Cancer Society
Te Kāhui Matepukupuku o Aotearoa

Submission To Health Select Committee:

Early Detection and Treatment of Prostate Cancer

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Key Messages

There is still no clear evidence to recommend a national screening programme for prostate cancer. Given the high proportion of men undergoing opportunistic screening in the control groups of both the recently reported European and US prostate screening random controlled trials, it is unlikely that there will ever be clear direction from random controlled trials. Men, particularly those at higher risk (men with a family history of prostate cancer), should be encouraged to discuss with their doctor the merits of testing for prostate cancer. This will enable them to make an informed choice as to whether or not testing is right for them. Discussions should always take into account the individual's risk factors for the disease.

General practitioners (GP's) and other healthcare providers are encouraged to give all men the opportunity to discuss the benefits and potential harms associated with the early detection of prostate cancer before having any form of testing. The discussion should also include possible treatment options, including active surveillance, and any associated side effects should the result be positive. It should be noted that side effects from early treatment have significantly reduced in recent years. Testing men older than 75 years is associated with significant harms and minimal benefits. The age at which to begin any testing is less clear. Any decision to test should be made as a shared, informed decision between the GP and the patient. The patient's values, understanding and acceptance of risk, and other personal preferences should be taken into account.

There are major difficulties separating the benefits of true '*population screening*' in men of around 50 to 70 years, from the rights of an informed individual, with the knowledge of both the benefits and the potential risks, to request screening. GP's should not be advising against screening if informed men request it.

For those men who are diagnosed with prostate cancer timely access to treatment is essential. The current geographical inequalities in treatment access should be reviewed with the aim of ensuring that all patients, regardless of their geographical location, have timely access to all available, best practice treatment options, provided by appropriately skilled staff.

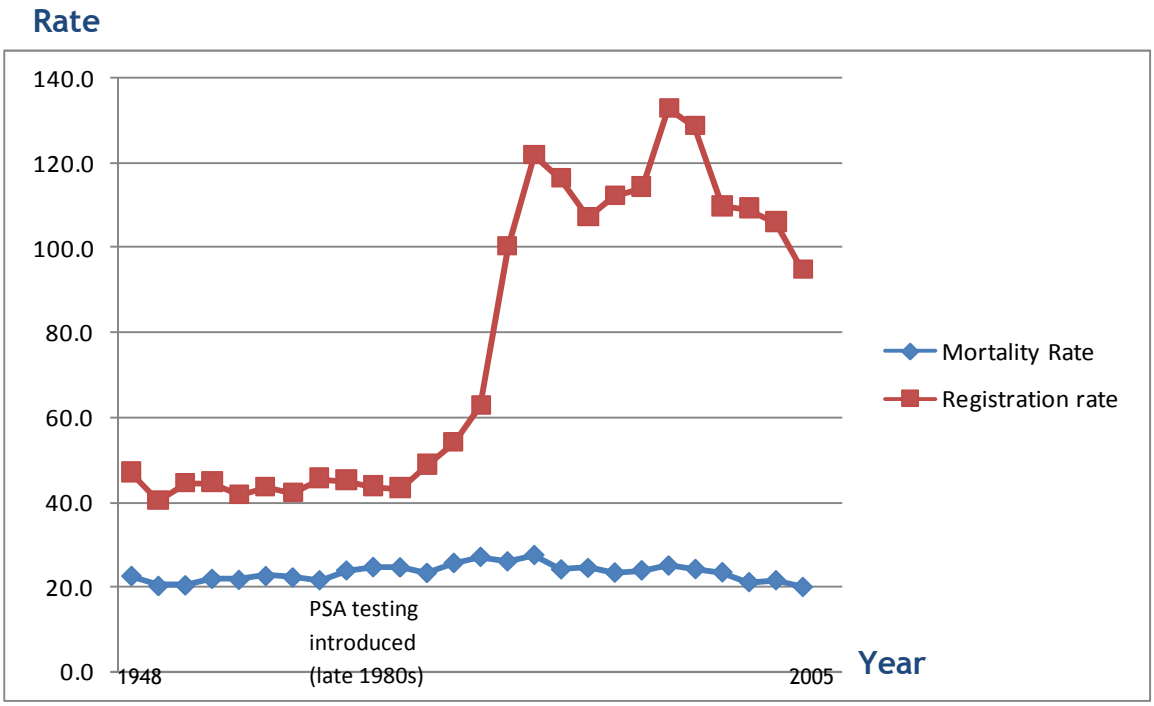
Introduction

In New Zealand, prostate cancer is the most commonly diagnosed cancer in men. Men who are 60 years old or older make up 82 percent of those diagnosed. It is the third leading cause of cancer death in men. Of the men who do die from prostate cancer, 96 percent are 60 years old or older (MoH 2008). Prostate cancer is a significant public health issue for men and one for which there have been repeated demands for a national screening programme.

Controversy around screening for prostate cancer has been ongoing for over a decade, causing confusion in both the general public and medical practitioners alike. The most commonly used tests for prostate cancer are the prostate specific antigen blood level (PSA test) and the digital rectal examination (DRE). In many developed nations the registration rate of prostate cancer rose sharply during the 1980s and early 1990s due to the introduction of PSA testing. New Zealand was no different, although the increase did not start until the early 1990s. Only recently have registrations started to plateaux and slowly decline.

During this time, however, the mortality rate has not significantly declined in New Zealand. Overseas, there are varying trends in mortality rates. Mortality rates are lower than those prior to the introduction of PSA testing in some countries such as Italy, Canada and USA. In countries such as Australia, Finland, New Zealand and the United Kingdom the rate has been stable with small decreases. However, the levels are still higher than before the introduction of testing. In other countries there has been seen a slow increase in the mortality rate over time (eg. Poland, Belgium Ireland and Argentina) (Damber and Aus 2008) (Bouchardy, Fioretta et al 2008).

New Zealand Prostate Cancer Registration and Mortality Rates 1980—2005



New Zealand Cancer Registry and the Ministry of Health's Mortality Data Collection, Historical Summary 1948—2005

PSA testing has changed the patterns of prostate cancer diagnosis. Whether it has lead to changes in mortality rates is less clear. It is possible that improvements in surgery, radiation treatment, and advances in drug therapies, have had an impact on mortality rates (Smith, Supramaniam, Marshall and Armstrong 2008). Some evidence from the USA suggests that where PSA testing is most common, there was a correspondingly lower proportion of men that presented with metastatic disease and a lower prostate cancer mortality rate (Loeb, Catalona 2008). The Cancer Society of New Zealand believes that the oft quoted message that " more men die with rather than from prostate cancer" is unhelpful and adds to the confusion.

Screening Criteria

Before a nationally organised screening programme begins, a number of criteria should be met. These criteria are that:

- the condition is a suitable candidate for screening
- there is a suitable test
- there is an effective and accessible treatment or intervention for the condition identified through early detection

- there is high-quality evidence, ideally from randomised controlled trials, that a screening programme is effective in reducing mortality or morbidity
- the potential benefit from the screening programme should outweigh the potential physical and psychological harm (caused by the test, diagnostic procedures and treatment)
- the health care system will be capable of supporting all necessary elements of the screening pathway, including diagnosis, follow-up and programme evaluation
- there is consideration of social and ethical issues
- there is consideration of cost-benefit issues (National Health Committee 2003).

Prostate cancer screening using the PSA test meets some of these criteria. However, to date the randomised controlled trial (RCT) evidence has been lacking.

Two recent screening trials released their results earlier this year. The European Randomised Study of Screening for Prostate Cancer (ERSPC) began in the early 1990s evaluated the effect of screening with the PSA test on death rates from prostate cancer (Schroder F, Hugosson J, Roobol M. et al 2009). They concluded that at a median follow-up time of nine years, there was an absolute risk reduction of 0.71 deaths per 1000 men. This meant that 1410 men would need to be screened and 48 additional cases of prostate cancer treated to prevent one death. PSA-based screening slightly reduced the rate of death from prostate cancer, but was associated with a high risk of over-diagnosis.

The other trial was based in the United States of America. This trial (the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial) involved a smaller sample of men (76,693 vs. 182,000) compared with the ERSPC trial. At 7 to 10 years follow-up, the trial concluded that the death rate from prostate cancer was very low in both groups and did not differ significantly. Both of these trials have limitations and have been criticised for a number of issues. One suggested limitation is that they both have reported on their findings too early thus preventing any long-term benefit from screening to be detected. Both trials also had contamination of their control arms due to increasing opportunistic screening over the time of study. However, both trials did note the higher risk of potential harms associated with over-diagnosis and treatment with PSA screening.

Factors that increase the risk for developing prostate cancer are:

- increasing age is the primary risk factor with most cases diagnosed in men over the age of 65 years
- a family history of one or more close relatives
- there is some data to suggest that men with relatives (male or female) who have mutations in the BRCA1 and/or BRCA2 genes have a slightly elevated risk for prostate cancer(Sinclair, Berry, Schaid et al 2000)((Thompson, Easton 2002)(Edwards, Kote-Jarai, Meitz et al 2003).

In the absence of definitive evidence to recommend a national screening programme, men, particularly those at higher risk, are encouraged to discuss with their doctor the merits of testing for prostate cancer, to enable them to then make an informed choice as to whether or not screening is right for them. In New Zealand, most men are unaware of the issues with PSA testing (Arroll, Pandit, Buetow 2003) and many GP's undertake screening with a limited understanding of the effectiveness or otherwise of the PSA test

(Durham, Low, McLeod 2003). GP's should have a clear understanding of the issues around screening with PSA testing. A discussion about testing should include the following points:

- the likelihood of a prostate cancer diagnosis
- the possibilities of false positive and false negative results
- the anxiety associated with a positive result
- the uncertainty regarding whether screening reduces the risk of death from prostate cancer (Barry 2001).

Testing should also take into account a man's risk profile. The best documented risk factors are age, race/ethnicity and family history (AHRQ 2002). Men should be informed that an abnormal result will require further evaluation often involving a biopsy. Recommendations for ceasing any testing suggest 75 years of age as being the appropriate limit (USPSTF 2008). Some suggest the maximum benefits of screening are in men up to 70 years of age (Lamb, Slaney, Smart et al 2007). When to start testing is dependent on the individual's risk profile and the informed choice of each man.

Treatment options include, surgery in the form of prostatectomy, radiation treatment both external and via brachytherapy and hormone therapy. Also, especially for low risk, older men, the option of active surveillance should also be discussed (Cancer Society 2008).

Testing can lead to a cascade of unanticipated events if patients do not understand the potential, but unproved, impact on survival, treatment effectiveness, side effects and lifelong changes associated with being a "cancer survivor" (Wilt T, Thompson I 2006).

Shared decision making helps an individualised, patient-centered approach. Patients with cancer should actively participate in making quality decisions that are based on their informed values (Stacey, Samant and Bennett 2008). The use of decision aids:

- reduces decisional conflict
- increases knowledge and understanding of prostate cancer
- promotes greater involvement in the decision making process (Volk, Hawley, Kneuper et al 2007).

Most agencies around the world have some form of recommendation that decisions for screening for prostate cancer should be made on an individual basis and in consultation with a medical professional:

The Australian Cancer Council states that: "In the absence of direct evidence showing a clear benefit of population based screening for prostate cancer, a patient centred approach for individual decisions about testing is recommended. Screening discussions and decisions should always include and take into account, age and other individual risk factors such as a family history of the disease" (Cancer Council Au 2005).

The American Cancer Society states that "The American Cancer Society (ACS) does not recommend routine testing for prostate cancer at this time. ACS believes that doctors should discuss the pros and cons of testing with men so each man can decide if testing is right for him. If a man chooses to be tested, the tests should include a PSA blood test and

DRE (digital rectal exam) yearly, beginning at age 50, for men at average risk who can be expected to live at least 10 more years." (American Cancer Society 2009).

The UK Cancer Research Council states: "in the UK, there is no national screening programme for prostate cancer because trials have not yet shown clear evidence that screening will reduce deaths from this disease. Also, many men diagnosed with prostate cancer have very slowly growing cancers that will never cause any symptoms or problems in their lifetime. So at the moment there is no clear benefit in diagnosing prostate cancer early and it may actually cause harm for some men."(Cancer Research UK 2009).

Urological Society of Australia and New Zealand states: "Individual men aged 50 to 70 years with at least a 10 year life expectancy should be able to be screened by annual DRE and PSA testing, after appropriate counselling regarding the potential risks and benefits of investigations and the controversies of treatment."(Urological Society ANZ 1999).

Treatment of Prostate Cancer

Treatment considerations for prostate cancer vary from one man to another, depending on the age of the man, the stage of the cancer, the tumour grade and the presence or absence of other serious medical conditions. Options include 'watchful waiting' (active surveillance), surgery, radiation therapy (external beam radiation, low-dose rate brachytherapy, high-dose brachytherapy), hormone therapy or a combination of the above. The New Zealand Guidelines Group (NZGG 2005) states that "Patient acceptability, convenience and staff safety are important considerations, and there is some descriptive evidence that HDR BT (high-dose-rate brachytherapy) has an advantage over other methods of dose escalation for these outcomes." At this time high dose rate brachytherapy is only available through the public health system in Wellington and Waikato District Health Boards. Patients outside these areas can, in some centres, access seed implant brachytherapy via the private health system. This 'geographical' inequality with respect to accessing treatment options should be reviewed with mechanisms put in place to enable all patients to access the same treatment options regardless of their location. This could be achieved either by improving distance access by cross DHB transfers or increasing the number of centres providing this therapy. Probably both will be required. These issues have already been identified within the Cancer Control Strategy under Goal 3, objective 1- Provide optimal treatment for those with cancer (MoH 2003). For patients with prostate cancer there is significant room for improvement.

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