Reviewer's report

Title: Risk factors of latent tuberculosis among asylum seekers in Switzerland: A cross-sectional study in Vaud County.

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Reviewer: Jean-Paul JP Janssens

Reviewer's report:

This is an interesting approach of an important problem for those involved in TB control in Western countries and faced with the question of whether or not to screen for LTBI in asylum seekers originating from high incidence countries. The score proposed gives very promising results in the specific study setting.

There are a few points which should be discussed or addressed

General comments:

1. The score devised is based on migration patterns at a given time in a given country. Going through statistics of origins of asylum seekers coming to Switzerland over the past 10 years, it is easy to see that dominant nationalities change overtime, sometimes very rapidly, and thus that the score is "site specific" and "time specific"; this should be acknowledged by the authors. Although the areas included in the model cover most of the high incidence countries in the world, the model's validity may change with changes in representation of different nationalities within these areas.

2. It is unclear why coming from Asia is integrated in the model since this variable is non significant with a CI which includes 1.

3. Why pregnancy tests in patients with a positive LTBI? Pregnancy is not a contraindication for treating LTBI

4. The fact that immunosuppression is not associated with LTBI may be related to the lower sensitivity of IGRAs in this group: a specific strategy for these patients should be evoked (of course this is not the topic of your paper, but it is a limitation of the score)

5. I am not very convinced by the rationale for married persons being at higher risk of LTBI: the statement that "Being married is an indicator of a social network with increased risk of inter-humane transmission" is very speculative; the opposite could easily be considered. The authors should see if there is any kind of epidemiological observation to explain this finding.

6. When you mention the NICE guidelines, I suppose you refer to a threshold of 50 and not 500 per 100,000 inhabitants

7. It would be interesting, if data collection allows this, to see if "coughing" can be replaced by "active smoker" with similar results: it is indeed confusing to integrate in a score for LTBI a potential symptom of active disease

8. Finally but importantly, and in order to propose a score which may be less "site
and time specific it would be interesting to look at incidence of TB in the
countries of origin of the 393 subjects screened and determine if this specific
item, associated or not with the other items identified in the multivariate analysis
(age, married status, ground transition, cough, previous TB exposure) gives an
interesting result. This would open the possibility of a wider testing of such a
score.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being
published

**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'