

# Prostate Biopsy

Information and Instructions



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# Biopsy – What Does It Mean?

## Definitions

A "**biopsy**" is defined as 'the process of removing a sample of body tissue to examine it for the presence of disease'. There are many reasons for requiring a biopsy, but the most common is to help determine if cancer is present in the tissue being biopsied. Biopsies can be done in a variety of ways. The most common types of biopsy are: excisional biopsy, incisional biopsy, needle biopsy, and aspiration biopsy.

- **Excisional biopsy** means that all of the suspicious area in question is removed.
- **Incisional biopsy** means that a part of the suspicious area in question is removed.
- **Needle biopsy** means that a hollow needle is placed into the suspicious area and a core of tissue is removed.
- **Aspiration biopsy** means that a very thin hollow needle is placed into the suspicious areas and, using suction, individual cells are drawn out.

The biopsy recommended by your doctor can be performed in their office. No anesthesia is required.

## What are the risks of a biopsy?

The risks vary depending on the technique and body part that is being biopsied. All biopsies have some common risks that are associated with almost any surgical procedure...bleeding, pain and infection. These risks should be understood by any patient undergoing a biopsy. Another risk is that the biopsy results may be inconclusive or difficult to interpret. Additional biopsies or opinions may be required to help with this problem.

## Who interprets the biopsy?

A biopsy is interpreted by a physician called a 'pathologist'. The tissues removed are prepared in many ways, often referred to as 'staining'. Preparation and staining and interpretation may require several days. The 'stained' tissue is placed between two small pieces of clear glass (which is called a 'slide') and then examined under a microscope. The pathologist may take into consideration the patient's medical condition and other laboratory tests and previous biopsy materials before giving an opinion or 'diagnosis'.

## How long does it take to get the results of a biopsy?

A technique called 'frozen section' can give results in a very short time, but it is a technique that has a higher likelihood of giving an incorrect or incomplete diagnosis. This technique is used almost exclusively in the operating room, where decisions have to be made immediately.

In most cases, biopsy results are obtained within 10-14 days. If the biopsy material is not clear cut, delays may occur. The pathologist may need to have other pathologists look at the biopsy, or additional and/or special preparations or staining may be needed. In some cases, the slides need to be sent away to a pathologist with special knowledge or expertise of a certain problem. All biopsy patients are scheduled for a follow-up appointment to discuss results.

## What can a biopsy tell?

Some of the more common interpretations of biopsies include **Grading**. Grading is based on the abnormality of cell appearance and arrangement. The more abnormal the prostate tissue, the higher the score. The sum of the two most prevalent grading scores present in the biopsy produces the "**Gleason Score**".

# Ultrasound Guided Transrectal Needle Biopsy of Prostate

**What are the indications for a transrectal ultrasound guided prostate needle biopsy (also referred to as a TRUS)?**

A transrectal ultrasound guided prostate needle biopsy is done to check the prostate gland for the presence of cancer.

This is generally indicated when ANY of the following occur:

- Suspicion is raised by an abnormal prostate specific antigen (PSA) blood test
- Suspicion is raised by a rising prostate specific antigen (PSA) blood test
- By an abnormal digital (finger) examination of your prostate
- By a prior biopsy that showed cells that were not normal (atypia or what is referred to by Urologists as PIN or Prostatic Intraepithelial Neoplasia)

**What does a transrectal ultrasound guided prostate needle biopsy mean?**

**Transrectal** means that the ultrasound and biopsy will be done through the rectal wall after the ultrasound device is placed through the anus into the rectum.

**Ultrasound** (or sonogram) are harmless sound waves used in a medical imaging device to give us pictures of certain body parts.

**Ultrasound Guided** means that the biopsy will be guided to the area of concern by an ultrasound machine.

**A biopsy** is the medical term which describes the removal of a piece of tissue from the body for microscopic examination to check for the presence of disease.

**A needle biopsy** specifically refers to using a needle to obtain a small piece of tissue which can then be examined.

## What is the preparation for the biopsy?

A prostate needle biopsy is a minor procedure which takes only 15 - 20 minutes to perform, and is generally done in our office. However, some preparation is needed to ensure that the biopsy will go smoothly and safely. **Bring a driver to take you home. DO NOT DRINK ALCOHOL 24 HOURS** prior to the procedure.

To ensure that bleeding risks are minimized no aspirin products can be used for 5 days before the biopsy. If you are taking any blood thinner, such as warfarin or Coumadin, we need to carefully plan a period of time off the drugs prior to the biopsy. Non-steroidal anti-inflammatory medication such as ibuprofen or naprosyn and multi-vitamins and herbal supplements should be stopped five days before the biopsy. Call us if you forget to stop your aspirin or blood thinners. We may want to re-schedule the biopsy.

Please **DO NOT TAKE** any aspirin, aspirin compounds, or anti-arthritic medications for 5 DAYS prior to your treatment. Some examples include:

Advil	Celebrex	Lodine
Aleve	Clinoril	Motrin
Alka-Seltzer	Daypro	Naprosyn
Anacin	Dolobid	Naproxen
Ascriptin	Ecotrin	Nuprin
Aspirin	Empirin	Orudis
Bextra	Excedrin	Pletal
Bufferin	Feldene	Relafen
Butazolidin	Ibuprofen	Ticlid
Cataflam	Indocin	Tolectin

A Fleets enema should be administered (by you) about two hours before the visit. Buy the enema at any drug store and follow the instructions on the package. This is done to cleanse the rectum of stool to allow us to get a clear view of the prostate with the ultrasound probe. We will give you an injection of antibiotics the day of the biopsy. You must sign a consent form that declares that you understand the procedure and the risks involved, (if you forget your form at home, another will be provided). No dietary restrictions on the day of the procedure are needed. It is ok to eat breakfast and lunch.

# What happens, step by step, during the biopsy procedure?

- Arrival:** After arriving at the office, we will ensure that you have complied with pre-biopsy instructions and have signed the consent form. If you have not taken the antibiotics or not stopped your aspirin, we may reschedule your biopsy. **You must bring someone with you the day of the procedure to drive you home. If you want a sedative for this procedure, please arrive 30 minutes earlier than your scheduled appointment time.**
- Biopsy Room:** You will be then escorted to a changing room and given a gown to wear or sheet to cover yourself. You will need to undress completely except for your socks and undershirt. To perform the biopsy, you will be asked to lie down on your side on the exam table. When the ultrasound begins we will have you bend both knees towards your chest and hold them there until the examination is completed.
- Digital Rectal Examination:** We will begin in most cases by performing a digital (finger) rectal exam of the prostate and to ensure that the rectum is not full of stool and to re-examine the prostate gland for nodules or irregularities.
- Ultrasound Probe:** The ultrasound probe, which is somewhat wider than a finger, is lubricated and then gently inserted through the anus into your rectum until it rests just behind your prostate (a matter of 2-3 inches). Using ultrasound waves, we will see the inside of your prostate on a television monitor. First, we will numb the prostate with Xylocaine, then scan the entire prostate and take measurements of the prostate size as well as any suspicious areas. These measurements will take about 1-2 minutes. Once these measurements are completed we are ready to biopsy the prostate.
- Biopsy of Prostate:** The ultrasound is also essential in guiding the placement of the needle into the prostate to obtain accurate biopsy tissue samples. After aiming the ultrasound probe at a certain area of the prostate the biopsy needle will be inserted through the ultrasound probe and placed through the rectal wall to reach your prostate. The needle is relatively thin and you may feel a pinch or some pressure as it is inserted into your prostate. We use an automated spring-loaded needle firing mechanism which, when triggered, very quickly and relatively painlessly removes a small prostate tissue sample inside the needle. Local anaesthesia (lidocaine (similar to but not Novocaine) will be used to reduce discomfort. The automated spring mechanism makes a snapping or popping sound with each needle biopsy. We will warn you when the popping is to occur. The assistant will then take each specimen, label it and return the biopsy gun to the urologist to biopsy another area of the prostate.
- Number of Biopsies?:** We may take several biopsies from your prostate gland depending upon the situation. There is no minimum or maximum number of biopsies but the number of biopsies taken averages from 12 to 24. Using an automated biopsy needle with the guidance of ultrasound, twelve biopsies can easily be obtained in less than five minutes with only minimal discomfort to you. Again, generally, only local anesthesia is necessary. In some circumstances we will also take biopsies using a finger guided method. The ultrasound probe is removed from the rectum and the urologist places a finger inside the rectum up to any suspicious area. Using the same biopsy gun and needle, additional biopsies will be taken.
- Procedure Completed:** After the biopsies are completed you will turn onto your back and rest for a moment or two. Then you will be helped off the table. You can clean up and if needed you may want to empty your bladder before leaving. Note: You may see some blood in the urine, even a small clot. This is not unexpected.
- After the biopsy, where should I go?** You should head home immediately from the biopsy procedure. Patients often experience a dull ache in the perineum for several days. We suggest that you curtail your activity until the next day particularly strenuous ones for 24 hours. If you see blood in the urine or stool, you must get off your feet and drink plenty of fluids. Increase your fluid intake for the next 1-2 days to decrease formation of blood clots in your urine. If your urine is completely clear for the first few urinations, you will probably not have to worry about this. Some spotting of the urine with blood may occur for the first week, even a month – not to worry, it will go away. You may shower or bathe whenever you wish. You may resume regular activity the following day.

# What are the complications of prostate biopsy?

The complication rate after this form of biopsy is in the region of 2-4% (2 to four men out of 100). Complications include bleeding, infection and inability to urinate.

- Bleeding:** Occasionally after a prostate biopsy some bleeding may occur in the urine and stool for several days, or semen for several months. If you see blood in the urine, however, you must again curtail activity until the day after the bleeding stops. You may experience discomfort in the rectum or base of penis. This is normal and should be of no concern. In addition, you may have a small amount of blood in your stool when you have a bowel movement.
- Urine:** You are likely to see some blood in the urine for the first few days. This bleeding might be noted at the beginning or end of urination or throughout the entire stream. Rarely, bleeding may persist for one to two weeks on and off. Exercise or sex may precipitate bleeding. If so, restrict these activities for a week. Call us if you are unable to urinate at any time - bleeding or not.
- Semen:** If you are sexually active, there is likely to be blood mixed with the sperm at the time of ejaculation. This is referred to as hematospermia or hemospermia by physicians. Hematospermia is not surprising as the prostate's main function is to produce semen, the fluid that is ejaculated with sexual intercourse. Traces of blood may persist for two to three months. Blood in the semen may be red or brown or a rusty color. Hematospermia is almost never serious and does NOT represent a threat to you or your partner. You do not need to restrict sexual activity if the only bleeding you see occurs with ejaculation.
- Stool:** The biopsy is done through the rectal wall. Therefore seeing blood in the stool is not surprising either. Rectal bleeding is actually rare other than some mild spotting for the first few days. Any significant bleeding that is noted after a week should be brought to our attention.
- Infection:** With any internal procedure, such as a biopsy, a small chance of infection exists (about 10%). If infection is to occur it will be in the prostate or urinary tract. The use of antibiotics pre-biopsy reduces but does not eliminate this possibility.
- A urinary tract infection can occur anytime within the first week or two after the biopsy but usually happens within two to three days. Symptoms that might be noted are from the lower urinary tract (bladder and prostate). Urinary frequency, burning with urination, sense of incomplete emptying of the bladder are the most common symptoms.
- If the infection is severe it may reach the blood stream. Fevers, chills, shaking, sweating and lack of energy may be noted. A blood stream infection is very serious and even life threatening. If symptoms of a blood infection are seen you must **CONTACT US IMMEDIATELY**. If you cannot reach us then **YOU MUST CONTACT YOUR REGULAR DOCTOR or GO TO THE EMERGENCY ROOM**.
- For any infection we will start you on antibiotics. If we are not sure whether you have an infection, we often start antibiotics until the urine tests (and sometimes, blood tests) are completed. The most important test is called a urine culture and it determines whether an infection really exists in the urinary tract. Urine cultures take at least 48 to 72 hours to complete.
- Urinary Tract Obstruction:** Occasionally there can be some swelling of the prostate gland after the biopsy, leading to difficulty in urination. If that happens, and you are unable to pass urine at all then you should telephone us for further advice. If you cannot reach us then you will need to come to the emergency room. It may be necessary to insert a small tube called a catheter through the penis and into the bladder to drain the urine out. How long the catheter remains in the bladder depends on a number of factors including how much urine was in the bladder at the time of catheterization and whether the patient has had any trouble passing urine prior to the biopsies being taken. If we did not place the catheter ourselves, you must call us the next day to discuss plans to have the catheter removed.