

POSTER PRESENTATION

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Efficacy of PI-RADS in prebiopsy prostate-MRI at a urological cancer centre: a comparison with histology

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Aims

The European Society of Urogenital Radiology (ESUR) prostate imaging-reporting and data system (PI-RADS) standardises reporting of multiparametric (MP) prostate cancer MRI. At our uro-oncology centre there has been a shift to using PI-RADS/MP MRI prior to transrectal ultrasound-guided biopsy (TRUSGB). We aim to assess the efficacy of using PI-RADS in targeted TRUSGB.

Methods

A retrospective review was performed on 50 consecutive patients who underwent prostate MRI and subsequent TRUSGB between January-March 2015. Data were collected from MRI reports/PI-RADS to score lesion level of suspicion and location, which was correlated to Gleason grading from histology obtained through TRUSGB. Analysis and basic statistics were performed.

Results

Histology was positive for high-grade cancer in 27/50 patients. Lesions deemed to be suspicious for cancer (PI-RADS score 4 and 5) had a positive predictive value of 83% (25/30), and were located correctly in 88%. Lesions deemed to be benign (PI-RADS score 1/2) had a negative predictive value of 80% (8/10). Equivocal lesions (PI-RADS score 3) were histologically higher grade (Gleason 3+4 and greater) in 30% (3/10), Gleason 3+3 in 10% (1/10) and negative in 60% (6/10). The overall sensitivity/specificity was 93%/62% respectively.

Conclusion

In this sample of patients, the use of PI-RADS on prebiopsy prostate MRI has shown to have a high sensitivity and high positive predictive value in detecting/localising prostate cancer, which makes it a useful tool

for targeting biopsy and detection. Going forward the high sensitivity would also have implications on the more selective use of TRUSGB.

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