

## Letters to the Editor

### Occupation and cancer of the prostate in New Zealand

SIR—We read with interest the recent article on occupation and cancer of the prostate in New Zealand by Pearce *et al.*<sup>1</sup> They were concerned with the fact that they did not find an increased risk of prostate cancer among agricultural workers, a result that has been reported in several previous epidemiological studies of prostate cancer. We noted that their controls were selected from cancer patients with primary sites other than prostate and testis who appeared in the same registry as the cases. Owing to the fact that agricultural work has been associated with the development of lymphomas, leukaemias, and multiple myeloma,<sup>2-5</sup> we feel that the inclusion of patients with these cancers in the control group may have artificially reduced the estimated relative risk of prostate cancer among agricultural workers in this study. If the authors were to eliminate subjects with cancer of these sites from their control group, their results might be more in accord with the results from previous reports.

Table 1 shows the data reported by the authors. Of the 1024 controls, 104 (10.2%) might be expected to have haematopoietic tumours.<sup>6</sup> From previous reports of case-control studies of cancer in New Zealand, 44.3% of the non-Hodgkin's lymphoma cases<sup>7</sup> and 56.6% of the multiple myeloma cases<sup>2</sup> are expected to be agricultural workers. Although the proportion of agricultural workers among leukaemia cases in New Zealand is unknown to us, the figure in the United States was reported to be 39.5%.<sup>5</sup> If we estimate that 45% of the patients with haematopoietic cancers are agricultural workers, 47 of the 104 possible

controls with haematopoietic tumours might be agricultural workers. Table 2 shows these hypothetically revised data with the expected haematopoietic cancers eliminated from the control group. Note that the risk estimate increases and approaches statistical significance. This "new" risk estimate is closer to the relative risks of 1.45 and 1.52, reported for agricultural workers in Italy<sup>8</sup> and the United States,<sup>9</sup> respectively. Of course, our figures are only speculative and are conditional on the assumption that patients with other cancers are a suitable control group. The data from the study of Pearce *et al* could provide the actual numbers for analysis.

We would caution readers of the journal that it could be premature to conclude that there is no association between agricultural workers and prostate cancer. We hope, rather, that this communication may help to resolve this apparent discrepancy and that the authors will consider our suggestion. Perhaps they will find evidence that agricultural workers in New Zealand, as in other countries, are at increased risk of prostate cancer.

#### References

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Table 1 Data from the study by Pearce *et al*<sup>1</sup>

Agricultural worker	Cases	Controls
Yes	94	197
No	365	827
odds ratio = 1.08		

Table 2 Hypothetical data with expected haematopoietic tumours removed from controls

Agricultural worker	Cases	Controls
Yes	94	150
No	365	770
odds ratio = 1.32		

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