Reviewer’s report

Title: Resistant Hypertension and Cardiovascular Disease Mortality in the US: Results from the National Health and Nutrition Examination Survey (NHANES)

Version: 0 Date: 16 Oct 2018

Reviewer: Andrew Hwang

Reviewer’s report:

Thank you for the opportunity to review this very interesting manuscript by Kaczmarski et al., concerning the risk of cardiovascular mortality among patients with apparent TRH. The manuscript is fairly well written and explores a clinically important area. Specific comments are as follow:

Major comments-

The authors excluded uncontrolled non-aTRH; however, they do not provide a clear explanation of why this group of patients were excluded from the study. I suggest the authors provide a clearer rationale for their reason in excluding this group. The potentially higher risk of CV death in the aTRH group could be due to the differences in BP, as observed in Table 1 (SBP for any non-TRH was 122 while SBP for any aTRH was 146) and Table 2 (the HR for controlled aTRH vs controlled non-TRH was not statistically significant).

Minor comments-

In Table 1, suggest including specific prevalence of use of specific antihypertensive classes among the different patient groups.

In the discussion, the authors should mention differences in CVD and diabetes between the non-TRH and aTRH groups, and how these may have affected the results. Additionally, this finding is not completely surprising given that aTRH tend to be 'sicker' and have more comorbidities.


Table 1, for 'Total Cholesterol', the results appear to be in mmol/L, however, the table states that it is in 'mg/dL'. Suggest clarifying this in the table.
The limitations paragraph in the Discussion appears to be lacking; suggest the authors to include additional limitations of the study (i.e., use of cross-sectional surveys which make it difficult for longitudinal follow-up).

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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.

Unable to assess

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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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