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For patients

Ultrasound - Prostate



Ultrasound of the prostate uses sound waves to produce pictures of a man's prostate gland and to help diagnose symptoms such as difficulty urinating or an elevated blood test result. It's also used to investigate a nodule found during a rectal exam, detect abnormalities, and determine whether the gland is enlarged. Ultrasound is safe, noninvasive, and does not use ionizing radiation.

This procedure requires little to no special preparation. Leave jewelry at home and wear loose, comfortable clothing. You may be asked to wear a gown and to lie on your side with your knees toward your chest. To obtain high-quality images, an ultrasound transducer – a plastic cylinder about the size of a finger – is inserted a short distance into the rectum. The transducer is covered with a protective sheath and lubricated with gel. If a biopsy is planned, you may be told to avoid aspirin and other blood thinners for seven to 10 days prior to the procedure. You may be instructed to use an enema to clean out your bowel and take antibiotics before a biopsy procedure.

What is Ultrasound Imaging of the Prostate?

Ultrasound imaging is a noninvasive medical test that helps physicians diagnose and treat medical conditions. It is safe and painless. It produces pictures of the inside of the body using sound waves. Ultrasound imaging is also called sonography (http://www.radiologyinfo.org) . It uses a small probe called a transducer and gel placed directly on the skin. High-frequency sound waves travel from the probe through the gel into the body. The probe collects the sounds that bounce back. A computer uses those sound waves to create an image. Ultrasound exams do not use radiation (http://www.radiologyinfo.org) (x-rays (http://www.radiologyinfo.org)). Because ultrasound captures images in real-time, it can show the structure and movement of the body's internal organs. The images can also show blood flowing through blood vessels.

Prostate ultrasound, also called transrectal ultrasound, provides images of a man's prostate gland (http://www.radiologyinfo.org) and surrounding tissue. The exam typically requires insertion of an ultrasound probe into the rectum of the patient. The probe sends and receives sound waves through the wall of the rectum into the prostate gland which is situated right in front of the rectum.

What are some common uses of the procedure?

A transrectal (http://www.radiologyinfo.org) ultrasound of the prostate gland is performed to:

- detect disorders within the prostate.
- determine whether the prostate is enlarged, also known as benign prostatic hyperplasia (BPH) (https://www.radiologyinfo.org/en/info/bph) , with measurements acquired as needed for any treatment planning.
- detect an abnormal growth within the prostate.
- help diagnose the cause of a man's infertility.

A transrectal ultrasound of the prostate gland is typically used to help diagnose symptoms such as:

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- a nodule felt by a physician during a routine physical exam or prostate cancer screening exam.
- an elevated blood test result.
- difficulty urinating.

Because ultrasound provides real-time images, it also can be used to guide procedures such as needle biopsies (http://www.radiologyinfo.org) , in which a needle is used to sample cells (tissue) from an abnormal area in the prostate gland for later laboratory testing.

Who interprets the results and how do I get them?

A radiologist, a doctor trained to supervise and interpret radiology exams, will analyze the images. The radiologist will send a signed report to the doctor who requested the exam. Your doctor will then share the results with you. In some cases, the radiologist may discuss results with you after the exam. Some prostate ultrasound exams may also be performed by a urologist.

You may need a follow-up exam. If so, your doctor will explain why. Sometimes a follow-up exam further evaluates a potential issue with more views or a special imaging technique. It may also see if there has been any change in an issue over time. Follow-up exams are often the best way to see if treatment is working or if a problem needs attention.

What are the benefits vs. risks?

Benefits

- Ultrasound is widely available, easy-to-use and less expensive than other imaging methods.
- Ultrasound imaging uses no ionizing radiation.
- Ultrasound scanning may be able to give a clearer picture of soft tissues that do not show up well on x-ray images.
- Ultrasound causes no health problems and may be repeated as often as is necessary if medically indicated.
- Ultrasound provides real-time imaging. This makes it a good tool for guiding minimally invasive (http://www.radiologyinfo.org) procedures such as needle biopsies (http://www.radiologyinfo.org) and fluid aspiration.

Risks

- Standard diagnostic ultrasound (http://www.radiologyinfo.org) has no known harmful effects on humans.

What are the limitations of Prostate Ultrasound Imaging?

Men who have had the end of their bowel (rectum) removed during prior surgery are not good candidates for ultrasound of the prostate gland because this type of ultrasound typically requires placing a probe into the rectum.

However, the radiologist may attempt to examine the prostate gland by placing a regular ultrasound imaging probe on the perineal skin of the patient (area between the legs, behind the scrotum, and in front of the anus).

Sometimes the gland can be examined by ultrasound this way, but the images may not be as detailed as with the transrectal probe. An MRI of the prostate gland is another alternative imaging option and may be done instead of or in-addition to an ultrasound.

Prostate MRI can be done without requiring anything to be placed into the rectum. It may be a good option for men who have had their rectum removed.

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