METHODIST HEALTH SYSTEM | PATHOLOGY CENTER

Prostate Cancer

Prostate Adenocarcinoma

Definition of Terms

Prostate: A walnut-sized gland located in the male reproductive system, just below the bladder and in front of the rectum.

Adenocarcinoma: A type of cancerous, or malignant, tumor that originates in a gland or glandular structure.

Invasive, Infiltrating: Capable of spreading to other parts of the body.

Malignant: Cancerous and capable of spreading.

Pathologist: A physician who examines tissues and fluids to diagnose disease in order to assist in making treatment decisions.

Lymphatic: Relating to lymph glands.

Advancing Excellence

What is Prostate Adenocarcinoma?

Prostate Adenocarcinoma accounts for 95 percent of all prostate cancers. It starts in the prostate gland and, if not treated successfully at an early stage, can spread to other parts of the body. Other than skin cancer, Prostate Adenocarcinoma is the most common cancer in American men, with 185,000 cases diagnosed each year.

Who is most likely to have Prostate Adenocarcinoma?

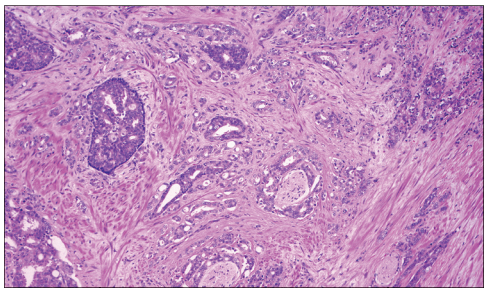
Prostate Adenocarcinoma becomes more common in men over age 50. Eighty percent of prostate cancer cases occur in men over age 65. African-American men have an above average risk. A family history of prostate cancer and a high-fat diet also increase risk.

What characterizes Prostate Adenocarcinoma?

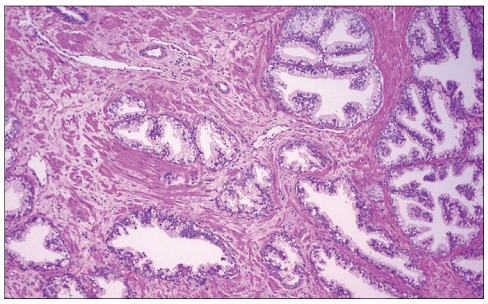
Prostate Adenocarcinoma can be characterized by changes to the size, shape, or texture of the prostate. Physicians can sometimes detect these changes through a ***digital rectal exam (DRE).*** In addition, a ***Prostate Specific Antigen (PSA)*** exam detects the level of PSA, a protein produced by prostate cells, in the blood. Higher PSA levels indicate the possibility of cancer. While most prostate cancers do not present symptoms, urinary abnormalities (such as increased frequency/urgency, decreased stream, or impotence) can be associated with prostate cancer.

How does the pathologist make a diagnosis?

If the results of a DRE and/or PSA are not within the normal range, a ***biopsy*** will be performed. In this procedure, the primary care physician will obtain multiple thin cores of tissue for the pathologist to examine under the microscope. Another way for the pathologist to make a diagnosis of prostate cancer, though less common, is by examining pieces (chips) of prostate tissue, which are removed from the prostate during a ***transurethral resection.*** This process is done for enlargement of the prostate gland (benign prostatic hypertrophy, or BPH). Pathologists can diagnose prostate cancer in whole prostate glands that are removed during a ***radical prostatectomy,*** a surgical treatment of prostate cancer. Finally, pathologists can diagnose prostate cancer that has spread by examining cells and tissue from other body sites.



Prostate Adenocarcinoma can be characterized by changes to the size, shape or texture of the prostate.



Normal prostate cells.

What else does the pathologist look for?

In all prostate tissue samples, a ***Gleason grade*** is assigned by the pathologist. This important number, which ranges from 2 (best) to 10 (worst), is a strong measure of how aggressive the prostate cancer is and can be used to help determine prognosis and type of therapy. Physicians often look at

What kinds of questions should I ask my doctors?

Ask any question you want. There are no questions you should be reluctant to ask. Here are a few to consider:

- *Please describe the type of cancer I have and what treatment options are available.*
- *What stage is the cancer in?*
- *What are the chances for full remission?*
- *What treatment options do you recommend? Why do you believe these are the best treatments?*
- *What are the pros and cons of these treatment options?*
- *What are the side effects?*
- *Should I receive a second opinion?*
- *Is your medical team experienced in treating the type of cancer I have*?

a combination of your Gleason grade, clinical ***stage,*** and serum PSA level (how fast your PSA is rising) in deciding on the best treatment. For needle biopsies and prostate chips, the pathologist will also report the amount of tissue involved that is cancerous and this finding can influence treatment. For radical prostatectomy tissue, pathologists define the stage or extent of the cancer and whether the cancer is at the tissue edge (margins). These findings are very important for prognosis and will influence the decision as to whether additional treatment is needed after surgery. Stage in the radical prostatectomy can be 2 (better) or 3 (worse), with spread into seminal vesicles (structures attached to the back of the prostate) or lymph nodes removed before or during surgery indicating a worse prognosis. Physicians also perform clinical staging tests (radiology or x-ray studies), usually before surgery, to try to tell if the cancer has spread.

How do doctors determine what surgery or treatment will be necessary?

This decision depends on the state of your prostate cancer. For the majority of patients whose cancer looks like it is still in or near the prostate, the decision is based on the Gleason grade assigned by the pathologist, the serum PSA, the clinical stage, your age, any other medical problems, and treatment or management preference.

What kinds of treatments are available for Prostate Adenocarcinoma?

Prostate Adenocarcinoma is treated through one or more of the following: watchful waiting, surgery, chemotherapy, hormonal therapy, and radiation therapy. It's important to learn as much as you can about your treatment options and to make the decision that's right for you.

Watchful waiting is most appropriate for older men with low-grade tumors and low PSA readings. With this approach, men hope to outlive the slow-growing cancer and avoid treatments and side effects including incontinence and impotency. Men choosing watchful waiting should receive DREs or PSAs every three to six months and may need periodic biopsies, as well.

The most common treatment for prostate cancer is ***surgery,*** which can remove the cancerous prostate from the body. Surgery is generally recommended for men with early stage or low-grade cancers but is sometimes used at advanced stages to relieve symptoms. The most common surgical procedure is ***radical prostatectomy,*** the removal of the entire prostate gland.

Radiation therapy can be used to treat men with small tumors confined to the prostate, as well as to relieve symptoms in advanced tumors. In one type of radiation therapy, ***brachytherapy***, a surgeon implants radioactive pellets inside the prostate. Over time, the pellets radiate the prostate and surrounding tissue, killing the cancer cells. Another kind of radiation therapy is ***external beam radiation*** in which high-energy beams pinpoint and kill cancer cells. Radiation therapy generally creates fewer side effects than surgery; for this reason, it is often the preferred treatment for older men.

Physicians use ***hormonal therapy*** to reduce the amount of testosterone, which prostate cancers need to grow. Hormone therapy cannot cure cancer but can delay its growth and provide relief.

If the cancer has spread (usually to bones) and is no longer responsive to hormonal therapy, ***chemotherapy*** can be considered. This treatment delivers drugs throughout the body, slows the cancer's progression, and reduces pain

Clinical trials of new treatments for Prostate Adenocarcinoma may be found at www.cancer.gov/clinicaltrials. These treatments are highly experimental in nature but may be a potential option for advanced cancers.

For more information, go to www.cancer.org (American Cancer Society) or www.cancer.gov (National Cancer Institute). Type the words ***prostate cancer*** into the search box.