Author's response to reviews

Title: Association between different measurements of blood pressure variability by ambulatory blood pressure monitoring (ABPM) and ankle-brachial index

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Author's response to reviews:

Reviewer's report
Title: Association between different measurements of blood pressure variability by ambulatory blood pressure monitoring (ABPM) and ankle-brachial index
Version: 4 Date: 15 September 2010
Reviewer: Beth Weatherley
Reviewer's report:
The authors have addressed the majority of my comments and the manuscript is improved.

Major compulsory revisions:

1. It is unfortunate that a linear regression model that seems to make sense (modelling the minimum ABI in the patient) does not support the author’s conclusions. That this is due to a reduced range of responses seems improbable. A lack of association could be generated, for example if higher time-rate index is associated with both high and low values of the ABI. The authors are using the ABI as a marker of atherosclerosis. As such, separate models in each leg misclassify in each model some patients who have a ‘normal’ ABI in one leg and an ‘abnormal’ leg in the other. These models are also inconsistent with the notion that a single patient can be classified as having PVD using the minimum value between the two legs. If the mean response for a subject is a better marker of the degree of burden of atherosclerosis, then a mixed model could be used to model this.
Response:

The issue of the “worst leg” model led us to discuss it with a senior biostatistician, and she agrees with our interpretation. On the other side, the suggestion to run a mixed model (the average of the ABI of both legs) is mathematically sound, and we apologize for not having done this in the previous response. We followed the recommendation we included the results of the mixed model in table 3 (see in the manuscript, I had pasted it here but it lost the format).