

Radiology- Pathology Case Presentation

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Objectives

- To follow a patient through a radiology procedure and a pathology work up.
- To understand the immunomarkers consistent with urothelial carcinomas.

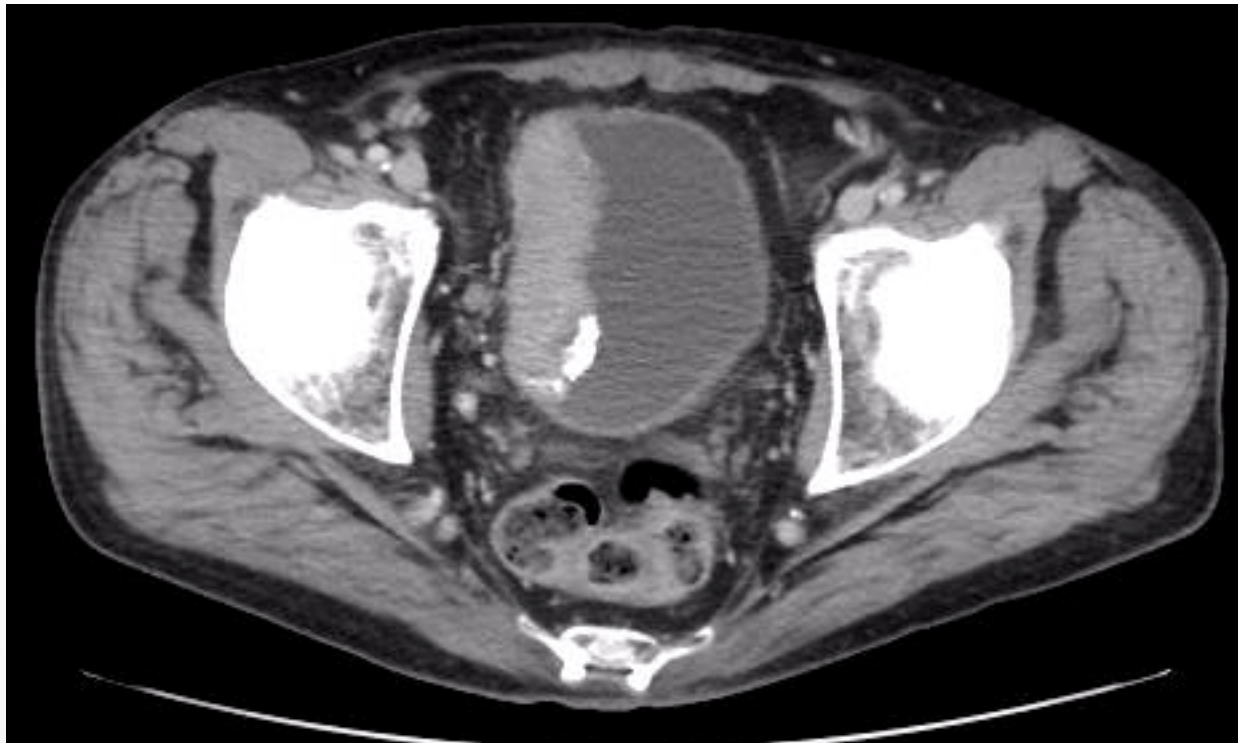


Clinical Scenario

- Mr. B is a 76 y.o. male who presents to clinic with hematuria. It started a week ago and has only gotten worse. He denies any pain but does endorse some weight loss.
- PMH: AAA, A-fib, HTN, HLD, CVA, COPD
- Meds: Aspirin, amlodipine, HCTZ, albuterol, gabapentin, tramadol
- PSH: Appendectomy
- Fam Hx: Heart disease and stroke. No cancer history.
- Soc Hx: 2 ppd smoker. 2 shots of whiskey each night.
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Initial Work Up

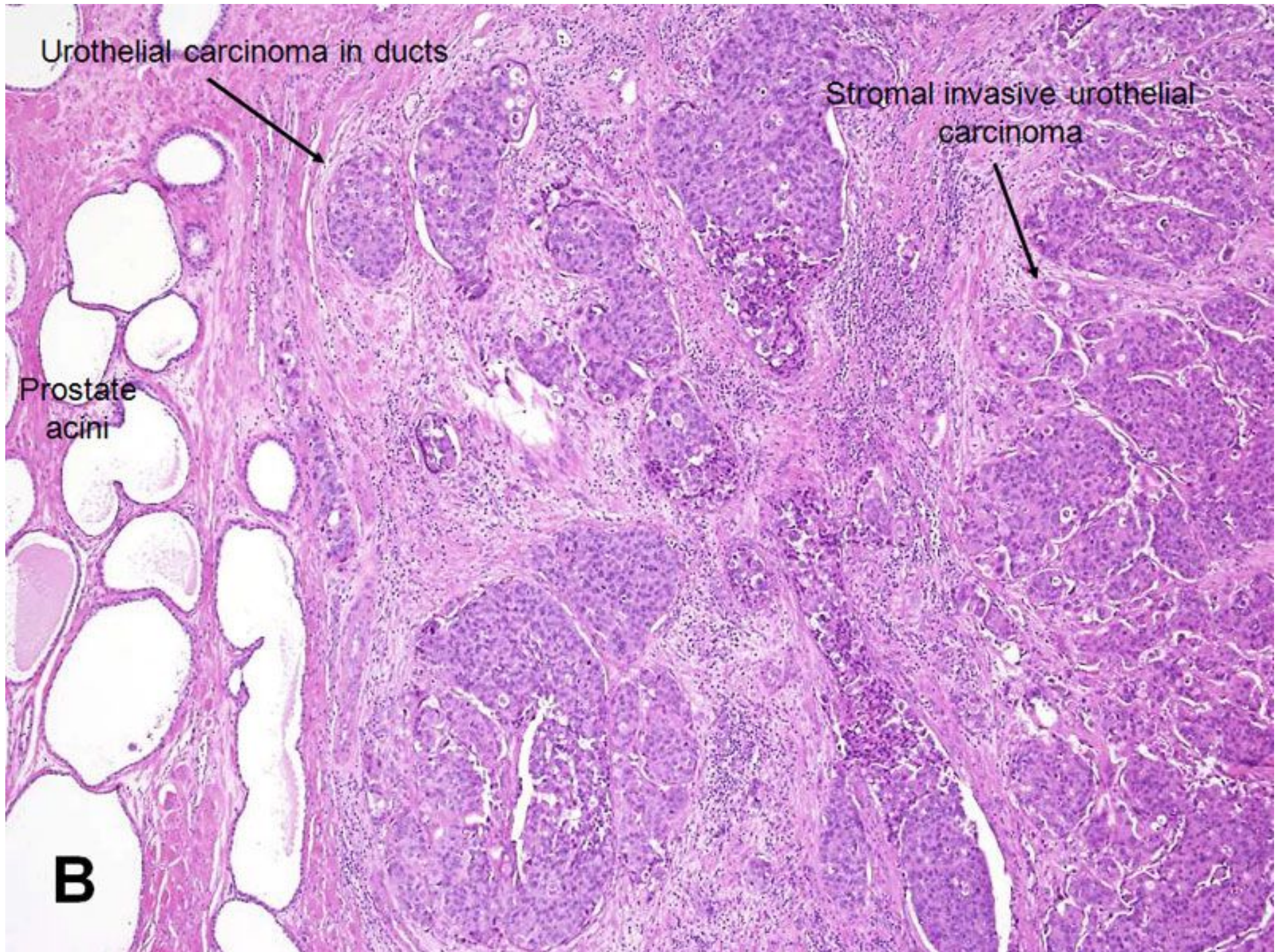
- Bladder U/S and urine cytology: Results suspicious for malignancy.

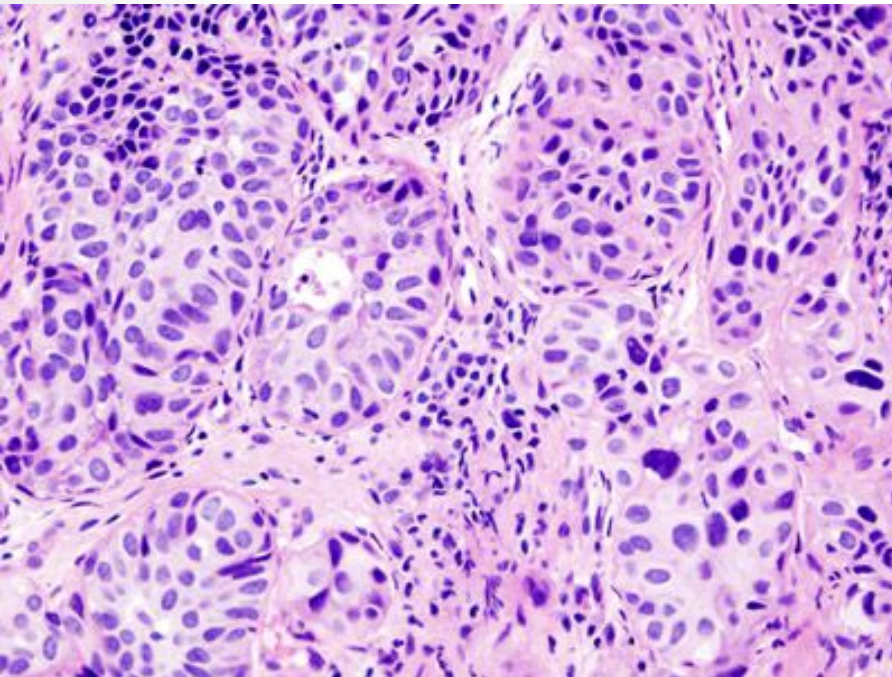
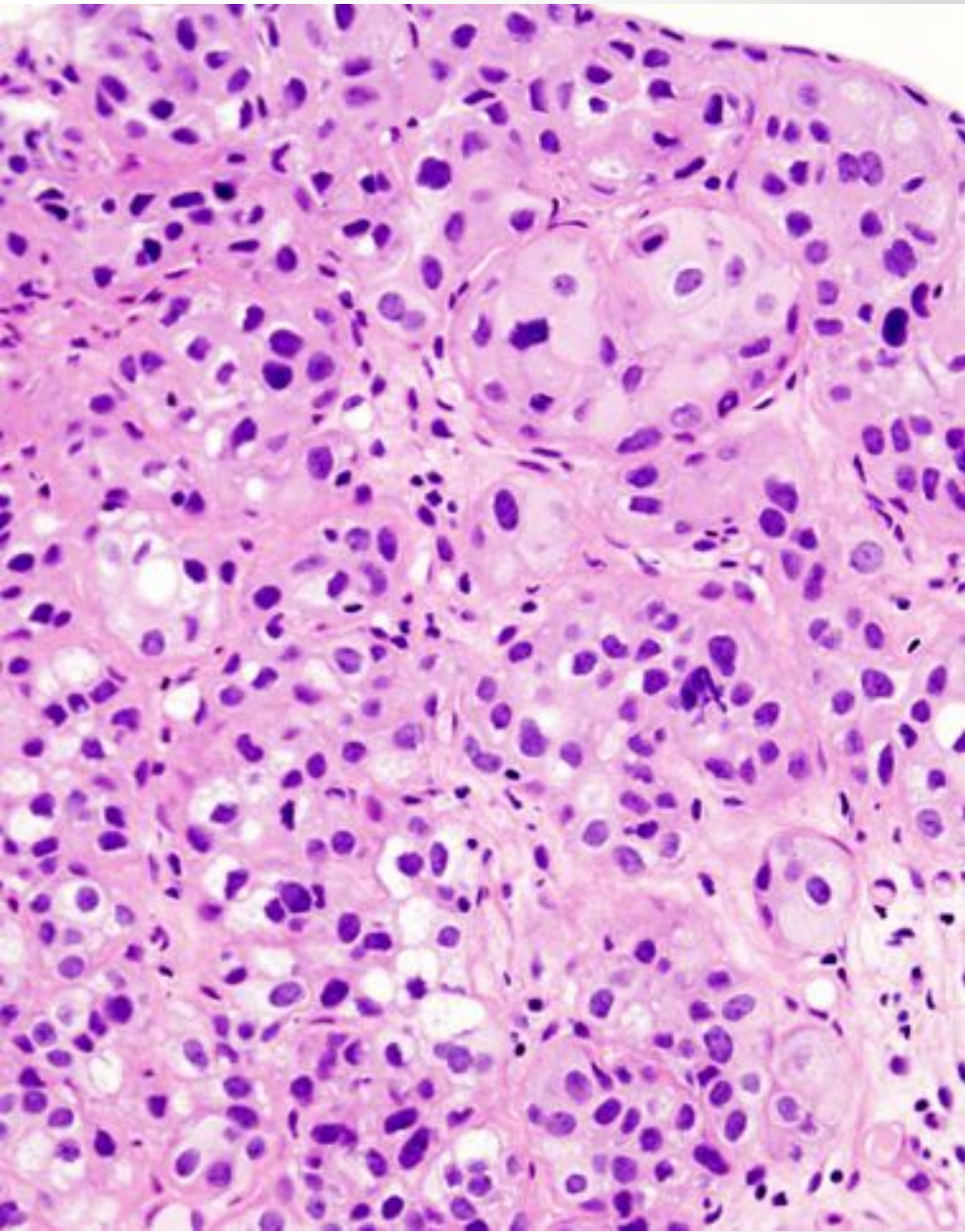
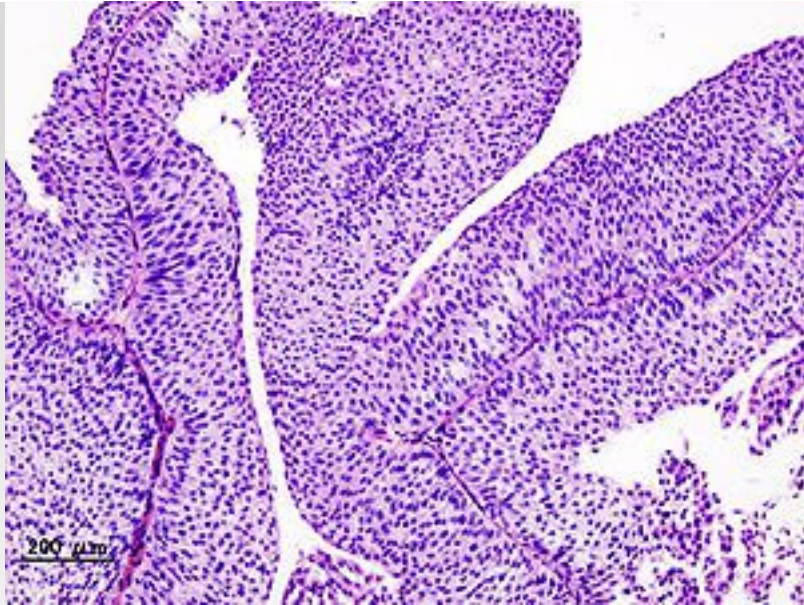


Treatment Course

- Cystourethroscopy and TURB-T, 01/26/17, > 7 cm bladder mass with biopsy revealing high-grade urothelial carcinoma
- Concurrent EBRT (Bladder and pelvic lymphatics), 03/08/17- 04/25/17; Cisplatin (weekly) 03/09/17- 04/13/17 (last dose held for worsening hypomagnesemia)
- Urology feels that cystectomy would be too morbid for patient









Final Pathology

- LUNG NODULE, LEFT LINGULA, CT-GUIDED FNA: METASTATIC UROTHELIAL CARCINOMA.
- LUNG NODULE, LEFT LINGULA, CT-GUIDED CORE NEEDLE BIOPSY: METASTATIC UROTHELIAL CARCINOMA. (SEE COMMENT.)
- The core biopsies demonstrate a tumor with similar morphology to the patient's previous biopsies (S17-2068). The morphology and immunophenotype are consistent with metastatic urothelial carcinoma.

Immunostaining

- Positive

- p63: Myoepithelial origin
 - If negative: Renal collecting duct carcinoma or high grade prostate cancer
- GATA-3: 67% of uroepithelial carcinomas
- CK 7/CK 20
 - +/+ : uroepithelial
 - +/- : bladder adenocarcinoma
 - -/- : adrenal or prostate

- Negative

- TTF-1: Thyroid transcription factor
 - Distinguish primary (TTF1+) vs. metastatic (usually TTF1-) lung carcinoma
- Napsin
 - Superior to TTF1 in distinguishing primary lung adenocarcinoma

Resources

- <http://www.pathologyoutlines.com/topic/bladderurothelialinvasivegen.html>
- https://www-uptodate-com.proxy.its.virginia.edu/contents/epidemiology-and-risk-factors-of-urothelial-transitional-cell-carcinoma-of-the-bladder?source=search_result&search=urothelial%20carcinoma&selectedTitle=3~80
- **TTF-1 and Napsin A double stain: a useful marker for diagnosing lung adenocarcinoma on fine-needle aspiration cell block. Fatima et al. Cancer Cytopathol. 2011 Apr 25;119(2):127-33.**

