Reviewer's report

Title: Estimates of cancer incidence, mortality and survival in Aboriginal people from NSW, Australia

Version: 5 Date: 21 December 2011

Reviewer: Patricia Valery

Reviewer's report:

Using NSW Cancer Registry records, the authors examined the patterns of incidence, mortality and survival from cancer in NSW Aboriginal people. The authors used multiple imputation of missing Aboriginal status in the Registry data and then calculated incidence rates. Mortality data is complete with regards to Indigenous status.

They restricted the data to cancers diagnosed after 1999 as the proportions of records with missing Aboriginal status were lowest from then. According to Fig 1 in 1999 there were about 30% of data missing on Indigenous status and by 2007 this went down to 20%.

Incidence rates of cancer among Aboriginal people were found to be 6-9% higher than that of the whole NSW population. The average incidence rate reported is at least 3 times higher than incidence rates reported in Queensland. (Moore et al MJA 2010) Also, in other states/territory, incidence of cancers among the Indigenous population was reported to be similar or lower than their non-Indigenous counterparts.

Mortality rates of cancer among Aboriginal people were found to be 68-73% higher than that of the whole NSW population. The average mortality rate reported is also about 3 times higher than mortality rates reported in Queensland. (Moore et al MJA 2010)

1. What is the proportion of missing Indigenous status for the overall time period 1999-2007? That should be clearly stated in the text.

2. I think it is easier for the reader to understand if comparisons are presented as ‘over 4 times higher’ instead of ‘374%’ (2nd paragraph page 10)

3. In 2nd paragraph, page 12 ‘Consequently, survival from cancer...’ – delete ‘Consequently,’ and re-write this first sentence. Too long and confusing. Present the proportions of those who died or those who survived (not both).

4. Table 5 – They should present hazard ratios adjusted by age, and cancer stage

5. The authors should not have the comment that “Aboriginality recording is near complete for NSW cancer mortality data from 1999 onwards, meaning that
cancer mortality in NSW Aboriginal people occurring from 1999 can be reliably estimated without imputation.” They did not investigate the completeness of the NSW mortality data. The authors are just stating that.

6. 5th paragraph on page 15, on pharmacogenomics is too speculative. A sentence about the issue is sufficient here.

7. In the last paragraph on page 17 the authors acknowledge some of the limitations of their data (e.g. accuracy of Indigenous status). The authors should also comment on:

a. The potential effect of such inaccuracies in their results (differentially biased or not?)

b. The accuracy of cancer stage at diagnosis and the effects on their results

8. It would be nice to include the strengths of this study. Strengths to be mentioned could include: population based-study, good coverage by the registry (case ascertainment).

**Declaration of competing interests:**

I declare that I have no competing interests