Reviewer's report

Title: HIV care and treatment factors associated with improved survival during TB treatment in Thailand: an observational study

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Reviewer: Jonathan Golub

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This is an interesting paper, specifically with increasing interest in determining best treatment practices for HIV/TB coinfected patients. Because this is an observational study, there are several limitations which are adequately addressed by the authors, but limit strong conclusions. This manuscript provides data regarding treatment of HIV/TB coinfected patients from a demonstration project investigating TB practices in a network of facilities in Thailand, and is an important contribution to the literature on this topic.

Major Compulsory Revisions

1. The data come from multiple public health facilities in the network described. How many facilities contributed patients to the study population analyzed? Was there balance between facilities? Did these facilities differ in data quality?

2. Page 9, Line 2/3: Delay in TB diagnosis implies that there was a delay in making the diagnosis once a patient sought care for their symptoms. The authors define "delay in TB diagnosis" based on patient symptoms. This should more accurately be referred to as patient delay, or delay in seeking care. Delay in TB diagnosis implies that the health care system was involved in some way, but this is not included in the stated definition.

3. Is the "delay in HIV diagnosis" definition a commonly used definition? If so, it should be cited.

4. Why was an unknown category developed for missing data? Was this simply to be able to include them in multivariate analyses, or did the authors hypothesize that "unknowns" would have an association with the outcome? What does it mean that those with missing albumin levels had greater risk of death?

5. Were patients with prior TB treatment included in the Cox model? They were excluded from the first analysis (as stated in methods section), but I thought they were excluded from all analyses based on Figure 1?

6. Was DOT the standard of care? Why did only 29% receive DOT?

7. Figure 3 would be better presented as a bar graph. However, even if left as is, because the authors are reporting relative hazards, the scale should be logarithmic and 95% confidence intervals should be shown.
8. In the methods section, severe HIV is defined as “CD4 count at study enrollment in the 1st or 2nd quintile of enrolled patients”. On page 11, it states that HIV disease severity will be adjusted for in the mortality analysis. In Table 2, severe HIV disease is defined as a decline in CD4 (measured as a continuous variable). This is confusing. Please clarify.

Discretionary Revisions
1. Figure 1 is difficult to read. The "Unknown HIV serostatus" box should be off to the right - all exclusions should be off to one side of the figure. Arrows on bottom should not be connecting.

2. Did any patients have elevated liver enzymes during co-treatment compared to treatment with just ART or TB meds?

3. How many patients developed bacteriologically confirmed TB during treatment that were not confirmed from a specimen prior to treatment (according to your definition)?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests