Reviewer's report

Title: Prostate-specific antigen (PSA) screening and follow-up investigations in Maori and non-Maori men in New Zealand: a cohort study

Version: 2 Date: 8 May 2014

Reviewer: Manuel Zorzi

Reviewer's report:

I read with interest the paper by Obertova et al, that analyses the screening rates with PSA test and subsequent diagnostic workup in a population from New Zealand by ethic group, Maori vs non-Maori. The authors found lower screening rates for Maori and for the patients of practices governed by Maori groups.

This is a well conduced and properly reported study. I have only one major and some minor points to underline.

Major Compulsory Revisions

1. The authors found lower screening rates among the Maori, which is coherent with the epidemiological figures of lower incidence rates of- and higher mortality rates for prostate cancer. They also found that general practices conducted by Maori, that have a higher proportion of Maori patients, are characterized by lower rates of PSA prescription.

However, the reported results regarding screening rates and type of practice (Maori vs nonM) does not allow to understand if and how much the lower screening rates among the Maori are associated with the ethnicity of the patient and/or with the prescription patterns of the Maori practices.

I encourage the authors to carry out some multivariate analysis in order to disentangle the effect of patients’ ethnic group from that of the type of practice. This result is of primary interest mainly at a local level, because it could highlight the underlying reasons of the observed disparities and help to focus future efforts to reduce them.

Minor Essential Revisions

2. Lines 108-109: the last part of the sentence that starts on line 105 should be clarified. In its actual form, it seems to suggest that the effect of a high PSA screening rate on prostatic cancer incidence and mortality is entirely due to over-detection of indolent cancers. In fact, this is not the case, otherwise we would expect to observe only differences in mortality. PSA screening has been shown to produce a proportion of overdiagnosed cancers, as well as the diagnostic anticipation of a proportion of ‘truly aggressive’ cancers (i.e. not over-diagnosed) that determines an impact on mortality rates.

3. Lines 139-144: are there other Laboratories (in particular private Labs) whose records have not been available for this study? If so:
- are there estimates of their volume of PSA tests in the studied cohort?
- Is it possible to evaluate whether their coverage on Maori and non-Maori is different?

4. Lines 142-144: what has been the geographical mobility of the studied population during 207-2010? Is it possible to evaluate whether it is different by ethnic group?

5. Lines 182-186 and Table 4: the description of the differences between Maori and non-Maori practices as in Table 4 has some limitations, e.g. the figure about the proportion of Maori men enrolled in Maori-practices is not available and it could be 21% as well as 99%. The authors could consider using different (or adding) data about the characteristics of the two groups of practices, in order to help the readers to better understand the differences.

6. Line 234: the authors should report if there are differences between Maori and non-Ma practices in terms of referral rates in case of elevated PSA result and of biopsy rates following referral. It is interesting to see if Maori practices are characterized only by a lower PSA prescription pattern or also by different referral rates of high PSA patients and biopsy rates after referral.

Discretionary Revisions
7. Lines 93-94: please report the figures of screening rates in clear

8. Lines 157-158: please report in clear the threshold values utilised for PSA test

9. Tables 1, 2 and 3: I would replace the terms ‘from tested men’, ‘from screened men’ etc, with ‘% of tested men’ (or x 100 tested men), etc, or with something similar according to the editorial rules.

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’