Reviewer's report

Title: Modelling prevalence and incidence of fibrosis and pleural plaques in asbestos-exposed populations for screening and follow-up: a cross-sectional study

Version: 1 Date: 15 November 2007

Reviewer: Paul De Vuyst

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The paper could be interesting because of the large number (over 1000) of asbestos-exposed subjects who underwent CT and for whom information about the individual cumulative exposure is also available. The authors have a large expertise in CT evaluation of asbestos workers. About the half of subjects have pleural plaques and 6% asbestosis. The presence of these lesions is associated with the time since first exposure and the cumulative exposure.

The screening methods do not address the malignant asbestos-related diseases.

The authors should emphasize what they really consider as new and original in their study.

The statistical part is incomprehensible for the mean and even “upper” reader, and not only the appendix.

The paper should be shortened, especially the discussion part.

The text should be more precise and straightforward.

Major Comments

1) What is the hypothesis tested by the study? What is the message for clinicians or radiologists who have probably no access to precise evaluation of exposure?

2) Why were the subjects with known diseases and/or involved in previous CT screening campaigns excluded from the study, if correct evaluation of exposure was available?

3) The CT methodology changed over time (incremental and then helical) depending on the date of inclusion.

4) Statistics: the statistical part should be rewritten and made much easier to understand. Paragraph on page 9, presenting Table 2 is particularly unclear. The regression formulae are not given. The abbreviations OR, CI, P are not explained.

5) France has adopted a surveillance program for asbestos-exposed workers, who may benefit from social advantages, such as compensation and early retirement, including for pleural plaques. This type of screening programs for benign and limited lesions (not necessarily “diseases” as mentioned in the
abstract) is of scientific interest, but the medical and/or social impact may be not relevant in other countries.

6) Some references are not classical peer-reviewed papers: 3, 4, 15, 17.

Minor Comments

1) Abstract. How do the authors define asbestosis on CT? This probably means “interstitial changes compatible with asbestosis”

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Needs some language corrections before being published

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