Prostate Cancer: Should I be tested?

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Overview

Prostate cancer occurs mainly in men over 50 years and is the most common male cancer after skin cancer. Many men are aware of others at the same age who have been diagnosed with prostate cancer. This raises the questions: what is my risk? Should I be tested?

Before deciding to have a test, you need to know a little more about prostate cancer, the tests and the treatment.

There are some good, not-so-good and unusual features of prostate cancer:

Good News

- Because most prostate cancers are slow growing and many occur in older men, they may not be a threat to life. A man may therefore have this cancer, but it may not cause him any trouble.
- If prostate cancer is detected and treated before it spreads beyond the prostate, it can be cured. Surgery which removes the whole prostate, or radiotherapy which destroys the cancer, can cure it.
- The PSA test (explained on the next page) can indicate prostate cancer at an early stage.
- If prostate cancer is detected after it has extended beyond the prostate area it can be slowed down by hormone treatments, radiotherapy and chemotherapy.
- If you have urinary symptoms such as frequent emptying of the bladder and a weak urinary stream, this is probably **not** due to prostate cancer, but to benign prostate enlargement (non-cancer growth).
- Benign enlargement of the prostate does not 'turn into' cancer.

Not-so-good News

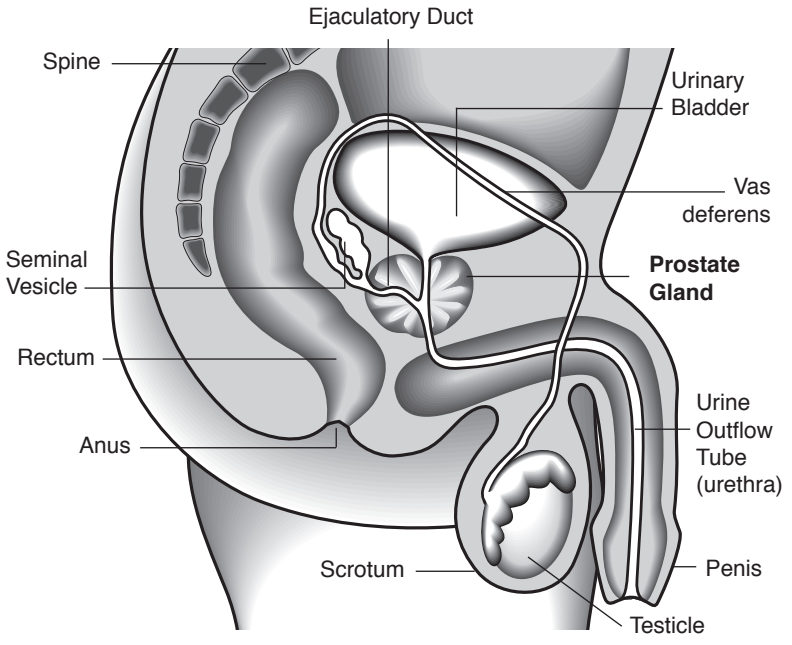
- The location of the prostate is just beneath the bladder, surrounding the urine outlet tube and close to nerves that are important for erections. This means that treatment can affect potency (ability to have erections) and continence (ability to "hold on" to urine).
- Because these cancers grow at different rates, we are not always sure which of the early cancers pose a threat and thus whether treatment of early disease is needed.
- It is not always easy to know whether a cancer is confined to the prostate, and thus whether it is curable or not.
- Early prostate cancer usually does not have any symptoms.
- If a man is diagnosed at a young age (eg. 50s), prostate cancer is likely to progress and eventually affect life and health.

Unusual News

- It is possible to have had an operation on the prostate and still get prostate cancer. Operations for benign enlargement of the prostate (such as a trans-urethral resection, TURP or 'rebore') only remove part of the prostate. After this operation it is still possible to develop cancer in the remaining part of the gland.

Figure 1 - Male Reproductive System

This diagram shows the prostate at the base of the bladder, surrounding the urine outflow tube.



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Having a large prostate doesn't increase your chances of having prostate cancer.

How likely am I to have prostate cancer?

Overall statistics

Prostate cancer is the second most common cancer in Australian men after skin cancer. Of 1000 men aged 50 years, about 136 will be diagnosed with prostate cancer before 80 years, and about 27 will die of it [1]. We know that many older men have small amounts of prostate cancer in their gland, but lead a normal life without it causing them any problem. Studies suggest that over 40% of men aged 70 and above have 'latent' or hidden prostate cancer [2].

High risk groups

Men who are at high risk of developing prostate cancer are those whose father or brother (first degree relative) have had prostate cancer at an early age. A man whose father or brother had prostate cancer is at least twice as likely to develop the disease as a man without such a history. The risk is higher if more than one relative has been diagnosed with it. For example one study suggests that a man with two first degree relatives affected is at least five times more likely to get it [3]. Some experts recommend men at high risk are tested regularly, beginning in their 40s.

What is the chance of a diagnosis of prostate cancer? [1].

For a man in his 40s	1 in 1000
For a man in his 50s	12 in 1000
For a man in his 60s	45 in 1000
For a man in his 70s	81 in 1000

- Younger men have a smaller chance of a prostate cancer diagnosis than older men.
- But if they do get it, they are more likely to die prematurely from it.
- This is because there is more time for the cancer to progress and older men are more likely to die of other causes [1].

Low or moderate risk

A man's age affects both his risk of developing prostate cancer, and whether it is likely to threaten his life. Prostate cancer is rarely found in men under the age of 40, if there is no family history, and so this group is at low risk. Men 50 - 79 years are at low to moderate risk of developing prostate cancer, (see boxes on this page). However if they do get it, there is quite a high chance (two in three) that it will ultimately threaten life. This is because although most cancers grow slowly, over a long period (eight or more years), the cancer has enough time to progress. Men older than 75 years face many other health risks. While they are most likely to be diagnosed with prostate cancer, they are least likely to be affected by it over the remaining course of their life.

What are the tests for prostate cancer?

PSA test

PSA stands for Prostate Specific Antigen. It is a protein produced by both normal and abnormal prostate cells. PSA is detected with a simple blood test. When cancer is present, the level of PSA rises as more of the protein leaks into the blood stream.

The PSA test does not tell you for sure that you do or do not have prostate cancer. Only about 4 in 10 men with a higher than normal test are found to have prostate cancer! However the test is useful. It guides the decision to have further investigations.

PSA will usually rise slowly with age. However a rapid rise may raise a concern about cancer. Many authorities advise that if you have a PSA test, you should also have a rectal examination. This is because not all cancers produce PSA. The rectal exam can pick up some cancers which are missed by the blood test.

Rectal examination

Because the rectum is located just behind the prostate, and cancer most often grows on that side of the gland, a doctor can sometimes feel a cancer by placing a gloved finger inside the rectum. This test may be uncomfortable but is rarely painful. A rectal examination is less likely to pick up early cancers than the PSA test, and so cancers detected in this way are

often larger. If this test is performed in conjunction with a PSA test the chance of picking up all cancers is better. However even if both tests are positive, there is a good chance you do not have prostate cancer.

The next step: Biopsy

If you have a PSA test and a rectal examination and either is abnormal, the next step in most cases is to refer you to a urologist. The urologist may repeat one or more tests and discuss the possibility that you have cancer. He or she may recommend a biopsy of the prostate.

To perform a biopsy, an ultrasound probe is placed in the rectum to help the doctor to see and target the prostate. He then takes 8 to 12 samples of prostate tissue from several different areas of the gland. Biopsies are usually done under anaesthetic but there still may be some discomfort. There is a small risk of infection. Antibiotics are given to reduce this risk. You may notice blood from the rectum or in the urine or ejaculate after a biopsy. This can last for some time before settling.

A biopsy is needed to find out if you do have prostate cancer. It also gives information about the cancer's "grade" (how rapidly it is likely to grow). Combining information from the PSA test, rectal examination, and the biopsy helps the doctor to tell what risk the cancer poses to your health and life expectancy.

What does treatment for localised prostate cancer involve?

If the cancer has not spread beyond the prostate region, three different treatment options may be offered: observation only (also called active surveillance or **watchful waiting**) - often chosen by men who are undecided about treatment, men over 70 years, or men with serious illnesses. Others may choose surgery: **radical prostatectomy** is an operation designed to remove all of the cancer - the whole prostate gland and some nearby tissue.

Different forms of **radiotherapy** (irradiation of the pelvic area), may be offered, including external beam and/or brachytherapy. Low dose rate brachytherapy is a form of radiotherapy where radioactive 'seeds' are left in the gland. All of these types of treatment may affect potency (the capacity to have erections), urine control (continence) and bowel function. These risks can be quite high - for example up to 70% of men may have sexual function affected following surgery [6], but the risk varies with the type of treatment. Prostate cancer which has spread beyond the prostate region is usually no longer curable and can have a greater impact on quality of life.

Early detection of Prostate Cancer and PSA testing

The best way to pick up prostate cancer at an early stage is with a program of regular PSA testing combined with a rectal examination. Regular testing increases your chance of detecting prostate cancer when it is still confined to the prostate gland, and so when potentially curative treatment is possible. If a man chooses to be tested, most authorities recommend annual testing from the age of 50 years. If a man has a family history of prostate cancer (father or brother diagnosed at an early age) your doctor may recommend beginning testing earlier, at 40 - 45 years.

There are some drawbacks to early detection programs, however. The PSA test can be abnormal, and you do not have cancer. The PSA test can detect cancers which may not threaten your life, and the test may miss some cancers. We are not absolutely sure yet that early detection programs save lives.

In discussion with your doctor:

1. Clarify your main concern.
2. Find out your personal risk.
3. Balance up the benefits and risks of early detection (see the table on the next page).

The best chance of detecting prostate cancer is by having **both** a blood test and a rectal examination.

It is **your** decision whether to have a test. **You** need to decide what is best for you.

Consider asking your GP about a longer consultation for a "Well Man's Health Check".

BENEFITS OF PSA TESTING	RISKS OF PSA TESTING
PSA testing can detect prostate cancer early, before it causes symptoms.	Some cancers grow slowly and don't threaten life. But treatment for them can affect your quality of life.
Prostate cancer detected early, & confined to the prostate gland is potentially curable.	A PSA test can be abnormal but you do not have cancer. You may need a biopsy to find out.
Advanced prostate cancer can be slowed down but not cured.	We do not yet have clear evidence that routine testing saves life (this may be proven in the future).

Footnotes

1 Baade, P et al. Med J Aust 182 (2005) in press

2 AHTAC 'Prostate Cancer Screening' (1996)

3 Steinberg, G. D et al. Prostate 17: 337-47 (1990)

4 Harris, R. and K. Lohr. Ann Int Med 137: 917-29 (2002).

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Men who haven't been diagnosed with a prostate condition can receive a Medicare rebate for a PSA test only once every 12 months.

Personal stories

Jack was 65 years old and had noticed he was getting up more often at night to go to the toilet and it took longer than it used to. His wife was concerned it might be prostate cancer and urged him to have a test. His GP explained that urinary symptoms were quite common as men grew older and were generally caused by a non-cancerous growth of the prostate. While urinary symptoms could be present in late stages of prostate cancer, in its early stages prostate cancer doesn't normally have symptoms. After a discussion of his prostate cancer risk and the pros and cons of a test, Jack decided to have one test to reassure his wife and if the result was normal, not worry about further testing.

Erik was 45 years old and concerned because his 56 year old brother has just been diagnosed with prostate cancer. He understood that men with a father or brother diagnosed at an early age had an increased chance of having it themselves. The doctor explained that there was a high chance that a prostate cancer diagnosed in a man at his age would progress and threaten his life. Erik wanted to be sure the cancer would be curable if it was detected and opted for regular testing. He and his wife felt that on balance, this was more important than the risk of detecting unimportant cancers. The doctor suggested regular yearly testing until the age of 75 years. He advised a digital rectal examination as well.

Peter, a 73 year old man chose not to have a test. He enjoyed an active life, his sexual relationship with his wife was important to his quality of life, and he knew of no-one in his family who had had prostate cancer. If he did have the test and it was abnormal, and investigations revealed a small amount of cancer, he thought he would probably ignore it.

Follow-up if you do *or* do not have the test

If you do decide to have the test and would like to continue to be screened for the disease, depending on your PSA result, you should return for the test every 1-2 years. You may wish to discontinue this after the age of 75 years.

If you choose not to have the test, you can review the decision annually with your GP, or if you have reason to believe your personal risk or circumstances may have changed.

For more information

Mr PHIP Series - available online at: www.prostatehealth.org.au

1. Should I be tested?
2. Interpreting the PSA test
3. After the diagnosis
4. Monitoring after treatment
5. Hormonal treatment
6. Sexual function after treatment
7. Useful resources / Glossary

Internet:
www.prostate.org.au
www.prostatehealth.org.au
www.andrologyaustralia.org.au

Phone:
National Cancer Help-line: 13 11 20

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