Reviewer’s report

Title: N-Terminal Pro-B-type Natriuretic Peptide and Microsize Myocardial Infarction Risk in the Reasons for Geographic and Racial Differences in Stroke Study

Version: 0 Date: 30 Aug 2017

Reviewer: Florian Rader

Reviewer's report:

Sterling et al. present an interesting observational study with case-control design, a substudy of the REGARDS cohort, showing an association between elevated NT proBNP and microsize (and typical) myocardial infarction. The methods are adequate, so is the interpretation of the results. There are a couple of things which would strengthen this manuscript:

1. What was the time interval between measured BNP and the event?

2. Evaluate multivariable-adjusted determinants of elevated BNP to shed light on who these individuals were who had elevated BNP and thus increased CV risk. There were multiple variables that appear to be strongly associated with high BNP levels, such as SBP. This analysis could also get done by calculating age, gender and bodysize-adjusted normal vs. abnormal values and find associated characteristics by logistic regression.

3. Table 1 lists a GFR of 10 (which would suggest end stage renal disease) in the lowest BNP tertile, which must be a mistake. Typically one would think the lower the GFR the higher the BNP.

4. Was there an age-adjusted optimal cut-off value that separated low-risk from high-risk individuals?

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.

Yes
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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