

**Low suspicion lesions on multiparametric magnetic resonance imaging do not correlate with high risk prostate cancer**

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**Background:** Multiparametric magnetic resonance imaging (mpMRI) has become a new tool for clinicians to improve prostate cancer detection. However, the question of whether mpMRI can be used to detect low risk cancer and serve in lieu of TRUS biopsy has not been well characterized.

**Methods:** We reviewed all patients who underwent a 3 Tesla mpMRI of the prostate with endorectal coil from March 2007 to November 2011. Two radiologists independently reviewed all suspicious lesions using T2-weighted, spectroscopic, dynamic contrast enhanced, and diffusion weighted MRI sequences. Patients with only low suspicion lesions (maximum of two positive parameters on mpMRI) who subsequently underwent TRUS/MRI-fusion targeted biopsy were selected for and analyzed.

**Results:** Of the 800 patients who received an mpMRI of the prostate, 125 patients (16%) had only low suspicion lesions on mpMRI. On TRUS/MRI-fusion biopsy, 77 of these patients (62%) had no cancer detected, 38 patients had Gleason 6 disease, and 10 patients had Gleason 7 (3+4) disease. Thirty patients with cancer detected on biopsy qualified for active surveillance using 2011 NCCN guidelines. Fifteen patients went on to radical prostatectomy and no one was pathologically upgraded to high risk cancer (Gleason 4+3 disease or higher). Thus, for patients with only low suspicion lesions, 88% (107 patients) either had no cancer or clinically insignificant disease.

**Conclusion:** Our results support the notion that low suspicion lesions on mpMRI do not correlate to high risk cancer and thus, many of these patients may be appropriate candidates for active surveillance.