Reviewer’s report

Title: Pleural IFN-γ release assay combined with biomarkers distinguished effectively tuberculosis from malignant pleural effusion

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Reviewer: Prabhat Sharma

Reviewer’s report:

The study by Tang et al aim to study TBE and MPE to assess the differential diagnostic efficiencies. However, the results shown and the conclusions drawn are not convincing as there are problems with the approach and a lack of detailed immunologic data that make the manuscript too preliminary, especially in the context of the current state of the field. I have following comments.

It is not convincing that the assays claimed in the manuscript can be used to distinct TPE and MPE. Authors claim that IGRA combined with recognition with ADA could provide potential distinction between these two diseases is not convincing. As one would still need cytology for the distinction of MPE and for TB confirmation of TB by Mtb presence or other means. There is overall immunosuppression in malignancy. The authors choose to study IFN-g only. TPE is known to be th1 type inflammatory situation especially in the pleural fluid. However, there is overall immunosuppression in Malignancy. The authors have not studied contribution of other cytokine(s) and immunologically relevant cell subset. There is overall age difference in the study cohort. In aged people Treg cells number is also more. The manuscript results and the conclusions drawn are confusing.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

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:

Needs some language corrections before being published

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