PT120 Baseline characteristics in an MRI-based active surveillance cohort: Association with clinical and histological outcomes
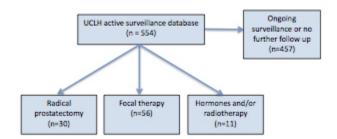
Stavrinides V. [1], Giganti F. [1], Stabile A. [1], Allen C. [2], Punwani S. [2], Whitaker H. [1], Emberton M. [1], Moore C. [1]

[1]University College London, Dept. of Surgery and Interventional Science, London, United Kingdom, [2]University College London Hospitals NHS Foundation Trust, Dept. of Radiology, London, United Kingdom

Introduction & Objectives: Active surveillance (AS) strategies are in widespread use for low to intermediate risk prostate cancer. Although eligibility for surveillance is decided using a combination of clinical and pathological variables such as age, PSA, Gleason grade and maximum tumour length, there is interest in using mpMRI. The prognostic significance of clinical and MRI baseline characteristics in AS is largely unexplored. Here, we present medium-term biopsy and clinical outcomes from our MRI-based surveillance cohort.

Materials & Methods: The UCLH active surveillance database (554 men with Gleason score 3+3 or low volume 3+4 disease, PSA<20ng/ml and a baseline mpMRI enrolled on surveillance between August 2004 – March 2017) was scrutinized for patients who either received treatment or secondary biopsies. Repeat biopsies (mainly transperineal, MRI-targeted) were performed in cases of MRI/histology discordance or a high degree of suspicion for disease progression. Treated patients were compared to the untreated group in terms of PSA density and MRI lesion visibility (i.e. Likert score of 4 or 5).

Results: Ninety-seven men had treatment. Fifty-six had focal therapy (HIFU, cryotherapy, photodynamic therapy or other on-trial treatments), 30 had radical prostatectomy and 11 hormones or/and radiotherapy. There was a statistically significant difference between treated and untreated men in terms of their presenting PSA density (Wilcoxon rank sum test, p= 0.0001548) and proportion with a visible MRI lesion at baseline (two-sample test for equality of proportions with continuity correction, p=0.0006606). 107 patients with a second biopsy were identified: Gleason upgrade was observed in 27 patients and, of those, 16 had an MRI-visible lesion at baseline. From the remaining 80, 33 had an MRI-visible lesion at baseline.

Conclusions: A higher PSA density and a visible MRI lesion at baseline could have clinical utility in predicting clinical outcome in patients on active surveillance. Further work is needed to quantify such effects and translate statistical findings to clinical practice.