Reviewer's report

Title: Impact of Bilateral Biopsy-Detected Prostate Cancer on an Active Surveillance Population

Version: 0 Date: 22 Jun 2018

Reviewer: Trevor Flood

Reviewer's report:

In this study the authors assess clinicopathologic variables that predict active surveillance (AS) failure on serial transrectal ultrasound (TRUS) guided biopsies. Their results show that bilateral disease on biopsy was the most effective parameter for predicting AS failure. Bilateral involvement outperformed number of cores with cancer, maximal core involvement (MCI), and PSA density. The data indicate that bilaterality on TRUS biopsy is an important predictor of AS failure. These results may have implications regarding the timing of subsequent biopsies and usage of MRI imaging modalities.

This is an interesting study and I enjoyed reading the manuscript. Great use of the flow chart in Figure 1. Overall, I have very few issues. However, the concerns that I do have include:

1. Which version of the Gleason scoring system did you use? The study interval was 2007-2014. In 2014, the International Society of Urologic Pathology (ISUP) held a consensus meeting and adopted several major modifications to the existing grading system. The modifications which are likely most pertinent to this study are: a) the inclusion of all cribriform architecture as a Pattern 4 morphology compared to the previous grading system that included some cribriform structures as Pattern 3, and b) classifying all glomeruloid morphology as Pattern 4 whereas previously there was no consensus with regard to grading. These changes could create possible grade migration within your cohort. Ideally, all biopsy and prostatectomy samples should be graded according to the current guidelines. Please comment.

2. Who analyzed the biopsies? Do you have Genitourinary trained pathologists at your institution? Did they read all of the biopsies and RPs?

3. There is a typo in the first sentence of the "2.1 Cohort definition" section. The word "our" should be inserted before "institution". There is another typo in second last paragraph of the Discussion. The words "Saturation biopsies, including have been reported" should be erased.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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