Reviewer's report

Title: Association between Tuberculin Skin Test Result and Clinical Presentation of Tuberculosis Disease

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Reviewer: Brian Kendall

Reviewer's report:

This is a well written and interesting manuscript. The methods appear to be sound, though review by a biostatistician may be helpful. The limitations of the study, specifically regarding excluded subjects and differences between TST tested and non-tested subjects, are stated and reasonable.

The most important results are found in the first section of the results. This large cohort confirms a fact that is underappreciated by many clinicians; namely, that TST is a poorly sensitive test for diagnosing active tuberculosis, especially in immunocompromised patients. The clear and consistent relationships between TST result and clinical presentation are compelling and should lead to testable hypotheses in tuberculosis immunology.

Discretionary revisions

1. The second section of the results (TST result and clinical category of disease) is well written. However, it is challenging to read due to the complex HIV and foreign-born subgroup analyses. These analyses are important but the results are simply shifts of the larger cohort's odds-ratios in the direction one would expect. These trends could be quickly pointed out during the explanation of the primary results and the reader referred to the tables/figures/supplemental materials. This would condense this section of the manuscript and help focus the reader on the main results as described in the abstract.

2. In the second paragraph of the discussion, the wording suggests that the results of this study refute the relationship between presence of cavities and sputum smear result. This is clearly not the case and I think the inference is probably not the authors’ intention. This could be written more clearly.

3. Later in the same paragraph, the authors discuss a “more robust immune response” but what this is in reference to is not clear. Otherwise, the discussion is interesting and well documented.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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