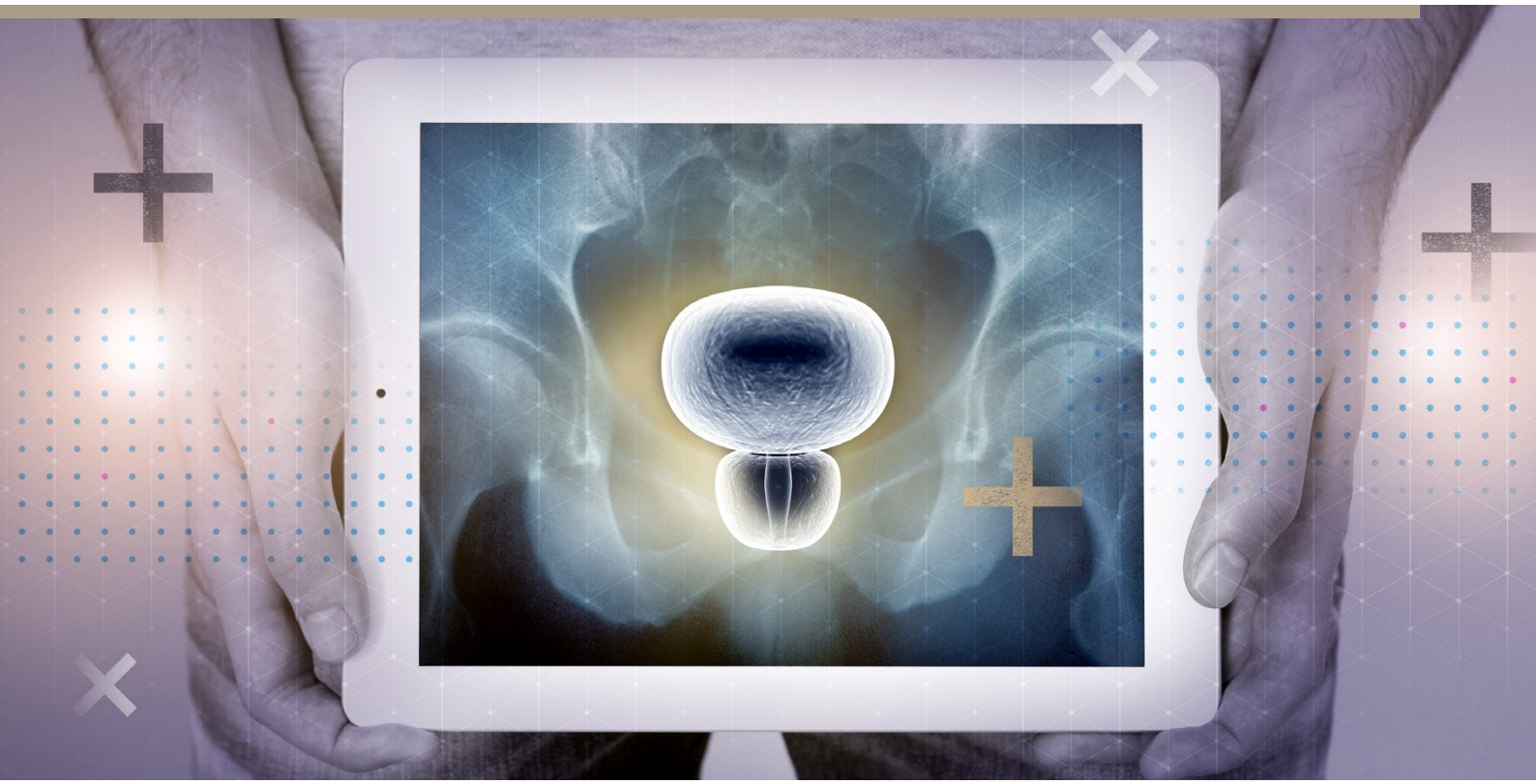

Testing for prostate cancer: helping patients to decide

Testing for prostate cancer is a difficult issue as many prostate cancers are low risk and do not necessarily result in adverse outcomes. Detecting and treating these low-risk cancers can cause adverse effects with limited benefit to patients. Patient education and informed consent is therefore key before testing for prostate cancer. Support material for patients is available to help them with their decision, and a recently released decision support tool can assist clinicians when discussing and conducting checks for prostate cancer.

KEY PRACTICE POINTS:

- Prostate cancer is the third highest cause of cancer death for New Zealand males, behind lung and colorectal cancers. Those with a family history of prostate cancer are at the greatest risk.
- Māori are approximately twice as likely to die following a diagnosis of prostate cancer than non-Māori, likely due to reduced access to healthcare and delayed diagnosis
- Prostate-specific antigen (PSA) is the only widely available test for detecting prostate cancer. However, interpretation of results can be difficult as elevated PSA levels are not specific for cancer and can be caused by other conditions such as benign prostatic hyperplasia and prostatitis. In addition, not all males with prostate cancer have elevated PSA levels.
- If asymptomatic males aged 50–70 years (or from age 40 years in those with a family history) enquire about testing for prostate cancer, provide information so they can make an informed decision, i.e. discuss the benefits and risks of PSA testing and the role of digital rectal examination (DRE) and refer them to patient information developed for a New Zealand audience: **www.kupe.net.nz**
- Testing may be appropriate in asymptomatic males aged over 70 years, e.g. with a family history of prostate cancer or previous abnormal PSA result, taking into consideration their life expectancy in relation to the likely course of prostate cancer, as part of the decision-making process
- Men with early stage prostate cancer are typically asymptomatic but symptoms can develop when the cancer progresses to be locally advanced or metastatic. Encourage patients to report urinary symptoms, so that possible significant prostate cancer can be detected at an early stage when treatment is more likely to be curative.
- A recently released bestpractice decision support tool by BPAC Clinical Solutions can assist primary care clinicians in managing PSA and DRE results and symptoms and signs associated with prostate cancer, keeping track of repeat test results and providing advice on referral

Prostate cancer is one of the leading causes of cancer death in men in New Zealand

Prostate cancer is the most common cancer in males in New Zealand, with 103 new registrations per 100,000 men in 2017, compared to rates of 29–45 per 100,000 men for other common cancers such as melanoma, lung or colorectal cancer.[1] Although prognosis is often good with early detection of confirmed disease, prostate cancer is the third-highest cause of cancer death for New Zealand males, behind lung and colorectal cancers.[2]

Māori have worse outcomes from prostate cancer than non-Māori

Evidence suggests Māori are being diagnosed at later stages of disease, when survival is less likely, resulting in poorer outcomes.[3] For example, an assessment of prostate-specific antigen (PSA) testing conducted between 2007 and 2010 in the Midlands Cancer Network region found that Māori were approximately half as likely to have a PSA test as non-Māori, but were twice as likely to have elevated PSA results.[4] An assessment of cancer survival rates from 1996 to 2010 found that following a diagnosis of prostate cancer, Māori were approximately twice as likely to die from prostate cancer than non-Māori.[5] Analyses suggest that differences in access to healthcare, rates of diagnosis and treatment contribute to this increased mortality, rather than Māori having a greater risk of prostate cancer.[6]

Males of Pacific Island ethnicity in New Zealand appear to have rates of prostate cancer incidence and mortality similar to all males in general.[6]

Patients with a family history are most at risk

The risk of prostate cancer increases as more men in the immediate family (e.g. father or brother) or more distant family (e.g. grandparent) are affected.[7] Compared to those without a family history, risks are:[6]

- Two times greater for males with one first-order relative (e.g. father or brother) with prostate cancer
- Five to eleven times greater for males with more than one first-order relative (e.g. father and one or more brother) with prostate cancer

Males with two or more relatives diagnosed at an early age, e.g. before age 55 years, are more likely to develop prostate cancer earlier but have the same chance of developing aggressive cancer as patients without a family history.[8]

The risk of prostate cancer increases with age

The risk of prostate cancer for males aged in their 40s is approximately one in 500, increasing to approximately one in 50 for males in their 50s and one in nine for males in their 70s.[9] Autopsy studies have found that undetected prostate cancer is present in approximately 50–60% of males aged over 79 years.[10] However, for a male aged 70 years who has an increased PSA, the chance in his lifetime that he will develop a symptomatic cancer is 50%, decreasing to 33% by age 75 years.[6]

Diagnosis of prostate cancer requires patients to undergo assessment in primary and secondary care

The diagnosis of prostate cancer begins in primary care with symptoms and signs, digital rectal examination (DRE) and PSA testing. Early, low grade, prostate cancer is typically asymptomatic. Urinary symptoms can develop when a tumour is locally advanced, with systemic symptoms in metastatic disease, such as bone pain, weight loss and fatigue.[6] Symptoms associated with prostate cancer are similar to those in benign prostate conditions, including benign prostatic enlargement or hyperplasia and prostatitis; some patients may have both prostate cancer and another co-existing benign prostate condition.[11]

Table 1: Factors which complicate the detection and management of prostate cancer[6, 14]

Tumour biology	■ Asymptomatic prostate cancer is common in older males, with many tumours posing little risk of premature mortality
Testing	■ PSA testing can result in a number of false positive and false negative results. DRE is recommended in addition to PSA testing to reduce the risk of missing a cancer. ■ False positive PSA test results mean patients may be referred for prostate biopsy for further investigation of possible cancer, resulting in additional anxiety and in some cases biopsy-related complications. ■ False negative PSA test results may result in false reassurance
Complications from management	■ Interventions such as radical prostatectomy and radiation therapy can result in lifelong adverse effects on urinary, sexual and bowel function in many patients ■ For males with localised, low risk prostate cancer, active surveillance (structured monitoring without initial treatment) is likely to provide the best outcomes, however, patients may choose to undergo more aggressive treatment if they are not comfortable with conservative management

Diagnosis is completed in secondary care with a prostate biopsy, guided by ultrasound, and possibly MRI, after which patients with a positive diagnosis can be categorised into low to high risk groups based on features such as the extent of advancement of the cancer, PSA levels and histological features of cancer biopsies (Gleason score).[6]

Targeted, rather than widespread testing, is most appropriate

Although increased rates of testing would be expected to improve early detection of prostate cancer and result in better outcomes, a combination of factors related to tumour biology, testing specificity and complications from interventions (Table 1) mean that targeted testing is most appropriate, rather than widespread screening of asymptomatic individuals (see: "Evidence from clinical trials of population screening").

Low grade prostate cancer poses little risk to survival

Some types of prostate cancer have a relatively slow rate of growth and can take many years to progress from early to metastatic disease. A landmark follow-up study of patients diagnosed between 1971 and 1984 with localised prostate cancer, who were treated conservatively, found an overall mortality rate of 33 deaths from prostate cancer per year for every 1,000 people after 15 years.[12] In those with low risk localised prostate cancer*, the rate of mortality was approximately six deaths per year for every 1,000 people.[12, 13] Patients with low risk cancers are therefore more likely to die from co-morbidities or other causes rather than prostate cancer. Therefore, detecting and treating many of these cancers is likely to cause harm to patients without meaningful benefits.

* Defined as localised prostate cancer with a low Gleason score of two to four

PSA testing is useful for detecting prostate cancer, but comes with caveats

PSA testing is currently the only widely available biochemical measure to assess a patient's risk of prostate cancer. However, it cannot reliably diagnose or exclude prostate cancer and patients with elevated levels require further investigation with a subsequent prostate biopsy or possibly MRI. Testing can therefore lead to a cascade of further investigations or interventions which could overall result in harm rather than benefit, due to false positive results, over-detection (detecting low risk cancers which do not threaten a patient's health) and over-treatment, i.e. patients choosing interventions which are more aggressive than may be necessary for the treatment of low-risk cancers.

Discussing testing with asymptomatic males

The Prostate Cancer GP Tool decision support module provides guidance on testing for prostate cancer in primary care, including information on risk, recommendations on when to refer patients based on their age, symptoms and signs, PSA and DRE results. The GP Tool can be accessed via Medtech32 and Medtech Evolution (see: "A recently released GP tool can help with prostate cancer testing").

Evidence from clinical trials of population screening

A number of clinical trials have evaluated the benefit of PSA testing in asymptomatic males, i.e. widespread screening, with sufficiently long follow-up times to evaluate the long-term benefit and adverse effects of PSA testing.

These trials have found that after ten years, PSA screening of 1,000 asymptomatic males aged 45–80 years, compared to no co-ordinated screening, results in:[14]

Increased detection and fewer prostate cancer deaths	More complications and no change in overall mortality
■ One fewer death from prostate cancer ■ Three fewer cases of metastatic prostate cancer ■ 14 more localised cancers being detected	■ No differences in rates of overall mortality ■ More complications from prostate biopsy, such as 67–94 males with blood in their semen or urine, and one additional patient hospitalised for sepsis ■ More complications from treatments, such as approximately 25 males with erectile dysfunction and three with urinary incontinence

Clinical guidelines groups in New Zealand and overseas unanimously conclude that evidence does not support population screening of asymptomatic males of this age due to the potential for widespread screening to cause harm.[6, 14, 15]

For asymptomatic males who are concerned about the possibility of having prostate cancer, e.g. due to a family history or increasing age, clinicians in primary care should offer information regarding the benefits and risks of PSA testing and DRE, including the implications of further testing if results are abnormal, as each patient will weigh the possible benefits and risks of testing differently.[6, 16]

Testing and examination for prostate cancer is appropriate for males:[6]

- **Without a family history:** aged 50–70 years
- **With a family history:** aged 40–70 years

Testing for prostate cancer in asymptomatic males aged over 70 years may be appropriate if the patient has a life expectancy of ten years or more, e.g. if they have previously had a raised PSA level or have a family history.[8]

Patients do not need to decide during the appointment

Some patients may arrive at an appointment having already read appropriate patient information materials or be willing to make a decision about testing after a brief discussion of the benefits and risks (Table 2). If patients require more time to decide and discuss options with family/whānau, there is little risk in having asymptomatic patients contemplate their options over the next few weeks before making a decision, as prostate cancer is typically slow growing.

For these patients, during the initial appointment the possible benefits and risks of undergoing testing could be introduced (Table 2), the patient referred to educational materials (see "Patient information material for a New Zealand audience") and a follow-up appointment or phone call scheduled, e.g. in two to four weeks.

PSA testing and DRE

Repeat PSA tests are necessary in most patients

PSA levels can fluctuate and are affected by factors other than prostate cancer.[6] Therefore, if patients have a raised PSA level in isolation, i.e. without abnormal DRE findings or red flags suggestive of metastatic disease (see below), a repeat PSA test after 6–12 weeks is recommended prior to making a decision regarding referral, to reduce false positive results.

Higher PSA levels or an increasing rate of change are suggestive of prostate cancer

A PSA level >4.0 micrograms/L has a sensitivity of 21% and specificity of 91% for a cancer being detected on a subsequent prostate biopsy. Sensitivity for detecting aggressive prostate cancer is higher, at 51%.[17]

The positive predictive value (probability of detecting a cancer on prostate biopsy) increases with higher PSA test results or quicker rate of change*:[6, 8]

- 4–10 micrograms/L: 40% chance of cancer on prostate biopsy
- >10 micrograms/L: 67% chance of cancer; values above this level are rarely caused by benign prostatic enlargement or hyperplasia
- >20 micrograms/L: high likelihood of cancer; prostatitis is an alternative cause

* For example, over 0.5 – 0.75 micrograms/L increase per year.[6,18]

False positives and negatives can occur

In one large clinical trial involving over 60,000 males, one in five had a false positive screening test at some point in the trial, defined as a PSA level >4.0 micrograms/L without finding a cancer on subsequent biopsy in the following year.[19] However,

Table 2: Possible benefits and risks for patients undergoing PSA testing and DRE for prostate cancer. Adapted from the Ministry of Health [8]

	Undergoing testing	Not undergoing testing
Possible benefits	■ If both PSA test results and DRE do not suggest prostate cancer then patients and their families/whānau can be reassured it is unlikely they have it ■ If cancer is detected it is more likely to be early stage with a better chance of survival than	■ Avoiding false positive results ■ Patients with low risk localised cancers may never develop problems associated with the cancer, and can avoid testing and the anxiety of a positive diagnosis
Possible risks	■ PSA testing or DRE could produce a false positive result and the patient would require a prostate biopsy, which in turn is associated with both benefits and risks ■ PSA testing could produce a false negative result and provide false reassurance if results are normal but a cancer is present	■ Risk of an early aggressive prostate cancer not being detected and treated, resulting in metastases

males with a false positive screening test were also more likely to have a positive diagnosis of prostate cancer at a later stage of the trial. Current guidelines recommend age-specific thresholds for intervention (see below) in order to reduce the incidence of unnecessary prostate biopsies.

False negatives are possible, i.e. patients can have prostate cancer with PSA levels <4.0 micrograms/L.[6]

Conducting a DRE can help avoid some cancers being missed

It is recommended that DRE is included as part of prostate cancer testing, in combination with PSA testing, as it is estimated that up to 17% of cancers are missed by PSA testing alone.[6] The prostate gland when palpated on rectal examination is typically smooth, symmetrical and relatively firm in consistency with two lobes and a central sulcus. DRE is of limited value in detecting early disease or tumours in the anterior aspect of the gland, however, the presence of a hard lump or irregularity on examination is likely to be a sign of a more advanced cancer.[6] Loss of the central sulcus can also be associated with prostate cancer, however, it is of less predictive value than detection of a hard lump or irregularity.[6]

PSA testing for prostate cancer should only be used alone if patients are particularly uncomfortable about having a DRE performed, and it becomes a barrier to being tested.[6]

For further information, see: "The role of DRE: a discussion".

When to refer asymptomatic patients to a urologist or oncologist

Referral criteria differ according to patient age. Clinicians in primary care should request a routine referral (i.e. to be seen within six to eight weeks) for asymptomatic patients if they:[6]*

- Are aged 50–70 years and the results of two PSA tests are ≥ 4.0 micrograms/L*
- Are aged 71–75 years and the results of two PSA tests are ≥ 10.0 micrograms/L*
- Are aged 76 years and over and the results of two PSA tests are ≥ 20 micrograms/L*
- Have DRE findings suggestive of a tumour, regardless of PSA test results

Referral may also be appropriate (discuss with a urologist) for patients with PSA levels below these thresholds, but that are rising significantly from earlier low levels in previous years, e.g. some clinical experts would suggest an increase of 0.75 micrograms/L per year over two consecutive years.[6]

* 5-alpha reductase inhibitors used for the treatment of benign prostatic hyperplasia reduce PSA levels by approximately 50% and thresholds of half the recommended level are appropriate for patients using these medicines.[20, 21]

Patient information material for a New Zealand audience

Various patient support materials have been developed to assist families/whānau in New Zealand to decide whether a male in their family should undergo testing for prostate cancer.

Kupe

Kupe is a website sponsored by the Ministry of Health containing information aimed at patients or a patient's support person, e.g. partner or family member. It contains information about prostate cancer, what testing involves and possible testing and treatment paths following a positive PSA test, in order to help patients decide whether to discuss prostate cancer assessment with their general practitioner.

Kupe is freely available at: **www.kupe.net.nz**

Ministry of Health patient information booklet

Free copies of an information booklet are available at the HealthEd website supported by the Ministry of Health and Health Promotion Agency. The booklet covers prostate cancer risks, symptoms, diagnosis and treatment options. Free copies can be ordered online, or patients can be directed to the website to view the pdf themselves. Videos in New Zealand sign language are also available.

www.healthed.govt.nz/resource/prostate-cancer-more-information-men-and-their-families-and-whānau-0

The role of DRE – a discussion

Recommendations regarding the role of digital rectal examination (DRE) in initial testing for prostate cancer in asymptomatic men are inconsistent among international guidelines. There is ongoing debate in the urological literature about the benefits of early diagnosis of prostate cancer versus the harms of overdiagnosis and overtreatment.[1, 2] Much of the discussion about prostate cancer investigation centres on whether all asymptomatic men should be screened or if targeted testing is the better approach, given the limitations of both PSA testing and DRE as population screening tests. The majority of international guidance supports shared decision making rather than population screening. Teasing out recommendations from the literature regarding the specific role of DRE is more challenging.

Advice from the 2015 New Zealand Prostate Cancer Working Group and Ministry of Health guidance is that the risks and benefits of both a PSA test and DRE should be part of an informed discussion and that if the decision to test for prostate cancer is made, DRE be carried out along with PSA testing because it can detect some cancers where PSA may be normal.[3]

A review of international guidance provides a mix of recommendations. The Canadian Urological Association supports the use of PSA and DRE after shared decision-making stating that while controversial, DRE can "increase the detection of clinically significant disease", while in contrast the Canadian Task Force on Preventive Health Care does not even recommend PSA "screening" with or without DRE, a situation that has left primary care clinicians in Canada without unified guidance.[4, 5] European guidelines recommend "informed men" be offered both PSA testing and DRE.[6] Some guidelines clearly state that they do not recommend the use of DRE for routine testing in asymptomatic men, e.g. Australian and the American Urological Association guidelines.[7, 8] However, others, e.g. National Comprehensive Cancer Network (NCCN) and American Cancer Society leave the option open, suggesting that the need for a DRE should be considered, or indeed strongly considered in the case of the NCCN advice, on an individual basis.[9, 10]

The recommendations vary because there is a lack of evidence regarding the utility of DRE in this clinical situation as pointed out by the authors of a recent systematic review and meta-analysis.[11] The evidence that is published is also of low quality and there continues to be uncertainty and disagreement about the whole issue of early detection.[12] Note: There is generally no debate about the role of DRE in symptomatic men or those with increased PSA results who are to be referred for biopsy or further investigations.

One of the key difficulties in making recommendations is that the PSA test is just not a very good screening test: It is not specific for malignancy, it reflects a continuum of risk, a "normal" PSA level does not rule out malignancy and high levels may trigger a range of investigations and treatment resulting in short and longer term complications without necessarily reducing overall mortality. When DRE is added to the mix as well, the situation becomes more complicated. DRE has limitations too: it has low sensitivity and specificity, the reliability of the examination is dependent on the experience of the clinician and some men may find the examination unacceptable. The low sensitivity is partly explained by the fact that early cancers may not be palpable and only those that are posterior or lateral can be felt. The conclusion from Naji *et al*. recommending against routine use of DRE in a primary care setting appears then to be understandable. However, it can also be argued that the combination of a PSA test and a DRE may increase the sensitivity and specificity of cancer detection.

It seems that best practice at this stage, until there is more clarity from good quality evidence, is that it is up to the clinician and the patient to make a shared decision based on individualised risks and benefits.

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Frequency of testing in asymptomatic patients

There is little evidence available to guide the frequency of repeat PSA testing or DRE in patients who have normal results on initial testing.

For patients without a family history, further testing may not be necessary, but could be offered at two to four year intervals until the age of 70 years if the patient wishes[8] however some experts advise repeat testing at one to two year intervals, e.g. in a younger man with a PSA at the higher end of the normal range.[22]

For patients with a family history, New Zealand guidance recommends that annual PSA tests and DRE should be offered from age 40 years until age 70 years.[8]

For patients aged over 70 years there is little evidence available regarding the benefits and risks of ongoing testing.[8] For males with previously normal PSA levels and DRE findings, further testing is unlikely to be necessary. For males with a family history of prostate cancer or previously elevated PSA levels, continuing annual assessments may be appropriate if they have a life expectancy of ten years or more.[8]

Managing patients with symptoms and signs suggestive of prostate cancer

Encourage males to report urinary difficulties

Prostate cancer is relatively rare in males aged 45 years or under, with incidence increasing from age 50 years.[1] Encourage males of this age and older to report urinary symptoms so that possible significant prostate cancer can be detected at an early stage when curative treatment is possible. Some evidence suggests that fewer Māori males seek treatment for urinary symptoms than non-Māori, which may contribute to Māori having worse outcomes for prostate cancer than males of other ethnicities in New Zealand.[3]

Symptoms and signs of prostate cancer are similar to other prostatic conditions

Lower urinary tract symptoms are nonspecific, can be indicative of many conditions and also cannot be used to clearly distinguish between early or more advanced prostate cancer. Guidelines recommend considering a PSA test and DRE to assess for the possibility of prostate cancer in males with lower urinary tract symptoms, including:[6, 11]

- Decreased force of urinary flow
- Nocturia
- More frequent urination
- Delay in starting urination
- Post-urination dribble
- Blood in urine
- Erectile dysfunction
- Feeling of incomplete bladder emptying

Red flags which are suggestive of metastatic prostate cancer include:[6, 8]

- Bone pain
- Macroscopic haematuria
- Acute neurological symptoms consistent with spinal cord compression or cauda equina syndrome
- Renal failure

Other tests to consider include a urine dipstick and midstream urine sample for assessment of urinary tract infection.

DRE findings may help with differential diagnosis: The prostate is typically the size of a squash ball with an even consistency and texture.[23] Patients with benign prostatic enlargement or hyperplasia may have a prostate larger than this but with the symmetry, texture and consistency of the gland preserved. These patients may also have mildly elevated PSA levels (e.g. < 10 ug/L).[6, 8]

Pain, such as perineal pain, pain during or after ejaculation, a sensation of urethral burning or penile pain, especially at the tip of the penis, is suggestive of prostatitis.[24, 25] In a study of over 400 males, pain was reported by approximately three out of five patients with prostatitis, compared to one in five patients with benign prostatic hyperplasia and one in twenty without prostate conditions.[26] In addition, prostatitis can cause rapid increases in PSA to high levels, e.g. > 20 micrograms/L.[6]

When to refer patients with suggestive signs or symptoms

The Prostate Cancer GP Tool decision support module provides recommendations on when to refer patients based on their age, symptoms and signs, PSA and DRE results, and can be accessed via Medtech32 and Medtech Evolution (see: "A recently released GP tool can help with prostate cancer testing").

Referral criteria and urgency differ according to the extent of PSA elevation, and which symptoms, signs or red flags are present (Table 3). If red flags are present or DRE results are abnormal, waiting for a repeat PSA tests after 6–12 weeks is not necessary.[8]

Further investigations and treatment options after referral

Prostate biopsies are necessary for a diagnosis

Inform patients who are referred that a prostate biopsy, performed under local anaesthesia, intravenous sedation or

Table 3: Referral recommendations for patients with signs and symptoms suggestive of prostate cancer. Adapted from Prostate Cancer Working Group and Ministry of Health, 2015.[8]

Urgency of referral *	For patients with:†
Immediate referral, to be seen within 24 hours	A single PSA level ≥10 micrograms/L with severe back pain and symptoms consistent with cauda equina or spinal cord compression‡
Urgent referral, to be seen within 14 days	A single PSA level ≥10 micrograms/L and one of: ■ Renal failure ** ■ New onset, progressive and severe bone pain ** ■ Macroscopic haematuria ** ■ A hard or irregular prostate on DRE
Routine referral, to be seen in six to eight weeks	■ A single PSA level between 4–10 micrograms/L with macroscopic haematuria in the absence of infection ■ A single PSA level <10 micrograms/L and the prostate feels hard or irregular on DRE ■ PSA levels which are abnormal on two measures 6–12 weeks apart: – ≥4.0 micrograms/L for males aged 50–70 years – ≥10.0 micrograms/L for males aged 71–75 years – ≥20 micrograms/L for males aged ≥76 years

* Access to services varies between DHBs and these referral time frames may not currently be achievable

† 5-alpha reductase inhibitors used for the treatment of benign prostatic hyperplasia reduce PSA levels by approximately 50% and thresholds of half the recommended level are appropriate for patients using these medicines.[20, 21]

‡ Where available, a referral should be made to a radiation oncology service by phoning the on-call radiation oncologist

** In these circumstances, phoning an on-call urologist is recommended

with a light general anaesthetic, is necessary for a diagnosis.[6] Other investigations such as an MRI may also be requested in secondary care.

Possible treatment options if prostate cancer is diagnosed

Management options for patients with prostate cancer include:[6]

- Active surveillance
- Radical prostatectomy
- Radiation therapy
- Surgical or more commonly, medical castration
- Androgen deprivation therapy, with the possible addition of chemotherapy, for patients with metastatic disease
- Watchful waiting

Clinicians in primary care may be involved in the management of patients on active surveillance, watchful waiting or androgen deprivation therapy. Some treatment approaches can be used in combination.

Watchful waiting is typically reserved for patients with a life expectancy of under ten years, where the aim is to monitor for development of symptoms or disease progression based on PSA levels and DRE results.[27] If necessary, palliative, rather than curative, treatment is initiated to reduce the impact of prostate cancer symptoms on quality of life in a patient with a limited life expectancy.[27]

Active surveillance is appropriate for patients with a life expectancy over 10 years and with low risk disease.[27] This strategy aims to reduce the burden of adverse effects related to treatment by monitoring the cancer with a regular predefined surveillance protocol and only undergoing curative treatment if the cancer progresses. Active surveillance includes repeat PSA tests, DRE, prostate biopsies and possibly MRI scans to ensure curative treatment is initiated when there is evidence of disease progression.[13, 27]

If patients are undergoing active surveillance:[6]

- Clearly identify this on practice records
- Set recalls and reminders for monitoring as per their management plan
- Communicate information about the management plan to any other relevant healthcare providers, e.g. if the patient moves practices

Patient information on active surveillance is available at: **www.health.govt.nz/system/files/documents/topic_sheets/prostate-cancer-flyer-22-aug-16.pdf**

A recently released GP tool can help with prostate cancer testing

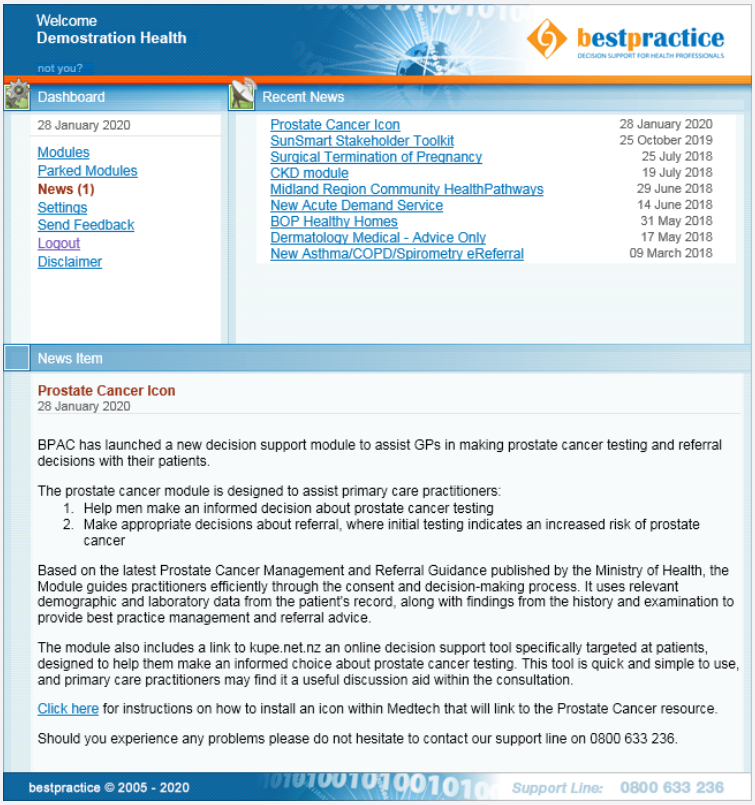
A decision support module developed by BPAC Clinical Solutions is now available in Medtech32 and Medtech Evolution to assist clinicians in primary care in testing for prostate cancer.

To access the tool, firstly log into Medtech (32 or Evolution) and then bring up the BPAC *bestpractice* front page (see screenshots below). The Prostate Cancer news item on the dashboard provides instructions on how to install an icon within Medtech that opens the Prostate Cancer tool.

The GP tool can streamline testing, keep track of results and provide referral advice: The tool will connect to the patient's medical record and fill in demographic information as well as show the dates and results of any previous PSA tests or DREs.

Clinicians can add in information about the patient's family history of prostate cancer (if not already present in their record), any prostate symptoms or red flags, document whether the patient has consented to a PSA test or DRE, and record DRE results. The tool provides appropriate age-based advice.

Medtech 32



Medtech Evolution

Testing for recurrence in patients who have undergone curative treatment for prostate cancer

Patients who have undergone radical prostatectomy, radiation therapy, chemotherapy or androgen deprivation therapy are usually discharged to primary care for follow-up. Refer to recommendations from the patient's oncologist or urologist regarding appropriate follow-up testing and intervals to detect a possible recurrence. For most patients repeat PSA tests every six months for the first two years after treatment, then annually thereafter, is appropriate.[28]

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