



# **Metastatic Prostate Cancer from Bladder Cancer; A Mimic of Primary Prostate Cancer**

**Jinxing Yu, MD**

**Professor of Radiology & Surgery  
Director of Prostate Imaging & Intervention  
Virginia Commonwealth University  
Richmond**

# History & Imaging Findings

- 69-year-old male presenting with hematuria and found to have a bladder mass
- CT of abdomen and pelvis shows an enlarged prostate with heterogeneous enhancement
- PSA 0.8. No prior TRUS bx. Prostate MRI performed

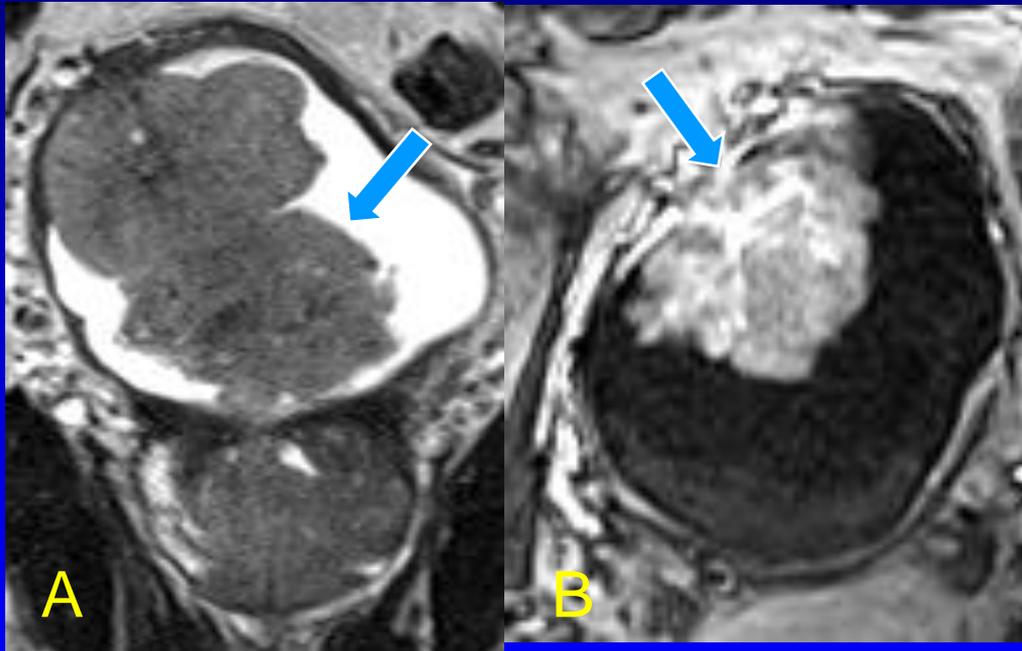


Fig. A-B) Coronal T2 and axial post contrast images demonstrated a large mass in the bladder with enhancement (arrow) consistent with urothelial carcinoma.

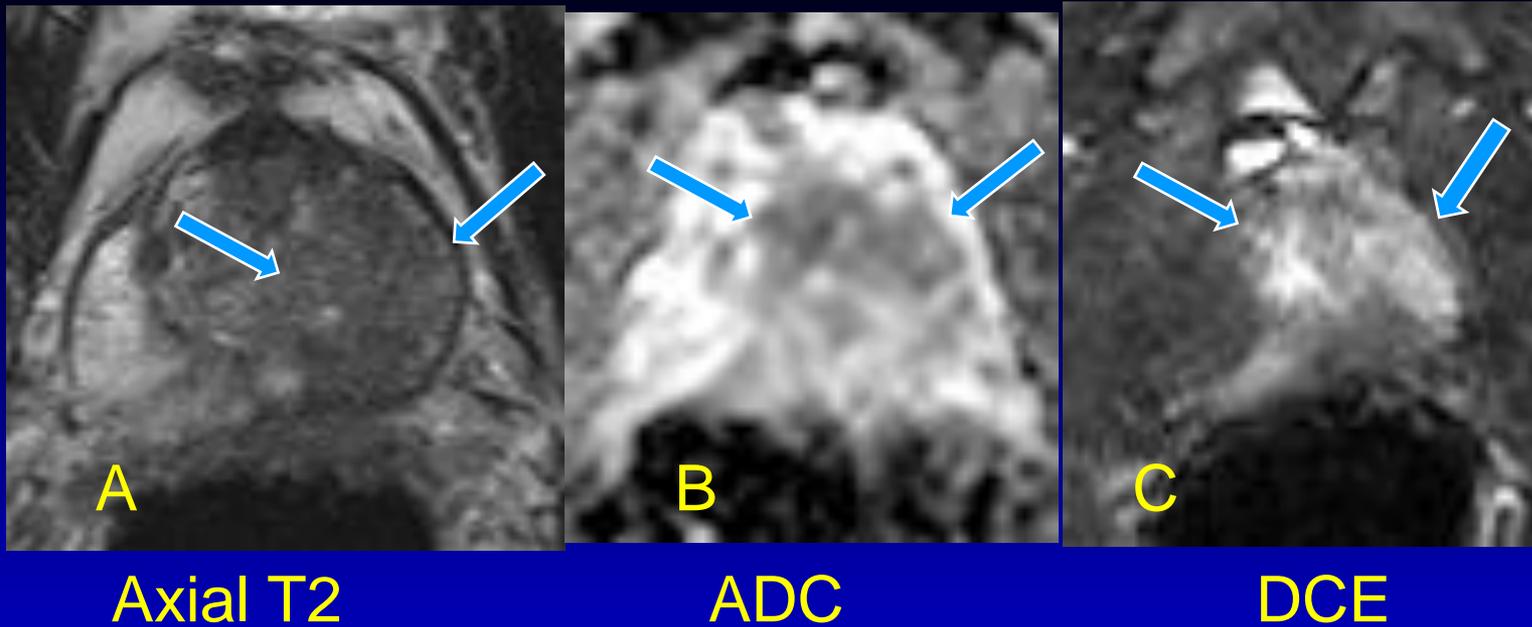


Fig. C-E) Axial T2, ADC and DCE showed a large T2 hypointensity in the left prostate involving the peripheral zone and transitional zone, with diffusion restriction and abnormal early enhancement (arrows), concerning for primary prostate cancer (PI-RADS 5).

US/MRI fusion prostate biopsy confirmed high grade urothelial carcinoma with extensive cancerization of prostate ducts; stroma intact. Bladder mass biopsy demonstrated invasive, high-grade urothelial carcinoma. The patient underwent cystoprostatectomy with ileal conduit.

# Teaching Points

- Involvement of the **prostate by TCC** is a common finding in radical cystoprostatectomy for bladder cancer, **12% to 58%**
- Transitional cell carcinoma of the prostate may arise from **extension of bladder tumors, proximal prostate ducts/ urethra**, or from **cell implantation from vesical neoplasms**
- MRI imaging features are **similar to** that of prostate cancer
- Key points which will help in the differential diagnosis
  - **Presence of bladder cancer**
  - **Low PSA**
  - **Even large prostate tumor, the capsule of prostate is not affected in our case (no bulging, no ECE)**
    - **Because the tumor cells are within the ducts; no stroma invasion**

# References

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