Reviewer's report

Title: The Genetic Architecture of Ankle-Brachial Index, a Measure of Peripheral Arterial Disease, in non-Hispanic Whites

Version: 1 Date: 31 December 2007

Reviewer: Marylyn Ritchie

Reviewer's report:

"The Genetic Architecture of Ankle-Brachial Index, a Measure of Peripheral Arterial Disease, in non-Hispanic Whites" by Kardia et al. is a very nice paper describing a number of associations with ankle-brachial index. The manuscript is very well written. I enjoyed reading it.

Major Compulsory Revisions

How many patients in the study had evidence of PAD? In the section describing ankle-brachial index, the definition is provided; however, there is never an indication of how many patients in this study would be defined as PAD. In the discussion is says than abnormal ABI was low in this study. Again, how low?

Is the manuscript in the proper BMC format? It seems that most BMC journals have the methods section last. Perhaps it is different for this one or it has changed.

Minor Essential Revisions

How does the internal replication differ from doing a 2-fold cross-validation? It would be nice to describe the benefit to doing the analysis this way. It would also be helpful to add more detail on the homogeneity of effects test.

When the cross-validation subsets are created, is familial relationship considered? In other words, are all members of a family kept in the same subset?

How many statistically significant results would you expect by chance in Table 3? Are you seeing more than expectation?

Discretionary Revisions

none

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable
**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.