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Editorial Comment: Multi-parametric MRI enhances detection of significant tumor in patients on active surveillance

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Multiparametric MRI (mpMRI) and fusion-guided biopsy have ushered in a new era in the diagnosis and treatment of prostate cancer (CaP). As its current role continues to expand, defining its value amongst various patient populations has become a primary focus. The current study adds to the growing body of literature supporting the use of imaging in active surveillance (AS) and its direct impact on patient management. Employing a heterogeneous AS population, the authors utilized a clinically relevant endpoint – the termination of AS – to gauge the impact of mpMRI on treatment decision-making. Of 111 patients undergoing mpMRI, 24.3% subsequently sought active treatment, in whom 63% were based on imaging findings alone. An important endpoint is also pathologic progression. The subgroup analysis of 97 patients with initial Gleason 6, demonstrated progression to Gleason 7 in 30.6% of patients. This echoes recent findings of the University of Toronto group revealing progression in 26% of patients, and established a negative predictive value of 100% for mpMRI in ruling out Gleason 7 disease¹.

The evolving role of imaging in AS not only includes patient selection in which certain mpMRI findings can be used to identify ideal candidates, but also continued monitoring which is currently under investigation². Changes on mpMRI may reflect pathologic progression or increased volume of disease selecting patients who may require definitive therapy. The addition of serial fusion-guided biopsy allows for retargeting of previously sampled areas with regions of concern being assigned as targets based on archived, patient-specific data³. Currently, imaging and targeted biopsy has demonstrated merit as an adjunct to the standard of care. At the present time, studies are limited by small sample size with short interval follow-up, however the widespread adoption of mpMRI and targeted biopsy platforms will no doubt continue to validate the encouraging early results. In an effort to ensure optimal patient care, standardized protocols for imaging and adequate training with interpretation of mpMRI and performance of fusion biopsy will be essential.

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