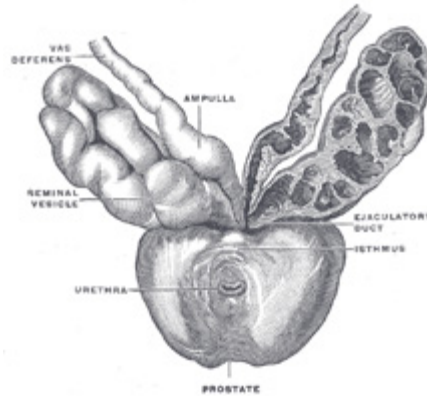


PSA and PROSTATE BIOPSY



Urologic Specialists of Richmond
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The Prostate

What is the Prostate?

The prostate is a gland found only in men and is usually the size and shape of a walnut. It is found at the opening of the bladder and surrounds the tube (urethra) that you void through. Its primary function is to produce the fluid in semen which is secreted during orgasm.

What happens to the Prostate during aging?

As men age, there are several changes that occur in the prostate. Most men have had some enlargement of the prostate by the age of 50. As the prostate enlarges in a process known as Benign Prostatic Hyperplasia (BPH), the position of the prostate at the neck of the bladder causes some restriction in the stream resulting in a slow and weak stream as well as frequent urination.

A second condition that occurs in men more frequently as they age is a tendency towards inflammation of the prostate known as prostatitis. This condition also causes swelling of the prostate resulting in a slow and weak stream as well as frequent urination and urgency.

The third possible condition of the prostate with aging is prostate cancer. It is estimated that as many as 1/3 of men aged 50 will have some microscopic changes in their prostate that is cancerous.

How is Prostate Cancer Diagnosed?

Prostate cancer is usually diagnosed based upon either a physical examination of the prostate or by an elevation of a blood test. There are no symptoms of prostate cancer in patients who have curable cancer that distinguish cancer from either BPH or prostatitis.

Since the 1990's, most prostate cancer is diagnosed by a blood test measuring Prostate Specific Antigen (PSA). Despite the fact that PSA is a highly sensitive test, there remain up to 20% of patients who are diagnosed based upon a digital rectal examination (DRE).

When should I start screening for Prostate Cancer?

The American Cancer Society and the American Urologic Association recommend that all males over the age of 50 should be screened for prostate cancer with both a serum PSA and a digital rectal examination. In patients who are at high risk for prostate cancer, such as African Americans and relatives of Prostate Cancer patients, the screening should probably start earlier.

What is PSA and how is it used?

PSA is a blood test that is used to screen for prostate. The test measures a protein that is secreted by the prostate (Prostate Specific Antigen). Anything that happens to the prostate, such as enlargement, inflammation, infections, or cancer will all make the PSA go up.

What is the meaning of an elevated PSA?

An elevation of the serum PSA may be due to a number of factors. Nearly 80% of patients who have an elevated PSA do not have cancer as the cause. Instead, these patients may have an infection or inflammation of the prostate or just enlargement of the prostate (BPH).

Despite the fact that only 20-25% of patients with elevated PSA has cancer, this is more accurate than mammography or other cancer screening tests.

What are the normal ranges for PSA?

For the average male in the United States, the normal PSA should be below 4ng/ml. However, young men tend to have a smaller prostate and the PSA can be adjusted for the patient's age. For example, a man under the age of 60 years should have a PSA under 3ng/ml, while men over the age of 70 may have PSA's up to 6.5ng/ml.

Is there other information that PSA can diagnose cancer?

Some cancers are now picked up by watching the PSA rise with time. This is called PSA Velocity and generally is reflected as a faster than expected rise in PSA. If your prostate is rising faster than 20% per year, then you may want to have an ultrasound of the prostate.

What should be done about an elevated PSA or abnormal digital rectal examination?

If either the PSA or digital rectal examination is abnormal, the patient should be evaluated by a Urologist. The patient will be checked to be sure that there is no inflammation or infection and treated if there is evidence that the prostate is inflamed. If there is no evidence of an inflammation or infection, the Urologist will usually recommend an ultrasound and biopsy of the prostate.

What is a Prostate Ultrasound?

A prostate ultrasound is a procedure where the Urologist places an ultrasound probe within the rectum and images the prostate by sound waves similar to radar. The Urologist is looking at the size of the prostate as well as for any tissue abnormalities. The ultrasound can be further utilized to perform biopsies of the prostate.

How is the Prostate Ultrasound performed?

An ultrasound probe is inserted into your rectum which allows the Urologist to visualize your prostate. The tissue around the prostate is then injected with a local anesthetic to reduce any discomfort. The Urologist then measures your prostate, looks for any abnormalities, and takes pieces of tissue guided by the ultrasound. Typically a total of 8-12 biopsies are taken.

What side effects can I expect after a Prostate Ultrasound?

There are 3 specific side effects that are seen after prostate ultrasonography. The first and most common is blood in the urine and rectum. This is usually not a major problem and stops within 2 or 3 days after the biopsy. Some patients may see clots in their urine which clear up with increasing the fluid intake. Blood in the semen is very common and can occur even weeks after the biopsy.

The second common side effect to a prostate biopsy is infection. These are fairly uncommon, but may be associated with a fever and chills as well as burning and frequency of urination. If a patient experiences a fever or chills after a biopsy, they should call the Urologist.

The third side effect after a prostate biopsy is difficulty urinating. This is usually because of swelling of the prostate due to a reaction to the biopsy, but can be related to a blood clot in the bladder. Again, this is something that the patient needs to communicate with his Urologist as soon as possible.

What happens if I have a side effect such as bleeding or a fever?

You should call Urologic Specialists (804) 323-0226 for any significant problems that you are experiencing or any question regarding your biopsy