Reviewer's report

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

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Reviewer: Victor Martinez

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REVISION

Authors present a manuscript titled "Pancreatic Cancer Clusters and Arsenic-Contaminated Drinking Water Wells in Florida". Main focus is to establish if clusters of persons diagnosed with pancreatic cancer were more likely to be located near arsenic-contaminated drinking water wells. Strength of this work is that authors provide novel information about the relationship between arsenic and pancreatic cancer.

Title "Pancreatic Cancer Clusters and Arsenic-Contaminated Drinking Water Wells in Florida" does not completely represent main findings of this work (the relationship between clusters and distance to arsenic-contaminated water).

Background is very good written and provides relevant information for the theme; however some references and details are missed, please, refers to "minor essential reviews" for description. Methodology is well described and relevant for the main question of this work. Results are well explained on Tables and Figures (with minor exception on Table 1 (please, see revisions)

Discussion needs to be completely revised, please check Major Compulsory Revisions

Minor Essential Revisions

1. [page 2] Please, provide references for the following phrase "Late diagnosis, lack of therapeutic options, and the aggressive biological nature of pancreatic cancer cells play major roles in the traditionally poor prognosis of pancreatic cancer"

2. [page 3, last paragraph] Authors mentioned that “Arsenic is linked to bladder, skin, and lung cancer occurrence in populations highly exposed to arsenic occupationally, medicinally, or through contaminated drinking water (Agency for Toxic Substances and Disease Registry, 1999; IARC, 1987)”. However, some studies have demonstrated correlation between some of these cancer types and low to moderate concentration of arsenic (PMID: 20049123). This is especially relevant in North America. Please, adapt the text and provide appropriate references.

3. [page 3, last paragraph] Please, provide references (other than Taiwan) in order to support arsenic-lung cancer relationship). There are other countries affected by this problem.
4. [Page 4, first paragraph]. Please, check missed reference about Florida Cancer Registry in the following phrase "... few invasive malignancies that had been slightly rising in Florida (The National Program of Cancer Registries 2002-2006), and the mortality rate of this fatal cancer has not changed"

5. [Table 2] Please, adjust the text. Each component of column 1 should have a correspondent with number in column 2 (if not, Results on the Multi-variable Logistic Regression analyses" becomes confusing

Major Compulsory Revisions

1. [DISCUSSION -"Screening" SECTION]. As presented, this section is not relevant for Discussion, since no results from the research are analyzed. Basically, this is background about screening on pancreatic cancer. Please, link this subsection with obtained results (e.g. is proximity to arsenic a good parameter for screening people at risk of pancreatic cancer?

2. [DISCUSSION -"Smoking" SECTION]. Same issue as mentioned above. Please, circumscribe Discussion to obtained result

3. [DISCUSSION -page 11, 2nd paragraph]. Authors mentioned “While these studies have identified important adverse health effects associated with relatively high-dose arsenic exposure, results cannot be extrapolated to US populations which are typically exposed to lower levels of arsenic exposure". First, is no clear if authors are discussing about "pancreatic" or any type of cancer associated with arsenic. Then, some studies (even among those cited by authors), specifically highlight that arsenic is linked with cancer at low/moderate levels in US population (PMID: 20049123, 19371619, 19834714)

4. [General comment] Discussion need to be redesigned. There is basically more background and recommendation related to different aspects of pancreatic cancer; however, little is discussed about actual results obtained. Questions remains no discussed, for example:
   a. Are smoking rates on the clusters similar to those found in other parts of the country?
   b. There are others co-carcinogens described on this area that can affect results?
   c. There are differences when gender is considered (this is not a parameter considered on analyses)

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests