34 year-old woman with controlled HIV and flank pain

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BOTSOGO

BOTSWANA ONCOLOGY
GLOBAL OUTREACH

Continuing Medical Education Announcement

Harvard Medical School

RSS 3081: Monthly BOTSOGO Tumor Board; 2017-2018 Academic Year

Today's Objectives:

- Describe the need for timely cancer case presentation and referral to treatment
- Formulate a multi-disciplinary plan for the care of common and complex oncologic cases
- Adopt successful, sustainable strategies to mitigate barriers to quality cancer care common in resource constrained environments

Target Audience:

Oncologists, internists, surgeons, radiation oncologists, infectious disease specialists, nurses, physicists, therapists, technicians, research staff, administrators, policy makers.

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Name	Role	Type of Financial Relationship

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Statements

Accreditation Statement

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The Harvard Medical School designates this live activity for a maximum of 1 *AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity

This activity meets the criteria of the Massachusetts Board of Registration in Medicine for 1.0 credits of Risk Management Study

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Claim your CME credits!

- To claim your CME credit for attendance at this session of the BOTSOGO Tumor Board, please fill out our survey after the Tumor Board.
- You can do this at your convenience on your personal or work computer by navigating to www.botsogo.org
  - Click “What We Do”
  - Click “Tumor Board”
  - Click the link under the section “Continuing Education Credits,” and complete and submit the survey
- Or follow the link that was emailed to our MGH BOTSOGO email list: www.tinyurl.com/tumourboard

History of Illness

Patient MM

34 year old female

Midwife

PMH

- RVD on ART for 10 years
- Last CD4 in 2017 was 881
- Viral Load suppressed

History of Illness (continued)

Pain in the right flank in Fall 2017

No haematuria

No fever or weight loss

Pain worsened over 3 months, now radiating to the back

Seen by a GP who ordered an USS

USS showed mass with calcifications in lower poll of right kidney

Referred to Urologist

History of Illness (continued)

CT scan confirmed mass in lower pole of right kidney;

No evidence of lesions elsewhere;

Followed by nephrectomy.

Patient background (continued)

Family history:

- Mother: colon cancer; died 2011 from lung and liver mets

G3P3 youngest 5 years

Risk factors:

- No exposure to asbestos/petrols
- No Tobacco
- Not obese, nor high dietary fat intake
- No history of acquired cystic renal disease
- No history of von Hippel-Liandau disease
- No alcohol

Pathology Report

The case was seen in consultation with Prof Goetsch from Lancet Johannesburg.

The overall findings are in keeping with that of a renal cell carcinoma. The diffuse CK7 positivity excludes a conventional clear cell subtype.

The features do not fit with other CK positive renal cell carcinomas including papillary / chromophobe / clear cell papillary / mucinous tubular spindle cell RCC.

Intraluminal eosinophilic colloid-like material is present which raises the possiblity of a thyroid-like follicular renal cell carcinoma.

FINAL DIAGNOSIS:

RIGHT KIDNEY

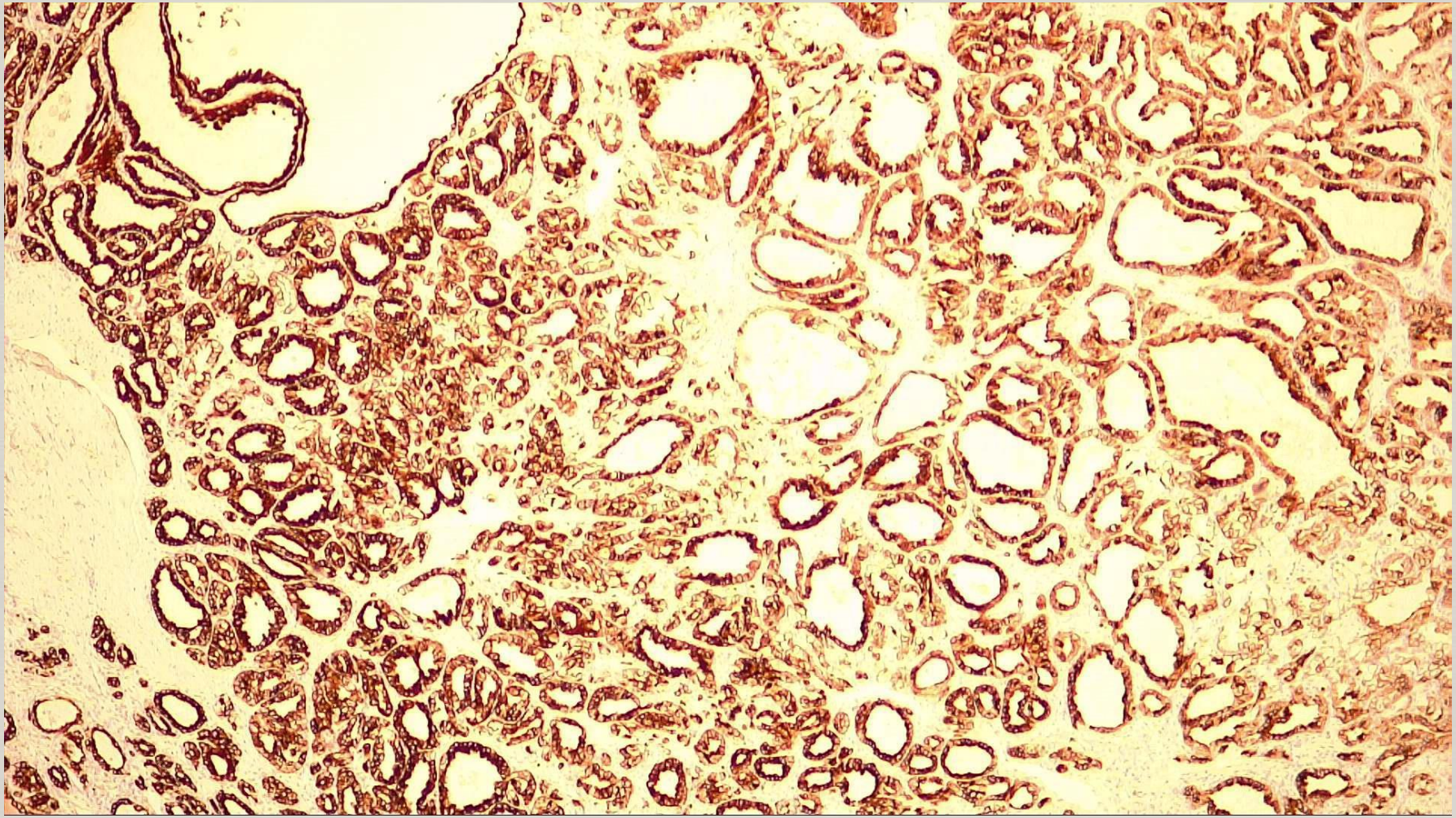
- RENAL CELL CARCINOMA.
- DOES NOT FIT IN WITH CONVENTIONAL CLEAR CELL SUBTYPE.
- POSSIBILITY OF THYROID-LIKE FOLLICULAR RENAL CELL CARCINOMA IS CONSIDERED.
- PLEASE SEE STAGING AND GRADING BELOW.

Pathology (continued)

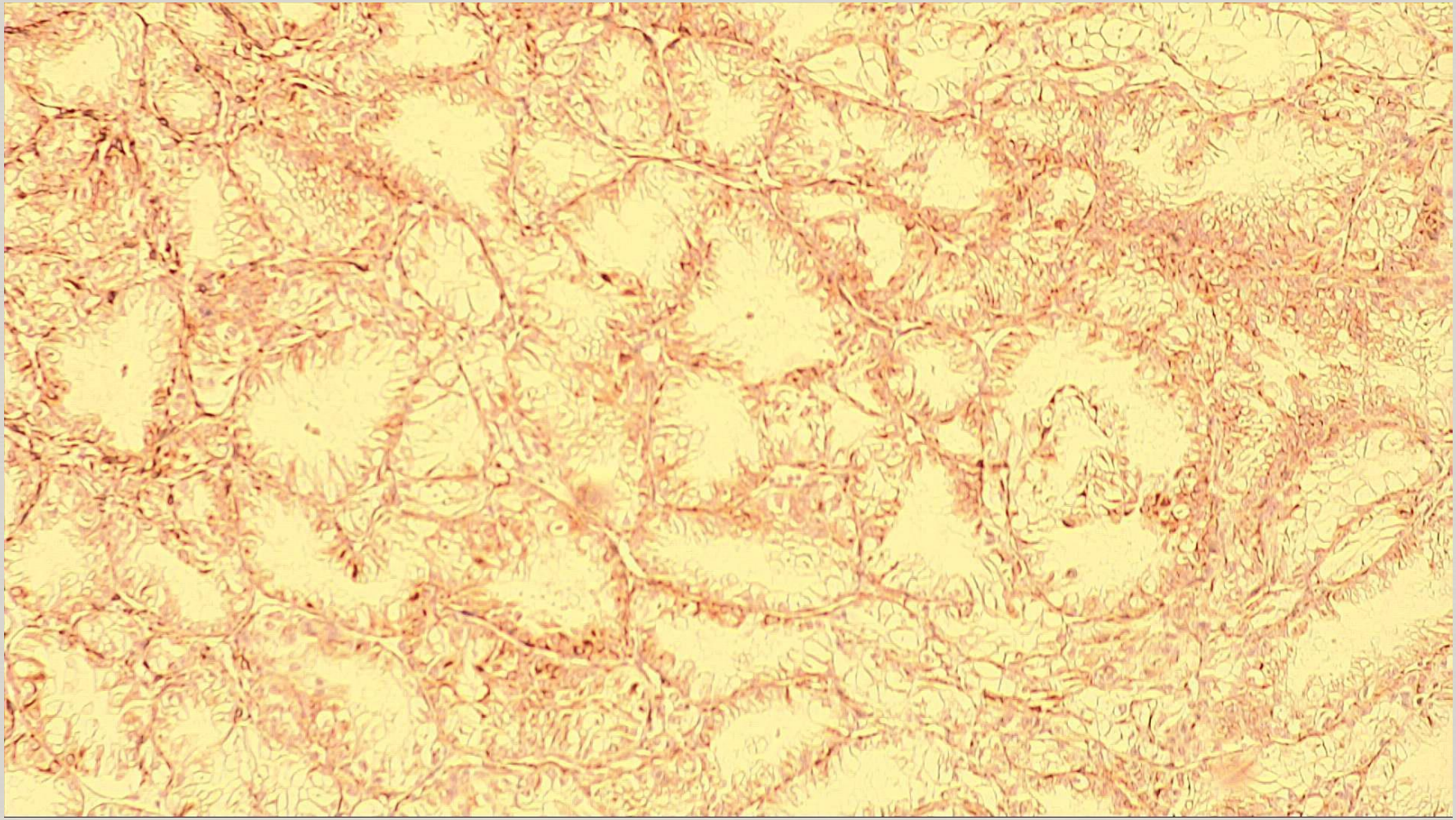
Final tumour stage is T1a (2.4x2.2 cm)

Stage II (65 -85% 5yr OS)

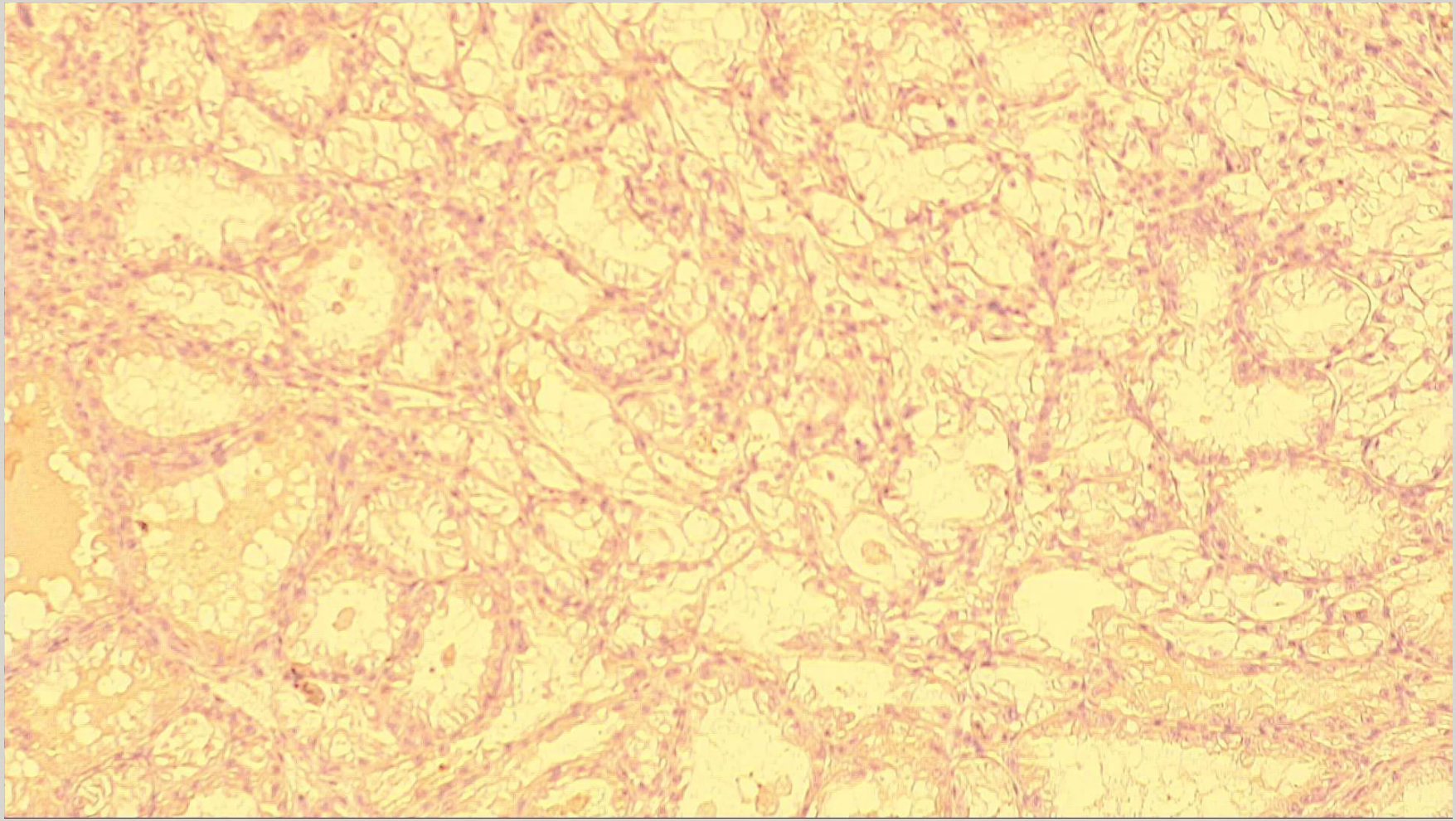
Immuno stain: CK7



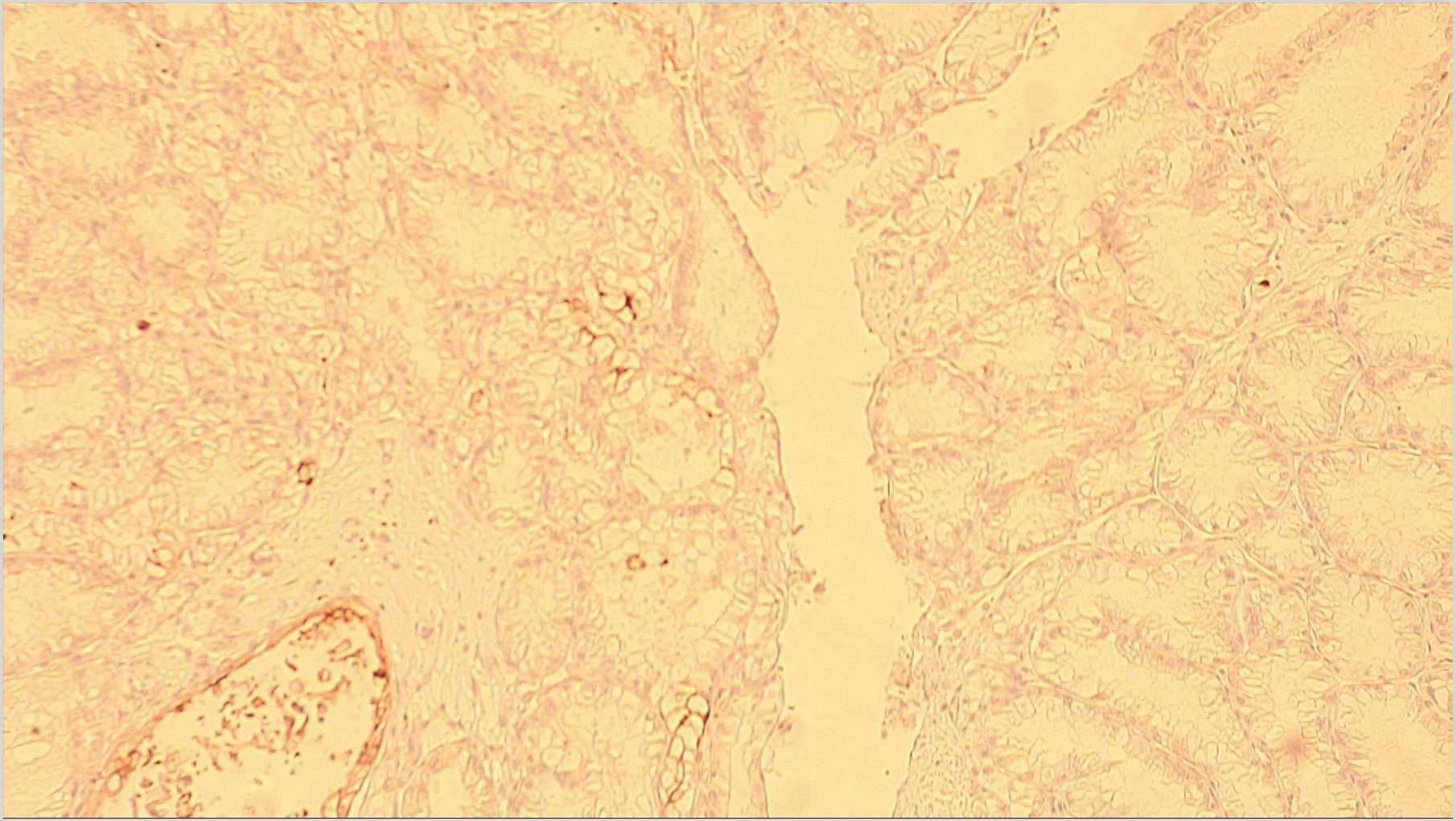
Immuno stain: Vimentin



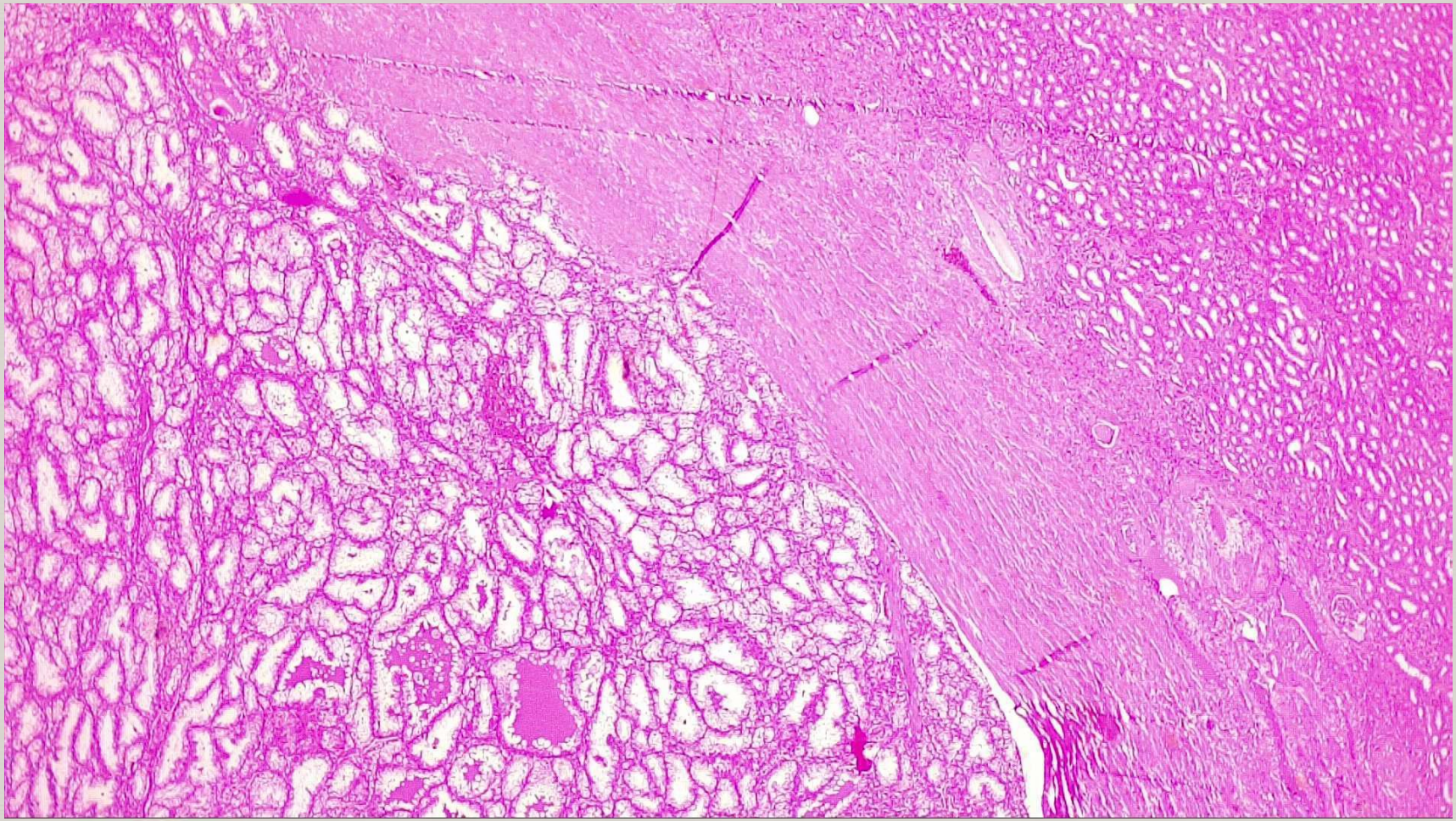
Immuno stain: TTF-1



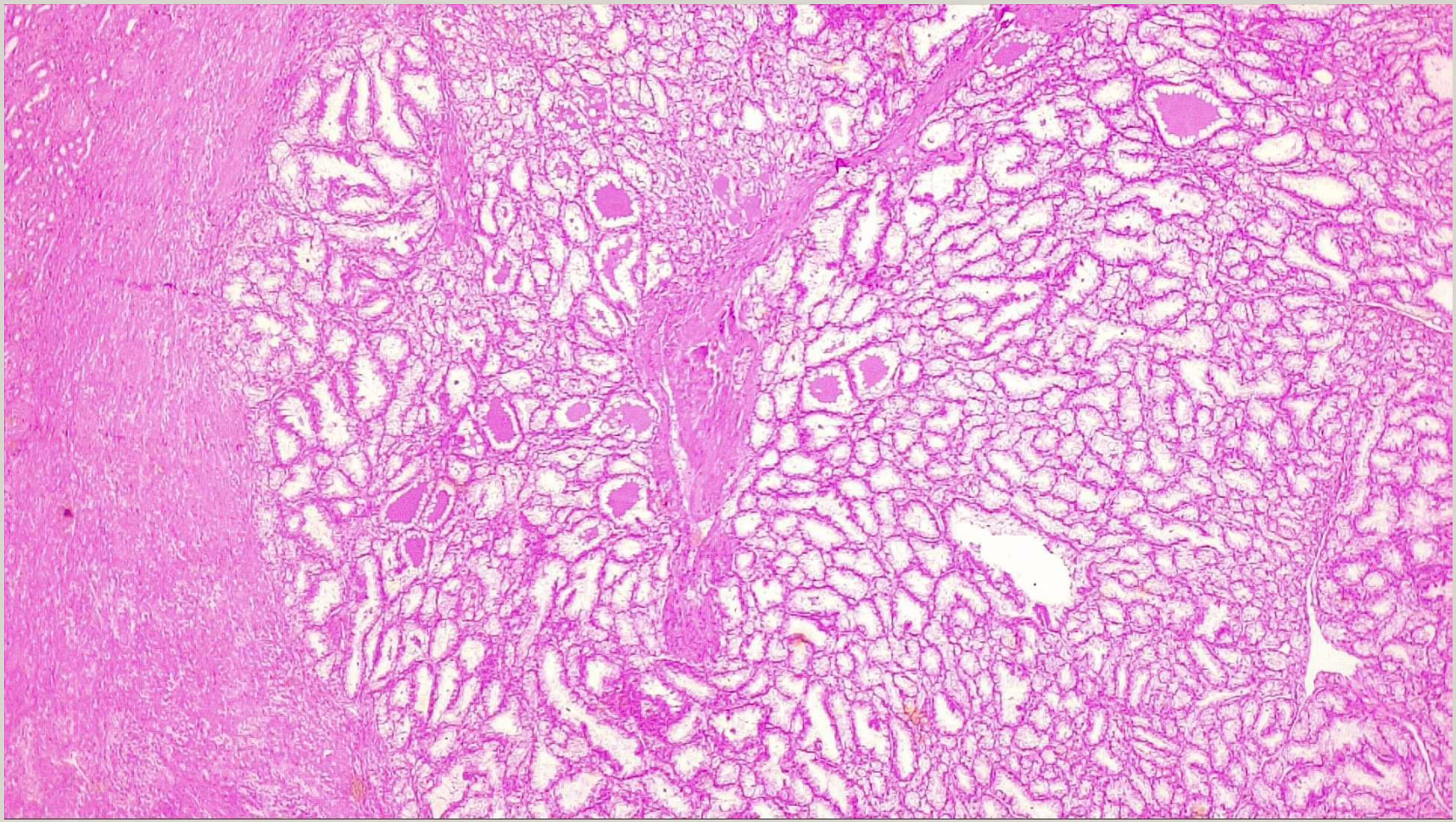
Immuno stain: CD10



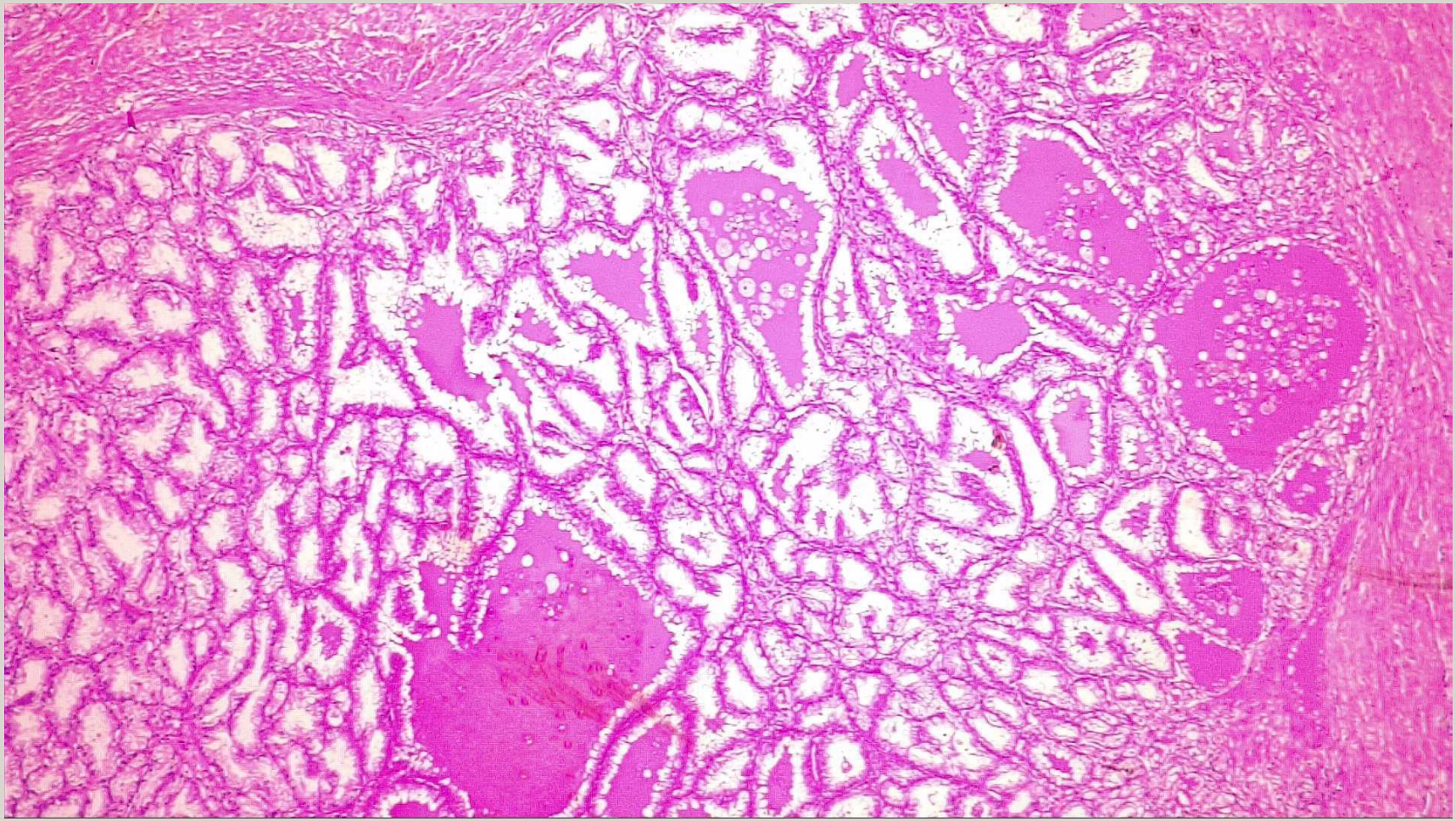
Pathology images



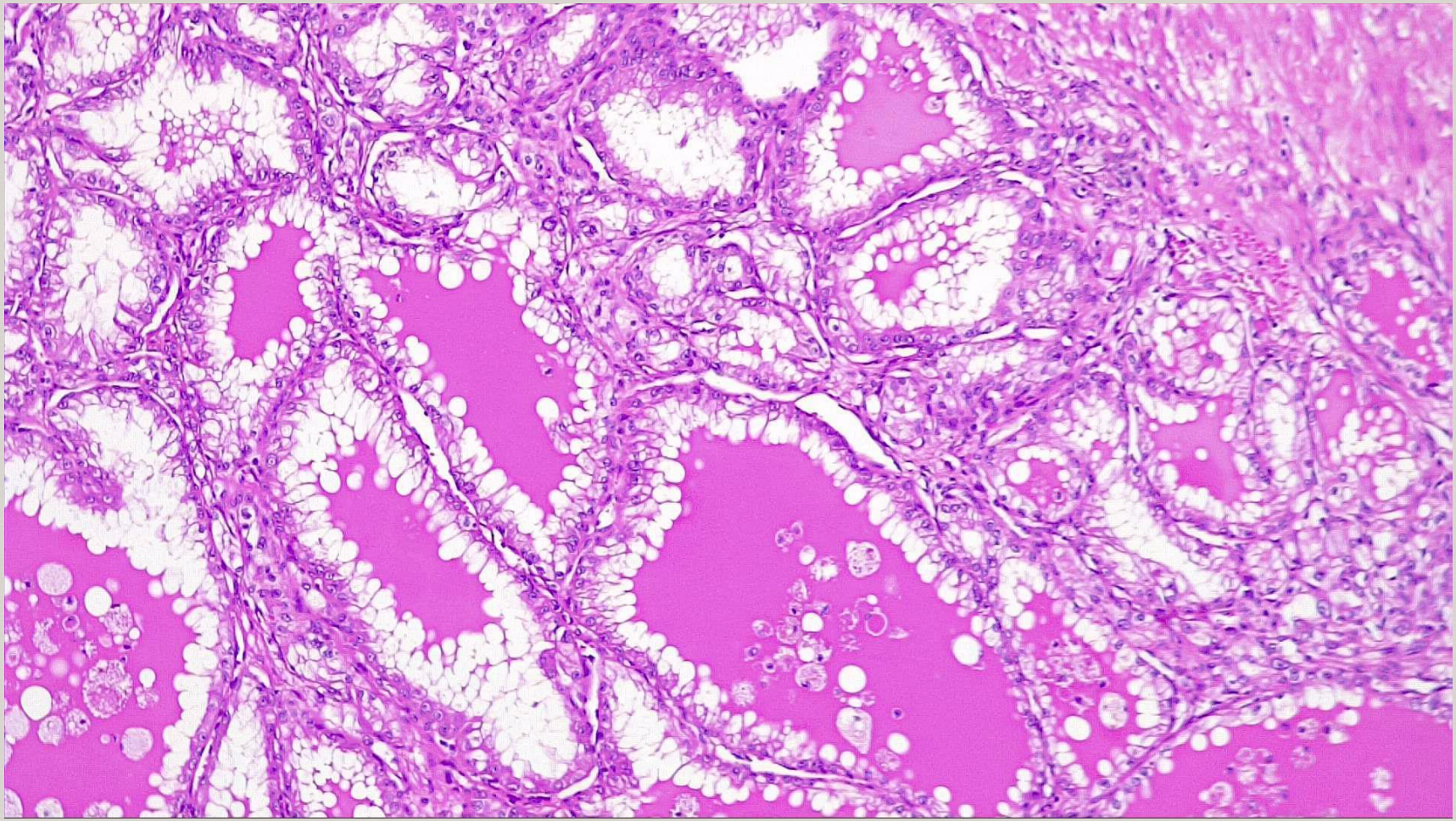
Pathology images (continued)



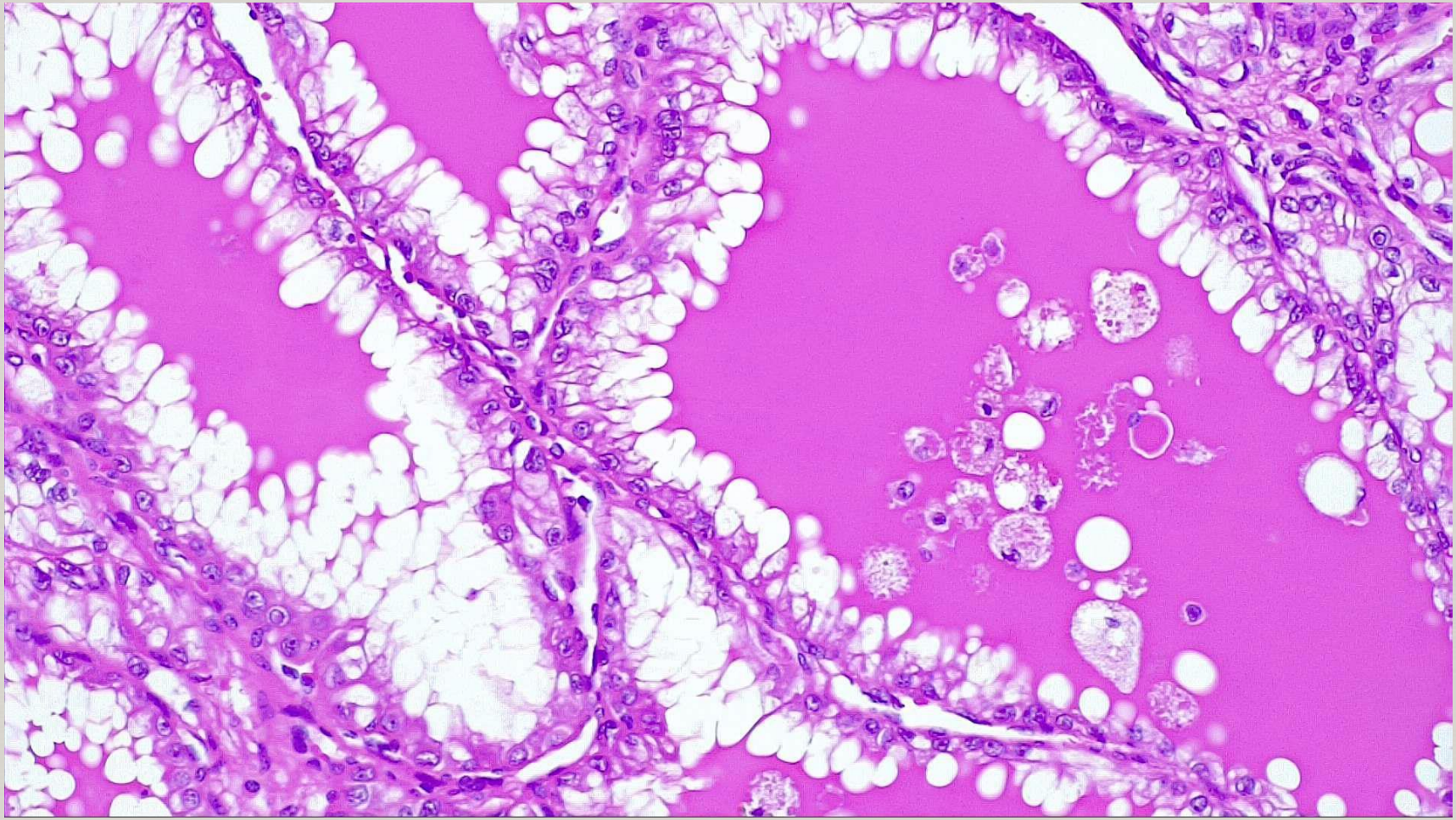
Pathology images (continued)



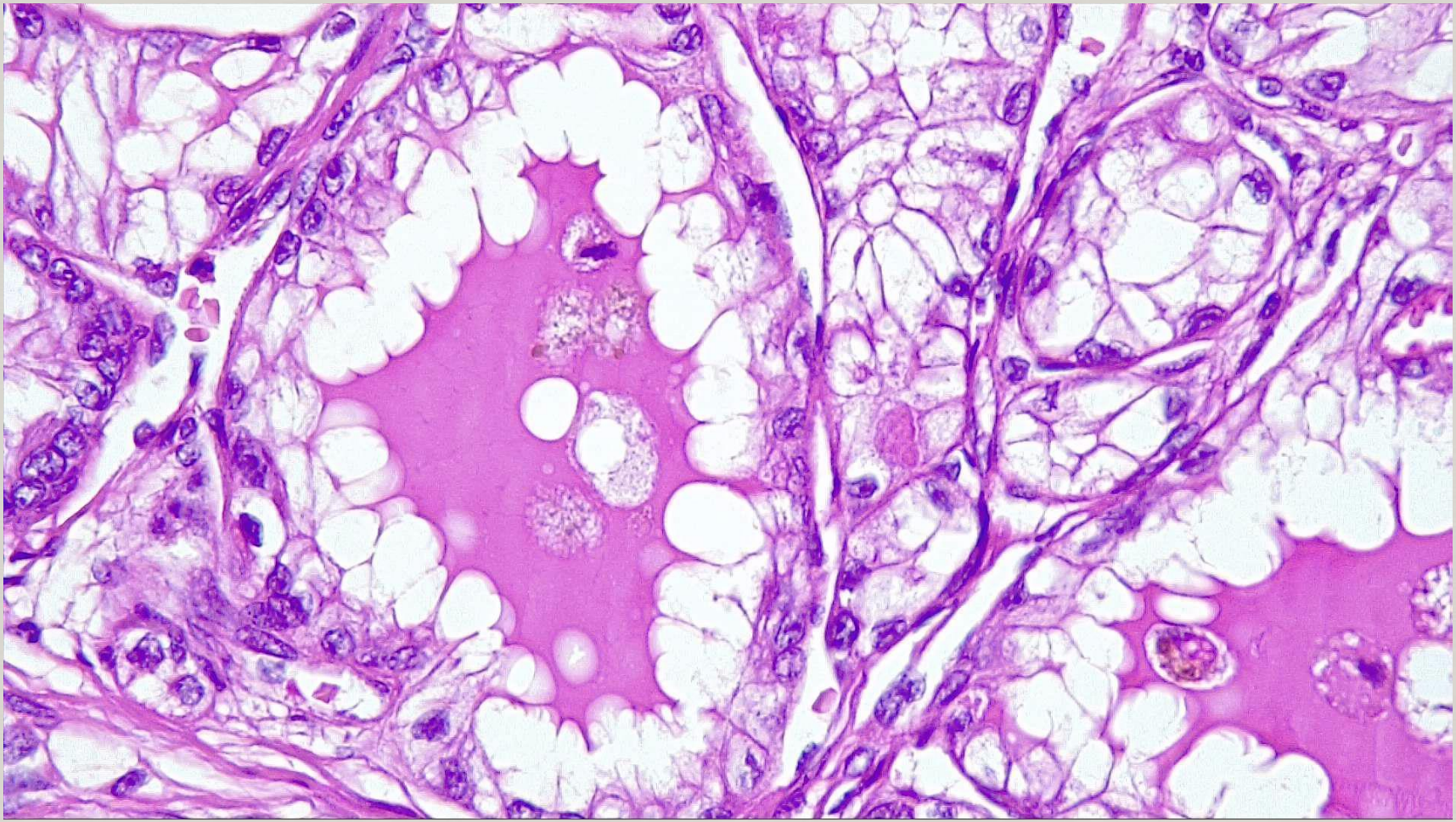
Pathology images (continued)



Pathology images (continued)



Pathology images (continued)



T categories for kidney cancer

TX: The primary tumor cannot be assessed (information not available).

T0: No evidence of a primary tumor.

T1: The tumor is only in the kidney and is no larger than 7 centimeters (cm), or a little less than 3 inches, across.

T1a: The tumor is 4 cm (about 1½ inches) across or smaller and is only in the kidney.

T1b: The tumor is larger than 4 cm but not larger than 7 cm across and is only in the kidney.

T2: The tumor is larger than 7 cm across but is still only in the kidney.

T2a: The tumor is more than 7 cm but not more than 10 cm (about 4 inches) across and is only in the kidney.

T2b: The tumor is more than 10 cm across and is only in the kidney.

T3: The tumor is growing into a major vein or into tissue around the kidney, but it is not growing into the adrenal gland (on top of the kidney) or beyond Gerota's fascia (the fibrous layer that surrounds the kidney and nearby fatty tissue).

T3a: The tumor is growing into the main vein leading out of the kidney (renal vein) or into fatty tissue around the kidney.

T3b: The tumor is growing into the part of the large vein leading into the heart (vena cava) that is within the abdomen.

T3c: The tumor has grown into the part of the vena cava that is within the chest or it is growing into the wall of the vena cava.

T4: The tumor has spread beyond Gerota's fascia (the fibrous layer that surrounds the kidney and nearby fatty tissue). The tumor may have grown into the adrenal gland (on top of the kidney).

Discussion

- Is there any further investigations required with regards to definitive histological subtype?
- Would management differ from classical clear cell?
- Is there any association with RVD status?
- Any role for I-131 (diagnostic and therapeutic) since possibility of thyroid like follicular ca?
- Management if patient had presented with metastatic disease

Additional discussion: HIV management

1) Risk of cancer of the kidney (overall, but largely RCC) is elevated in context of HIV, 1.5-fold (1.2 to 1.8), and transplant, 6.8-fold (5.7 to 8.1). Mechanisms of excess risk uncertain.

2) In Thabatse cohort, 3 of 12 patients with RCC have concurrent HIV.

Additional discussion: HIV management (continued)

3) Current ART regimen good, however transition to current first line in Botswana (Truvada/Dolutegravir) probably even safer in regards to drug-drug interactions and increased barrier to resistance.

Complete pathology report

CLINICAL HISTORY

A 34-year-old female with a calcified mass right kidney on CT-scan. Nephrectomy done. Right kidney submitted.

MACROSCOPY

An unopened right nephrectomy specimen measuring 100 x 57 x 35mm. The specimen weighs 159g.

An attached portion of fibrofatty tissue 60 x 45mm is present at the lower pole. A proximal urether 30mm x 5mm in diameter is identified. No adrenal gland is present.

Sectioning shows a tan brown pink tumour 24 x 22mm. The tumour surface is covered by attached fibrofatty tissue. No penetration of capsule is macroscopically identified. No tumour involvement of the renal hilum is identified. No vascular infiltration is identified.

Complete pathology report

MICROSCOPIC EXAMINATION

Histologic examination shows kidney involved by a clear cell epithelial neoplasm with a lobulated border and surrounding region of fibrosis. Most of the tumour is composed of densely packed tubular structures lined by clear cells with abundant cytoplasm and prominent cytoplastic borders. Many of the tubules contain eosinophilic material in the lumina. Focally papillary structures are seen. Very focally there is also a more sheeted solid architecture. In areas bony metaplasia is noted.

The nuclei are round with moderately irregular nuclear contours and some have nuclei visible at 100x magnification. These features are in keeping Fuhrman nuclear grade 3.

Immunohistochemical stains:

CK7	-	positive in the tumour.
Vimentin	-	very weak staining, largely negative.
CD117	-	negative.
CD10	-	negative.
S100	-	negative.

MICROSCOPIC EXAMINATION (Continued)

HMB45 - negative.

The overall findings are that of a clear cell epithelial neoplasm. Clear cell renal cell carcinoma is the favoured diagnosis. The morphological and immunohistochemical features are however atypical for a conventional clear cell carcinoma and the case will be sent for expert consultation. An addendum report with a more definitive diagnosis will follow.

In areas the tumour bulges onto the perirenal fatty tissue with an interspersed zone of fibrosis, however infiltration into the perirenal fatty tissue is not identified. The tumour is histologically completely excised. No infiltration into the renal sinus, hilar vessels or urethra is identified. The urethral resection margin is free of tumour.

The overall findings are in keeping with a TNM stage of least T2b, Nx, Mx, stage III.

Except for focally pockets of chronic inflammation in the interstitium, the premorbid renal parenchyma appears within normal limits.

Complete pathology report

DIAGNOSIS

RIGHT KIDNEY

- CLEAR CELL EPITHELIAL NEOPLASM.
- FAVOUR CLEAR CELL RENAL CELL CARCINOMA.
- MORPHOLOGICAL AND IMMUNOHISTOCHEMICAL FEATURES ATYPICAL FOR CONVENTIONAL CLEAR CELL RENAL CELL CARCINOMA.
- EXPERT CONSULTATION IS PENDING.

Complete pathology report

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