Reviewer's report

Title: Use of cervicovaginal PAMG-1 protein as a predictor of delivery within seven days in pregnancies at risk of premature birth

Version: 1 Date: 28 Mar 2017

Reviewer: Johannes Stubert

Reviewer's report:

The authors compared the test characteristics of fFN and PAMG-1 for prediction of delivery during the next 7 days in cases of threatened preterm birth. Both biomarker are available as commercial test kits and results of recent, small studies presumed a better performance of PAMG-1. Therefore, the topic is of a high clinical impact. However, I have major concerns for publication of the manuscript in its actual presentation:

BACKGROUND:

- preterm birth was defined as birth between 24 and 37 weeks, I think this definition is not correct, the reference you cited is not appropriate

MATERIALS:

- please give the correct pregnancy interval for inclusion (with days)

- in case of inclusion it is not clear for me, if all criterions or only at least one had to be present

- what is about exclusion of patients with vaginal examination/ transvaginally ultrasound?

- why did you exclude patients with a history of preterm birth?

- I am not a statistician, but I am not sure if the McNemar's test is the correct one in this situation. This test is suitable for paired data (e.g. results before and after test), but not for comparison between different test results - however this should be proofed by an experienced person.
RESULTS:

- more information about the patient characteristics would be useful (e.g. mean cervical length at admission, percentage of subject which delivered below 34 wks. and below 37 wks)

- 15 of 72 patients delivered during the following 7 days after admission. Please explain the results of the fFN test with 14/19 and 3/53 patients.

- I am surprised about the high PPV of a cervical length below 25mm, particularly in respect of the high mean gestational age of the cohort.

- Please explain how did you compute the validity?

- please specify the mean delivery interval --> I think you mean days, but it is not evident.

DISCUSSION:

- I did not understand how it is possible to get higher results of sensitivity, specificity and PPV if criterions of inclusion are less restrictive? The discussion of the history of a preterm birth is the same problem

- Nikolova instead of Nikolava

- electrocardiographic - this term do not imply a tocography

- I miss the inclusion and comparison of results of some important studies that tested fFN alone (e.g. PMID: 24807328)

GENERALLY:

I would wish a more rigorous, scientific style of the paper the % -sign has to follow the number I am not a native speaker, but I think an English proof reading would be necessary before publication.
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.

Yes

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

No

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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
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Needs some language corrections before being published

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