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## Is a high strength (3Tesla) MRI scan necessary for the detection and characterisation of prostate cancer?

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**Introduction:** Multiparametric MRI (mpMRI) is of increasing interest in the detection and characterization of prostate cancer. One concern is that 1.5 Tesla scanners in routine use in many hospitals may not be of sufficient magnet strength for such work. We report findings from a cohort of men who had a routine 1.5 Tesla mpMRI, and a higher strength (3 Tesla) MRI within the MAPPED (Magnetic Resonance Imaging in Prostate Cancer after Exposure to Dutasteride) study.

**Methods:** Men with low to intermediate risk prostate cancer on biopsy and a 0.2cc measurable lesion on the T2 weighted sequence of a 1.5 Tesla Siemens MRI were eligible for study consideration. 40 consented men had a 3 Tesla MRI scan using a new Siemens research scanner.

**Results:** 34/40 men deemed eligible for inclusion on the 1.5 Tesla scan were also eligible on the 3 Tesla scan. Of 6 men not eligible, 3/6 (50%) were within the first 10 patients scanned. 1/3 (33%) had evidence of biopsy artefact, and 2/3 (67%) may have been due to poor scan optimization early in the use of the research magnet.

**Conclusions:** A 3 Tesla research MRI did not show all lesions seen on a 1.5 Tesla routine clinical MRI, in men with low to intermediate risk prostate cancer. The placebo arm of MAPPED will allow assessment of whether this is due to variability in MRI assessed prostate cancer volume over time, or whether issues regarding magnet strength or scan optimization are the most likely explanation.