

A.D.A.M. Medical Encyclopedia.

## Prostate cancer

Cancer - prostate; Biopsy - prostate; Prostate biopsy; Gleason score  
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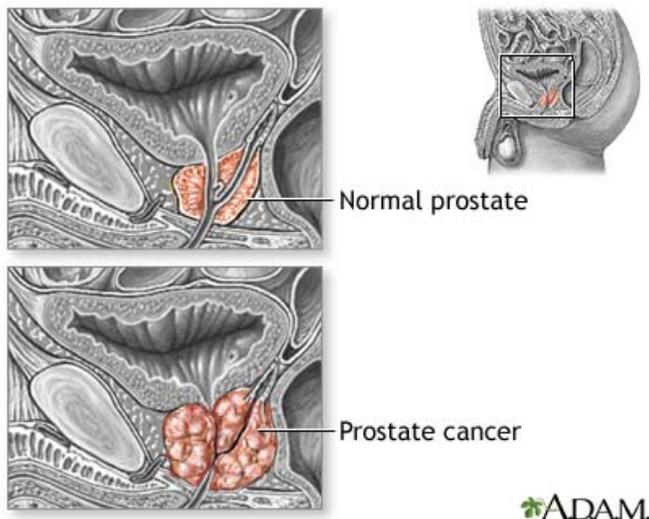
Prostate cancer is cancer that starts in the prostate gland. The prostate is a small, walnut-sized structure that makes up part of a man's reproductive system. It wraps around the urethra. This is the tube that carries urine out of the body.

### Causes, incidence, and risk factors

Prostate cancer is the most common cause of death from cancer in men over age 75. Prostate cancer is rarely found in men younger than 40.

People who are at high risk include:

African American men, who are also more likely to develop this cancer at every age  
Men who are older than 60



Men who have a father or brother with prostate cancer  
Other people at risk include:

Men who have been around Agent Orange  
Men who use too much alcohol  
Farmers  
Men who eat a diet high in fat, especially animal fat  
Obese men  
Tire plant workers  
Painters

Men who have been around cadmium

Prostate cancer is less common in people who do not eat meat (vegetarians).

A common problem in almost all men as they grow older is an enlarged prostate. This is called benign prostatic hyperplasia, or BPH. It does not raise your risk of prostate cancer. But it can increase your prostate-specific antigen (PSA) blood test result.

## **Symptoms**

With early prostate cancer, there are often no symptoms.

The PSA blood test may be done to screen men for prostate cancer. Often, PSA level rises before there are any symptoms.

The symptoms listed below can occur with prostate cancer as it grows larger in the prostate. These symptoms can also be caused by other prostate problems:

Delayed or slowed start of urinary stream

Dribbling or leakage of urine, most often after urinating

Slow urinary stream

Straining when urinating, or not being able to empty all of the urine

Blood in the urine or semen

When the cancer has spread, there may be bone pain or tenderness, most often in the lower back and pelvic bones.

## **Exams and tests**

An abnormal digital rectal exam may be the only sign of prostate cancer.

A biopsy is needed to tell if you have prostate cancer. A biopsy is a procedure to remove a sample of tissue from the prostate. The sample is sent to a lab for examination. It will be done in your doctor's office.

Your doctor may recommend a biopsy if:

You have a high PSA level

A digital rectal exam reveals a hard or uneven surface

The biopsy result is reported using what is called a Gleason grade and a Gleason score.

The Gleason grade tells you how fast the cancer might spread. It grades tumors on a scale of 1 through 5. You may have different grades of cancer in one biopsy sample. The two most common grades are added together. This gives you the Gleason score. The higher your Gleason score, the more likely the cancer can spread beyond the prostate:

Scores 2 through 5: Low-grade prostate cancer.

Scores 6 through 7: Intermediate- (or in the middle) grade cancer. Most prostate cancers fall into this group.

Scores 8 through 10: High-grade cancer.

The following tests may be done to determine whether the cancer has spread:

CT scan

Bone scan

MRI scan

The PSA blood test will also be used to monitor your cancer after treatment.

## **Treatment**

Treatment depends on many things, including your Gleason score and your overall health. Your doctor will discuss your treatment options.

If the cancer has not spread outside the prostate gland, common treatments include:

Surgery (radical prostatectomy)

Radiation therapy, including brachytherapy and proton therapy

If you are older, your doctor may recommend simply monitoring the cancer with PSA tests and biopsies.

If the prostate cancer has spread, treatment may include hormone therapy (medicines to reduce testosterone levels). It may be used for all but the earliest stage of prostate cancer. It may be given before, along with, or after other treatments.

If prostate cancer spreads even after hormone therapy, surgery, or radiation has been tried, treatment may include:

Chemotherapy

Immunotherapy (medicine to trigger the immune system to attack and kill cancer cells)

Surgery, radiation therapy, and hormone therapy can affect your sexual performance. Problems with urine control are possible after surgery and radiation therapy. Discuss your concerns with your health care provider.

After treatment for prostate cancer, you will be closely watched to make sure the cancer does not spread. This involves routine checkups, including PSA blood tests (usually every 3 months to 1 year).

## **Support Groups**

You can ease the stress of illness by joining a prostate cancer support group. Sharing with others who have common experiences and problems can help you not feel alone.

## **Outlook (prognosis)**

How well you do depends on whether the cancer has spread outside the prostate gland and how abnormal the cancer cells are (the Gleason score) when you are diagnosed.

A cure is possible if the cancer has not spread. Hormone treatment can improve survival, even if a cure is not possible.

Calling your health care provider

Discuss the advantages and disadvantages of PSA screening with your health care provider.

## **Prevention**

Talk with your health care provider about possible ways to lower your risk of prostate cancer. These may include lifestyle measures, such as diet and exercise.

Taking extra vitamin E has not been found to reduce the risk of prostate cancer and may increase the risk. Talk with your doctor before taking larger doses of this vitamin.

There are no medicines approved by the FDA for preventing prostate cancer.

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