

Title

## **The first 2-5 targeted transperineal prostate biopsies diagnose the majority of PROMIS criteria cancer in patients with a Likert 4 or 5 score on mpMRI**

Authors

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## **Abstract**

### **Introduction**

Locally the total number of prostate biopsies taken by practitioners is variable and this is reflected within the literature with no consensus. There is a trend towards taking more biopsies in order to increase cancer detection rate and minimise need for repeat biopsy however, this increases complication rates and the diagnosis of clinically insignificant cancers. NICE guidelines suggest multiple prostate biopsies for histological diagnosis of cancer in those patients with a Likert 4 or 5 score on their mpMRI scan. Depending on the treatment planned, some patients need systematic TP biopsy, but in frail patients, those with limited treatment options or extensive disease, a cancer diagnosis may be all that is required.

### **Aims and Method**

To see if the first 2-5 targeted transperineal (TP) biopsies give a diagnosis of PROMIS criteria cancer in patients with a likely prostate cancer on mpMRI. 375 patients had an mpMRI for suspected prostate cancer between January and June of 2021 in a large volume quaternary centre. 367 were given a Likert score of which 108 were scored Likert 4 or 5. Of these, 94 patients were sent for biopsy. 70 of the biopsied patients were ultimately diagnosed with PROMIS criteria cancer. A separate pot was sent containing the first 2-5 targeted biopsies in 69 of the 70.

### **Results**

The median number of biopsies in all patients sent for biopsy was 12 (range 3-19). The first 2-5 targeted biopsies showed PROMIS criteria cancer in 65 of the 69 (94.2%) Likert 4 and 5 patients diagnosed with cancer. 62/69 (89.9%) showed the maximum length or grade of cancer in the first 2-5 targeted biopsies. All 4 of the missed cancers were ISUP 2 or less and located in the apex of the gland.

### **Conclusion**

A cancer diagnosis is usually obtained in the first 2-5 targeted biopsies in patients with a Likert score of 4 or 5. Further biopsies may be required for treatment planning or for lesions in the apex of the gland where cancers can be missed.