Overview: Prostate Cancer

How Is Prostate Cancer Found?

Prostate cancer can often be found early by testing the amount of PSA (prostate-specific antigen) in your blood. Another way prostate cancer is found early is when the doctor does a digital rectal exam (DRE). Because the prostate gland lies just in front of the rectum, during the exam the doctor can feel if there are any bumps or hard places in the prostate. These might be cancer. If you have had routine yearly exams and either one of these test results becomes abnormal, any cancer you might have has probably been found at an early, more treatable stage.

Since about 1990 it has become more common for men to have tests to find prostate cancer early. The prostate cancer death rate has dropped, too. But we do not yet know if this drop is the direct result of the tests.

These tests are not perfect, though. Wrong test results could lead to excess worry, or even an unneeded biopsy or other tests.

Until more is known, you should talk to your doctor about whether or not you want to be tested. Things to take into account are your age and your health. If you are young and you get prostate cancer, it will probably shorten your life if it is not caught early. But if you are older or in poor health, then prostate cancer may never become a major problem because it often grows so slowly.

What the American Cancer Society Recommends

The American Cancer Society believes that doctors should offer the PSA blood test and DRE (digital rectal exam) yearly, beginning at age 50 to men who do not have any major medical problems and can be expected to live at least 10 more years. Men at high risk should begin testing at age 45. Men at high risk include African Americans and men who have a close relative (father, brother, or son) who had prostate cancer before age 65.

Men at even higher risk (because they have several close relatives with prostate cancer at an early age) could begin testing at age 40. Depending on the results of the first tests, they might not need more testing until age 45.

Doctors should talk to men about the benefits and risks of testing, and men should take an active part in the choice about whether or not to have tests.

No major scientific or medical groups (including the American Cancer Society) recommend **routine** testing for prostate cancer at this time. Rather, they recommend that men talk to their doctors about the benefits, risks, side effects, and questions about early prostate cancer tests and treatment. Each man needs to have the best information to make the decision that is right for him.

The PSA Blood Test

PSA (prostate-specific antigen) is a substance made by the normal prostate gland. Although PSA is mostly found in semen, a small amount is also found in the blood. Most men have levels under 4 ng/mL (nanograms per milliliter) of blood. Prostate cancer can cause the level to go up. If your level is between 4 and 10, you have about a 1 in 4 chance of having prostate cancer. If it is above 10, your chance is over 50% and goes up as the PSA level goes up. But some men with a PSA below 4 can also have prostate cancer.

Factors other than cancer can also cause the PSA level to go up, including having BPH or an infection in the prostate, taking certain drugs, and getting older. Men with a high PSA will need further tests to find out if they actually have cancer.

There are a number of new types of PSA tests that might help to show whether a man needs more testing or not. Not all doctors agree on how to use these new PSA tests. You should talk to your doctor about your cancer risk and any tests that you are having.

There is no question that the PSA test can help spot prostate cancer. But it can't tell how dangerous the cancer is. The problem is that some prostate cancers are slow growing and may never cause problems. But because of a high PSA level, many men will be found to have prostate cancer that would never lead to their death. Yet they are being treated with either surgery or radiation because they are uncomfortable not having treatment. Doctors and patients are still struggling to decide who should receive treatment and who can be followed without treatment.

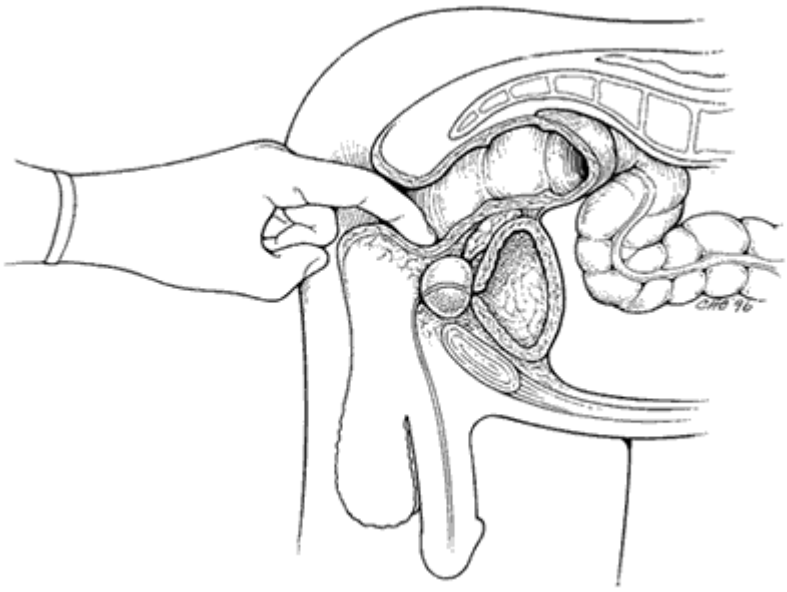
The PSA test is also useful after prostate cancer has been found. It can be used along with other results to help decide which types of treatment might be helpful. A very high PSA level might mean that the cancer has spread beyond the prostate. Some forms of treatment are not as useful for cancer that has spread to the lymph nodes or other organs. The PSA test can also be used to help show if treatment is working or if cancer has come back after treatment.

If prostate cancer has spread outside of the prostate or if it has come back after treatment, the way PSA is used changes. The PSA value does not tell whether a person will have symptoms or not or how long he will live. Many men with a high PSA feel just fine. Other people have low values but they have symptoms. With advanced disease, the way the PSA value is changing may be more important than the number alone.

DRE (Digital Rectal Exam)

To do the DRE the doctor inserts a gloved, lubricated finger into the rectum to feel for any irregular or firm areas that might be cancer. The prostate gland is next to the rectum, and most cancers begin in the part of the gland that can be reached by a rectal exam. While it is uncomfortable, the exam isn't painful and takes only a short time.

The DRE is less effective than the PSA blood test in finding prostate cancer, but it can sometimes find cancers in men with normal PSA levels. For this reason, ACS guidelines recommend that when prostate cancer screening is done, both the DRE and the PSA should be used. The DRE is also used once a man is known to have prostate cancer. It can help tell whether the cancer has spread beyond his prostate gland. It can also be used to find cancer that has come back after treatment.



If Cancer Is Suspected

Early prostate cancer often causes no symptoms. It may be found by a PSA test or DRE. Problems with urinating could be a sign of advanced prostate cancer. But more often this problem is caused by a less serious disease known as BPH (benign prostatic hyperplasia).

Symptoms of advanced prostate cancer could include the following:

- trouble having or keeping an erection (impotence)
- blood in the urine
- pain in the spine, hips, ribs, or other bones
- weakness or numbness in the legs or feet
- loss of bladder or bowel control

Once again, other diseases also can cause these symptoms.

If certain symptoms or the results of early tests suggest you might have prostate cancer, your doctor will use further tests to find out whether the disease is present.

The prostate biopsy: A biopsy (**by**-op-see) is the only way to know for sure if you have prostate cancer. During a biopsy, tissue from your prostate is removed so it can be sent to the lab to see if there are cancer cells. A core needle biopsy is the main method used. Here is how it's done:

A small probe is placed in the rectum. The probe gives off sound waves that create a picture of the prostate on a video screen. This technique is called TRUS (transrectal ultrasound). Guided by TRUS, the doctor inserts a narrow needle through the wall of the rectum into the prostate gland. The needle then removes a piece of tissue, usually about ½ inch long and 1/16 inch across. Some doctors do the biopsy through the skin between the rectum and the scrotum.

Although the test sounds painful, it usually causes little discomfort because it is done very quickly. The doctor can numb the area ahead of time. You might want to ask your doctor about numbing the area. Several samples are often taken from different parts of the prostate. Ask your doctor how many samples

will be taken.

The biopsy takes about 15 minutes and is usually done in the doctor's office. You will likely be given antibiotics ahead of time to reduce the chance of infection. For a few days afterwards you may notice some soreness and blood in your urine or light bleeding from the rectum. Some men also have blood in their semen for a month or two after the biopsy.

Cancer may only be present in a small area of the prostate. Because of this, sometimes the biopsy will miss the cancer even when it is there. This is known as a "false negative." If your doctor still strongly suspects cancer, a repeat biopsy may be needed.

Grading the prostate cancer: The biopsy sample will be sent to a lab. A doctor there will look for cancer cells in the sample. If cancer is present, the sample will be graded. Grading the cancer helps to predict how fast the cancer is likely to grow and spread. Prostate cancers are graded on the basis of how closely the cells in the sample look like normal prostate cells. Those that look very different from normal cells are likely to mean a cancer that grows faster. The system used most often for grading prostate cancer is called the **Gleason system.**

Samples from 2 areas of the prostate are each graded from 1 to 5, and the number grades are added to give a **Gleason score** or **sum** of between 2 and 10. The lower the number, the more the cells in the sample look like normal prostate cells. A higher score means the samples look less normal and the cancer is likely to grow more quickly. Ask your doctor to explain the grade of your tumor because it is an important factor in making treatment decisions.

Sometimes the cells don’t look like cancer but they don’t look really normal either. In these cases, more biopsies may be done later.

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