Reviewer’s report

Title: A novel method for interrogating Receiver Operating Characteristic curves for assessing prognostic tests

Version: 0 Date: 05 Jul 2017

Reviewer: Valentijn de Jong

Reviewer's report:

In the methods section, sensitivity, specificity, NPV an PPV are clearly introduced.

I think the proposal that "...should mimic the pre-eclampsia risk information as available for a second-time pregnant woman" (p 12, line 11-12) is perhaps a little too ambitious, considering that it "remains to be determined by a stochastic process" and the authors find the absence of such a test unsurprising (p 13, line 1-2).

No explanation is given as to why "multivariate tests that comply with either the rule-in or the rule-out test will also be more robust to variance in prevalence" (p 13, line 20).

The central purpose of the equi-ppv and equi-npv lines seems to be the visualization thereof. I find the visualization tool to be informative, and agree with the authors that the the equi-PPV and equi-NPV lines may be valuable statistical tools. However, these tools can only be valuable to clinical researchers, if these are available to them. Therefore, I would like to suggest that the code be moved to a public repository or published as an R package.

I'm having trouble interpreting Figure 5 A and B. So please add some more elaborate captions. E.g. in 5B, what do the blue and red indicate? Are these related to the rule-in and rule-out tests?

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