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## MAGNETIC RESONANCE IMAGING FUSION PROSTATE BIOPSY IN PATIENTS WITH PROSTATE CANCER ON ACTIVE SURVEILLANCE WHO WENT ON TO HAVE A RADICAL PROSTATECTOMY

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## **ROLE OF MAGNETIC RESONANCE IMAGING FUSION PROSTATE BIOPSY IN PATIENTS WITH PROSTATE CANCER ON ACTIVE SURVEILLANCE WHO WENT ON TO HAVE A RADICAL PROSTATECTOMY.**

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### **INTRODUCTION:**

Patients with low-risk clinically localized prostate cancer may forgo immediate treatment and opt for active surveillance (AS). Follow up biopsies are an essential component of AS protocols. Our study evaluates the use of MRI Fusion prostate biopsy (MFB) in patients on active surveillance who went on to have definitive surgical management.

### **METHODS:**

Single institution retrospective review of 221 patients who underwent MFB between October 2015 and August 2019. Gleason scores from double sextant 12-core specimens were compared to those of regions of interest, and to the final pathology specimen where appropriate. Upgrading was defined as Gleason score 6 on biopsy, showing a pathological score of 3+4 or above, while downgrading was the reverse.

### **RESULTS:**

In patients on active surveillance, the rate of cancer detection on subsequent biopsies is similar between TRUS and MFB (77% vs 77%,  $p=0.87$ ). Of the 29 patients that had radical prostatectomy 26 out of 29 had positive TRUS cores compared to 27 out of 29 that had positive MFB cores. The final pathological score coincided with TRUS and MFB on 30% and 44% of the time ( $p=0.30$ ), respectively. Similar upgrading rates were noted between TRUS and MFB (44% and 53%,  $p=0.61$ ).

### **CONCLUSIONS:**

Detection cancer rates and concordance with final pathology appear to be similar between the TRUS and MFB approaches. Given the similarity in detection rate and concordance of Gleason score with final pathology, the utilization of MFB might not be warranted for patients on AS, as it is associated with higher financial burden.