Reviewer's report

**Title:** The Association between Maternal Blood Pressures and Offspring Size at Birth in Southeast Asian Women

**Version:** 1  **Date:** 28 July 2014

**Reviewer:** Katherine Bowers

**Reviewer's report:**

This is an interesting and important study relating maternal blood pressure measurements in pregnancy to offspring size at birth. The majority of my comments are focused on the authors further justification, clarification and/or discussion about methods employed.

**Major Compulsory Revisions:**

- It would be useful for the authors to address several issues related to maternal body size. First, the BMI that was adjusted for in the models (and used to evaluated interaction) seems to be a mid-pregnancy measure of BMI. Often, pre-pregnancy BMI is considered and it would be useful for the authors to discuss their reason for choosing the pregnancy measure. Second, are the typical BMI cut-offs for overweight, obese the same during pregnancy? This information was not readily available. So, if a women's BMI at 27 week is 28, is she considered overweight. Finally, what about weight gain? Does a pre-pregnancy and time of delivery weight measure exist to evaluate the effect of weight gain. Weight gain is an important contributor to offspring birth size, but I'm less familiar with the association with blood pressure. This could be addressed in the discussion.

I have some questions about Table 1. The manuscript says that table 1 evaluates maternal characteristics across blood pressures, but the table seems to look at blood pressures across maternal characteristics using ANOVA (methods). Is this what the authors intended? The table title is more accurate, but I'm still a little unclear what the intention was. Do the authors want to show how maternal characteristics change as blood pressure increases?

**Minor Essential Revisions:**

- white, not Caucasian

- There is no discussion about why one might expect to see racial differences in the association between BP and birth size. Is there biologic plausibility to explain?

- Was the study powered sufficiently in the first place to see any potential effect modification by ethnicity?

- The authors address that smoking was self reported. Do the percentages of smokers seem reasonable considering the known (reported in the literature)
prevalence of smoking for these populations?
-Mention of additional unmeasured confounders (diet, exercise, for example)
-Were the size of birth measurements taken by study staff or were these extracted from medical records?

Discretionary Revisions
-in results, add n's by ethnicity (not just %)

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