PI-RADS Categories on initial prostate MRI are associated with Active Surveillance progression in patients with Prostate Cancer

Background

- Active Surveillance (AS) is now a popular and well-accepted alternative to definitive therapy in patients with low-favorable intermediate risk prostate cancer (CaP).
- Prostate Imaging Reporting & Data System (PI-RADS) scores are assigned to assess risk of clinically significant prostate cancer (csCaP).
- In this study, we investigate if PI-RADS scores are associated with AS progression for patients.
Methods

- Patient were enrolled in a prospectively designed, nationally registered, clinical trial assessing cancer detection for MRI targeted biopsies.
- 1052 potential AS candidates were referred to the National Institutes of Health (NIH) and evaluated for active surveillance from 11/2003 to 5/2017.
- 351 men remained on AS and received at least 2 MRIs and at least 2 biopsies and received both a targeted biopsy and systematic biopsy to compare.
- There were no strict exclusion criteria with regards to PSA, PSA density (PSAD), or tumor volume estimated by MRI or biopsy results.
- Univariate analysis was performed to compare the rates of AS progression between different PI-RADS categories. Student t-test and the chi-square test were used for continuous and categorical variables, respectively. Cox proportions hazard regression analysis was performed on all baseline clinical and MRI data.
• Patients with PI-RADS 4 lesions should be considered high risk in any AS protocol whereas patients with PI-RADS 3 lesions or lower can likely safely continue AS.