



Diseases and Conditions

Prostate cancer

By Mayo Clinic Staff

Prostate cancer is cancer that occurs in a man's prostate — a small walnut-shaped gland that produces the seminal fluid that nourishes and transports sperm.

Prostate cancer is one of the most common types of cancer in men. Prostate cancer usually grows slowly and initially remains confined to the prostate gland, where it may not cause serious harm. While some types of prostate cancer grow slowly and may need minimal or no treatment, other types are aggressive and can spread quickly.

Prostate cancer that is detected early — when it's still confined to the prostate gland — has a better chance of successful treatment.

Prostate cancer may cause no signs or symptoms in its early stages.

Prostate cancer that is more advanced may cause signs and symptoms such as:

- Trouble urinating
- Decreased force in the stream of urine
- Blood in the semen
- Discomfort in the pelvic area
- Bone pain
- Erectile dysfunction

When to see a doctor

Make an appointment with your doctor if you have any signs or symptoms that worry you.

There is debate regarding the risks and benefits of screening for prostate cancer, and medical organizations differ on their recommendations. Discuss prostate cancer screening with your doctor. Together, you can decide what's best for you.

It's not clear what causes prostate cancer.

Doctors know that prostate cancer begins when some cells in your prostate become abnormal. Mutations

in the abnormal cells' DNA cause the cells to grow and divide more rapidly than normal cells do. The abnormal cells continue living, when other cells would die. The accumulating abnormal cells form a tumor that can grow to invade nearby tissue. Some abnormal cells can break off and spread (metastasize) to other parts of the body.

Factors that can increase your risk of prostate cancer include:

- **Older age.** Your risk of prostate cancer increases as you age.
- **Being black.** Black men have a greater risk of prostate cancer than do men of other races. In black men, prostate cancer is also more likely to be aggressive or advanced. It's not clear why this is.
- **Family history of prostate or breast cancer.** If men in your family have had prostate cancer, your risk may be increased. Also, if you have a family history of genes that increase the risk of breast cancer (*BRCA1* or *BRCA2*) or a very strong family history of breast cancer, your risk of prostate cancer may be higher.
- **Obesity.** Obese men diagnosed with prostate cancer may be more likely to have advanced disease that's more difficult to treat.

Complications of prostate cancer and its treatments include:

- **Cancer that spreads (metastasizes).** Prostate cancer can spread to nearby organs, such as your bladder, or travel through your bloodstream or lymphatic system to your bones or other organs. Prostate cancer that spreads to the bones can cause pain and broken bones. Once prostate cancer has spread to other areas of the body, it may still respond to treatment and may be controlled, but it's unlikely to be cured.
- **Incontinence.** Both prostate cancer and its treatment can cause urinary incontinence. Treatment for incontinence depends on the type you have, how severe it is and the likelihood it will improve over time. Treatment options may include medications, catheters and surgery.
- **Erectile dysfunction.** Erectile dysfunction can be a result of prostate cancer or its treatment, including surgery, radiation or hormone treatments. Medications, vacuum devices that assist in achieving erection and surgery are available to treat erectile dysfunction.

If you have signs or symptoms that worry you, start by seeing your family doctor or a general practitioner.

If your doctor suspects you may have a problem with your prostate, you may be referred to a urinary tract specialist (urologist). If you're diagnosed with prostate cancer, you may be referred to a cancer specialist (oncologist) or a specialist who uses radiation therapy to treat cancer (radiation oncologist).

Because appointments can be brief, and because there's often a lot of ground to cover, it's a good idea to be prepared. Here's some information to help you get ready and what to expect from your doctor.

What you can do

- **Be aware of any pre-appointment restrictions.** At the time you make the appointment, be sure to ask if there's anything you need to do in advance, such as restrict your diet.
- **Write down any symptoms you're experiencing,** including any that may seem unrelated to the reason for which you scheduled the appointment.

- **Write down key personal information**, including any major stresses or recent life changes.
- **Make a list of all medications**, vitamins or supplements that you're taking.
- **Consider taking a family member or friend along**. Sometimes it can be difficult to remember all the information provided during an appointment. Someone who accompanies you may remember something that you missed or forgot.
- **Write down questions to ask** your doctor.

Your time with your doctor is limited, so preparing a list of questions can help you make the most of your time together. List your questions from most important to least important in case time runs out. For prostate cancer, some basic questions to ask your doctor include:

- Do I have prostate cancer?
- How large is my prostate cancer?
- Has my prostate cancer spread beyond my prostate?
- What is my Gleason score?
- What is my prostate-specific antigen (PSA) level?
- Will I need more tests?
- What are my treatment options?
- Is there one treatment option you think is best for me?
- Do I need cancer treatment right away, or is it possible to wait and see if the cancer grows?
- What are the potential side effects of each treatment?
- What is the chance that my prostate cancer will be cured with treatment?
- If you had a friend or family member in my situation, what would you recommend?
- Should I see a specialist? What will that cost, and will my insurance cover it?
- Are there brochures or other printed material that I can take with me? What websites do you recommend?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask other questions during your appointment.

What to expect from your doctor

Your doctor is likely to ask you a number of questions. Being ready to answer them may allow more time later to cover other points you want to address. Your doctor may ask:

- When did you first begin experiencing symptoms?
- Have your symptoms been continuous or occasional?
- How severe are your symptoms?
- What, if anything, seems to improve your symptoms?
- What, if anything, appears to worsen your symptoms?

Screening for prostate cancer

Whether to test healthy men with no symptoms for prostate cancer is controversial. Medical organizations don't agree on the issue of screening and whether it has benefits.

Some medical organizations recommend men consider prostate cancer screening in their 50s, or sooner for men who have risk factors for prostate cancer. Other organizations advise against screening.

Discuss your particular situation and the benefits and risks of screening with your doctor. Together, you can decide whether prostate cancer screening is right for you.

Prostate screening tests might include:)

- **Digital rectal exam (DRE).** During a DRE, your doctor inserts a gloved, lubricated finger into your rectum to examine your prostate, which is adjacent to the rectum. If your doctor finds any abnormalities in the texture, shape or size of your gland, you may need more tests.
- **Prostate-specific antigen (PSA) test.** A blood sample is drawn from a vein in your arm and analyzed for PSA, a substance that's naturally produced by your prostate gland. It's normal for a small amount of PSA to be in your bloodstream. However, if a higher than normal level is found, it may be an indication of prostate infection, inflammation, enlargement or cancer.

PSA testing combined with DRE helps identify prostate cancers at their earliest stages, but studies have disagreed whether these tests reduce the risk of dying of prostate cancer. For that reason, there is debate surrounding prostate cancer screening.

Diagnosing prostate cancer

If an abnormality is detected on a DRE or PSA test, your doctor may recommend tests to determine whether you have prostate cancer, such as:

- **Ultrasound.** If other tests raise concerns, your doctor may use transrectal ultrasound to further evaluate your prostate. A small probe, about the size and shape of a cigar, is inserted into your rectum. The probe uses sound waves to make a picture of your prostate gland.
- **Collecting a sample of prostate tissue.** If initial test results suggest prostate cancer, your doctor may recommend a procedure to collect a sample of cells from your prostate (prostate biopsy). Prostate biopsy is often done using a thin needle that's inserted into the prostate to collect tissue. The tissue sample is analyzed in a lab to determine whether cancer cells are present.

Determining whether prostate cancer is aggressive

When a biopsy confirms the presence of cancer, the next step is to determine the level of aggressiveness (grade) of the cancer cells. In a laboratory, a pathologist examines a sample of your cancer to determine how much cancer cells differ from the healthy cells. A higher grade indicates a more aggressive cancer that is more likely to spread quickly.

The most common scale used to evaluate the grade of prostate cancer cells is called a Gleason score. Scoring combines two numbers and can range from 2 (nonaggressive cancer) to 10 (very aggressive cancer).

Determining how far the cancer has spread

Once a prostate cancer diagnosis has been made, your doctor works to determine the extent (stage) of the cancer. If your doctor suspects your cancer may have spread beyond your prostate, imaging tests such as these may be recommended:

- Bone scan
- Ultrasound
- Computerized tomography (CT) scan
- Magnetic resonance imaging (MRI)
- Positron emission tomography (PET) scan

Not every person should have every test. Your doctor will help determine which tests are best for your individual case.

Once testing is complete, your doctor assigns your cancer a stage. This helps determine your treatment options. The prostate cancer stages are:

- **Stage I.** This stage signifies very early cancer that's confined to a small area of the prostate. When viewed under a microscope, the cancer cells aren't considered aggressive.
- **Stage II.** Cancer at this stage may still be small but may be considered aggressive when cancer cells are viewed under the microscope. Or cancer that is stage II may be larger and may have grown to involve both sides of the prostate gland.
- **Stage III.** The cancer has spread beyond the prostate to the seminal vesicles or other nearby tissues.
- **Stage IV.** The cancer has grown to invade nearby organs, such as the bladder, or spread to lymph nodes, bones, lungs or other organs.

Your prostate cancer treatment options depend on several factors, such as how fast your cancer is growing, how much it has spread and your overall health, as well as the benefits and the potential side effects of the treatment.

Immediate treatment may not be necessary

For men diagnosed with very early-stage prostate cancer, treatment may not be necessary right away. Some men may never need treatment. Instead, doctors sometimes recommend active surveillance.

In active surveillance, regular follow-up blood tests, rectal exams and possibly biopsies may be performed to monitor progression of your cancer. If tests show your cancer is progressing, you may opt for a prostate cancer treatment such as surgery or radiation.

Active surveillance may be an option for cancer that isn't causing symptoms, is expected to grow very slowly and is confined to a small area of the prostate. Active surveillance may also be considered for a man who has another serious health condition or an advanced age that makes cancer treatment more difficult.

Active surveillance carries a risk that the cancer may grow and spread between checkups, making it less

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.