Reviewer's report

Title: Update: cohort mortality study of workers highly exposed to polychlorinated biphenyls (PCBs) during the manufacture of electrical capacitors, 1940-1998

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Reviewer: Pier Alberto Bertazzi

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General

The paper reports on the extension of the follow-up of a cohort of capacitor manufacturing workers employed in high exposure jobs in two plants in the USA. The topic is of interest since the toxic and carcinogenic effects of PCBs to humans are still incompletely known. The follow-up extension added a substantial number of person-years at risk and of deaths. State and county-specific reference rates were adopted to weight national rates. No quantitative exposure metrics and no individual job histories other than employment dates were available, and duration of employment in the two plants was used as a proxy for exposure to PCBs. Results partially confirm findings of previous follow-up, but given the absence of individual quantitative exposure data they do not add much to our present knowledge.

It is a bit disappointing that the two potentially most interesting results (i.e., diseases of the nervous system and exposure-response relations) are not reported here, and are instead the object of other papers, one submitted elsewhere and one in preparation with a newly created job-exposure matrix. The consistently lower than expected results for breast cancer do probably deserve some further discussion in the light of previous data linking breast cancer and chlorinated compounds.

I'm not sure whether the reporting of both combined and plant specific results is needed: It very much depends on the design and the a priori hypothesis. Obviously, the choice should not be driven by results. The paper without the announced exposure-response analysis appears somehow incomplete and preliminary and is to be considered of low priority.