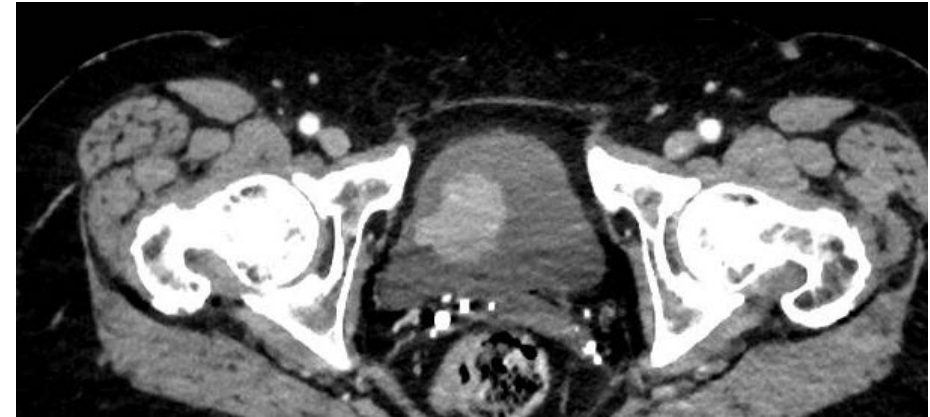


# URO 1

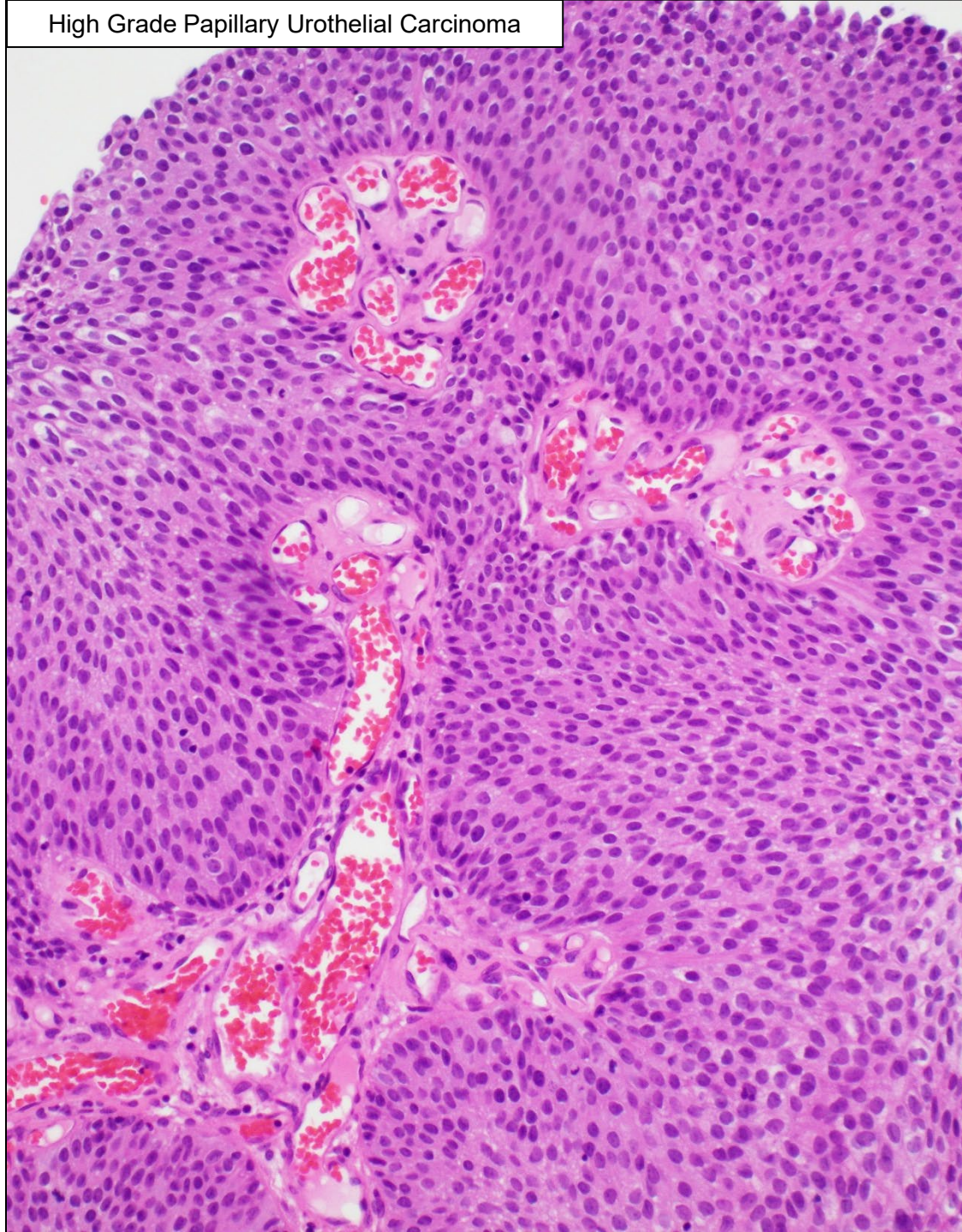
- 65 year old healthy woman presents with hematuria , chemistries wnl, ECOG PS 0
- BLADDER, "TUMOR", TRANSURETHRAL RESECTION:
- **INVASIVE PAPILLARY UROTHELIAL CARCINOMA,**
- **HIGH-GRADE, ANGIOLYMPHATIC INVASION**
- **MUSCULARIS PROPRIA INVOLVED**



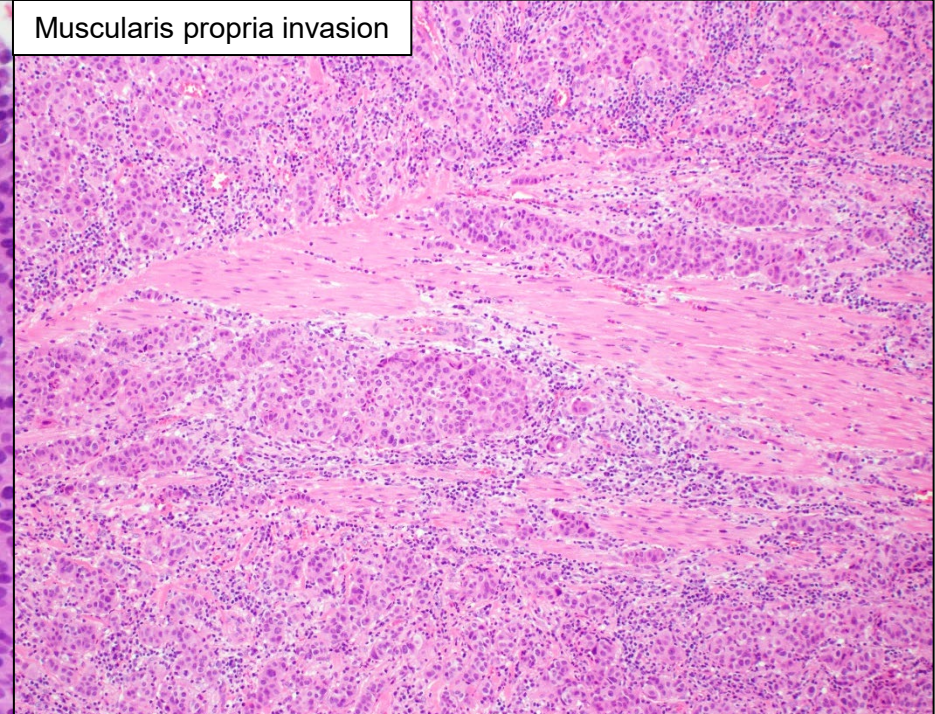
- The carcinoma has a variety of morphologies with urothelial (predominant), micropapillary, and focal squamous differentiation.
- The tumor is staged as at least pT2



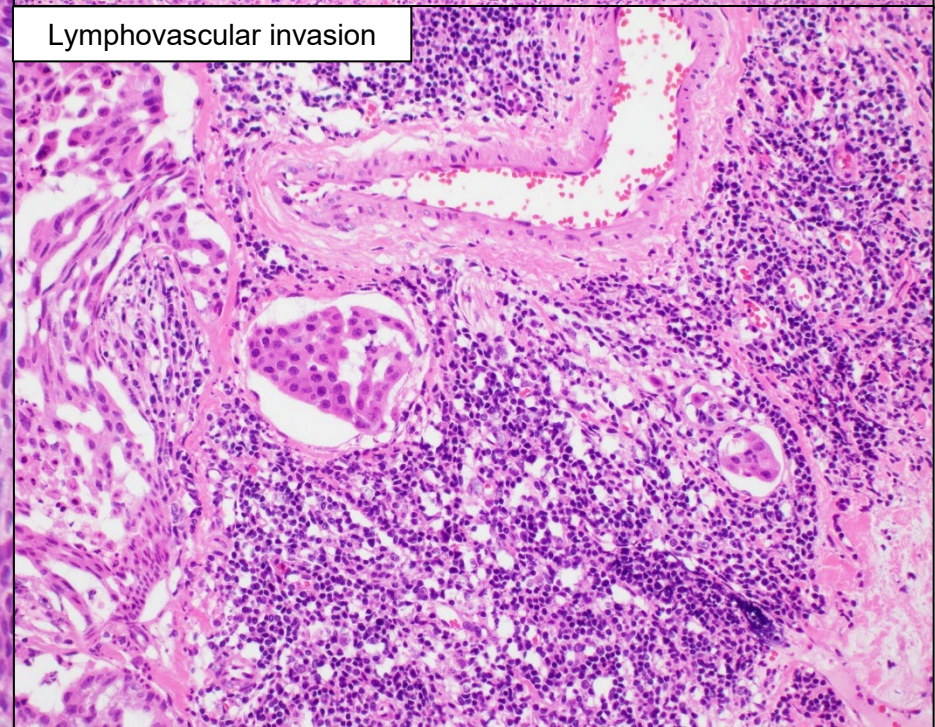
High Grade Papillary Urothelial Carcinoma



Muscularis propria invasion

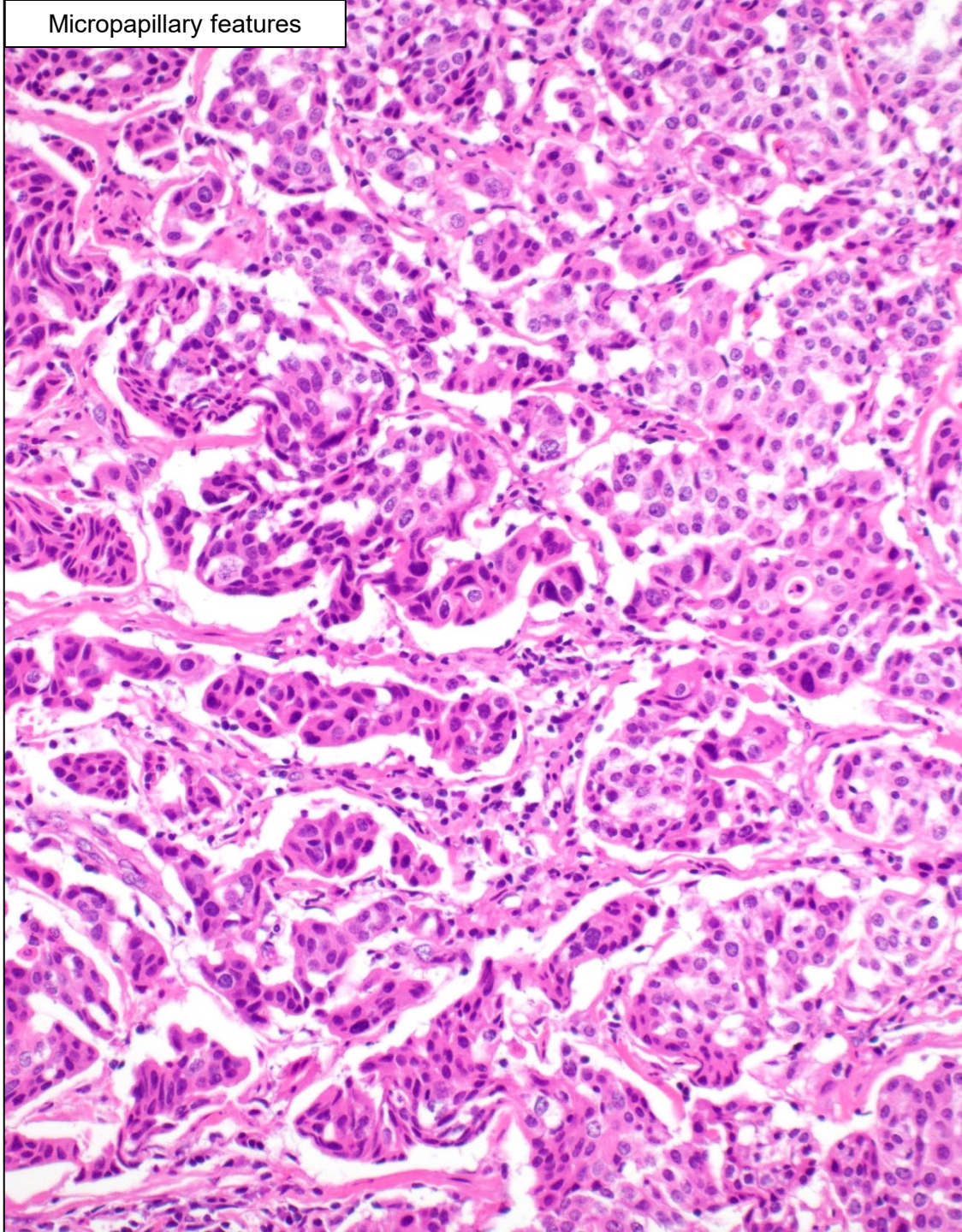


Lymphovascular invasion

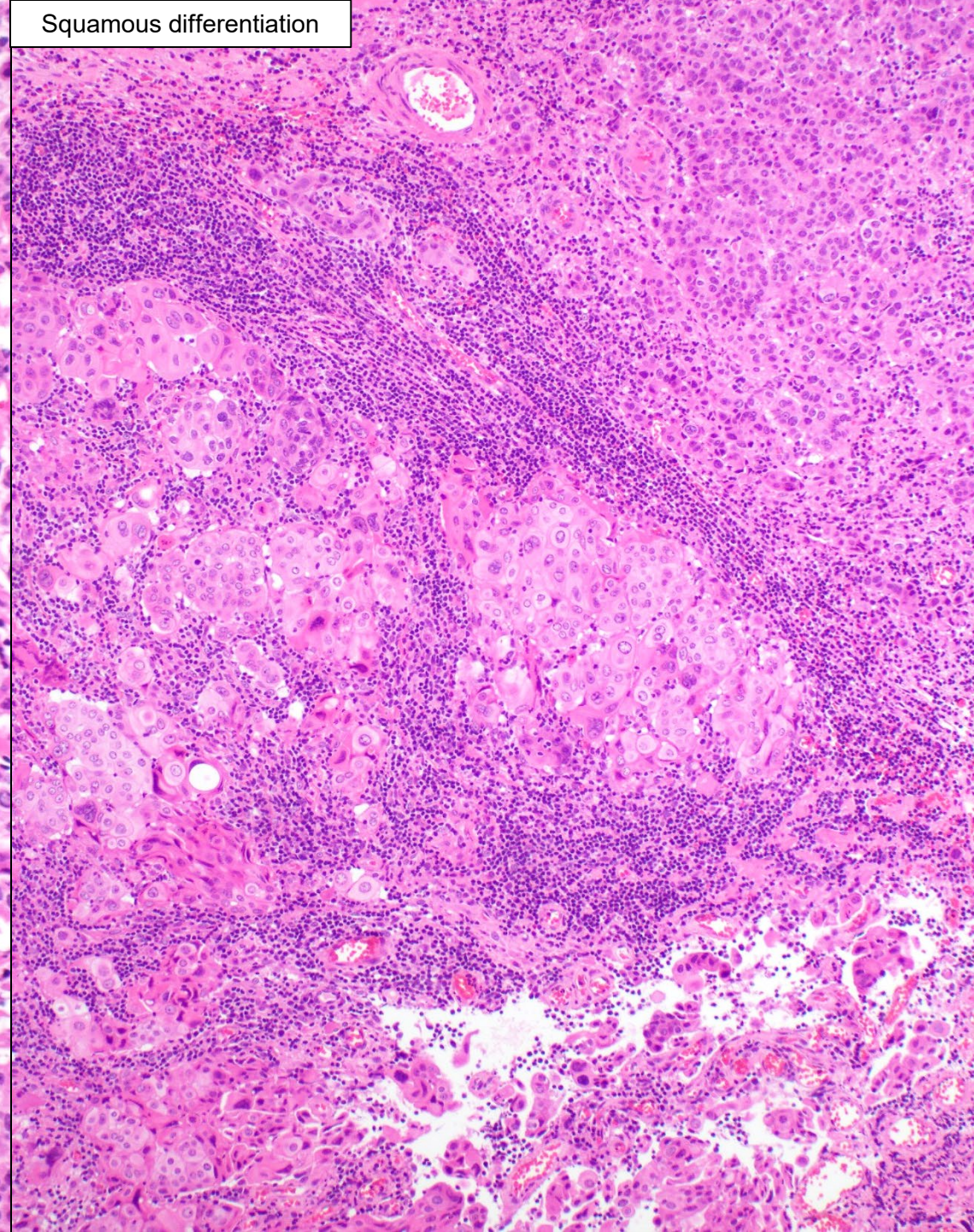




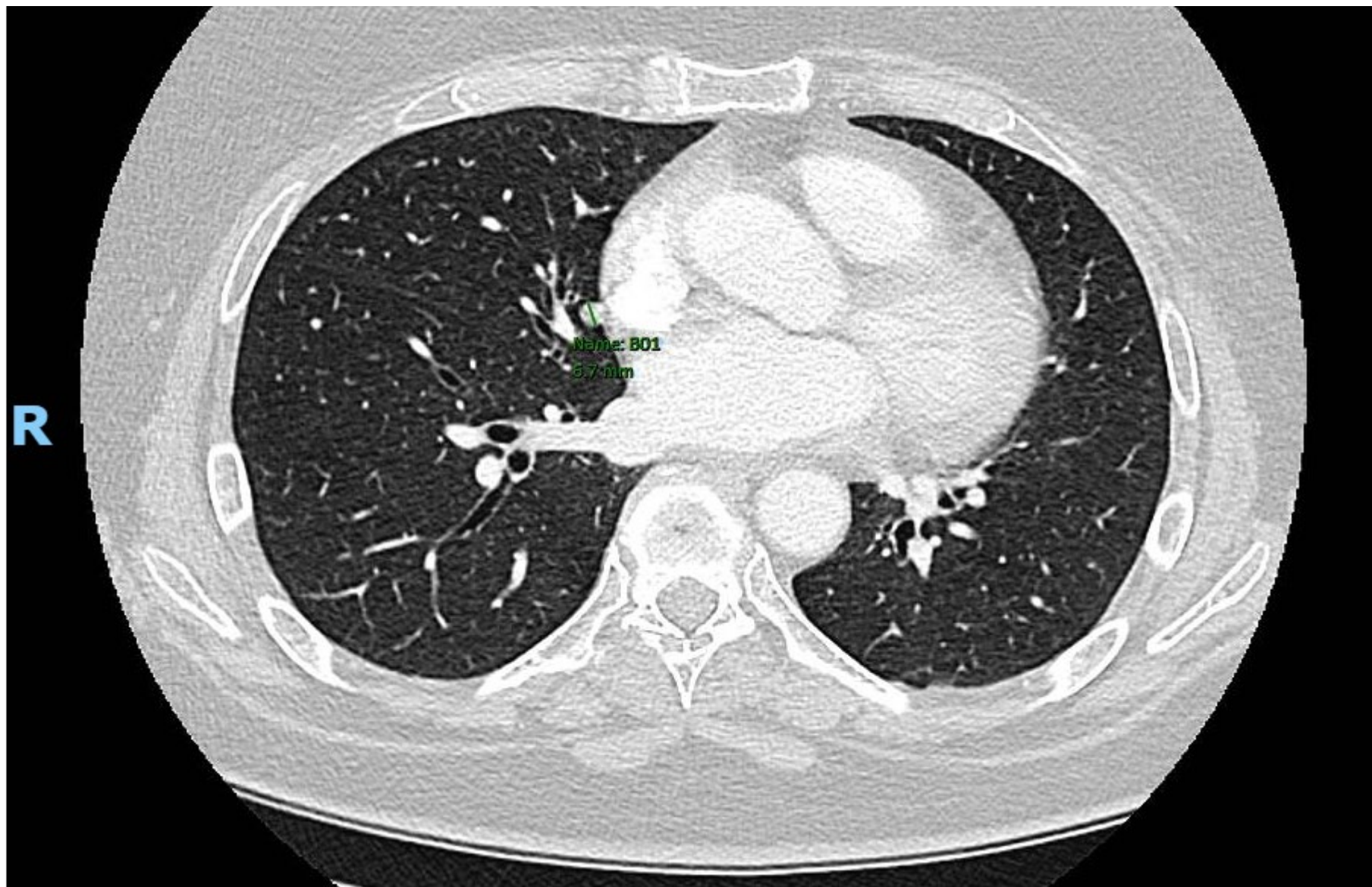
Micropapillary features



Squamous differentiation







# URO 1

## You Recommend

- A. 4 cycles of neoadjuvant cisplatin-based chemotherapy
- B. Expectant management, repeat CT chest in 10 weeks
- C. Something else

# URO 1

- Receives 4 cycles of gem/cis with acceptable toxicity, ECOG PS 1
- Repeat CT imaging demonstrates significant reduction in size of bladder mass
- Sub pleural lesion on chest CT is not present, no new lesions

# URO 1

## You Recommend

- A. EBRT to bladder, start immune checkpoint
- B. Radical cystectomy
- C. Expectant management CT scans in 3 months
- D. Something else

# URO 2

- 75 year old healthy gentleman, ECOG PS 0, develops gross hematuria
- CT IVP: Infiltrative enhancing mass in posterior lateral aspect of urinary bladder measuring 5.8 x 3.3 x 6 cm, no HUN, pathologic right perivesicular lymph node 1.2 cm
- CT chest shows few indeterminate pulmonary nodules, all sub-centimeter in size, in setting of severe emphysema
- CNS imaging NED





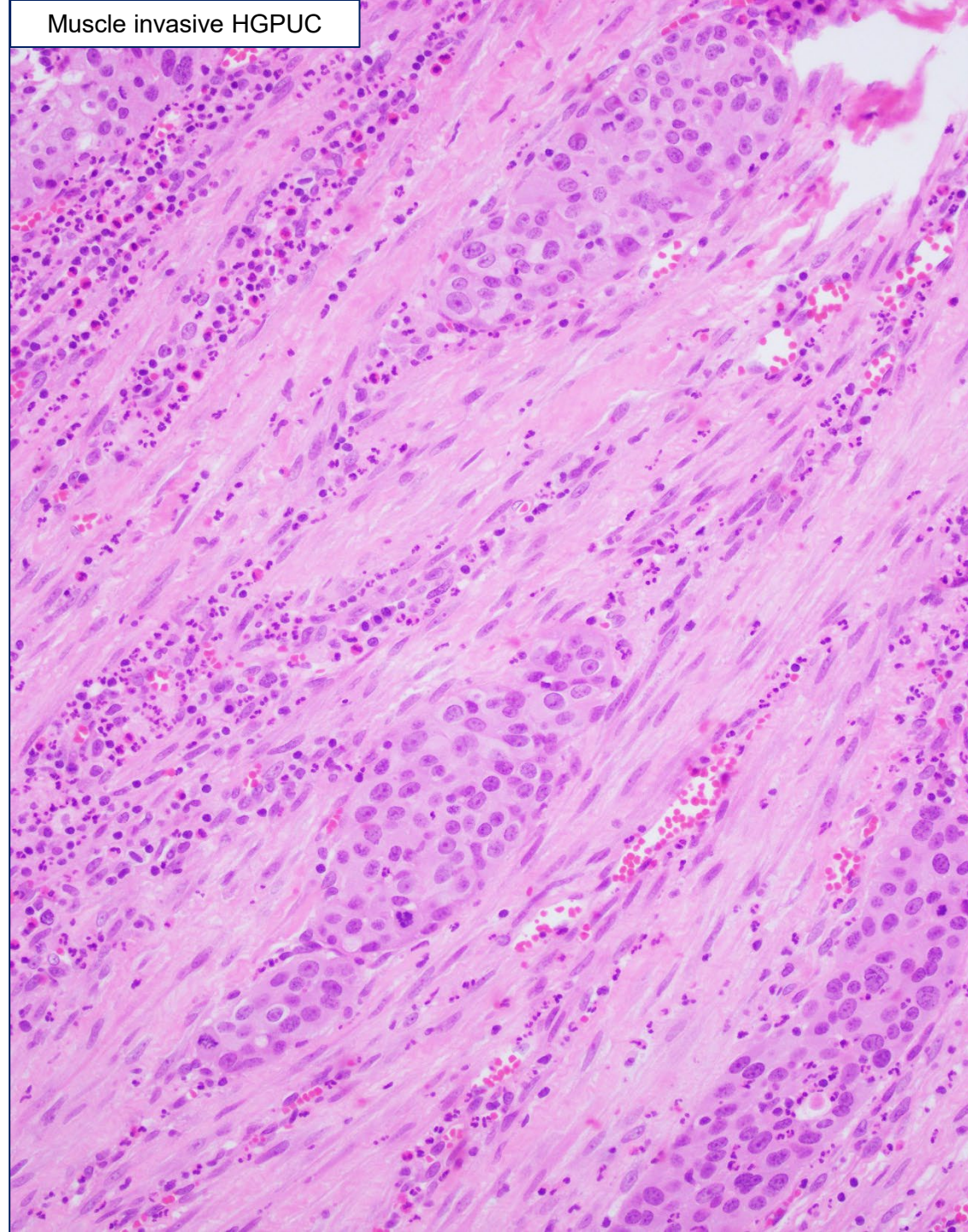
# URO 2

Cystoscopy with TURBT performed:

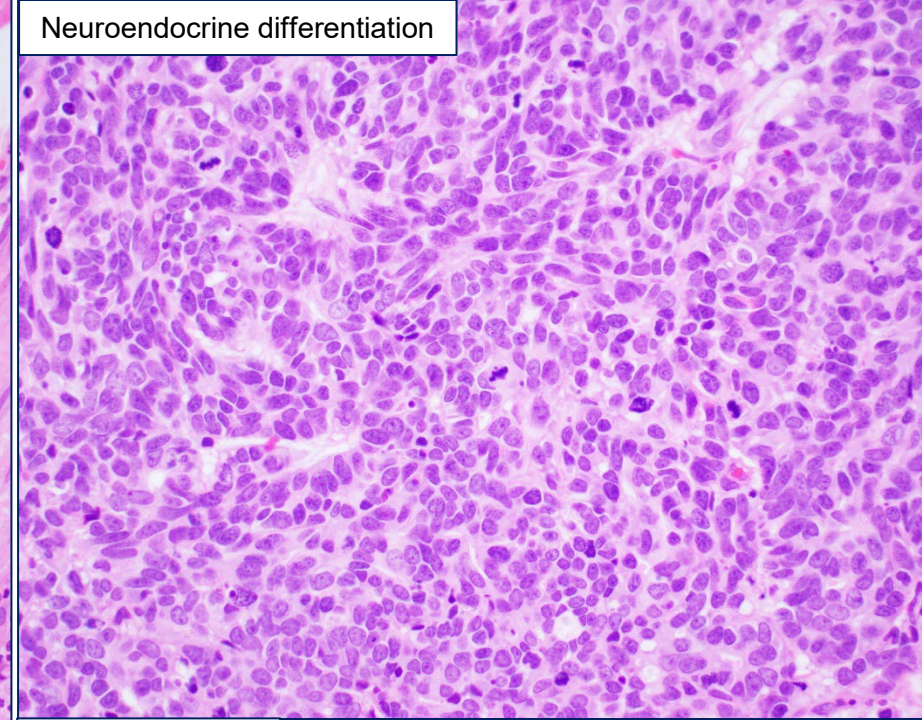
- Large sessile mass on right lateral wall with difficulty identifying right ureteral orifice
- Path reads **muscle invasive high-grade urothelial carcinoma with foci of small cell carcinoma**



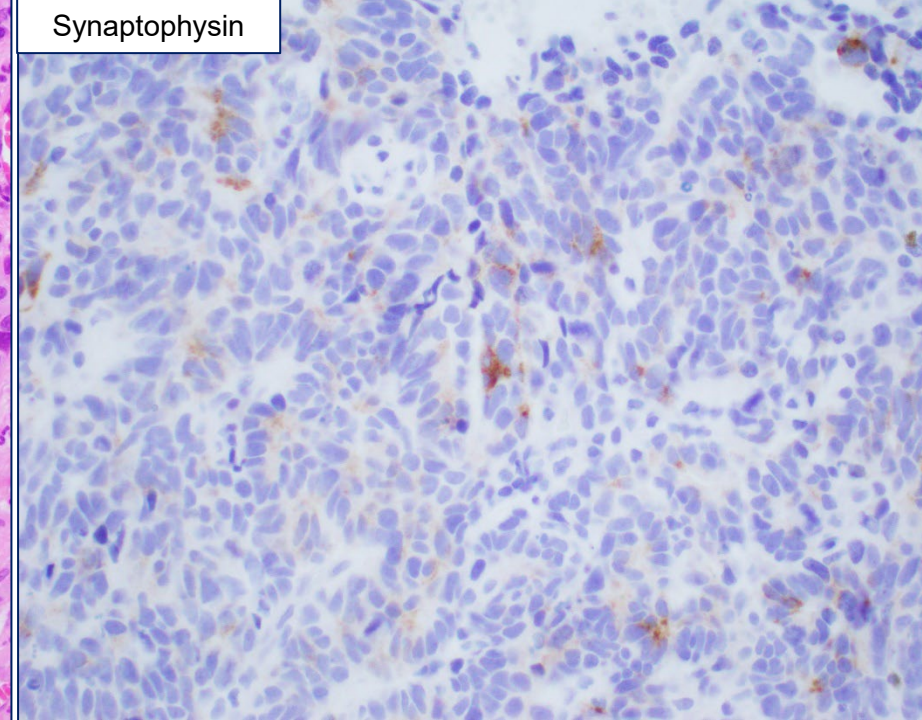
Muscle invasive HGPUC



Neuroendocrine differentiation



Synaptophysin





# URO 2

## You Recommend

- A. Radical cystectomy
- B. Neoadjuvant gemcitabine/cisplatin or ddMVAC followed by radical cystectomy
- C. Neoadjuvant etoposide/cisplatin followed by radical cystectomy
- D. Bladder preservation with TURBT plus chemotherapy plus radiation
- E. Something else

# URO 2

- Patient is treated with 3 cycles of neoadjuvant etoposide/cisplatin
  - 4<sup>th</sup> cycle held due to renal insufficiency
  - Post-chemotherapy CT demonstrates partial response, bladder mass now measuring 4.2 x 2.1 x 3.2 (previously 5.8 x 3.3 x 6 cm), perivesicular lymph node decreased to 0.5 cm





## URO 2

- Patient now seeks a second opinion
- CT chest stable lung nodules
- ECOG PS 1

# URO 2

- Underwent radical cystoprostatectomy with bilateral pelvic lymph node dissection and creation of diverting ileal conduit
- Surgical path reads
  - High-grade urothelial carcinoma, invasive into perivesicular soft tissue
  - One perivesicular lymph node with metastatic urothelial carcinoma, remaining 43 lymph nodes negative



# URO 2

## You Recommend

- A. Surveillance
- B. Additional platinum-based chemotherapy
- C. Adjuvant immune checkpoint inhibitor
- D. Something else

# URO 3

- 45 year old male, hematuria leads to evaluation locally with admission to a hospital, hgb 4.8, bilateral perc neph tubes placed for AKI secondary to obstruction creatinine 4.9
- TURBT HG mibc into muscularis propria
- CT chest/abd/pelvis no mets
- Received neoadjuvant dose dense MVAC (x 6) and referred for cystectomy
- Pre op CT scans NED
- Intraop discovery of bulky nodes around right ureter distal to the iliacs, cystectomy aborted
- Now returns to you as initial consult, ECOG PS 0-1, creatinine 2.4



# URO 3

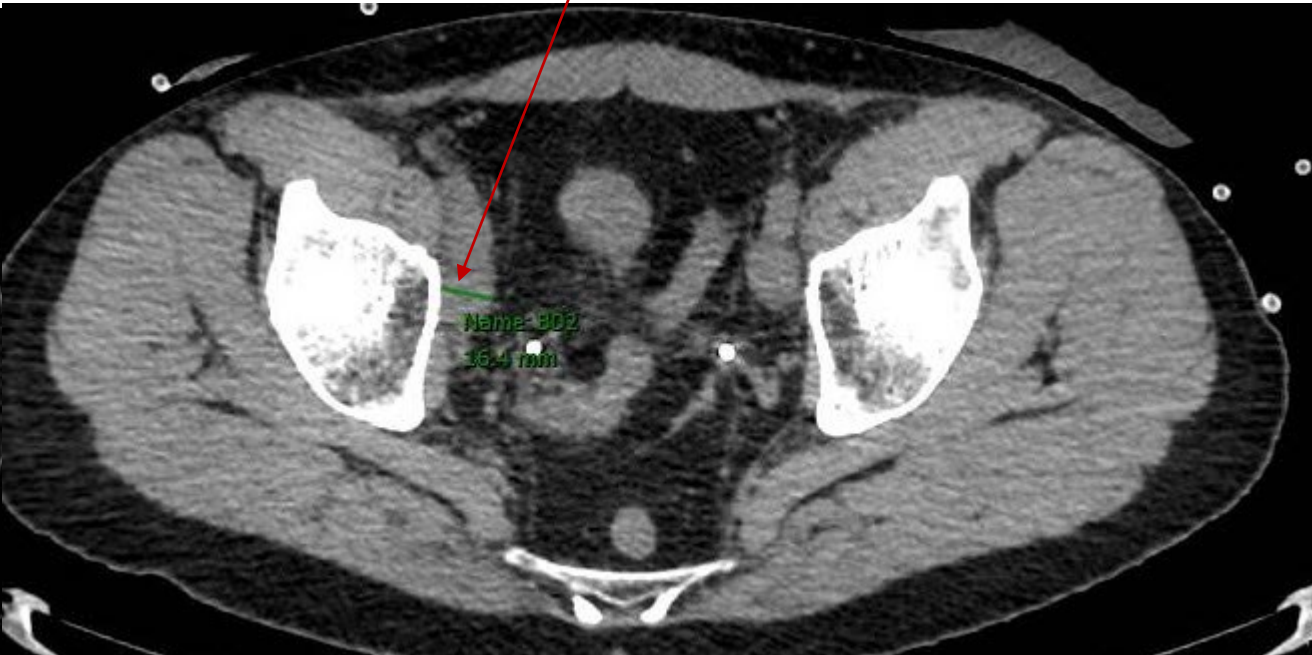
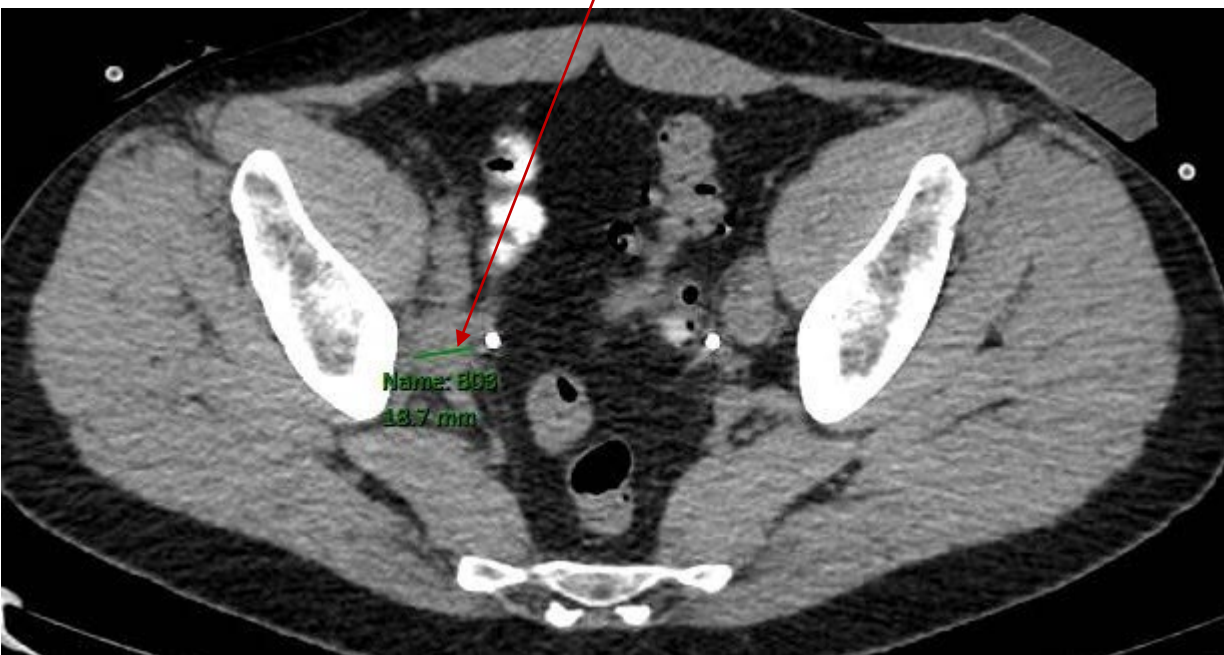
## You Recommend

- A. Expectant management, repeat CTs 3 months
- B. Additional platinum-based chemotherapy
- C. Immune checkpoint inhibitor
- D. Enfortumab vedotin + pembrolizumab
- E. Something else

# URO 3

- Surveilled with q 3 month CT imaging and cystoscopies
- Cysto x 2 negative





CT imaging 9 months following aborted cystectomy  
Chest CT NED

# URO 3

## You Recommend

- A. Surveillance
- B. Additional platinum-based chemotherapy
- C. immune checkpoint inhibitor
- D. EVP
- E. Something else



## URO 3

- Initiated therapy with pembrolizumab with radiographic CR after 3 months
- Completed 2 years of therapy (12/22)
- Cystoscopic evaluation, random bx, cytology negative

# URO 3

## You Recommend

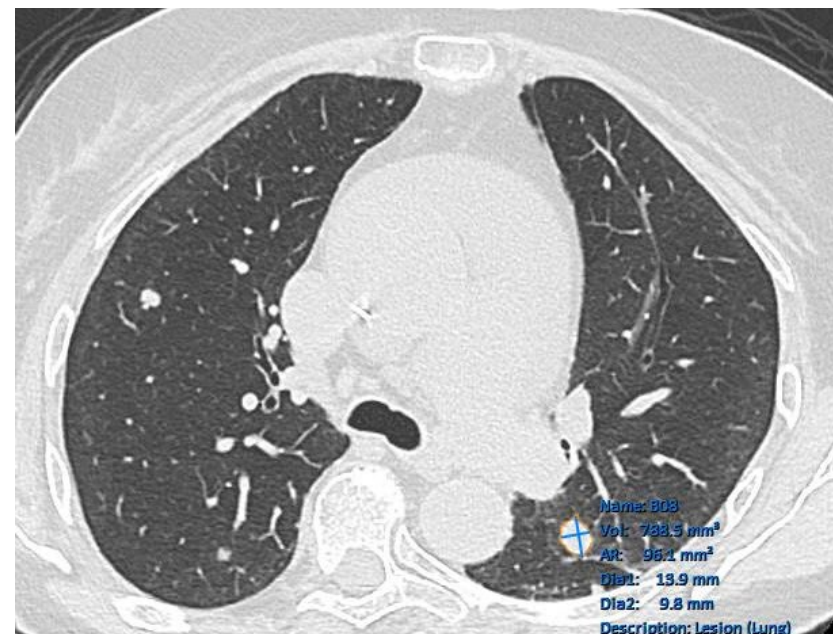
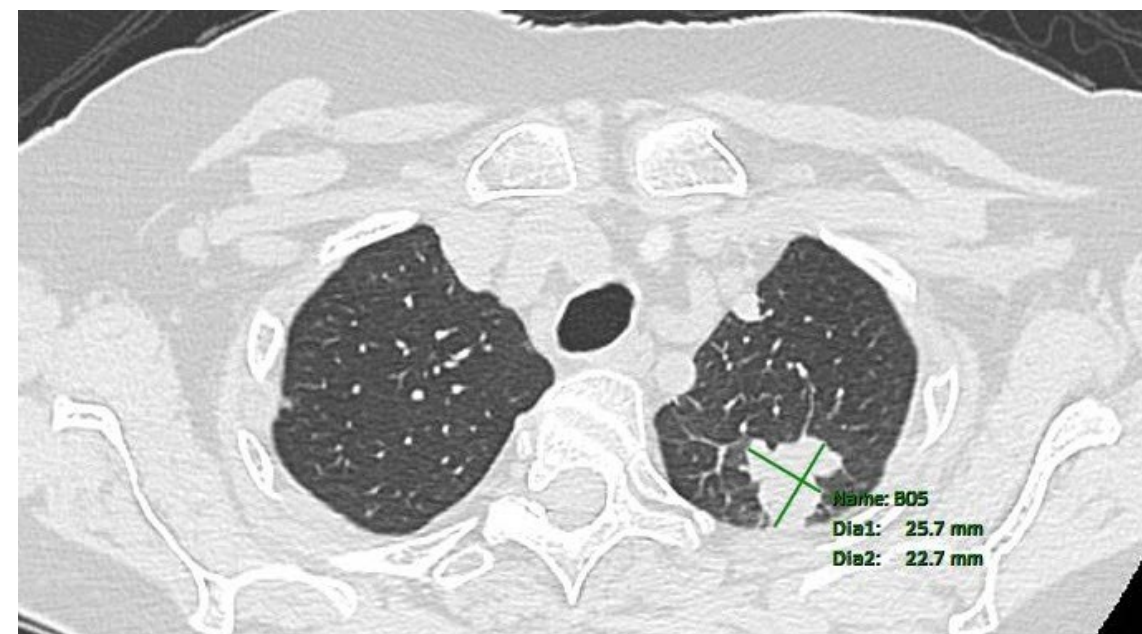
- A. Surveillance
- B. Radiotherapy to the bladder
- C. Radical cystectomy
- D. Something else

## URO 4

- 65 year old woman presents with gross hematuria
- Long standing type II diabetes, baseline renal function creatinine clearance 45 ml/min, ECOG PS 1
- TURBT HG MIBC ( muscularis propria)
- CT abd/pelvis bladder mass no metastatic disease



# Uro 4



Bx proven metastatic urothelial cancer

# URO 4

## You Recommend

- A. Gemcitabine/carboplatin
- B. Pembrolizumab
- C. Enfortumab vedotin/pembrolizumab
- D. Something else

## URO 5

- 69 year old male presents with a long history of non muscle invasive high grade urothelial cancer of the bladder, s/p multiple cycles of BCG and intravesical chemotherapy presents with left sided hydronephrosis/hydroureter
- Left nephroureterectomy, node dissection, cystoprostatectomy, adrenalectomy at a major referral center



# URO 5

- Path demonstrated invasive, high-grade urothelial papillary carcinoma (4.5cm span) centered in left ureter with prominent micropapillary features (80%) and extensive invasion beyond the muscularis into periureteric and renal hilar adipose tissue. LVI present. Positive margins and 9/26 involved nodes (ypT3N2). TEMPUS showing MSS, CPS 20 (TPS < 1%), FGFR3 pS249C GOF missense variant
- Creatinine 2.4, eGFR 27

# URO 5

## You Recommend

- A. Gemcitabine/carboplatin
- B. Nivolumab
- C. Surveillance
- D. Something else

# URO 6

- 65 yr old healthy man presents with new onset hematuria
- Never smoker, salesman, mild hypertension
- CT Urogram: 3 x 2.5 cm mass involving left ureteropelvic junction, there is moderate dilatation of the renal pelvis and intrarenal collecting system on the left side
- Cystoscopic exam, random biopsies negative
- Renal pelvis left side washing positive for malignant cells
- ECOG PS 0, creatinine 0.9 eGFR 69 ml/min
- Chest CT NED



# URO 6

## You recommend

- A. Neoadjuvant gemcitabine/carboplatin
- B. Neoadjuvant gemcitabine/cisplatin
- C. Nephroureterectomy followed by adjuvant carboplatin-based chemotherapy
- D. Nephroureterectomy followed by adjuvant nivolumab
- E. Something else

# URO 6

- Pt undergoes a L lap nephroureterectomy (Hand Assist) with bladder cuff excision excision of paraaortic lymph node packet
- Preop creatinine 1.5, post op ( 6 weeks) 1.5
- Pathology:
  - Invasive high-grade papillary urothelial carcinoma with squamous differentiation and flat urothelial carcinoma in situ arising in proximal ureter
  - The tumor invades into, but not through the muscularis propria (detrusor muscle), All surgical margins are negative for tumor, no lymphovascular invasion is present
  - Left perirenal lymph nodes - One of five lymph nodes positive for metastatic tumor

# URO 6

- Post operative recovery uneventful, at 6 weeks feels 90% recovered
- 2.5 months out from surgery CT chest/abd/pelvis NED
- Creatinine 1.3 eGFR 55 ml/min
- ECOG PS 1



# URO 6

## You recommend

- A. adjuvant gemcitabine/carboplatin
- B. adjuvant gemcitabine/cisplatin
- C. adjuvant nivolumab
- D. Surveillance
- E. Something else