Reviewer's report

Title: A prostate biopsy strategy based on a new clinical nomogram reduces the number of biopsy cores required in high-risk patients

Version: 2
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Reviewer: Charles Rosser

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This is an interesting study by Huang et al entitled ‘A prostate biopsy strategy based on a new clinical nomogram reduces the number of biopsy cores required in high-risk patients’. In this study the authors developed a novel nomogram to assist in predicting patients at risk of harboring prostate cancer. Using a testing group and a validation group, the authors state that the nomogram can be used to predict risk of harboring cancer. Subjects with high risk could undergo a 6-core biopsy without a loss of diagnostic capability while lower risk patients may be offered 12-core biopsy. Unlike in the US where PSA screening has caused a stage migration and thus we require more cores to diagnosis smaller volume tumors, in China, tumor may be larger and thus easily detected by the traditional sextant biopsy. Please comment on average tumor volumes in Chinese population. With PSA screening one may see stage migration and then the need to perform more core biopsies to detect the cancer.

Was build to predict, not was build up to predict
Why reduced the number of cores from 12 to 6? Is 12 associated with significant complications or pain? In my practice, no this is not the case.
Overall this is an interesting study. It does have some limitations and it could use editing. Below is a point-by-point critique of the manuscript.

TITLE:
ABSTRACT: 13 core or 12 core performed?
using a scheme based on the results of the first stage.

INTRODUCTION: As the researchers state numerous nomograms are available but may not be applicable to Chinese cohort. But we must specific do we need a nomogram to tell us the risk of harboring prostate cancer and thus when to biopsy or do we need a nomogram to tell us the number of cores to biopsy? I believe the former is more necessary.

MATERIALS AND METHODS:
Why were patients seen? Elevated psa? Abnormal DRE? What?
Move ethics statement to the beginning of this section.
So it says 12 core biopsy but it seems like everyone had 12 core + 1 (hypoechoic or apex), correct? Perhaps state 13 core then. Otherwise it is a little confusing.
New biopsy scheme? If it’s not the 6 core then how was the new scheme developed? I think you mean the nomogram. Your data analysis section does not describe a new biopsy scheme.

Cacoethic biopsy effect?

Text font should be the same

AUROC 0.761 is from?

RESULTS: No issues

DISCUSSION: Please describe your results with the results of other nomogram from China.

REFERENCES: Reference 4 and 16 have typos.

TABLES:
Table 1 No issues
Table 2 No issues
Table 3 No issues

FIGURES:
Should error bars be on panel B and C?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.