Reviewer’s report

Title: A comparison of liquid and solid culture for determining relapse and durable cure in phase III TB trials for new regimens

Version: 0 Date: 19 Apr 2017

Reviewer: Susan Dorman

Reviewer's report:

This manuscript, derived from the REMoxTB phase 3 clinical trial, describes the incidence of isolated positive MGIT liquid cultures occurring after TB treatment completion, and their relationship to trial outcome (at the individual participant level). This is important to the TB clinical trials field because it offers the first opportunity to understand how the contemporary (clinical) gold standard of liquid MGIT culture might perform, and the challenges that might be encountered, if used as the primary endpoint measure in clinical trials that historically have used solid LJ media. The methods and analyses are appropriate and the conclusions are in line with the results. The discussion very nicely puts the results into context.

There are two relative shortcomings of this study, but they do not diminish the current report's significance to the field. It would have been ideal and interesting if the Mtb isolates from MGIT isolated positives had been investigated at the molecular level (e.g. whole genome sequencing or MIRU/other fingerprinting) to ascertain relatedness to participants' baseline Mtb strain. Second, LJ and MGIT results were handled differently during the trial, as specified in the study protocol, and this put some limitations on the analyses presented in the current report. That said, both of these limitations are very clearly acknowledged by the authors in the discussion.

Otherwise I have no major or minor comments.

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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