

INDICATIONS OF MAGNETIC RESONANCE IMAGING IN PROSTATE CANCER.

Background: Prostate cancer is the most frequent cancer in men in all regions of Brazil, excluding skin cancers, and the second leading cause of cancer death in the male population. The diagnosis of prostate cancer is based on prostate-specific antigen (PSA) serum, the digital rectal examination, and transrectal ultrasound guided biopsy (TRUS). Magnetic Resonance Imaging (MRI) of the prostate have been increasingly used to refine the detection and staging of prostate cancer. The indications of MRI in prostate cancer include: locoregional staging; evaluation of suspicious lesions prior to biopsy or in patients with high clinical suspicion and negative previous biopsy; follow-up after surgical and non surgical treatments; and monitoring of patients on active surveillance

Hypothesis: The aim of this study is to evaluate the main indications of magnetic resonance imaging (MRI) of the prostate in a cancer center.

Methods: Prospective, single center study, held by reviewing medical records and imaging studies of patients undergoing MRI of the prostate between June and September 2015, totaling 508 cases, after approval of the institutional ethics review board.

Results: The mean age of patients was 64.2 years (31-87 years). 250 (49.2%) had a previous histological diagnosis of prostate cancer, with a mean Gleason score of 7 (2-10). 83 patients (15.3%) have performed prior prostatectomy and 58 had biochemical recurrence. The main indications for prostate MRI were staging of prostate cancer (35.2%), screening (32.6%), follow-up / post-therapeutic restaging (19.8%), suspected cancer with previous negative biopsy (7.3%) and active surveillance (4.5%). Other infrequent indications include evaluation before or after arterial embolization in patients with prostate benign hyperplasia (0.4%) and evaluation of patient with hematospermia (0.2%). In conclusion, prostate MRI is an increasingly used tool, especially in cancer centers, both for diagnosis staging and follow-up of patients with prostate cancer. A better understanding of the indications of this method allows the radiologist to develop specific protocols directed to answer questions from the referring physician.