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Detecting and treating prostate cancer: a surgeon's perspective

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PSA testing has become a "hot" topic in recent years and the debate has only become stronger since the publication of the early results of the European and American Prostate cancer screening trials.[1–3] Such is the debate and interest in the topic that it has even overflowed into the popular press with recent articles published in North and South and Scientific American.[4,5]

Unfortunately the debate has left many confused and uncertain of the role of PSA in prostate cancer management. Much of the debate has surrounded the role of PSA testing in population based screening in *asymptomatic* men. The key tenets of the debate have surrounded whether or not there is an overall survival benefit and if this survival benefit is outweighed by the potential for harm from the diagnosis of so called "insignificant" cancers and the morbidity of treatment.

This very real concern about over treatment is well recognised and accepted by those treating prostate cancer and there has been a significant paradigm shift over the last 5 years towards aggressive treatment of intermediate and high risk disease and away from intervention in low risk disease. This "uncoupling" of the link between diagnosis and active treatment will go some way to reducing the harm from over treatment. Another strategy to reduce this harm is to develop new biomarkers that have accurate prognostic value in predicting the course of the disease process in individual patients.

The article published in this issue of the *NZMJ* by Lance Ng and colleagues[6] titled *Beyond PSA: are new prostate cancer biomarkers of potential value to New Zealand doctors?* is an excellent summary of the landscape of investigation into prostate cancer biomarkers. Currently there are no markers that closely rival PSA in clinical practice, but this is a field in constant evolution.

One of the key difficulties for any prostate cancer researcher is the long latency period between diagnosis of prostate cancer and sequelae of the disease. This means that any studies being conducted with overall survival and cancer specific survival as endpoints need at least 15 years to mature. If a biomarker was developed that was also able to determine response to treatment this would greatly speed up the development and investigation of new prostate cancer treatments especially at the early, potentially curable stages of the disease.

Currently a significant amount of investment has gone into drug development at the end stages of the disease, partly because it is easier to measure outcomes later in the disease process as the latency period is significantly reduced. Whatever opinion you have on prostate cancer population screening in *asymptomatic* men everyone agrees that prostate cancer has a significant impact on the New Zealand population.

Prostate cancer is the third leading cause of male cancer deaths in New Zealand.[7] There is no doubt that we need to get smarter about the concept of screening in general.

Risk assessment tools may play a central role in the future when considering whether to biopsy men with an elevated PSA. Such tools enable both the clinician and patient to quantify the risk of finding prostate cancer on biopsy and most importantly the specific risk of finding high-grade prostate cancer.[8]

A limited number of factors such as age, comorbidity, prostate volume, family history, ethnicity and previous biopsy status have been identified to modify risk and are important for consideration in routine practise.[9,10]

As the debate surrounding PSA screening has raged what has been lost in translation is that PSA remains an invaluable test in *symptomatic* men as well as in the follow up of men treated for prostate cancer. As a clinician treating prostate cancer on a daily basis, unfortunately it is common for me to hear from patients and General Practitioners alike that they thought that PSA, as a test is "a waste of time". It is important that this misconception and extrapolation of the prostate cancer screening data to *symptomatic* men be rectified.

It is the right of all male New Zealanders to be well informed about the benefits and drawbacks of PSA testing and it is our responsibility as clinicians to enable them to make a risk assessment based on the most currently available data. Moreover it is the right of all New Zealand males to have a PSA test if they so choose.

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