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: 16 October 2012

Reviewer: Andrea 't Mannetje

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This manuscript presents results of a Canadian lung cancer case-control study including 1681 male cases and 2053 controls. The focus is on the association between asbestos exposure and lung cancer risk, adjusting for potential confounders including smoking and lung cancer. Asbestos exposure (medium/high) was associated with a doubling in lung cancer risk, in all 3 smoking strata. Asbestos is a known lung carcinogen, but this study is nonetheless an important contribution because it shows an association between asbestos exposure in a wide range of occupations in the general population: occupations that are often associated with relatively low levels of exposure. The paper is well written and uses appropriate methods.

Just some minor essential revisions:

1) Page 9 response rates: the overall response rates (men+women) are reported, but considering only men are included in the presented analyses, it would make sense to report the response rates for men (the actual study population here).

2) Page 14 formulas: it would make more sense to use the ORs in these formulas rather than ‘risks’, as the ORs are actually used in the calculation (not risks).

3) Page 14: “where each risk is relative to those who were non-smokers and not exposed to asbestos (R0)” : this is not correct for this study: the reference group used were <10 packyear smokers and not exposed to asbestos.

Some minor discretionary revisions:

4) Page 12 degree of reliability for the assigned exposures: can this be quantified? This is an extensive reliability study including double exposure assessment for 1086 jobs. Is more information available?

5) Page 5 first line: remove ‘cause of’

6) Page 8: “there were no subjects from Quebec”: it is unclear why this sentence is included.

Level of interest: An article of importance in its field
**Quality of written English:** Needs some language corrections before being published

**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'