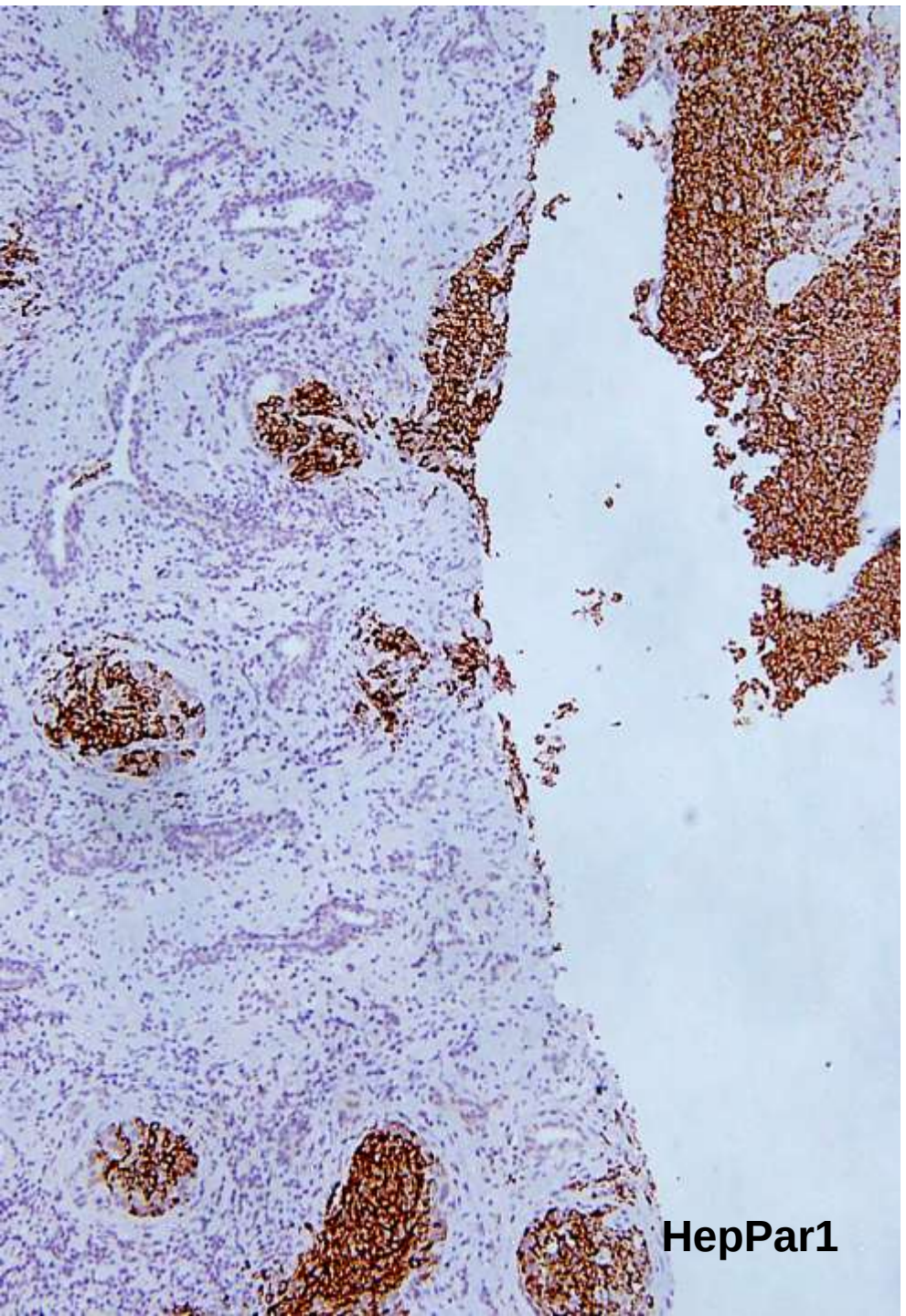
- The tumor was also unreactive to CK 7 & CK 20.

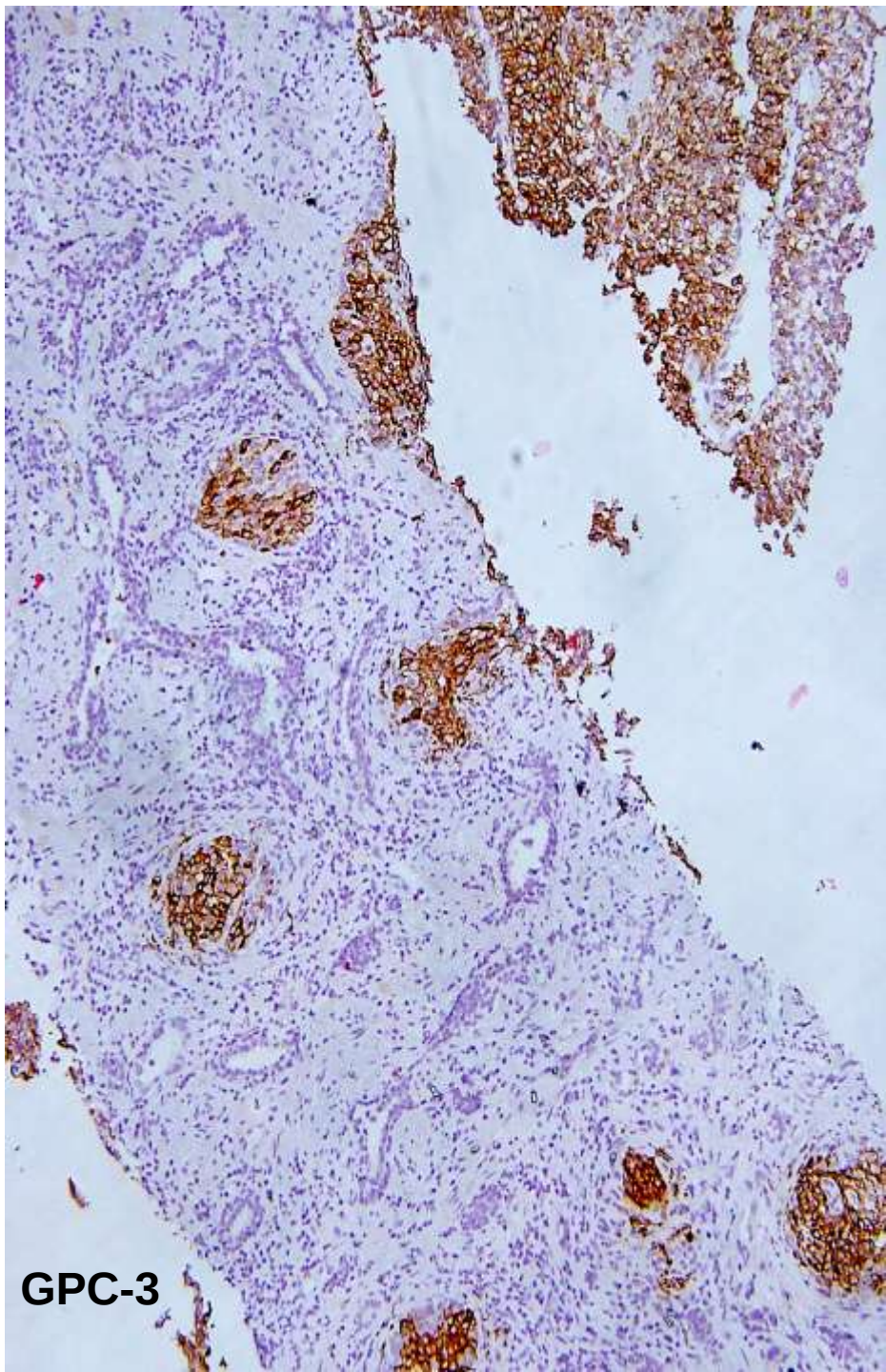
- The case was an out of station tissue diagnostic referral and the attached notes had very little clinical information.

- Since a metastatic carcinoma was a front line consideration, enquiry was made on further clinical data and a possible primary site was explored on the basis of available morphologic and IHC features






HepPar1


GPC-3

The IHC profile of CK 7 & CK 20 –ve and Hep Par-1 & Glypican-3 +ve was diagnostic of Hepatocellular Carcinoma

Simultaneously a message was received that 2 years previous to the present complaint the patient had a liver transplant for HBV related cirrhosis with HCC (having large areas of clear cells).

Diagnosis: Metastatic HCC in Prostate.

- Extra hepatic metastasis of HCC is mostly seen in Grade IV tumors

- Common sites of these metastasis are: Lungs, Abdominal lymph nodes, bones and Adrenals in that order of frequency

- Other extra hepatic sites are extremely rare

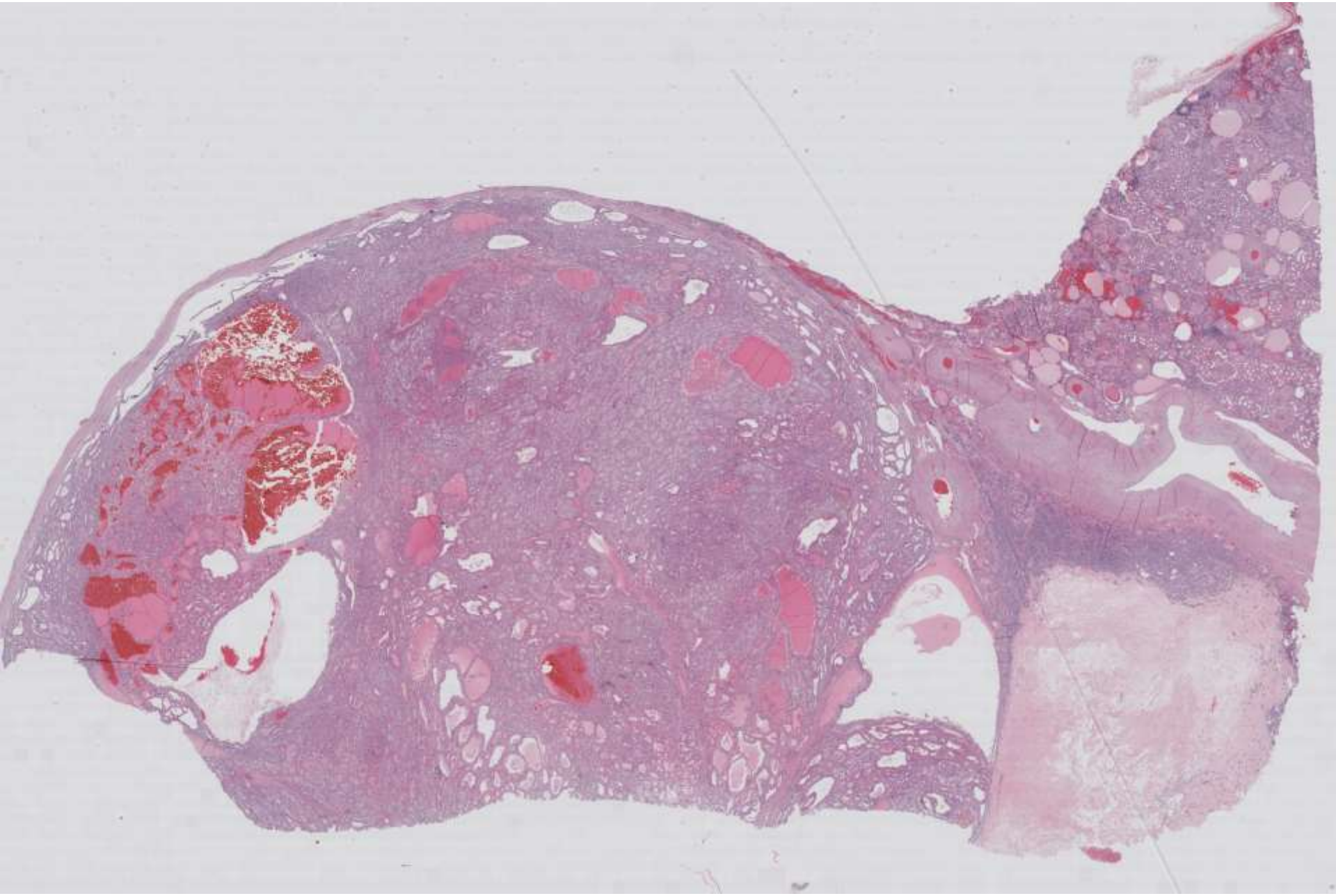
- Metastasis to prostate has not been reported **[int J Clin Exp Pathol 2013;6:816-820]**

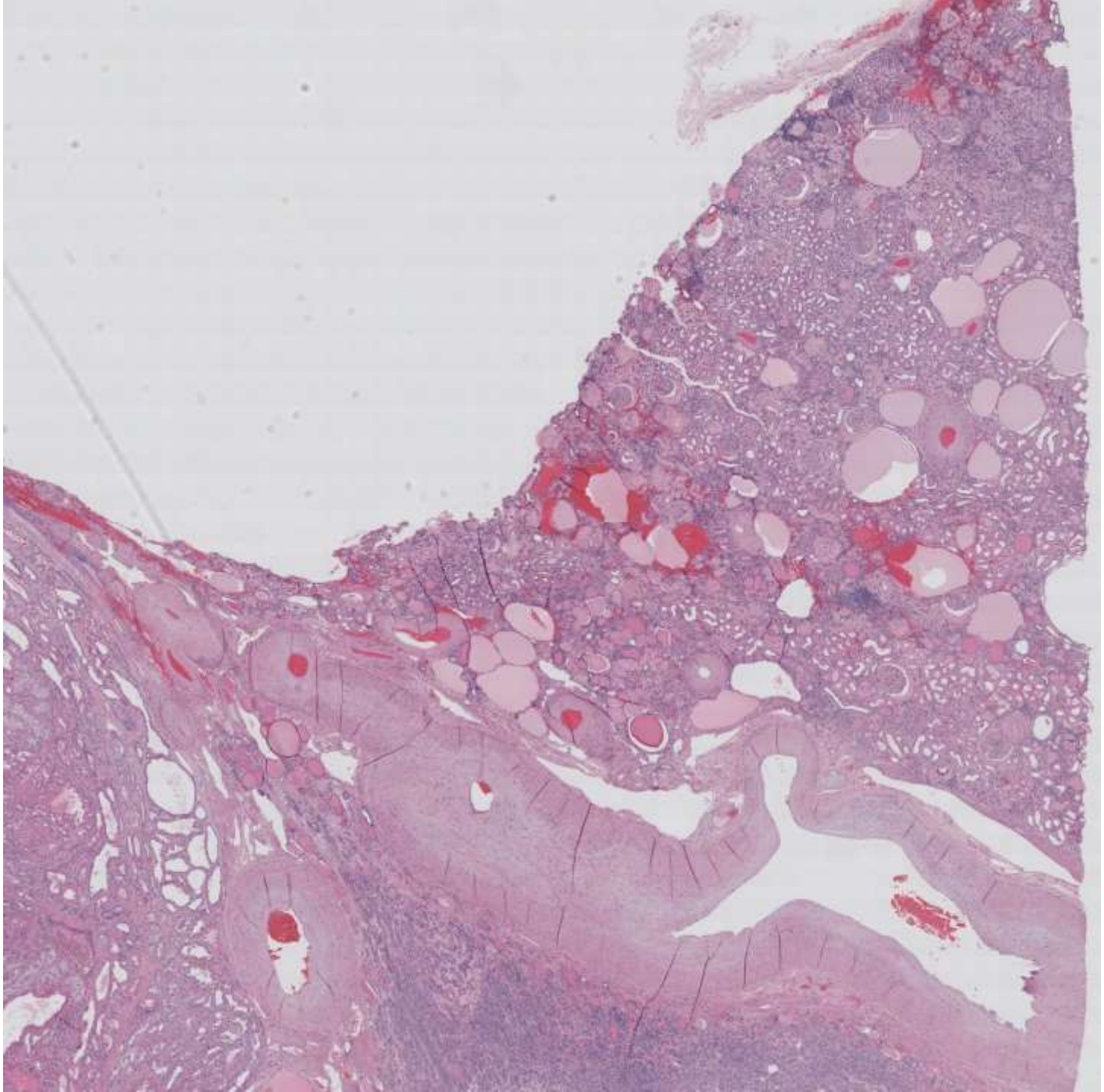
- Interestingly, there has been a very recent publication **[Hum Pathol 2016 May 13. doi: 10.1016/j.humpath.2016.04.016.]** that reports a subset of Adenocarcinoma of the prostate that specifically expresses Hepatocyte differentiation marker Hep Par-1 but not Arginase-1

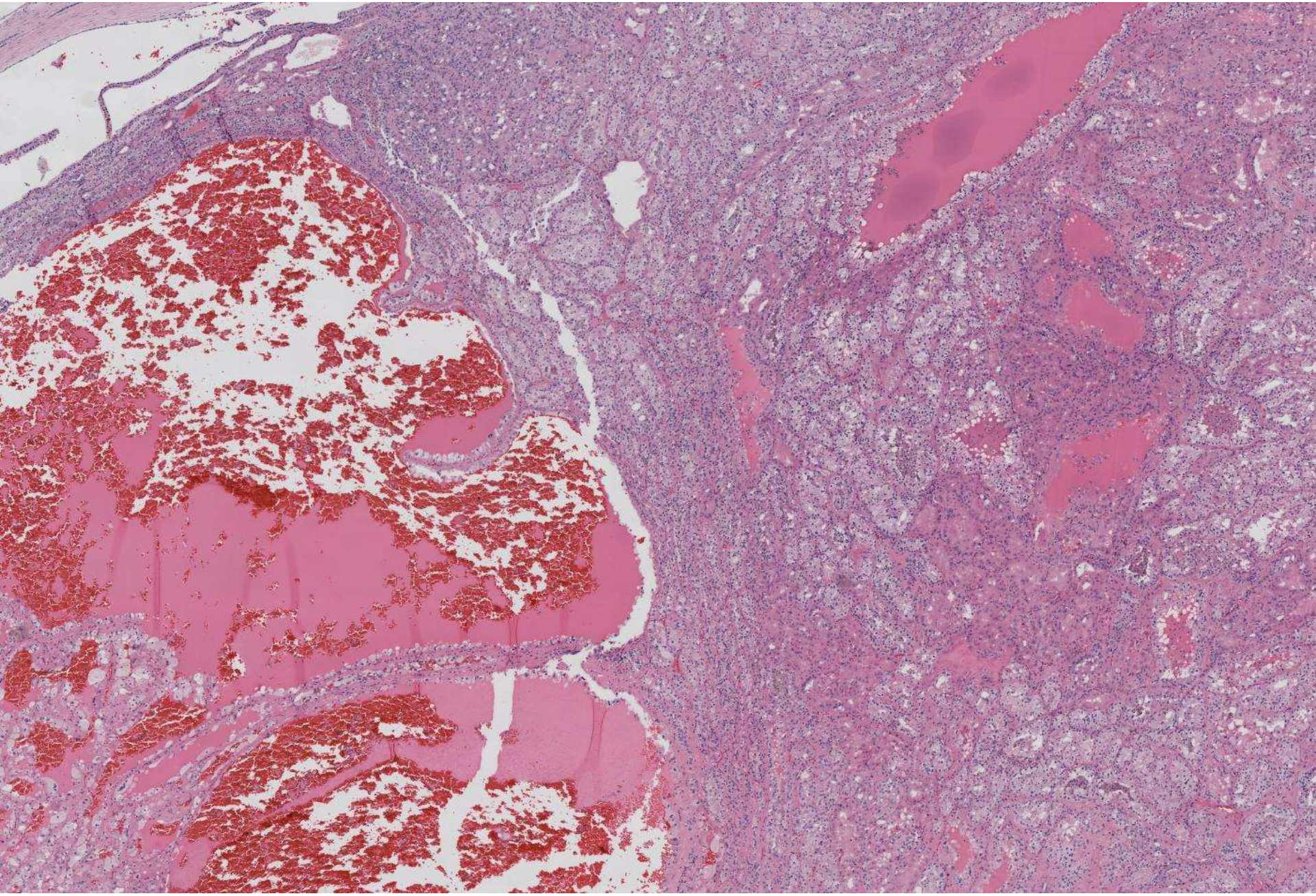
SB 6072

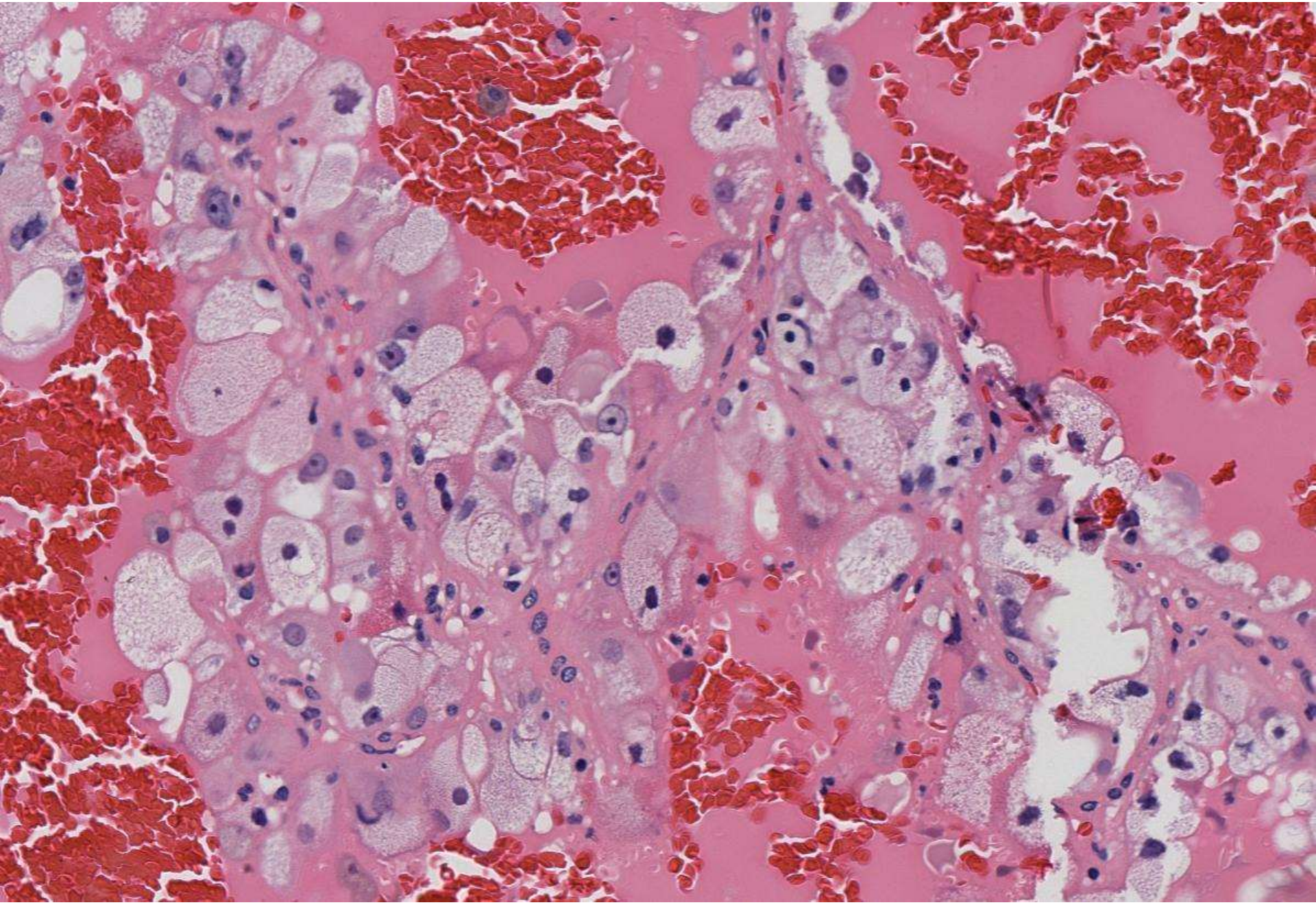
Sunny Kao; Stanford

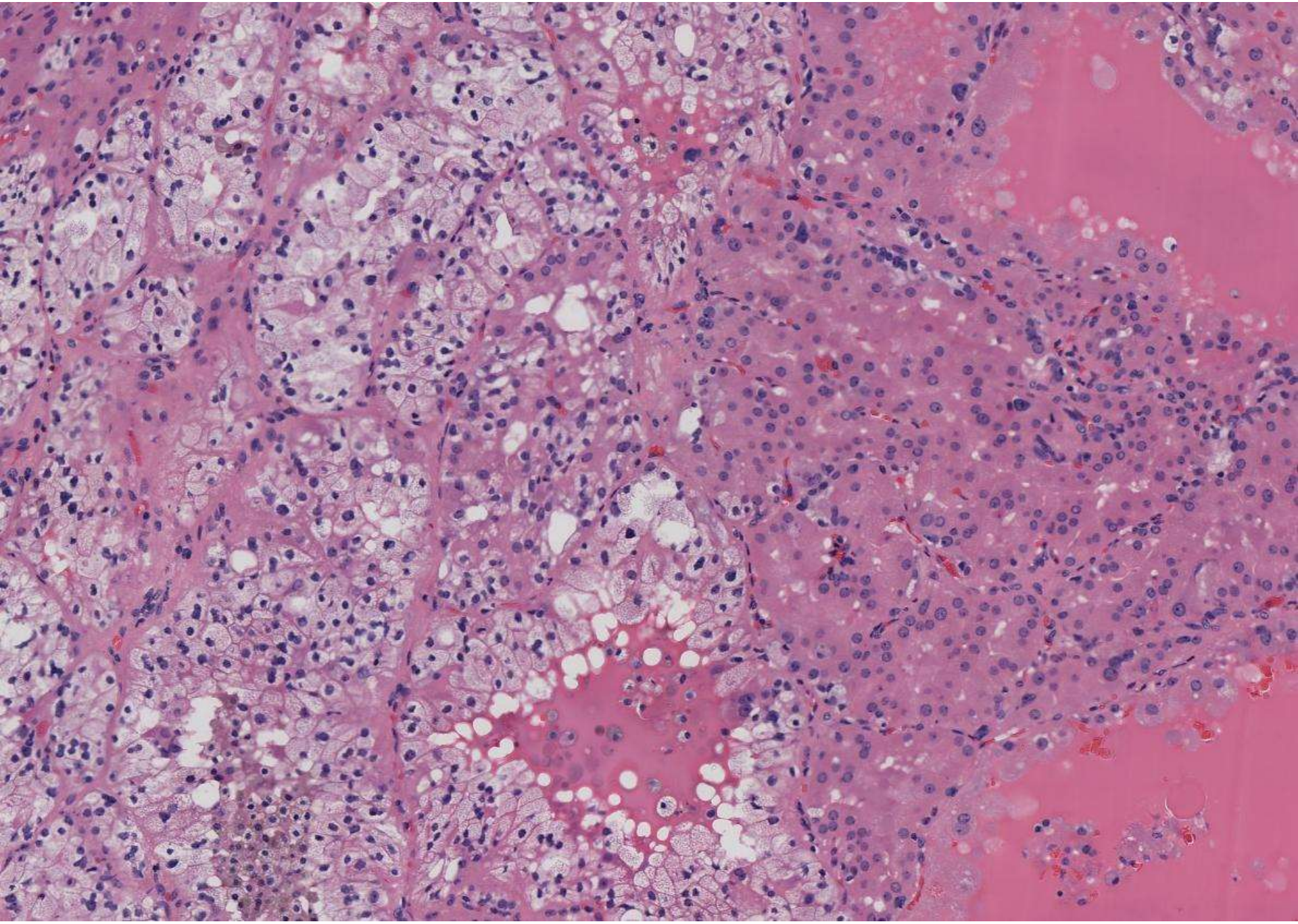
73-year-old female with end-stage renal disease on hemodialysis with renal mass.

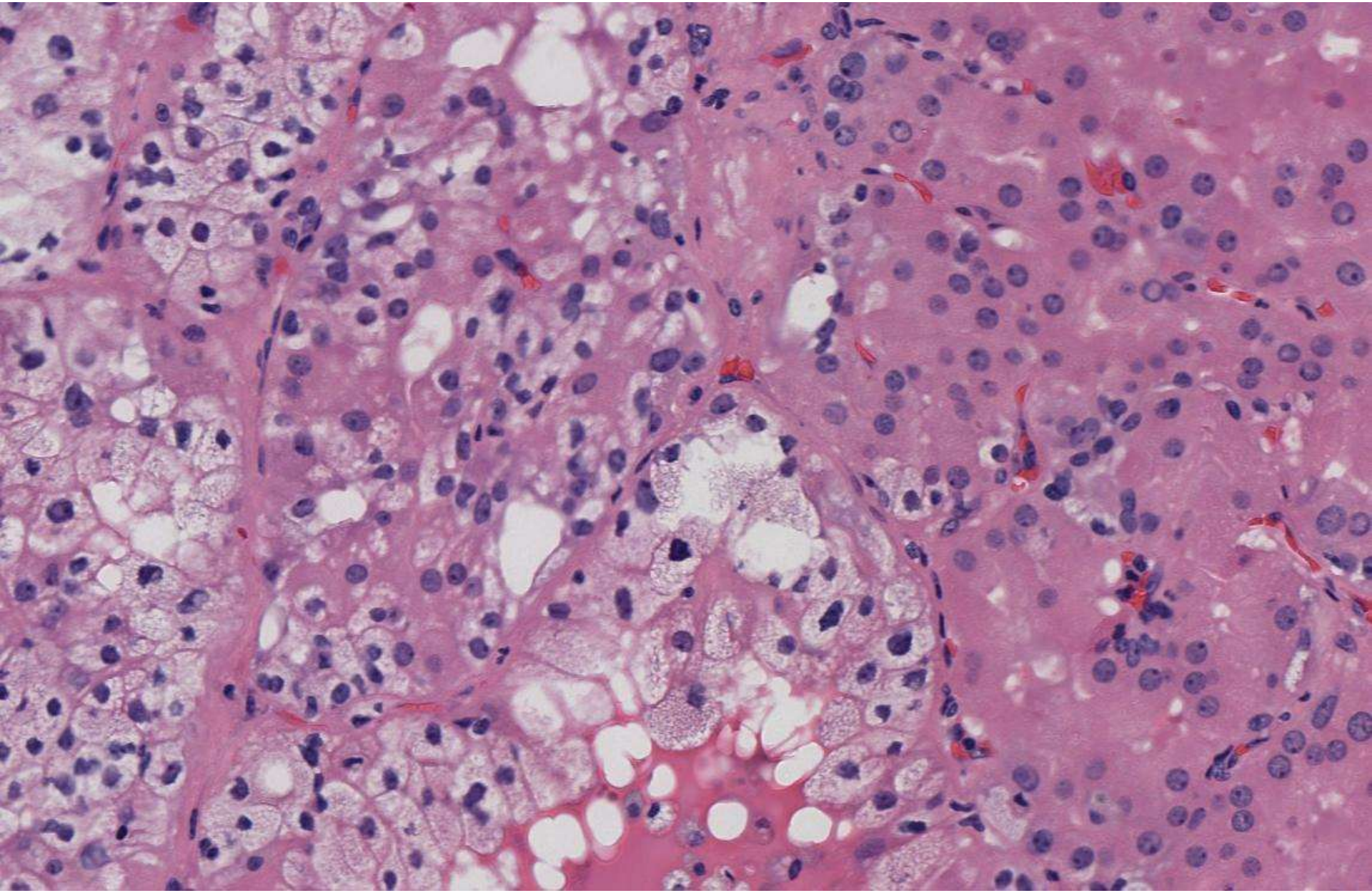


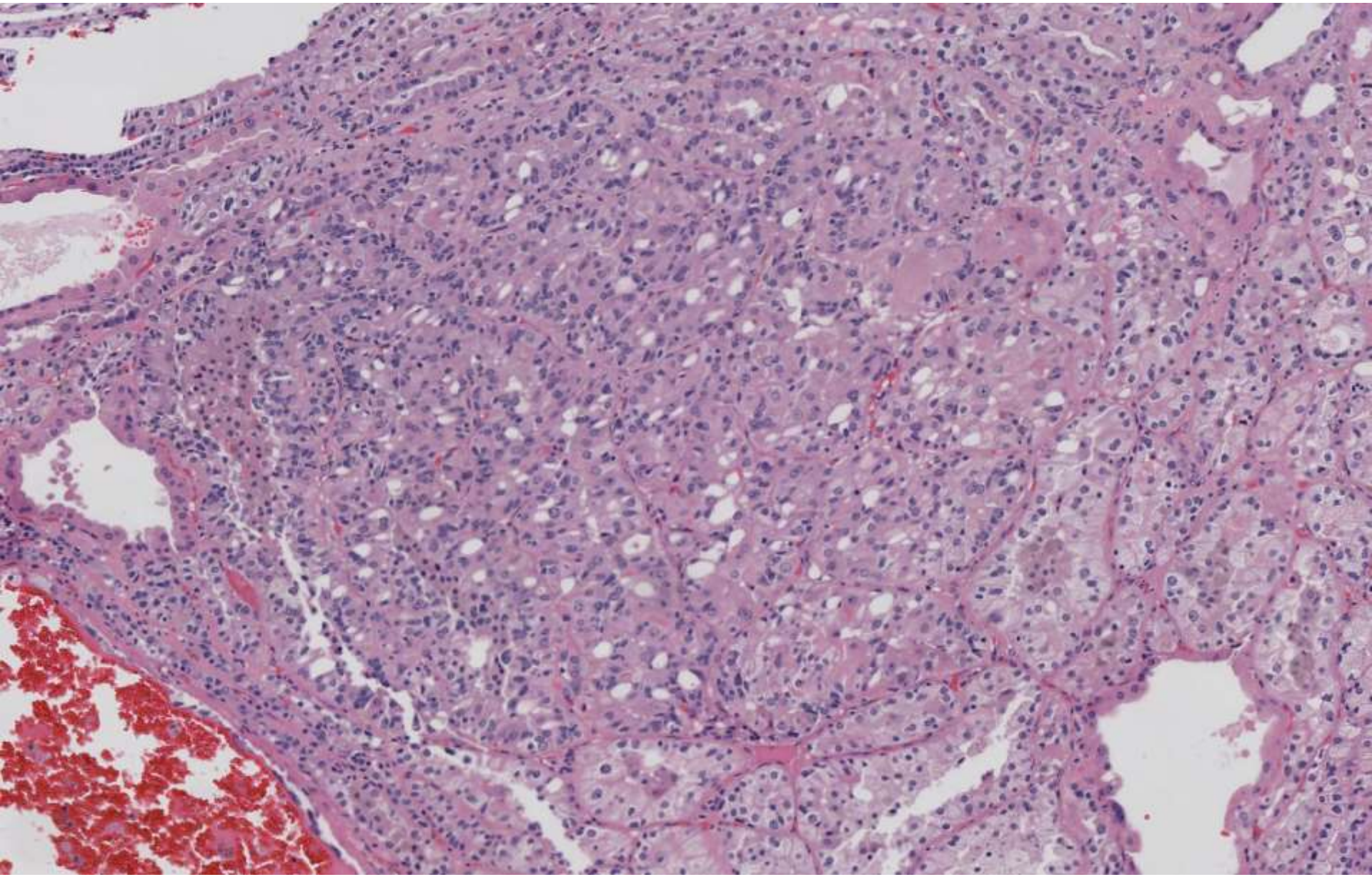


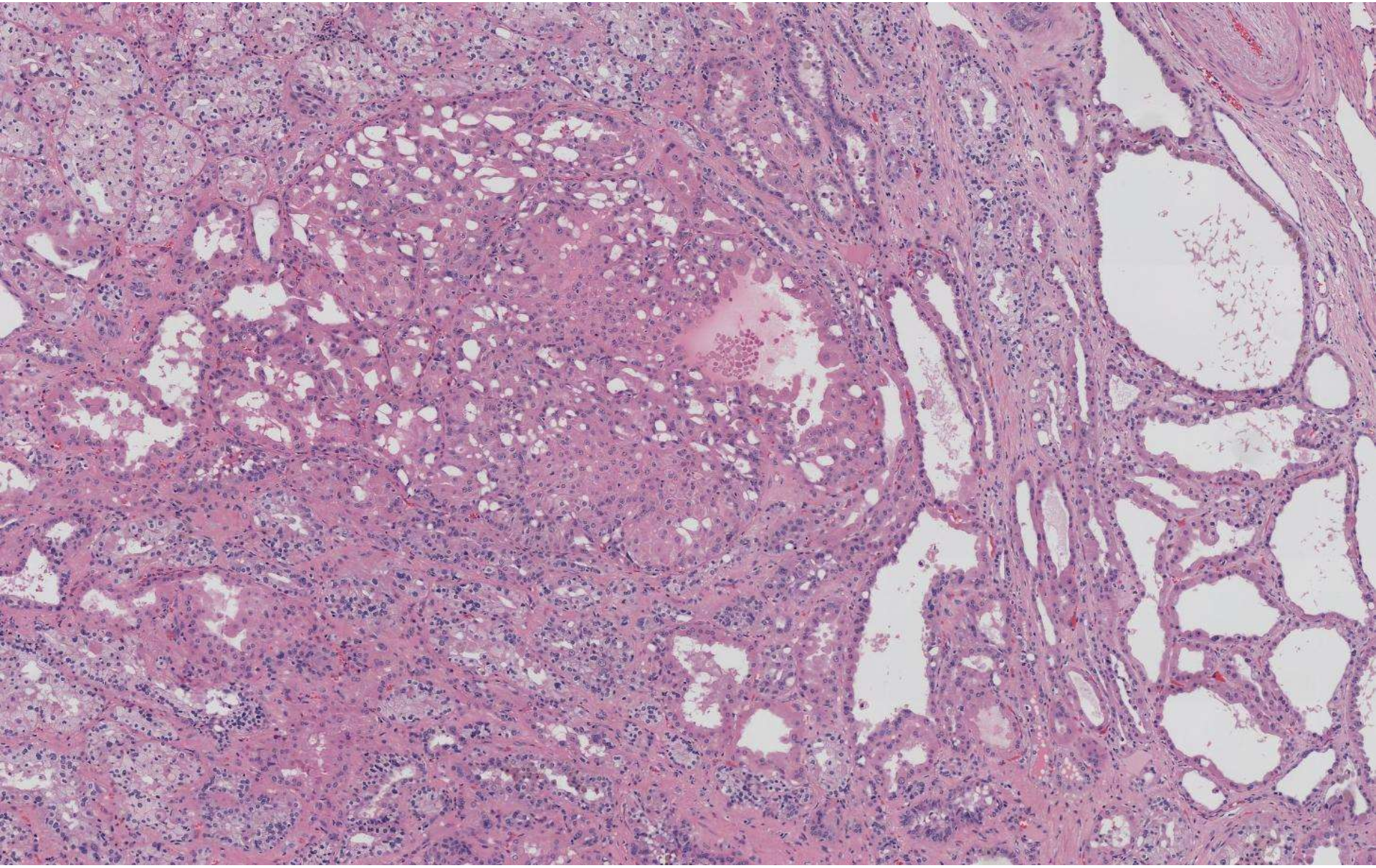


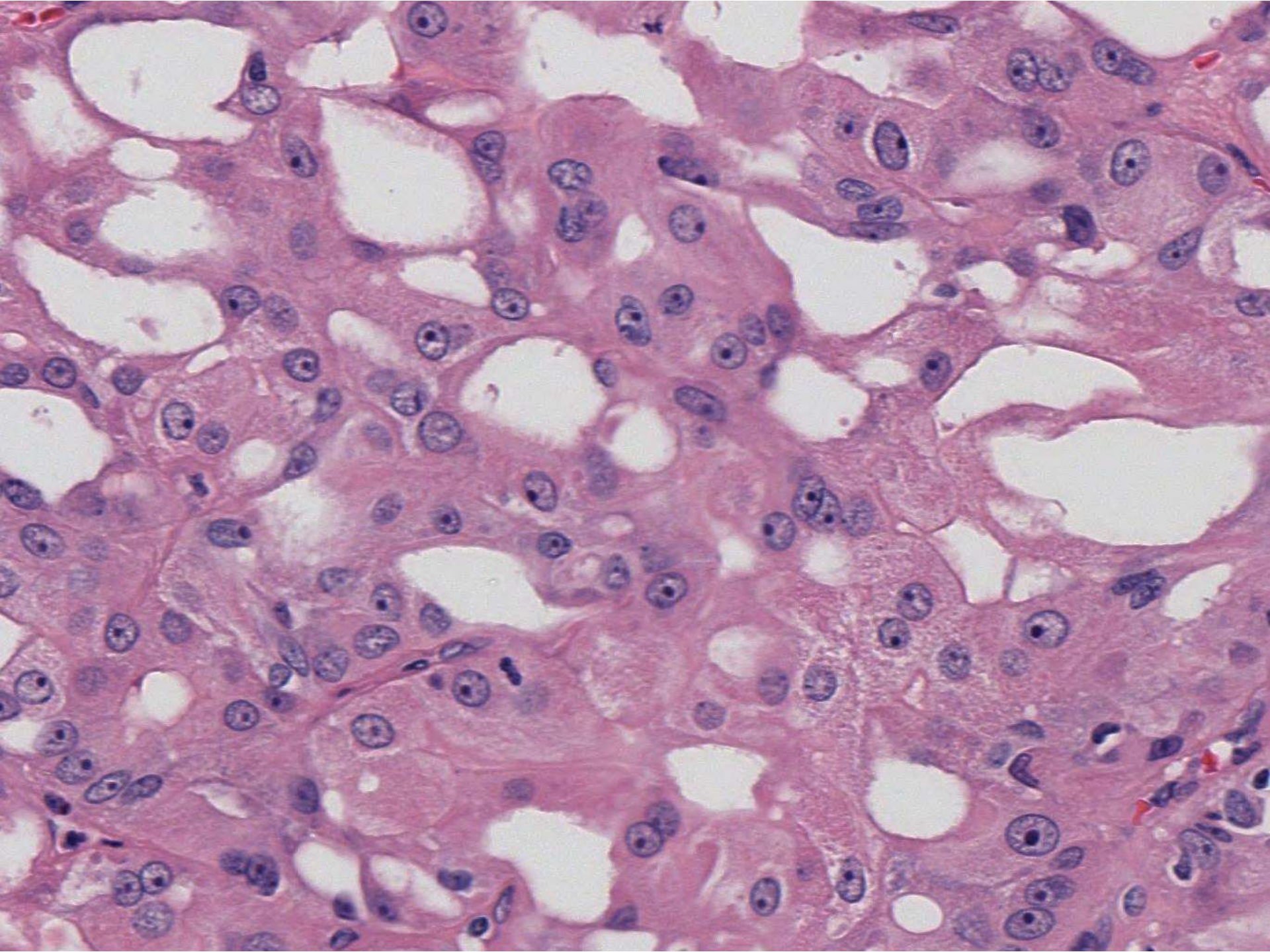


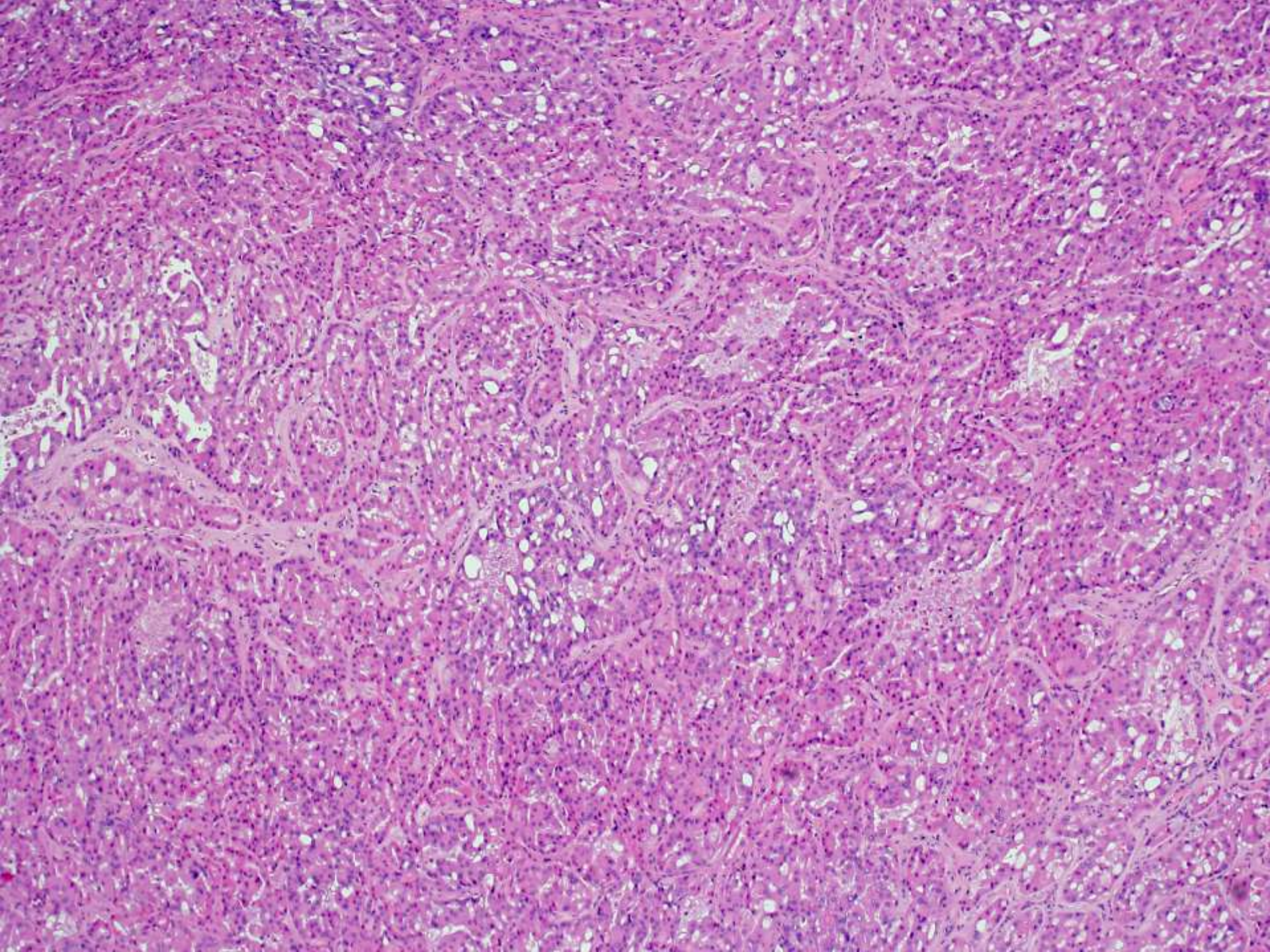


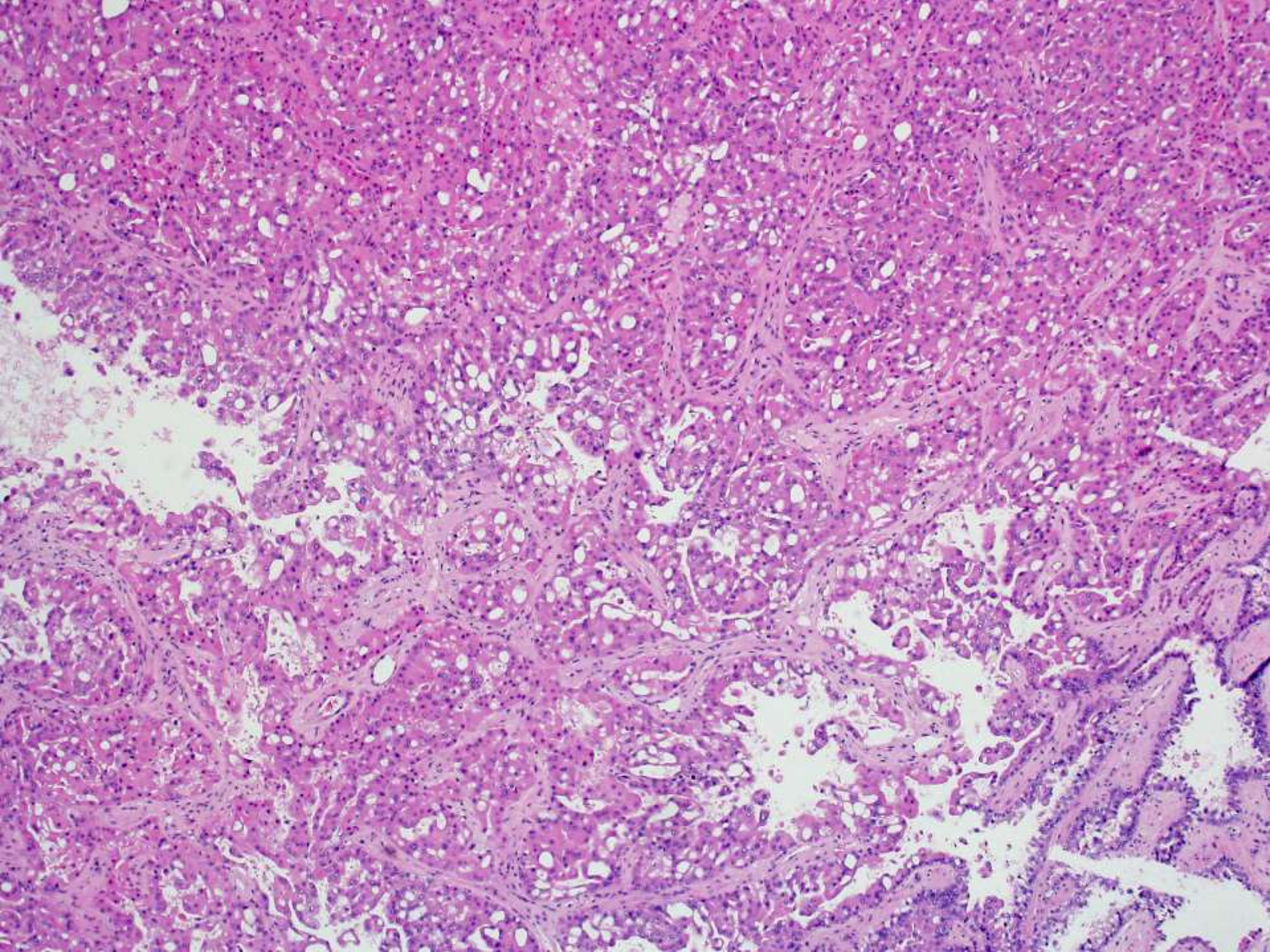


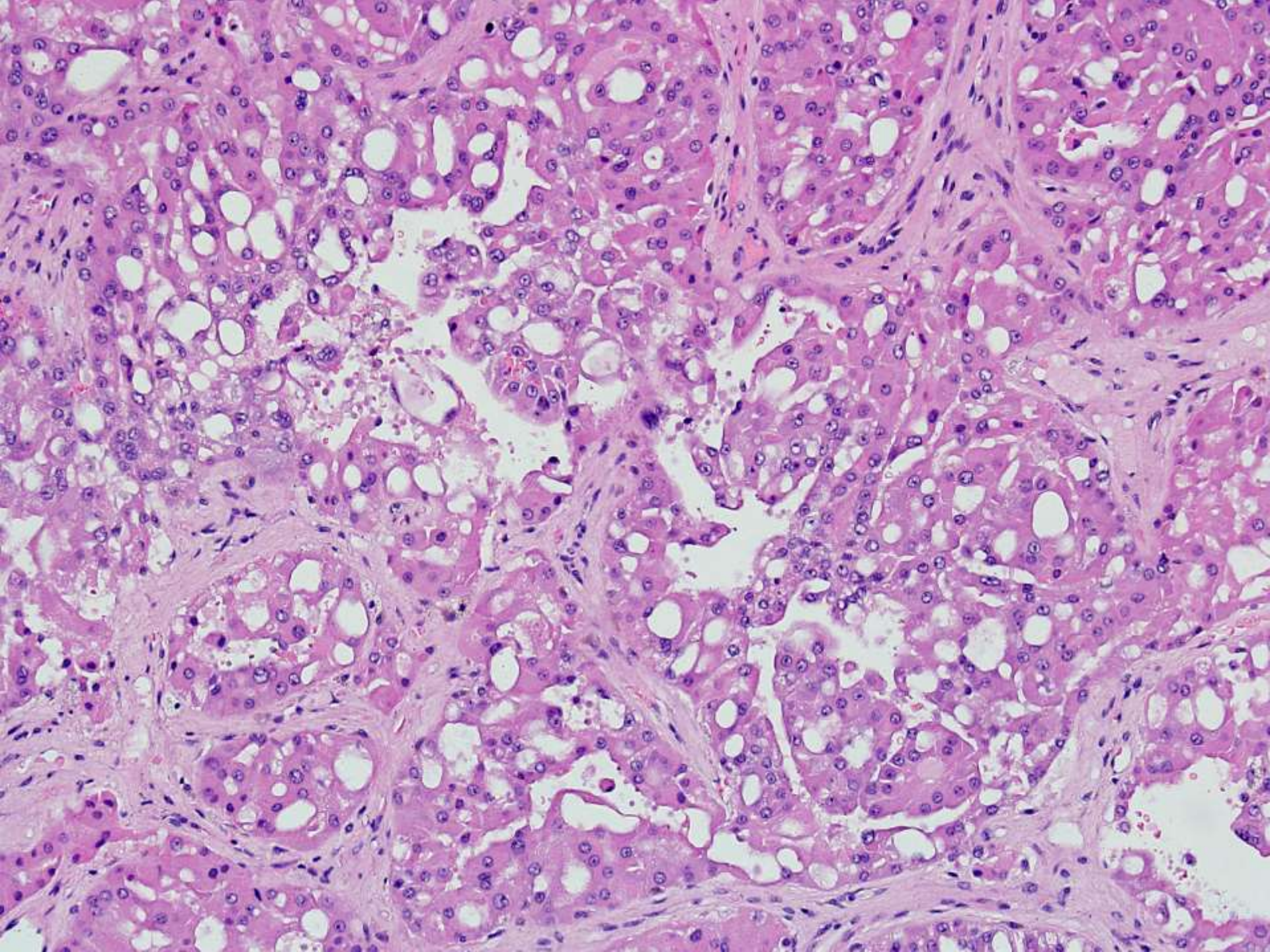












Differential Diagnosis

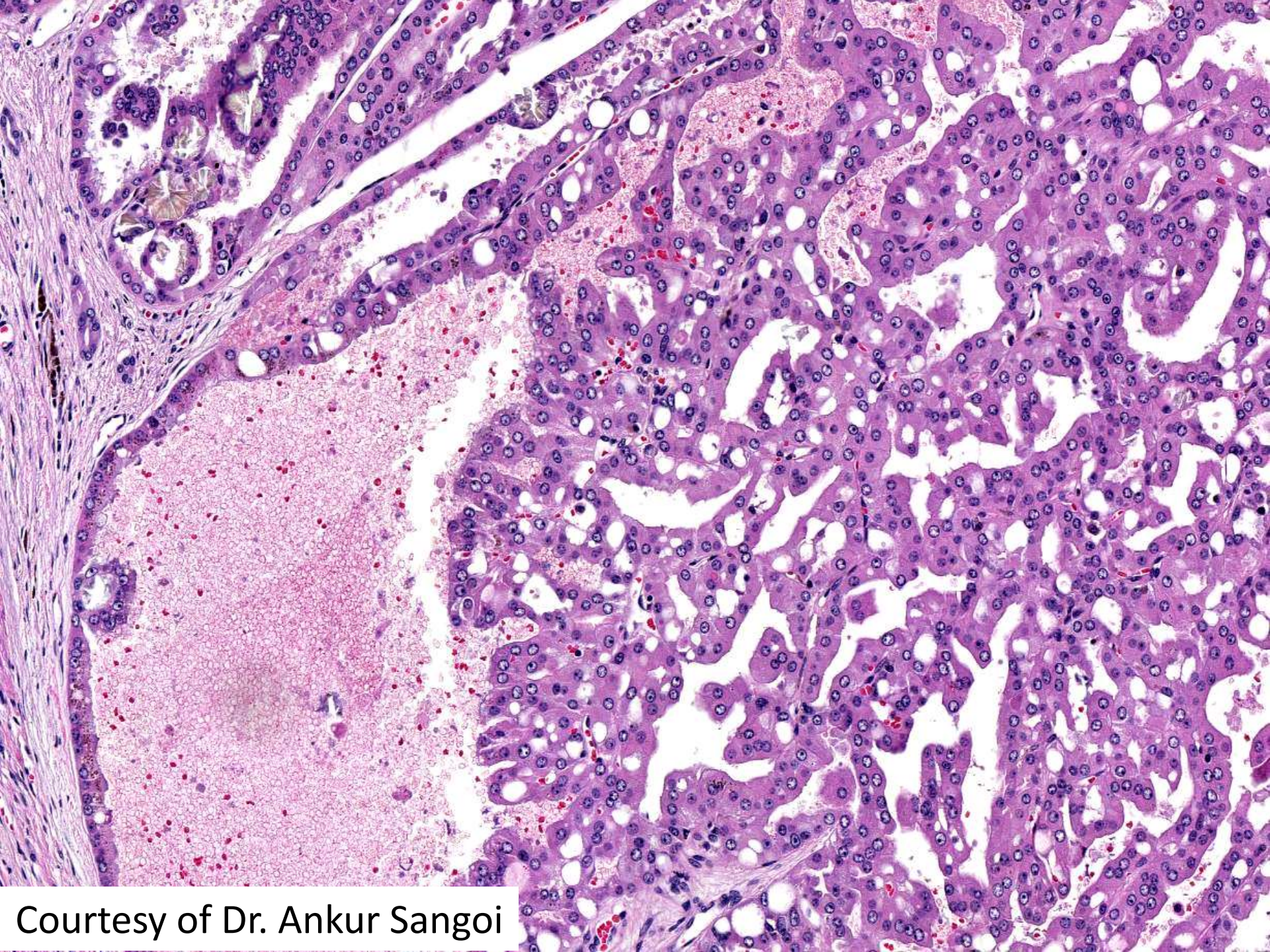
- Oncocytoma
- Chromophobe RCC
- Tubulocystic RCC
- Clear cell RCC (with prominent eosinophilic cell morphology)
- Papillary RCC
- RCC with rhabdoid features
- Epithelioid angiomyolipoma
- Acquired cystic kidney disease associated RCC

Staining results

- CK7, P504S ++
- AE1/AE3, CAM5.2, CD10 patchy +
- CAIX, HMB45 -

Acquired cystic kidney disease associated RCC

- 36% of all epithelial neoplasms in end-stage kidneys
- Occurs exclusively in acquired cystic disease in patients with long-standing hemodialysis
- cribriform/microcystic/sieve-like architecture
- Calcium oxalate crystals are common
- Gains of 3, 16, and Y chromosomes
- Indolent with rare metastasis



Courtesy of Dr. Ankur Sangoi

Key Learning Points

- **DDX for eosinophilic renal neoplasms**

- **Features of acquired cystic kidney disease associated RCC**

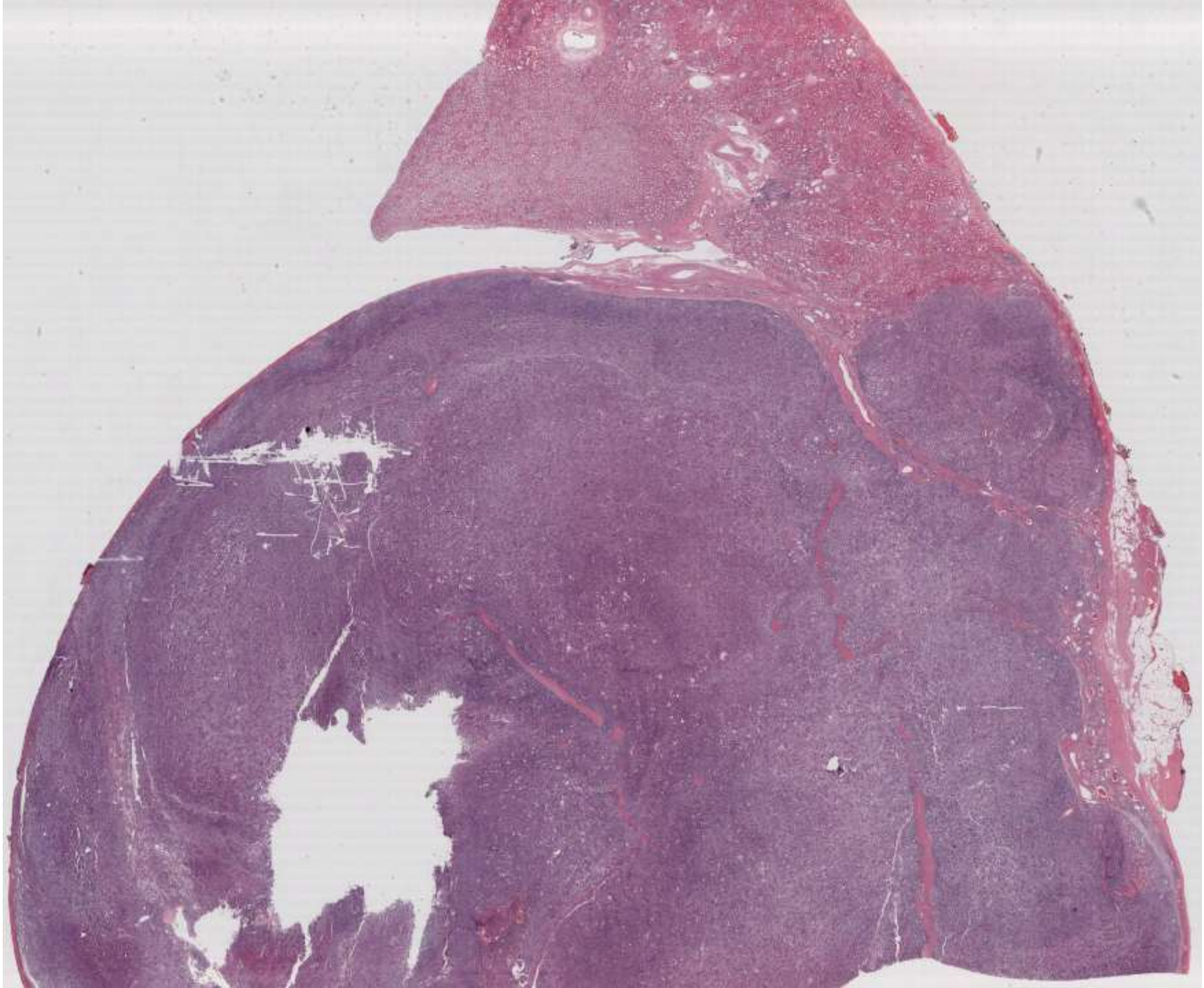
References

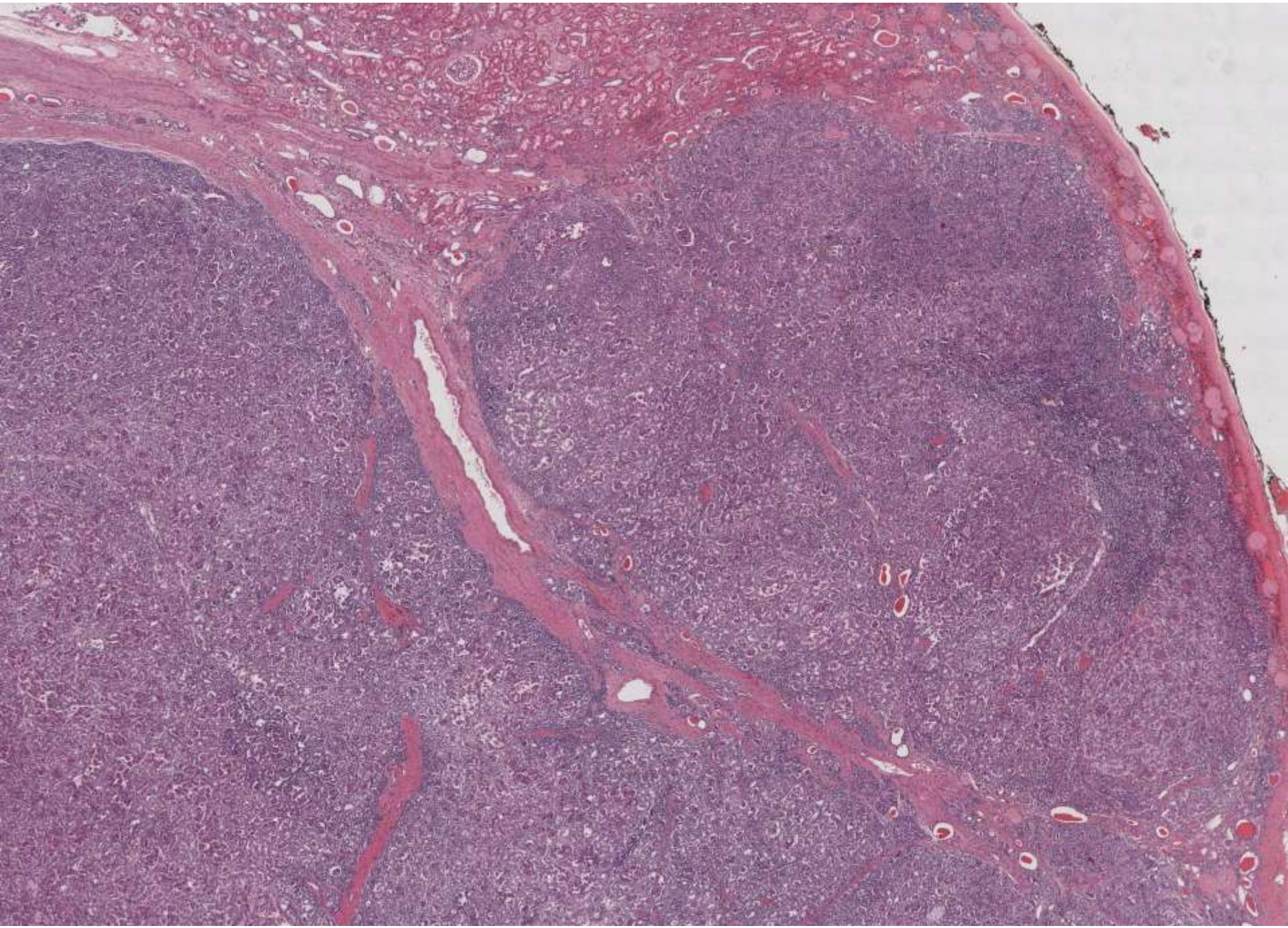
- **Tickoo, SK et al**. Spectrum of epithelial neoplasms in end-stage renal disease: an experience from 66 tumor-bearing kidneys with emphasis on histologic patterns distinct from those in sporadic adult renal neoplasia. Am J Surg Pathol. 2006 Feb;30(2):141-53.
- **Bhatnagar R, Alexiev BA.** Renal-cell carcinomas in end-stage kidneys: a clinicopathological study with emphasis on clear-cell papillary renal-cell carcinoma and acquired cystic kidney disease-associated carcinoma. Int J Surg Pathol. 2012 Feb;20(1):19-28.

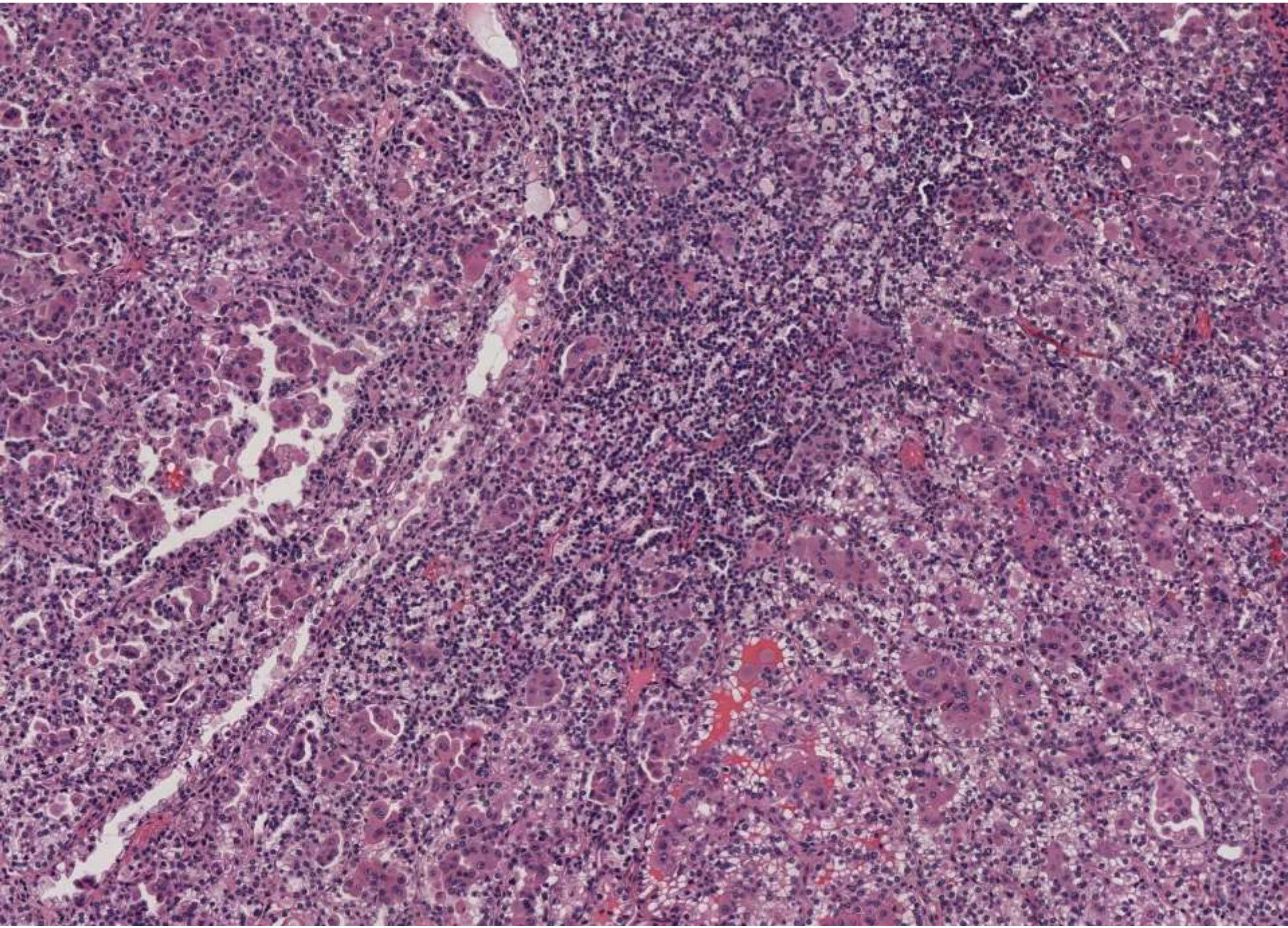
SB 6073

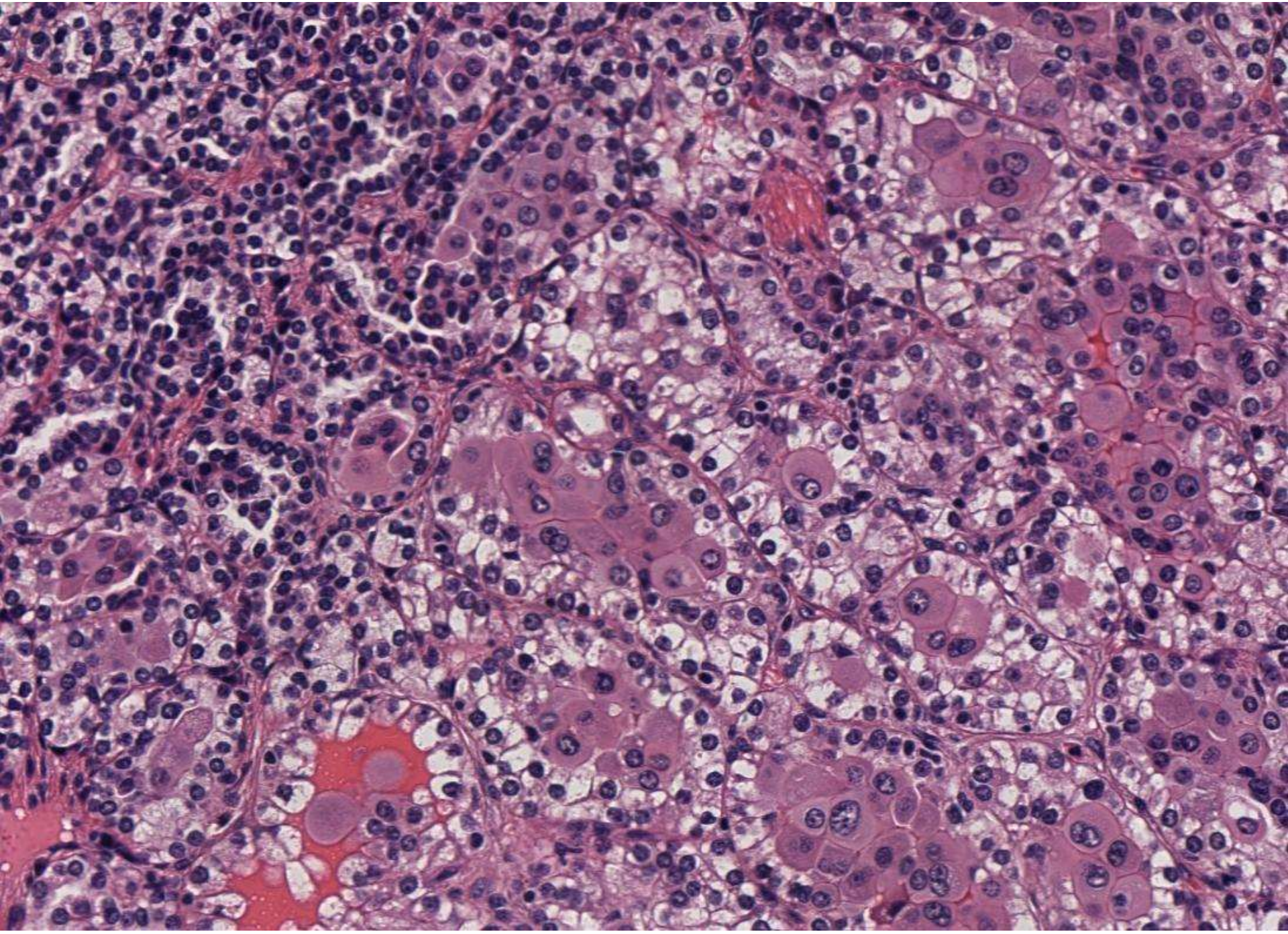
David Levy/Megan Troxell/John Higgins; Stanford

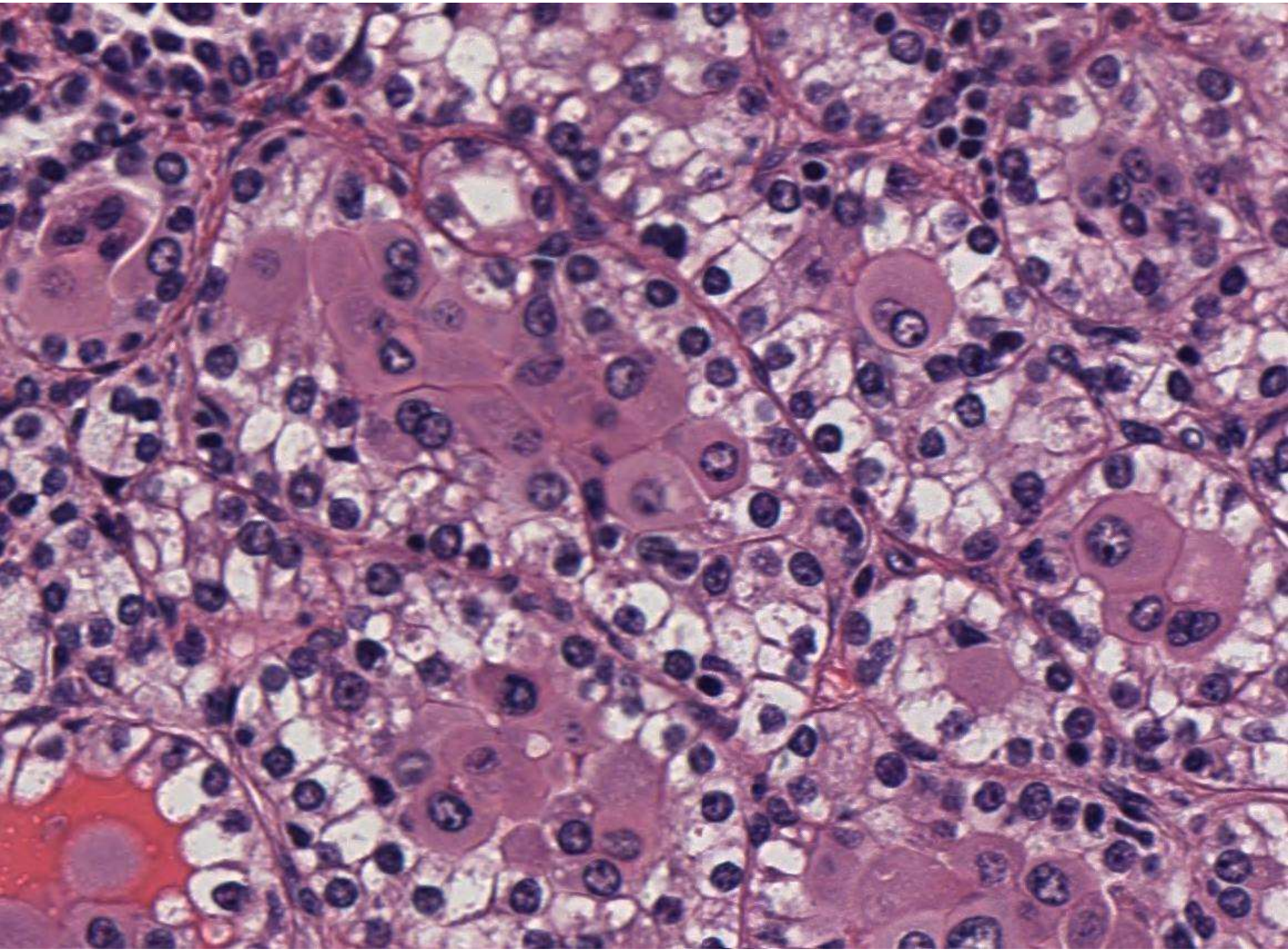
63-year-old man with renal mass.

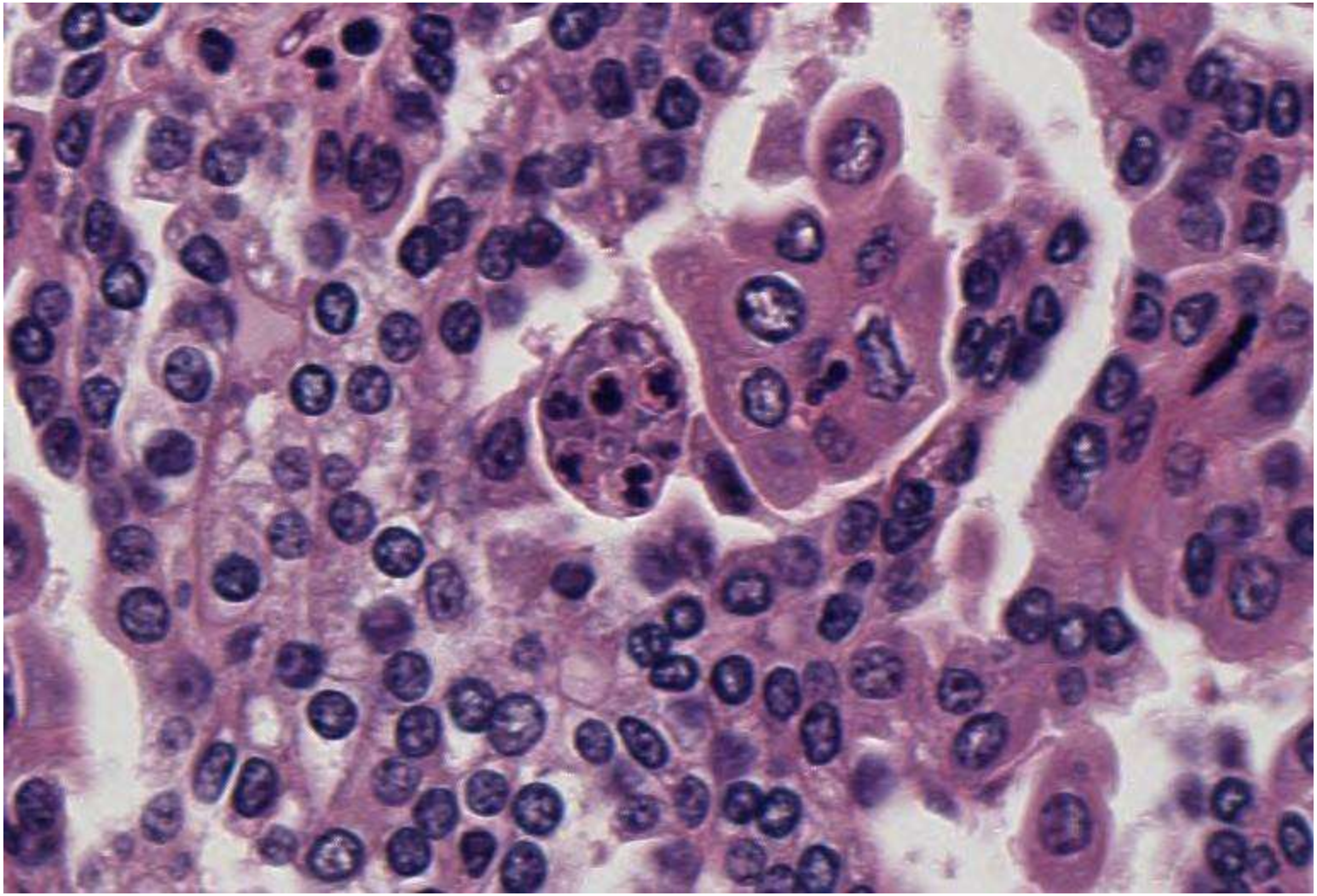


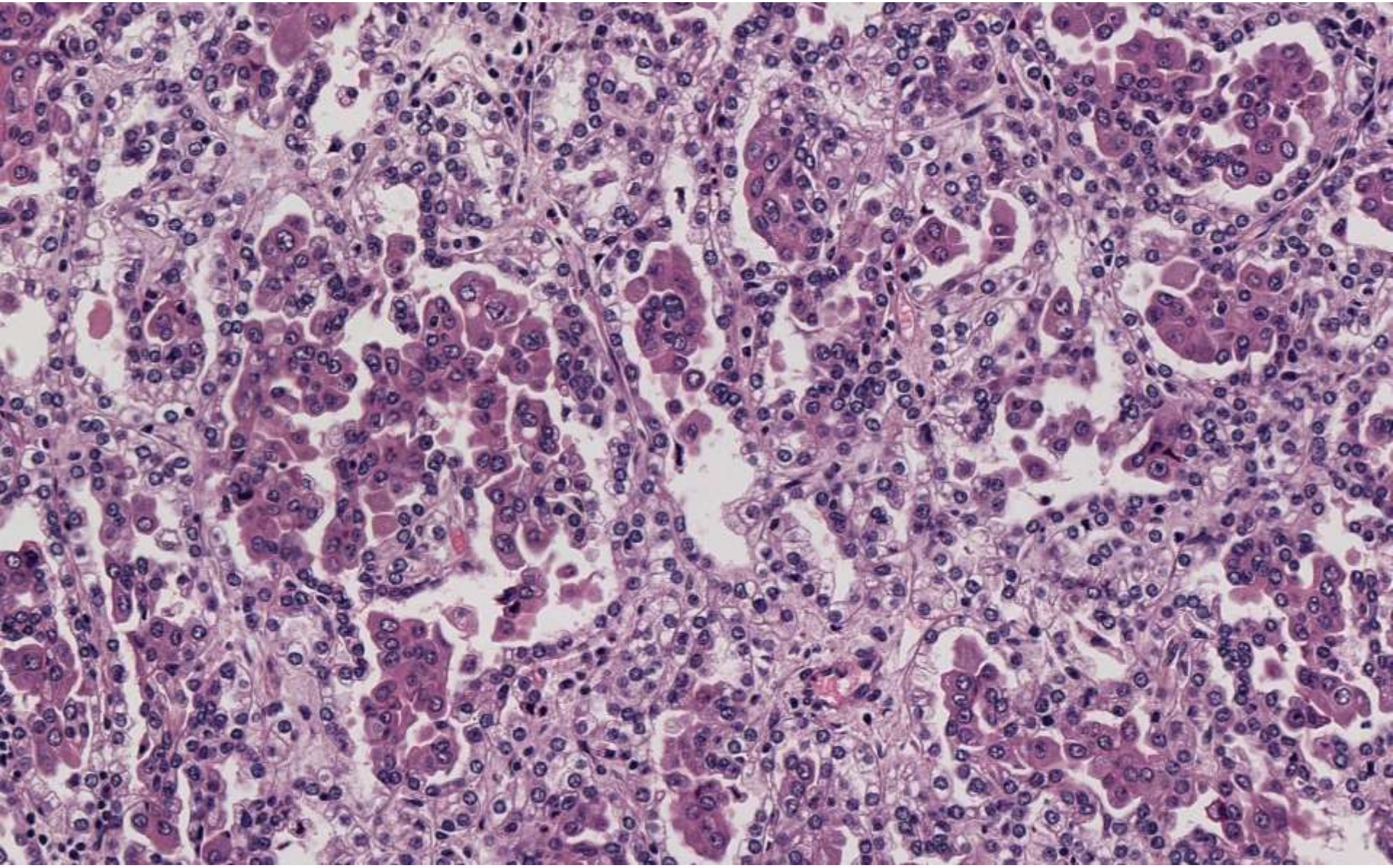


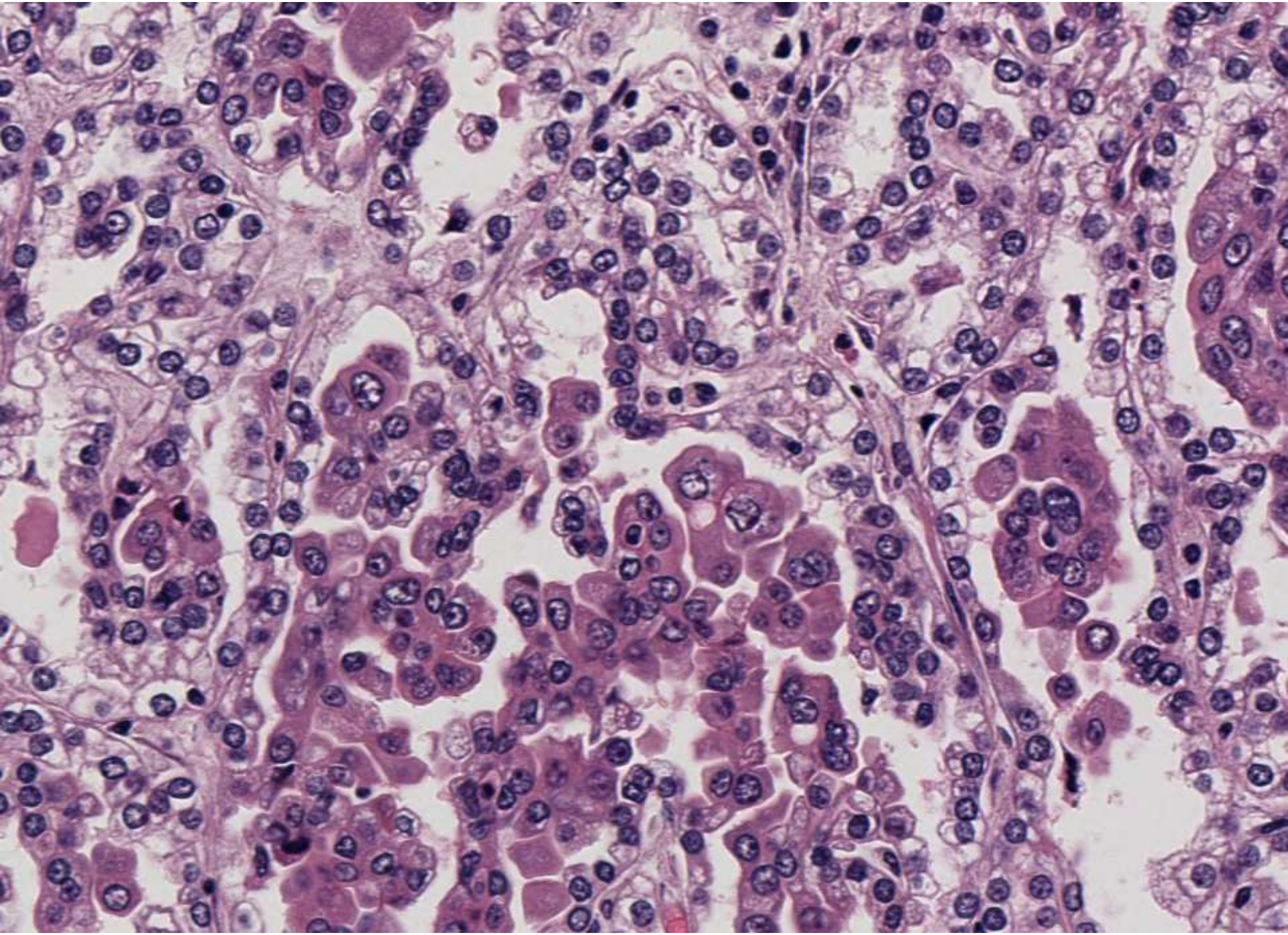












Differential Diagnosis

- Papillary RCC
- Clear Cell RCC
- Urothelial carcinoma
- Chromophobe RCC

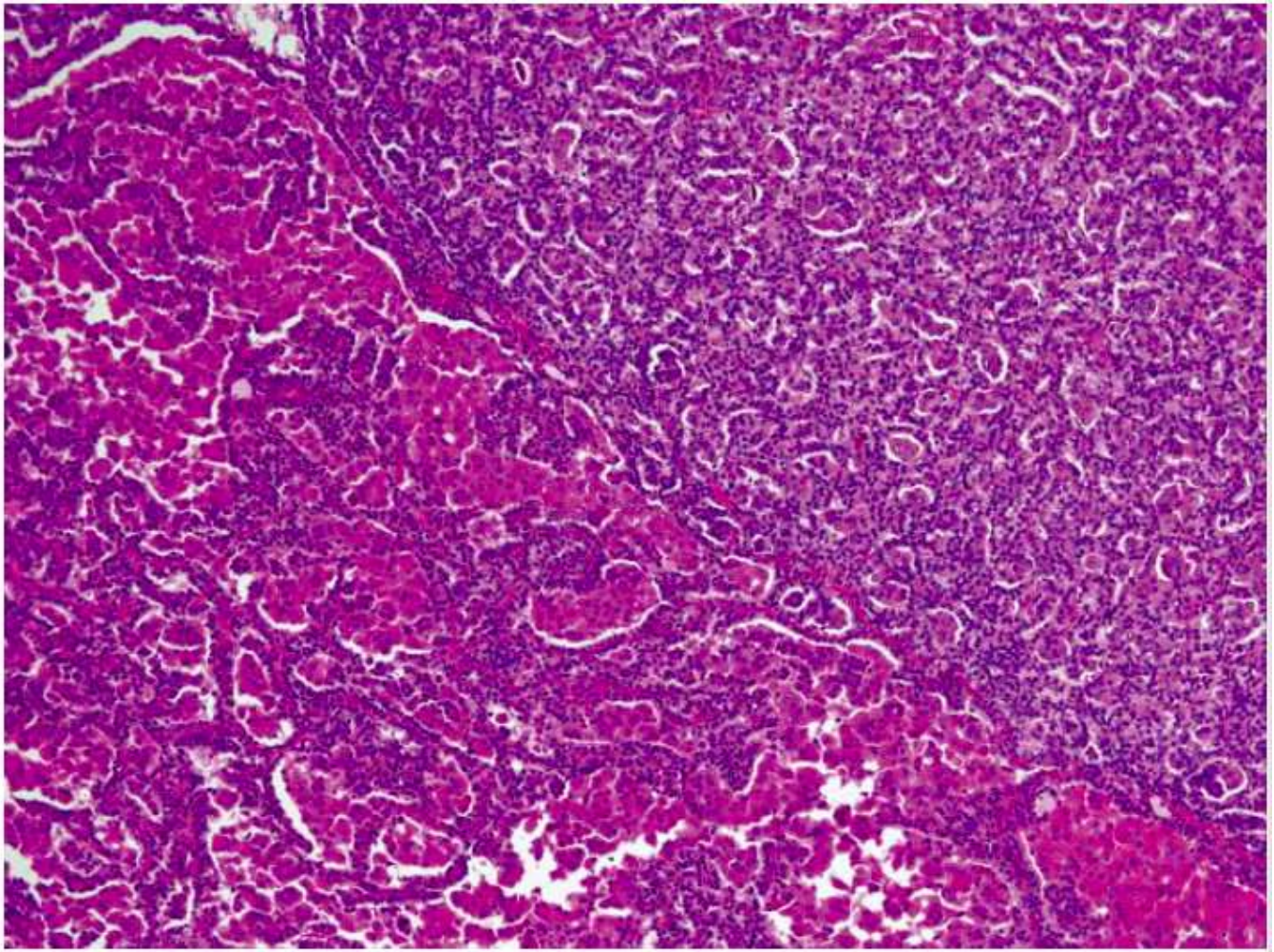
Biphasic Squamoid Alveolar Renal Cell Carcinoma

A Distinctive Subtype of Papillary Renal Cell Carcinoma?

Ondrej Hes, MD, PhD, Enric Condom Mundo, MD, PhD,†‡ Kvetoslava Peckova, MD,**
Jose I. Lopez, MD,§ Petr Martinek, PhD, Tomas Vanecek, PhD,* Giovanni Falconieri, MD,‖*

Am J Surg Pathol 2016;40:664–675

Et al.



21 cases
~0.1% of RCC

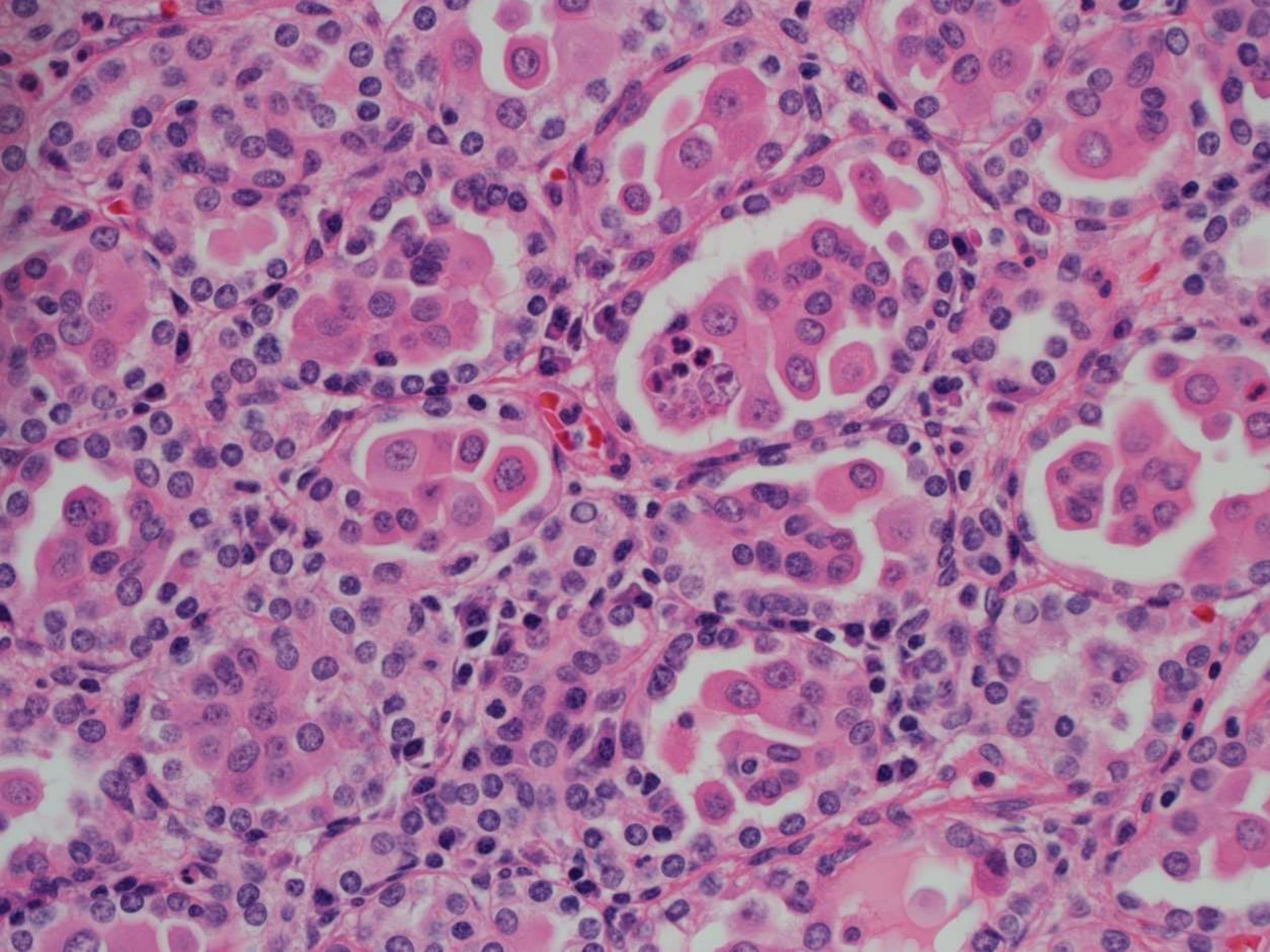
Age: 53-79

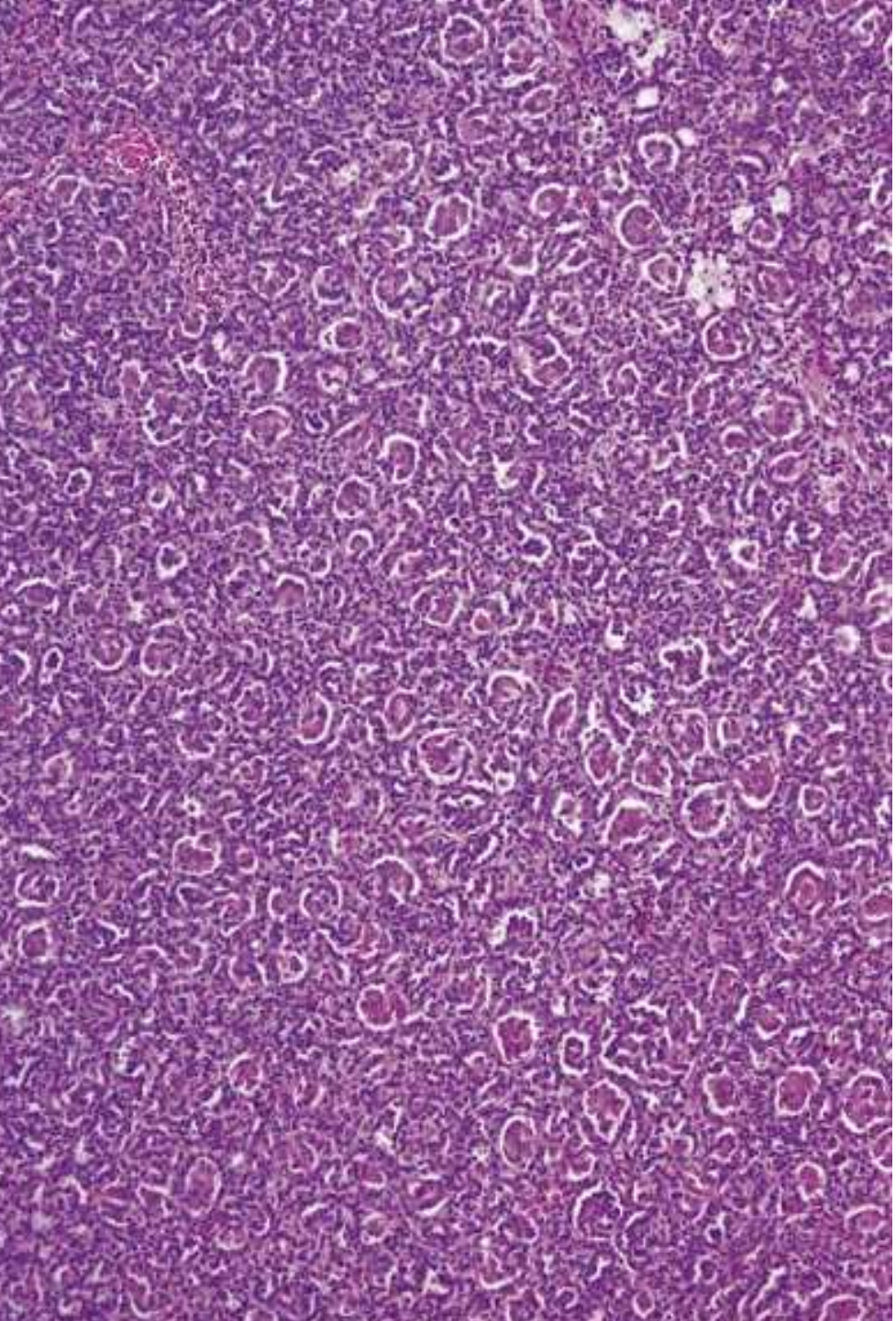
1.1:1 M:F

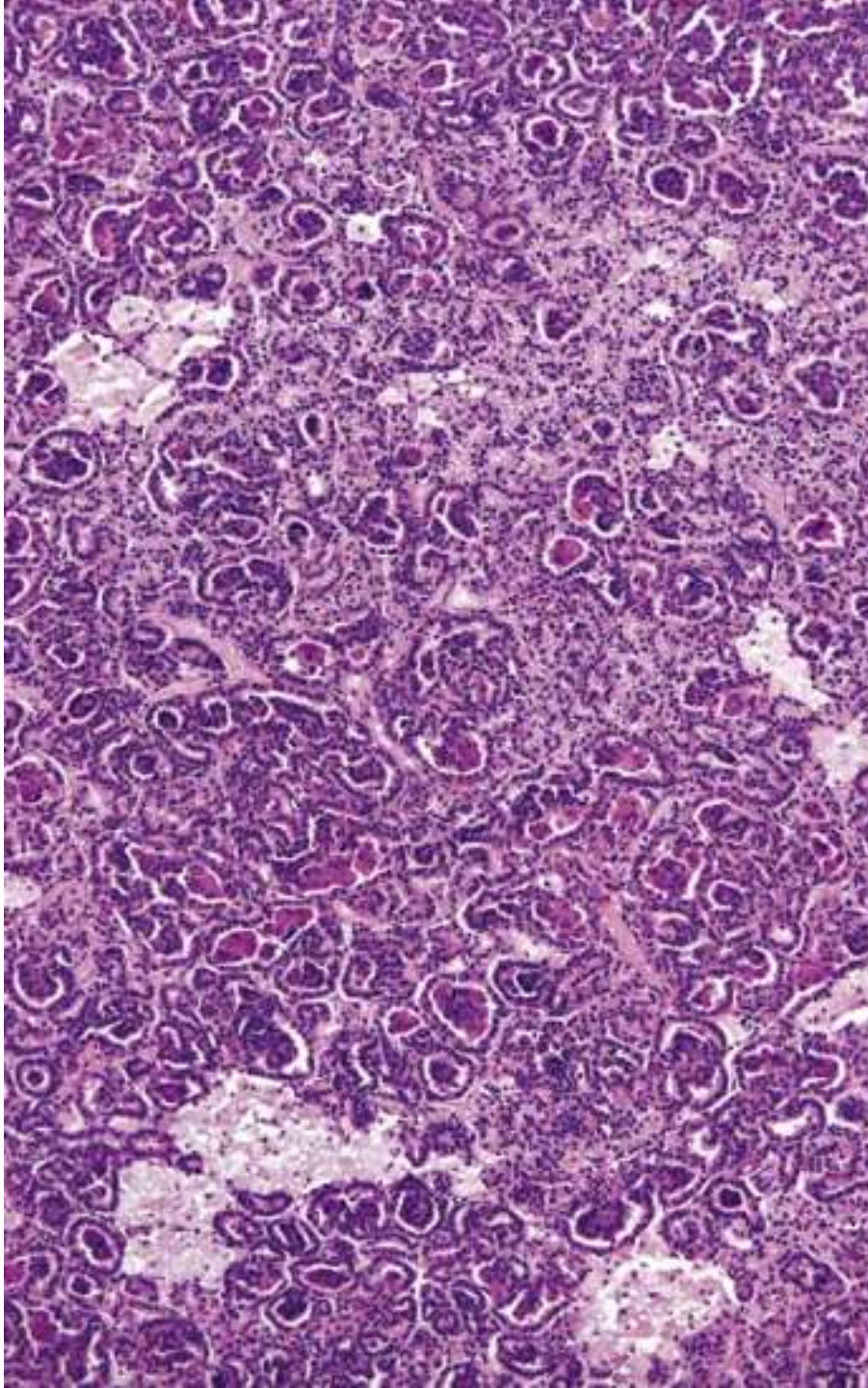
2/13 DOD
3/13 Alive w/ disease
Others well

Biphasic Squamoid Alveolar RCC – Microscopic Features

- Dual cell population:
  - **Glomeruloid structures:**
    - **Solid nests of large "squamoid" eosinophilic cells in alveolar spaces.**
    - **Emperipolesis**
  - **Alveolar lining cells:**
    - **Small cells, high N:C, lining vascular structures surrounding the glomeruloid structures.**
- **Can have classic Papillary RCC features.**





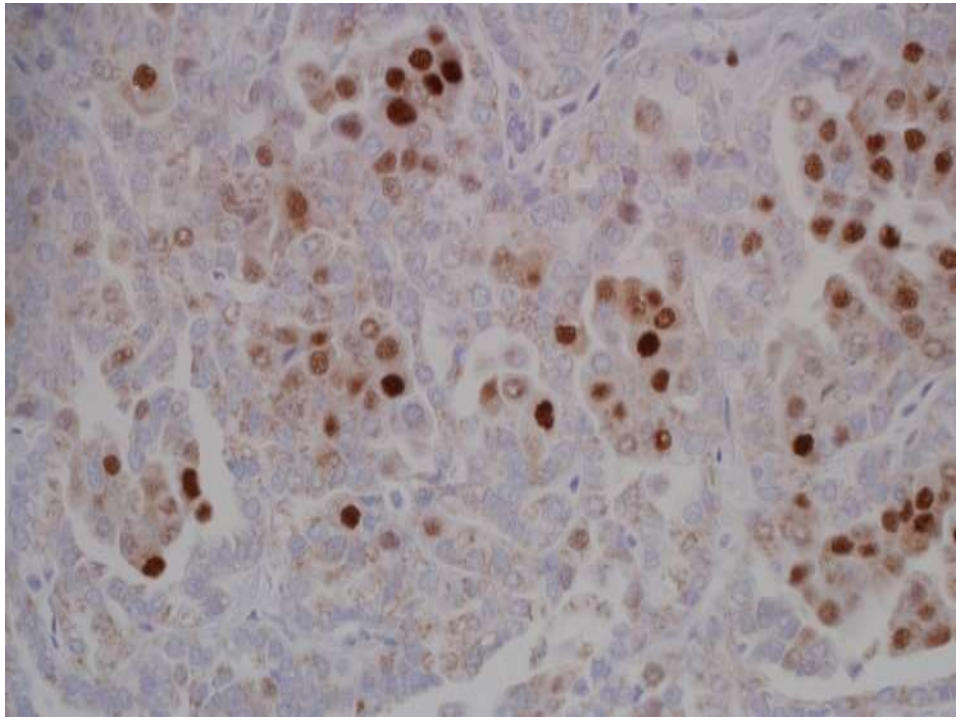


Immunophenotype & genetics

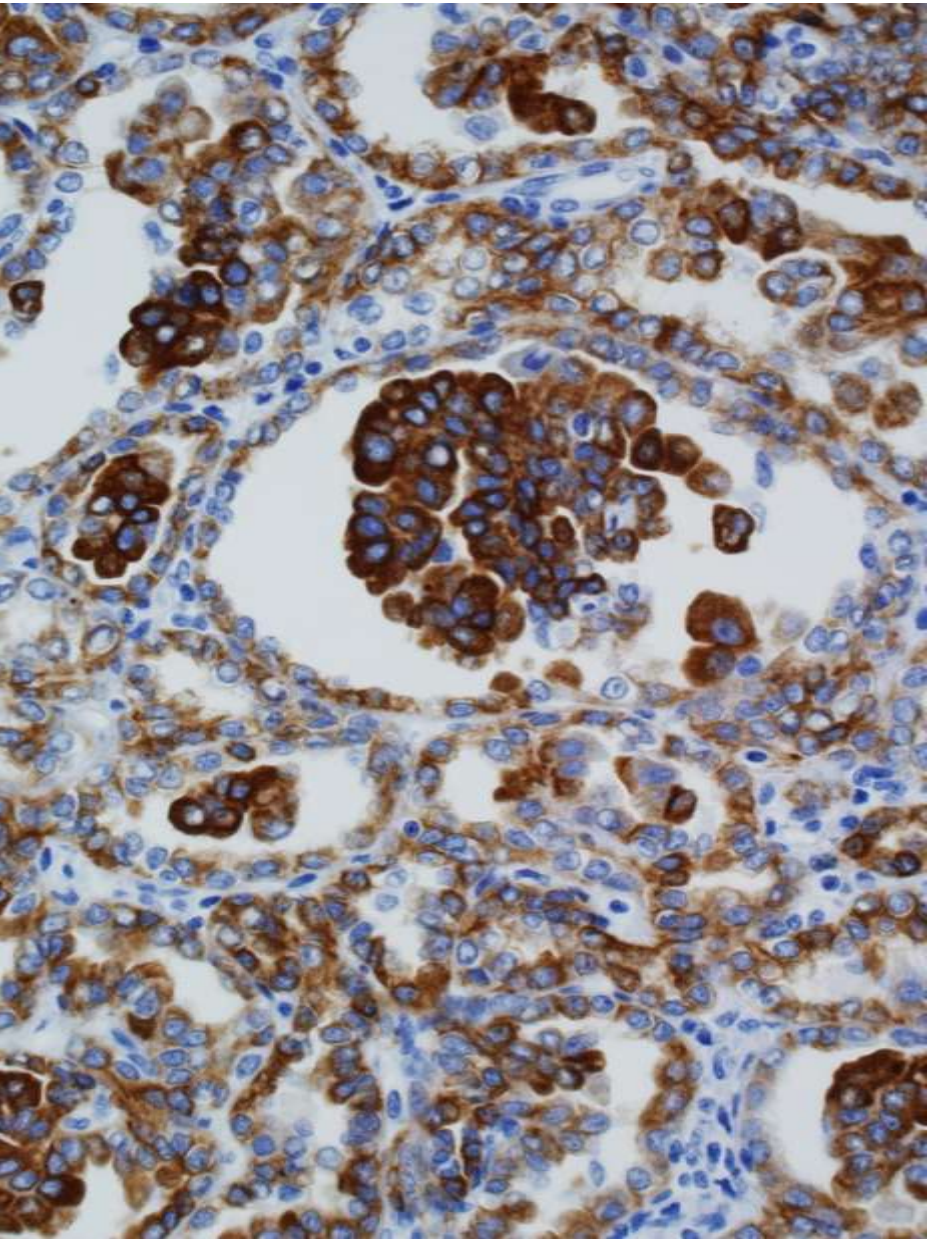
Stain	
CK, CK7	+
PAX8	+
vimentin	+
AMACR	+
Cathe,TFE3	-
CD10	-
p63	-

Biphasic	Clear	Squamoid
Cyclin D1	-	+
CK HMW	-/weak	+
RCC	+	-

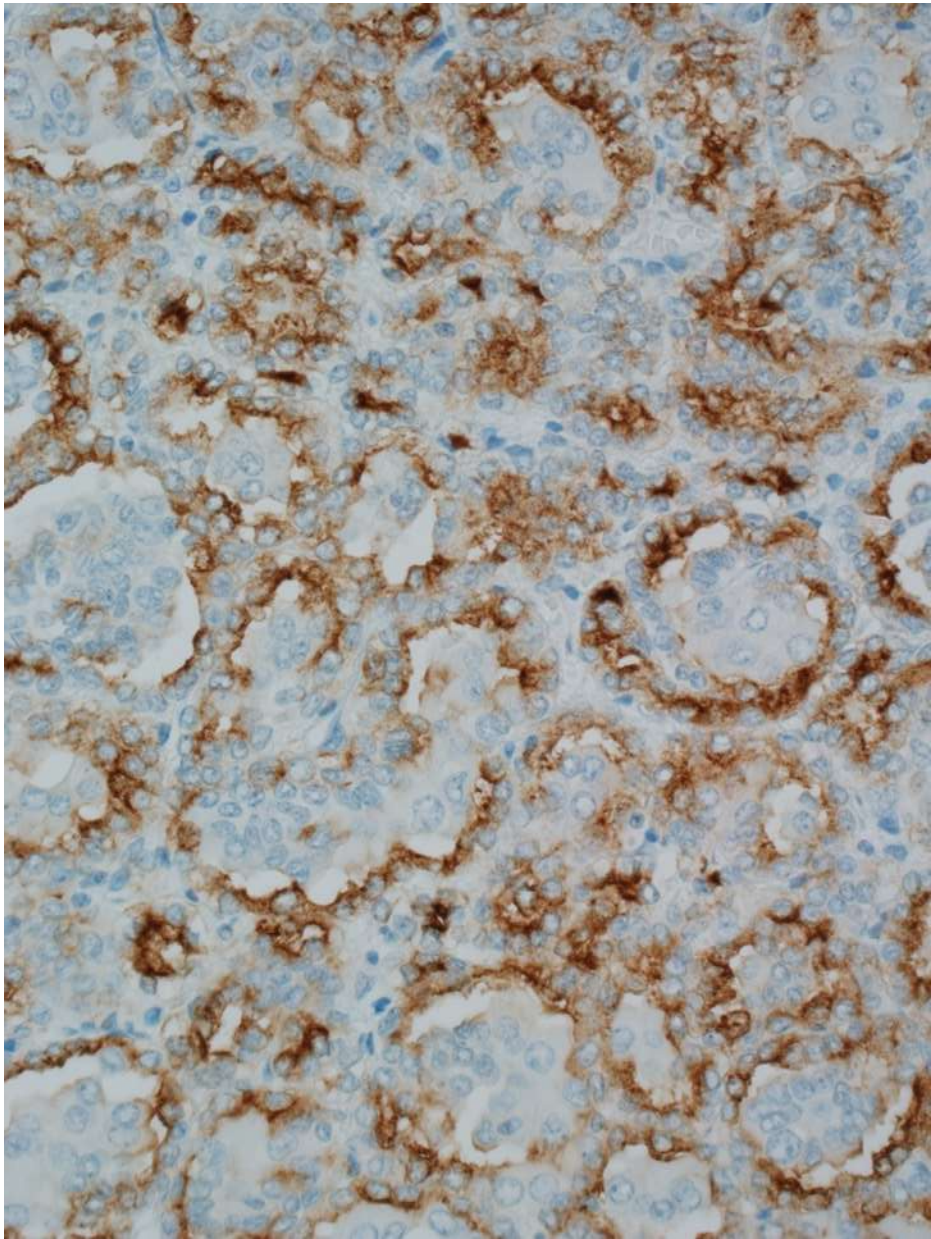
FISH: gains of 7, 17 in 11/11 tested cases
Loss of Y in 4/5
Akin to papillary RCC



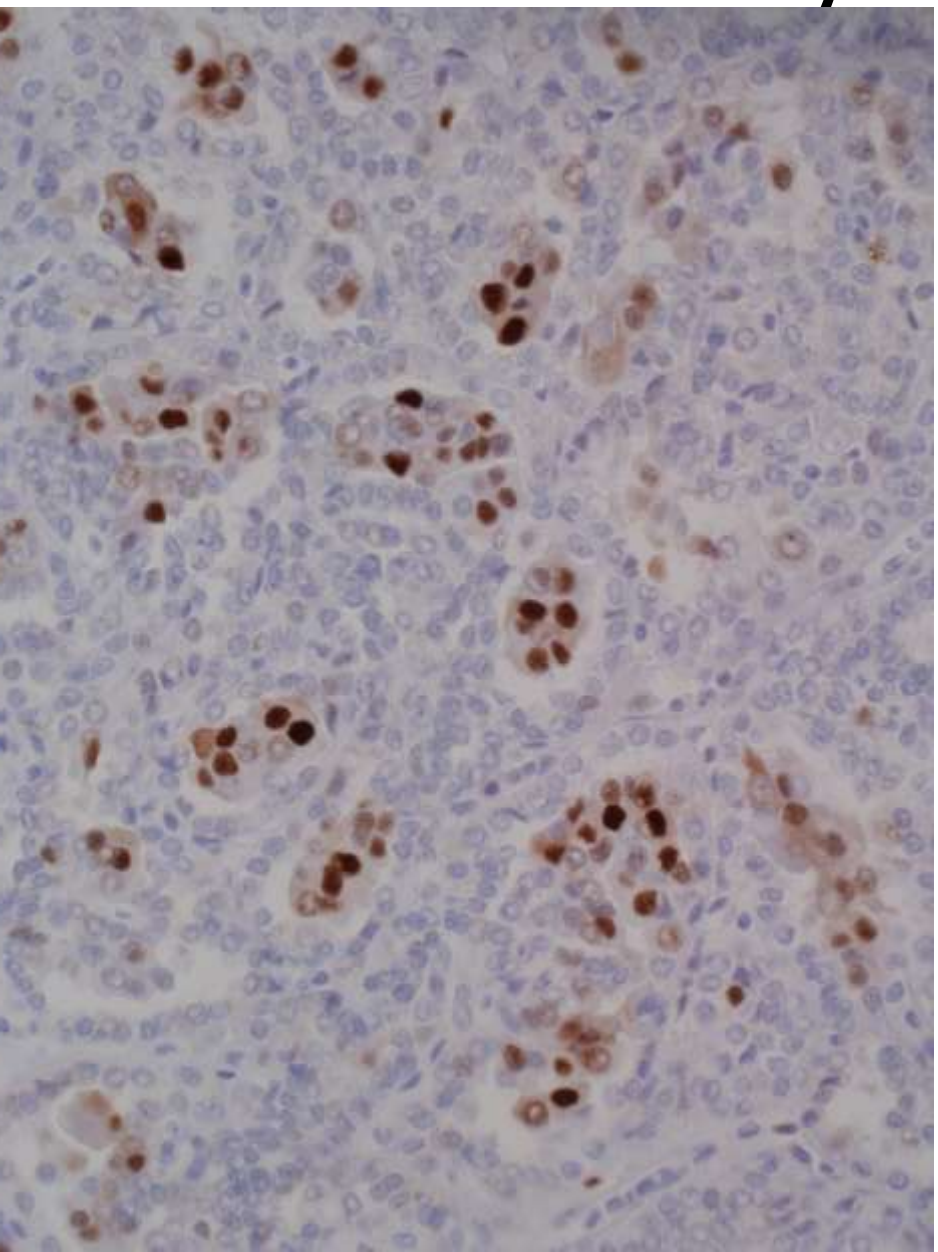
CK HMW

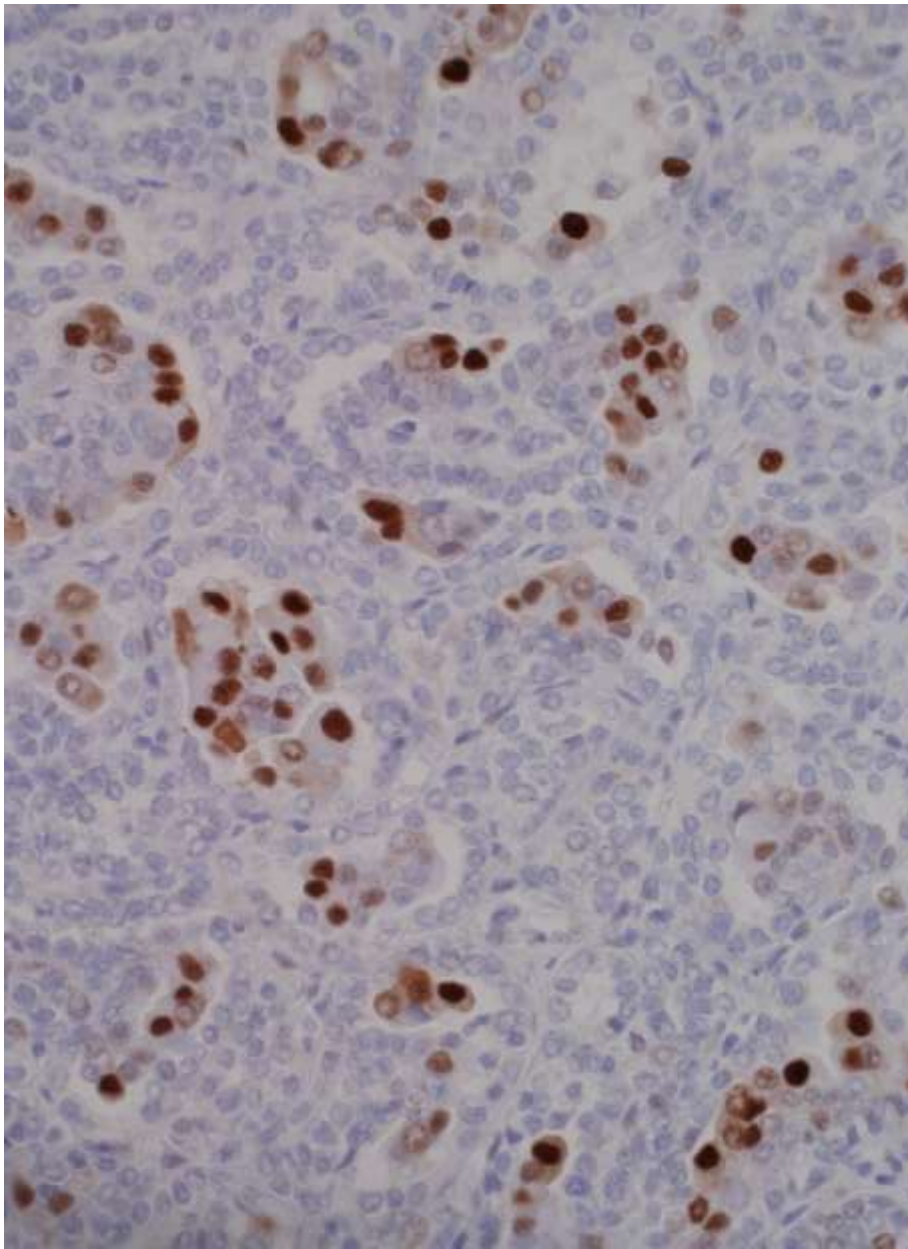


RCC



Cyclin D1



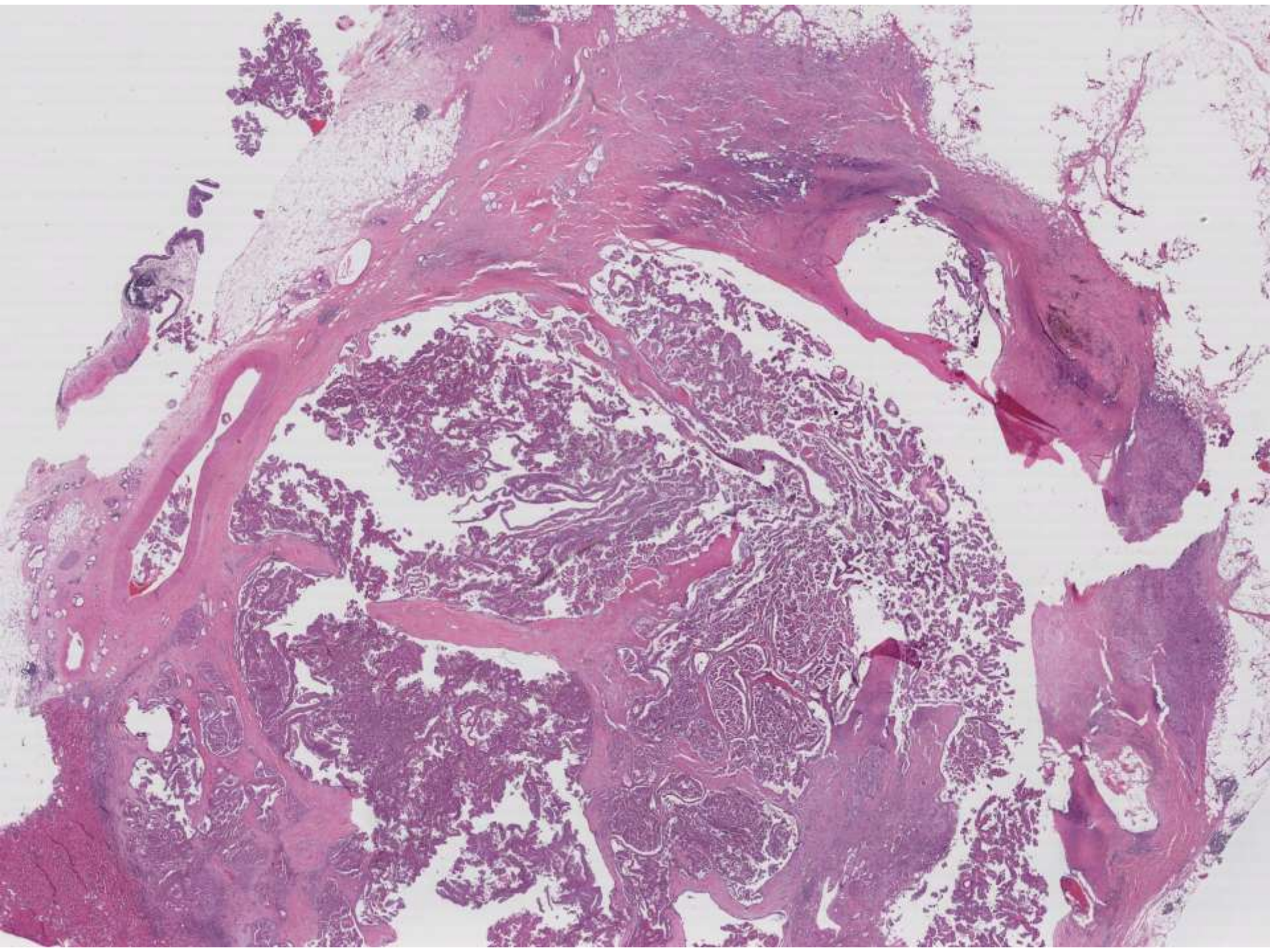


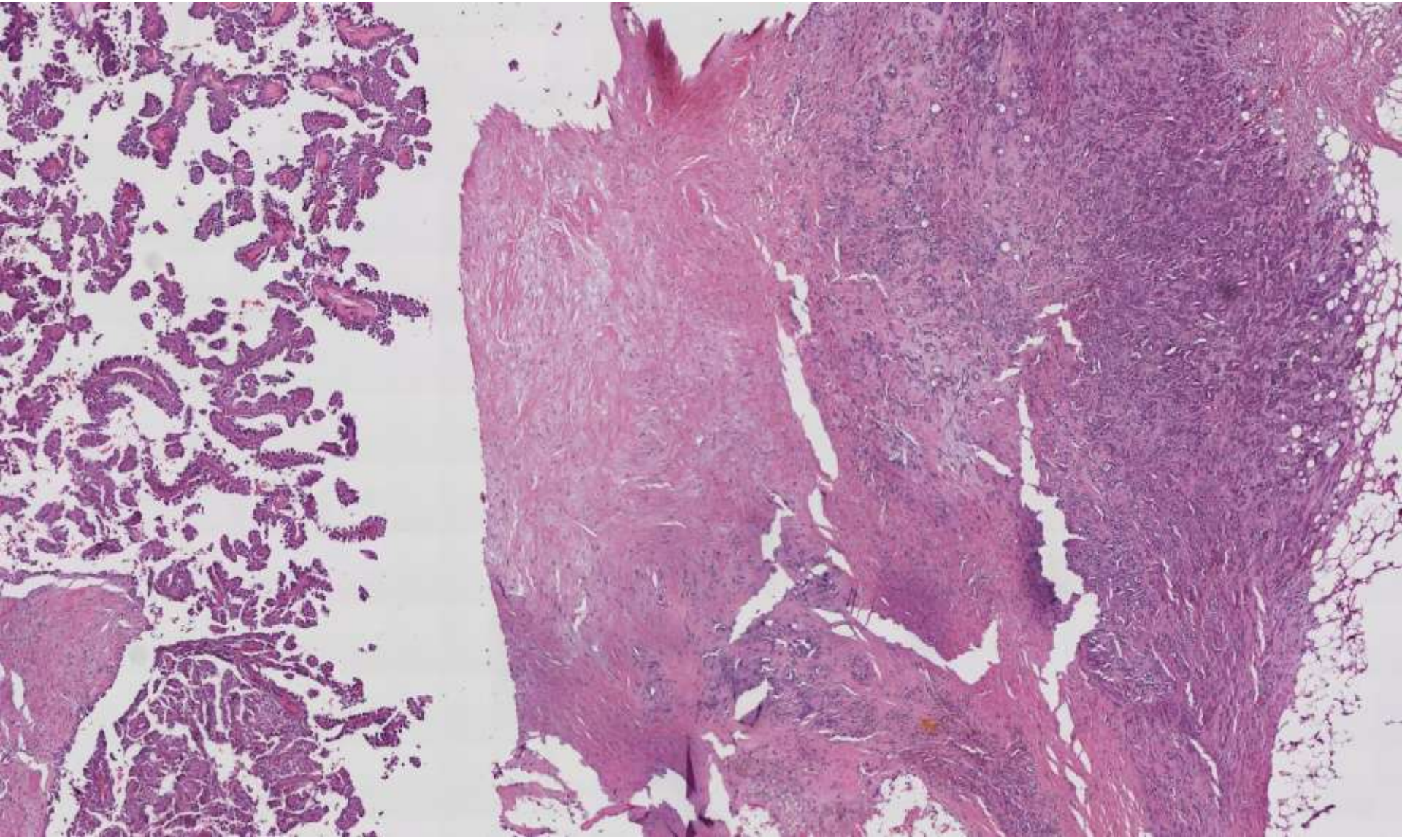
- **BIPHASIC SQUAMOID ALVEOLAR RCC**
  - Histologically and immunophenotypically distinct renal tumor.
  - Gains of chromosomes 7 and 17 with loss of Y, similar to papillary RCC.
  - Can have areas with classic Papillary RCC features.

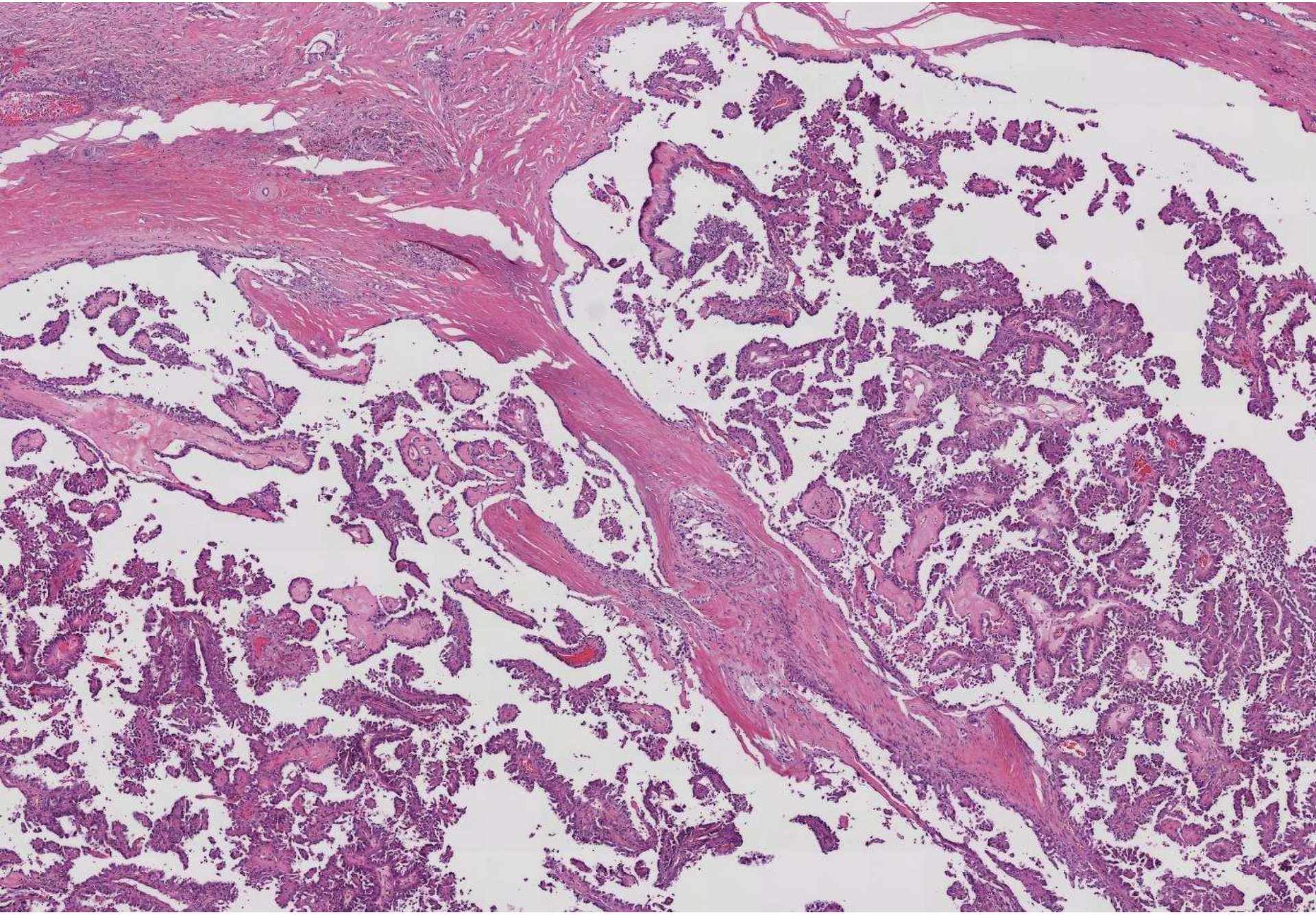
SB 6074

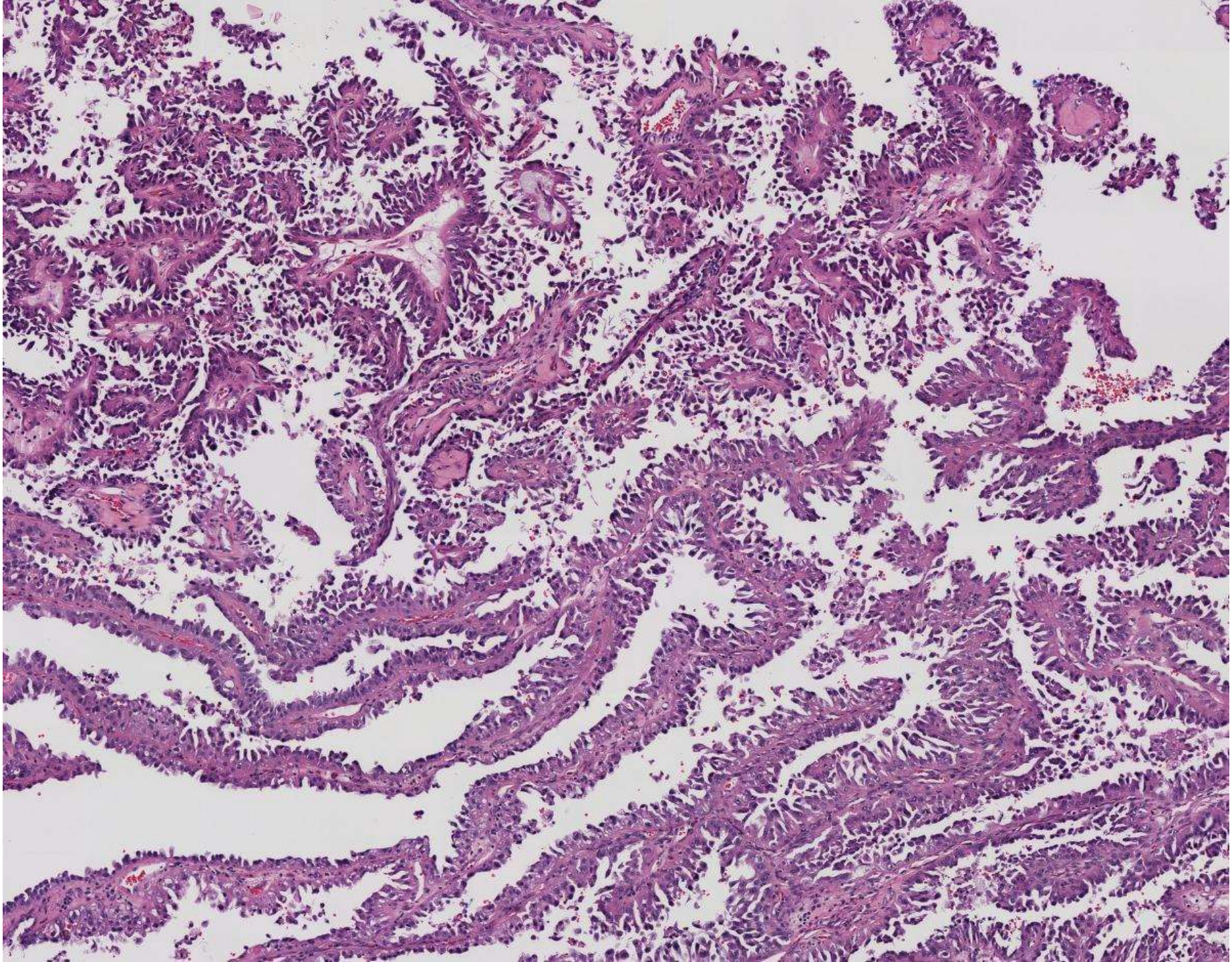
David Levy/Ankur Sangoi; Stanford; El Camino Hospital

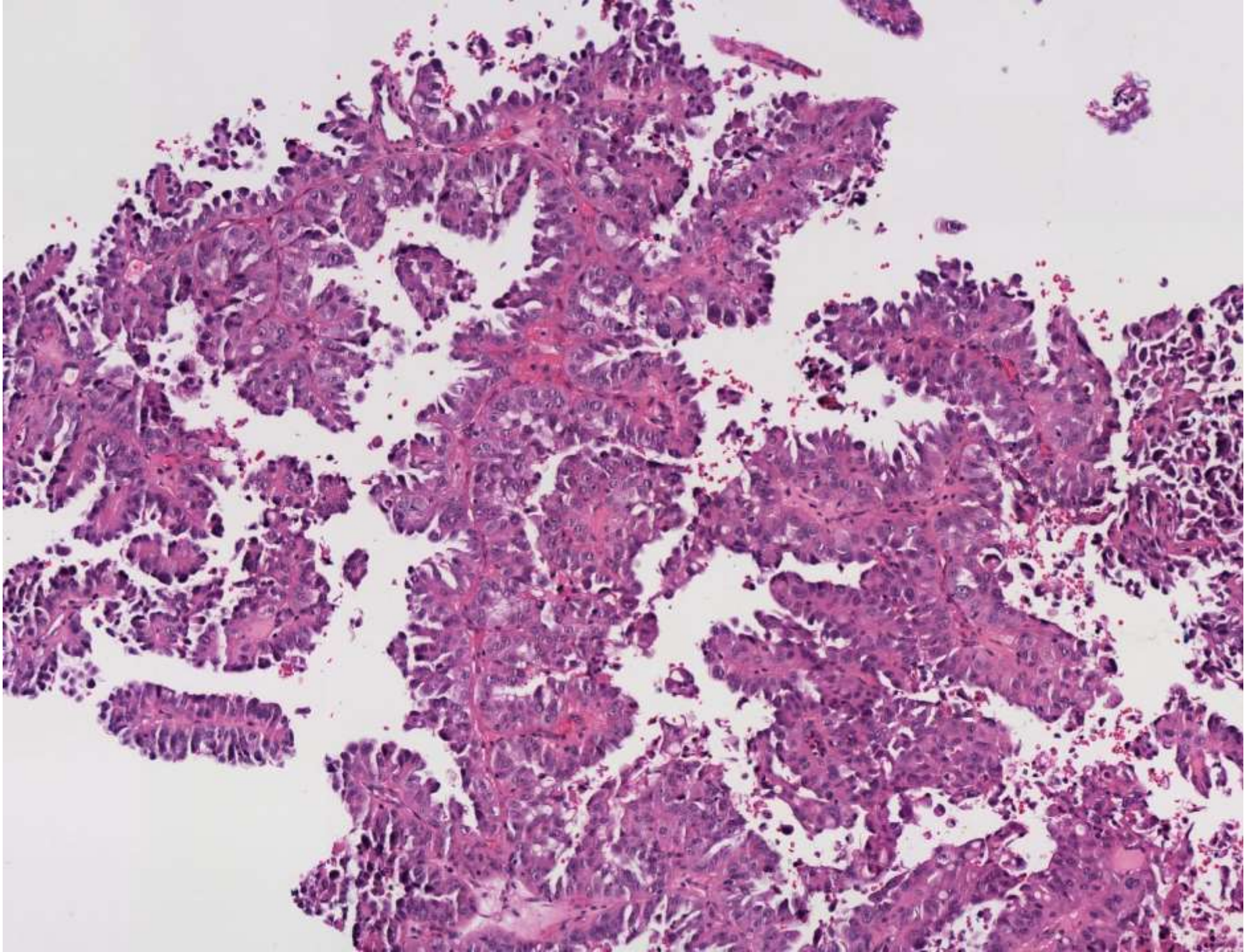
Adult male with renal mass.

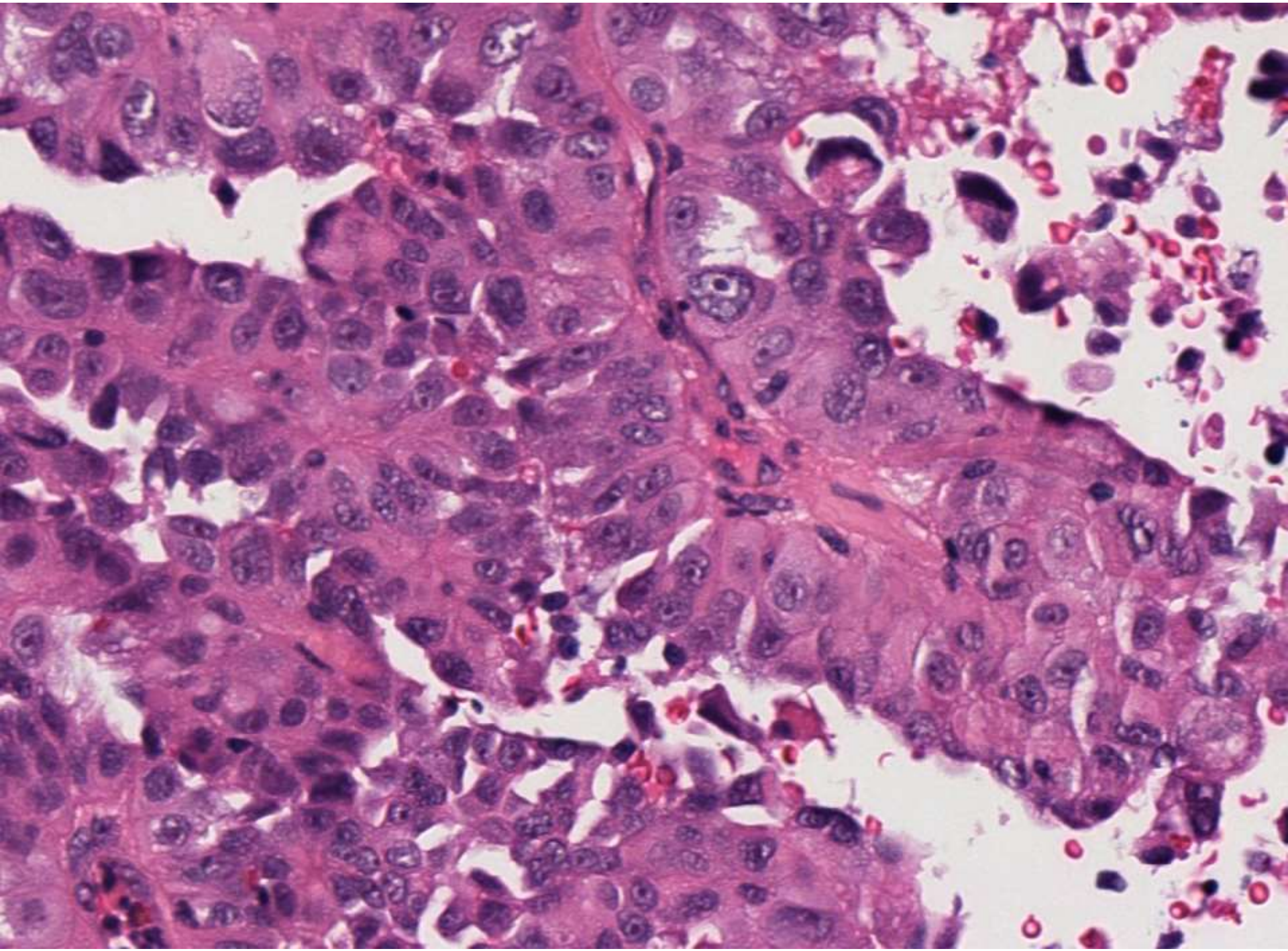


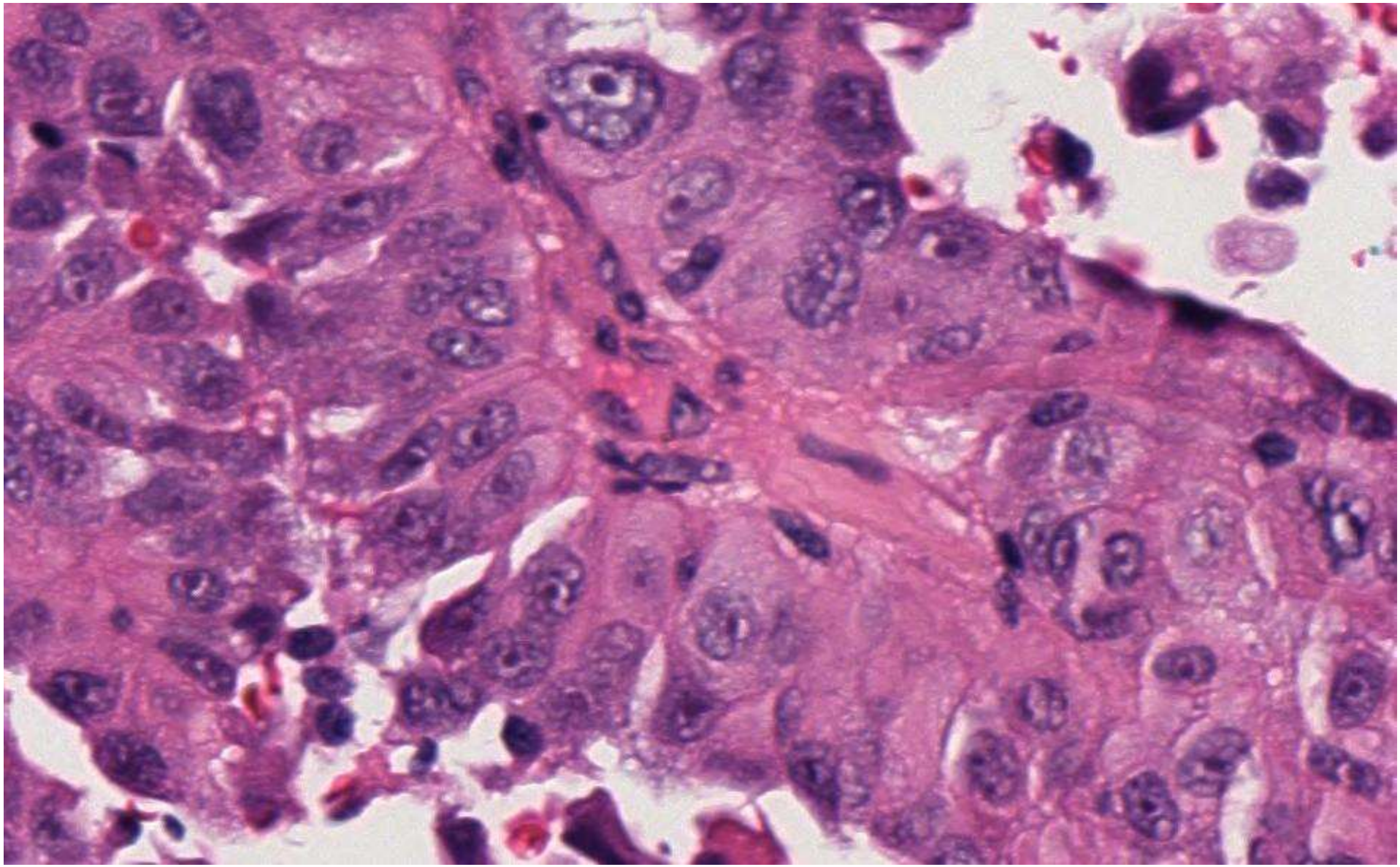






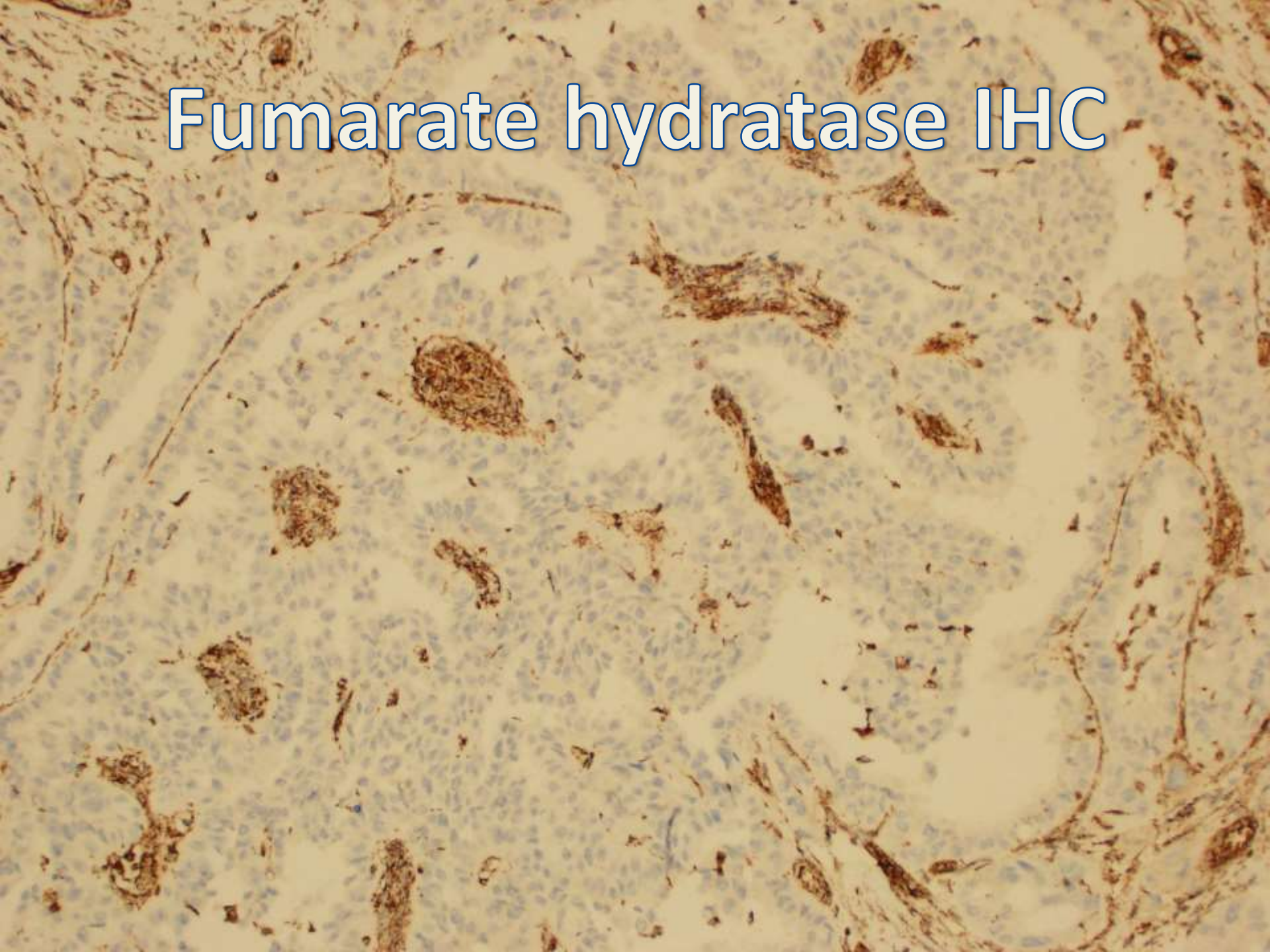






Differential Diagnosis

- Type 2 Papillary RCC
- Hereditary leiomyomatosis RCC (HLRCC) syndrome-associated RCC
- MiTF/TFE family translocation-associated RCC
- RCC unclassified


Fumarate hydratase IHC

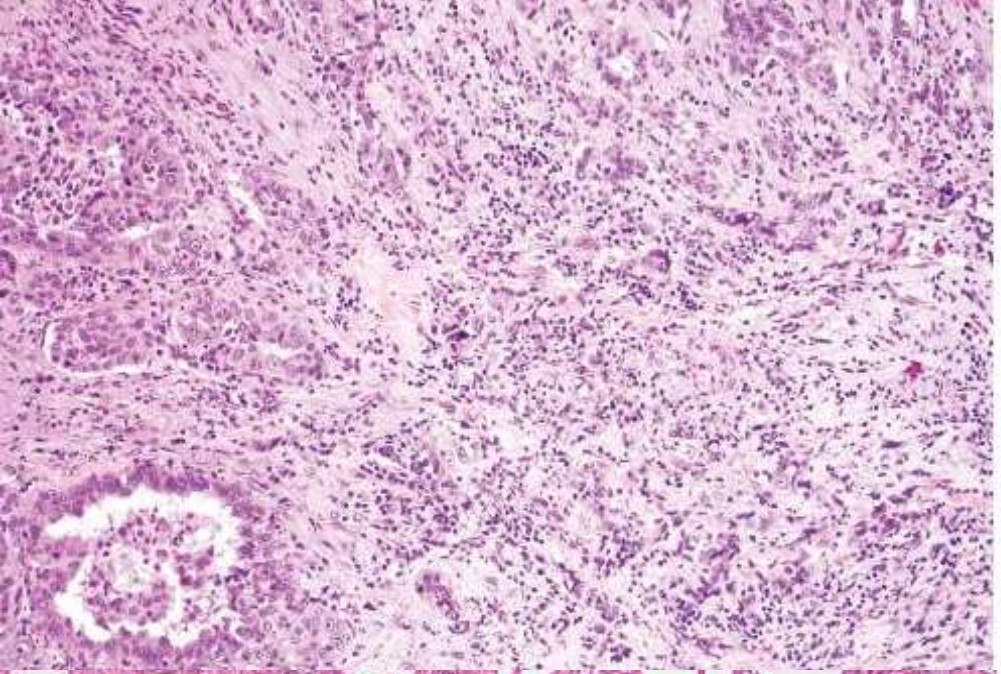
HLRCC– Syndrome Associated RCC

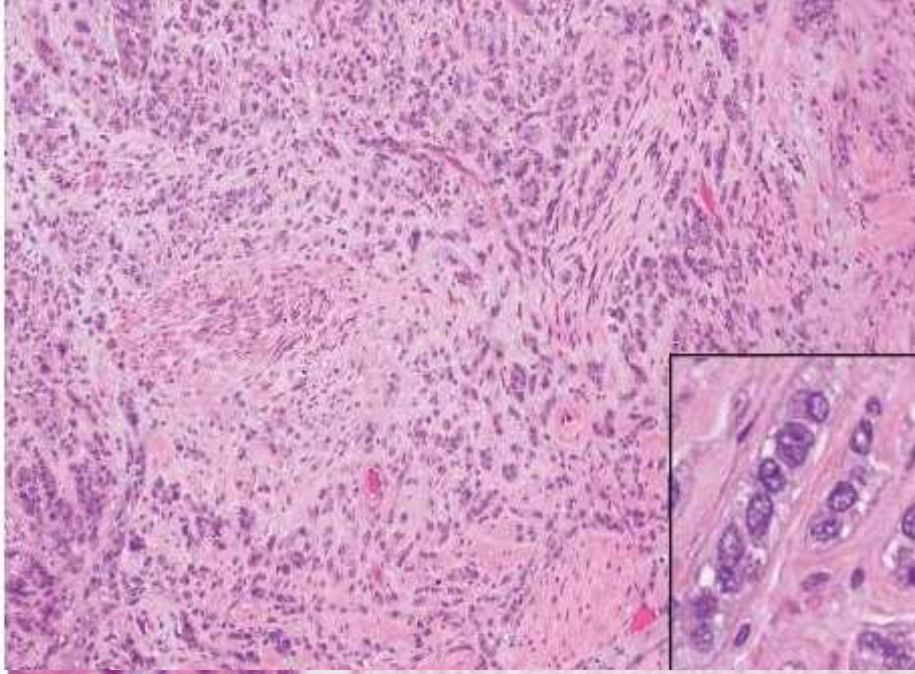
- Background
  - Classic patient:
    - Young adult with leiomyomas of the skin and uterus.
    - Increased risk for aggressive renal cancers (Avg. presents at 36-46 years of age).
  - Renal tumors are associated with an inactivating mutation of fumarate hydratase (Kreb's cycle enzyme)
- Requires germline mutation in ***FH* gene** for confirmatory Dx
- Poor prognosis
  - Tendency for early widespread dissemination

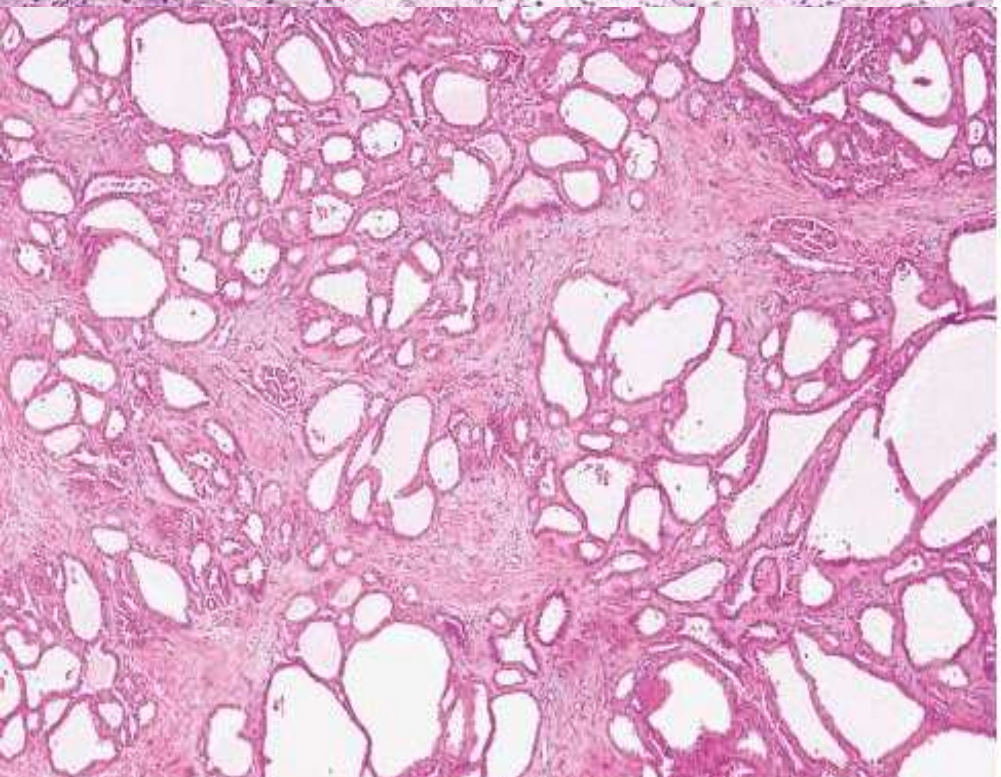
HLRCC– Syndrome Associated RCC

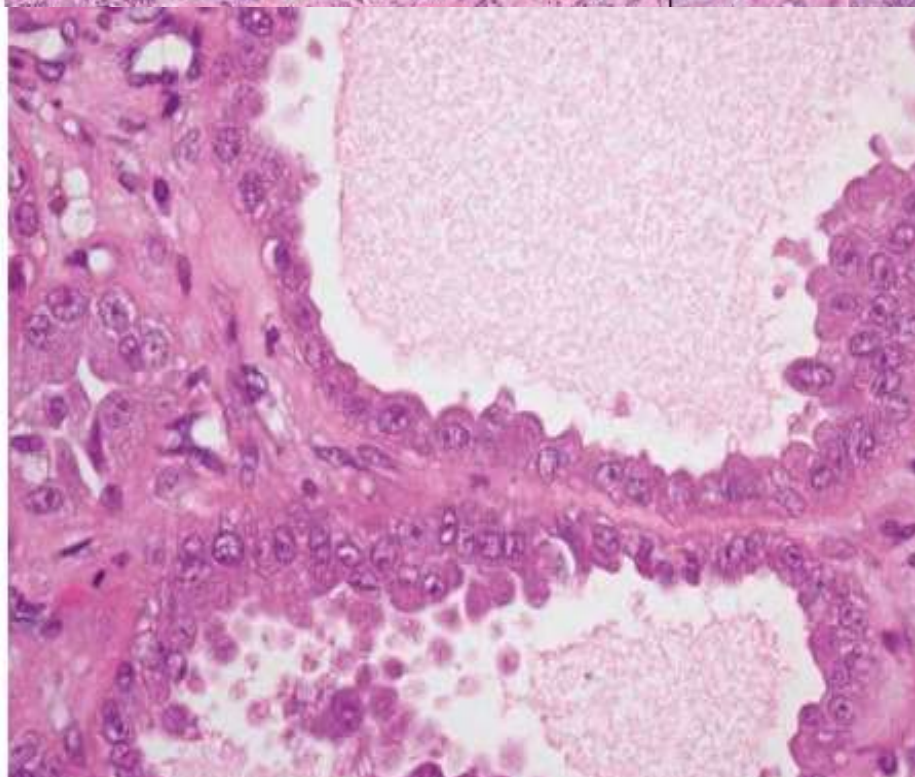
(new bonefide WHO entity)

- **Histologic Features:**
  - **Classic: Large nuclei with prominent eosinophilic nucleoli surrounded by a clear perinucleolar halo**
  - Papillary architecture with:
    - Abundant eosinophilic cytoplasm (very similar to type 2 papillary RCC)
    - Hyalinized vascular cores
    - Infiltrative borders
  - Other common architectural features: solid, tubular (collecting duct-like), tubulocystic
  - IHC:
    - Fumarate Hydratase: Diffuse loss
    - 2SC: Diffusely positive





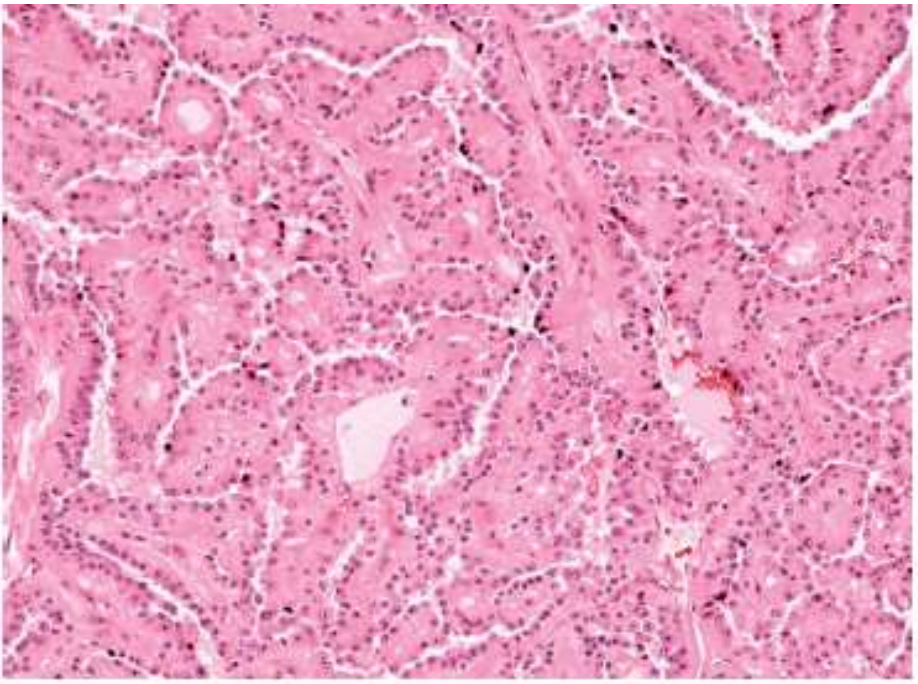


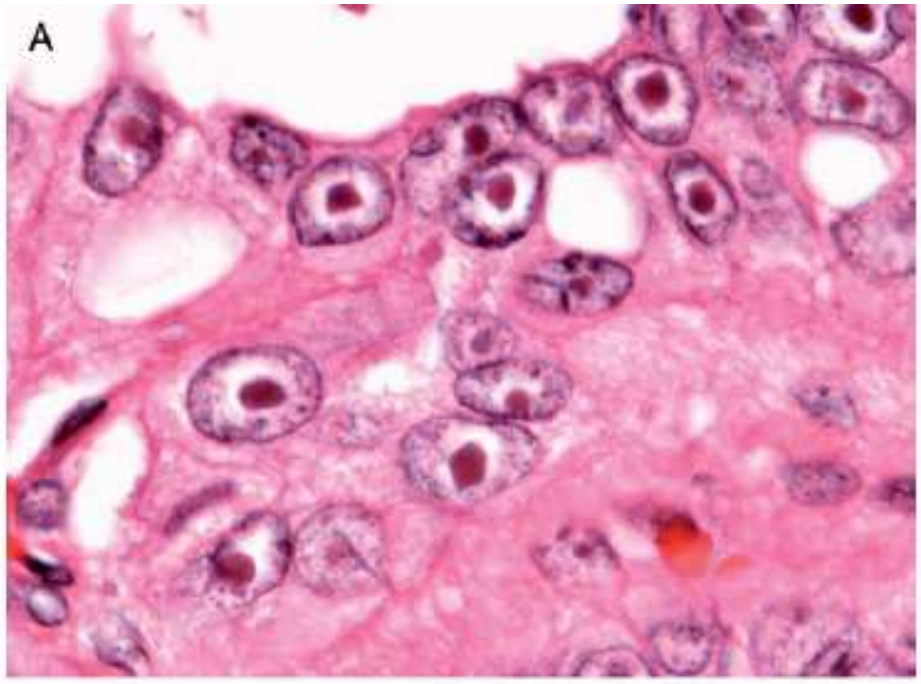


The Morphologic Spectrum of Kidney Tumors in Hereditary Leiomyomatosis and Renal Cell Carcinoma (HLRCC) Syndrome

Maria J. Merino, MD, Carlos Torres-Cabala, MD,* Peter Pinto, MD,† and William Marston Linehan, MD†*

Am J Surg Pathol • Volume 31, Number 10, October 2007



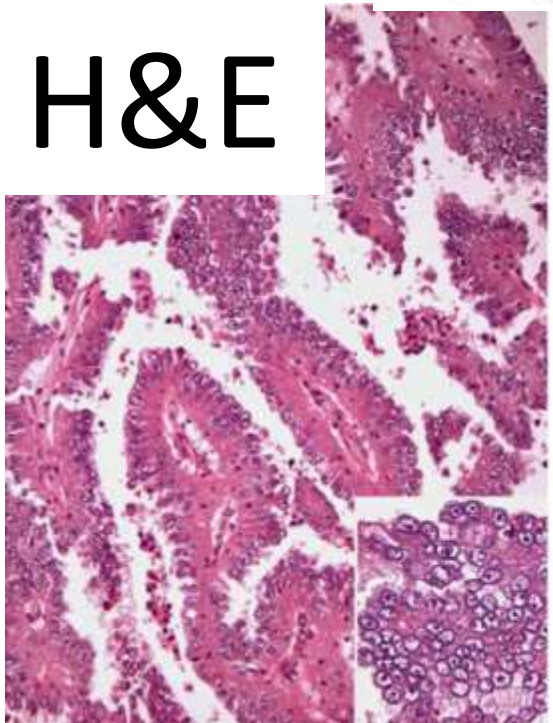


Fumarate Hydratase–deficient Renal Cell Carcinoma Is Strongly Correlated With *Fumarate Hydratase* Mutation and Hereditary Leiomyomatosis and Renal Cell Carcinoma Syndrome

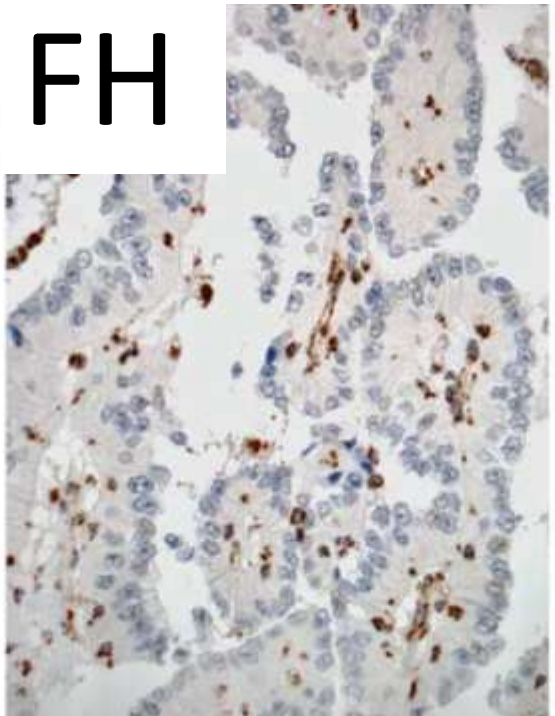
Kiril Trpkov, MD, FRCPC, Ondrej Hes, MD, PhD,† Abbas Agaimy, MD,‡ Michael Bonert, MD, FRCPC,* Petr Martinek, PhD,† Cristina Magi-Galluzzi, MD, PhD,§ Glen Kristiansen, MD,‖ Christine Lüders, MD,‖ Gabriella Nesi, MD,¶ Eva Compérat, MD,# Mathilde Sibony, MD,** Daniel M. Berney, MD,†† Rohit Mehra, MD,‡‡ Fadi Brimo, MD, FRCPC,§§ Arndt Hartmann, MD,‡ Arjumand Husain, MD, FRCPC,* Norma Frizzell, PhD,‖‖ Kirsten Hills, FRCPA,¶¶ Fiona Maclean, FRCPA,## Bhuvana Srinivasan, MD, FRCPA,*** and Anthony J. Gill, MD, FRCPA†††*

Am J Surg Pathol • Volume 40, Number 7, July 2016

H&E



FH



2SC

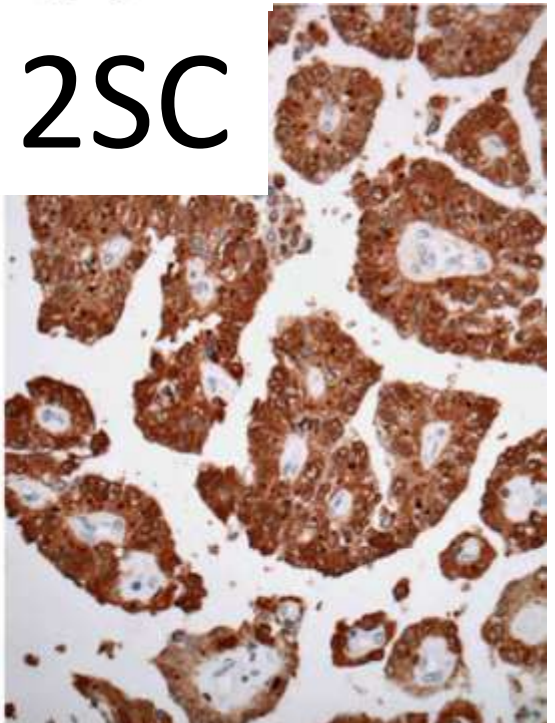


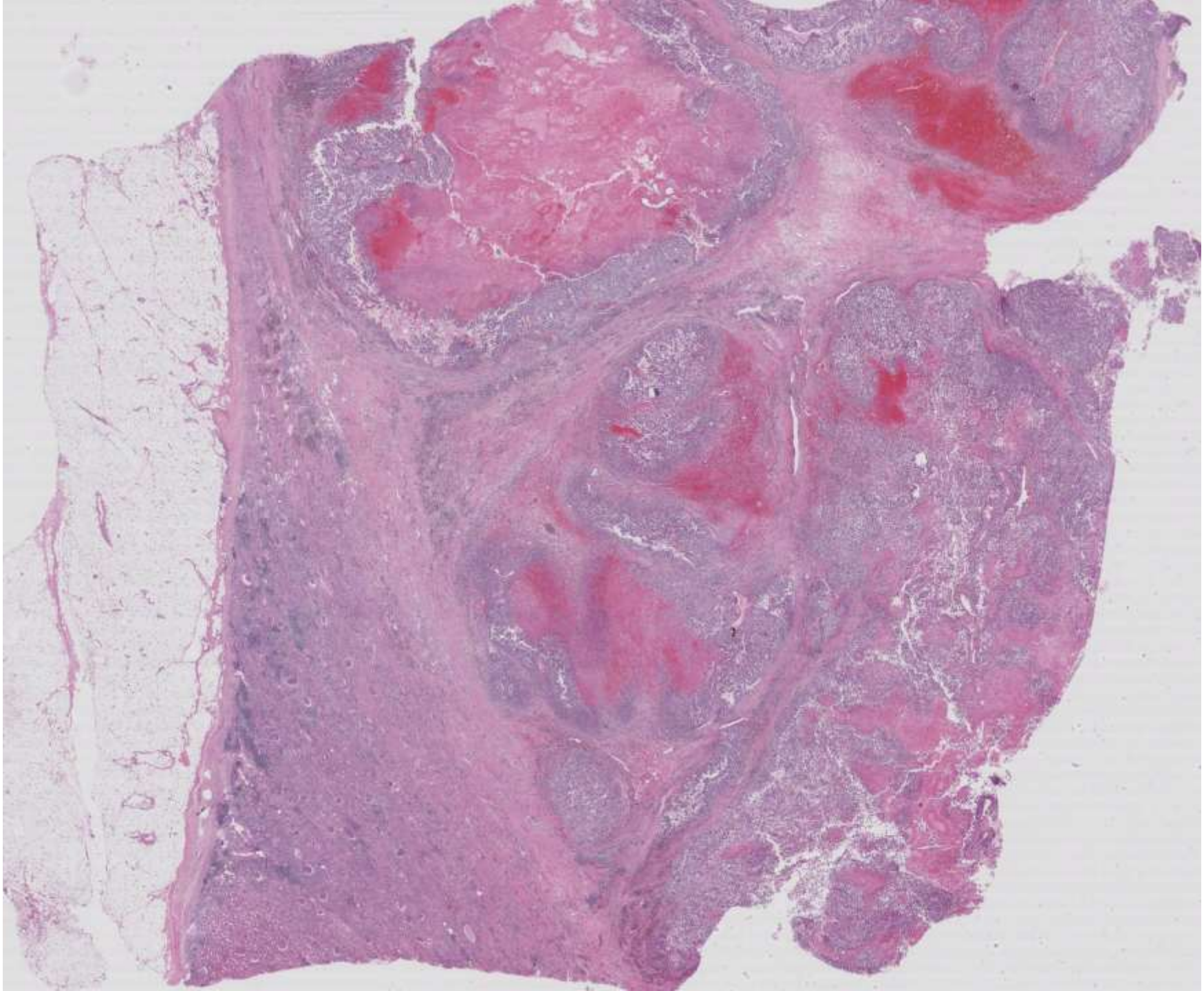
TABLE 2. Clinical Characteristics of Patients With FH-deficient RCC

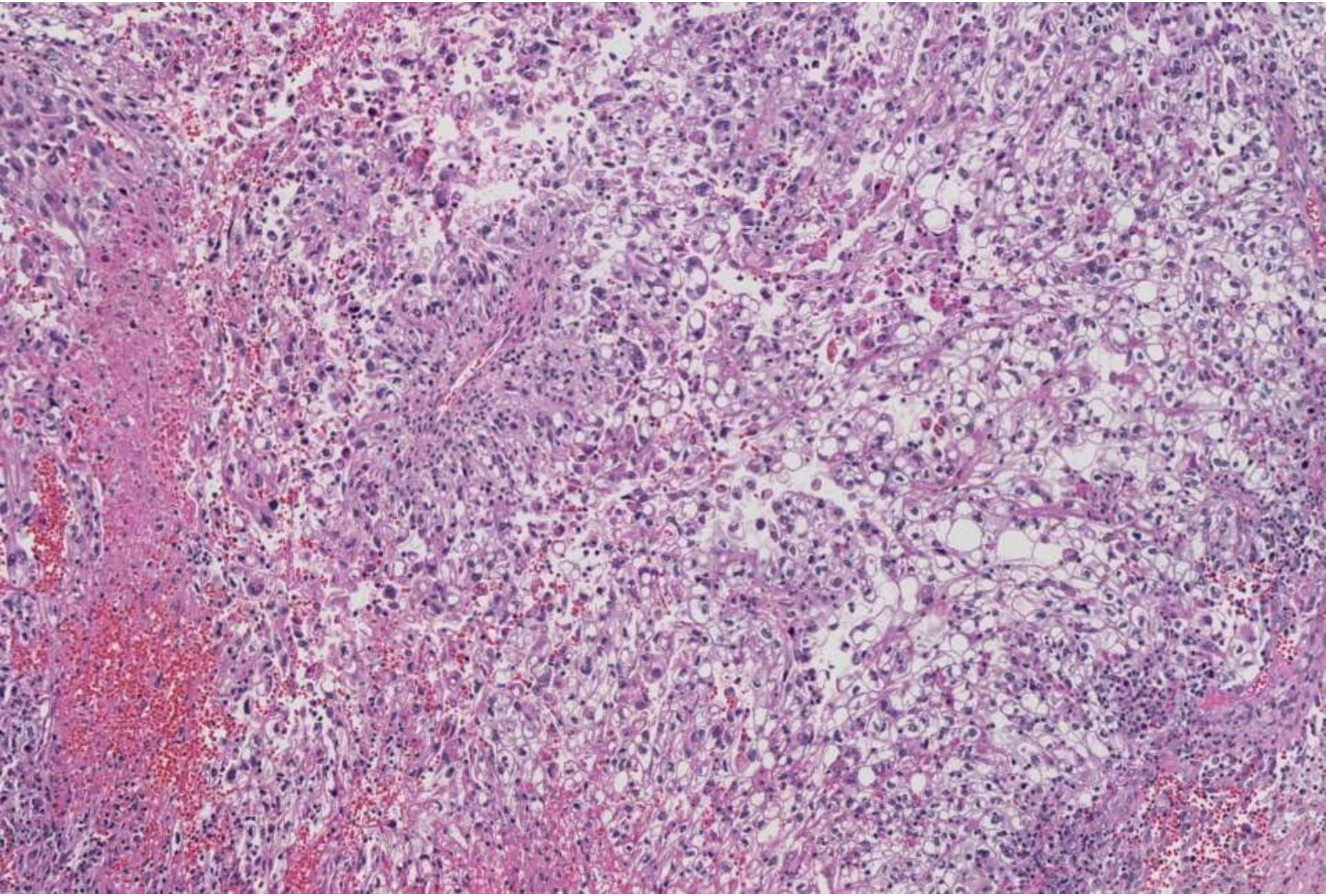
Pt	Sex	Age	Leiomyomas	Family History	Side	Greatest Size (cm)	pTNM Stage	Metastasis	Follow-up (mo)	Status
1	M	65	No	Unk	L	18	T3aN1	Liver, lung, spleen, and bone at presentation	3	DOD
2	M	62	Unk	Unk	L	10	T2aN0		114	AND
3	M	60	No	Unk	R	8	T2aNX		7	AND
4	F	25	Uterine at 25 (FH−)	Yes*	R	4	T1aNX		17	AND
5	M	44	Unk	Yes†	R	4.5	T3aN0		7	AND
6	M	25	Skin	Yes‡	R	14	T3aN1	Liver, flank wall at 6 mo	64	DOD
7	F	32	Uterine	Yes§	L	3	T1aNX	Left para-aortic lymph nodes	56	AWD
8	M	35	Unk	Unk	R	10	T3aN1	Para-aortic lymph node	18	DOD
9	M	51	Unk	Unk	R	14	NA		96	AND
10	M	46	Unk	Unk	L	10	T3aN1	Bone (multiple)	24	DOD
11	M	44	Unk	Unk	NA	8	NA	Lung, lymph nodes at 6 mo	6	AWD
12	F	40	Unk	Unk	L	9	T3aN1	Peritoneum, retroperitoneum, lymph nodes, omentum	24	DOD
13	M	52	Unk	Unk	R	14	T4N1	Lung, mediastinum	13	DOD
14	M	41	No	Unk	L#	1	T1aNX	Similar hilar tumor resected after 1 y (see below)	13	AWD
		42	No	Unk	L	4	T3aN1	Perihilar lymph node	13	
15	F	21	No	Yes‖	L	5.5	T3aNX		12	AND
16	M	42	Unk	No	L	10	T2N0	Aorta involvement	18	DOD
17	M	21	No	Unk	L	5	T4N1M1	Bone (rib), retroperitoneal nodes	4	AWD
18	M	46	Unk	Unk	NA	NA	T3bN1M1	NA	12	DOD
19	F	50	Unk	Unk	L	10.9	T2N0		18	AND
20	F	59	Skin, uterine	Unk	L	12.5	T4N1M1	Liver, lung, supraclavicular, and iliac lymph nodes (direct into adrenal, pancreas)	1	DOD
21	F	51	Skin, uterine at 31	Yes¶	L	1.4**	T1aNX		46	AWD
		51			R	0.9	T1aNX		46	
22	M	56	No	Unk	R	3.5††	T3aN0		31	AWD
	M	56	No	Unk	L	9	T2aNX			
	M	57	No	Unk	R	4	T1aNX	Probable local recurrence (same side tumor)		
23	F	43	Uterine at 38 (FH−)	Unk	L	12.5	T3aN1M1	Bone (tibia)	1	AWD

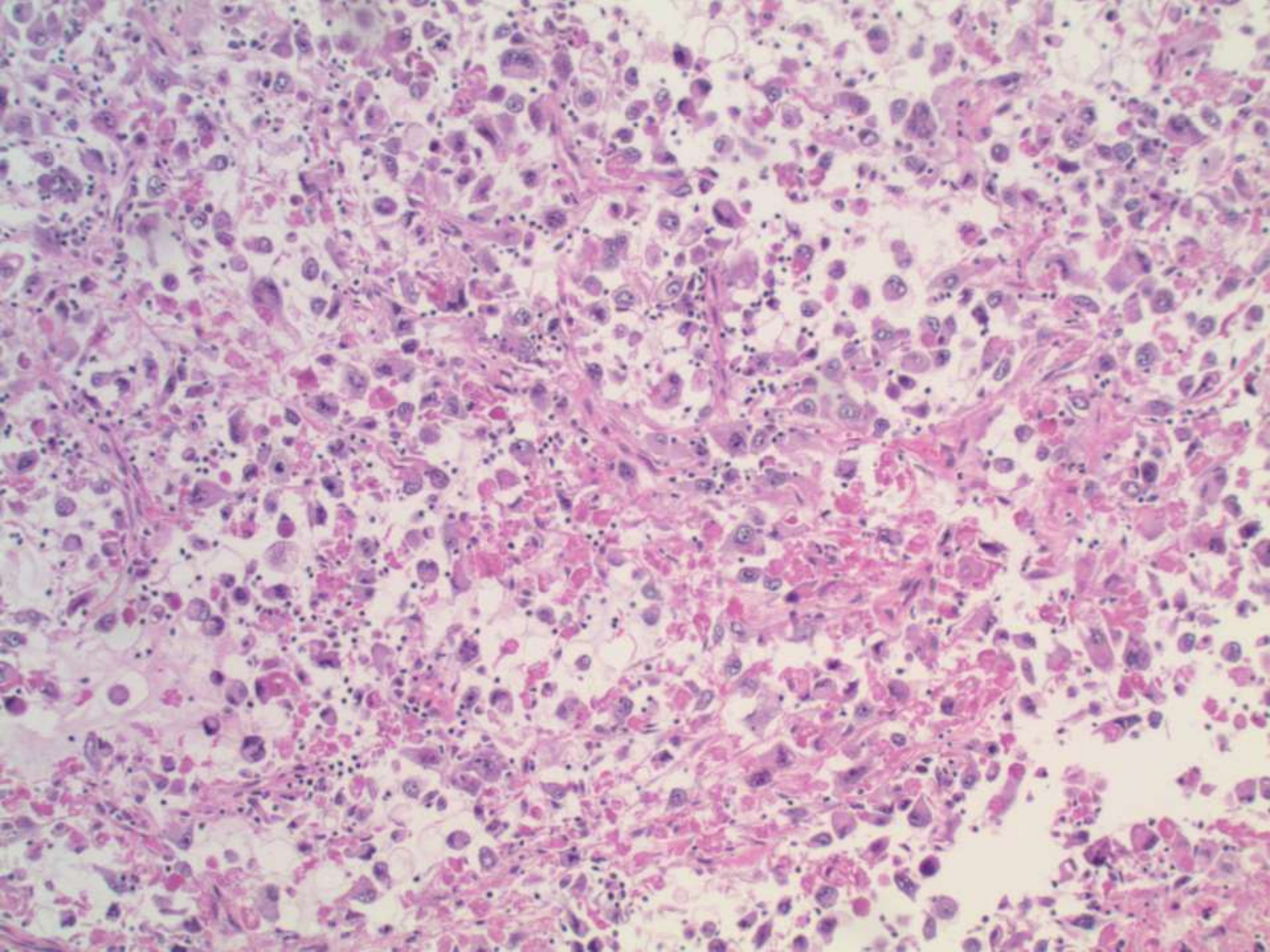
SB 6075

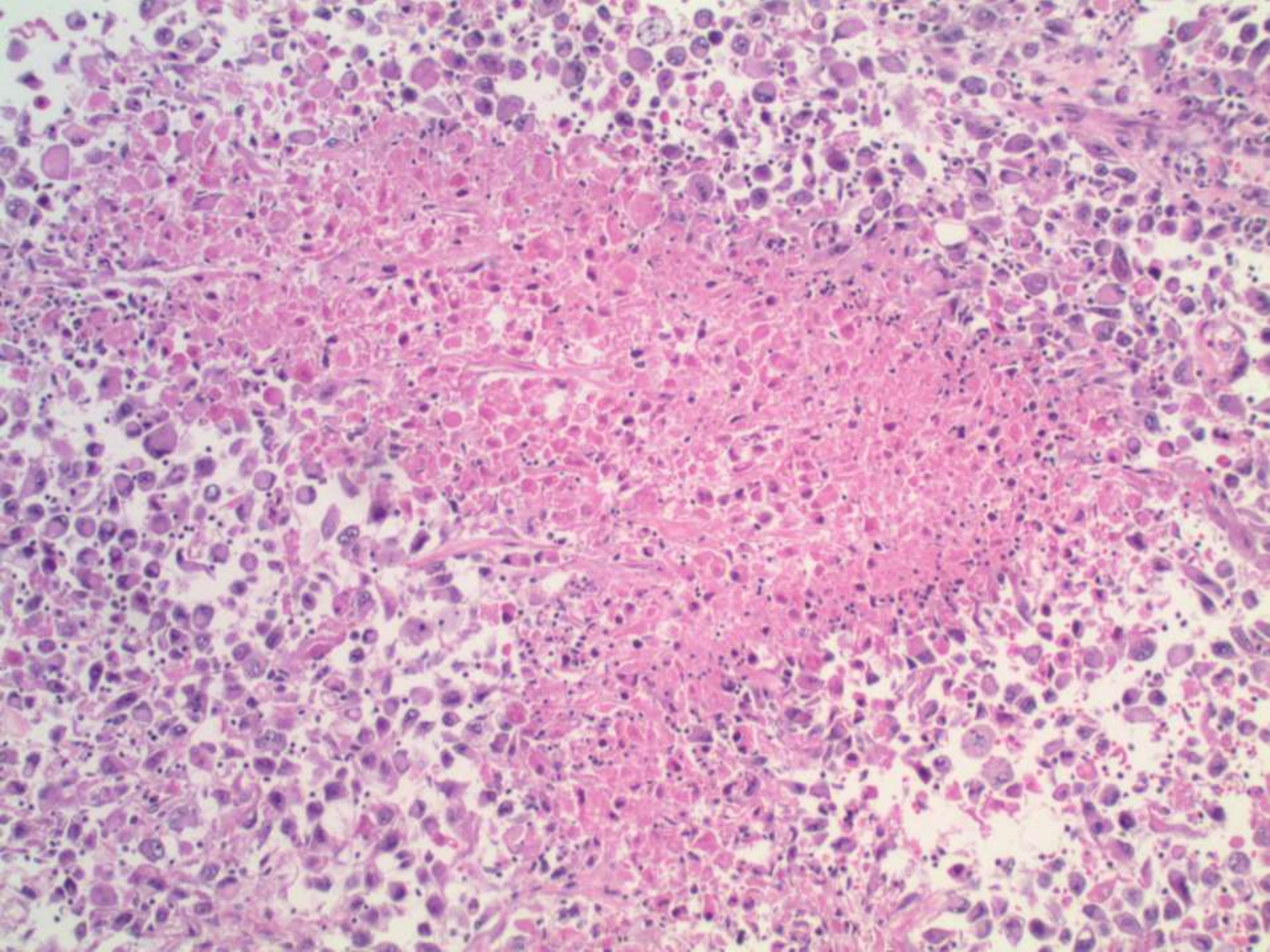
Ankur Sangoi; El Camino Hospital

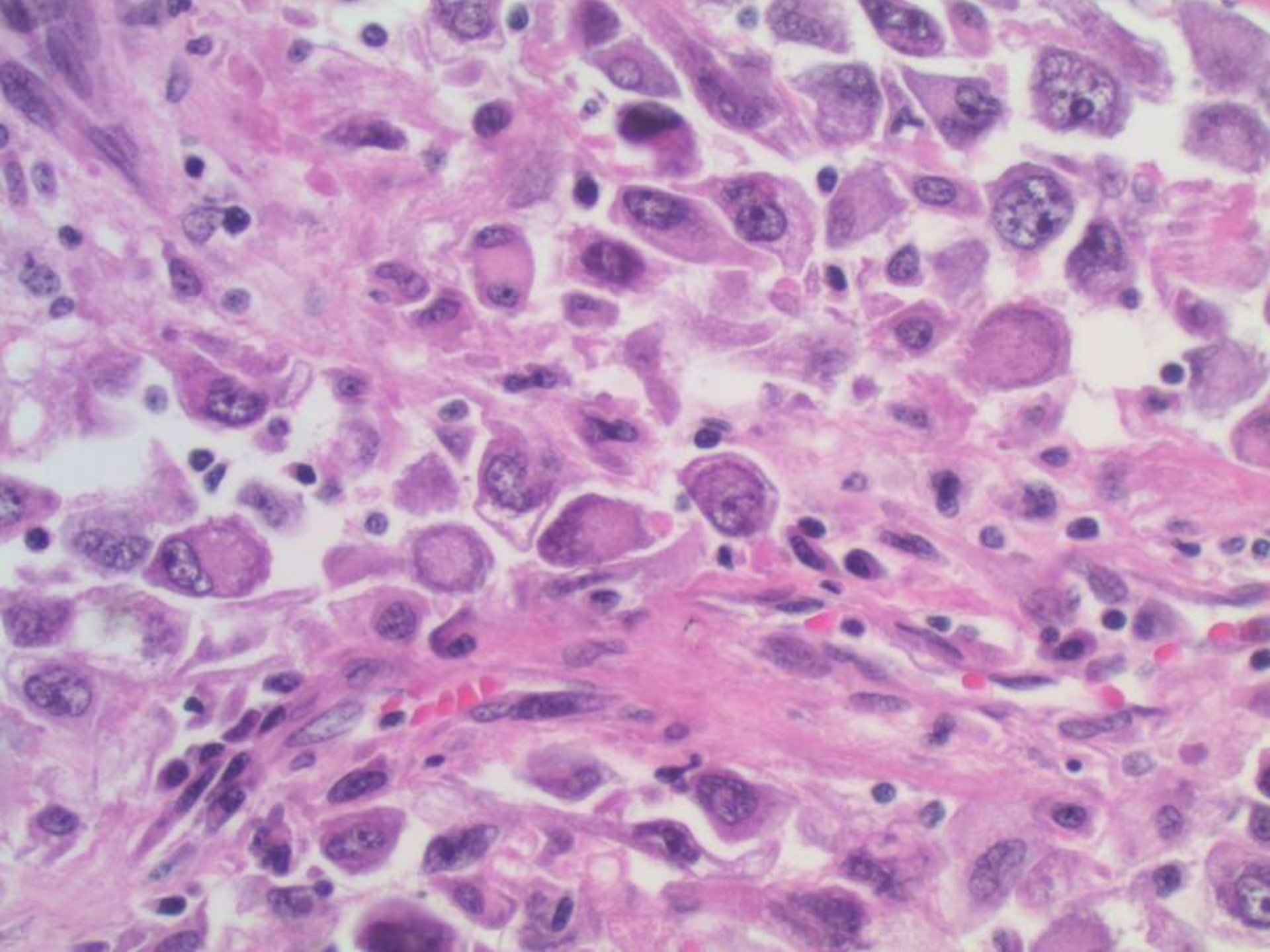
91-year-old man with 4.8 cm renal mass.

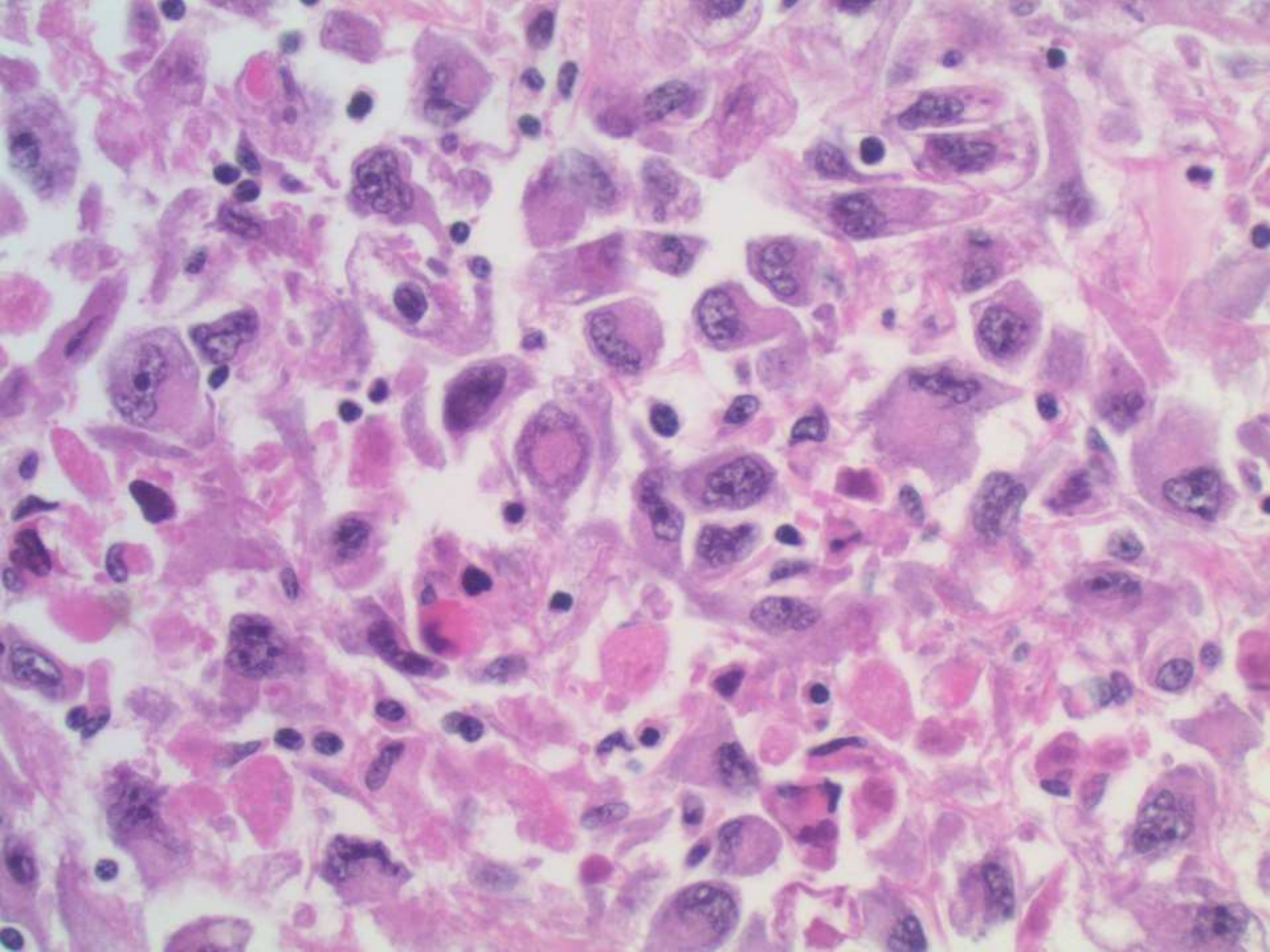












DDx

- Clear cell RCC, ISUP grade 4 of 4
- Clear cell RCC, with sarcomatoid differentiation
- Clear cell RCC, with rhabdoid differentiation
- Mixed clear RCC + “rhabdoid tumor”

Rhabdoid Differentiation Is Associated With Aggressive Behavior in Renal Cell Carcinoma

A Clinicopathologic Analysis of 76 Cases With Clinical Follow-up

Christopher G. Przybycin, MD,† Jesse K. McKenney, MD,*† Jordan P. Reynolds, MD,* Steven Campbell, MD, PhD,† Ming Zhou, MD, PhD,‡ Matthew T. Karafa, PhD,§ and Cristina Magi-Galluzzi, MD, PhD*†*

Am J Surg Pathol • Volume 38, Number 9, September 2014

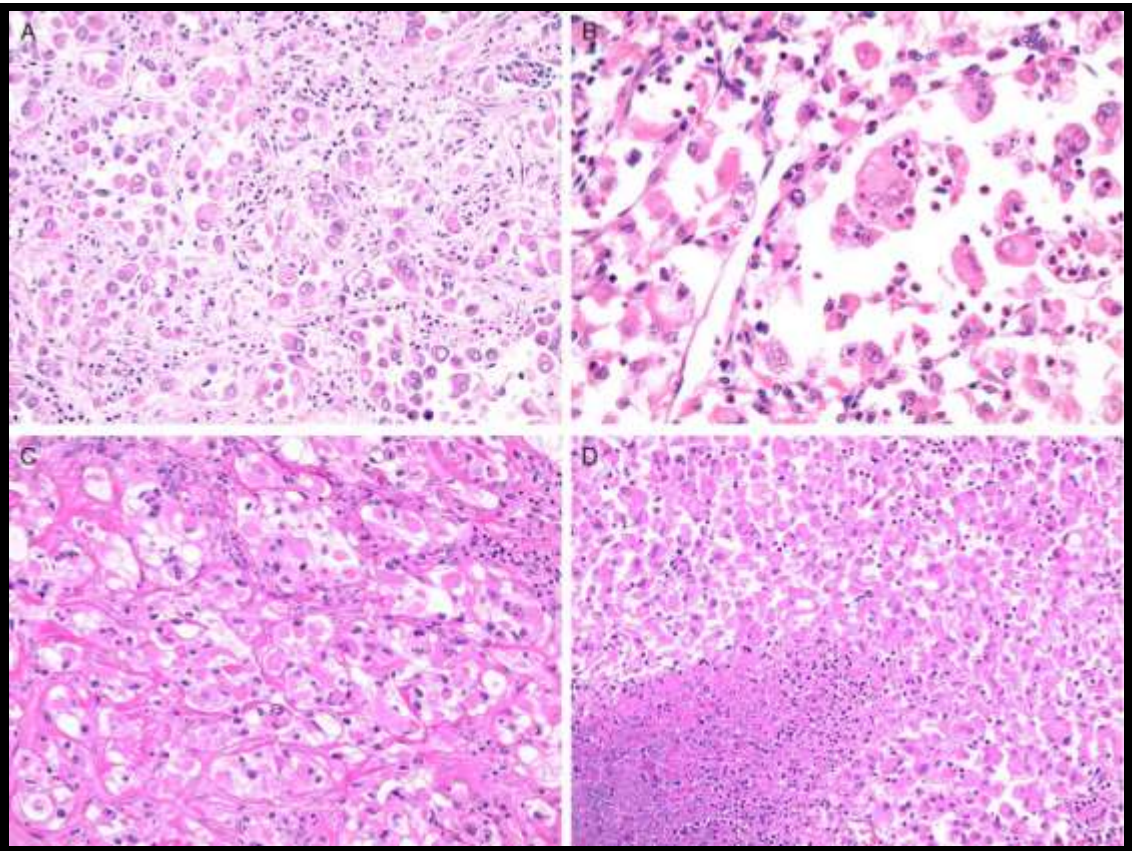


TABLE 2. Factors Associated With Death—Univariable Analysis

Factor	N	Hazard Ratio	95% CI	*P*
Rhabdoid differentiation				< 0.001
No	41	1.00	Ref	
Yes	49	8.33	3.4-20.0	
Tumor stage				< 0.001
< pT3a	37	1.00	Ref	
≥ pT3a	53	4.05	1.76-9.29	
Tumor grade*				< 0.001
3	50	1.00	Ref	
4	40	3.57	1.75-7.14	
Necrosis				< 0.001
No	42	1.00	Ref	
Yes	48	5.91	2.61-13.40	
Node involvement				0.028
No	21	1.00	Ref	
Yes	10	3.23	1.13-9.21	
Distant metastasis				0.034
No	57	1.00	Ref	
Yes	33	2.05	1.05-4.00	

*Grade of the nonrhabdoid component in tumors with rhabdoid differentiation.

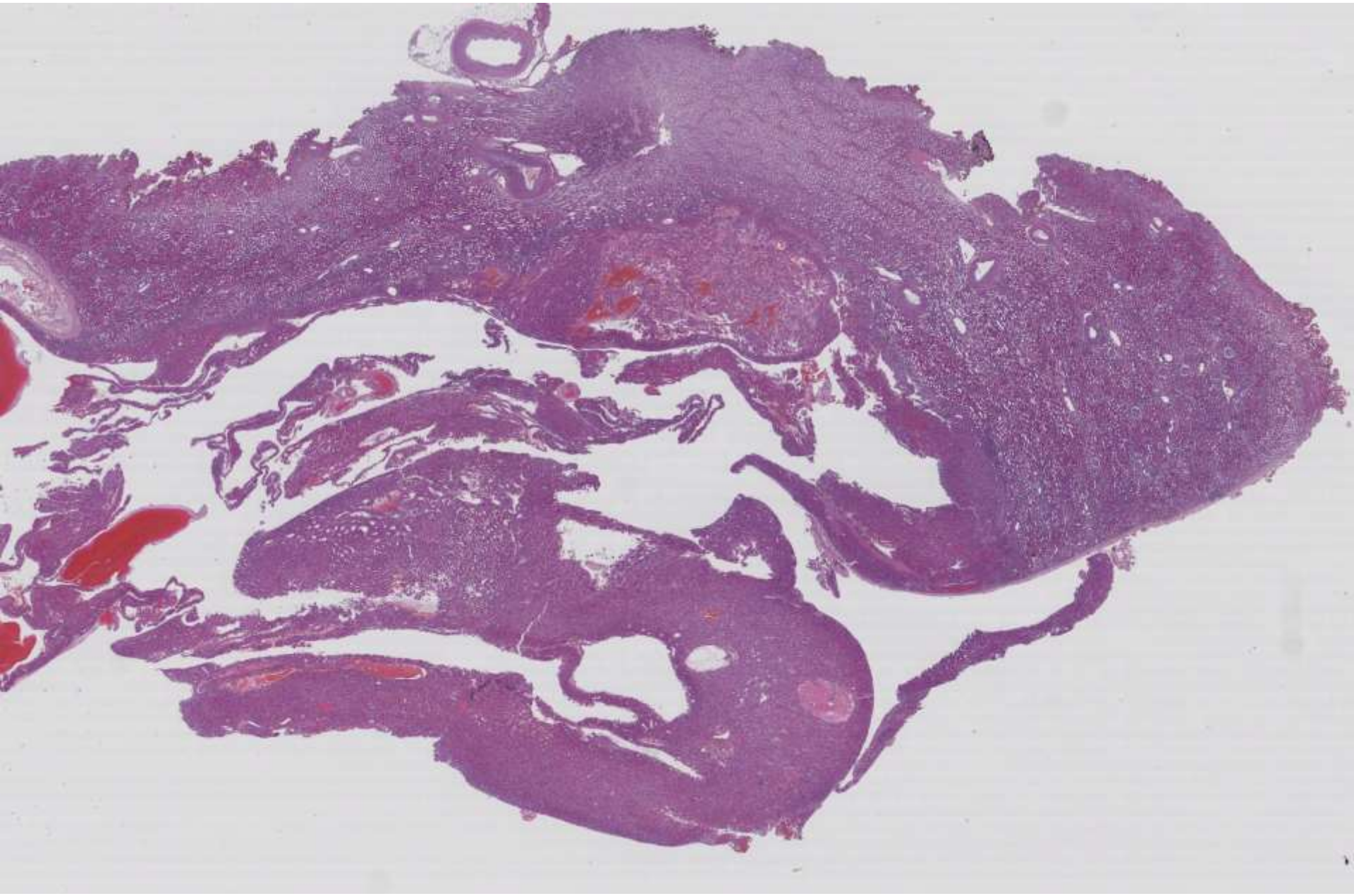
RCC with plasmacytoid differentiation

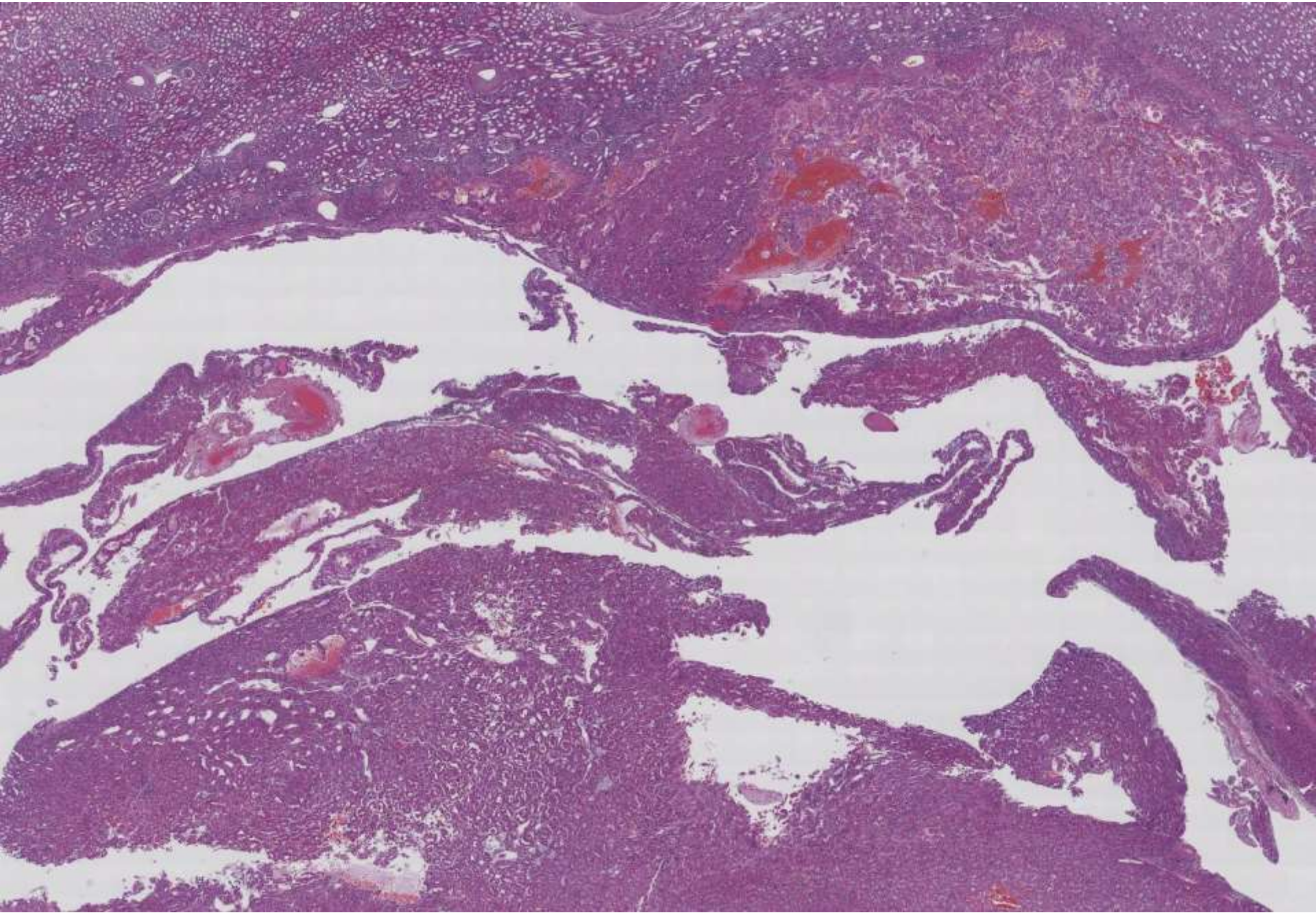
- **Indicator of aggressive behavior**
- **Independent of its association with higher tumor stage and grade**
- **Delahunt B et al. Members of the ISUP Renal Tumor Panel. The International Society of Urological Pathology (ISUP) grading system for renal cell carcinoma and other prognostic parameters. Am J Surg Pathol. 2013 Oct;37(10):1490-504:**
  - Consensus recommendation to report rhabdoid differentiation when present
    - If underlying RCC subtype present, incorporate it into diagnosis
      - *e.g.: Clear cell RCC with rhabdoid differentiation*

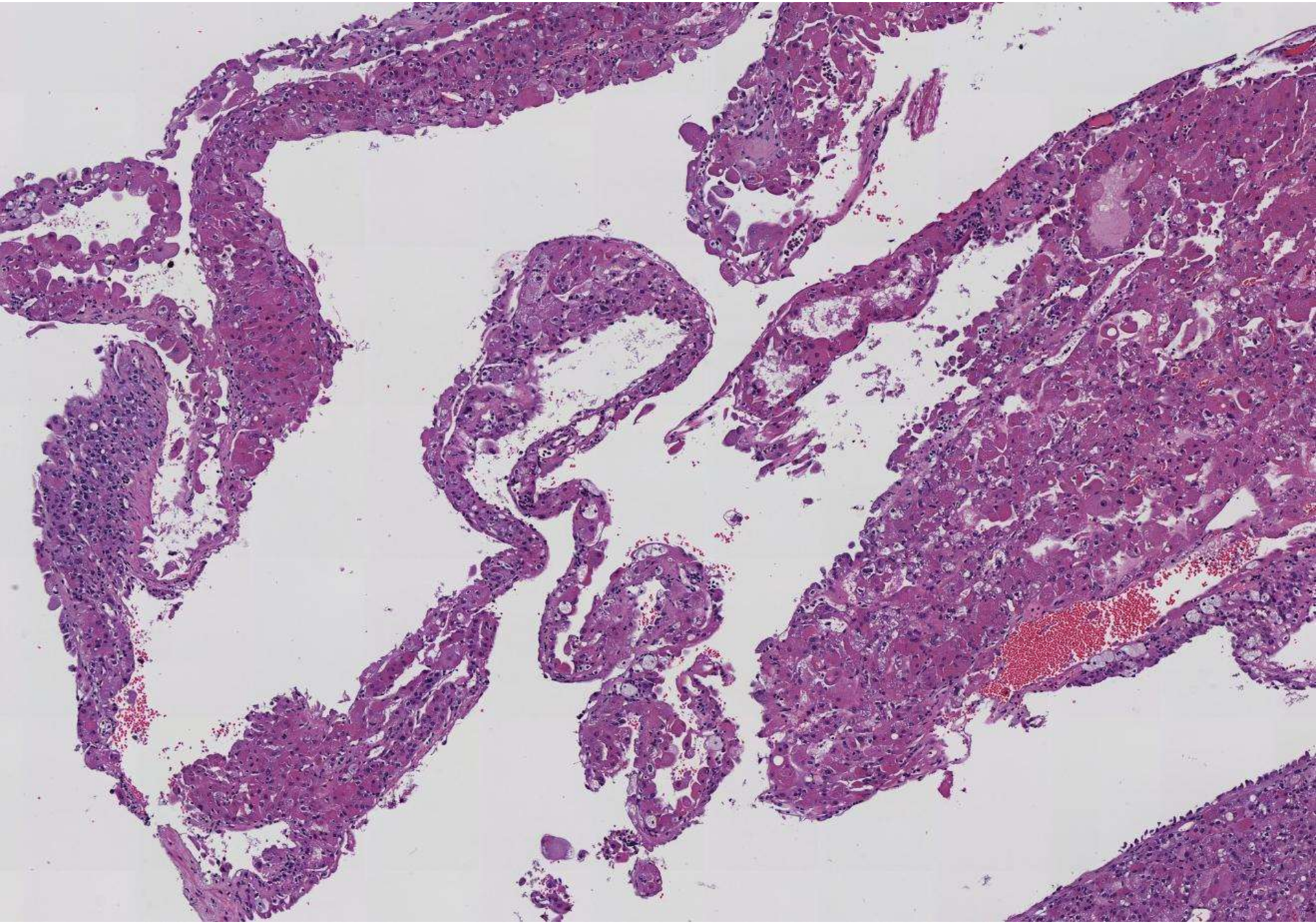
SB 6076

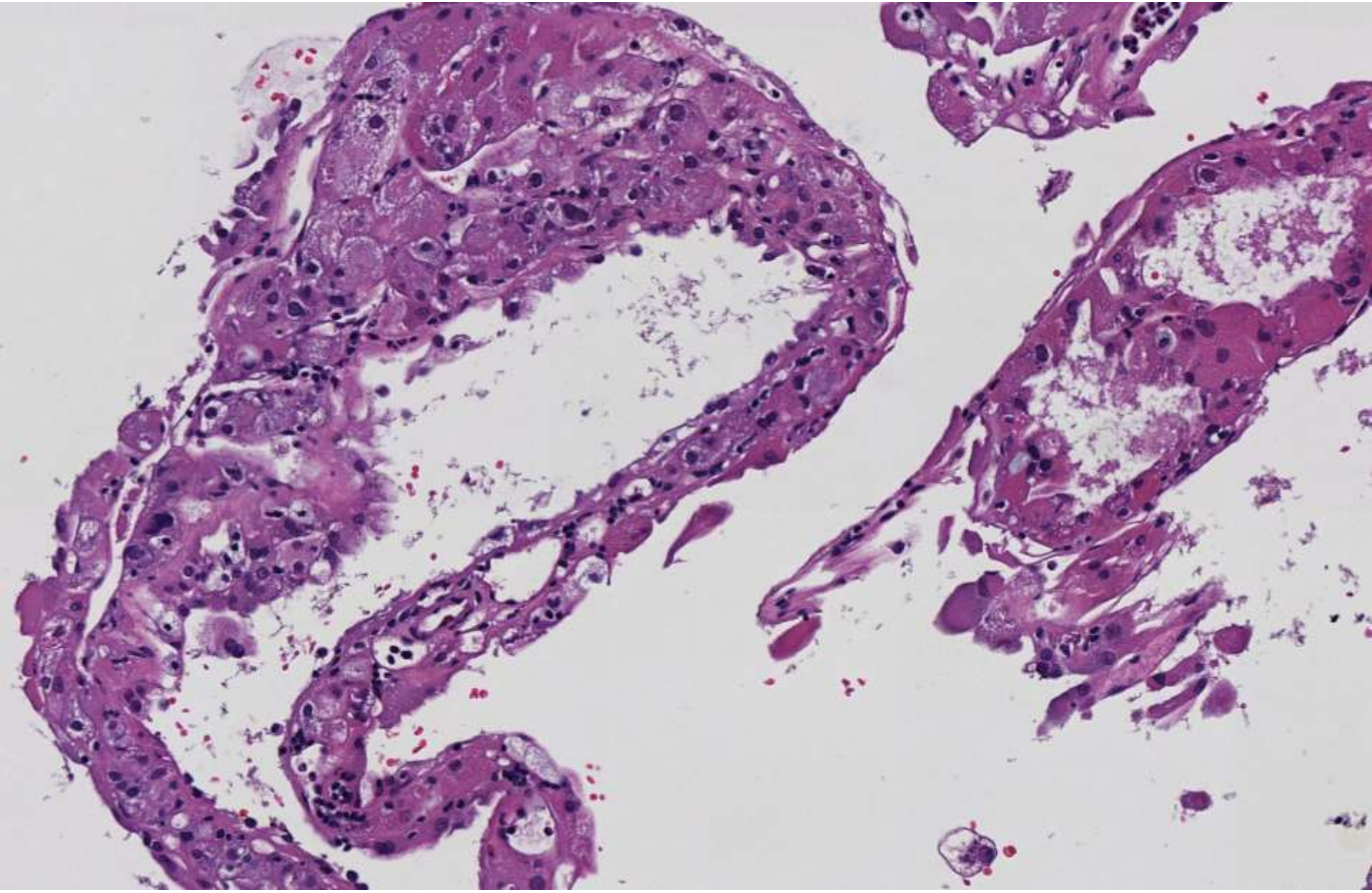
Ankur Sangoi; El Camino Hospital

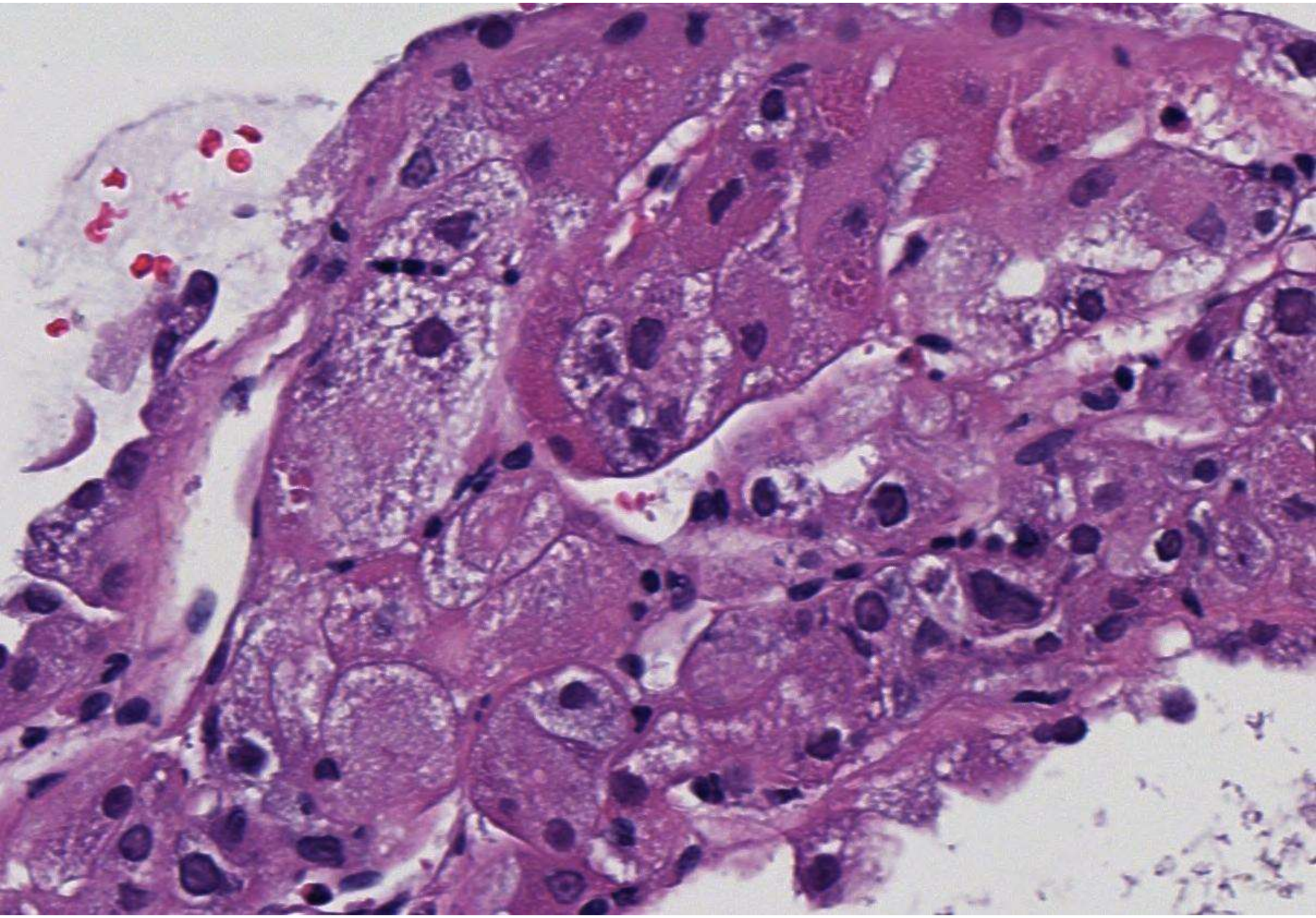
68-year-old female with 1.8cm renal mass.

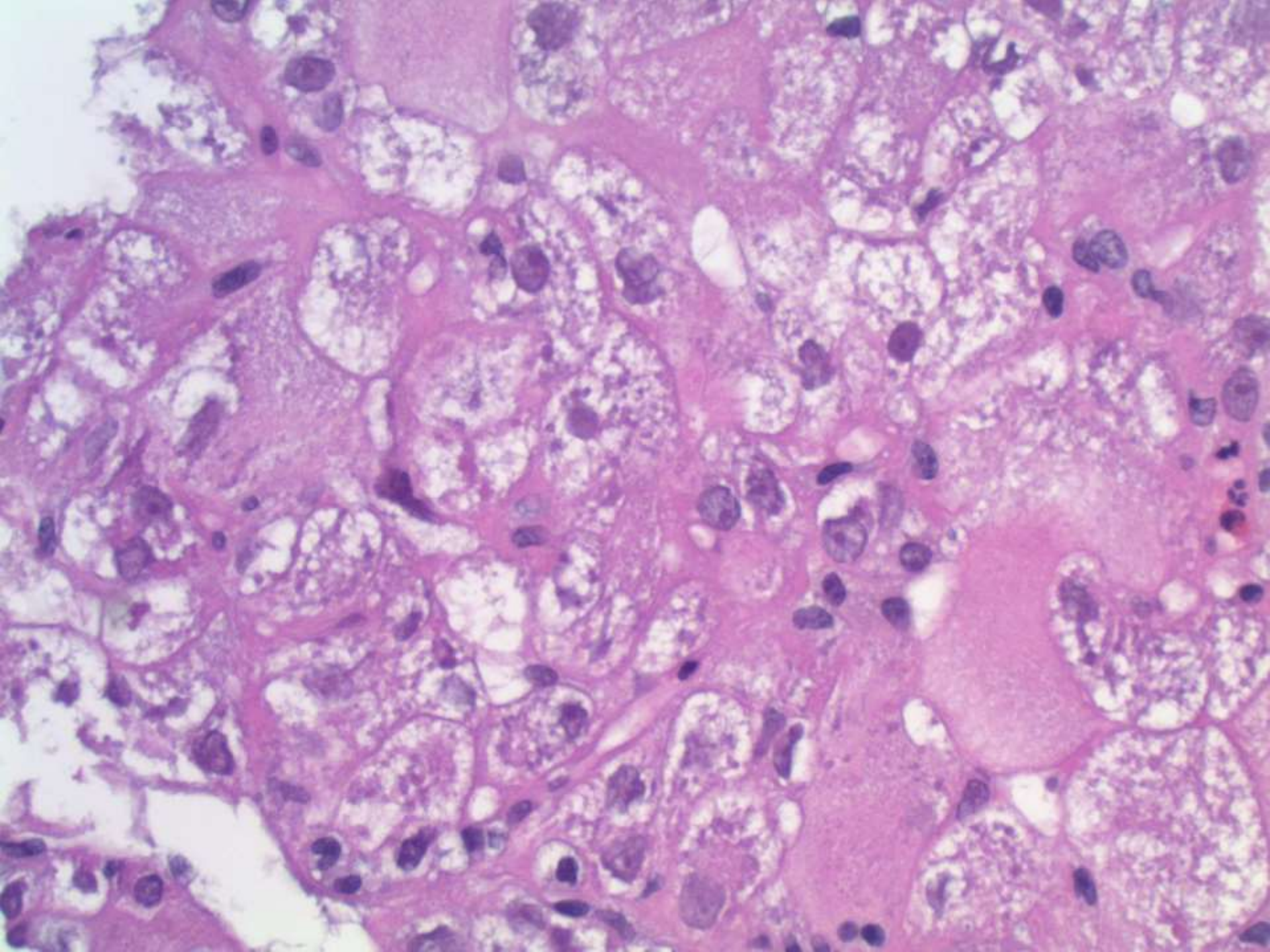


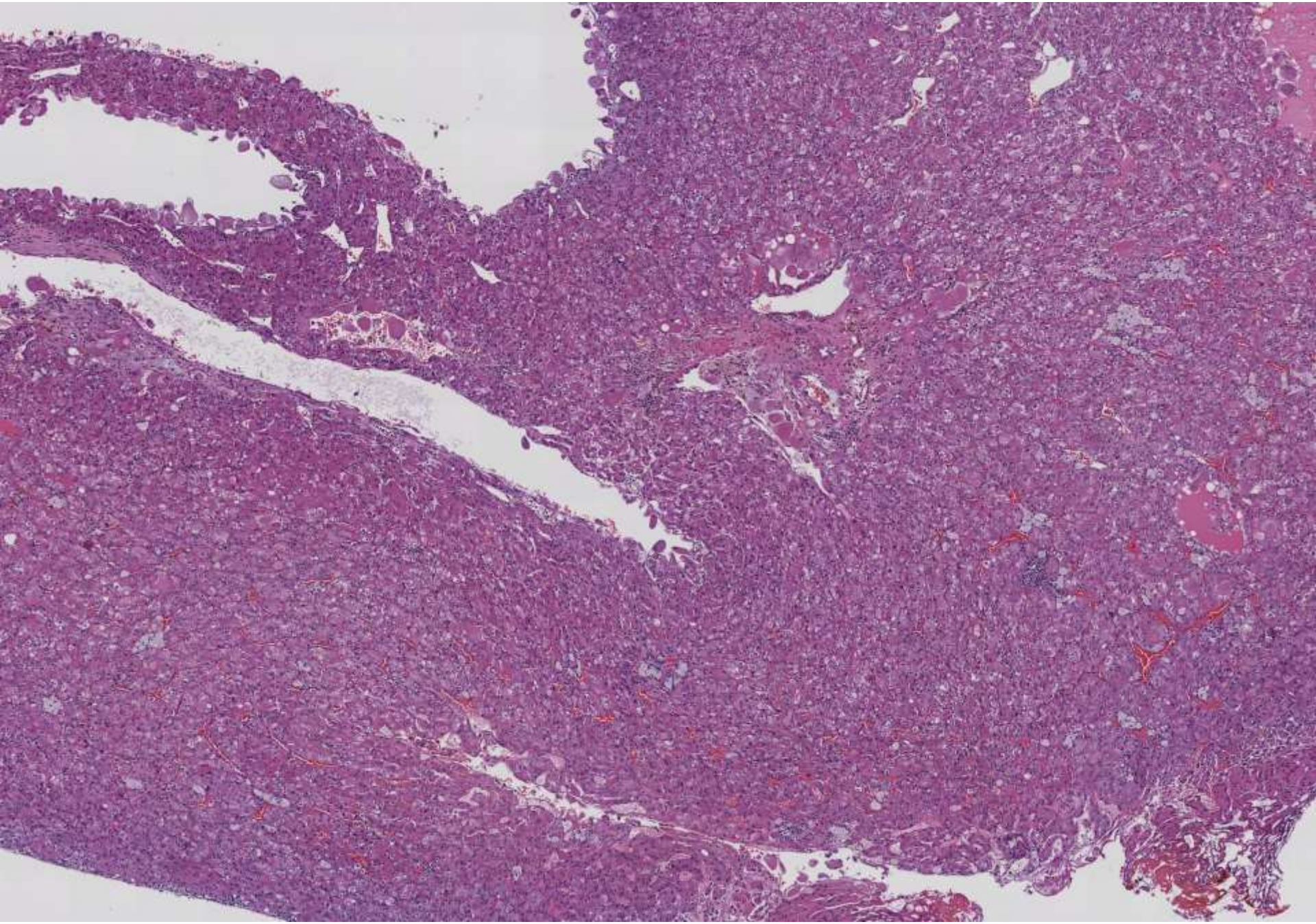


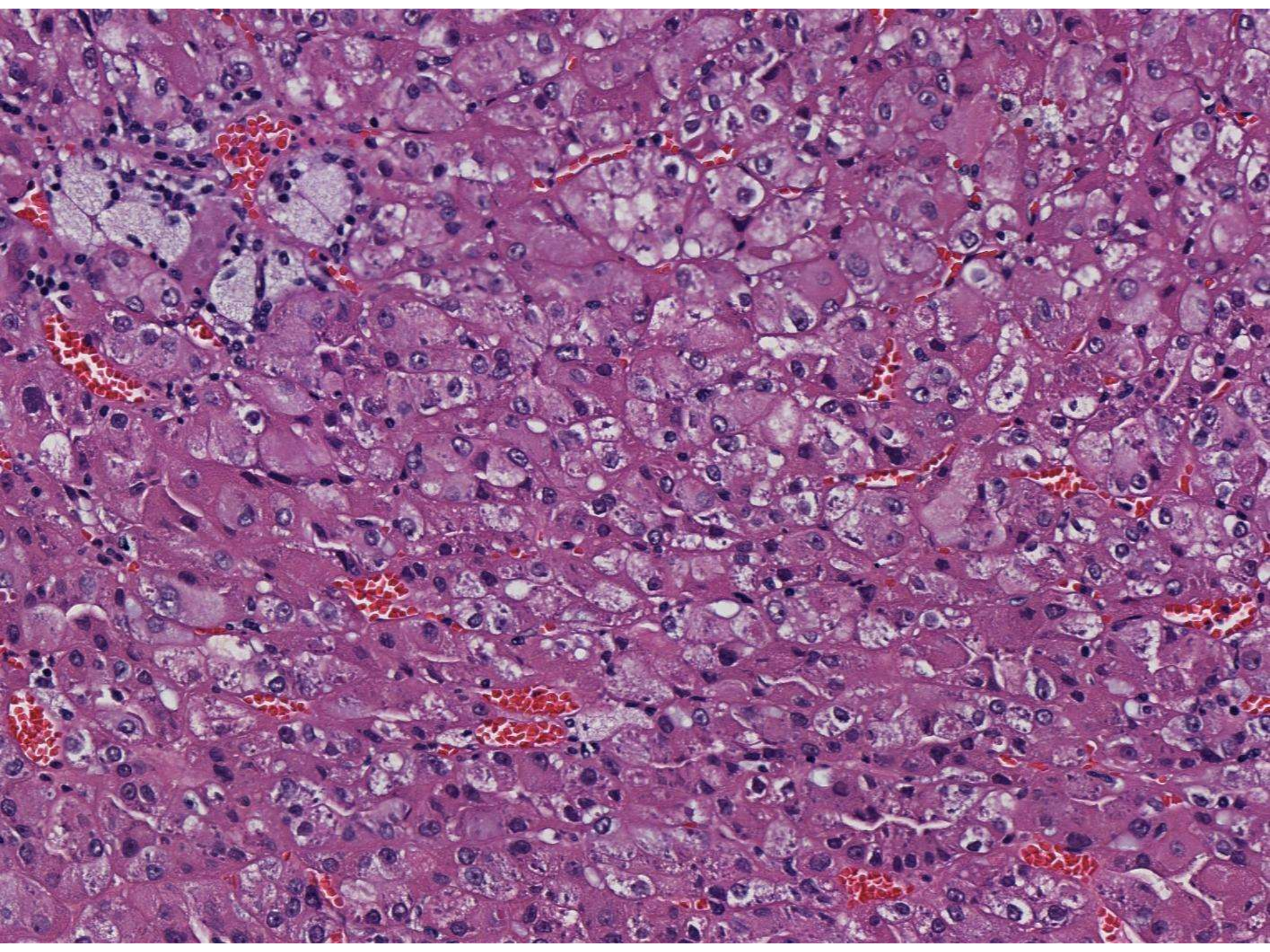


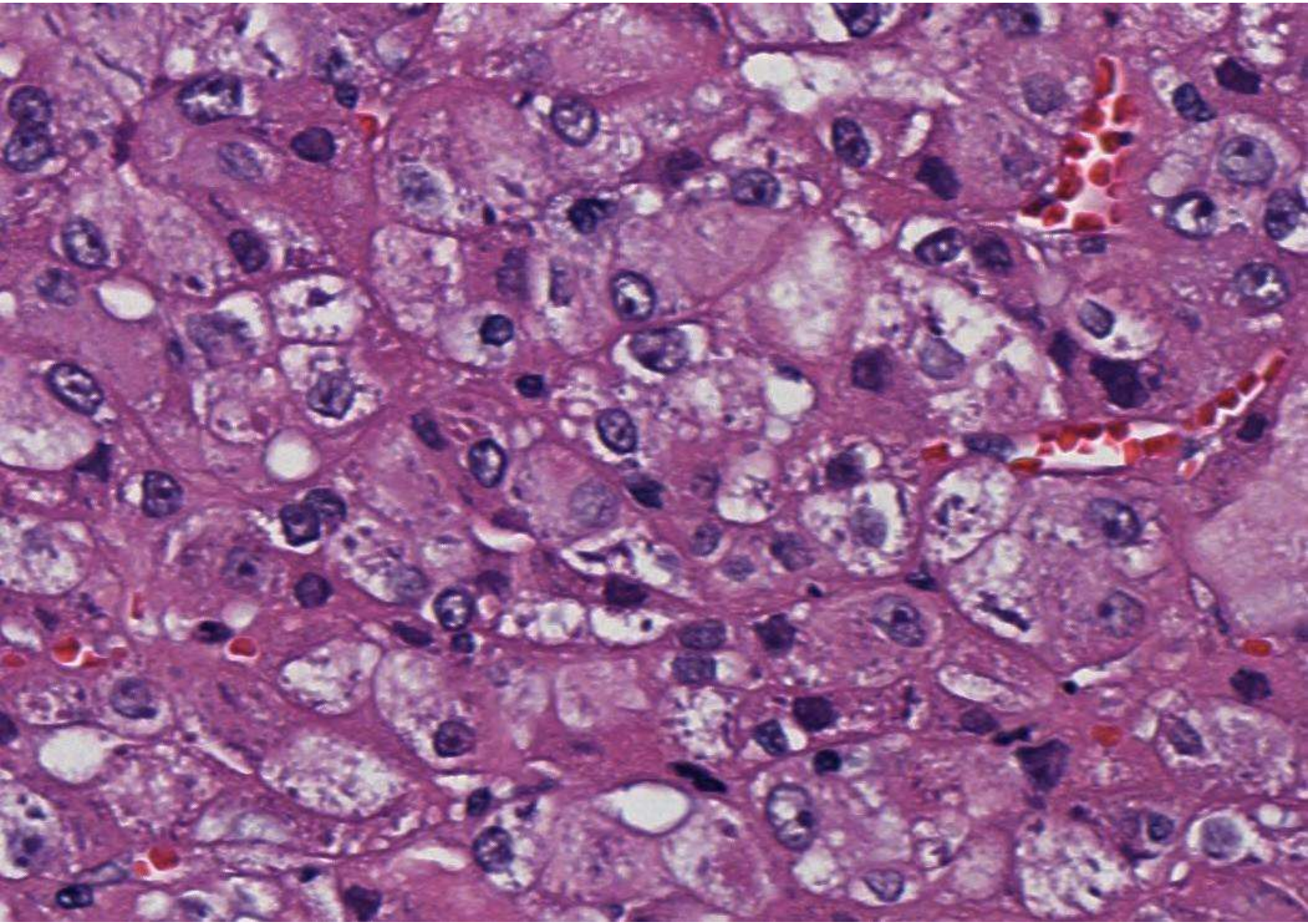












DDx

- Oncocytoma
- Chromophobe RCC
- SDH-deficient RCC
- MiT translocation-type RCC
- Epithelioid AML

Tuberous Sclerosis–associated Renal Cell Carcinoma

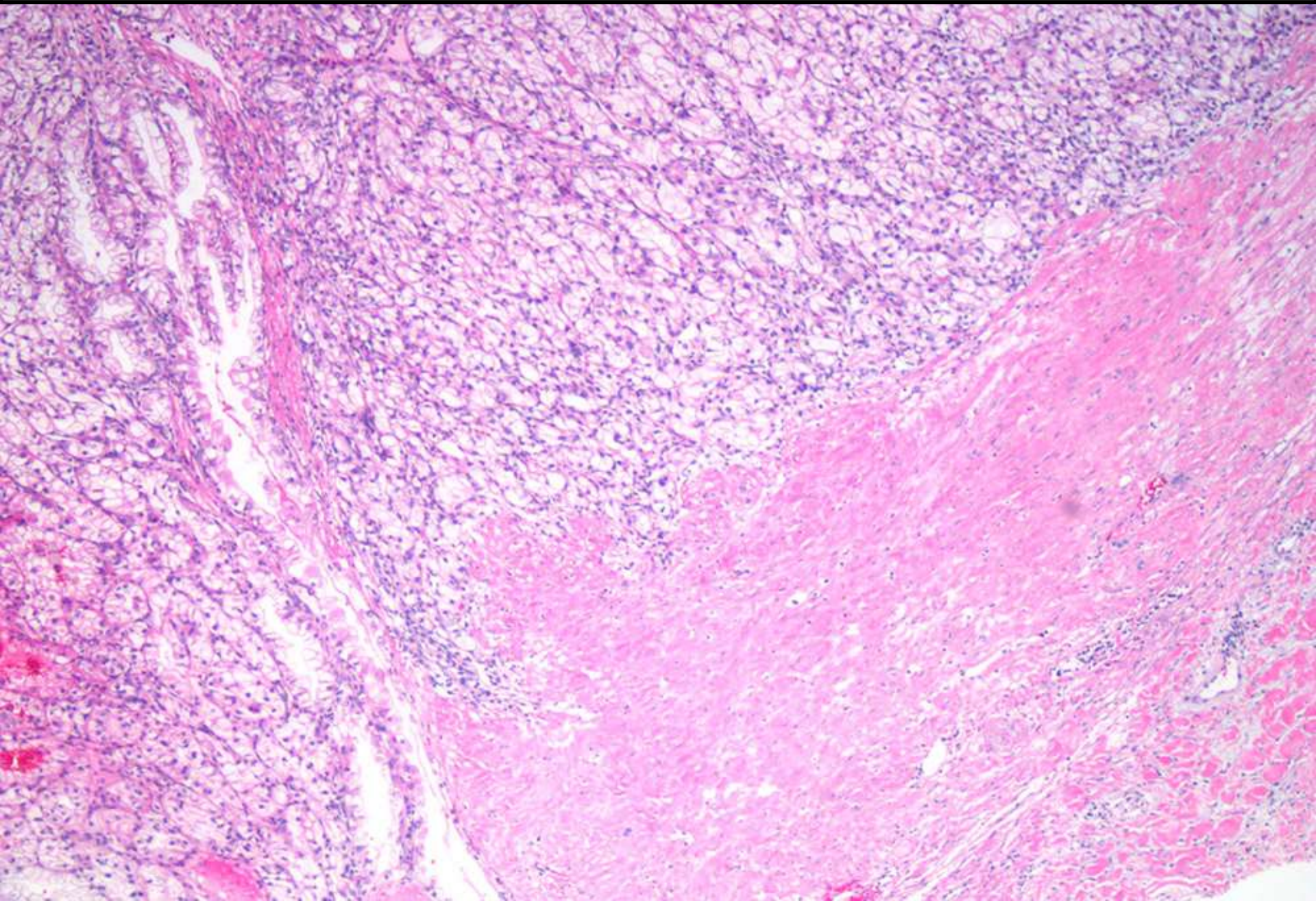
A Clinicopathologic Study of 57 Separate Carcinomas in 18 Patients

Juan Guo, MD, PhD, Maria S. Tretiakova, MD, PhD,† Megan L. Troxell, MD, PhD,‡ Adeboye O. Osunkoya, MD,§ Oluwole Fadare, MD,‖ Ankur R. Sangoi, MD,¶ Steven S. Shen, MD, PhD,# Antonio Lopez-Beltran, MD, PhD,** Rohit Mehra, MD,†† Amer Heider, MD,†† John P. Higgins, MD,‡‡ Lara R. Harik, MD,§§ Xavier Leroy, MD,‖‖ Anthony J. Gill, MD,¶¶ Kiril Trpkov, MD,## Steven C. Campbell, MD, PhD,*** Christopher Przybycin, MD,**** Cristina Magi-Galluzzi, MD, PhD,**** and Jesse K. McKenney, MD*****

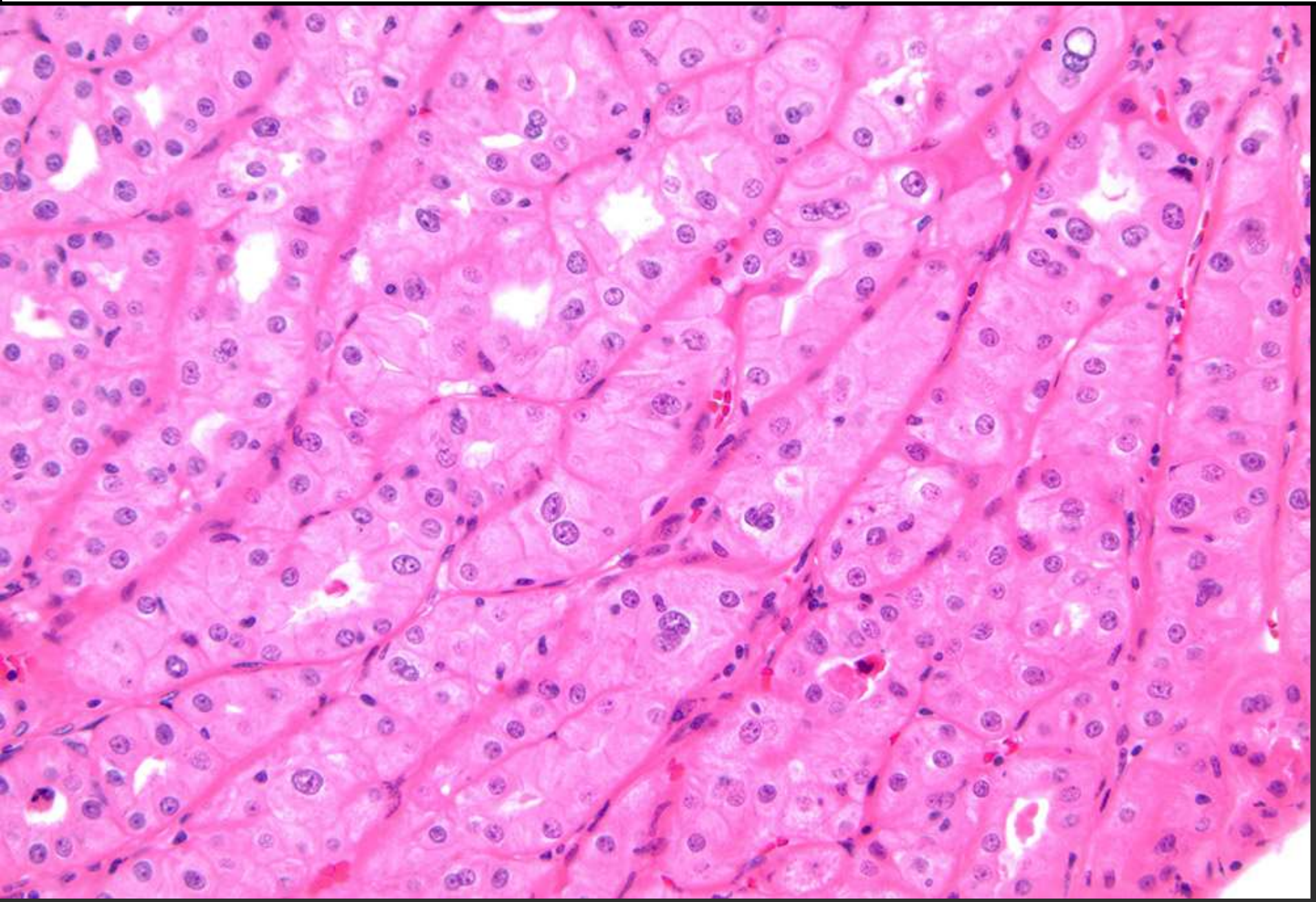
Am J Surg Pathol • Volume 38, Number 11, November 2014

1) **Rena angiomyoadenomatous tumor (RAT) or RCC with smooth muscle stroma**
2) **Chromophobe-RCC like**
3) **Granular eosinophilic-macrocystic**

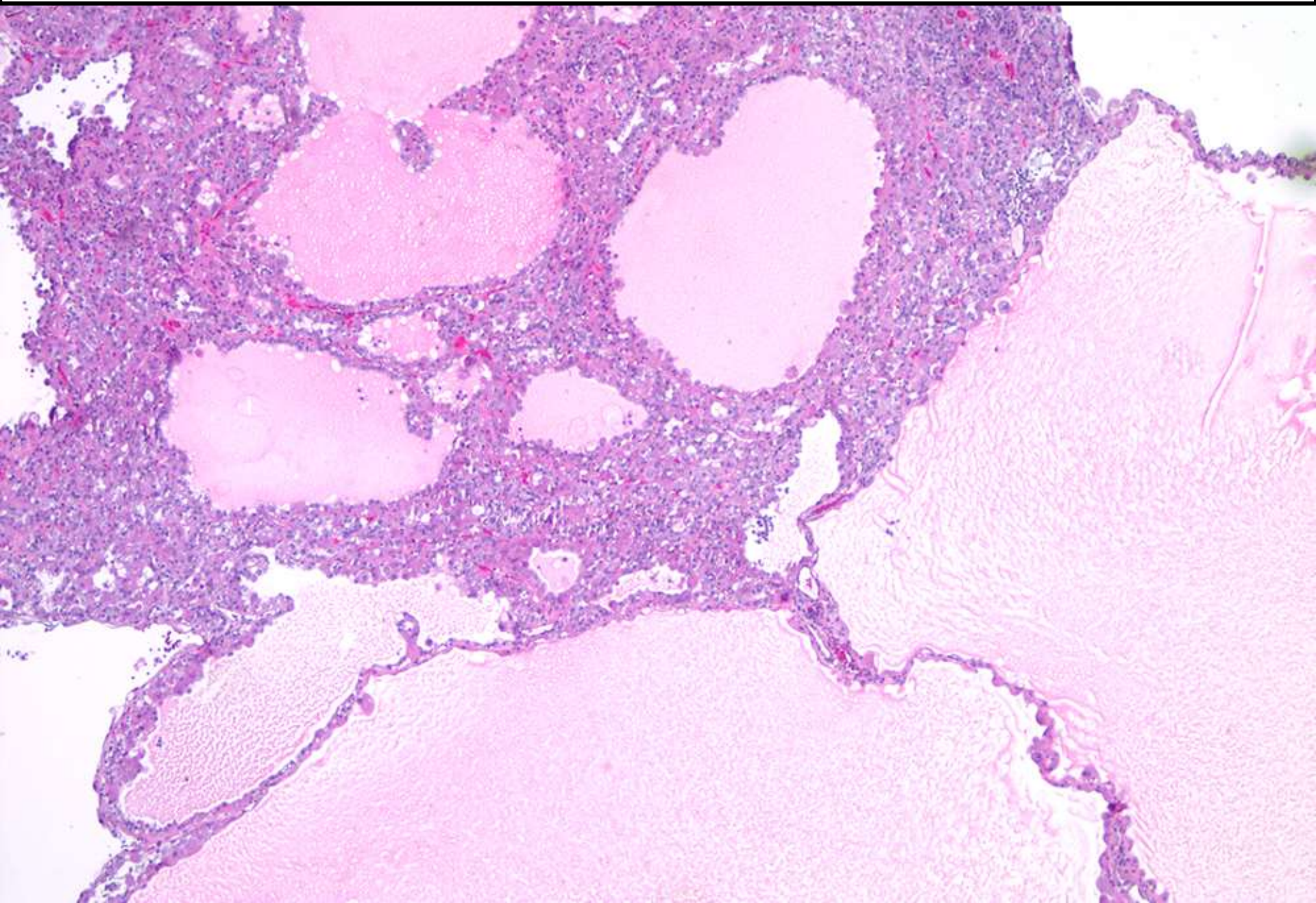
1. RCC in TS: Clear cell v RAT-like



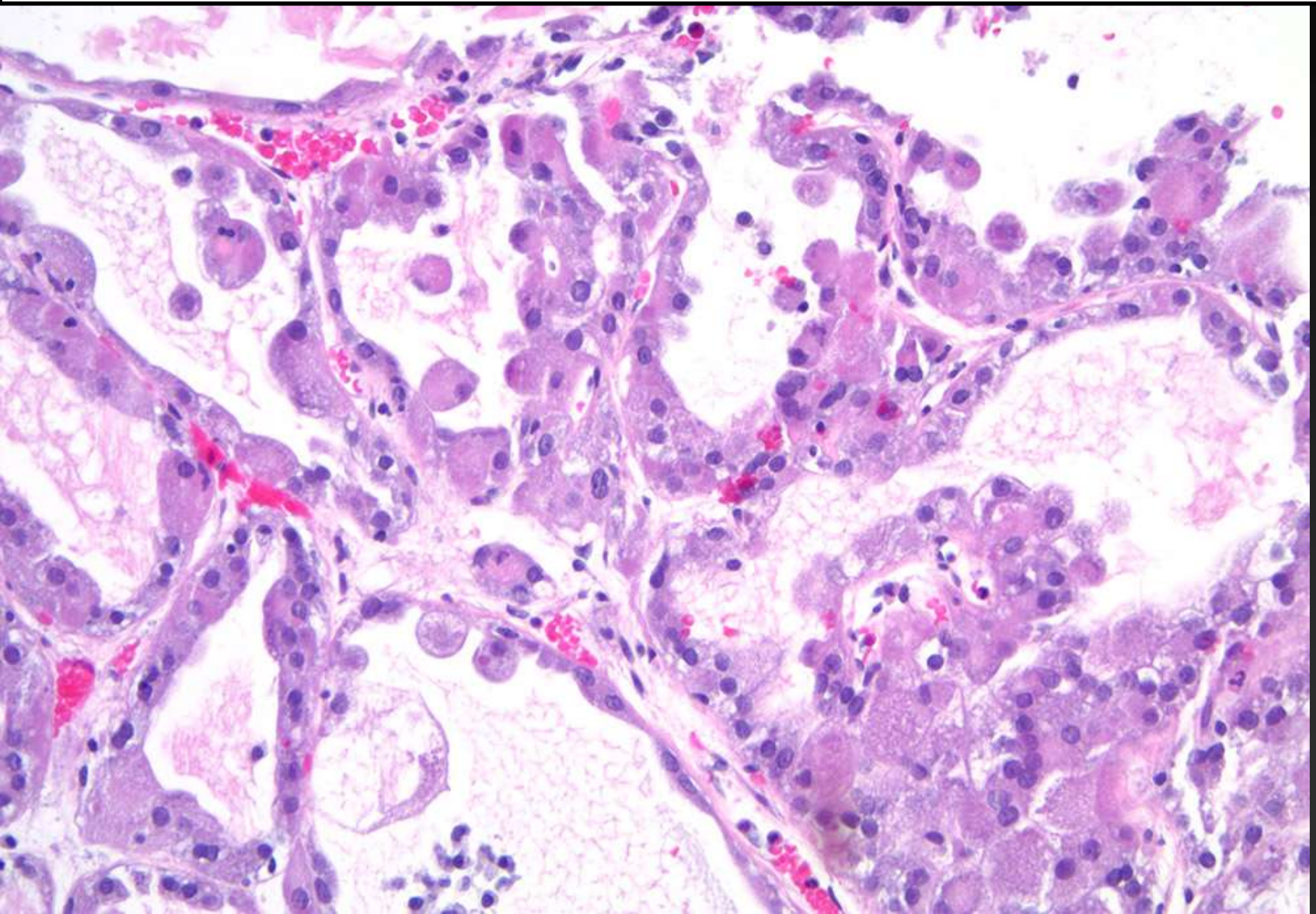
2. RCC in TS: Chromophobe-like

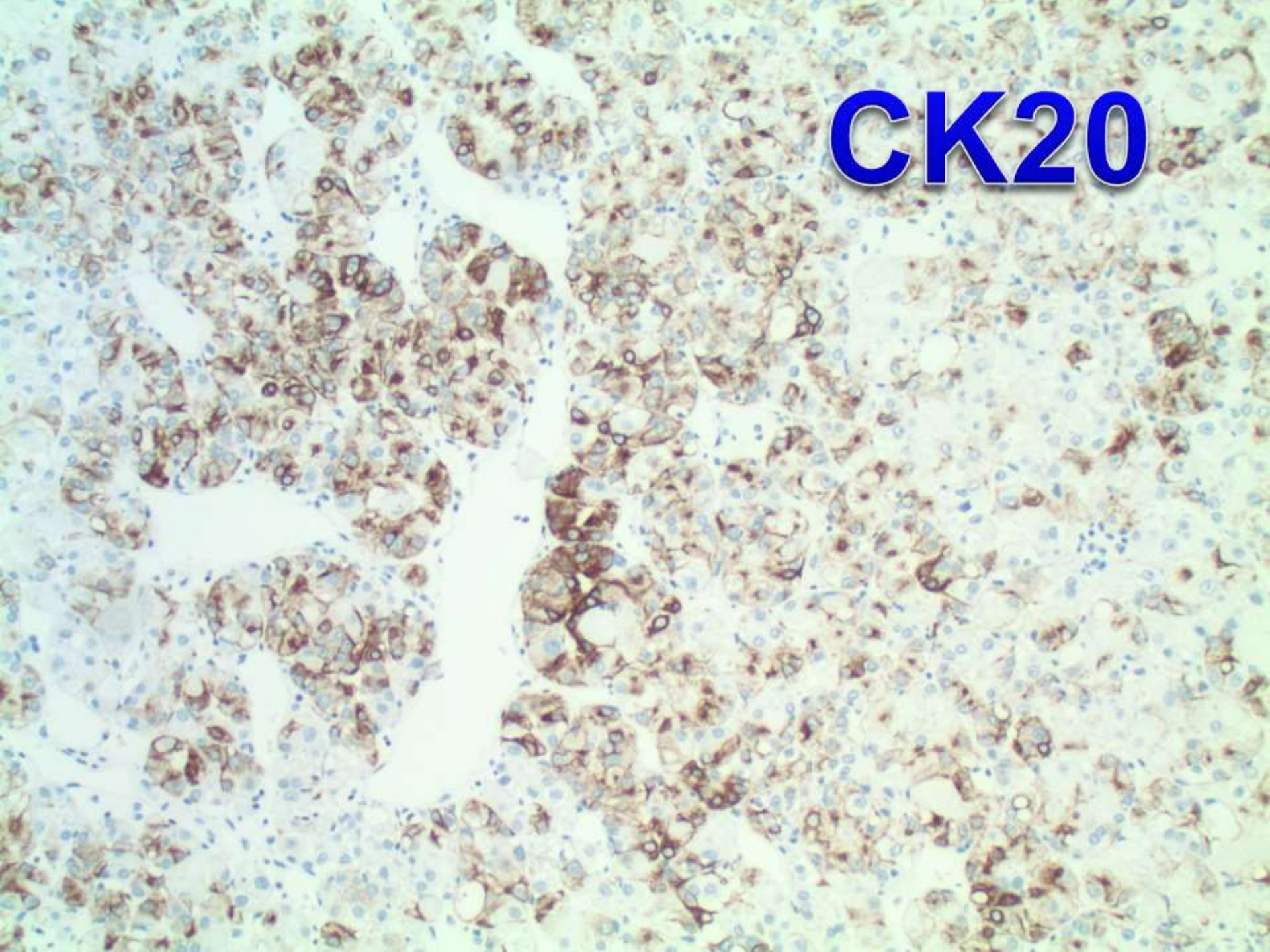


3. RCC in TS: Cystic/Voluminous Pink



3. RCC in TS: Cystic/Voluminous Pink



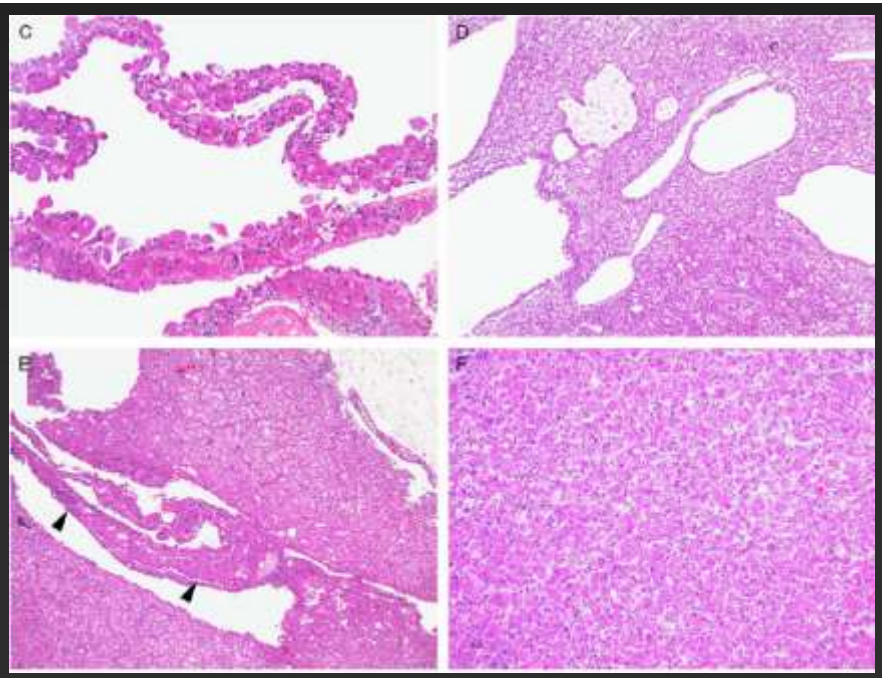

CK20

Eosinophilic, Solid, and Cystic Renal Cell Carcinoma

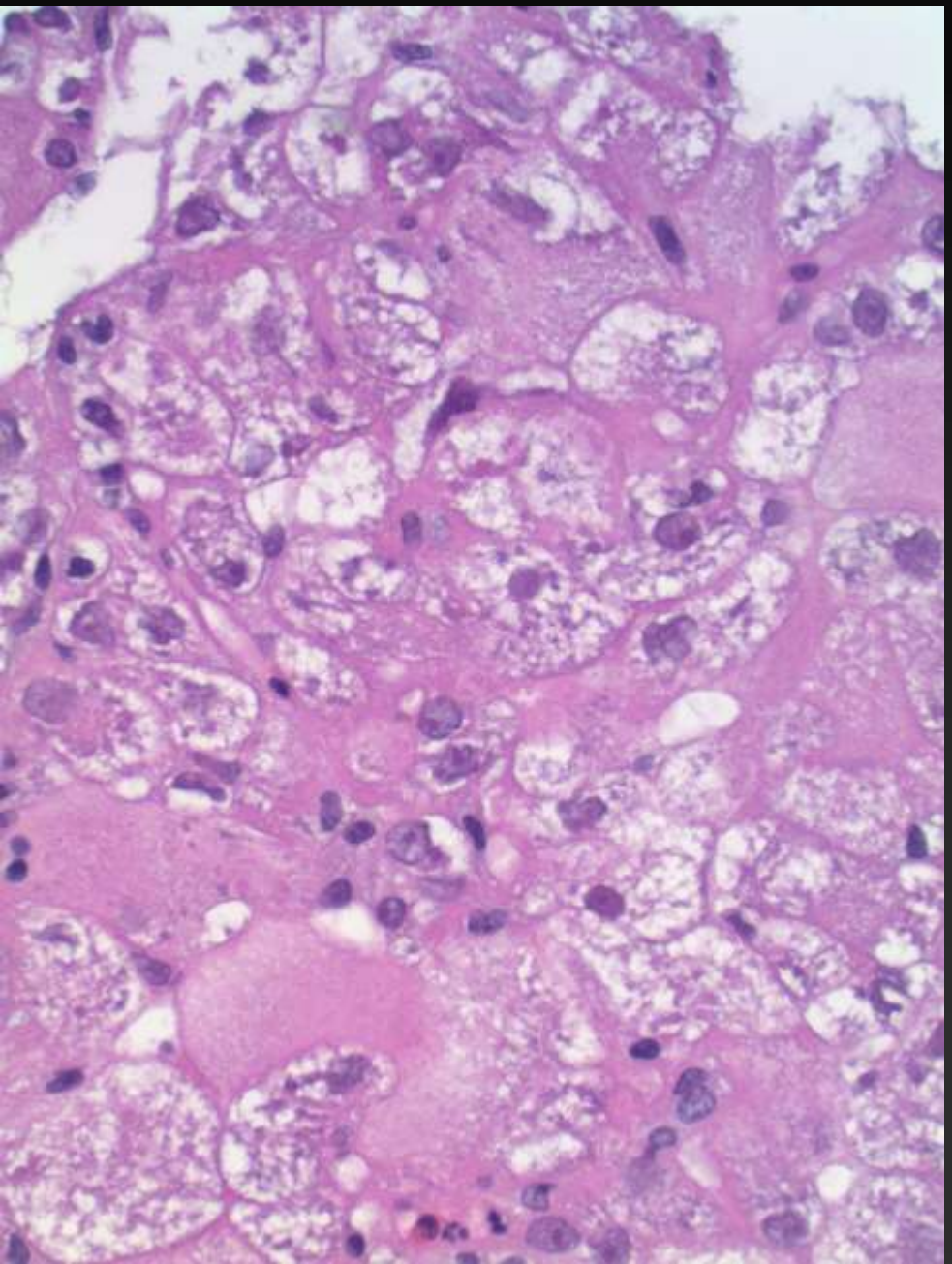
Clinicopathologic Study of 16 Unique, Sporadic Neoplasms Occurring in Women

Kiril Trpkov, MD, FRCPC, Ondrej Hes, MD, PhD,† Michael Bonert, MD,* Jose I. Lopez, MD, PhD,‡ Stephen M. Bonsib, MD,§ Gabriella Nesi, MD,‖ Eva Comperat, MD,¶ Mathilde Sibony, MD,# Daniel M. Berney, MD,** Petr Martinek, MSc,† Stela Bulimbasic, MD,†† Saul Suster, MD,‡‡ Ankur Sangoi, MD,§§ Asli Yilmaz, MD,* John P. Higgins, MD,‖‖ Ming Zhou, MD, PhD,¶¶ Anthony J. Gill, MD, PhD,## Christopher G. Przybycin, MD,*** Cristina Magi-Galluzzi, MD, PhD,*** and Jesse K. McKenney, MD****

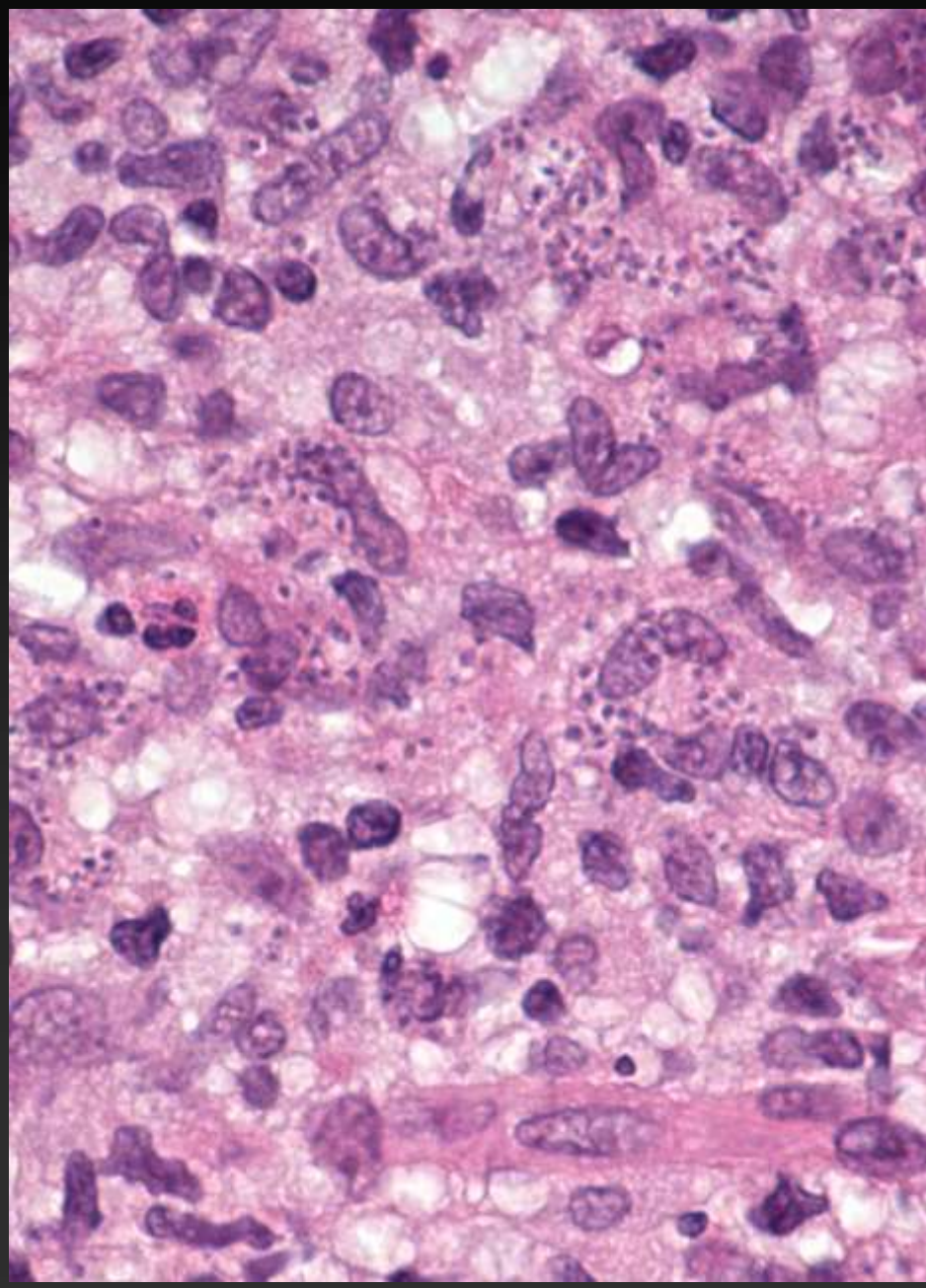
Am J Surg Pathol • Volume 40, Number 1, January 2016



ESC-RCC



Leishmamaniasis




Esc
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option

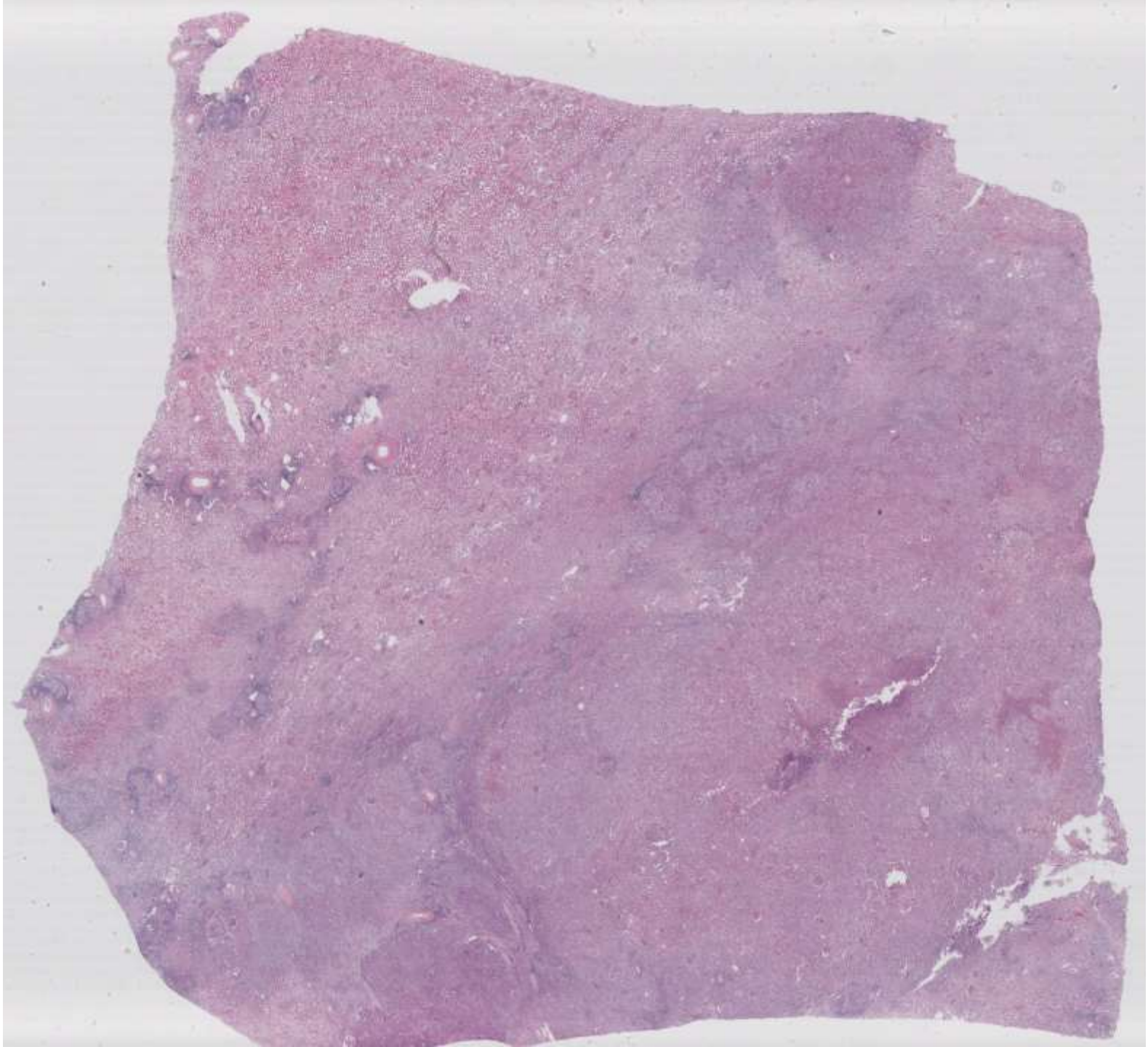
TABLE 2. Summary of the Key Features of ESC RCC

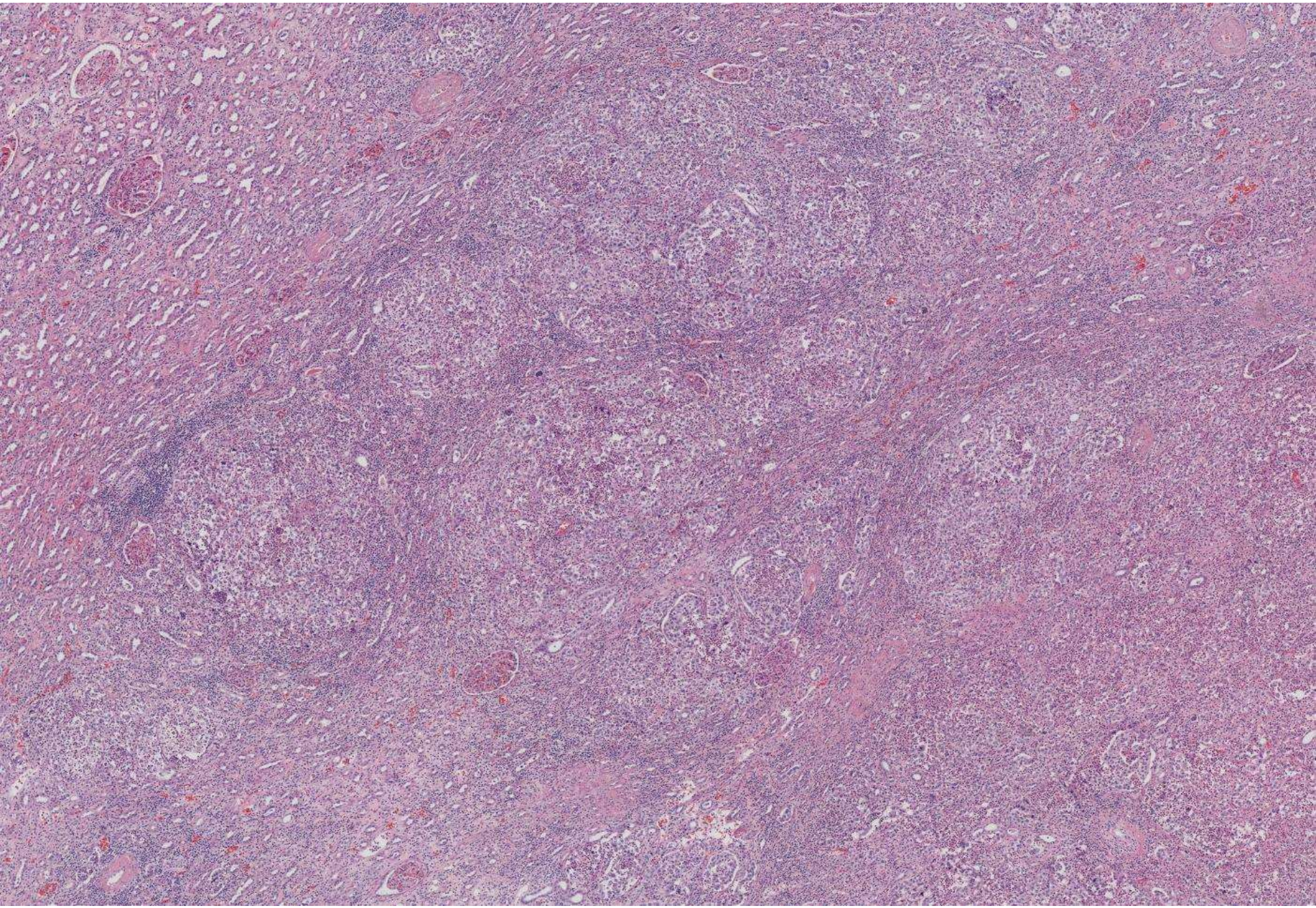
Clinical	Females, usually low stage, good prognosis
Gross	Solid and cystic or solid (minority), tan, single tumors
Light microscopy	Architecture: Solid and cystic. Hobnail arrangement of cells lining septa. Diffuse or tightly compact acinar or nested growth in solid foci. Capsule absent. Cytology: Eosinophilic, voluminous cytoplasm with granular stippling, round to oval nuclei, and prominent nucleoli. Scattered foamy histiocytes, lymphocytes, and multinucleated cells.
IHC	Positive: PAX8, $CK20^{+}/CK7^{-}$ phenotype most common, Vimentin, AMACR (+/−), CD10 (+/−) Negative: CA9, CD117, HMB45
Electron microscopy	Abundant rough endoplasmic reticulum
Molecular karyotype	LOH: 16p and Xq (3/3 cases); 11p (2/3 cases) CN gains: 1p, 7p-q, 10q, 13q, 16p-q (2/3 cases) CN losses: 19p, 19q, Xp, Xq (2/3 cases)
aCGH	Gain of Chr 16 (only 1 case analyzed)

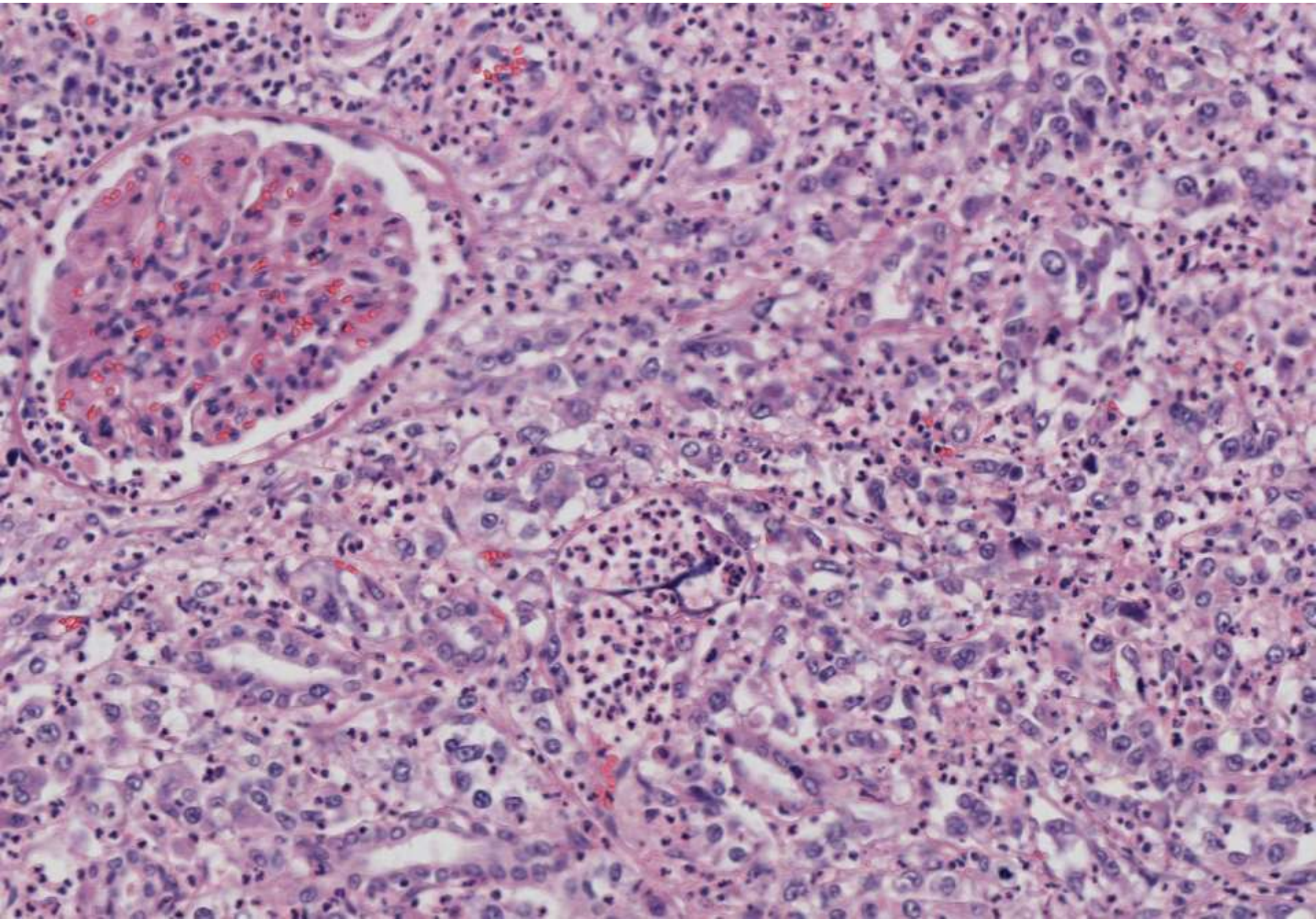
SB 6077

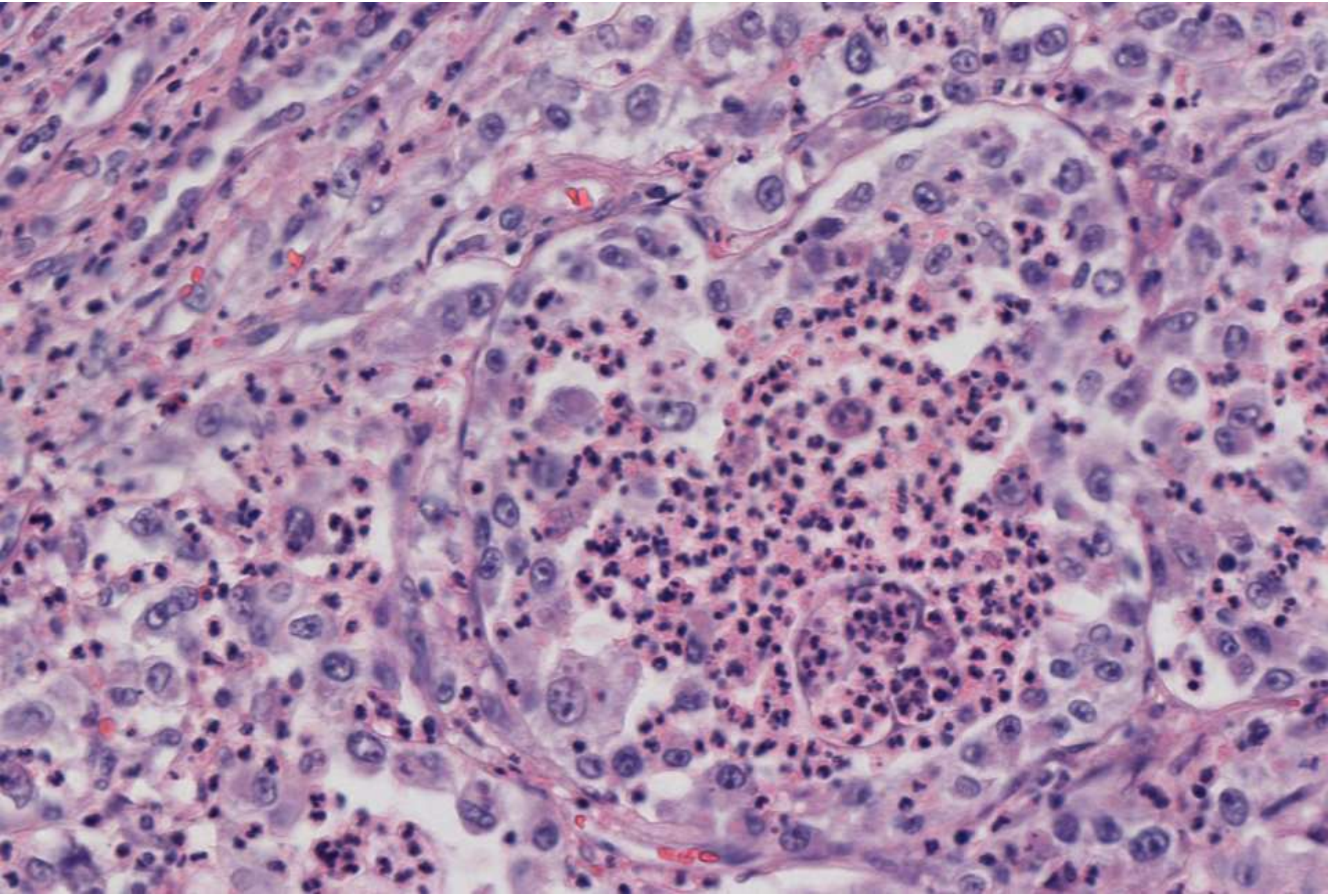
Dean Fong; Palo Alto VA

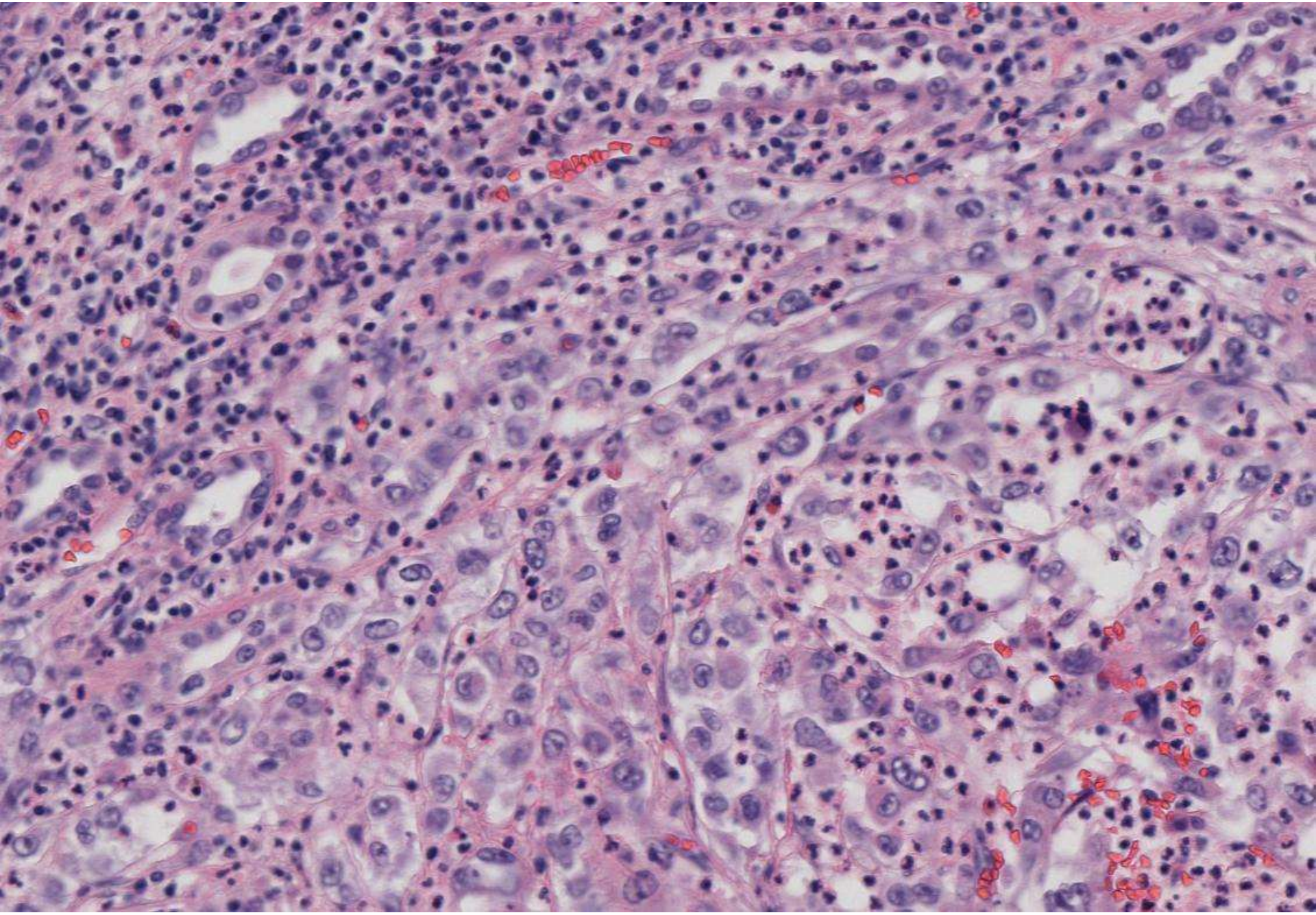
66-year-old man presented to ED with right abdominal pain and was found on imaging to have new right renal mass with IVC thrombus and an obstructing left distal ureteral stone.

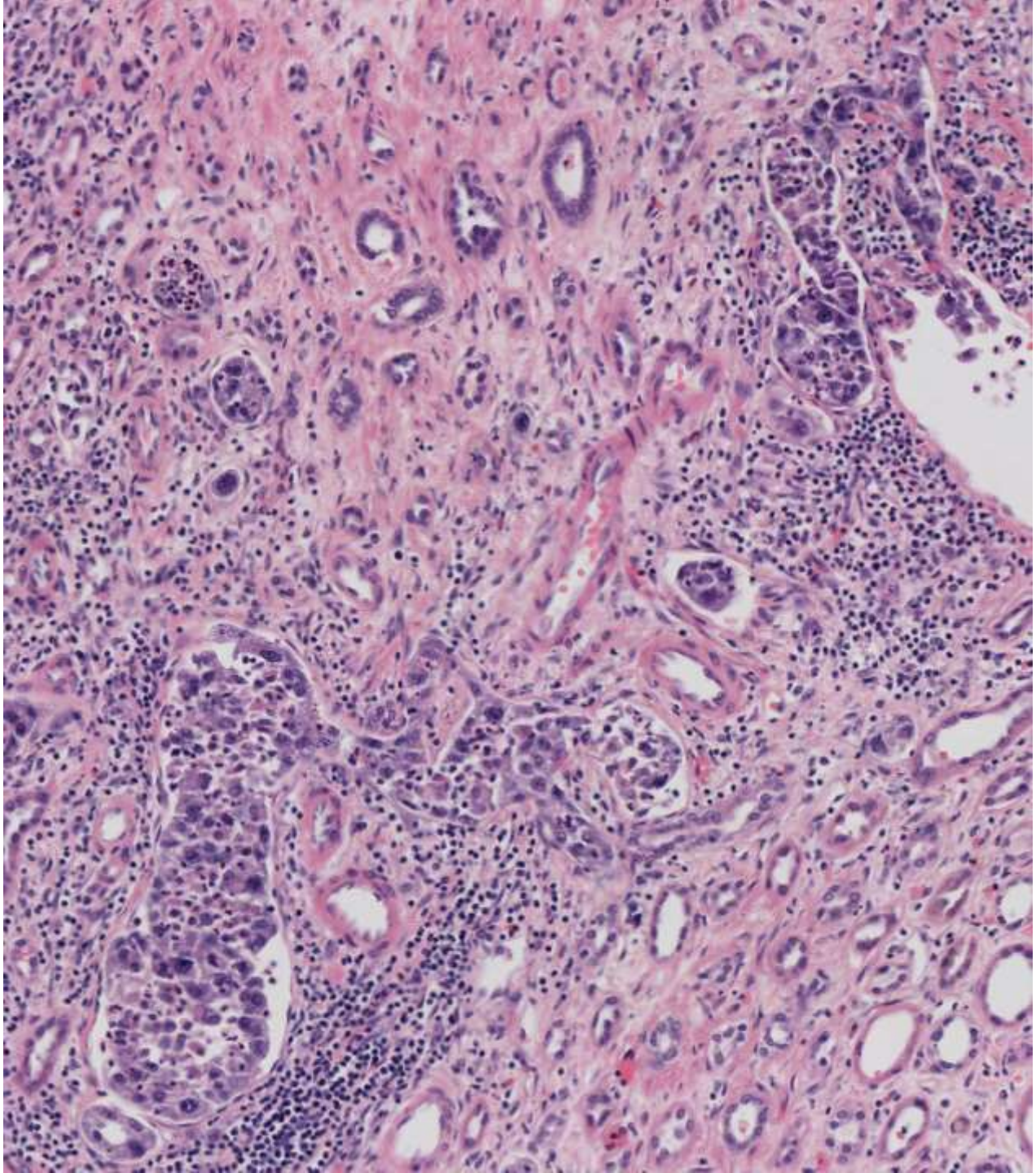


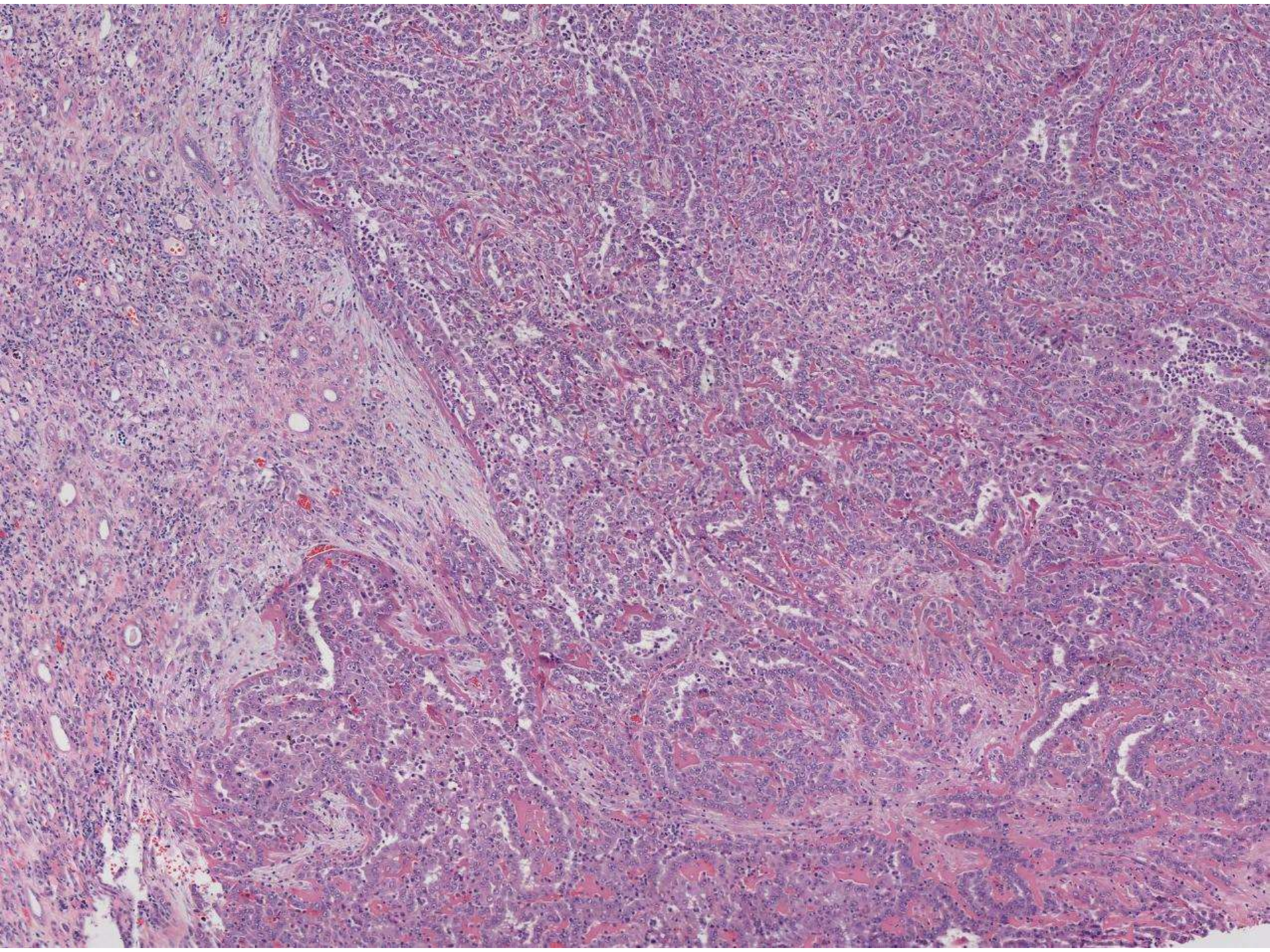


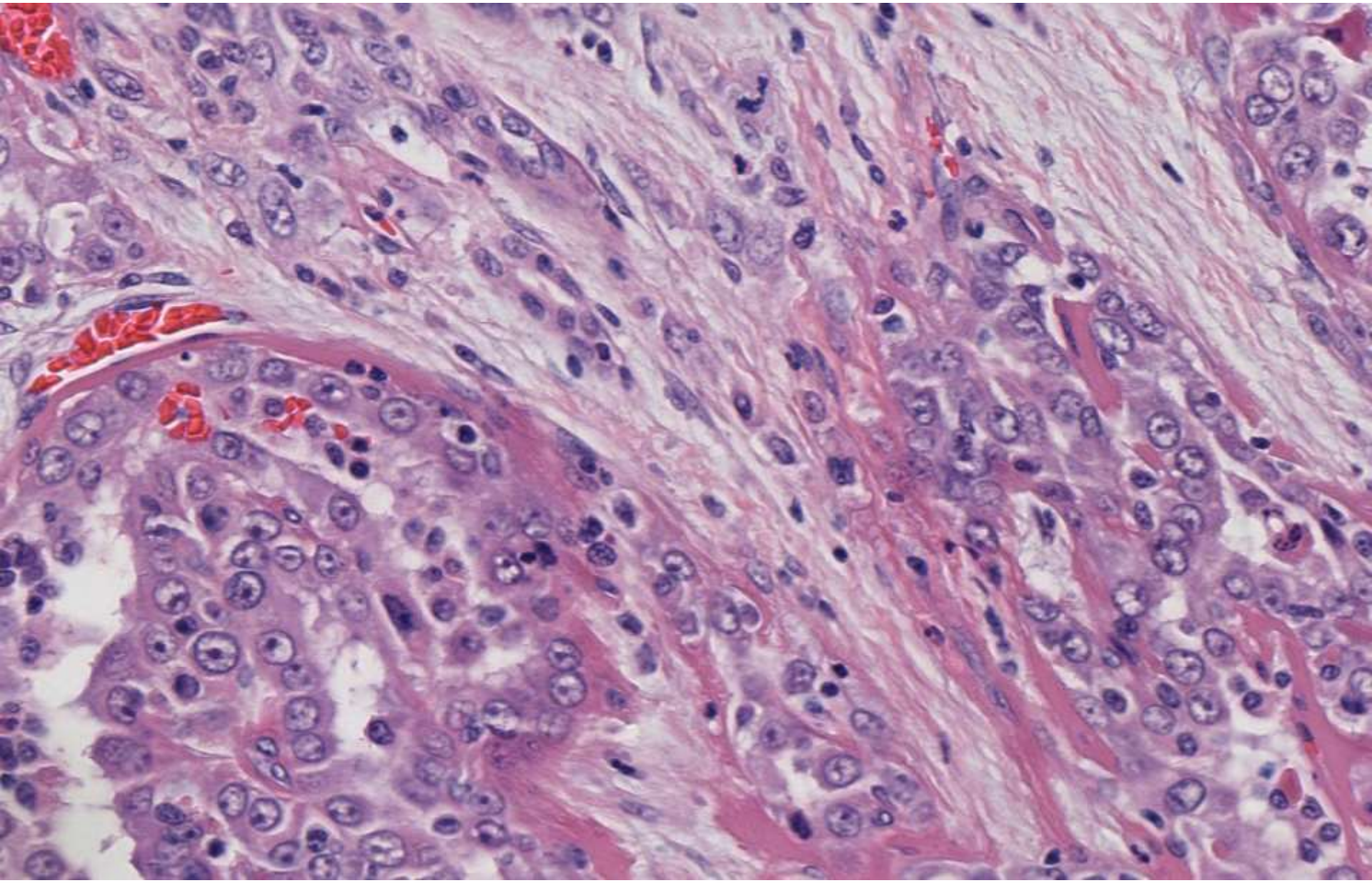












Diagnosis

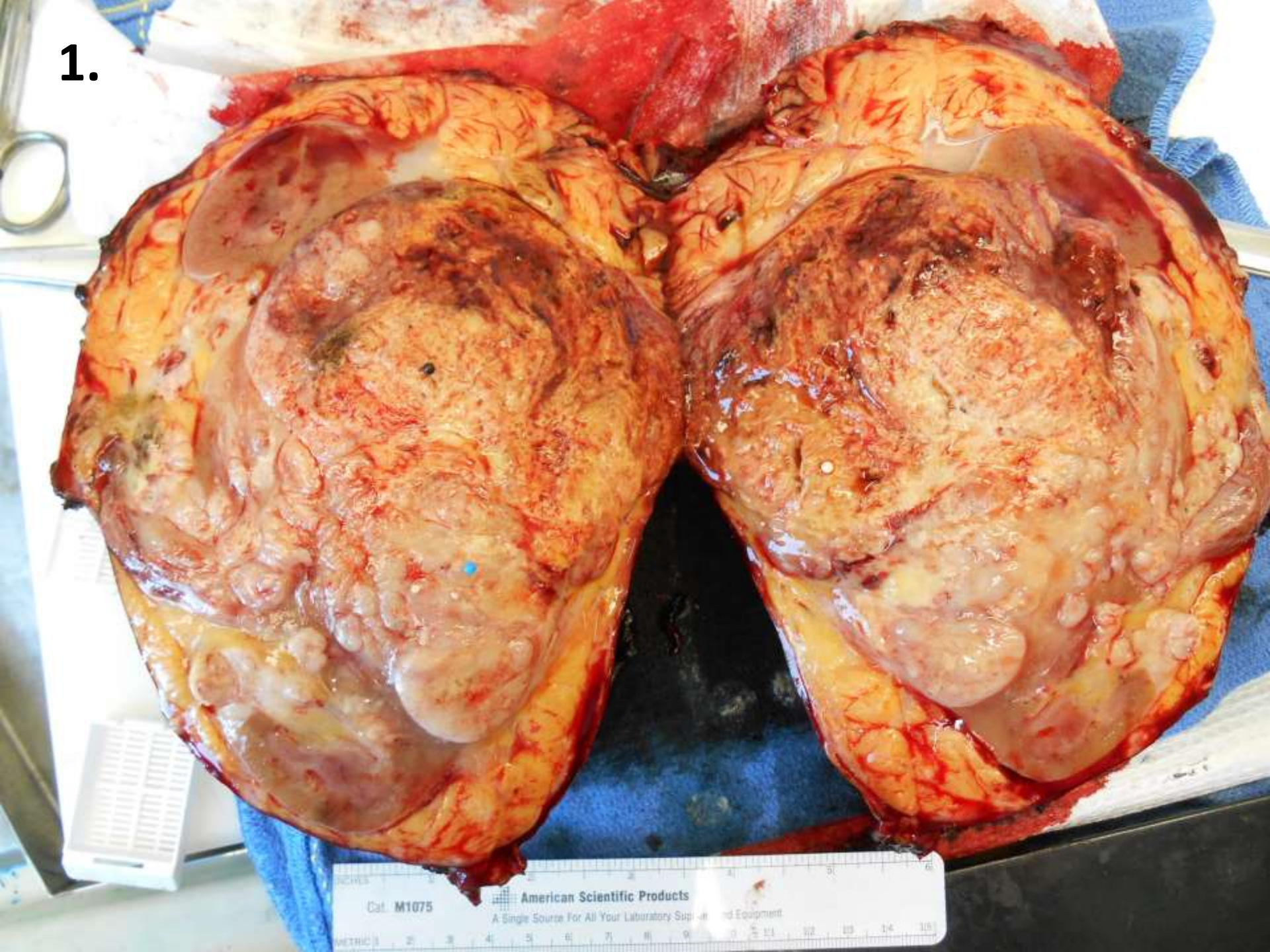
- Collecting Duct Carcinoma (Carcinoma of Colleting Ducts of Bellini)

Overview

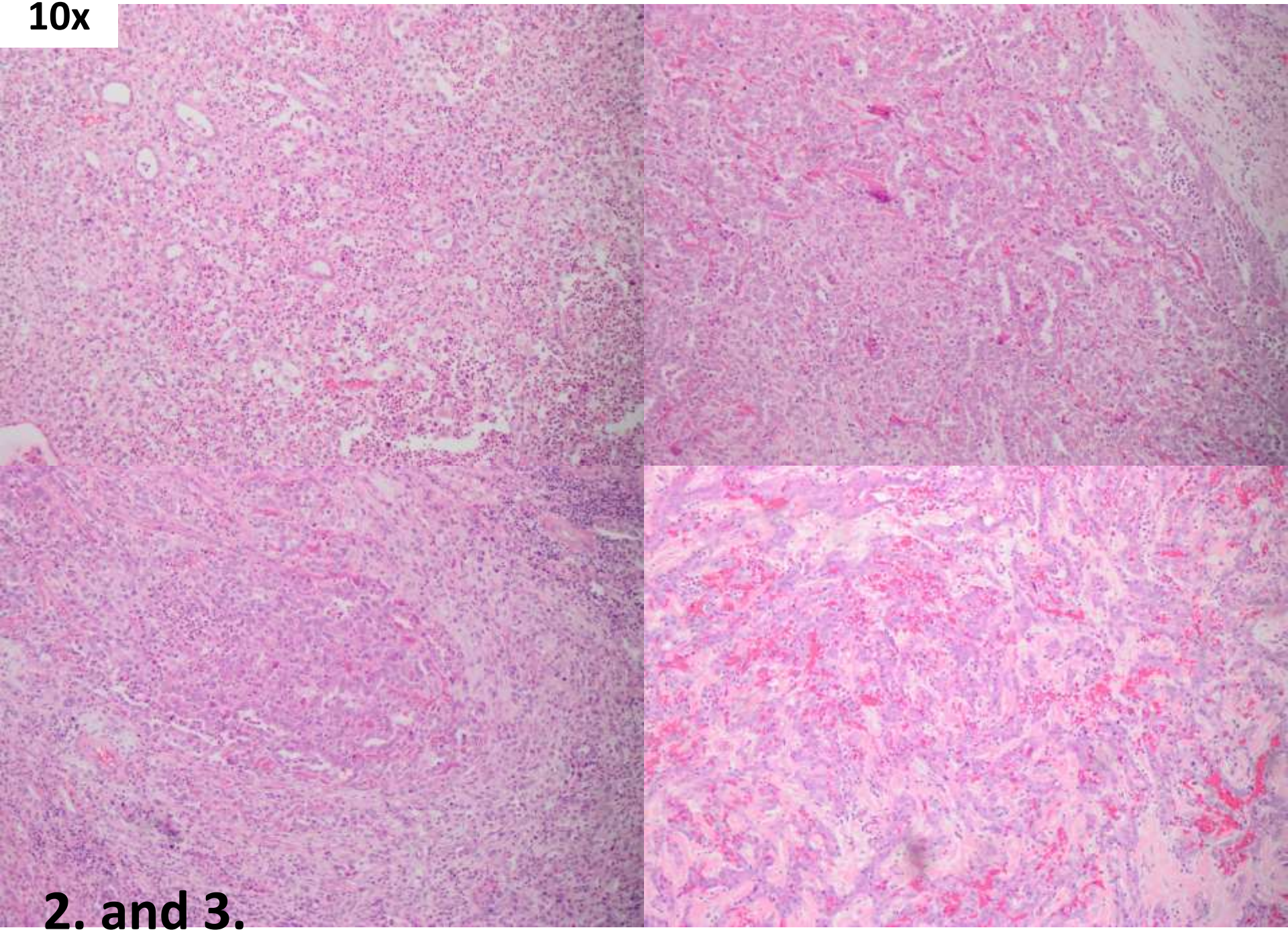
- Rare renal carcinoma accounting for <1% of renal malignancies
- Derived from the cells of the collecting duct of Bellini
- Mean age 50-55 years old (range 13-83)
- Poor prognosis
  - 50% positive node at presentation
  - 20-40% distant metastasis at presentation
  - 14% 10 year survival

Diagnostic Criteria

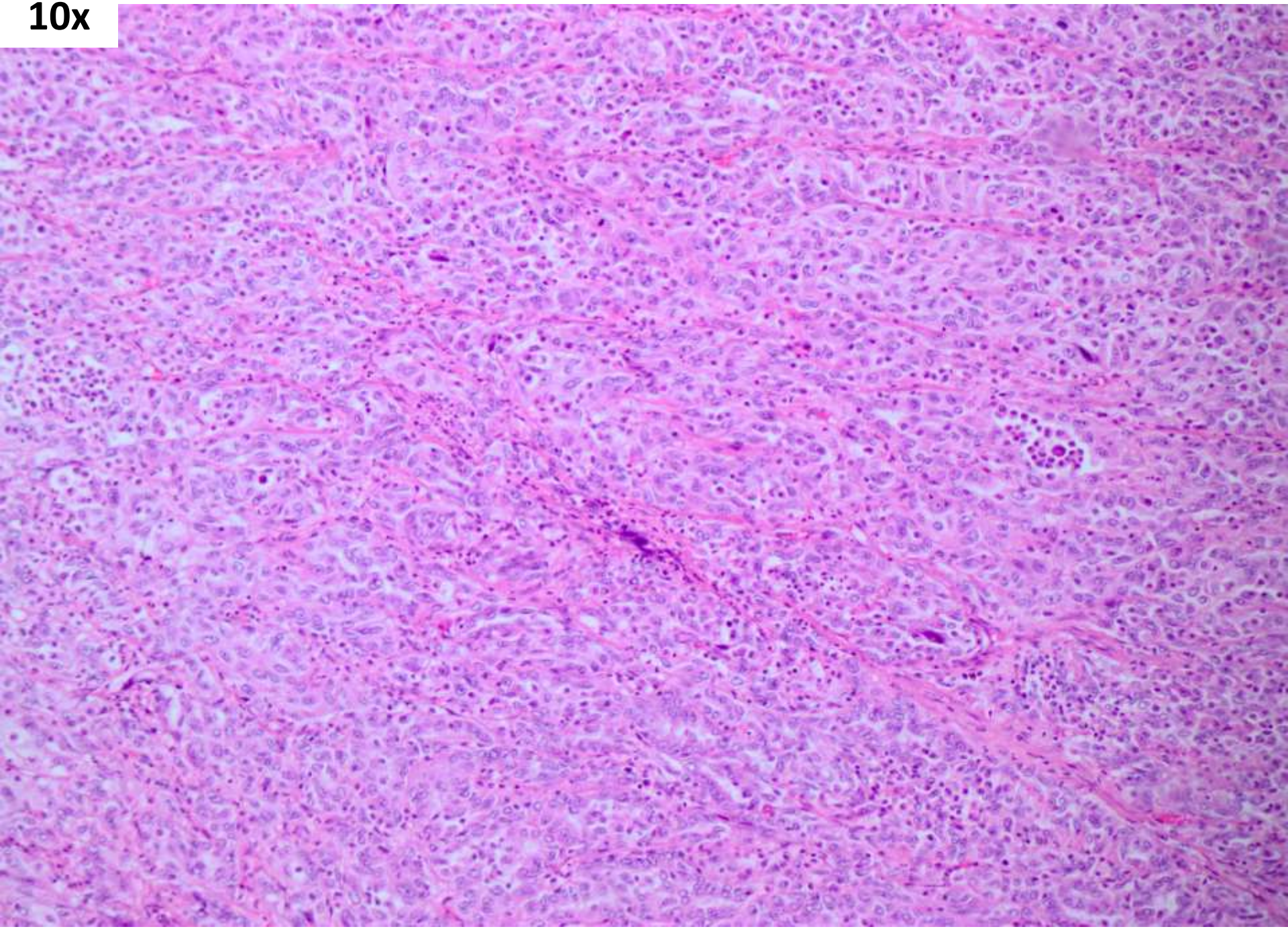
- International Society of Urological Pathology (ISUP) Vancouver Classification of Renal Neoplasia 2013
  1. At least some of the lesion involves the medullary region
  2. There is a predominant formation of tubules
  3. Desmoplastic stromal reaction should be present
  4. Cytologic features are high grade
  5. Growth pattern is infiltrative
  6. There is an absence of other typical RCC subtypes or urothelial carcinoma


1.
American Scientific Products
Cat. M1075

10x



2. and 3.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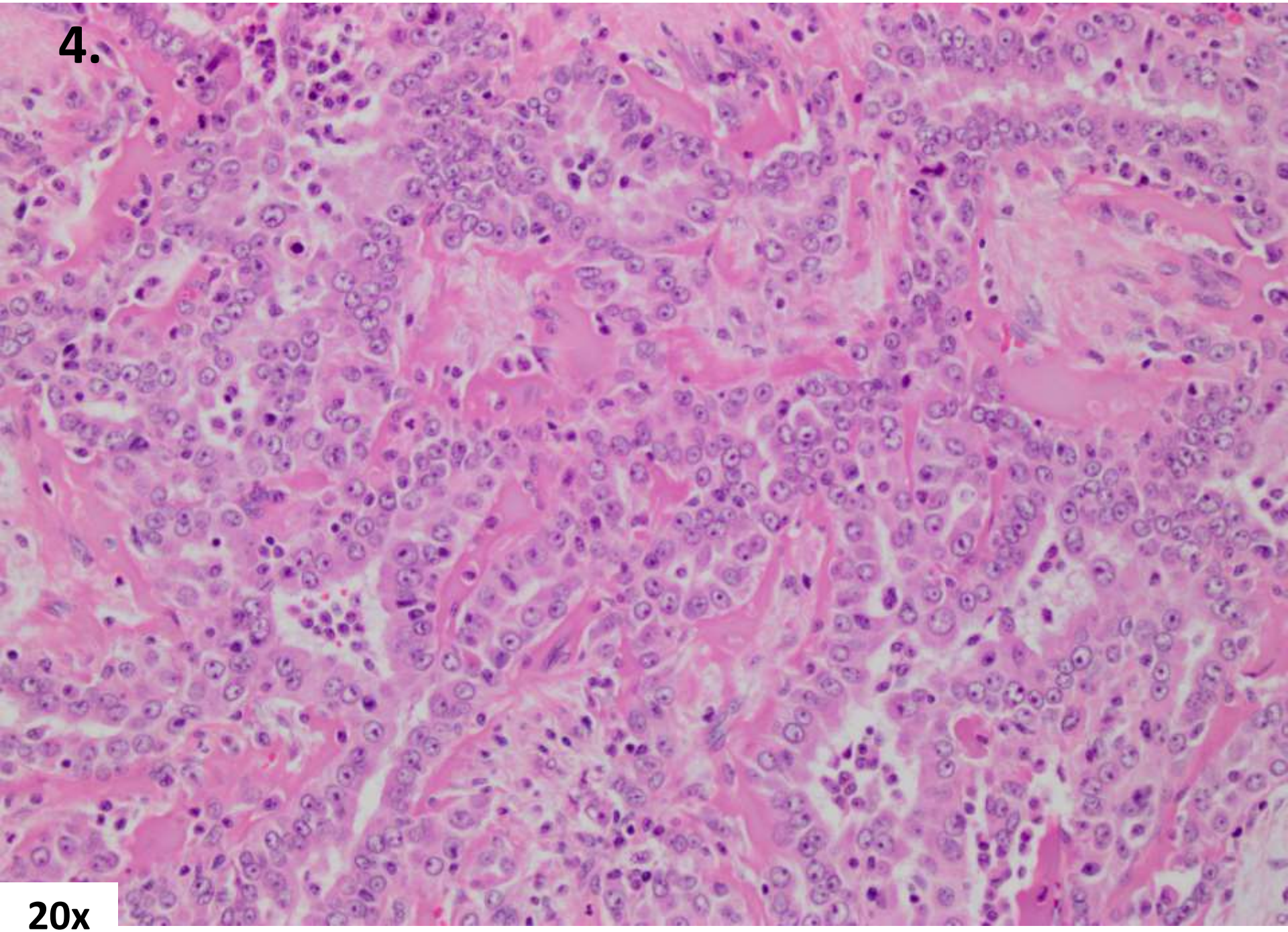
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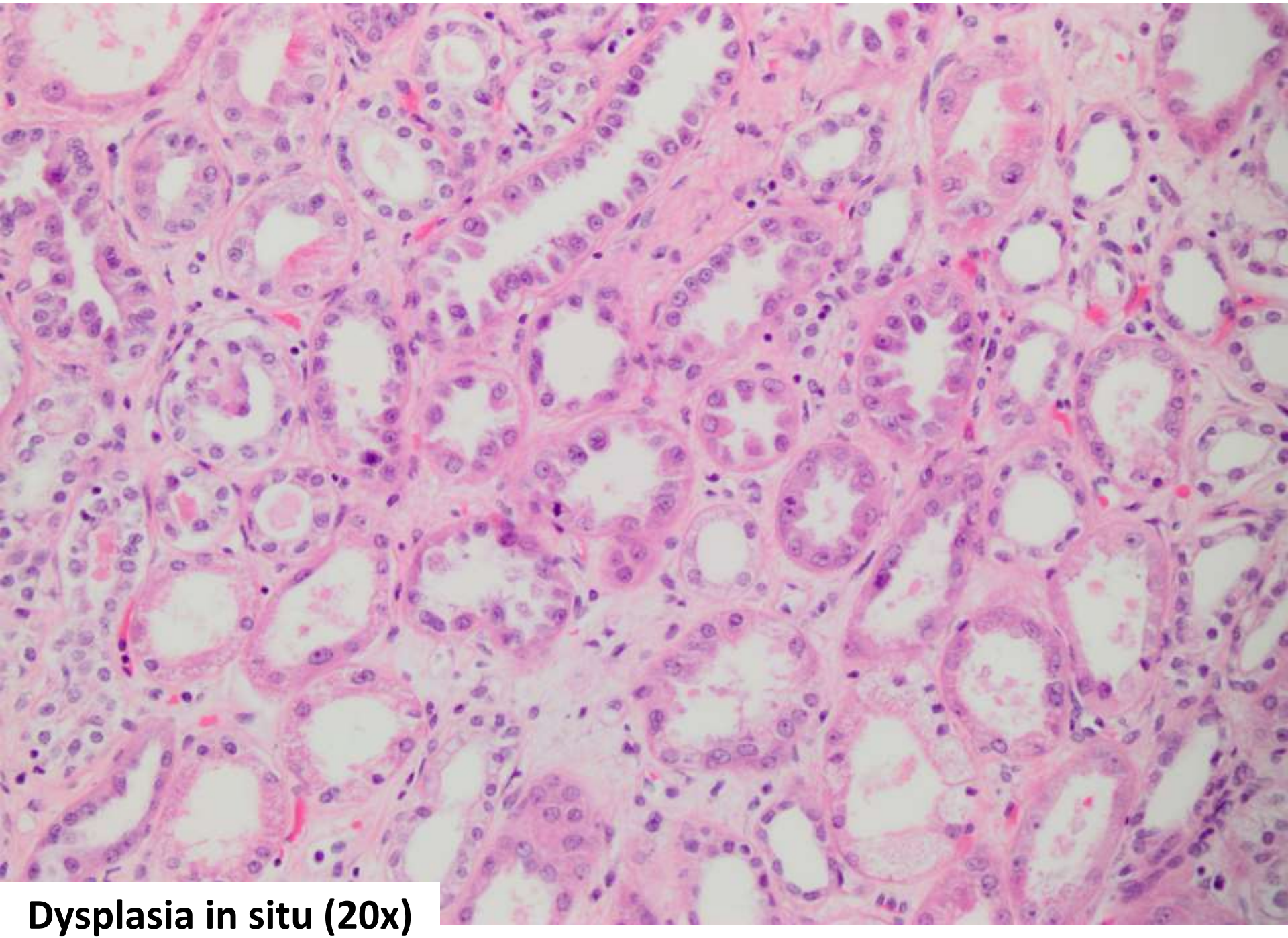


Dysplasia in situ (20x)

Immunohistochemistry

High & low MW keratin	Variable
PAX8	Positive
cKIT	Variable
E-cadherin	Positive
EMA, CD15	Variable
p63	14%
CD10	25%
AMACR (racemase)	Negative
PN15/gp200	Negative
CK20	Negative
Ulex & peanut agglutinin lectins	Positive

From J.P. Higgins and R.V. Rouse, Stanford Surgical Pathology Criteria

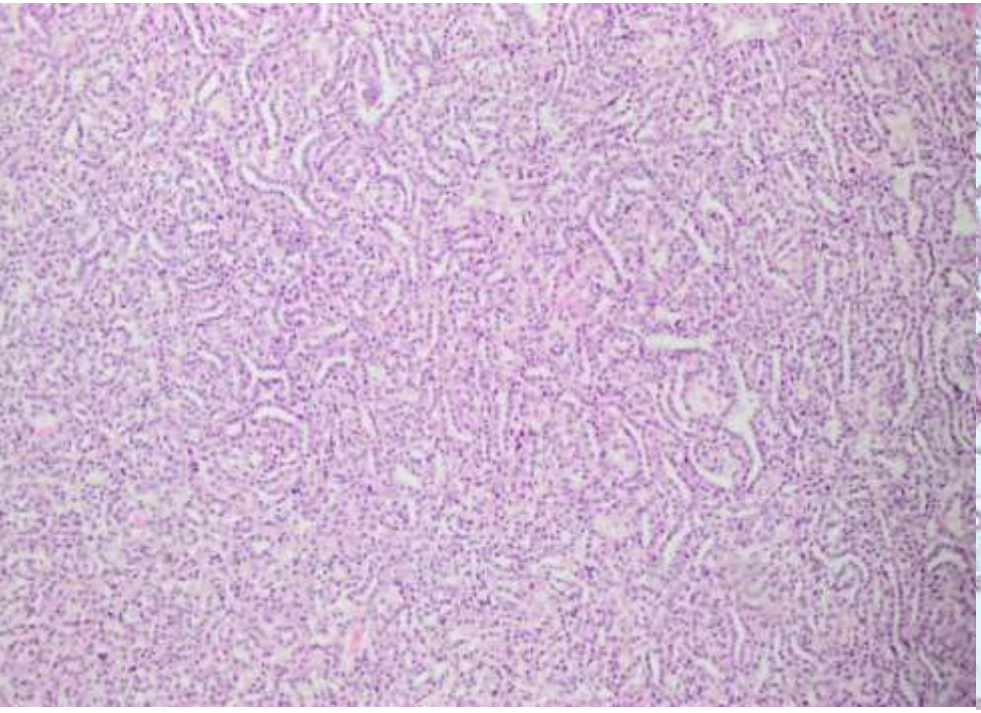
Differential Diagnosis

- Metastatic adenocarcinoma
- Papillary renal cell carcinoma
- Gland-forming urothelial carcinoma
- Medullary carcinoma of the kidney

	Medullary CA	Collecting Duct CA
INI	Negative	Positive (85%)
OCT3/4	Positive (69%)	Negative

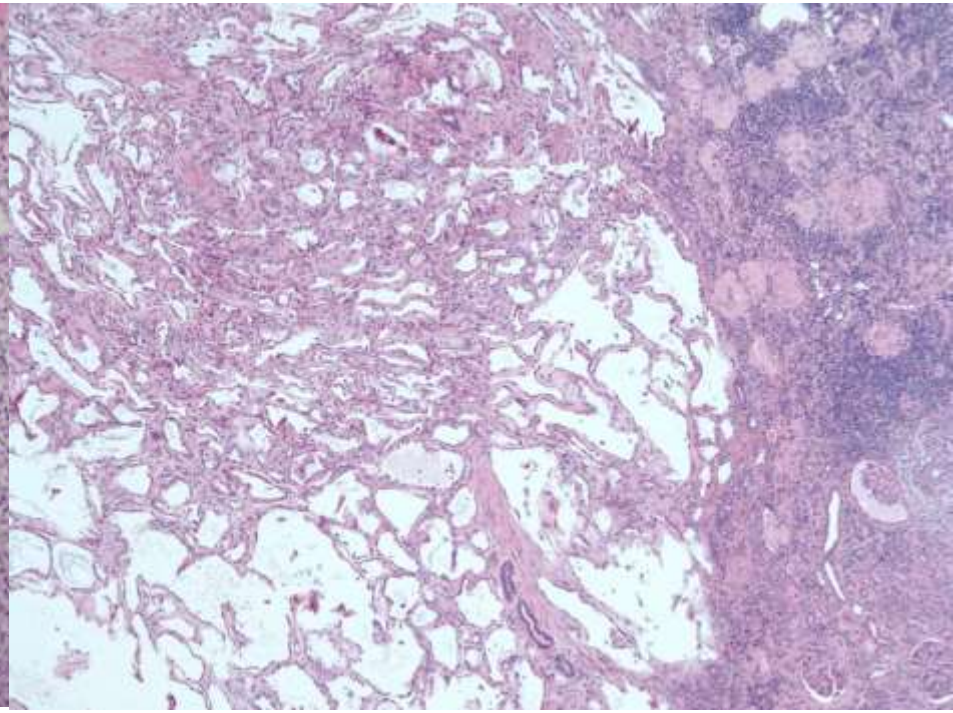
- Mucinous tubular and spindle cell carcinoma
- Tubulocystic carcinoma

Mucinous tubular and spindle cell carcinoma



SB 5409
July 2010
Submitted by Ivan Damjanov

Tubulocystic carcinoma



SB 6027
February 2016
Submitted by John Higgins

Summary

- Rare renal malignancy
- Highly aggressive with poor prognosis
- Criteria
  - Medullary involvement
  - Desmoplasia
  - High grade nuclear features
- Rule out other common entities
  - Metastatic adenocarcioma
  - Papillary renal cell carcinoma
  - Gland-forming urothelial carcinoma
- Think about less common entities

References

- Amin MB et al, “Collecting Duct Carcinoma Versus Renal Medullary Carcinoma: An Appeal for Nosologic and Biological Clarity”, *Am J Surg Pathol* 2012;36(9):1265-78
- Gupta R et al, “Carcinoma of the collecting ducts of Bellini and renal medullary carcinoma: clinicopathologic analysis of 52 cases of rare aggressive subtypes of renal cell carcinoma with a focus on their interrelationship”.
- Murphy WM et al, “Tumors of the Kidney, Bladder and Related Urinary Structures”, Atlas of Tumor Pathology, AFIP Fourth Series, Fascicle 1, 2004.
- Srigley, JR et al, “The International Society of Urological Pathology (ISUP) Vancouver Classification of Renal Neoplasia”, Am J Surg Path 2013;37(10):1469–1489.

SB 6078

Zhen Yan/Sanjay Kakar, UCSF

59-year-old woman with sigmoid polyp at 45cm.

She has history of SSA in transverse colon and HPs in sigmoid and rectum.

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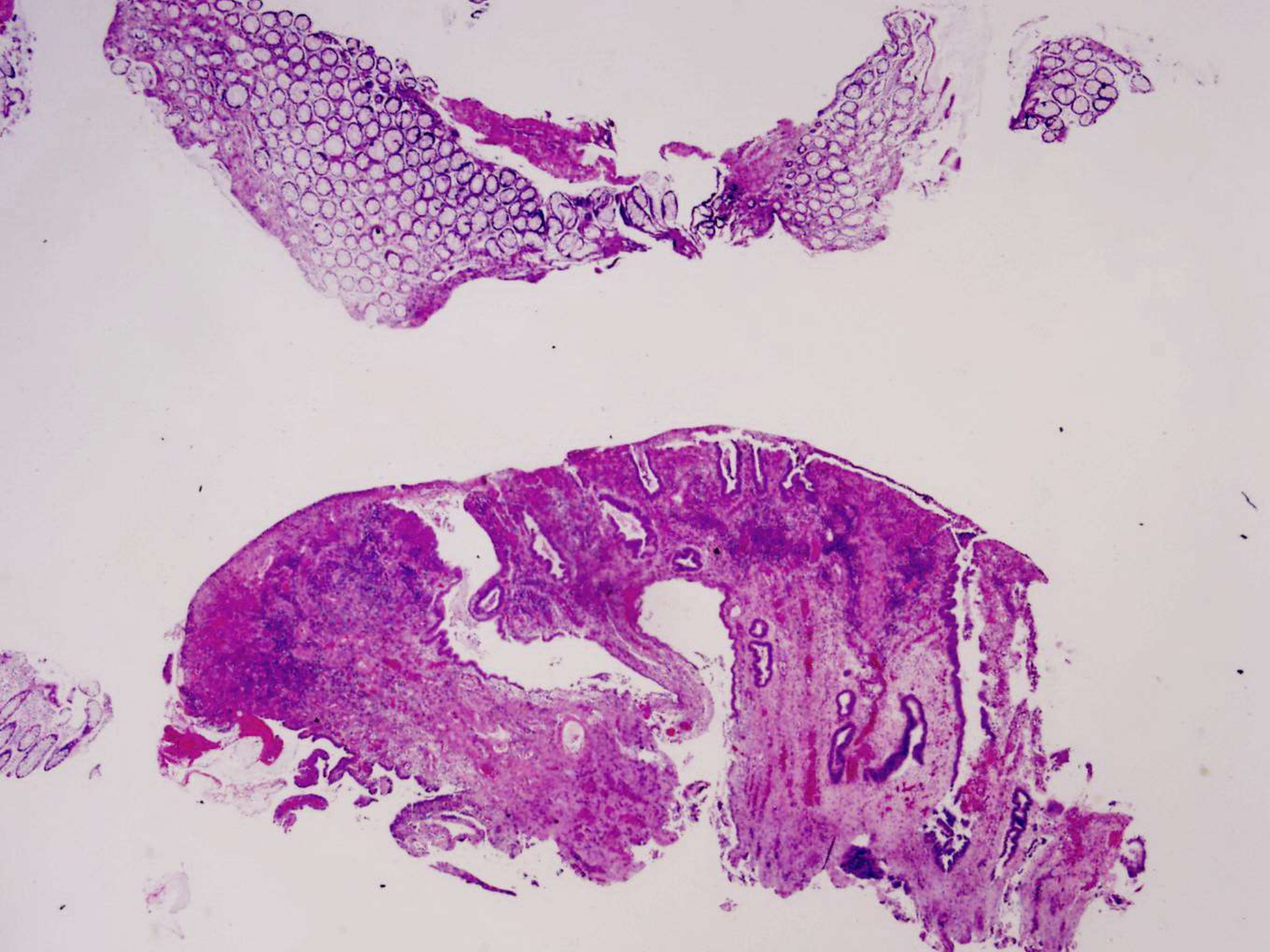
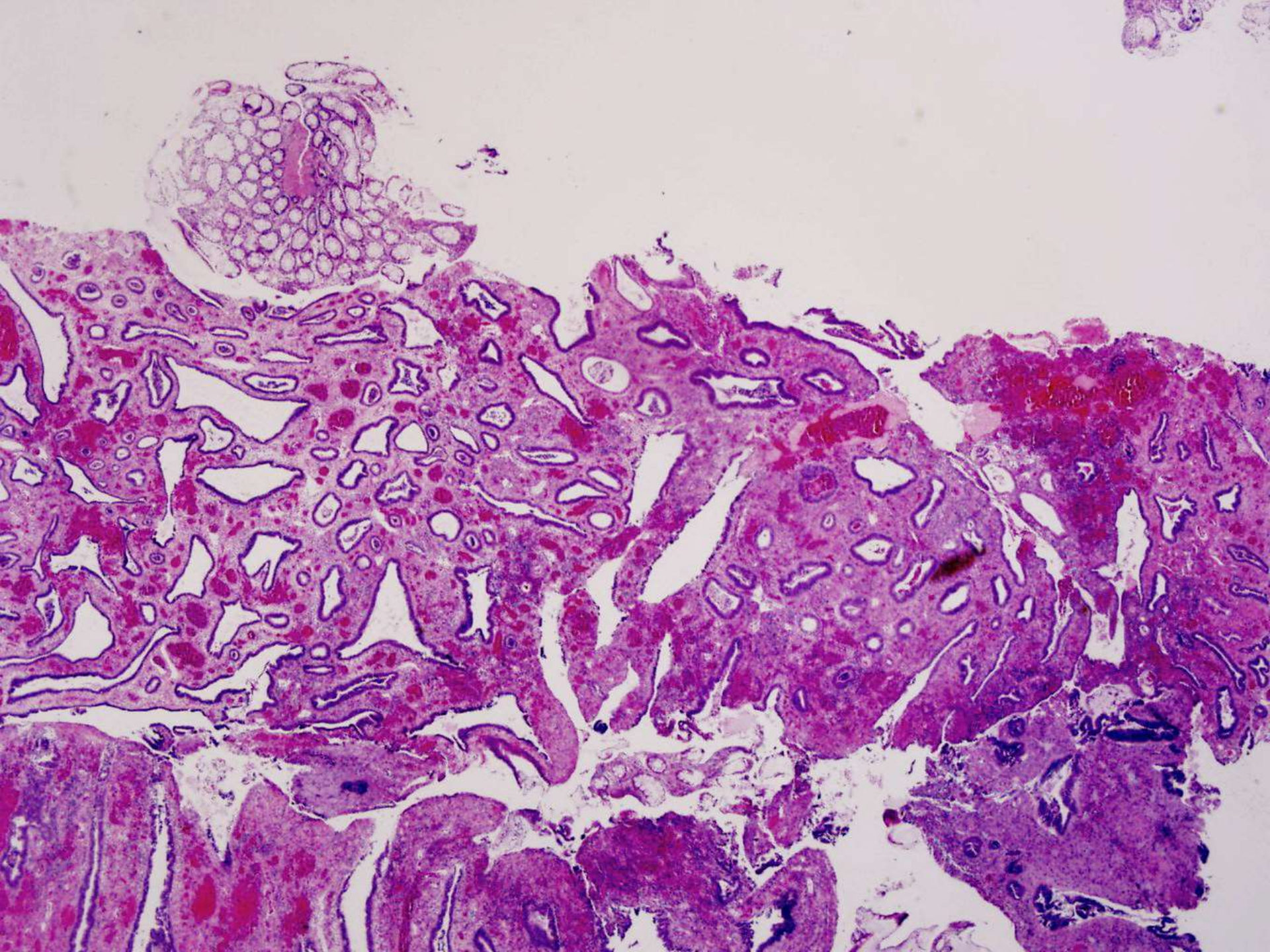
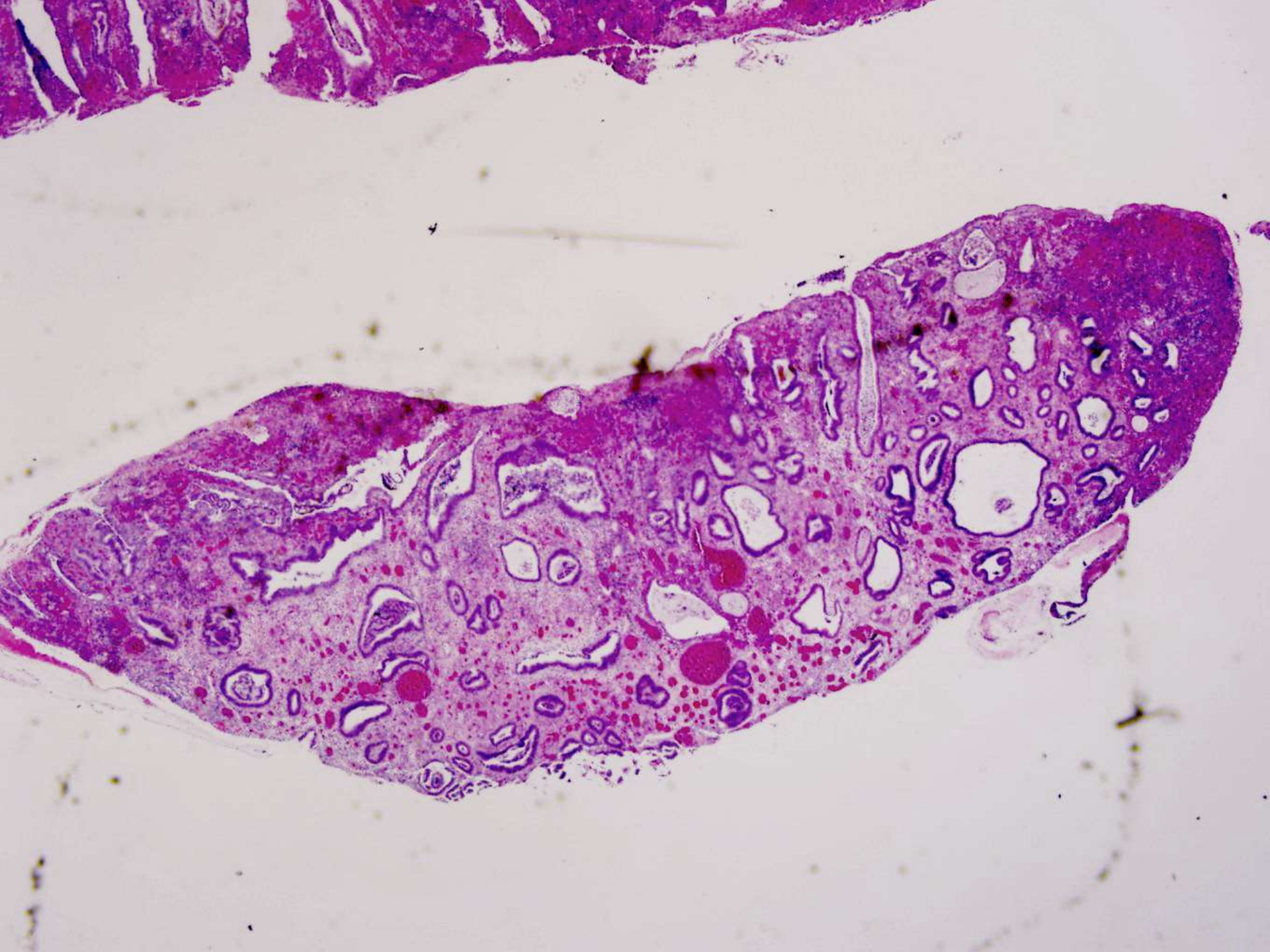
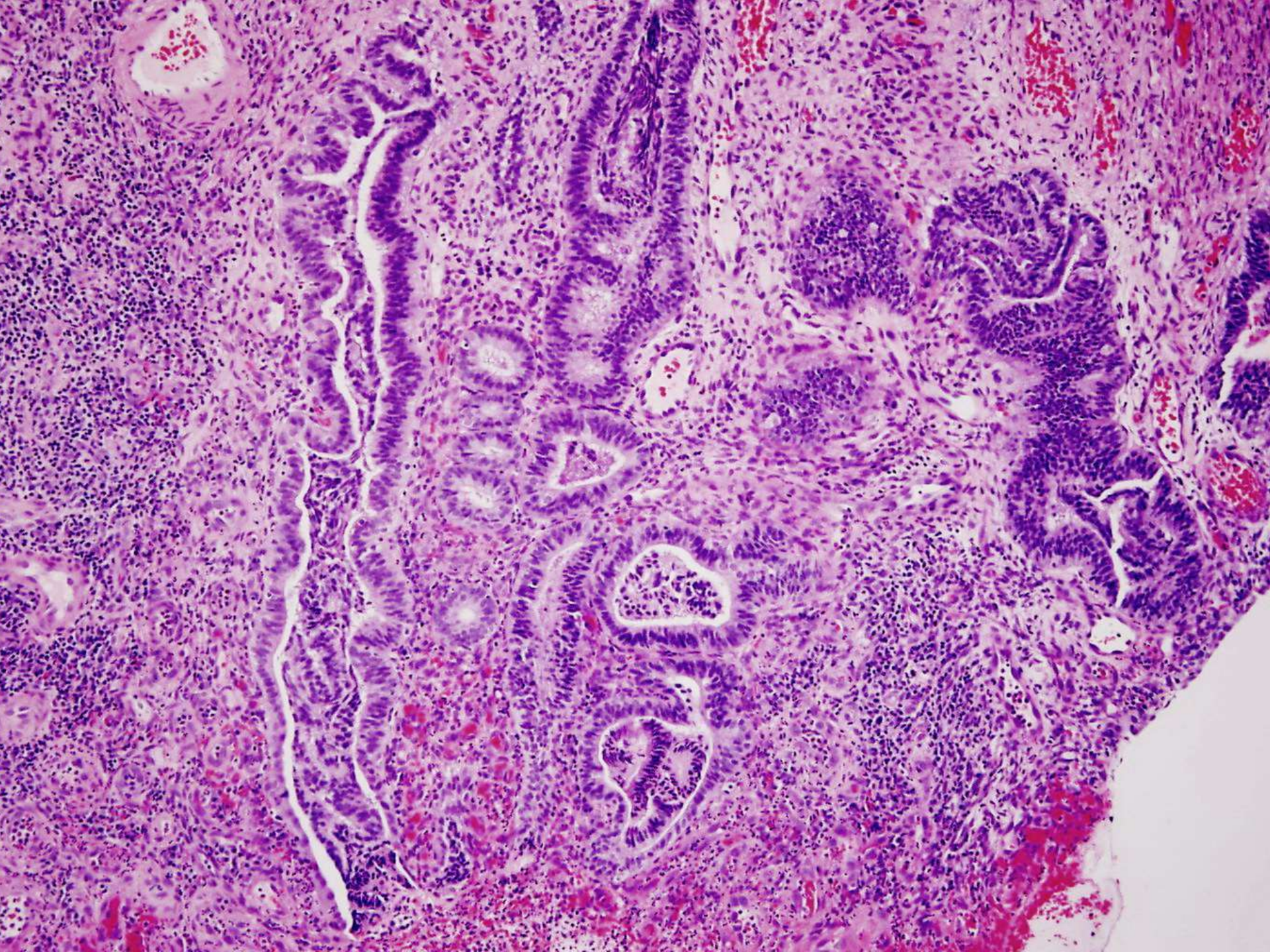
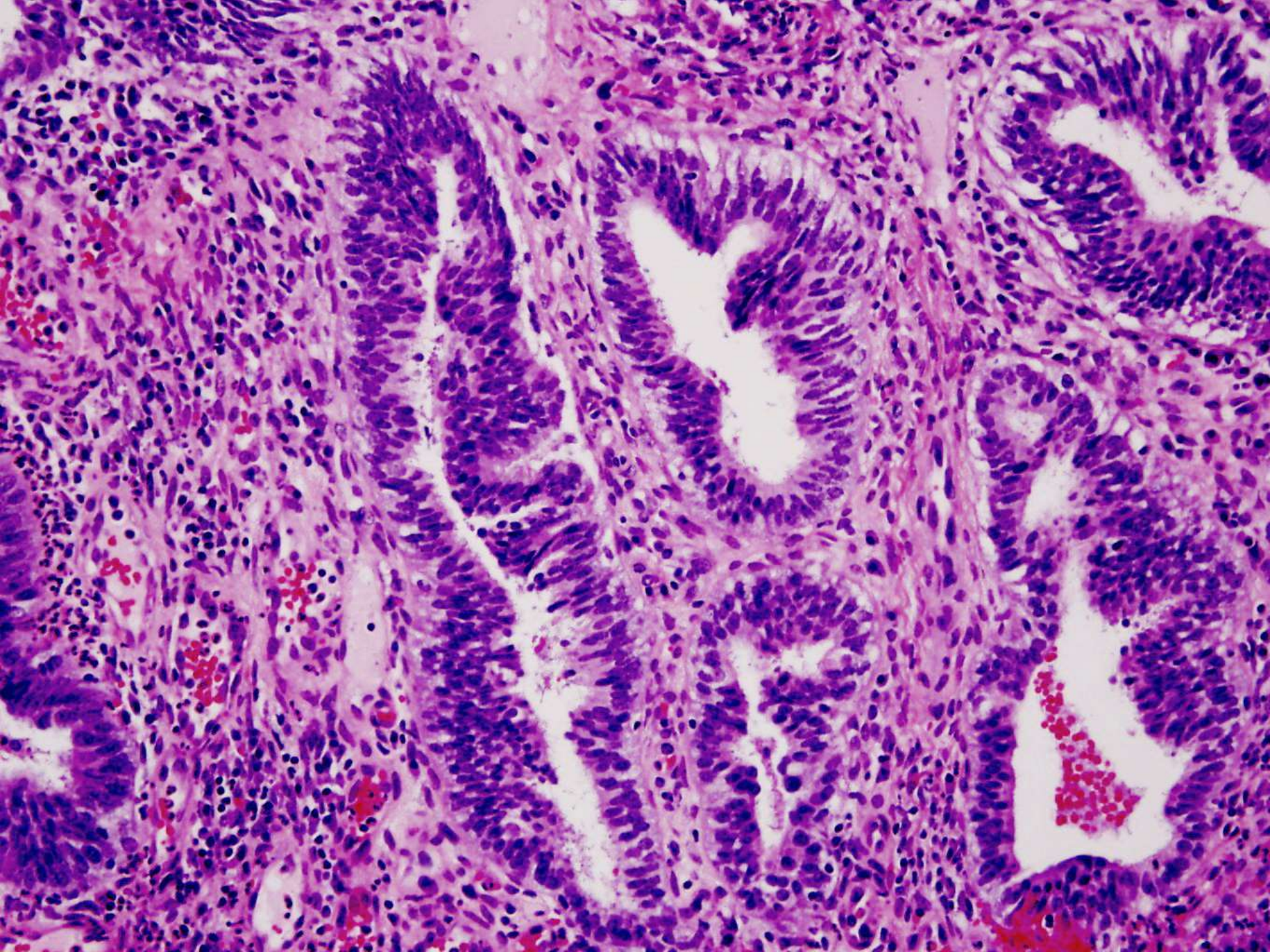




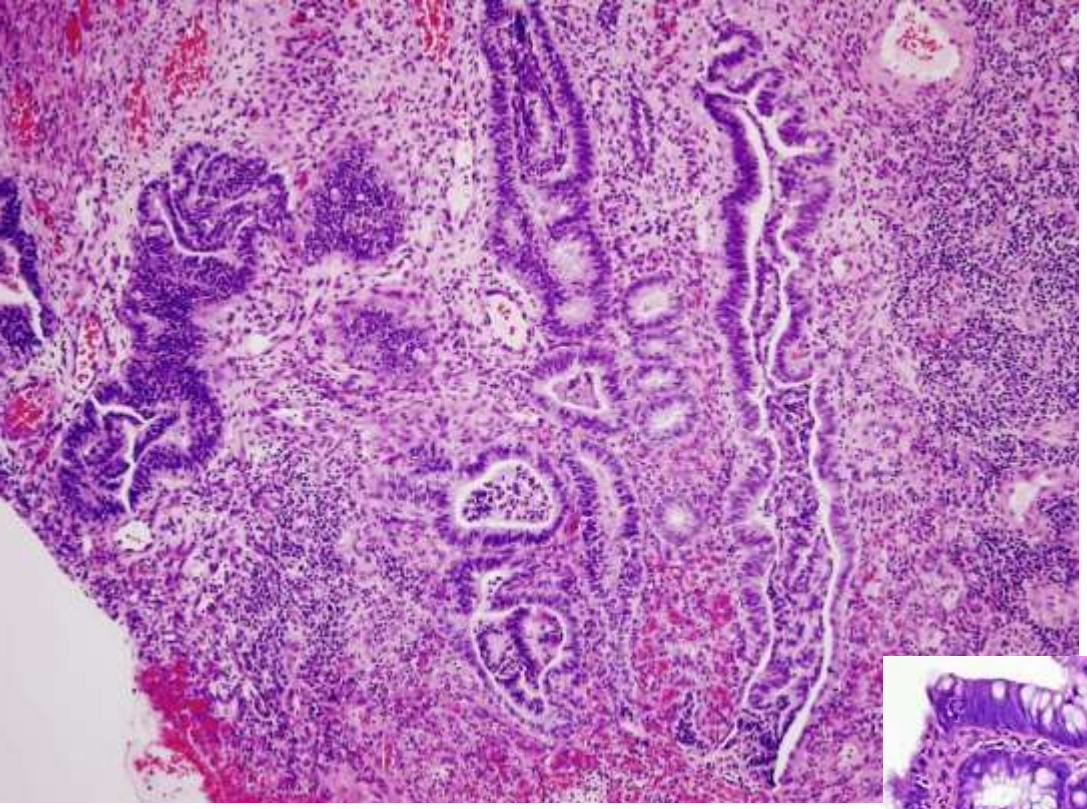






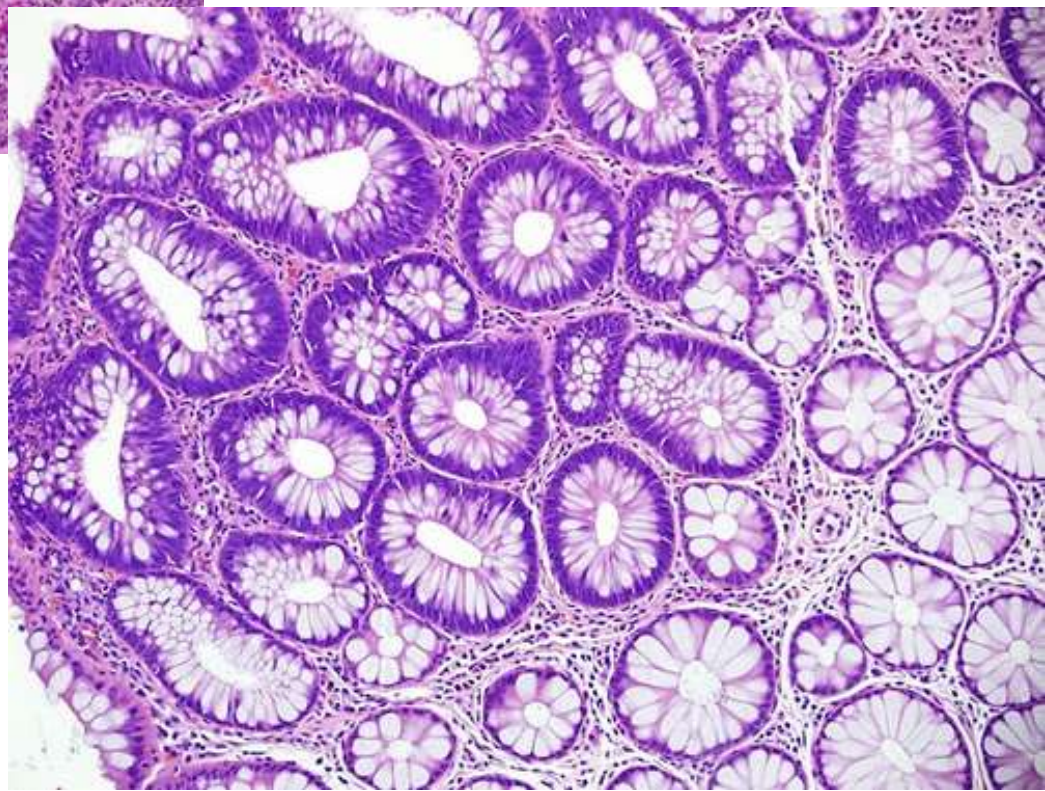
Differential Diagnosis

- **Tubular adenoma**
- **Mucosal prolapse**
- **Colitis cystica profunda**



Present case

TA

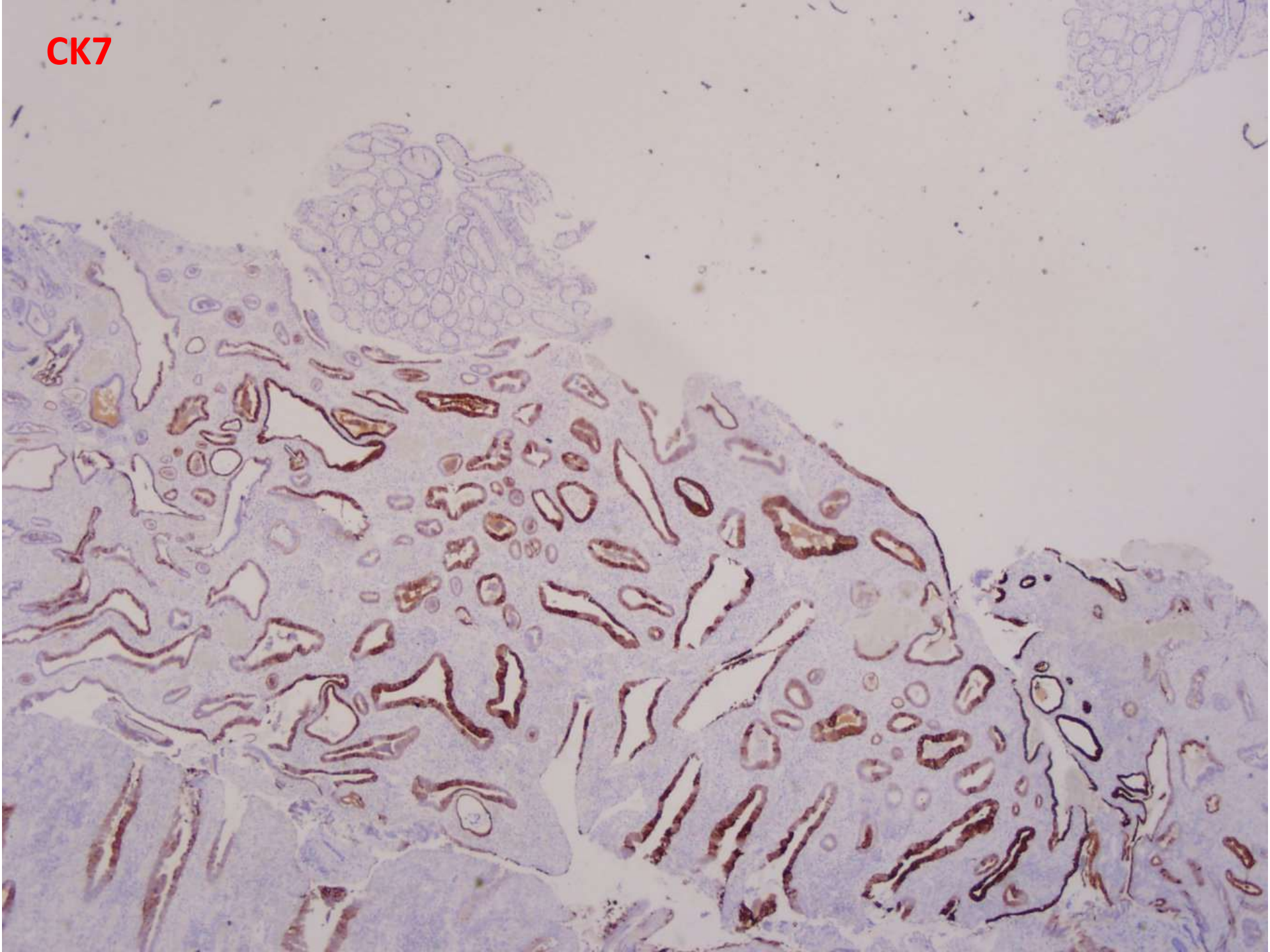


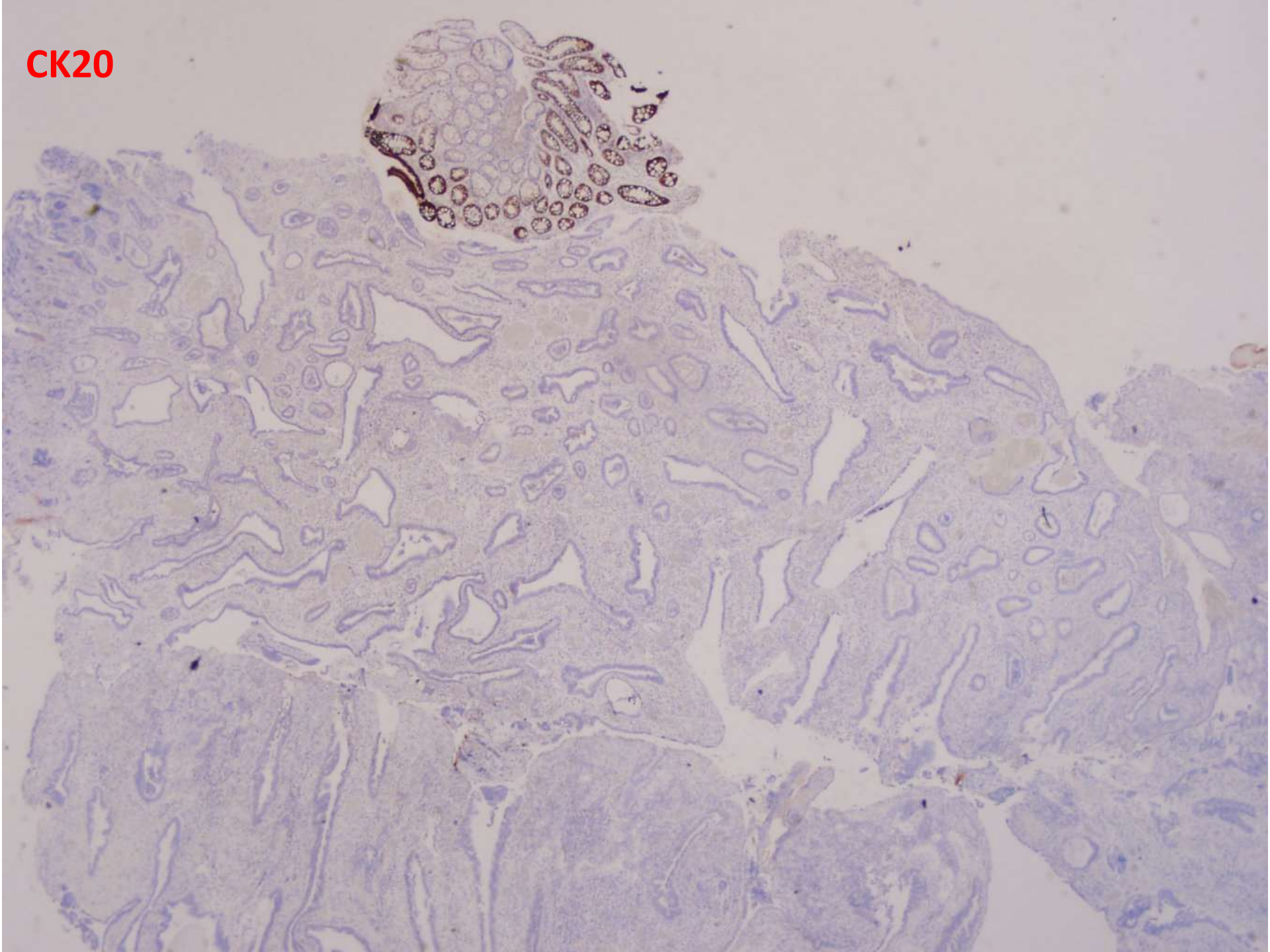
Mucosal prolapse

- **Superficial ulceration or erosion of mucosa**
- **Thickened, disorganized muscularis mucosae with extension into lamina propria**
- **Glands may be displaced into submucosa**

Colitis cystica profunda

- **Misplaced benign colonic epithelium forming cystic spaces filled with mucin and surrounded by lamina propria**
- **Mucin may extravasate into surrounding tissue**


CK7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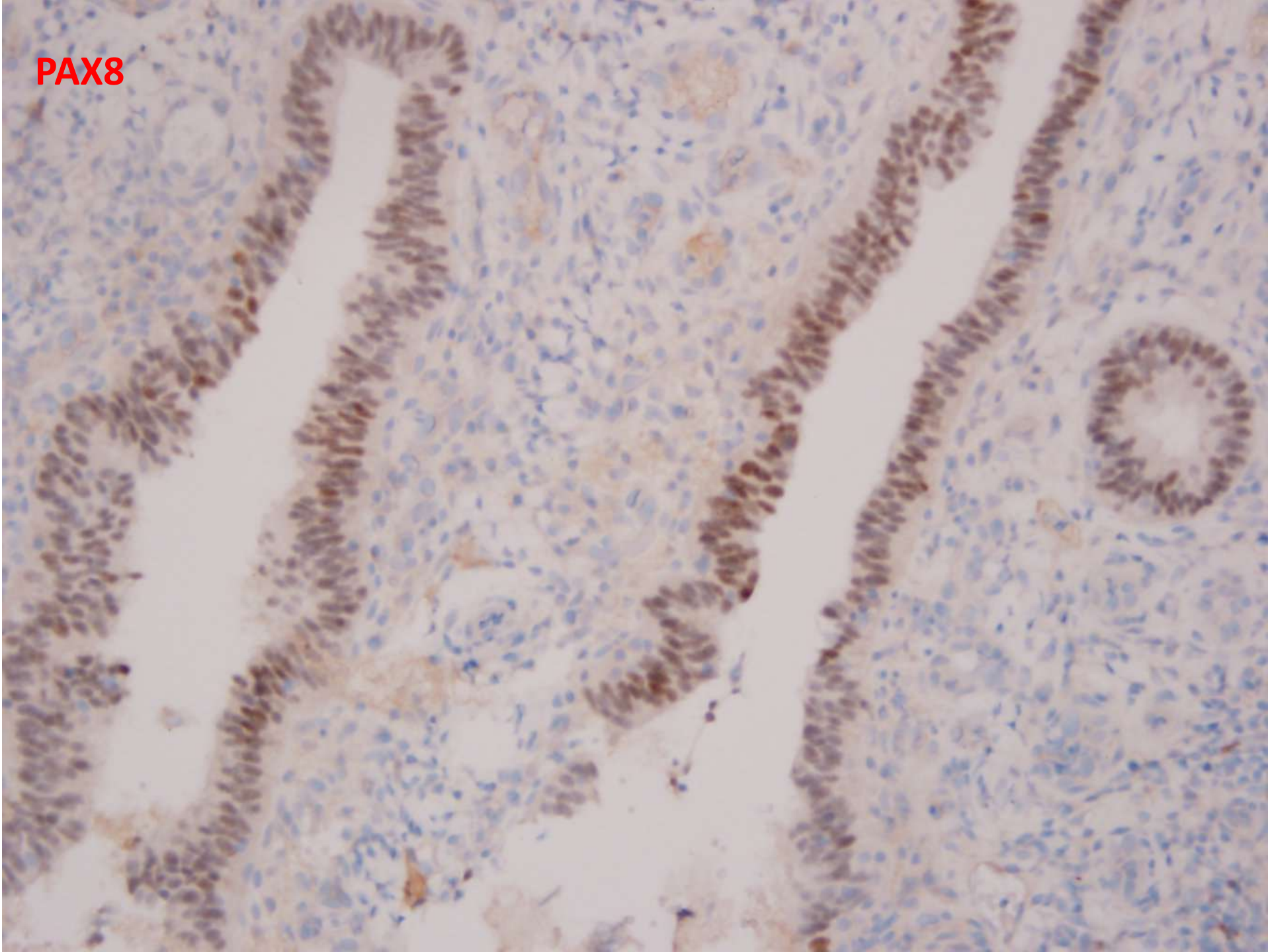
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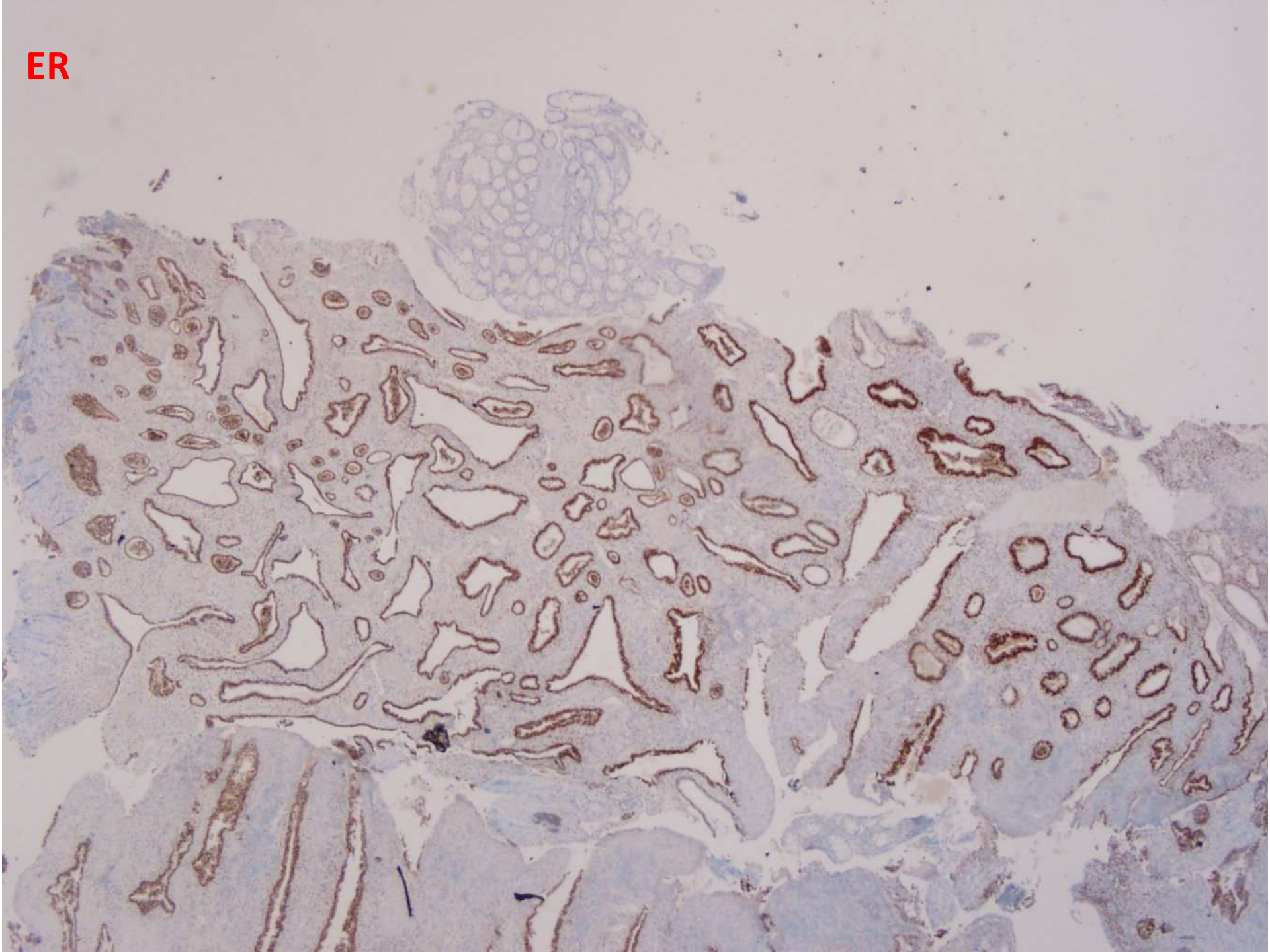
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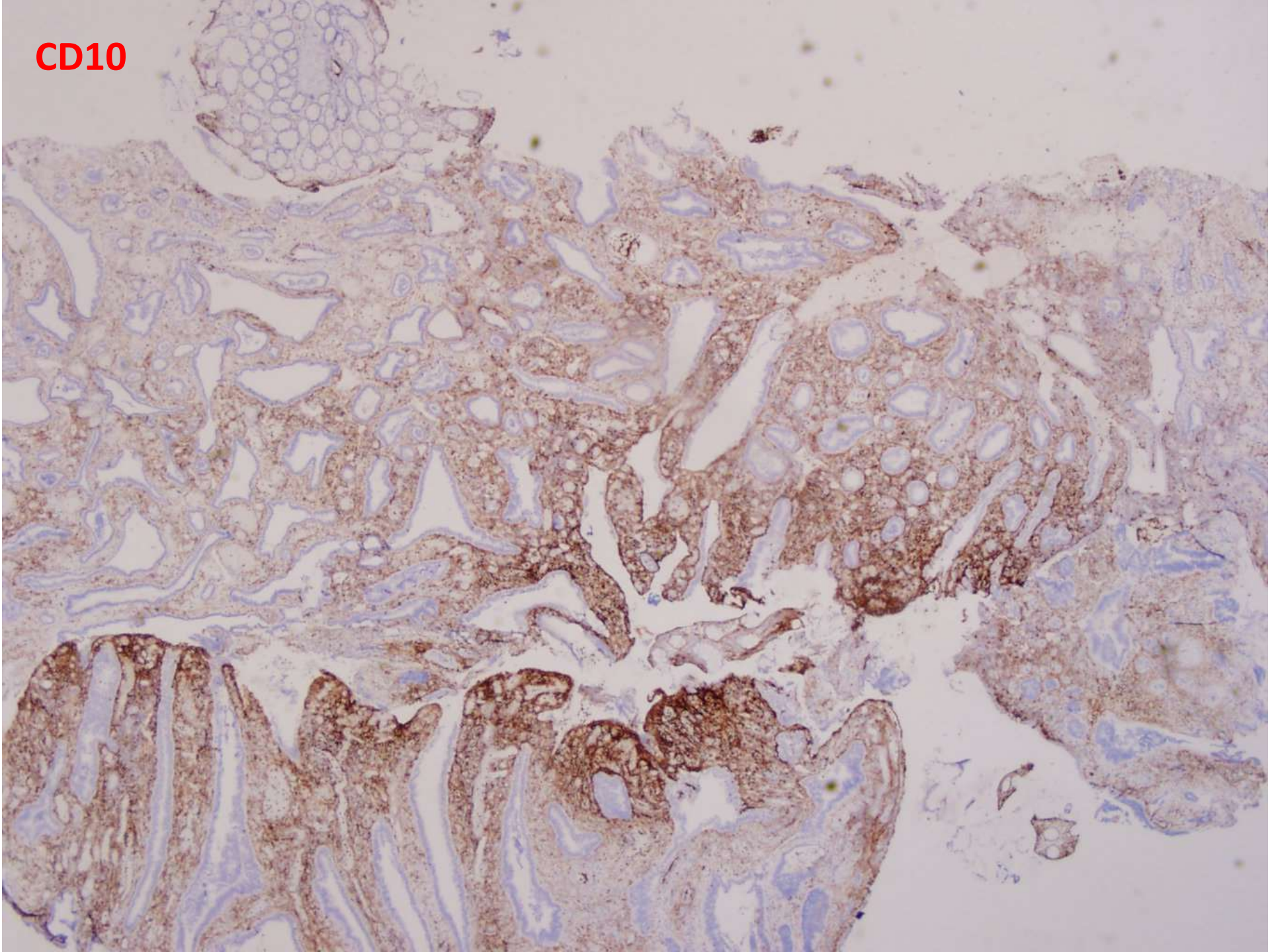
CD10

Endometriosis involving the mucosa of the intestinal tract: a clinicopathologic study of 15 cases

- Wei Jiang, et al. Modern Pathology 2013, 26: 1270

- **Diagnosing endometriosis involving serosa, muscularis propria or submucosa: straightforward. However, involving mucosa can cause diagnostic difficulty**

- **Majority involving rectum (73%); Sigmoid colon (20%); Ileum (7%)**

- **Epithelial metaplasia : tubal metaplasia (n=11); squamous (n=3) mucinous (n=2); hobnail (n=1); eosinophilic (n=1)**

- **All cases show proliferative or inactive glands with no secretory glands**

- **May cause adjacent colonic cryptal architectural distortion, cryptitis, cryptal abscess, or prolapse change**

Endometriosis involving the mucosa of the intestinal tract: a clinicopathologic study of 15 cases

- Wei Jiang, et al. Modern Pathology 2013, 26: 1270

- **Hyperplasia or malignancy may involve both epithelial and stromal components:**
  - **Complex atypical hyperplasia (2 cases)**
  - **Carcinosarcoma (1 case)**
  - **Endometrioid carcinoma (1 case)**

- **So called “stromal endometriosis”: spindle cell proliferation in lamina propria.**

SB 6079

Charles Lombard; El Camino Hospital

64-year-old man with prosate biopsies.

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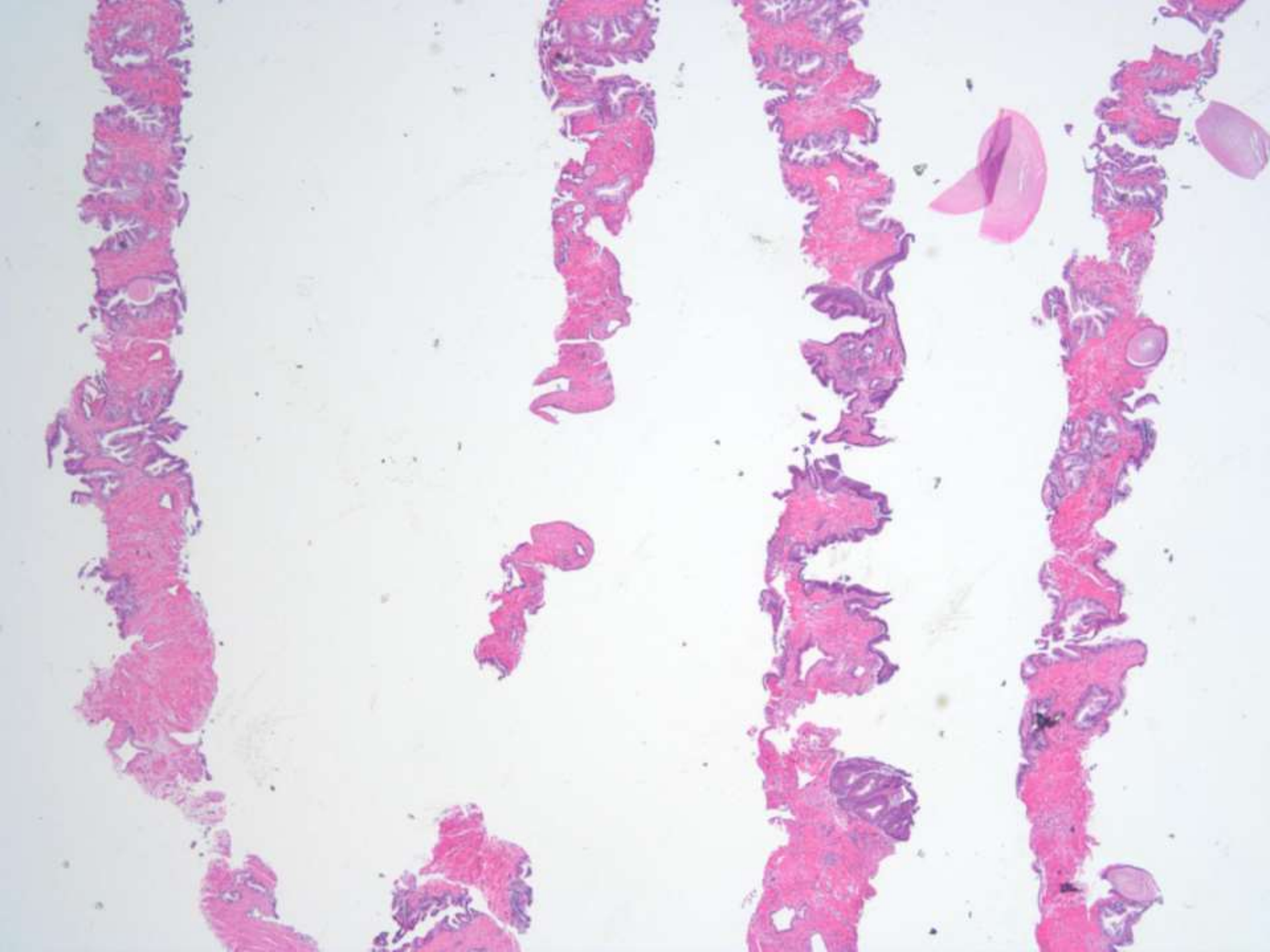
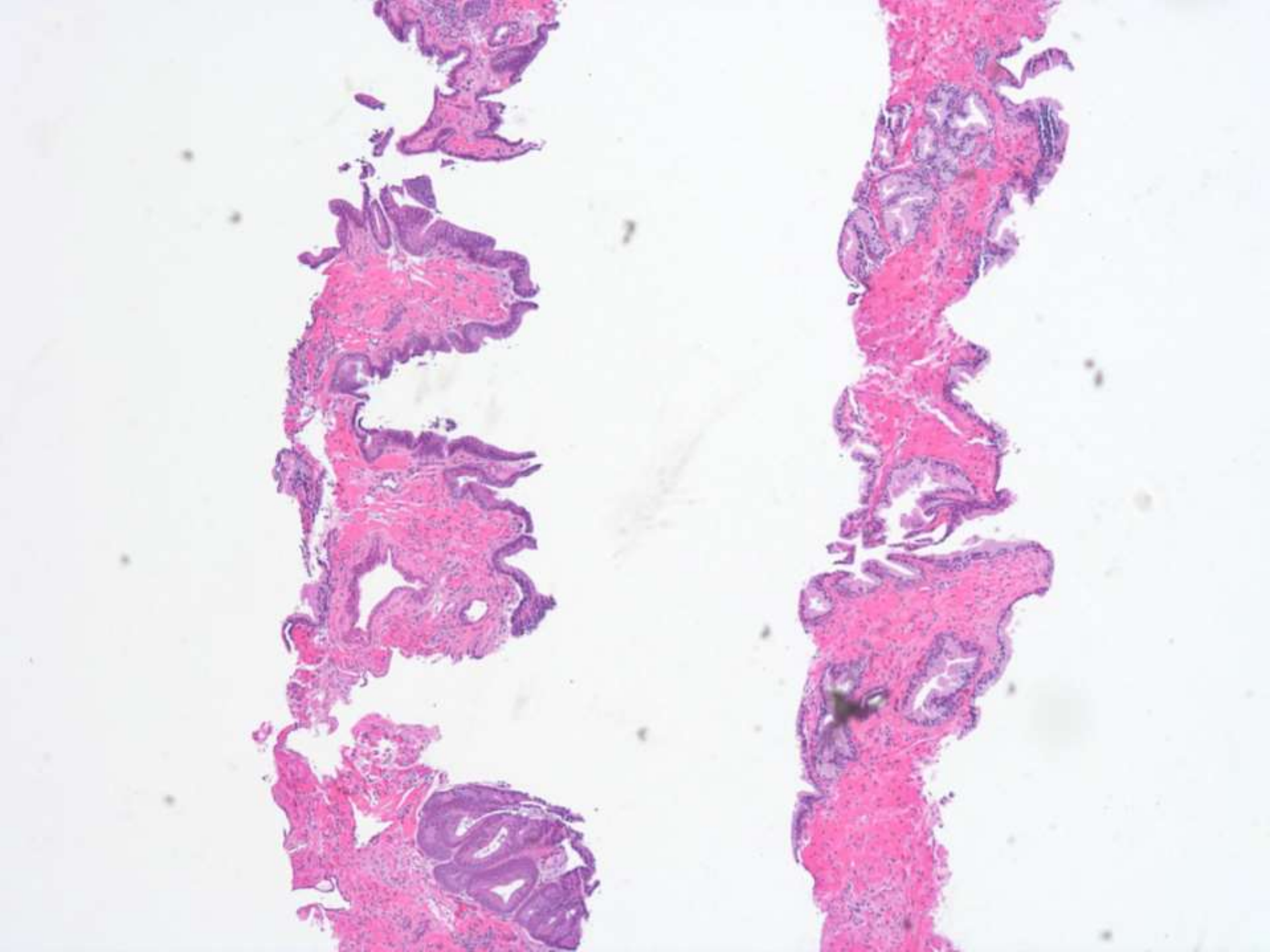
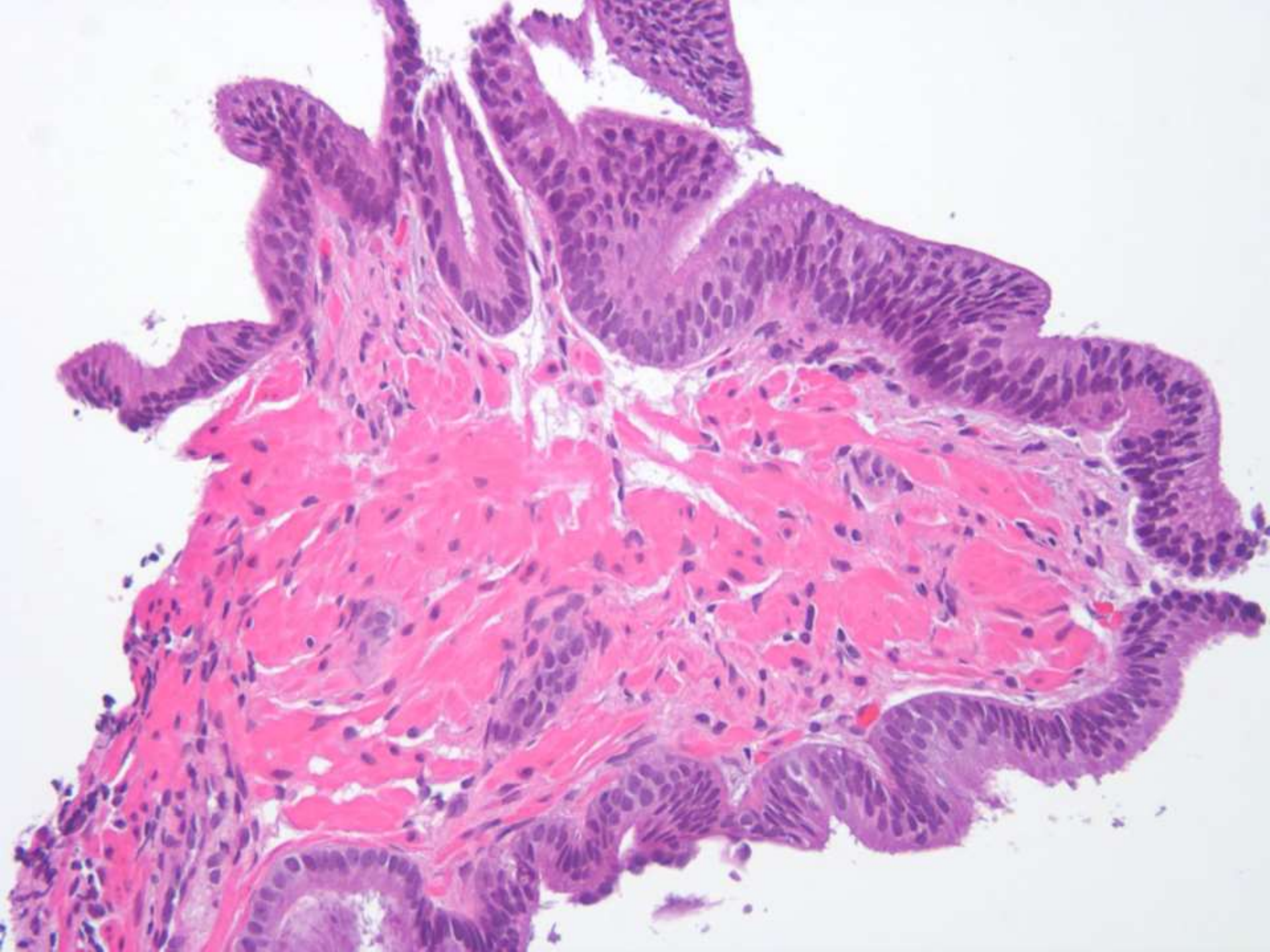
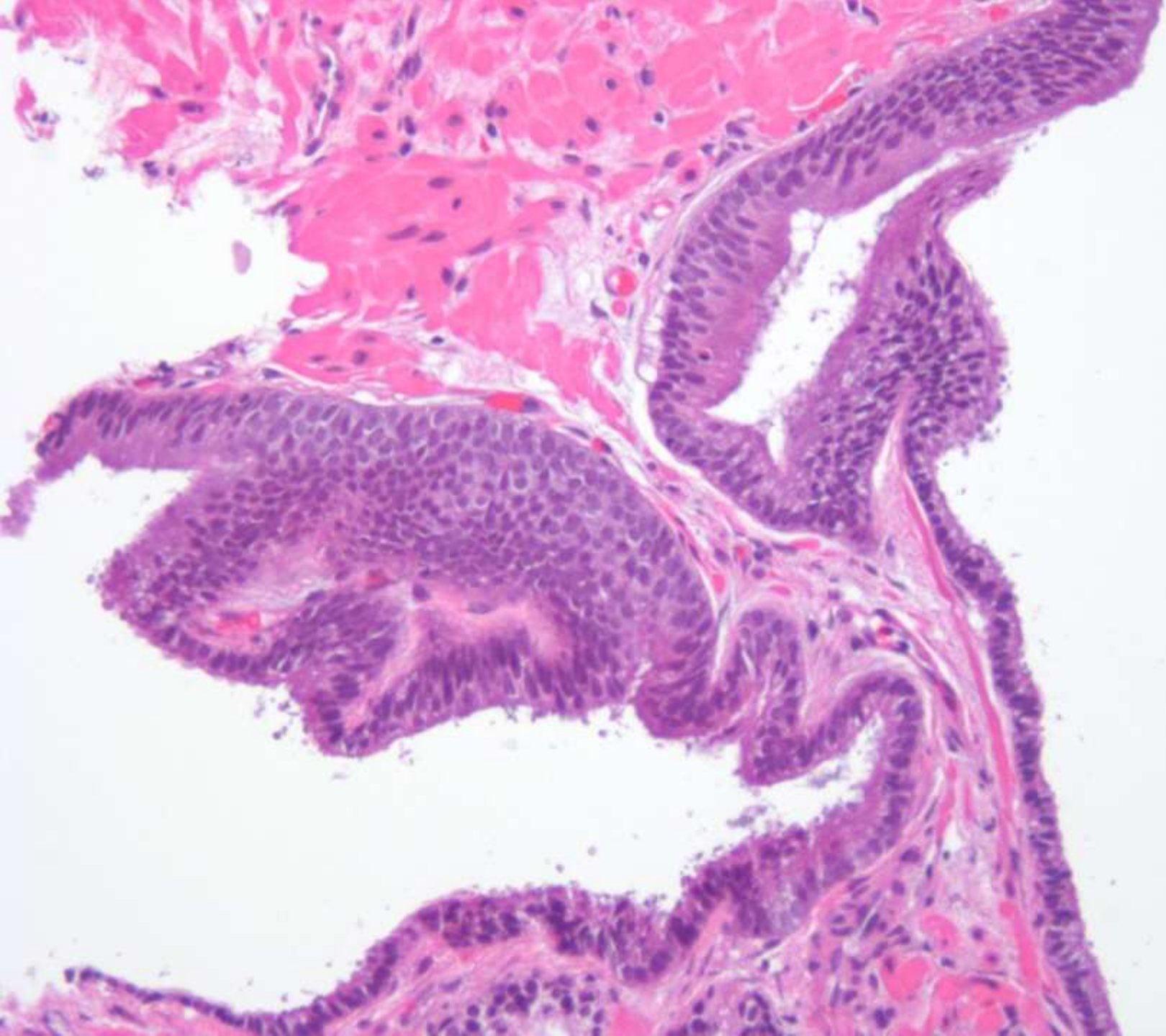
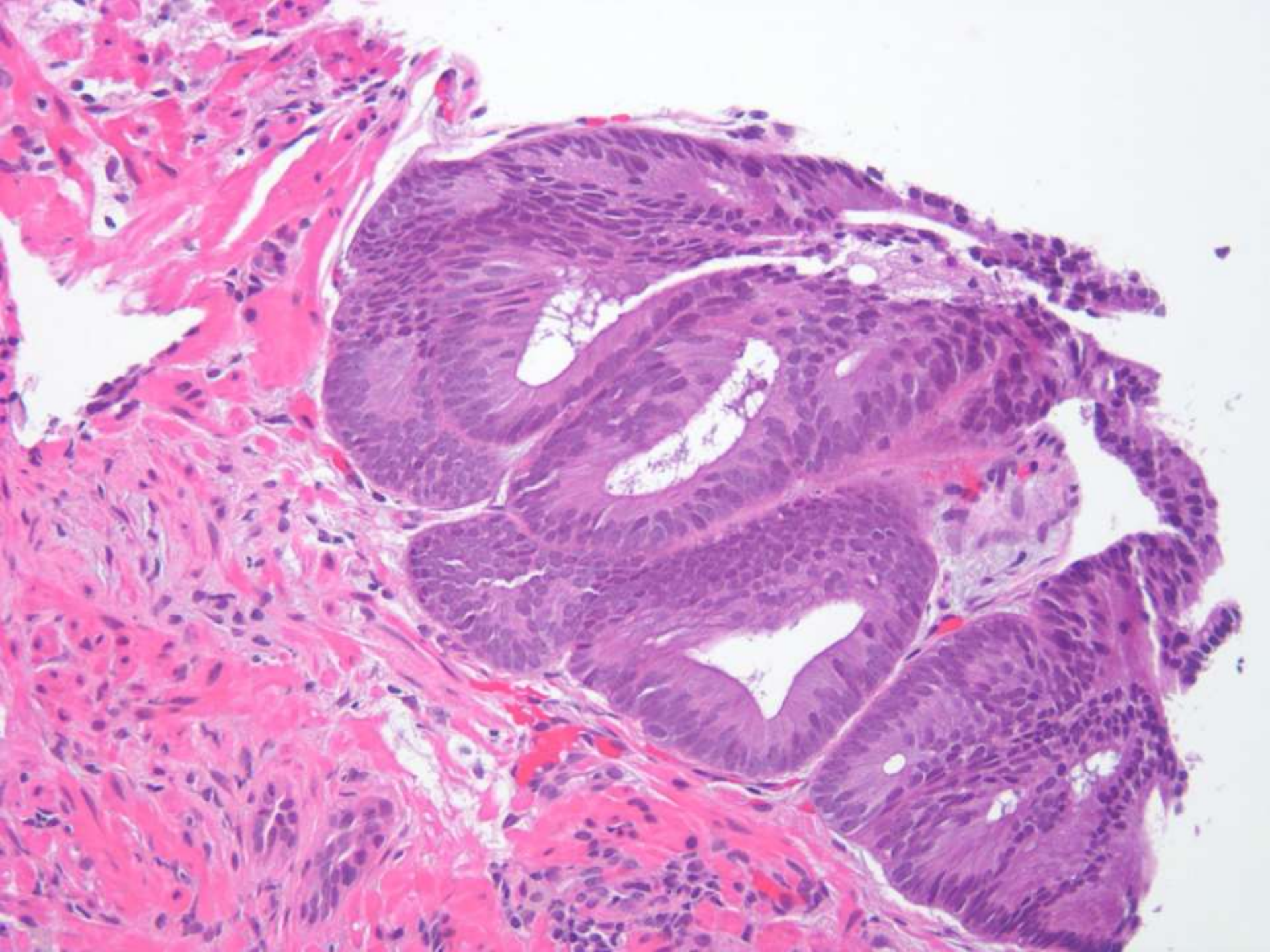
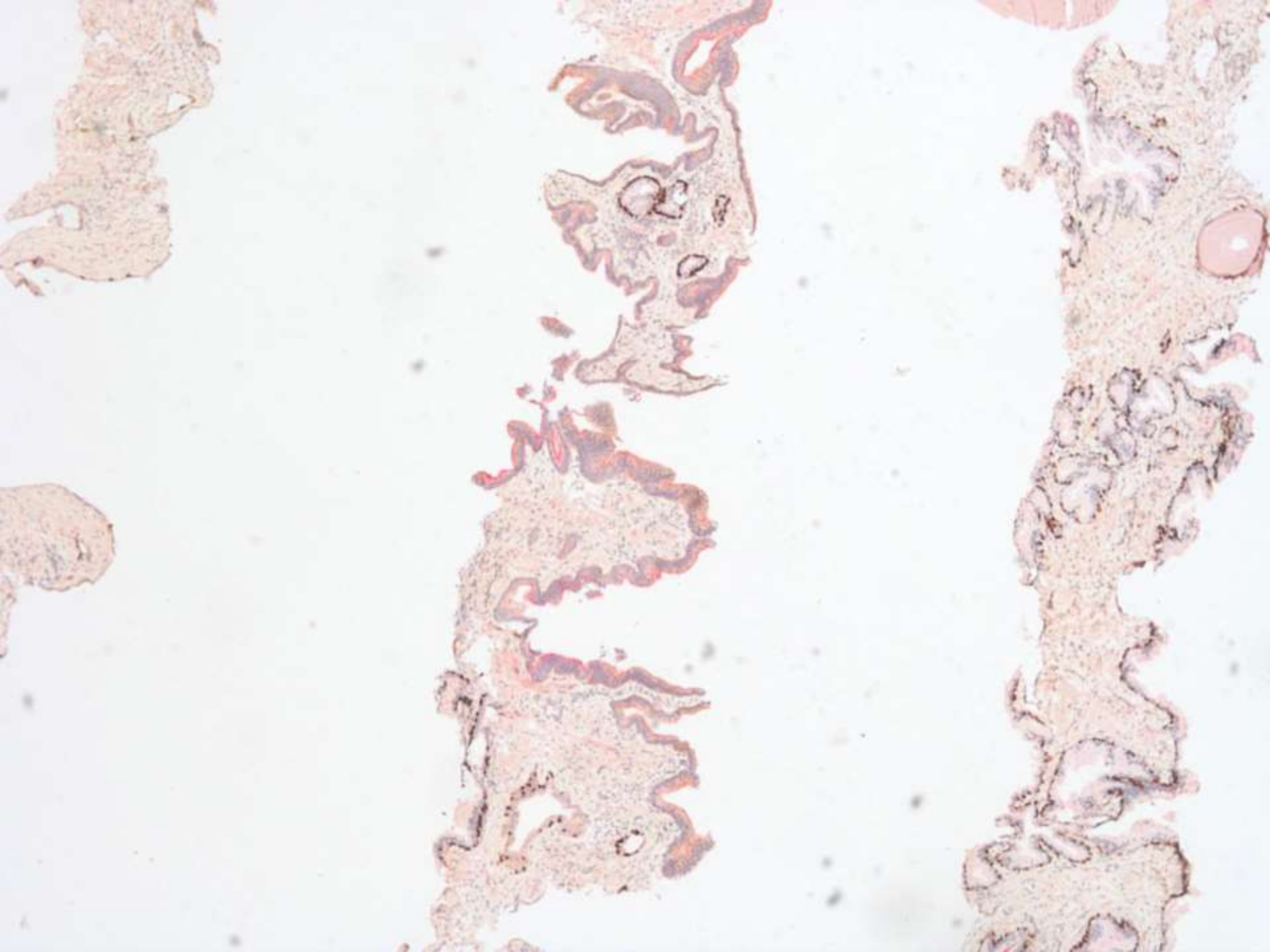


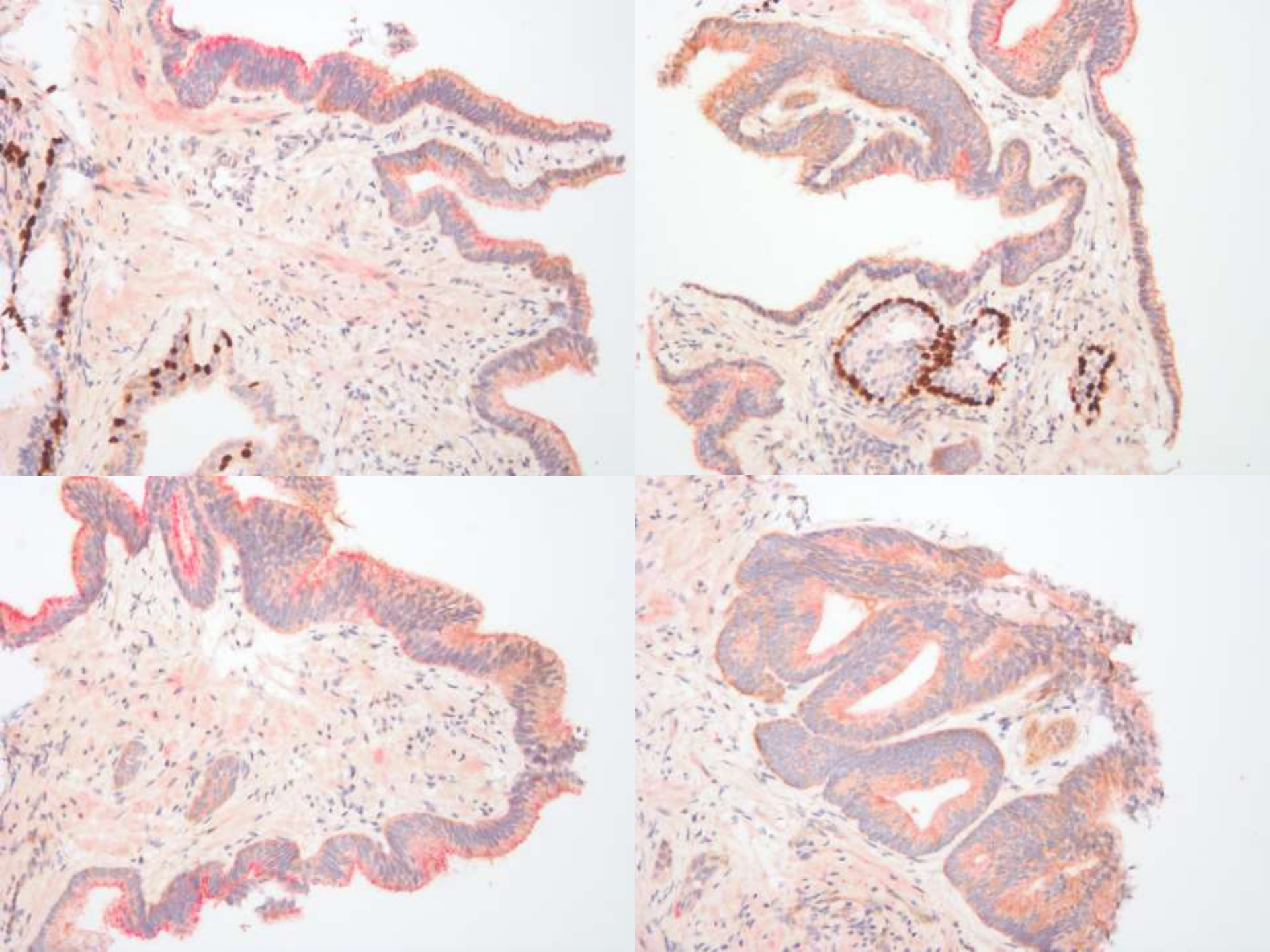








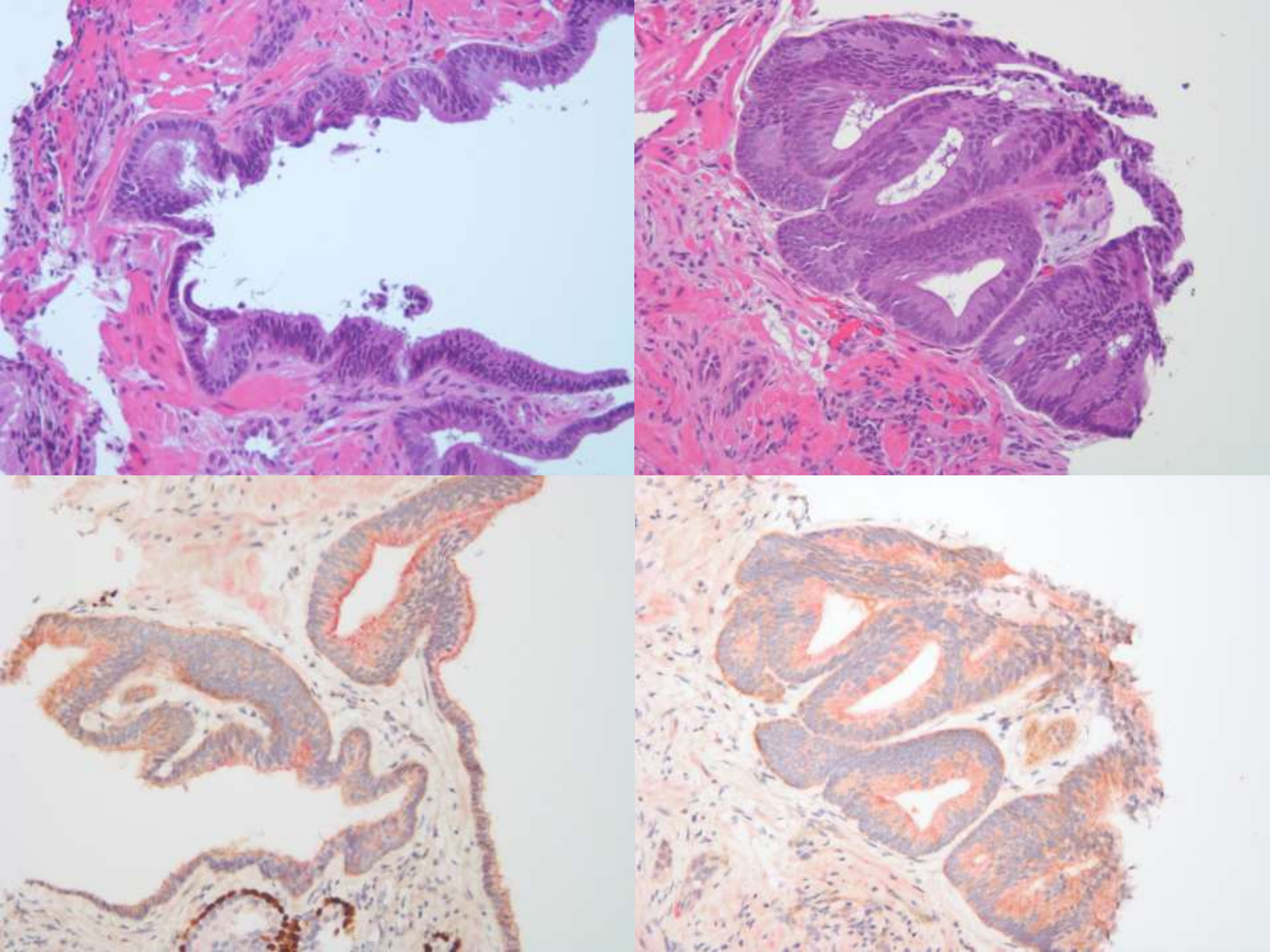


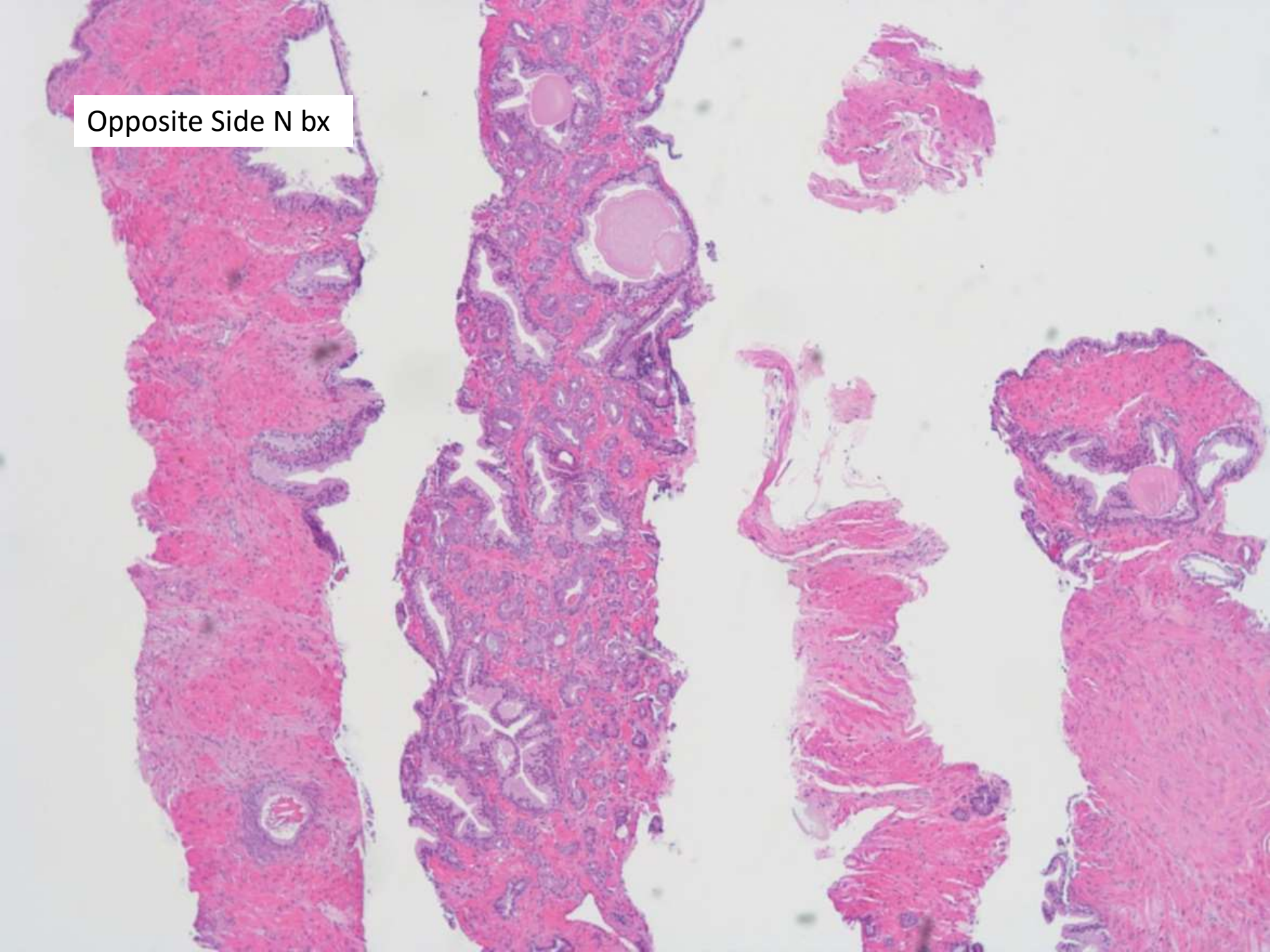


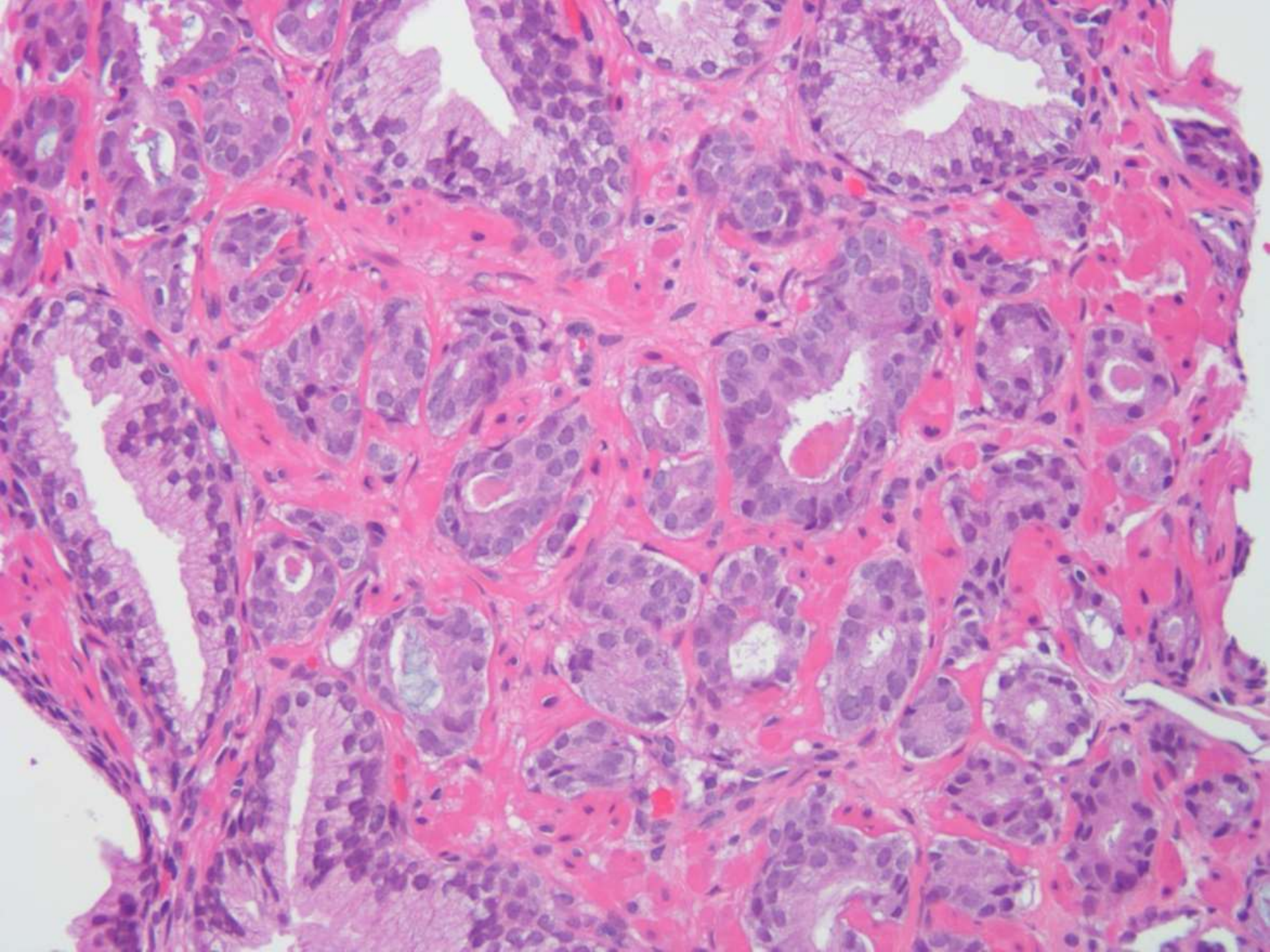
High grade prostatic intraepithelial neoplasia-like ductal adenocarcinoma of the prostate

Tavora and Epstein

AJSP 2008;32:1060-67.




Opposite Side N bx



PIN-like ductal adenocarcinoma 28 cases

- Histologic patterns
  - Flat pattern (42%)
  - Tufted pattern (41%)
  - Micropapillary pattern (17%)
- 50% revealed segments of dilated glands on the edge of the biopsy suggesting a large gland component

DDX: PIN-like carcinoma and Usual ductal adenocarcinoma vs. PIN

- PIN-like CA lack cellular pseudostratification, marked pleomorphism, necrosis, solid areas, cribriform formations, and true papillary fronds seen in usual ductal adenocarcinoma
- PIN-like ductal adenocarcinoma show less prominent nucleoli than HGPIN (more like LPIN)
- Flat epithelium, “crowded” glands and dilated glands with “extensive involvement” (unlike LPIN)
- HGPIN may have focal lack of basal cell markers but not extensive loss seen in PIN-like carcinoma

Followup of needle biopsies
9 patients

- Stage: 8-pT2 and 1-T3a
  - No seminal vesicle involvement
  - No lymph node involvement
- Concurrent acinar type adenocarcinoma seen in 6 patients. All Gleason 3+3
- Followup short but no progressive disease detected

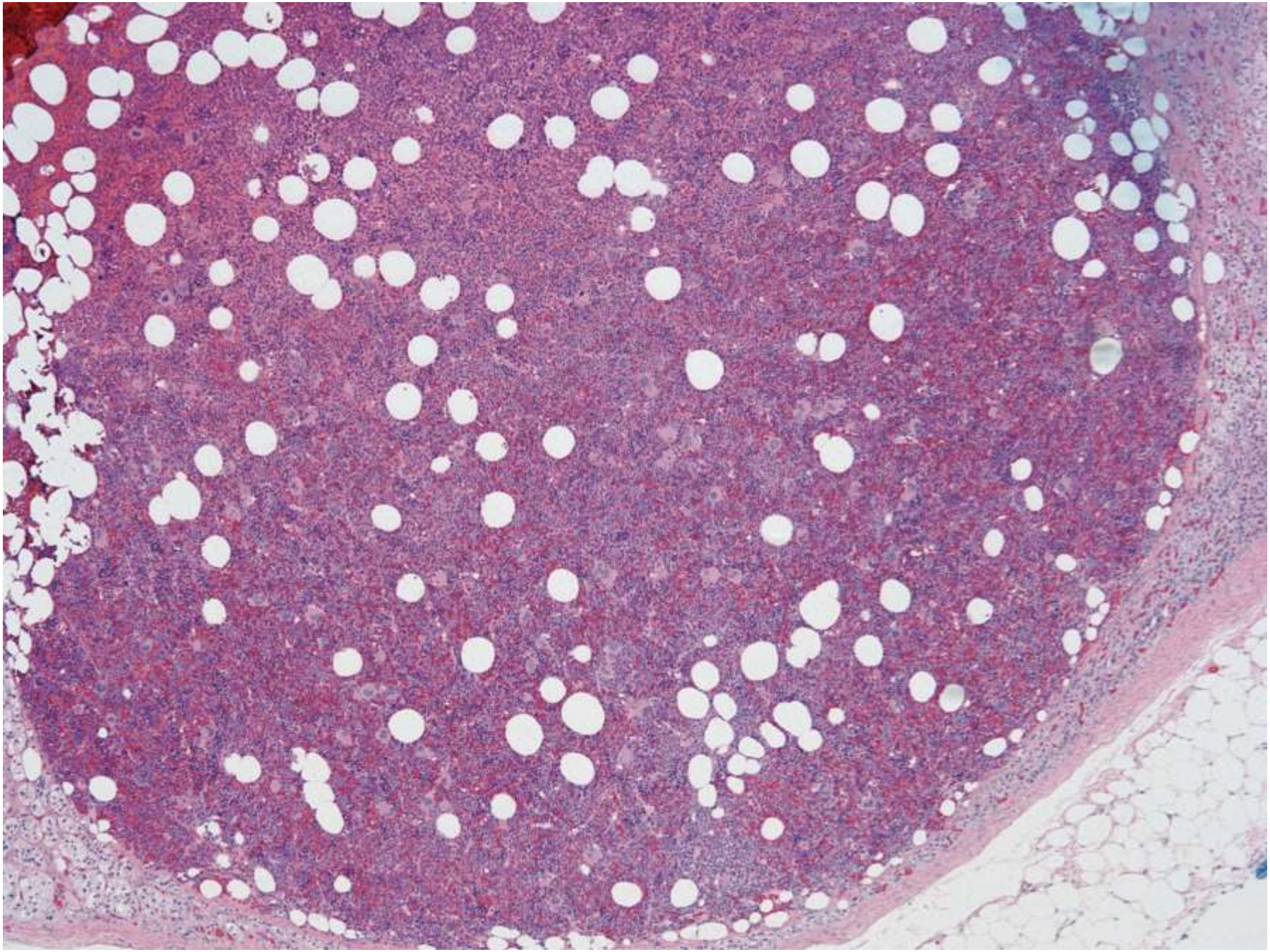
Staging comments

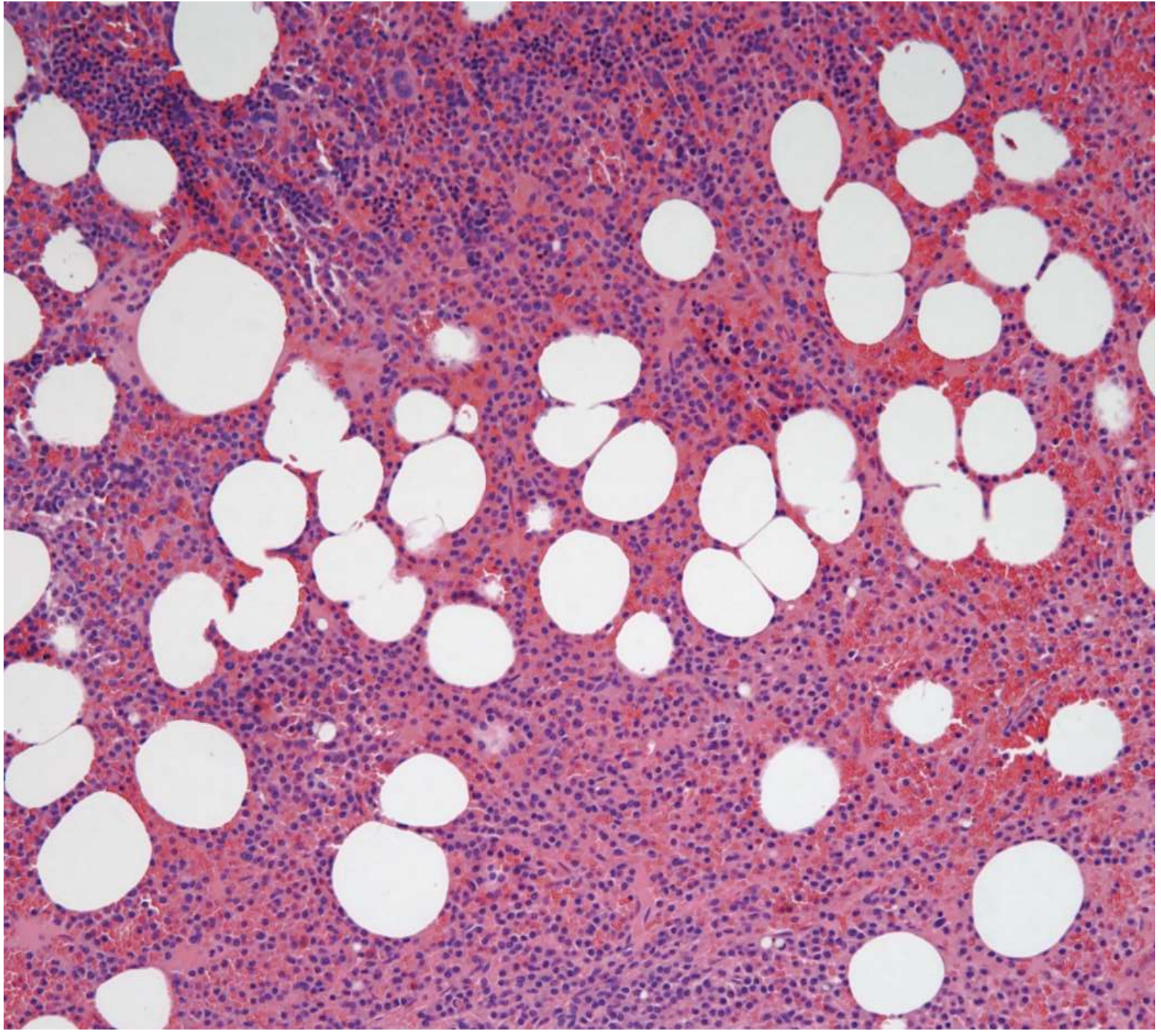
- The recommendation for grading usual prostatic ductal adenocarcinoma is to denote that they are comparable to Gleason score 4+4 =8
- This studies suggest that PIN-like ductal carcinoma is less aggressive with behavior more like Gleason score 3+3=6
- “These tumors seems to be less aggressive than typical ductal adenocarcinoma and at this time may be best considered as Gleason score 6 for purposes of treatment and predicted prognosis”.

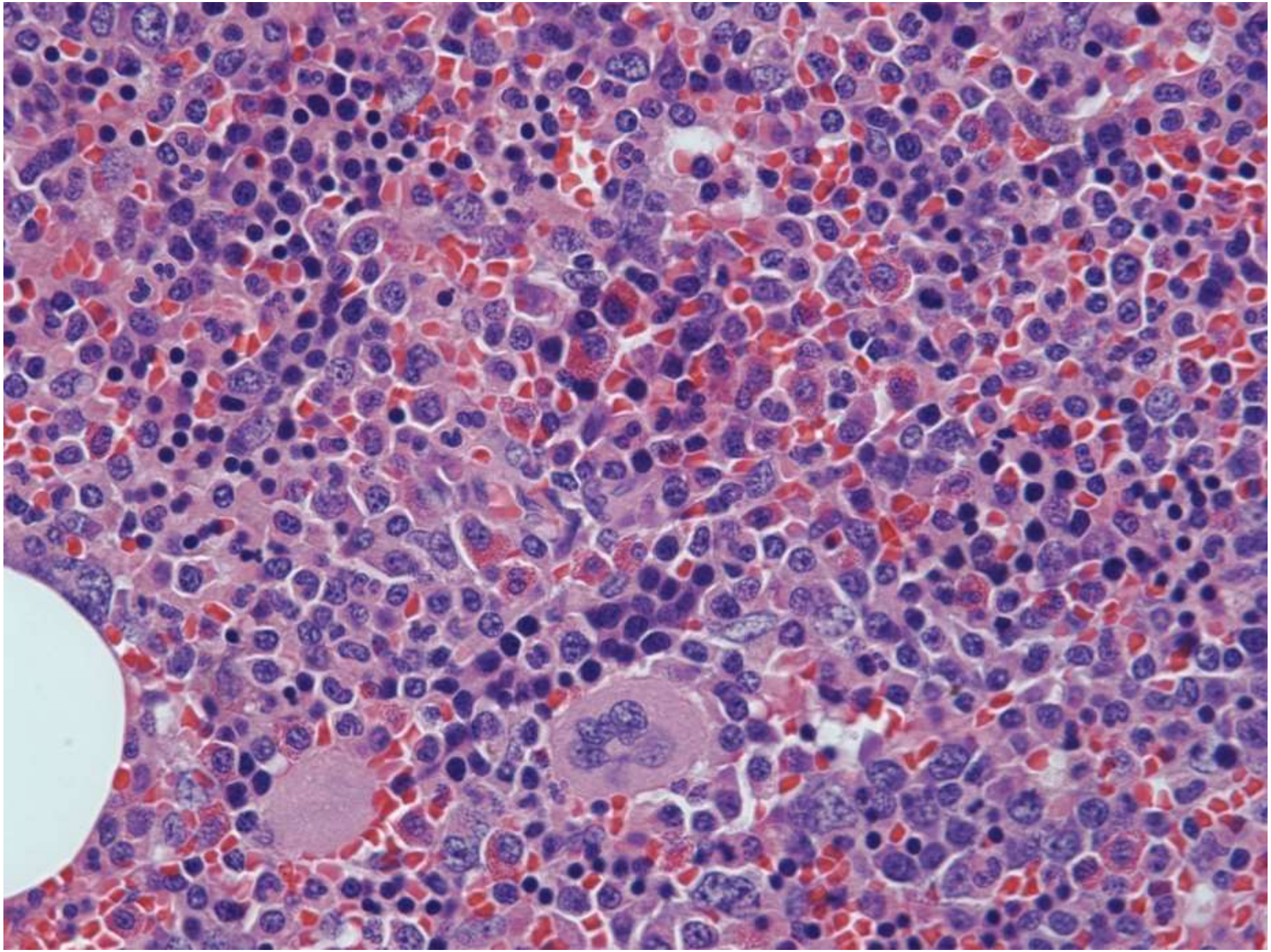
SB 6080

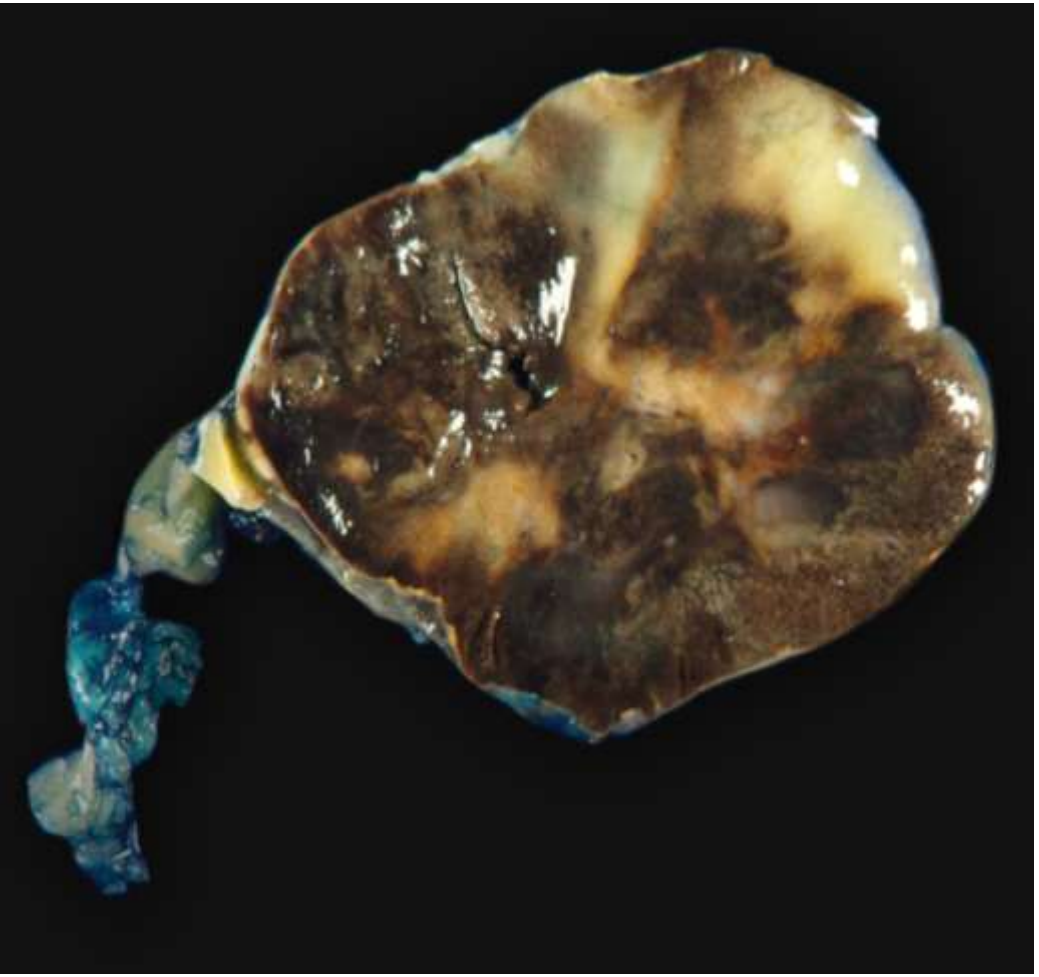
Chieh-Yu Lin/Sunny Kao/John Higgins; Stanford

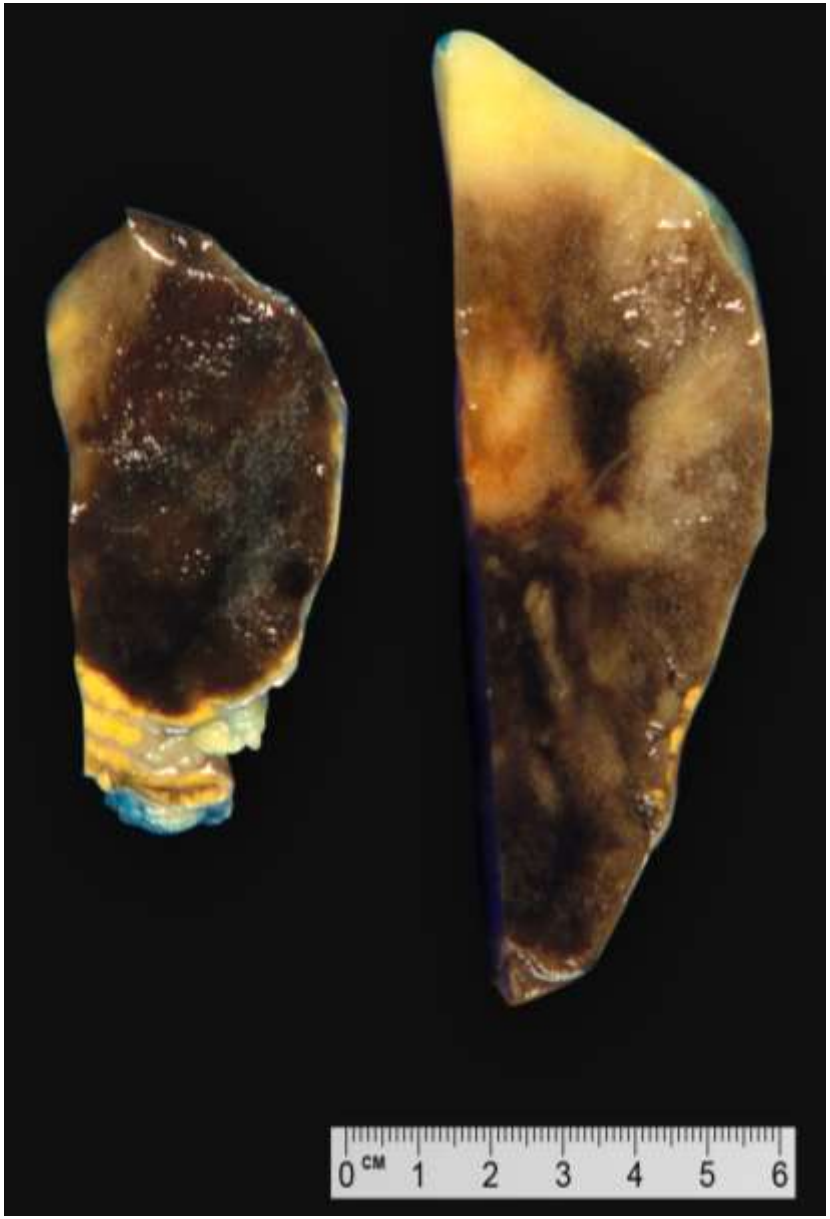
81-year-old man with low back pain for years. Adrenal gland submitted.







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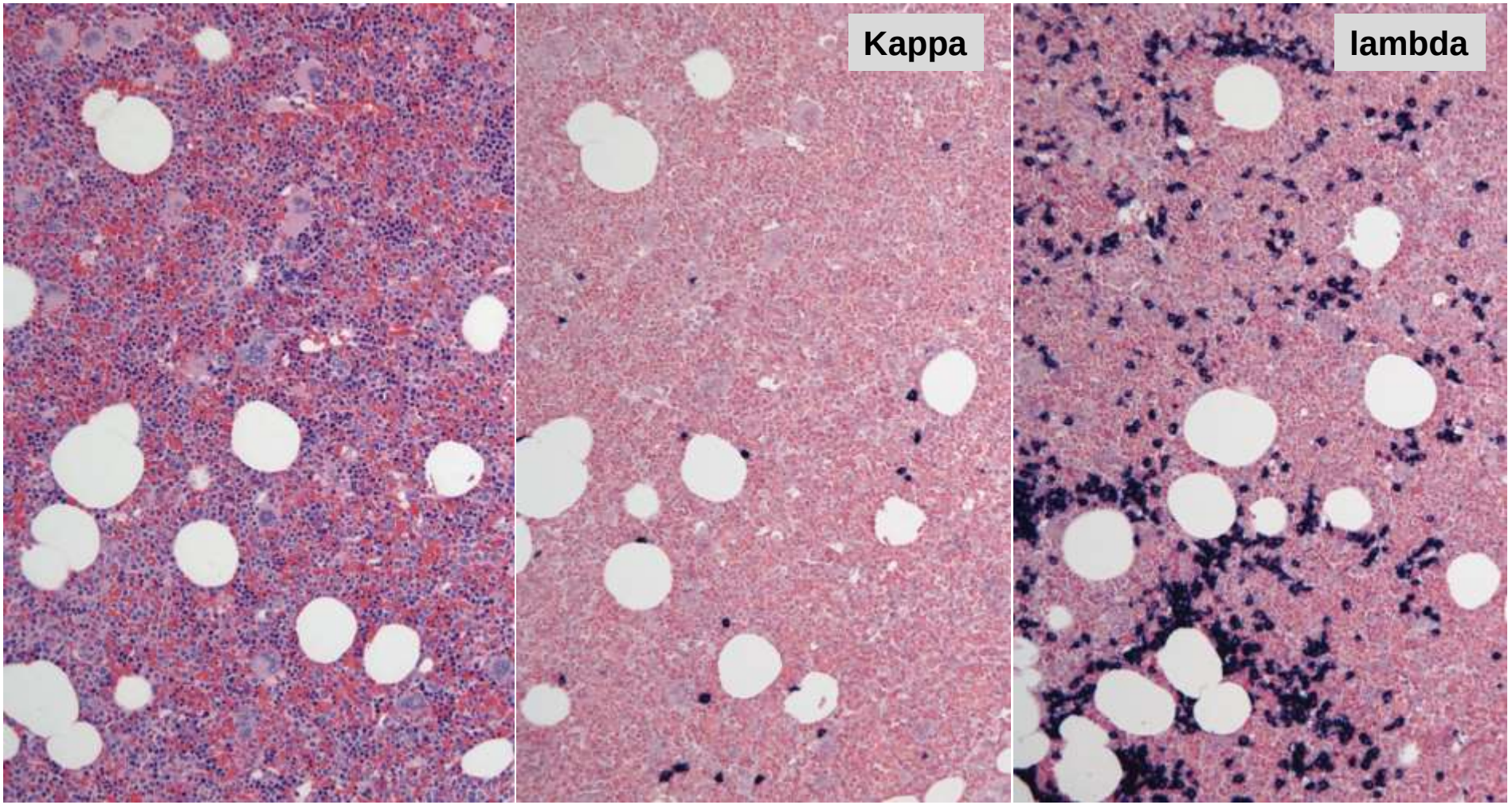
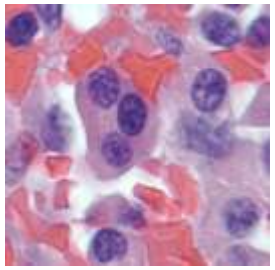
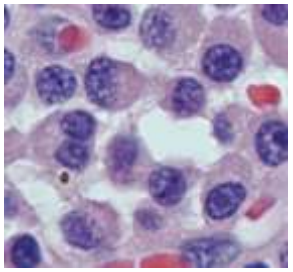
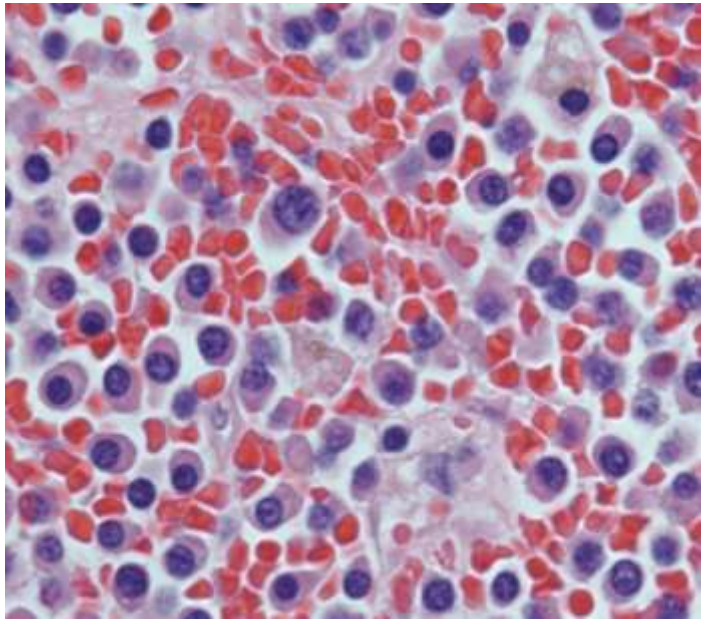
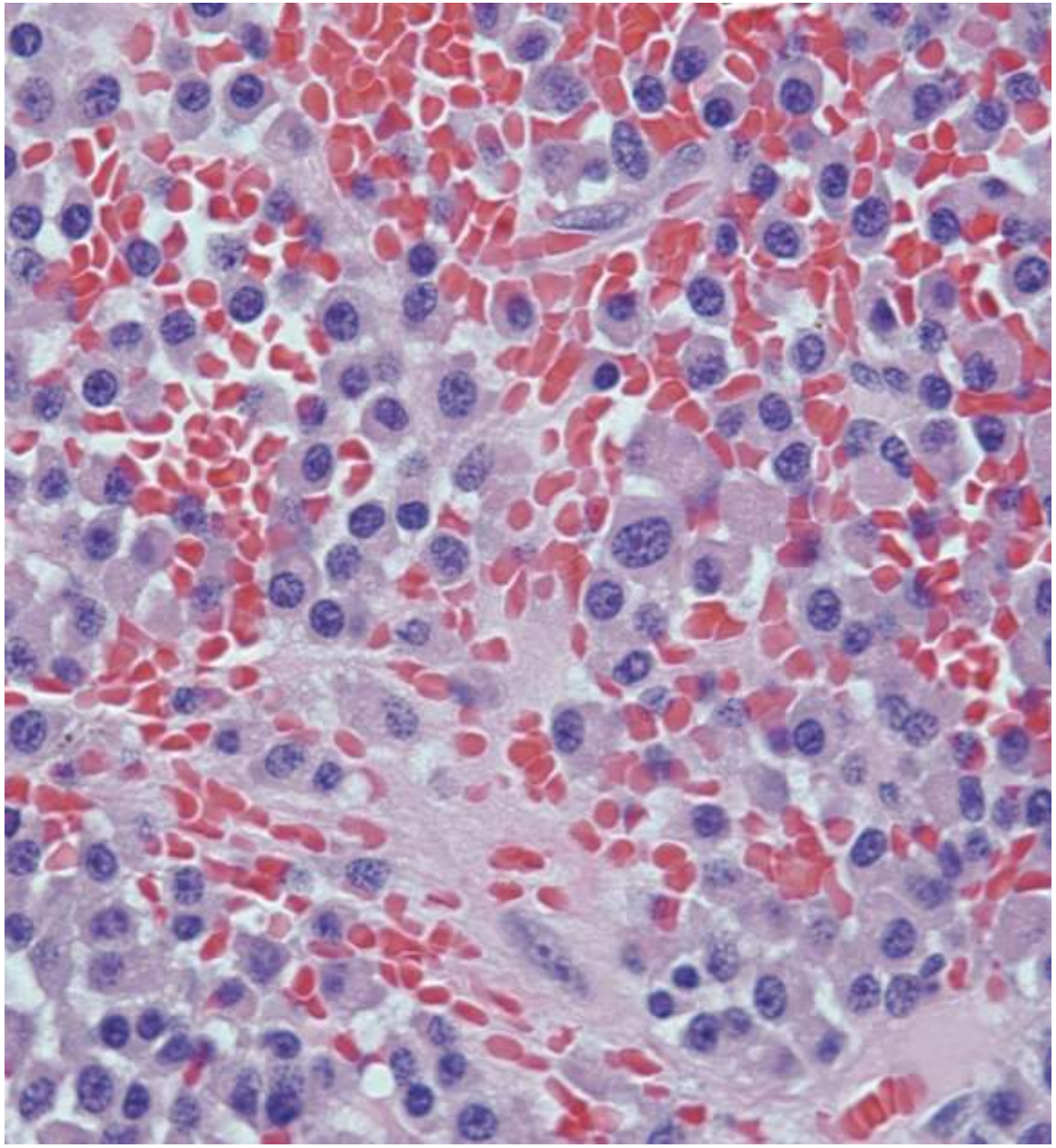
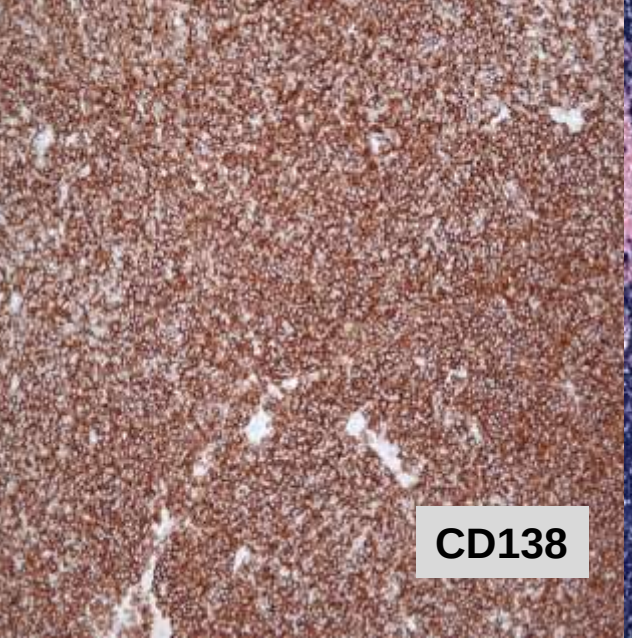

Kappa
lambda

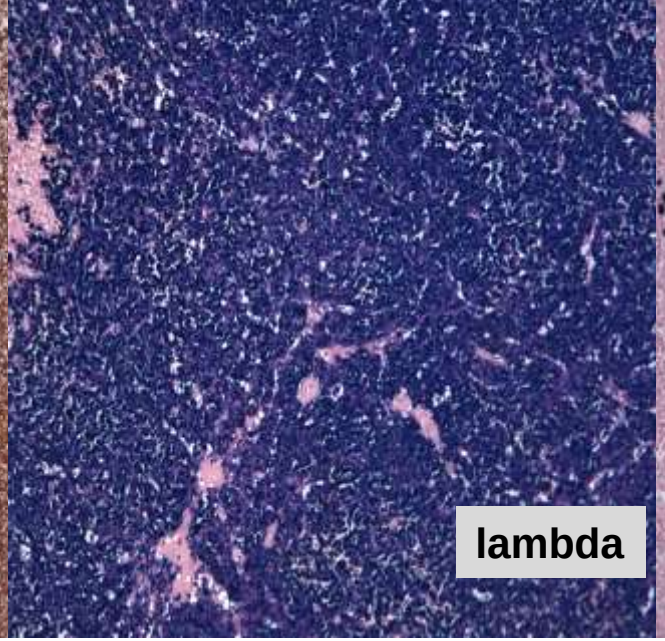


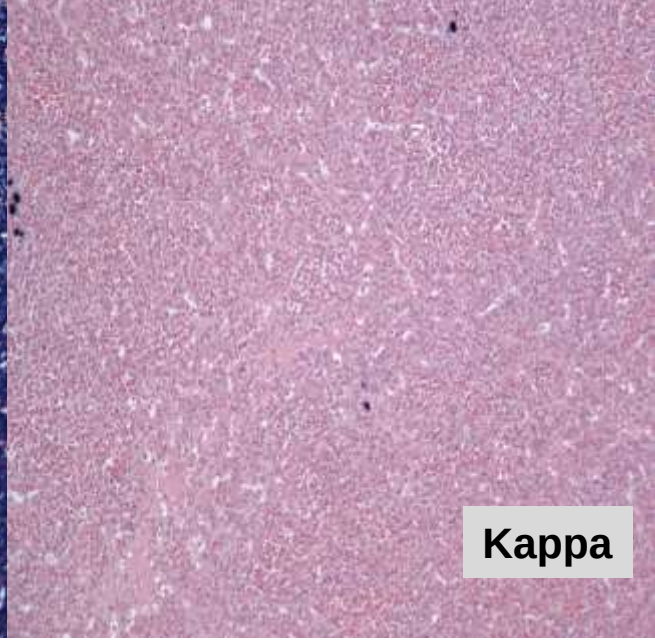












MYELOLIPOMA WITH INVOLVEMENT BY A PLASMA CELL NEOPLASM

Myelolipoma

- BENIGN
- Adrenal and extraadrenal
- 5^{th}-7^{th} decade; M:F = 1:1
- Mature adipose tissue with myeloid components
- Etiology unclear
- Risk of hemorrhage → surgical intervention

Malignant transformation?

- Most of the lymphoid aggregates in myelolipoma are reactive (negative flow)
- Four cases reported in the literature
  - 2 CLL
  - 1 Hodgkin lymphoma
  - 1 Low-grade B cell lymphoma

Noll *et al*, *Ann Clin Lab Sci*. 2013 Fall;43(4):441-6
Gheith *et al*, *Int J Clin Exp Pathol*. 2009;2(1):95-8

- Plasma cell neoplasm
  - -- arising in myelolipoma?
  - -- secondary involvement?

Follow-up

- Normal serum calcium level
- No additional masses or osteolytic lesions on CT
- BM bx: hypercellular marrow (70%) with sheets of plasma cells (53% plasma cell, lambda light chain-restricted)
- The patient received dexamethasone and Velcade (last f/u 9/2015).

Take home messages

- Myelolipoma

  A rare, benign, adrenal/extraadrenal lesion with potential secondary hematopoietic neoplasm(s)

- Don’t stop at one diagnosis!