

### Re: Active Surveillance Magnetic Resonance Imaging Study (ASIST): Results of a Randomized Multicenter Prospective Trial

Klotz L, Loblaw A, Sugar L, et al

Eur Urol 2019;75:300–9

#### Experts' summary:

ASIST is a randomized, prospective, multicenter trial that evaluated whether adding magnetic resonance imaging (MRI)-fusion targeted biopsies to standard template systematic biopsies in patients on active surveillance (AS) for low-risk prostate cancer more effectively identifies grade reclassification on confirmatory biopsy. Overall, 273 men entering AS with Gleason grade (GG) 1 prostate cancer were randomized to either MRI with targeted + systematic biopsy ( $n = 137$ ) or systematic biopsy alone ( $n = 136$ ). The use of MRI-targeted biopsies did not yield higher rates of grade reclassification: upgrading was found in 36/132 men (27%) in the systematic biopsy only arm and 42/127 men (33%) in the MRI with targeted and systematic biopsy arm ( $p = 0.3$ ). Notably, targeted biopsy missed 7.9% of GG  $\geq 2$  cancers found on systematic biopsy, and systematic biopsy missed 6.5% of significant cancers found on targeted biopsy. The positive and negative predictive values for MRI for clinically significant cancer in this AS cohort were 23% and 85%, respectively.

#### Experts' comments:

MRI is increasingly being used as a tool for enrolling and monitoring patients in AS protocols [1,2]. Much of the literature on the utility of MRI in AS, however, is retrospective and based on relatively small study populations [3].

ASIST is the first prospective, randomized trial assessing the performance of MRI and fusion-biopsy compared to standard of care in identifying clinically significant cancer in AS patients. The authors are to be congratulated for their important, high-level, and elegant contribution to the literature. ASIST did not find that MRI with targeted + systematic biopsy was superior for the detection of clinically significant prostate cancer compared to systematic biopsy alone, despite the use of 3-T MRI with an endorectal coil and fusion software. Interestingly, the likelihood of detecting GG  $\geq 2$  cancer was higher for men with an MRI target (region of interest with a Likert score of 3, 4, or 5), even if the targeted biopsies were negative. This finding might be attributable to a targeting miss despite fusion technology, to MRI inaccuracy, or to a field effect. Experience may play a role, as the positive predictive value (PPV) of a target ranged widely between study sites (8–33%); in addition, the study was designed before the Prostate Imaging-Reporting and Data System (PI-RADS)

classification, which could have affected target identification.

In ASIST, 11% (5/45) of patients with a negative MRI had GG  $\geq 2$  cancers found on systematic biopsy. These outcomes corroborate recent retrospective data showing that targeted biopsies alone are insufficient for surveillance given the low sensitivity and PPV of MRI for detecting higher disease grades in AS populations [4,5]. Together, these data suggest that MRI, standard template systematic biopsies, and targeted biopsies (for men with an MRI target) should all routinely be performed on entering AS.

Like all good clinical trials, ASIST leaves us with as many questions as it answers. For example, how frequently should MRI be used in AS protocols? How often does a de novo target appear during AS? Do targets upgrade over time? And can proposed risk stratification tools that incorporate MRI and other clinical parameters help in subjecting patients to fewer biopsies with reasonable safety [2]? Optimizing the role of prostate imaging during AS remains a fertile area of study.

**Conflicts of interest:** The authors have nothing to disclose.

#### References

- [1] Stamatakis L, Siddiqui MM, Nix JW, et al. Accuracy of multiparametric magnetic resonance imaging in confirming eligibility for active surveillance for men with prostate cancer. *Cancer* 2013;119:3359–66.
- [2] Thurtle D, Barrett T, Thankappan-Nair V, et al. Progression and treatment rates using an active surveillance protocol incorporating image-guided baseline biopsies and multiparametric magnetic resonance imaging monitoring for men with favourable-risk prostate cancer. *BJU Int* 2018;122:59–65.
- [3] Schoots IG, Petrides N, Giganti F, et al. Magnetic resonance imaging in active surveillance of prostate cancer: a systematic review. *Eur Urol* 2015;67:627–36.
- [4] Ma TM, Tosoian JJ, Schaeffer EM, et al. The role of multiparametric magnetic resonance imaging/ultrasound fusion biopsy in active surveillance. *Eur Urol* 2017;71:174–80.
- [5] Tran GN, Leapman MS, Nguyen HG, et al. Magnetic resonance imaging-ultrasound fusion biopsy during prostate cancer active surveillance. *Eur Urol* 2017;72:275–81.

Mohit Gupta, Christian P. Pavlovich\*  
James Buchanan Brady Urological Institute, The Johns Hopkins University  
School of Medicine, Baltimore, MD, USA

\*Corresponding author. Department of Urology, Johns Hopkins Bayview  
Medical Center, 4940 Eastern Avenue, Baltimore, MD 21224, USA.  
E-mail address: cpavlov2@jhmi.edu (Christian P. Pavlovich).

<https://doi.org/10.1016/j.eururo.2019.02.024>

© 2019 European Association of Urology. Published by Elsevier B.V. All rights reserved.



### Re: Sunitinib Alone or After Nephrectomy in Metastatic Renal-cell Carcinoma

Méjean A, Ravaud A, Thezenas S, et al

N Engl J Med 2018;379:417–27

#### Experts' summary:

On the basis of phase 3 clinical trials conducted in the era of IFN systemic therapy, cytoreductive nephrectomy (CN) has become the standard of care for selected patients with metastatic renal cell carcinoma (RCC) and a surgically