Reviewer’s report

Title: Military history and prostate cancer

Version: 1 Date: 20 January 2006

Reviewer: James Cerhan

Reviewer’s report:

General
In a population-based case-control study from Western Australia (606 cases and 471 controls), there was an increased risk of prostate cancer in men who were deployed in Vietnam (OR = 2.16) but not among men in the military who served elsewhere. Men with either a father (OR = 1.97) or brother (OR = 2.03) with prostate cancer were also at an increased risk of prostate cancer. The family history finding is generally consistent with extensive published data (some studies find a stronger association with brother having a family history). The association with Vietnam military service is of interest, and this group is just now aged enough to begin to evaluate this hypothesis.

Strengths of this study include a population-based design; in-home interviews; collection of grade; and collection of confounding data. The major limitation is the small sample size, particularly with respect to exposure to Vietnam service, which therefore limits the ability to address detailed exposures from military service. Therefore, few conclusions beyond service in Vietnam can be assessed, limiting etiologic inferences. Another limitation was the modest response rate for cases 64% and the low response rate 43% for controls.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. Aggressiveness. One strength of this study is the analysis of the results by Gleason score. I suggest using the term “aggressive prostate cancer” rather than “severe prostate cancer”. Are there any data on the reliability or validity of the pathology reports from the cancer registry with respect to Gleason grading? Also, it would be important to report the results for Table 2 based on the aggressive prostate cancer, including the number exposed/unexposed cases in this analysis so the reader can understand the robustness of the results.

2. Medical Care of Veterans. A brief discussion of whether military veterans use the same health system as the general population in Australia, or if there is a separate system for the military that could impact detection. Also, there should be some discussion of the level of screening in this population, and specifically if data on screening practices were collected on the case-control participants.

3. Selection Bias. The authors should comment on the potential impact of the low response rates among the control group on their findings. While they do not have any data on the non-respondents, were associations robust across subgroups likely to have varying participation (e.g., age, income, or education)? Another approach would be to evaluate the prevalence of exposures in the control group relative other population-based data from Western Australia.

Specific Comments:
1. Was length of service or other exposures collected; do these suggest any leads in prostate cancer risk?
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Table 1. Report p-values to only one significant digit. Under “Age Group” the category “66-70” should probably be “66-69” (currently not mutually exclusive with the 70 and above group).

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests