Author's response to reviews

Title: Pancreatic Cancer Clusters and Arsenic-Contaminated Drinking Water Wells in Florida

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Author's response to reviews: see over
Author's covering letter for initial submission

Title: Pancreatic Cancer Clusters and Arsenic-Contaminated Drinking Water Wells in Florida

Authors:

Version: 1 Date: 12 September 2012

Comments: see over
September 11, 2012

Christna Chap, PhD
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RE: MS 1032211416636929 - Pancreatic Cancer Clusters and Arsenic-Contaminated Drinking Water Wells in Florida

Dear Dr. Chap,

Thank you for sending us the reviewer’s comments. As the reviewer indicated, we have addressed many of the limitations in the Discussion section, and we believe that overall the manuscript is much improved. Both reviewer 1 and reviewer 2 have no further comments and suggestions for the manuscript. There is only one new issue raised by reviewer 3 which we discuss below in our Response to the Reviewer.

We believe that we have thoroughly addressed the reviewers’ comments and that we have completed a strong manuscript worthy of publication. Thank you for your time and consideration of our manuscript; we look forward to hearing from you soon.

Sincerely,

Wen Liu

Wen Liu, MD, PhD
Response to the Reviewer

Reviewer's report
Title: Pancreatic Cancer Clusters and Arsenic-Contaminated Drinking Water Wells in Florida
Version: 3
Date: 10 August 2012
Reviewer: Melissa Slotnick

I believe the authors addressed many of the study limitations adequately in the discussion section; however, the main concern I have with this manuscript is that the higher incidence of pancreatic cancer is observed in the urban areas, and the authors use well water concentration as a proxy for exposure in these areas. I'm guessing that people living in urban areas are not likely drinking well water, but treated city water. If this is the case, it would be more accurate to run a model with even 1-2 city water measurements available from public records. I understand that this is an ecological study and the problems with exposure misclassification have been discussed; however, using groundwater samples does not seem like an adequate measure of exposure (even ecologically) for those in urban areas unless the authors can document that a significant portion of the population consumes well water in urban areas. If this is true and that link can be made -or, if the authors observe the same results when substituting a city water measurement for well water measurements in urban areas - then I feel the manuscript would be acceptable for publication. I trust the authors can make these changes and/or address this concern when communicating their conclusions.

The issue and possible solution raised by the Reviewer could not be addressed in this study since the Florida well monitoring program is voluntary. There is no data file in existence in Florida which provides geocoded coordinates of areas exclusively covered or not covered by municipal water systems (http://www.myfloridaeh.com/water/petroleum/saindex.html).

Nevertheless, we wish to clarify the interpretation of this particular study and its analyses. The results do not indicate that arsenic-contaminated wells are more likely to be in urban areas, nor that all the clusters are associated with arsenic exposure – only that there more likely to be clusters of pancreatic cancer (after controlling for a number of variables) located near arsenic wells, and separately, clusters of pancreatic cancer located in cities. The urban/rural residence is a factor separate from the location of wells; it has been controlled in the analyses while studying the association between pancreatic cancer clusters and the arsenic contaminated wells.

We agree that the specific issue raised by the Reviewer is an important (but separate) question worth of further exploring. As we indicated in the manuscript, it will be the next step for us to investigate in our future study when additional funding becomes available.