Reviewer’s report

Title: Serum screening in first trimester to predict pre-eclampsia, small for gestational age and preterm delivery: Systematic review and meta-analysis

Version: 3 Date: 14 March 2015

Reviewer: Francesco D’Antonio

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Major compulsory revisions

1) Systematic review of diagnostic accuracy require specific tools to assess study quality. I would advise using QUADAS-2 to ascertain the quality of the included studies.

2) In this review, the authors opted to express the diagnostic accuracy of the different serum biomarkers as likelihood ratios. Being a review of diagnostic accuracy, results should be expressed as sensitivity, specificity, positive and negative likelihood ratios and diagnostic odd ratio. In order do this, either bivariate meta-analysis or a hierarchical summary receiver operating characteristics (HSROC) model should be used.

3) The overall diagnostic performance of a test is strictly related to the occurrence of a given outcome in the population analysed. The figures for predictive accuracy reported in the different studies are likely to be affected by the type of population analysed (low vs high risk). I would advise performing a sub analysis according to the population analysed.

Level of interest: An article of importance in its field

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

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

Declaration of competing interests:

I declare that I have no competing interests