Reviewer's report

Title: Investigation of publication bias in meta-analyses of diagnostic test accuracy: a meta-epidemiological study

Version: 2 Date: 15 March 2014

Reviewer: Katharina F Müller

Reviewer's report:

Major compulsory revisions:

Background:
1. The authors describe that there is little known on publication bias in meta-analyses on test accuracy.

Please try to give some more information on what is known on publication bias in meta-analyses on test accuracy and the mechanisms by which it might be induced.

Results:
2. Which were the other statistical tests apart from Egger’s test, Deek’s test, and Begg’s test, which have been used and how often they were used in the included reviews.

Please comment on these tests as well. Is there a reason why you did not apply these tests to the extracted data? Please explain this reason in the methods section.

3. Why you obtained two by two tables only of 52 reviews and not of all the included reviews?

Conclusion:
4. We believe that publication bias is one of the major threats to the validity of meta-analyses also on diagnostic tests. Therefore I strongly disagree with the suggestion not to assess publication bias in DTA meta-analyses. Above all as there is a robust test (Deek’s test) existing. We should rather stress on the importance of further research in this field.

Figure 1:
5. I don’t understand the first box on the right: „1183 ineligible articles excluded after screening titles & abstracts N=983“, what does N refer to in this case?

Funding:
6. Has the report been funded? If yes please declare.

Minor essential revisions:
1. line 82: contribute instead of contributes
2. line 236: lung instead of long
3. line 343: please provide citation

Discretionary revisions:

Background:
1. Please try to rephrase lines 114-116. This sentence is not very clear, are the mechanisms that may induce publication bias scarce?

Methods:
2. Has a protocol of this study been published? If yes please refer to it in the methods section.
3. A random sample of one third of the reviews has been double checked. What happened in case of disagreement between the reviewers?

Results:
4. In one review publication bias was not assessed, because the results were too heterogenous. Did they assess heterogeneity in this case?
5. Some reviews performed tests on less than five studies, others on more than 20 studies. Could you give some information how often tests were performed on how many included studies.

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: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.