

Unilateral Seminal Vesicle Agenesis

Baris Turkbey M.D.

Molecular Imaging Program,

National Cancer Institute, NIH, Bethesda, MD, USA

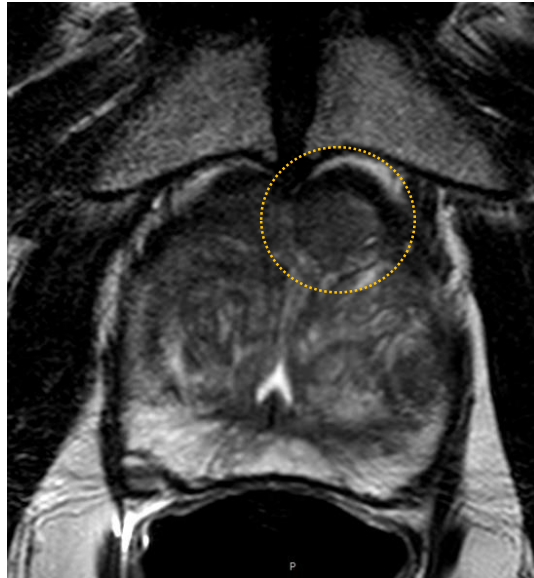


**69 year-old-male
serum PSA=8ng/ml**

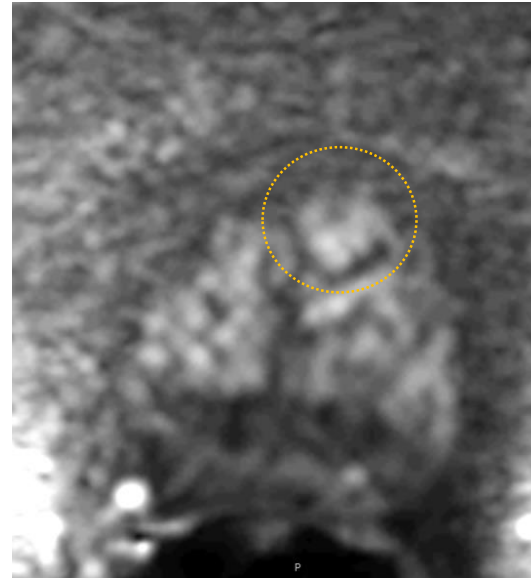
Intraprostatic MRI Findings:

There is a mostly encapsulated hypointense nodule (“atypical nodule”) in the left apical-mid anterior transition zone.

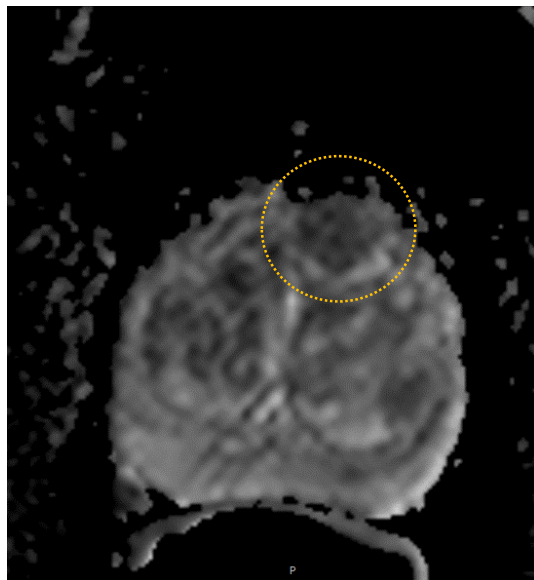
- T2W PI-RADS category=2
- DW MRI PI-RADS category=4
- DCE MRI PI-RADS category=positive (+)
- Overall PI-RADS category=3/5



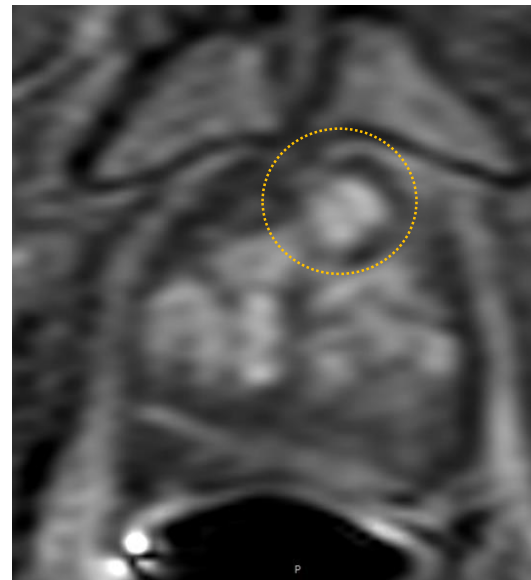
Axial T2W MRI



b2000 DW MRI



ADC map



DCE MRI

Note: this lesion has not been biopsied yet

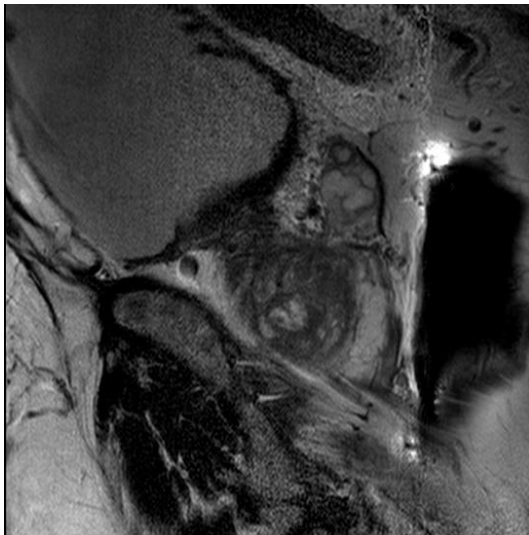
69 year-old-male
serum PSA=8ng/ml



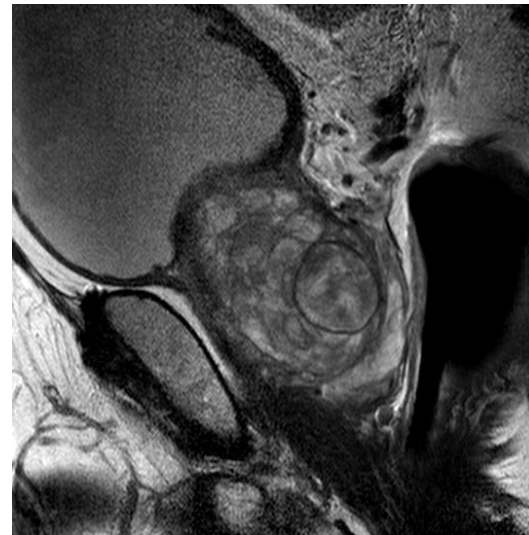
Axial T2W MRI



Coronal T2W MRI



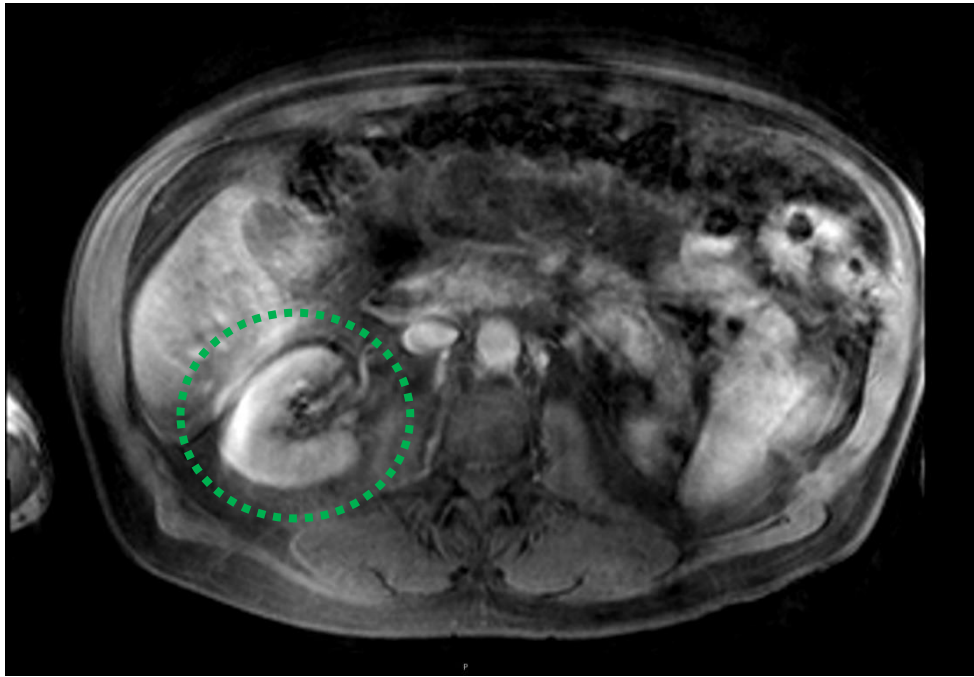
Sagittal T2W MRI-Right



Sagittal T2W MRI-Left

Seminal Vesicle Findings:

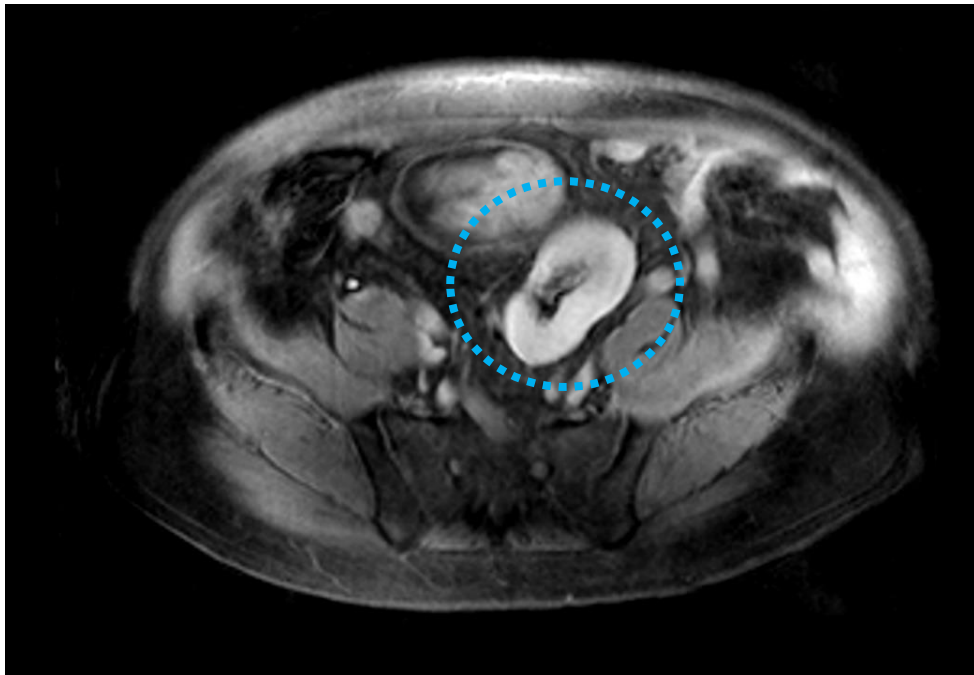
- Right side: unremarkable
- Left side: seminal vesicles are not seen
 - Unilateral left seminal vesicle agenesis



69 year-old-male
serum PSA=8ng/ml

Axial T1W post-contrast
abdomen MRI:

- **Right Kidney: unremarkable**
- **Left Kidney: ectopic location in the pelvis**



Teaching Points

- Unilateral seminal vesicle (SV) agenesis:
 - Often found incidentally at cross-sectional imaging,
 - Develops if an embryologic insult occurs before the 7th week of gestation, when the ureteric bud arises from the mesonephric duct
- Seminal vesicle agenesis does not occur isolated and is often associated with ipsilateral renal agenesis (79% of cases) or other renal abnormalities (12%) and it can also be associated with normal kidneys (9%)
- **When a unilateral SV agenesis is detected, please check kidneys**

References

- Donohue RE, Fauver HE. Unilateral absence of the vas deferens: a useful clinical sign. *JAMA* 1989; 261(8):1180–1182.
- Ege G, Akman H. Unilateral seminal vesicle agenesis and associated abnormalities. *EuroRAD (ESR)*. DOI: 10.1594/EURORAD/CASE.1107.
- Arora SS, Breiman RS, Webb EM, Westphalen AC, Yeh BM, Coakley FV. CT and MRI of congenital anomalies of the seminal vesicles. *AJR Am J Roentgenol* 2007;189(1):130–135.
- Kim B, Kawashima A, Ryu JA, Takahashi N, Hartman RP, King BF Jr. Imaging of the seminal vesicle and vas deferens. *Radiographics*. 2009;29(4):1105-1121.
- Ocal O, Karaosmanoglu AD, Karcaaltıncaba M, Akata D, Ozmen M. Imaging findings of congenital anomalies of seminal vesicles. *Pol J Radiol*. 2019;84:e25-e31.