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: 0 Date: 26 Apr 2019

Reviewer: Sebastiano Buti

Reviewer's report:

I read with interest the work by Tobias Klatte and coauthors about the development and validation of a new prognostic score for papillary renal cell carcinoma. The issue is topical and relevant for oncologists and urologists. The strengths and weaknesses of the VENUSS score have been clearly stated by the authors.

I believe that this work should be accepted for publication.

MINOR COMMENTS

91.7% of low risk patients had oligometastatic recurrent disease, compared to 16.7% of intermediate risk and 40.0% of high risk patients. The oligometastatic rate of high risk is higher than intermediate risk: in my opinion, this result is somewhat unexpected and it should be commented in the Discussion section.

Page 3: the authors stated that "RCC subtypes differ on molecular and clinical levels, they are generally managed as the same disease, simply because they occur in the same organ". I think that non clear cell RCC subtypes are managed as the same disease mostly because they are different rare disease and so we have very few data on the efficacy of the available treatment options.

Of note, almost half of the patients in the development cohort had a partial nephrectomy, suggesting an high rate of small tumors in this cohort. Moreover, as much as 43% of the first recurrence was oligometastatic. These observations are in accordance with an high rate of stage I patients in the development cohort, in contrast with the validation ASSURE study cohort. The authors should stress the differences between the two cohorts in terms of different risk of recurrence due to the different distribution of the known prognostic factors (i.e. stage, N1) and of the VENUSS groups (low risk 5 vs 63%, intermediate risk 48 vs 24%, high risk 46 vs 12%).
To cite and comment another prognostic (more "crude" but easy to calculate) score recently validated on ASSURE population also in non clear cell RCC population [Ann Oncol 2017 Nov 1;28(11):2747-2753, Buti S, et al].

Page 5: among the included pathological parameters is missing the perinephric/renal sinus fat invasion, but it is necessary for the calculation of 2018 Leibovich score (used for comparison with VENUSS): can the authors clarify this point?

To provide the DFS curves for the validation cohort (ASSURE), by VENUSS, UISS and Leibovich scores, if possible.

**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.

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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Acceptable

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