Reviewer’s report

**Title:** Diagnostic accuracy of controlled attenuation parameter (CAP) as a non-invasive test for steatosis in suspected non alcoholic fatty liver disease: a systematic review and meta-analysis

**Version:** 1  **Date:** 12 Dec 2018

**Reviewer:** Research Square

**Reviewer’s report:**

"STATISTICAL REVIEWER ASSESSMENT:

Is the study design appropriate for the research question (considering whether the analyzed population accurately reflects the design and whether you see any problems with control/comparison groups, e.g., likely confounders)?

No - there are minor issues

Are methodologies adequate and well implemented (considering whether assumptions are addressed and whether analyses are robust)?

No - there are minor issues

Are the analyses adequately communicated (considering whether reporting details are adequate and whether figures and tables are well labeled and described)?

No - there are minor issues

Does the interpretation accurately reflect the analyses without overstatement (considering whether limitations/bias are acknowledged and whether accurate descriptors, e.g., 'significant', are used)?

Yes - interpretation accurately reflects analyses, limitations/bias are acknowledged, accurate descriptors are used

Could an appropriately REVISED version of this work represent a statistically sound contribution?

Yes - current version has sound statistics
STATISTICAL REVIEWER COMMENTS:

When asked to participate in this pilot program, I expected the article to be of poor quality. I stand to be corrected, as the analysis was extremely detailed and I only have minor issues, many of which are just for further clarity and elaboration.

REQUESTED REVISIONS:

1. The authors have a long list of operating characteristics they require for study inclusion. Can they comment on the potential number of studies excluded due to limited amount of missing elements? I am concerned that the restrictively long list, while important to the analysis, may create a selection bias due to poor reporting more broadly.

2. Primary figures appear to be of very poor pixel quality. It would be nice if they could be improved.

3. Can the authors provide further detail on how they pooled overall measures for figures 3-5, S1. This is my key question and what I feel is the major omission in this draft. The meta-analytic methods (and the limitations of them) are not very well developed. Citations are needed and there are no details about why a MH versus DerSimonian Laird test were executed or the sensitivity of the arbitrary cut-offs chosen by the authors.

4. Figure S2, S3, and S4, why switch the ordering of the 2 axes?

5. It is unclear what figure S6 is showing. Please describe the content of the figure with greater detail.

6. For general reading and clarity, please have one figure per page in the supplement.

7. Table S1 is hard to read."

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.

Yes

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?

If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**

Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

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