Post Radiation Induced Sarcoma

Mukesh Harisinghani, MD, FACR
Professor of Radiology
Massachusetts General Hospital
History

- 95-year-old male patient presented to ER with recurrent bouts of hematuria and acute urinary retention
- History of brachytherapy and XRT for prostate cancer in 1995
mp MRI

DCE

DWI b=1500

DCE

T2w

T2w
Findings

• Large lesion arising from prostate; central area of necrosis, heterogenous enhancement and DWI signal
• No adenopathy
Pathological Diagnosis

- High grade malignant neoplasm with spindle morphology, marked nuclear pleomorphism, focal necrosis and frequent mitotic figures → Sarcoma of Prostate
Take Home Point

- There is a perceptible risk of sarcoma after radiation
- Think sarcoma if large, aggressive lesion in setting of prior radiation therapy
- For prostate risk is from prior radiation to rectum or to the prostate