Reviewer's report

Title: The validity of self-reported cancer screening history and the role of social disadvantage in Ontario, Canada

Version: 2 Date: 25 August 2014

Reviewer: Thomas Perneger

Reviewer's report:

Thank you for the opportunity to review this paper. The paper addresses an interesting topic, employs adequate methods (but see comments below), and the interpretation is sound.

Major compulsory revisions

1) the definition of telescoping and its analysis (Table 3) is incorrect. The authors use the PPV as criterion, and conclude that if the PPV increases when they expand the time frame of the gold standard, this implies telescoping. But if the definition of a positive (gold standard) is broadened, the PPV must increase. This is inevitable, not specific to telescoping. To show telescoping, the authors should look at specificity: specificity should improve as the definition of a positive is broadened, because telescoped events are now removed from the "negative" column.

2) In the tables the authors show lots of stratified analyses, but do not signal significant differences between strata. Add interaction tests, and then comment on the significant differences.

3) Describe in Methods how the report/record ratios were obtained. McNemar tests?

4) revise the abstract so it addresses the issue of deprivation that is announced in the title and the intro of the abstract. The results are uninformative about this.

5) In the conclusion (abstract and paper), the authors call for educational strategies to help people remember their screening status. This is totally beyond the available data. Why would education be the answer here? There are many other options: ask better questions, rely on records instead of reports, give everyone a smart card with actual screening records, etc

6) describe the study population and the study design at the beginning of Methods, then the study variables, and then only the datasets.

7) In the Discussion, answer the research question - what do you think about the effect of deprivation on recall?

Minor essential revisions
1) ratios should not be given to the 1000th

2) The first paragraph of Results should describe the 3 populations

3) The authors talk about "cohorts", but this is a cross-sectional study

4) The tables are data-heavy. Consider removing the LRs. If you keep them, note in the discussion that LRs of about 2 are generally considered useless

5) I would think that the tables should be within the main paper, not additional material.

Discretionary revision

1) I believe that the paper would be more interesting if the authors examined the predictors of overreporting of screening. I would use only the "negative" groups (by gold standard), and look for predictors of a positive report, using logistic regression

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

**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