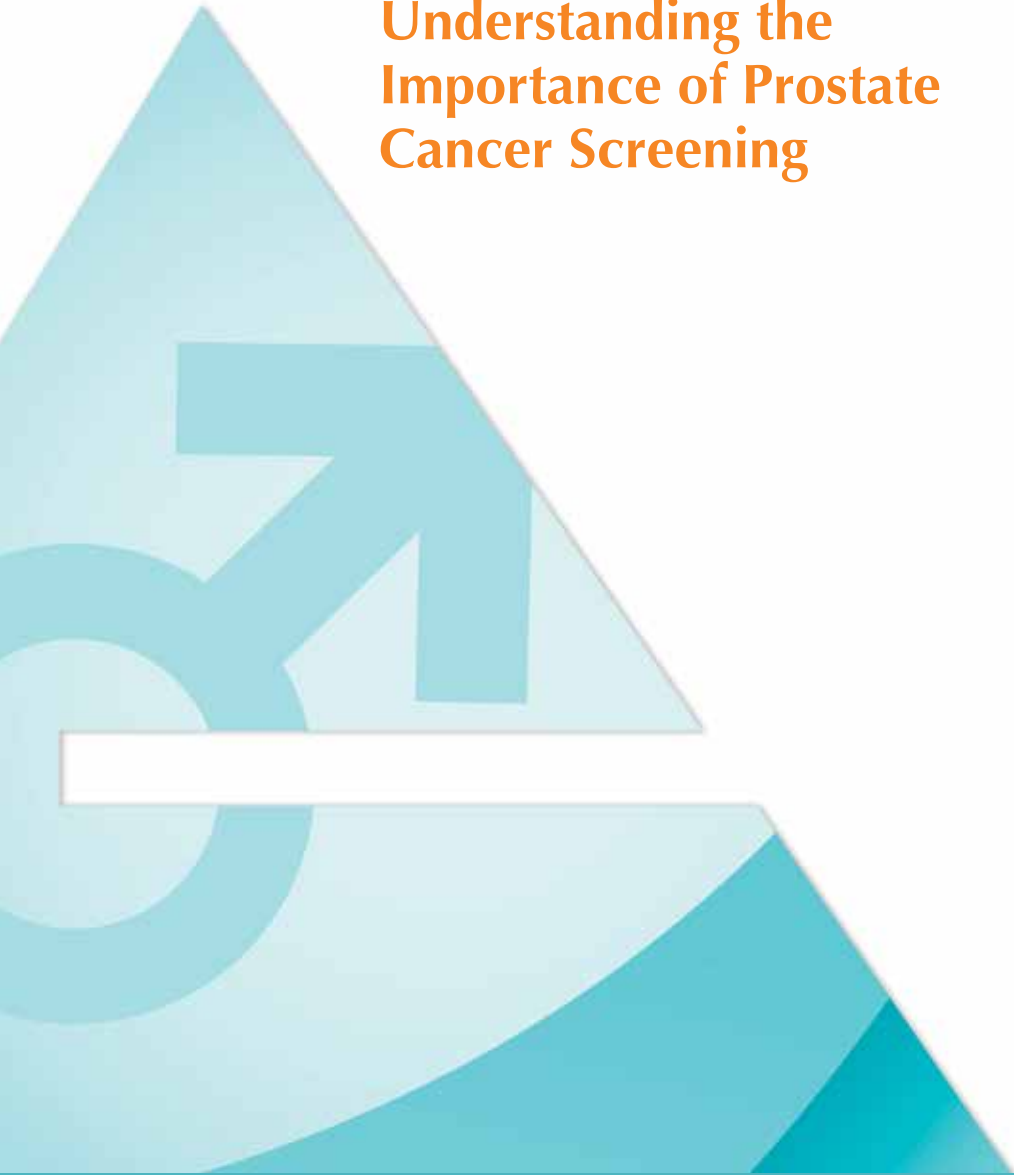


**ADVANCED
UROLOGY
ASSOCIATES**



Understanding the Importance of Prostate Cancer Screening



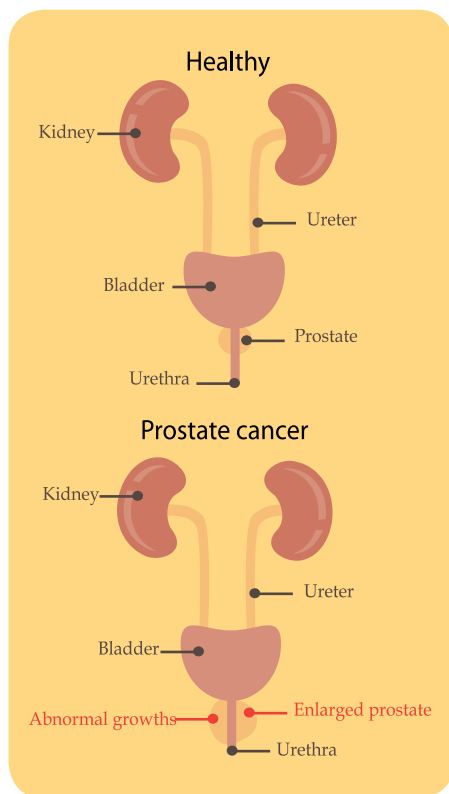
Importance of Screening

What is your prostate? And what does it do?

The prostate gland is part of the male reproductive system and helps make semen, the milky fluid that carries sperm from the testicles through the penis when a man ejaculates.

Your prostate is a collection of glands that is enclosed by a capsule. It lies just below the bladder and in front of the rectum. It encircles the urethra (the tube that carries urine out of the bladder and through the penis). Because it lies just in front of the rectum, it can be assessed through a rectal exam. The normal size of the prostate gland is about the size of a walnut.

The prostate gland is divided into five lobes: two lateral lobes, a middle lobe, an anterior lobe, and a posterior lobe. In 85% of cases, prostate cancer is multifocal, meaning it is found in more than one area in the prostate.



How do we screen for prostate cancer? What is a PSA? What is a DRE?

A combination of PSA and digital rectal exam (DRE) is ideal for screening, usually once a year when men turn 50 (beginning at 40 if family history of prostate cancer or African American). It also helps urologists detect and treat patients before metastatic prostate cancer develops. Both of these tests can aid in the diagnosis of prostate cancer.

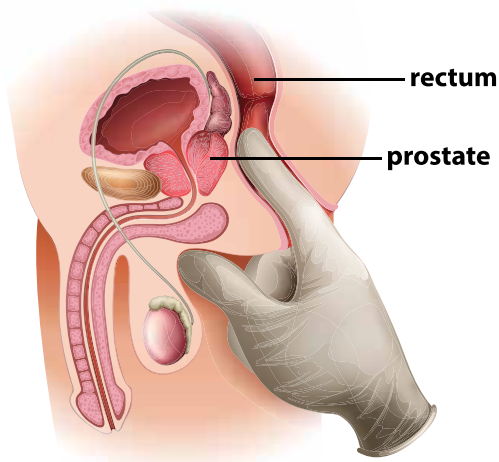
(PSA) prostate specific antigen

A PSA is obtained through a sample of blood. It is a protein produced by prostate cells and normally only a small amount of PSA gets into the bloodstream. The normal range varies with age and race.

However, when the prostate is irritated, inflamed, or damaged, PSA leaks into the bloodstream more easily, causing the level to be higher. A high PSA level is not proof of cancer, as many other things can cause false positive test results, as listed above. And a low PSA does not necessarily mean a man does not have prostate cancer. Once a baseline PSA has been obtained, the rate of change of the PSA is important. It should be monitored at least once a year, but more often if warranted. If a man has been diagnosed with prostate cancer, the PSA can help detect if cancer is activated, changing, or be a sign of recurrence. The PSA will then be monitored more frequently than normal.



Digital Rectal Exam (DRE)



A digital rectal exam (DRE) is performed by a clinician to feel the prostate. You will either stand and bend forward at the waist or lie on your side with your knees pulled up to your chest on an exam table. The clinician will gently insert a lubricated, gloved finger into the rectum. You should relax and take slow, deep breaths to make the exam more comfortable. The rectal exam is done to check the size, firmness, and texture of the prostate through the rectum. Any hard

areas, lumps, or growth spreading beyond the prostate may warrant further testing, such as a biopsy. If your prostate is enlarged, you may feel some discomfort or mild pain during the exam, but pain is unusual. You may also feel the need to urinate.

Prostate Cancer Statistics

Prostate cancer is the most common cancer in the United States. For unknown reasons, the risk of prostate cancer is 70% higher in African American men than white men. This year, an estimated 180,890 men in the United States will be diagnosed with prostate cancer. In all racial and ethnic groups, prostate cancer is the leading cancer diagnosed in the United States.

It is estimated that 26,120 deaths from this disease will occur this year, ranking at the second cause of cancer related deaths. The goal of early detection is to reduce death from prostate cancer in men. Early stage prostate cancer offers many options for treatment and cure.

The goal of early detection is to reduce death from prostate cancer in men. Early stage detection offers many options for treatment and cure.

The 5-year survival rate tells you what percent of men live at least 5 years after the cancer is found. Percent means how many out of 100. The 5-year survival rate for most men with prostate cancer is 99%, if detected and treated in early stages. It is found that 98% are alive after 10 years and 95% live for at least 15 years. These percentages do not tell you if you are prostate cancer-free. Close monitoring with PSA, imaging, and exam can monitor your cancer status. For men diagnosed with prostate cancer that has spread to other parts of the body, the 5 year survival rate drops to 28%. For this reason, regular screening and early detection of cancer is very important to prolong survival after diagnosis with prostate cancer.

The Leading Cancer Diagnosed in the U.S.

70%
HIGHER RISK IN
AFRICAN AMERICAN
MEN THAN
CAUCASIAN MEN

OVER
160,000
ESTIMATED NUMBER OF
NEW PROSTATE CANCER
CASES DIAGNOSED IN 2017

OVER
26,000
DEATHS ESTIMATED
2nd CAUSE
CANCER RELATED DEATHS

Prostate Cancer Signs & Symptoms

Prostate cancer symptoms may not be apparent in the early stages. The symptoms may be different for each person and these symptoms may be caused by other conditions. Routine screenings by digital rectal exams (DRE) and prostate specific androgen (PSA) tests are important.

Make an informed decision with your doctor about whether to be tested, beginning at age 50. Men with one or more risk factors or a family history of prostate cancer should consult with their physician about whether to start screening earlier than the age of 50.

Some prostate cancer signs related to urination include:

- Burning or pain during urination
- Difficulty urinating, or trouble starting and stopping while urinating
- More frequent urges to urinate at night
- Loss of bladder control
- Decreased flow or velocity of urine stream
- Blood in urine (hematuria)

Other prostate cancer symptoms include:

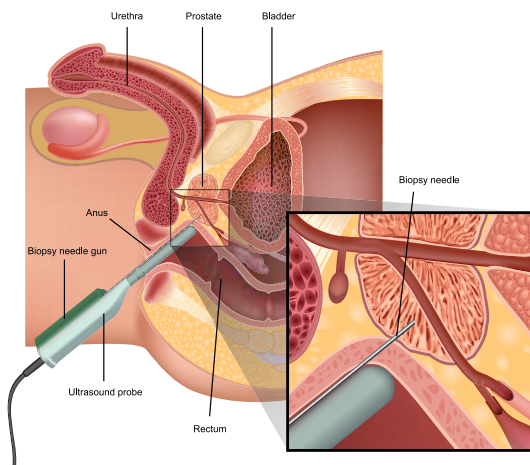
- Blood in semen
- Difficulty getting an erection (erectile dysfunction)
- Painful ejaculation
- Swelling in legs or pelvic area
- Numbness or pain in the hips, legs or feet
- Bone pain that doesn't go away, or leads to fractures

**Talk with your doctor
today about the importance
of prostate cancer screening**

Biopsy Information

What is a prostate biopsy?

If symptoms, a digital rectal exam, or PSA levels are abnormal, a biopsy of the prostate may be recommended. A transrectal ultrasound (TRUS) guided biopsy is usually done in the office where small tissue samples are taken from on average 12 areas, or cores, of the prostate using an ultrasound probe. You will be asked to stop taking Aspirin or nonsteroidal anti-inflammatory medications for



about one week prior to the biopsy to minimize bleeding. The day of the biopsy, you will need an enema to be sure the rectal area is emptied of stool. You will also be prescribed antibiotics to start the day before the biopsy.

The tissue obtained from the biopsy is then analyzed by a pathologist. The tissue may be benign (no cancer was found) or malignant (cancer).

What if my biopsy is negative? What is ConfirmMDx?

If the biopsy is negative for cancer, ConfirmMDx may be ordered on your tissue from the prostate biopsy. This test can identify men who have a “false negative” biopsy result and truly have risk of developing prostate cancer. Or it can identify men who are truly negative, reducing the number of unnecessary repeat biopsies in the future. If the ConfirmMDx results show the likelihood of developing cancer, your clinician may order additional testing, such as an MRI guided biopsy.

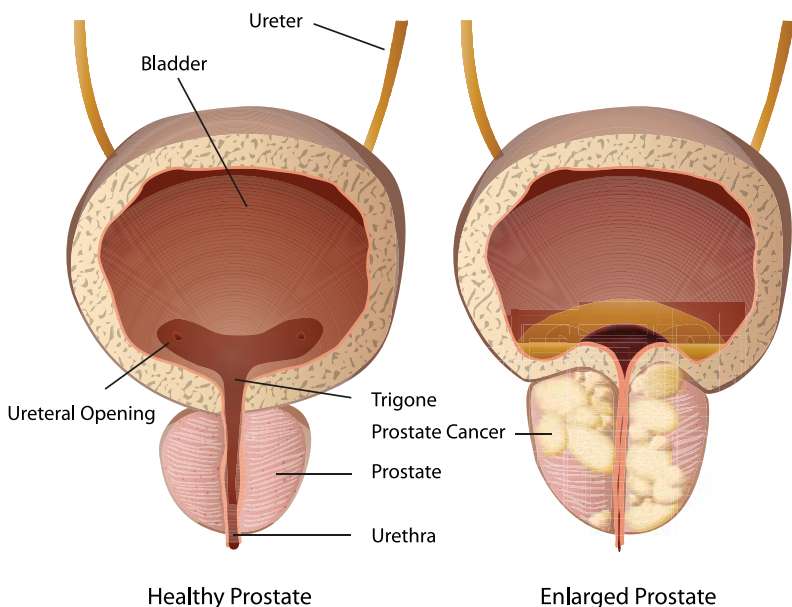
What if my biopsy is positive? What is Prolaris?

If the biopsy is positive, cancer has been found. Grading of the cancer is done (Gleason score), it will be noted how many cores are positive for the cancer, and the percentage of tissue that is positive for cancer in the biopsy. If there is any abnormal tissue, not cancerous in the cores, it will also be noted on the pathology report.

Sometimes, tissue from the biopsy may be sent for further analysis with Prolaris testing, for Gleason scores of 6, 7, or 8. Prolaris testing measures the aggressiveness of your prostate cancer. It measures how fast the prostate cancer is growing. It is given a score and is unique to you. The score can help determine your treatment options. The scores range from -3 to 7. Higher scores represent more aggressive cancers. A graph will illustrate your risk compared to other patients within the same score category. The score is also combined with your PSA and Gleason score values to estimate a 10 year prostate cancer specific mortality risk.

What is prostate cancer?

Prostate cancer means cancer cells form in the tissues of the prostate. Our body is composed of billions of cells that function for a while and then die, being replaced in an organized manner. Sometimes there can be an uncontrolled replacement of the cells, leaving them unorganized. This abnormal growth of cells and disorder is cancer. The cancer cells can grow without the normal control and limits. Cancer can spread locally into surrounding tissues or break away from the tumor and enter body fluids, such as blood and lymph and spread to other parts of the body.



What is a Gleason Score?

If prostate cancer is detected, it will be given a Gleason score from the tissue collected. Because prostate cancer may be composed of cancer cells of different grades, the pathologist assigns numbers to the two predominant grades present. Sometimes a third grade is given. The numbers range from 1 (low grade) to 5 (high grade). Typically the Gleason score is the total of these two numbers. Lower risk prostate cancer is a Gleason score less than or equal to 6. Intermediate risk is a Gleason score of 7. High risk is a Gleason score of 8-10. The lower the number, the tumor is usually less aggressive and less likely it will spread. The higher the Gleason score, the more aggressive the cancer.

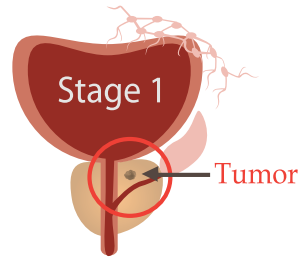
- 1 Nearly Normal Cells**
Small, uniform glands.
- 2 Some Abnormal Cells Loosely Packed**
More space (stroma) between glands.
- 3 Many Abnormal Cells**
Distinctly infiltration of cells from glands at margins.
- 4 Very Few Normal Cells Left**
Irregular masses of neoplastic cells with few glands.
- 5 Completely Abnormal Cells**
Lack of or occasional glands, sheets of cells.

What is cancer staging?

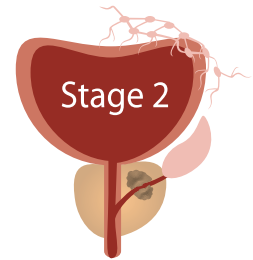
If prostate cancer is diagnosed, other tests are done to find out if cancer cells have spread within the prostate or to other parts of the body. This process is called staging. Whether the cancer is only in the prostate, or has spread outside the prostate, determines your stage of prostate cancer. Staging is done by reviewing the PSA, prostate biopsy, rectal exam. Your provider may recommend imaging, such as CT scan, bone scan, MRI, or PET fluoride scan, to evaluate other organs to help in the staging and treatment decision. This is considered clinical staging. Pathological staging is performed when a pathologist examines

the prostate, seminal vesicles, and pelvic lymph nodes at the time of the removal of the prostate. It is important to know the stage of prostate cancer in order to plan treatment. Stages range from 1 to 4. Stage 3 and 4 are known as advanced prostate cancer.

Stage 1-cancer is found only in the prostate: found by biopsy (done for a high PSA) or in a small amount of tissue during surgery for other reasons, PSA is less than 10 and Gleason score of 6 or less, OR cancer is found in one half or less of one lobe of the prostate and the PSA is less than 10 and the Gleason score is 6 or lower.



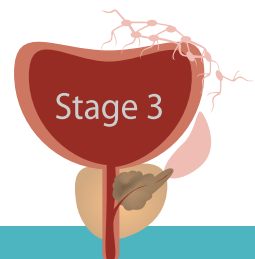
Stage 2-cancer is more advanced than stage 1, but is still only in the prostate. Stage 2 is divided into stages 2A and 2B.



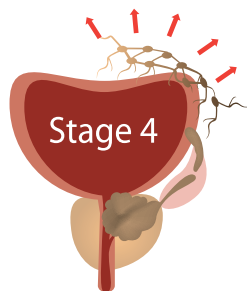
Stage 2A- is found by biopsy (done for a high PSA level) or in a small amount of tissue during surgery for other reasons. The PSA is lower than 20 and the Gleason score is 7. OR PSA is at least 10, but lower than 20 and Gleason score is 6 or lower. OR Found in one half or less of one lobe of the prostate. The PSA is at least 10, but lower than 20 and the Gleason score is 6 or lower. OR Found in one half or less of one lobe of the prostate. The PSA is lower than 20 and the Gleason score is 7. OR Found in more than one half of one lobe of the prostate.

Stage 2B- is found in opposite sides of the prostate. The PSA can be any level and the Gleason score can range from 2 to 10. OR Cannot be felt during a digital rectal exam and cannot be seen in imaging tests. The PSA is 20 or higher and the Gleason score can range from 2 to 10. OR Cannot be felt during a digital rectal exam and cannot be seen in imaging tests. The PSA can be any level and the Gleason score is 8 or higher.

Stage 3-cancer has spread beyond the outer layer of the prostate and may have spread to the seminal vesicles. The PSA can be any level and the Gleason score can range from 2 to 10.



Stage 4-The PSA can be any level and the Gleason score can range from 2 to 10. The cancer has spread beyond the seminal vesicles to nearby tissue or organs, such as the rectum, bladder, or pelvic wall OR may have spread to the seminal vesicles or to nearby tissue or organs, such as the rectum, bladder, or pelvic wall. Cancer has spread to nearby lymph nodes. OR has spread to distant parts of the body, which may include lymph nodes or bones. Prostate cancer most commonly spreads to the bones.



What Scans May be Ordered for the Staging Process

In prostate cancer, staging tests may not be done unless you have symptoms or signs that the cancer has spread, such as bone pain, a high PSA level, or a high Gleason score. Possible tests ordered either at time of your diagnosis of prostate cancer or during your treatment or monitoring include:

Bone scan: A procedure to check if there are rapidly dividing cells, such as cancer cells, in the bone. A very small amount of radioactive material is injected into a vein and travels through the bloodstream. The radioactive material collects in bones and is detected by a scanner. It can detect cancer in the bones, arthritis, or other injuries.

CT scan: A procedure that makes a series of detailed pictures of areas inside the body, taken from different angles. The pictures are made by a computer linked to an x-ray machine. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly.

MRI (magnetic resonance imaging): A procedure that uses a magnet, radio waves, and a computer to make a series of detailed pictures of areas inside the body.

Sodium Fluoride PET/CT scan: A procedure using a radioactive sodium material with higher quality images for bone metastasis. After the IV injection, the scan is done 45 minutes later and will typically take 15-20 minutes.



A prostate exam can be the difference between life and death.

Talk to your doctor today about the importance of prostate cancer screening.



AUA Prostate Cancer Center

Tel: 815.409.4930

Fax: 815.409.4940

1541 Riverboat Center Drive

Joliet, IL 60431

www.AdvUro.com