Reviewer’s report

Title: Pesticide exposure assessed through agricultural crop proximity and risk of amyotrophic lateral sclerosis

Version: 1 Date: 05 Jun 2017

Reviewer: Evelyn Talbott

Reviewer's report:

I continue to believe that there was a potential for significant bias due to over matching, my comments follows: issue of overmatching always comes to mind, eg. why was the control not chosen at random from the four provinces of study area instead of being matched precisely to the same province? This may have resulted in overmatching on the exposure of interest, proximity to agricultural exposure to pesticides? I am not sure what you do about this at this point but it should be discussed in the weaknesses and strengths section.

I indicated that there was really nothing to be done as once you have matched on province there is no way to undue this short of choosing a new control group. that being said, I believe this significant bias needs to be directly stated in the strengths and weaknesses section or it will be open to criticism within the environmental epi community. The authors indicate that they considered the proportion of tillable land was similar between provinces as well as the rates of ALS but they have not specifically stated that the there is a potential for overmatching when a case is directly matched to a control from the same place which may directly nullify any difference in exposure, It doesn't mean this happened but there needs to be an admission that overmatching could have occurred, I would recommend this should be placed in the strengths and weaknesses section before publication could go forward.

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