Reviewer’s report

Title: Cumulative Asbestos exposure and Mortality from Asbestos Related Diseases in a Pooled Analysis of 21 Asbestos Cement Cohorts in Italy

Version: 0 Date: 11 Jun 2019

Reviewer: Pia Nynas

Reviewer's report:

Major Comments

Page 7 line 161: Please explain what you mean by "causes of death associated to the Healthy Worker Effect (HWE)"

Page 15 line 373: "A biological interpretation of the overall evidence that mesothelioma incidence does not increase indefinitely by TFSE is that asbestos fibres are slowly cleared." If this is true, shouldn't the same kind of trend be seen also in the SMR for lung cancer?

Page 16 line 404: "With consideration to the possible misclassification of outcome, we underline that 89 deaths in men and 1 in women had been recorded as "other pneumoconiosis" in the death certificate, possibly attributable to incorrect reporting of asbestosis."

Can you tell something about the differential diagnostics of asbestosis? Is it possible that this could be also other way round, that other pneumoconiosis would be falsely diagnosed as asbestosis? Based on Table 2, other pneumoconioses (mainly silicoses?) seem to be much more common in the population. And is it possible that IPF/UIP could be diagnosed as asbestosis? In practice a patient can get a diagnosis of asbestosis even if the exposure had been at low level which is not in line with the Helsinki criteria. (Tossavainen A, reporter. Asbestos, asbestosis, and cancer: the Helsinki criteria for diagnosis and attribution. Scand J Work Environ Health 1997;23(4):311-316. Wolff H, reporter, Vehmas T, reporter, Oksa P, reporter, Rantanen J, reporter, Vainio H, reporter. Asbestos, asbestosis, and cancer, the Helsinki criteria for diagnosis and attribution 2014: recommendations. Scand J Work Environ Health 2015;41(1):5-15)

Table 3: In the legend, explain Fibre-type-weighted-CEI tertiles (which are not very clearly explained in the text either)

Minor comments

Page 4: please add explanation for abbreviation CRD (page 17)
Page 6 line 148: What means "impossible age"?

Page 7 line 156: "Causes were coded according 157 to the 8th, 9th, or 10th Revisions of the International Classification of Diseases (ICD), according to the date of death." Page 12 line 335: "There was no specific code for mesothelioma of peritoneum and pleura in the 8th and 9th ICD." When was ICD10 taken in use?

Page 8 lines 180 and 181: "interested" does not seem to be the right verb in the context

Page 15 line 367: Traditional models imply an unlimited increase of MM mortality rates

Page 16 line 387: "Moreover, mortality analyses are not very sensitive for diseases with long survival, such as laryngeal cancer in recent periods." Please, insert reference concerning the survival with laryngeal cancer.

Page 17 line 424: CRD mortality?

Page 17 line 424: Cardiovascular diseases SMR was were decreased significantly lower in men

Table 2: if Asbestosis is included in Pneumoconioses, for clarity this class should be renamed, e.g. All pneumoconioses

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