Reviewer's report

Title: Serum glucose and risk of cancer: A Meta-analysis

Version: 3 Date: 16 October 2014

Reviewer: Arash Etemadi

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Major Comments:
1. One major problem is the great heterogeneity in the results, which does not seem to go away easily by the stratifications performed. This may be particularly because many studies were limited to one specific cancer, and these were all mixed with "all cancer" studies.
2. The authors mention lack of information about diabetes treatment as one weakness of their study. Why don't they do a stratified analysis for studies which did adjust for treatment/diabetes diagnosis?
3. A cut off of 6.1 seems a mixture of different groups with different exposure intensities. Besides, for non-fasting conditions this is not really "high" blood glucose. Why didn't they also define a different higher cut off (diabetic range) for a secondary analysis? Most studies likely have more categories of exposure. Also I suggest that the authors should have different cut off limits for studies in which fasting status is known.
4. The search strategy seems very limited. For example the authors have searched "glucose" while some studies may report this as blood sugar, or malignancy might be used instead of cancer/neoplasm.
5. What was the age range of participants in the studies? Was there any exclusion based on this? Were the studies required to have adjusted for age?
6. I find the classification of cancers into hormone-driven and IGF-1 driven very arbitrary, particularly that they overlap except for one cancer. I think this whole analysis and the conclusions driven from it are too speculative and should be dropped.

Minor Comments:
1. How many people (and who) assessed the titles for inclusion? How many checked the data?
2. If language was an exclusion criterion, this must be clearly mentioned in methods.
3. The authors mention checking titles, but then jump into abstracts. What happens between these two?
4. The MECAN group has been mentioned in the results, while this must be explained in the methods, with more detail.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'