Reviewer's report

Title: Reduction in Cervical Cancer Incidence and Mortality in Canada: National Data from 1932.

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Reviewer: Matejka Rebolj

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The authors presented trends in the burden of cervical cancer in Canada by age and year of diagnosis/death, and by age and birth year. They discussed whether the observed consistent reductions in the mortality and the incidence of this cancer could be due to cervical screening and to other factors. What distinguishes this analysis from earlier analyses undertaken in other countries is a very long data series (mortality from 1932 onwards).

I would like the authors to consider making some “minor essential revisions” along the following lines:

1. Although changes in screening policy over time would make it complex, the authors could consider presenting a Lexis-type of a diagram for this population. A Lexis diagram could simplify an interpretation of the observed changes in the burden of cervical cancer over time, for example any lags in a decreasing burden of cervical cancer at older ages.

2. The authors presented no quantitative data on the coverage of screening. Are these available from statistical sources, or could they be estimated from any other source?

3. Table 1 was not completely visible. Would it be possible to include in this table the mortality data from the earliest period?

4. Although this may be seen as formalistic, I wonder whether the title can be as conclusive as it is now. It might have been better if it revealed that the relationship between the reduced cervical cancer burden and the extent of screening is the most likely of all explanations.

5. Essentially the same analyses have been done for other countries. It would be informative to summarize their findings, and compare them to the findings of the present study.

6. Were the decreases in mortality by the 1970's due to screening (ref. 6) or due to better treatment (authors' interpretation)?

7. The authors stated in the limitations of their analysis that prior to the 1970's there was substantial misclassification of advanced disease between cervical and uterine cancer, so early mortality data is likely to provide a major underestimate. Are the authors here referring to any earlier analyses of the data? If so, please state.

8. Because the authors did not have the necessary data, they could not adjust
the trends for changes in the rates of hysterectomy. They reported that in Canada the hysterectomy rates peaked in 1972. In case of a steady decrease thereafter, this would mean that fewer women from younger birth cohorts would have undergone a hysterectomy in their lifetime than was the case for women from older birth cohorts. In principle, that could suggest that some of the effect of cervical screening in the recent periods could be hidden if trends in hysterectomy rates are not taken into account.

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I am currently involved in a comparative study of new-generation HPV tests, a collaboration with Roche Diagnostics A/S, Genomica S.A.U., Qiagen Gaithersburg Ltd., and GenProbe Inc., but have received no salary or bonuses from any of the companies.