Nayana Patel, MD, FSAR
Associate Professor, Dept of Radiology
Director, Abdominal Imaging Fellowship Program
• 73 year old male.
• No positive family history for prostate cancer
• PSA of 6.3 ng/ml.
• Multiparametric MRI is performed to detect clinically suspected prostate cancer.
T2

DWI with B of 1400

ADC map

DCE

University of Colorado
Anschutz Medical Campus
MRI Findings:

- Prostate volume of 29 mL and PSA density of 0.22.
- 1.6 cm lesion in the left lateral posterior peripheral zone mid gland to base with marked restricted diffusion and early enhancement: PIRADS 5.
MRI Findings:

- There is capsular bulge at the tumor site with extraprostatic tumor extension in rectoprostatic angle and involvement of the left neurovascular bundle - T3a
- No seminal vesicle invasion or pelvic LAD.
Teaching Points:

• It is important to identify and report extra-prostatic tumor extension (EPE) and seminal vesicle invasion on MRI for tumor staging, which helps determine appropriate treatment options.
• T2 is a key sequence to evaluate for EPE.
• Combining T2 with DCE and DWI improve sensitivity of EPE detection and staging.
• MRI T stage plays role in predicting the risk of early BCR and subsequent distant progression in a man with localized Prostate Cancer.
References:

• Soylu FN, Oto A et al: Seminal Vesicle Invasion in Prostate Cancer: Evaluation by Using Multiparametric Endorectal MR Imaging; Radiology 2013.