Reviewer's report

Title: Adverse Childhood Experiences are Associated with the Risk of Lung Cancer: A Prospective Cohort Study

Version: 1 Date: 27 July 2009

Reviewer: Jeanine Genkinger

Reviewer's report:

Dear author,

The manuscript entitled “Adverse Childhood Experiences Are Associated with the Risk of Lung Cancer: A Prospective Cohort Study” aims to examine the adverse childhood experiences (childhood emotional, physical or sexual abuse and household dysfunction) and risk of lung cancers in a cohort study, ACE Study, conducted in California. To date, it appears that few studies have assessed adverse childhood experiences with lung cancer. As there are a limited number of studies, this study adds to the important discussion of this association.

For this analysis, the question posed by the authors is well defined and the methods are appropriate. In general, the authors clearly state the background, methods and results, however a few points should be addressed.

Minor Essential Revisions:

-ABSTRACT section
  o The conclusion statements appear strong for the results that you presented, particularly since most of the estimates have wide confidence intervals and many are not statistically significant. Instead of “Adverse childhood experiences are associated with an increased risk”, it would be better to state “Adverse childhood experiences may be associated with an increased risk”. In addition, the statement re smoking – since you were not able to examine different models adjusting for smoking using duration, etc, “may only be partly explained by smoking”

-INTRODUCTION section
  o In the introduction you do not discuss if there is any prior research conducted on ACE or lung CA or ACE with any other types of cancer. Please see Fuller-Thomson E. Cancer 2009 Jul 15: 115(14): 3341-50.

-METHODS section:
  o With regards to the population, I am not sure how the population numbers are defined. It appears that initially you start with 18,175 (those who completed the mailed questionnaire) – but some of the following paragraphs/analyses relate to 17,337. Can you show in your methods how you switch from 18,175 to 17,337? Since you show how you go from 17,337 to 15,365 (-1248 – 735)?
Instead of just adding smoking as a covariate, are you able to do an analysis stratified by smoking status? Do you see the same results in never smokers? I am not sure if you have the case numbers to be able to do this analysis, if so, I think it would greatly add to the paper.

Also, for a number of analyses you have too few cases in the highest category to get meaningful results. Have you done analyses collapsing the highest two categories (4 or 5 with 6, 7 or 8)?

Do you have information on screening practices – it might be interesting to examine those who follow guidelines versus those who do not.

In addition, have you assessed whether or not the association is linear. If it is linear, you can do analyses of continuous estimate of ACE stratified for other factors of interest (smoking status, SES, screening history)?

When you examined competing risks – you might want to state that you excluded lung cancer?

-RESULTS section:

How many cases were in the analysis on page 13, paragraph 1 for the estimates 10.48 (1.94-56.64) and 7.90 (1.40-44.61). As these confidence intervals are extremely wide, I think this information should be included.

-DISCUSSION section:

Were your results in line with the same magnitude (similar strength in RR/OR) of prior research?

Are any of the biologic plausibility related to lung cancer, or another type of cancer? If so, you might want to include this information in the discussion.

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests