Reviewer's report

**Title:** Age-specific values of Access anti-Müllerian hormone immunoassay carried out on Japanese patients with infertility: A retrospective large-scale study

**Version:** 0  **Date:** 28 Jul 2018

**Reviewer:** Tod Charles Aeby

Reviewer's report:

This is an important study looking for racial differences in AMH levels by age. While the sample size seems sufficient, I have concerns about selection bias in the population studied. Given that this was a group of women seeking fertility treatment, one might assume that their AMH levels might differ from an age-matched group of reproductive age women randomly selected from a general Japanese population. Much in the same way that bilirubin levels at a hepatology clinic might not represent bilirubin levels in the general population and probably should not be used for determining "normal". That being said, close reading of reference #6 (Seifer et al), which seems to supply the current reference standards, shows that they also used a large number of randomly selected patients presenting to several Infertility Clinics throughout the United States. If we can assume that the Japanese and the US patients are otherwise similar, then the results would, at least, be compatible.

I have no concerns with the rest of the manuscript, but I feel that a discussion of this concern would make the paper stronger.

The authors used some abbreviations (PCOS, POI) that might not be familiar to the general BMC readership and they might want to spell them out, the first time they are used.

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

Yes

**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.
Yes

**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:

Acceptable

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