Author’s response to reviews

Title: Arsenic Exposure and Risk of Non-Alcoholic Fatty Liver Disease (NAFLD) Among U.S. Adolescents and Adults: An Association Modified by Race/Ethnicity, NHANES 2005-2014

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Dear Ms Karagas

Thank you for your review and your conditional acceptance of our manuscript "Arsenic Exposure and Risk of Non-Alcoholic Fatty Liver Disease (NAFLD) Among U.S. Adolescents and Adults: An Association Modified by Race/Ethnicity, NHANES 2005-2014" (ENHE-D-17-00210R1). We have reviewed the reviewers’ additional comments and have responded to them below and in the attached revised draft of our manuscript.

Attached you will find 2 copies of the revised manuscript, one with changes tracked and one with the changes accepted.
We appreciate the time taken and the feedback provided by you and the other reviewers and are pleased with the revisions made as a result. I hope that we have adequately addressed the suggestions/concerns raised and you will find that the revised version suitable for publication.

Regards,

Jean Welsh, PhD

Response to reviewer comments

Reviewer #1: Most reviewer's critical questions had been answered by this revised manuscript already. The answer to question 1 raised by reviewer 2 ["Is there any underlying hypotheses (genetics, environmental or cultural) that explain racial differences in non-alcoholic fatty liver disease?"] could have been better by addressed. . .

Author response: To address this, we have added to the background a reference to the known genetic predisposition to NAFLD among Hispanics. Please see lines 186-187.

Reviewer #2: The authors have done a nice job at addressing some of the concerns. In light of the small number of cases for some of the analyses I encourage the authors to think about examining the precision of their estimates. For example, NHANES recommends not reporting anything with 20 to 30% relative standard error: [https://www.cdc.gov/nchs/data/nhanes/nhanes_03_04/nhanes_analytic_guidelines_dec_2005.pdf]. Acknowledging this issue and making sure this is not case for their main analyses would complete the paper.

Author response: Thank you for this suggestion. We have revised the text in the discussion section in an effort to highlight the limitations of the small sample size for some of the subgroup analyses. Please see lines 282-288:

“Finally, the sample sizes in some of our subgroup analyses were very small, particularly when stratifying by obesity status, which subjects those results to a greater sampling error bias. High relative standard errors, which are reflected in wide confidence intervals, suggest that the comparison being made may not be reliable or representative. To address this, we have
presented the sample size for all subgroups as well as the confidence intervals for all estimates to make the level of uncertainty around estimates clear to the reader.”