



Screening for prostate cancer

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The article 'Screening for prostate cancer: a survey of New Zealand general practitioners' by Durham, Low and McLeod appears in this issue of the NZMJ.¹ This important paper looks at New Zealand general practitioners' attitudes, habits and understanding around this complex issue. In so doing, a number of areas are highlighted where there are discordant views between GPs and the evidence from the literature.

Of the GPs surveyed, 42.3% would screen men between the ages of 70 and 79 years and 12.3% would screen men of 80 years or greater. Most recommendations on screening would not advise the screening of men over the age of 75 years and many would not recommend screening men over the age of 70 years. Risk factors for carcinoma of the prostate are a family history, advancing age, a diet high in animal fat and, to a lesser degree, a family history of breast cancer. Also implicated have been low UV sunlight exposure and low selenium intake. Benign prostatic hyperplasia is not a risk factor for carcinoma of the prostate and indeed prostate cancer is detected in no greater frequency in men with symptoms than men without symptoms of bladder outflow obstruction. Nevertheless, if one is considering treatment of benign prostatic hyperplasia, exclusion of malignancy is important, as that may alter the treatment administered. As far as ethnicity is concerned, African-Americans seem to have the highest incidence and Asians the lowest incidence. Little is known about the relative risk in Maoris. It should be noted, however, that Asians who live in a Western environment start to develop a risk more akin to that of a Western population.

This article highlights the fact that there is wide variation in the screening tests used to detect prostate cancer. The most common combination, however, is digital rectal examination (DRE) and prostate specific antigen (PSA) testing. This would remain the recommendation of the urological community if a PSA cut-off point of 4 were to be used as the threshold for advancing to prostate biopsies. There is evidence, however, that lowering the cut-off point to 3 may negate the need for the rectal examination in an organised screening programme.² Further, a number of urologists have recommended the screening cut-off point to be lowered as far as 2.5. To date, there is no evidence that the outcomes in men who have a PSA between 2.5 and 4 are any worse than in men with a PSA between 4 and 10. Thus, it is generally recommended that a PSA of 4 be a trigger point for further investigation. The role of free-to-total PSA is still debated. As pointed out by Durham et al, while this may reduce the probability of having prostate cancer on a biopsy, it is unlikely to result in a difference sufficient to persuade men not to have a biopsy. This paper points out that there is a 90-day spontaneous variation of up to 1ng/ml. With fully automated testing this may be greater and certainly in clinical practice it is not uncommon to find greater spontaneous variations of PSA. Accordingly, repeating the PSA is preferable prior to proceeding to biopsy of the prostate, as recommended in a recent publication

by Eastham et al.³ The majority of GPs overestimated the positive predictive value of both the PSA and DRE. These positive predictive values are around 35%.

In discussing the results, Durham et al state that 'These reviews have consistently concluded that there is no evidence that screening for prostate cancer will reduce mortality, and that radical treatment of prostate cancer has risk of significant increased morbidity.' To date, there are no results from randomized controlled trials of screening. The results of the American and European screening studies should be available within the next five years. Until these results are available the question of whether or not prostate cancer screening will reduce mortality remains unanswered. Nevertheless, there is a considerable body of evidence, including the Quebec study, the Tyrolia study, and the Olmstead County study, as well as the analysis of the SEER data, which would suggest a possible effect, without being conclusive.⁴ Furthermore, in Western countries, where widespread PSA testing has become common, the age-adjusted mortality rate of prostate cancer is falling. Thus, to date, whilst there is no proof that prostate cancer screening will reduce mortality, there is also no proof that it will not!

Finally, the findings of the controlled trial performed in Sweden by Holmberg et al, comparing radical prostatectomy with watchful waiting, require comment.⁵ This trial was reported after eight years of follow up and there was no statistically significant difference in overall mortality between the two groups. There is, however, a statistically significant difference in prostate cancer mortality between the two groups. It is widely expected that as the trial matures this may translate into a difference in overall mortality. Thus, it seems highly likely that an effective treatment is available for the treatment of prostate cancer.

The question of prostate cancer screening remains complex and requires discussion between GP and the individual patient. The study by Durham et al highlights some of the deficiencies in the understanding of GPs around a number of issues related to the discussion about screening. An understanding of these issues should help GPs to better advise their patients about the benefits and risks associated with prostate cancer screening, and in so doing help them in making their individual decisions.

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