Reviewer's report

Title: Incidence, Mortality Patterns and 5-year Relative Survival Ratio of Prostate Cancer among Residents in Singapore from 1968 to 2002

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Reviewer: Francesco La Rosa

Reviewer's report:

The paper by Chia Sin Eng and colleagues reports about prostate cancer epidemiology in Singapore.

Abstract
1. Study results are scattered throughout the paper. The conclusions themselves are indeed relative survival results for an ethnic group by presence of metastases. Rephrase the abstract. [Major Compulsory Revisions]

Background
2. The short article background starts with a description of prostate cancer epidemiology in Singapore; since describing epidemiologic trends in Singapore is the very aim of the paper, I would suggest to devote the introduction to the aspects of prostate cancer epidemiology and control relevant to the paper or, may be, to general trends in prostate cancer epidemiologic indicators. Anyway background scientific aspects need more consideration and the discussion of incidence trends should be avoided in the background section [Major Compulsory Revisions]
3. Moreover mortality trend is described in western countries only while incidence both in Singapore and western countries. [Discretionary Revision]

Methods
4. I would define this study historical rather than retrospective and would reserve this definition to studies proceeding backwards from the event/outcome to past exposures but this classification is also sometimes adopted. [Discretionary Revision]
5. “The completeness of reporting is high with about 96% in the 1970s and close to 100% in the 1990s”
Reporting of DCO and percentage of cases with MV would be more informative here. [Minor Essential Revision]
6. Please explain why you tested for a linear trend in log rates over the study period.
7. Mortality data are based on a few cases despite grouping in five year periods. The analysis for some ethnic subgroups is also based on a few cases. This
limitation should be clearly acknowledged in the discussion [Minor Essential Revision]

Results

8. Metastatic compared to cases without distant disease is a simplified staging information. This classification excludes also the locally advanced category that is used in the simplified stage coding adopted by cancer registries. However this simple stage is useless here because of the 39% of cases without information. With this level of missingness that is likely to change by age class and time (Will Roger phenomenon) relative survival data are difficult to interpret. An improvement in reporting and an increasing diagnostic accuracy in assessing the presence of metastases is compatible with the steep increase in relative survival rates for cases with unknown metastatic status. [Major Compulsory Revisions]

table 1

9. The total number of deaths by period figures are wrong. [Minor Essential Revision]

10. Survival figures are based on too sparse data and are unstable.

Figure 1.

11. The panels are BW but curves should be coloured. [Minor Essential Revision]

Discussion

12. “For all residents, both the incidence and mortality rates were increasing but diverging because their rate of increase was different, suggesting a possible improvement in prostate cancer treatment. But the lack of a definite positive slope in the RSRs does not lend support to this hypothesis. Therefore, the growing divergence, especially after 1990, could be due to an increased diagnosis of non-fatal prostate cancer cases.”

This seems a fault reasoning since an increasing diagnosis of non-fatal prostate cancers would lead to a definite positive slope in RSRs. [Major Compulsory Revision]

13. Data on incidence, mortality, and survival for prostate cancer by country are reported in a number of published studies. The discussion relies excessively on a paper by Hankey and colleagues (that refers also to a not very recent period). Bibliography should be more complete and updated. [Major Compulsory Revision]

14. Avoid whenever possible personal communications and reference to article in press or submitted. [Discretionary Revision]

15. The separate discussion of the study indicators is too long and includes some repetition of the results. For instance the finding of a increasing incidence rates is reported in almost any section of the paper. The discussion should be shortened. [Major Compulsory Revision]
16. However some possible interpretations of study findings are not considered; for instance socioeconomic or access to care differences may explain differences among ethnic groups. This was discussed in some detail in many papers comparing ethnic groups and should be considered here (eventually ruling out such hypotheses). [Major Compulsory Revision]

17. An improvement in reporting, be it associated with the Prostate Awareness Week or not, may explain most of the observed trend, probably together with a true incidence increase (PSA diffusion?). Moreover an analysis by age class would be relevant. [Major Compulsory Revision]

18. I would define this study historical, descriptive epidemiologic and population based but not retrospective neither ecologic. [Discretionary Revision]

Conclusion. Due to major limitations, partially acknowledged by the Authors, namely the probable changing accuracy in reporting and diagnostic accuracy over the extended study period, the small number of cases in many subgroups (most analyses by ethnic group are based on a few cases) and analyses, and the excessive number of cases with missing information on the presence of metastases (stage), this paper should not be published.

Level of interest: An article of limited interest

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests