**Reviewer’s report**

**Title:** Development of an algorithm for evaluating the impact of measurement variability on response categorization in oncology trials

**Version:** 1  **Date:** 30 Mar 2019

**Reviewer:** Peter van de Ven

**Reviewer's report:**

The authors have satisfactorily answered my questions.

I have only a single point that may need some additional clarification. This point concerns the results in supplementary figures S1, S2 and S3. To me it is not yet clear how data used for these plot were generated/obtained. Any distribution for the percent change in lesion size - as considered under (a) ... (g) would imply a specific ORR(%), e.g. an ORR of 50% in case of the distribution -30+N(0,5^2) [as it is symmetric around the cut-off -30%].

Some typo's that need to be corrected:
- Page 5 line 5: "in an ordinal measure" should read "an ordinal measure"
- Page 7 line 10: "perchance" should read "percentage"
- Page 7 line 13: "complete response (0%)" should be something like "complete response (-100%)" or be presented without the percentage change

**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

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