Reviewer’s report

Title: Prostate-Specific Antigen (PSA) and distress: - a cross-sectional nationwide survey in men with prostate cancer in Sweden

Version: 0 Date: 10 Apr 2019

Reviewer: Kasonde Bowa

Reviewer's report:

Study Summary

This is a study of 3165 men who are members of the Swedish Prostate Cancer Federation and have clinical confirmed diagnosis of Cancer of the Prostate. The study objective was to determine if PSA levels were a source of distress to these men. The study assessed the correlation of this to various variables including age, education, socioeconomic factors, Hormonal therapy and quality of life score.

The method used was a self administered questionnaire which was sent by mail to these clients with a 55% compliance rate. The study was analysed using bivariate and multivariate regression analysis. The study found 53% of patients experienced stress. This stress was higher with higher PSA. There was a positive correlation with being on hormonal therapy and not having a partner.

Title- The study title should include the study method and the study population and the country where the study was done.

Abstract- The division into PSA subgroups should be in the methods not the results. The results section of the abstract is not clear it should be summarised more and only the key positive results given.

The methods- The study design has several weakness which need to be explained or corrected in order for the publication to reach an acceptable standard

1. The questionnaire were sent to the participants and therefore self administered, this weakens the data obtained

2. No key informant interviews or focus group discussions were done to re-enforce the results from the questionnaire

3. There was selection bias, in selecting only the clients who responded, these are mostly likely to have had distress with PSA levels (55% of the total 6,389)
4. The group of PSA results was too wide 0-19ug/l the normal PSA 0-4ug/l so a group of 0-4, 5-10, 11-19, >20 would be expected. Anyone with a PSA >5 is likely to be distressed

5. The common measure of PSA is ng/ml the use of ug/l maybe confusing to most readers

6. The question designed to measure distress was too weak and the response quiet imprecise. since this was the major outcome variable a quantitative measure with several questions is required here.

7. There is an overlap between quality of life score and distress, since they both measure patients discomfort it seems the QoL score includes distress so the two cannot be compared.

8. The men older 73 will most likely have a higher PSA and higher distress by virtue of age alone. The study dichotomized men into two group as <74 and 74 and older

9. The study compares too many variable without selecting out from the literature review the most important elements to be considered.

The Results. The descriptive data should be presented first before the analytical data.

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- Are the description of any error bars and probability values appropriate?
- Are all error bars defined in the corresponding figure legends?
- Has a sample size calculation been included, or a description and rationale about how sample sizes were chosen?

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