Reviewer's report

Title: Occupational exposure to asbestos and lung cancer in men: evidence from a population-based case-control study in eight Canadian provinces

Version: 1  Date: 4 October 2012

Reviewer: Darren Brenner

Reviewer's report:

The authors conducted an analysis of asbestos exposure and lung cancer risk among Canadian men in a population-based study. As the carcinogenicity of asbestos in lung cancer has been well established by IARC, the two primary objectives of this analysis were to determine the effects of occupational exposure and the combined effects with smoking in a population-based sample where exposure prevalence is likely to be low. Overall, the analyses are well described and the paper is concise and well written.

- Major Compulsory Revisions
None

- Minor Essential Revisions
1. The conclusion provided in the abstract should be altered to match that made in the conclusion section. In the conclusion section it reads that asbestos has contributed to increased lung cancer risk in Canadian workplaces. The statement made in the abstract is much stronger (increased incidence in Canadian men-broader statement). Asbestos has likely only attributed to very slight changes in the incidence in the overall male population as the PAF is likely quite small (not provided in results).

- Discretionary Revisions
2. Page 8- Please include percentages for each numbers provided in the description of exclusion/inclusion, not just the final percentages.

3. Page 9 -Were the cases and controls all the same ethnic group? Please specify if this was part of the matching criteria or what was the ethnic distribution of the study.

4. Page 10- Not sure if the genetic factor motivating removing young onset cases is entirely correct. Reports of heritability components or measures of family history are generally small OR 1.25-1.4. It is possible that exposed occupations could have occurred in at young ages so that if short intense exposures are of interest, a relevant incubation period (20-30 years) could be possible even among young onset cases.

5. Page 12- Please provide a quantity for the reliability between the hygienists.
Weighted Kappa or another measure to validate the “high-degree” stated.

6. Page 12- Provide additional justification for using a binary variable to adjust for silica exposure and that such crude adjustment does not lead to the possibility of residual confounding, particularly when occupations with exposures may be correlated.

7. Page 13 -Please provide the actual number and percentage of never smoking cases in paragraph 2

8. As the goal is to estimate the effect estimates for asbestos in the population-based sample please provide PAF associated with the significant effect estimates provided.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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