

## Do all patients with suspicious prostate cancer need multiparametric magnetic resonance imaging before prostate biopsy?

European Urology Open Science 2020;21(Suppl 3):S100

Sousa Passos P.<sup>1</sup>, Anacleto S.<sup>1</sup>, Dias E.<sup>1</sup>, Mota P.<sup>1</sup>, Caló B.<sup>2</sup>, Morais N.<sup>1</sup>, Lima E.<sup>1</sup>

<sup>1</sup>Hospital de Braga, Dept. of Urology, Braga, Portugal, <sup>2</sup>University of Foggia, Dept. of Urology and Renal Transplantation, Foggia, Italy

**Introduction & Objectives:** Multiparametric magnetic resonance imaging (mpMRI) is a promising tool to diagnose prostate cancer but its cost is not negligible. In order to avoid unnecessary costs and minimize time to diagnosis, it is necessary to establish which patients benefit from doing mpMRI prior to prostate biopsy (PB). Our aim is to test if mpMRI still predicts prostate cancer (PCa) and clinically significant prostate cancer (csPCa) in patients with high clinical suspicion of cancer, defined as prostate specific antigen (PSA) >10ng/ml, PSA-Density (PSAD) >0.15ng/ml/cc or suspicious digital rectal examination (DRE).

**Materials & Methods:** We retrospectively collected data on 594 patients who underwent transrectal ultrasound-guided PB at the Urology Department of Hospital de Braga from January 2017 to July 2018. From these, 206 patients who underwent mpMRI were selected. mpMRI results were classified using Prostate Imaging Reporting and Data System (PI-RADS) version 2. In primary analysis, Chi-Squared and Fisher's-Exact Tests were used to evaluate the association of mpMRI with PCa and csPCa. Stratification of this model for low versus high clinical suspicion of cancer, defined by different PSA and PSAD cutoffs and DRE, was then performed.

**Results:** In primary analysis and overall, mpMRI was predictive of PCa and csPCa ( $p < 0.001$ ). In stratified analysis, we found that in patients with high clinical suspicion of cancer (PSA >10ng/ml and PSAD >0.15ng/ml/cc), mpMRI was still significantly associated with PCa ( $p=0.004$  and  $p < 0.001$ , respectively) and csPCa ( $p < 0.001$ ). In men with suspicious DRE, however, mpMRI was no longer predictive of PCa nor csPCa ( $p=0.168$  and  $p=0.571$ , respectively).

**Conclusions:** mpMRI is still useful in predicting csPCa in patients with PSA >10ng/ml and PSAD >0,15ng/ml/cc. In patients with suspicious DRE though, mpMRI might be no longer useful in the prediction of cancer, since almost all men will have csPCa.