

The choice of diagnostic test in prostate cancer is a balance of the risks and benefits

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Reply to Francesco Montorsi, Giorgio Gandaglia, and Alberto Briganti's Letter to the Editor re: Veeru Kasivisvanathan, Armando Stabile, Joana B. Neves, et al. Magnetic Resonance Imaging-targeted Biopsy Versus Systematic Biopsy in the Detection of Prostate Cancer: A Systematic Review and Meta-analysis. Eur Urol. In press.

The Choice of Diagnostic Test in Prostate Cancer is a Balance of the Risks and Benefits: One Size May Not Fit All

It is clear that magnetic resonance imaging (MRI)-targeted biopsies are important in the diagnosis of clinically significant prostate cancer in men with no prior biopsy, prior negative systematic biopsy, or those on active surveillance [1]. Montorsi et al point out their preference for adding systematic biopsy to MRI-targeted biopsies to understand the precise anatomic location of disease in the prostate gland for surgical treatment planning. However, we would suggest that the best understanding of disease location in relation to key anatomic structures including the sphincter, neurovascular bundles, and capsule is given by the MRI itself. At our institution, MRI-planning meetings with radiologists and urologists before radical prostatectomy has contributed to increased use of nerve-sparing procedures and better 3-mo urinary continence and 12-mo potency rates [2].

We know from the PROMIS study that multiparametric MRI missed no men with primary pattern Gleason 4 disease. The 29-yr follow-up data from the SPCG-4 study demonstrated that only men with Gleason $\geq 4 + 3$ disease on their radical prostatectomy specimen experienced reduced prostate cancer-specific mortality [3]. Use of MRI and targeted biopsy alone may therefore allow us to focus on identifying the group of men who will benefit the most from treatment.

We should also consider some of the disadvantages of additional systematic biopsies, which lead to increased detection of clinically insignificant cancer [1]. Avoiding the diagnosis and overtreatment of men with clinically insignificant cancer is an important unmet need in prostate cancer. Many of these men experience side effects of treatment, including psychological effects, urinary incontinence, and erectile dysfunction, without experiencing better prostate cancer-specific survival [4]. In addition, monitoring of insignificant disease places a significant financial burden on health care systems.

We acknowledge that the quality of MRI and targeted biopsy varies between institutions and we would therefore encourage centres to evaluate the negative predictive value of MRI and the efficacy of targeted biopsy at their own centres before considering omitting systematic biopsy. However, we know from landmark studies that high standards in prostate MRI can be achieved across institutions in the academic and community settings [5]. Should we therefore not strive to improve MRI quality and reporting to achieve such standards across institutions given the potential benefits for our patients? This would not only be of significant value in the diagnostic setting but would also be useful in treatment planning.

Overall, the choice of diagnostic test for men with suspected prostate cancer involves weighing up the risks and benefits of the various approaches, considering the goals of diagnosis and treatment on an individual and population level. There are a number of valid approaches and one size may not fit all.

Conflicts of interest: Veeru Kasivisvanathan has received speaker fees from the European Association of Urology. The remaining authors have nothing to disclose.

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