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Introduction & Objectives: Although intravesical administration of BCG is part of the treatment of high- and intermediate-risk non-muscle-invasive bladder urothelial carcinomas as it reduces the risk of recurrence, it is not free from side effects. These include granulomatous prostatitis, a condition caused by urine contaminated by BCG, usually asymptomatic, with local or systemic reactions in only 1-3% of patients. On digital rectal examination, the prostate often presents fixed nodules with increased consistency and there may be a significant elevation of PSA in up to 40% of cases. MP-MRI has become an important tool in the detection, localization and characterization of lesions suggestive of prostate cancer, leading to the development of targeted prostate biopsy techniques. There are, however, benign conditions that mimic clinically significant prostate cancer. With this work we intend to make a theoretical review and exposition of the cases of the Centro Hospitalar e Universitário de Lisboa Central (CHULC) regarding this theme, describing and evaluating the imaging findings, exploring the history and clinical data of these patients.

Materials & Methods: For this study, all patients undergoing fusion prostate biopsy at CHULC in the period between January 2016 and August 2021 were taken into account, their histopathological exams were analyzed and those with granulomatous prostatitis were selected. Subsequently, the clinical histories of each of these patients were evaluated. MP-MRIs were performed according to the protocol established by the ESUR. The criteria for interpreting the images followed the evolution of PI-RADS, from version 1 to 2.1.

Results: 6 patients showed lesions of granulomatous prostatitis. All were found to have a history of transurethral resection of high- or intermediate-risk non-muscle-invasive bladder urothelial carcinomas and subsequently underwent immunotherapy with BCG. 2 had a PI-RADS 5 lesion (very high probability of clinically significant cancer) and four had a PI-RADS 4 lesion (high probability of clinically significant cancer). Overall, the lesions were described as hypointense on T2-weighted sequences, with diffusion restriction, with high signal on diffusion weighted imaging (DWI) and low signal on the ADC map, also revealing early and intense uptake of contrast. The results are explored and detailed in the study, as well as schematized in a table.

Conclusions: Granulomatous prostatitis is a benign inflammatory condition of the prostate that is difficult to distinguish clinically and imaging from clinically significant prostate cancer. However, there are discrete features that can help guide the diagnosis. Even so, currently, the histopathological examination is crucial in their differentiation. In the future, new techniques or the application of new criteria may emerge that may allow a better characterization of these lesions and, thus, possibly reduce the need for unnecessary biopsies.