Reviewer's report

Title: HIV-associated tuberculosis: relationship between disease severity and the sensitivity of new sputum-based and urine-based diagnostic assays

Version: 3 Date: 20 July 2013

Reviewer: Patricia Price

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The cohort is actually quite small for a study of this type (n=86 where some lack data from urine samples). There were only 6 deaths.

Major Compulsory Revision

Table 1 has no statistical analysis and is very hard to read. Are ranges or IQR shown? The number of decimal places can be reduced and comparisons with a significant difference should be marked (eg: with an asterisk *). What is the basis of the cut-offs for the categories? Perhaps it would have been better to show correlations (r and p values) for the continuous variables.

Minor essential revisions

The title implies study is compares diagnostic tests with “disease severity” when it actually excludes patients with only extrapulmonary TB. This Ok but it should be clearer.

Figure 1 showing the derivation of the 86 samples is not needed…especially as it is duplicated in the text.

Figure 2 is unreadable…axes are off the page. This looks careless…not a good sign.

Figure 3 distinguishes patients who lived and died…which isn’t really the point. A positive reaction doesn't mean that a patient will die…clearly it important to have a diagnostic that picks that a patient who will die has TB but I am not convinced that this would not be detected on medical grounds. I note that the sputum assays were less discriminating than the urine…presumably this means patients were dying of extra pulmonary TB…perhaps TB meningitis which has its own symptoms and diagnostics. This could be explored if the study was larger.

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare I have no competing interests