MP13-09: Pre-Biopsy multiparametric MR Imaging using PI-RADS scoring system significantly predict upgrading of random transrectal prostate biopsies grading following radical prostatectomy

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Background and purpose:

- **Background:** An increase or ‘upgrade’ in Gleason Score (GS) in prostate cancer following Transrectal Ultrasound (TRUS) guided biopsies remains a significant challenge to overcome.

- **Purpose:** to evaluate whether pre-biopsy magnetic resonance imaging (MRI) has the potential to narrow the discrepancy of histopathological grades between TRUS biopsy and radical prostatectomy using Prostate Imaging Reporting and Data System version 2 (PIRADS v2.0).
Methods and result

• Three hundred and thirty men treated consecutively by laparoscopic radical prostatectomy (LRP) between July 2013 and January 2019 with localised prostate cancer were included in this study. All the participants had a pre-biopsy 3T-MRI scan followed by TRUS biopsies.

• In a multivariate analysis, the PIRADS score significantly improved prediction ability of pre-biopsy MRI scans for upgrading of TRUS biopsy GS (p=0.001, 95% CI [0.06-0.034]), which improved the C-index of predictive nomogram significantly (0.90 vs. 0.64, p<0.05).