

Community Care Urology

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Prostate biopsy

Overview

A prostate biopsy is a procedure to remove samples of suspicious tissue from the prostate. The prostate is a small, walnut-shaped gland in men that produces fluid that nourishes and transports sperm.

During a prostate biopsy a needle is used to collect a number of tissue samples from your prostate gland. The procedure is performed by a doctor who specializes in the urinary system and men's sex organs (urologist).

Your urologist may recommend a prostate biopsy if results from initial tests, such as a prostate-specific antigen (PSA) blood test or digital rectal exam is abnormal. Tissue samples from the prostate biopsy are examined under a microscope for a sign of prostate cancer. If cancer is present, further tests may be necessary to determine the extent of the disease and/or the likelihood of spreading of the cancer

Why it's done

A prostate biopsy is used to detect prostate cancer.

Your doctor may recommend a prostate biopsy if:

- A PSA test shows levels higher than normal for your age and/or compared to previous values
- Your doctor finds lumps or other abnormalities during a digital rectal exam
- You've had a previous biopsy that was normal, but your PSA is still rising

- A previous biopsy revealed prostate tissue cells that were abnormal but not cancerous
- Other imaging may have revealed areas of abnormality within your prostate

Risks

Risks associated with a prostate biopsy include:

- **Bleeding at the biopsy site.** Rectal bleeding is common after a prostate biopsy and usually subsides by itself.
- **Blood in your semen.** It's common to notice red or rust coloring in your semen after a prostate biopsy. This indicates blood, and it's not a cause for concern. Blood in your semen may persist for a few weeks after the biopsy.
- **Blood in your urine.** This bleeding is usually minor and will cease by itself.
- **Difficulty urinating.** In some men, prostate biopsy can cause difficulty urinating after the procedure and usually resolved spontaneously.
- **Infection.** Rarely, men who have a prostate biopsy develop an infection that may turn into sepsis. You will receive antibiotics to prevent infection.

How you prepare

To prepare for your prostate biopsy, your urologist may have you:

- Provide a urine sample to analyze for a urinary tract infection. If you have a urinary tract infection, your prostate biopsy will likely be postponed while you take antibiotics to clear the infection.
- **Stop taking medication that can increase the risk of bleeding for 7 days prior to your procedure. These include: Warfarin (Coumadin), Plavix, Xeralto, Eliquis,**

aspirin (any dose), Ibuprofen (Advil, Motrin, Aleve, and Naproxifen), Vitamin E, Fish Oil, Omega supplements. Ask if you are uncertain if you are on a blood thinner.

- Do a cleansing enema at home before your biopsy appointment.
- Take antibiotics 30 to 60 minutes before your prostate biopsy to help prevent infection from the procedure.
- Some providers may have you take an antibiotic the day before, the day of and the day after your procedure.

What you can expect

Types of prostate biopsy procedures

Prostate biopsy samples can be collected in different ways. Your prostate biopsy may involve:

- **Passing the needle through the wall of the rectum (transrectal biopsy).** This is the most common way of performing a prostate biopsy.
- **Inserting the needle through the area of skin between the anus and scrotum (transperineal biopsy).** In the area of skin (perineum) between the anus and the scrotum. The biopsy needle is inserted through the skin and into the prostate to draw out a sample of tissue. An ultrasound or CT may be used to guide the needle for the biopsy

What to expect during transrectal prostate biopsy

You will be asked to lie on your side with your knees pulled up to your chest. After cleaning the area and applying gel, your doctor will gently insert the ultrasound probe into your rectum.

Transrectal ultrasonography uses sound waves to create images of your prostate. Your doctor will use the images to identify the area that needs to be numbed with an injection to reduce discomfort associated with the biopsy. The ultrasound images are also used to guide the prostate biopsy needle into place in real time.

Once the area is numbed and the biopsy device is situated, your doctor will retrieve thin, cylindrical sections of tissue with a spring-propelled needle. The procedure typically causes a very brief uncomfortable sensation each time the spring-loaded needle takes a sample.

Your doctor may target a suspicious area to biopsy or may take samples from several places in your prostate. Generally, 10 to 12 tissue samples are taken. The entire procedure usually takes about 10 minutes.

After the procedure

Your doctor will likely recommend that you do only light activities for 24 to 48 hours after your prostate biopsy.

You'll probably need to take an antibiotic for a few days. You might also:

- Feel slight soreness and have some light bleeding from your rectum.
- Have blood in your urine or stools for a few days.
- Notice that your semen has a red or rust-colored tint caused by a small amount of blood in your semen. This can last for several weeks.

Call your doctor if you have:

- Persistent fever over 6 hours
- Persistent episodes of chills over 4 hours
- Difficulty urinating
- Prolonged or heavy bleeding with clots

Results

A doctor who specializes in diagnosing cancer and other tissue abnormalities (pathologist) will evaluate the prostate biopsy samples. The pathologist can tell if the tissue removed is cancerous and, if cancer is present, estimate how aggressive it is. Your doctor will explain the pathologist's findings to you.

Your pathology report may include:

- **A description of the biopsy sample.** Sometimes called the gross description, this section of the report might evaluate the color and consistency of the prostate tissue.
- **A description of the cells.** Your pathology report will describe the way the cells appear under the microscope. Prostate cancer cells may be referred to as adenocarcinoma. Sometimes the pathologist finds cells that appear abnormal but aren't cancerous. Words used to describe these noncancerous conditions include "prostatic intraepithelial neoplasia" and "atypical small acinar proliferation."
- **Cancer grading.** If the pathologist finds cancer, it's graded on a scale of 2 to 10 called the Gleason score. Cancers with a high Gleason score are the most abnormal and are more likely to grow and spread quickly.
- **The pathologist's diagnosis.** This section of the pathology report lists the pathologist's diagnosis. It may also include comments, such as whether other tests are recommended.