P006 Correlation between Gleason score and PIRADS score on mpMRI –initial experience

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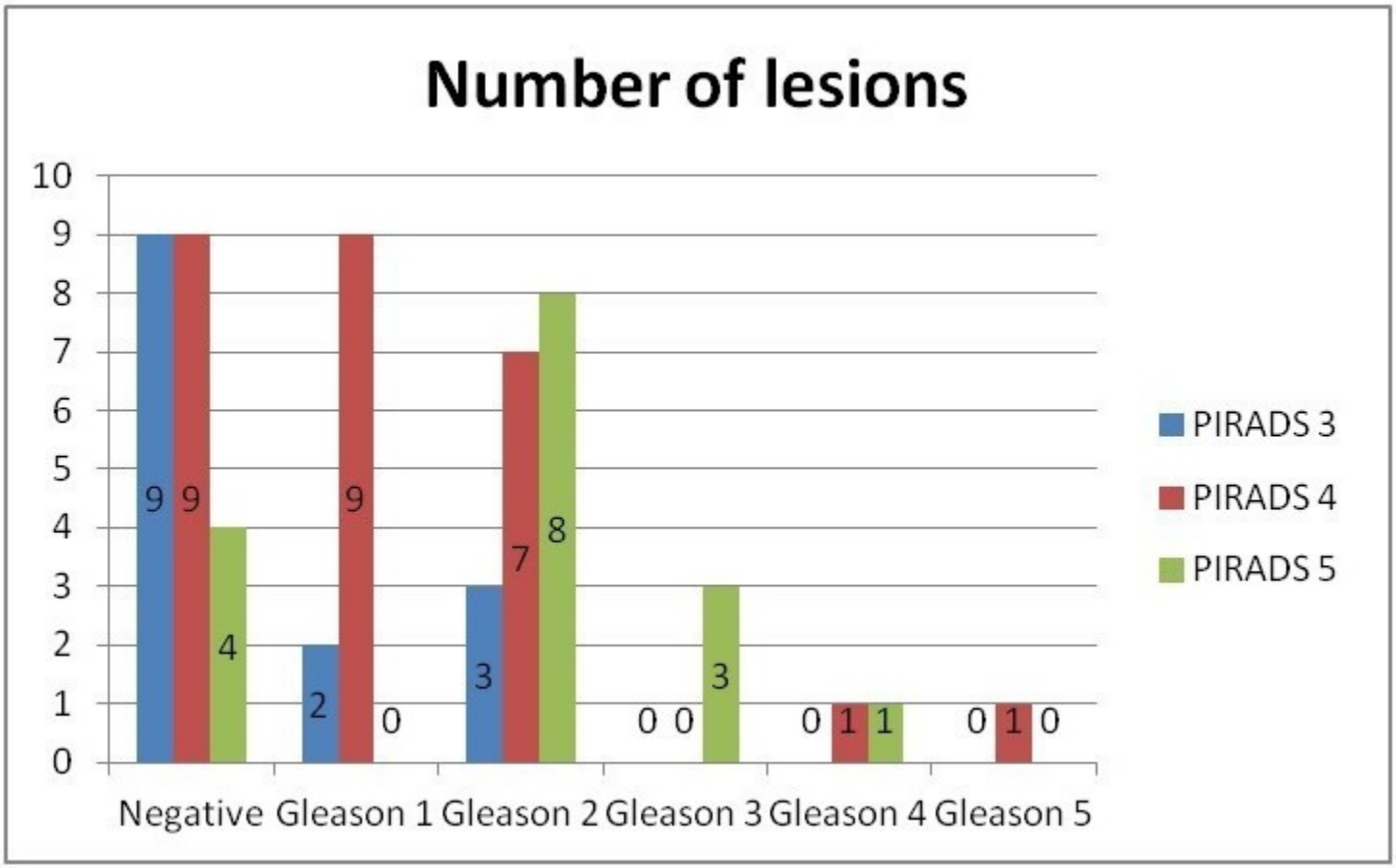
Introduction & Objectives: Multiparametric MRI (mpMRI) is an addition to the diagnostic pathway of prostate cancer to reduce the number of biopsies needed and to increase the sensitivity of detecting clinically significant cancers. PIRADS v2 was developed to score any lesions detected on MRI. Lesions graded PIRADS 3 and above are generally considered to be suspicious for cancer, although this remains in contention. Previous studies have shown a correlation between PIRADS and Gleason score. The aim of this study is to verify this correlation in our centre.

Materials & Methods: A prospective study was conducted from September 2019 to August 2020. Patients without a history of prostate cancer and no previous biopsies were included. mpMRI studies were performed based on PSA and PR findings. A transrectal (TRUS) biopsy was performed for peripheral lesions while transperineal (TP) biopsies were performed for anterior lesions found on MRI. Correlation between the PIRADS and Gleason score were tested using the Kendall test.

Results: Ninety seven patients underwent a mpMRI of which 57 patients (mean age 65.0 years, mean PSA 7.36) underwent biopsies. TRUS biopsies were performed in 43/57 patients (75.4%). The biopsied lesions are shown in the figure below according to their grade group and PIRADS scores. Cancers were found on 35/57 (61.4%) lesions. 9/14 PIRADS 3 lesions (64.2%) were negative for cancer compared to 4/16 (25%) PIRADS 5 lesions. A moderate correlation was found between PIRADS and Gleason scores (Kendall Tau 0.354).



Conclusions: A moderate correlation was found between PIRADS and Gleason score. This demonstrates that the PIRADS score may be used for detection of cancers and may be used to direct further management. Even at this early stage, PIRADS 3 lesions were found to have a low probability of significant malignancy and may be excluded from immediate biopsy.