

## **PROSTATE CANCER INFORMATION**

Perhaps one of the greatest areas of health concerns for men over the age of 45 is their prostate. Prostate cancer is the most common cancer in men, other than skin cancer. The American Cancer Society estimates that last year more than 220,000 new cases were diagnosed in the U.S. and that more than 32,000 men died from the disease, making it the second-leading cause of cancer death among men in the country.

Despite the prevalence of prostate cancer, many men are still uncomfortable discussing the topic. In fact, less than 10 percent of men in the United States are screened for prostate cancer. So it is a disease that has many unanswered questions.

The urologists at Shore Health System specialize in the world's most state-of-the-art treatments of prostate cancer. Some of the following questions that the physicians are frequently asked and their answers may help you to better understand various topics about the prostate and prostate cancer:

### **The Prostate**

#### ***What is the prostate?***

It is a walnut-sized gland located below the bladder and surrounding the urethra. It is also located close to the rectum and can be felt by placing a finger in the rectum. The prostate produces secretions that are part of semen. Fluid from the vas deferens, which is the tube that delivers the sperm from the testicles to the urethra inside the prostate and from the seminal vesicle gland, drains through the prostate into the urethra. As the prostate enlarges from normal growth or cancer, it can block the passage of urine.

#### ***What is non-cancerous prostate growth?***

Prostate growth is not always a sign of cancer. Many men experience non-cancerous growth of the prostate, which can lead to blockage of the urinary flow. This non-cancerous growth does not increase the risk for prostate cancer, but is usually the cause of urinary symptoms.

### **Prostate Cancer**

#### ***What is prostate cancer?***

Prostate cancer is the cancerous growth of the cells inside the prostate. It usually grows slowly over many years. However, in later stages, the growth usually speeds up. In the prostate, the hormone testosterone is converted into DHT, which stimulates the growth of the cancer cells. As the cancer grows, it can spread outside the prostate -- usually into the surrounding lymph nodes and bones.

#### ***What causes prostate cancer?***

At this point, the specific cause of prostate cancer is unknown. However, it is believed that genetics, diet and other environmental factors work together to cause and encourage cancer cell growth.

### **Risks and Warning Signs**

#### ***Who is at risk for prostate cancer?***

Although prostate cancer generally occurs in older men, younger men can get it too. African-American males and those men who have a family history of prostate cancer have a higher risk of getting it. Therefore, screening and early diagnosis are especially important for individuals at risk.

#### ***Are there any warning signs?***

Unfortunately, there are no early warning signs of prostate cancer. It usually grows very slowly, and due to

its location, many men do not have any physical symptoms. However, if the prostate grows large enough, you may have all or a few of the following symptoms:

- Frequent urination
- Blockage of urinary flow
- Dribbling at the end of urination
- The need to get up out of bed and urinate at night
- Urinary leakage
- An urgency to urinate
- Straining to empty the bladder

These symptoms are usually due to benign prostate enlargement, and do not necessarily represent symptoms of prostate cancer.

### ***Is blood in the urine or semen a sign of prostate cancer?***

Not usually. Blood in the urine can be a sign of non-cancerous prostate enlargement, bladder infection, kidney stones, kidney or bladder cancers, or other conditions. However, since it can be an indication of something serious, you should see your doctor. Likewise, blood in the semen is not an indication of prostate cancer, but you should see your doctor to be sure.

## **Screening and Detection**

### ***How is prostate cancer detected?***

Early detection of prostate cancer is critical to successful treatment. Most prostatic cancers are initially detected through an elevated prostate specific antigen (PSA) test and a digital rectal exam (DRE). A DRE is a gloved-finger examination of the prostate through the rectum. The PSA test is a blood test that is used to help screen for prostate cancer. The only conclusive form of detection is biopsy. This is usually done with the aid of ultrasound.

### ***When should a man be screened?***

To detect prostate cancer early, the American Cancer Society advises that all men over 50 have an annual prostate DRE and a PSA blood test. However, many recommend that those at high-risk (African-American men and those men with a family history of prostate cancer) should begin testing as early as age 40.

### ***What is a digital rectal exam?***

To perform a digital rectal exam (DRE), a doctor briefly inserts a gloved, lubricated finger into the rectum to feel the back wall of the prostate. Most of the prostate cannot be felt, but by feeling the back wall, a doctor can tell if there are areas of firmness, hard nodules or lumps. These may show a problem since the prostate is supposed to feel soft, smooth and round. However, an abnormality does not always mean that cancer is present.

### ***What is a PSA blood test?***

The prostate specific antigen (PSA) blood test is used to check the enzyme normally produced by the prostate cells. PSA is not found in large amounts anywhere else in the body. A small amount of PSA normally leaks into the blood stream and can be detected with a simple blood test.

Higher levels of PSA can be associated with inflammation, enlargement or prostate cancer. In other words, a mild to moderate increase in PSA does not always mean cancer. Often a higher PSA level can show that the prostate cancer is in its later stages and may have spread. Together, the PSA blood test and digital rectal exam are used as tools to detect cancer early.

An abnormal PSA test result is defined as 4.0 ng/ml or higher. An elevated level does not necessarily mean cancer. The age of the patient, prostate size, recent ejaculation or an infection may also have an influence on this level. Conversely, a patient may have a normal PSA level, but still have prostate cancer. That is why it is imperative to have both a PSA test and DRE.

***What if the PSA or digital rectal exams appear suspicious?***

If your doctor is concerned by the results of these tests, then an ultrasound and biopsies are done. The only conclusive form of detection for prostate cancer is biopsy.

***What is a prostate ultrasound?***

A lubricated ultrasound probe is placed into the rectum and ultrasound waves are sent out from the probe to obtain a picture of the prostate. This procedure allows the entire prostate to be seen to determine the prostate size and to see if problems are present. It also allows more accurate biopsy of areas for concern.

***Can an ultrasound be performed without the biopsy?***

An ultrasound alone is not completely precise since at least 30 percent of the time cancer can be present but not detected by the ultrasound. Therefore, biopsies are generally done even when the ultrasound appears normal.

***What is a prostate biopsy?***

To take a biopsy of the prostate, many tiny sliver-like pieces of tissue are removed using a long thin needle to be looked at under a microscope to see if cancer is present. The procedure takes only 15 minutes and usually causes only mild discomfort.

***What are the risks of biopsy?***

Although rare, infection and significant bleeding can occur after biopsy. However, some bleeding can be expected. Few men also experience swelling of the prostate gland and difficulty urinating.

***If the biopsy is negative does that mean that I don't have cancer?***

Not necessarily. A negative biopsy means that no cancer was seen on the tissue that was analyzed. However, cancerous tissue may still exist in other parts of the prostate. This can actually occur in 15-25 percent of biopsies, and is why some doctors recommend a repeat biopsy for suspicious cases.

***How could the cancer have been missed when taking the biopsy?***

Many cancers hide in small clusters within or outside the prostate, which can be missed even when several tissue samples are taken.