Reviewer's report

Title: The VENUSS prognostic model to predict disease recurrence following surgery for non-metastatic papillary renal cell carcinoma: development and evaluation using the ASSURE prospective clinical trial cohort

Version: 1 Date: 29 Jun 2019

Reviewer: Kay See Tan

Reviewer's report:

Thank you for addressing my comments and providing the necessary details to help distinguish between "validation" vs "evaluation" of the VENUSS model.

Following are my comments to fill in the gaps in the description of the statistical methods.

Please clarify the procedure of multiple imputation. After creating 5 imputed datasets by chained equations, "we used the median of the five imputed datasets for evaluation of ASSURE." (p8 lines 13-15). Please provide the appropriate reference to justify the use of the "median" values rather than data from all 5 imputed datasets. Conventionally, a model would be fit to each of the imputed datasets, and the model coefficients from each of the 5 imputed datasets would be "pooled" using Rubin's Rules (Rubin, 1987; Rubin & Schenker; 1986; and Little & Rubin, 1987).

Minor:

- Figure 1C: label the curves or provide figure legend
- Figures 4 A-C: include numbers at risk at each time point
- Supplementary Table 1 (Validation cohort) should now state "Independent cohort" based on your edits.
- Figure 2A and Supplementary Figure 3 Calibration Plots: The y-axis can't possibly be "frequency" - It should be "observed event probability" - or better year, "observed 5-year cumulative incidence of recurrence"

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Not applicable

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?
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I am able to assess the statistics

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

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