Types of Cancer

Prostate Cancer

What is prostate cancer?
Cancer develops when cells grow out of control. Prostate cancer is a typically slow-growing cancer of the prostate gland, a walnut-sized organ located under the bladder and in front of the rectum. But in some cases, the cancer can grow rapidly and spread beyond the prostate, a process known as metastasis.

Who gets prostate cancer?

Prostate cancer is the most common cancer in men besides skin cancer, and 1 in 7 men will be diagnosed with the disease in their lifetime. About 174,600 men in the United States will develop prostate cancer this year, according to the American Cancer Society. But because it usually progresses slowly, the death rate is relatively low at around 31,600 per year.

Older men are more likely to get prostate cancer. About 60 percent of cases are diagnosed in men 65 or older, and it is uncommon in men under 40. African-American men are more likely to develop prostate cancer than white or Hispanic men, while Asian men have a lower risk.

What are the risk factors for prostate cancer?
The major risk factors for prostate cancer are genetics and family history. Studies looking at the link between prostate cancer and a diet high in red meat, chemical exposures including smoking, sexually transmitted infections and having had a vasectomy have produced conflicting results.

What is prostate cancer screening?

Doctors primarily use two tests to screen for prostate cancer: the prostate-specific antigen (PSA) blood test and the digital rectal exam (DRE), in which a finger is inserted into the rectum to feel for lumps or swelling of the prostate.

Experts disagree about when prostate cancer screening should be done. Because it usually grows slowly, most men with prostate cancer will die from other causes and early treatment carries some risks. The American Cancer Society recommends that at age 50, men should discuss the risks and benefits of screening with their doctor and make an individual decision. African American men and those with a family history of prostate cancer should start this discussion sooner, at 45 or even 40.

What are the symptoms of prostate cancer?
Usually early-stage prostate cancer, when tumors are small, causes few or no symptoms. As

cancer progresses, some men may experience symptoms including:

- A frequent urge to urinate
- Difficulty urinating
- Blood in the urine or semen
- Difficulty getting an erection
- Pain in the lower back and hips

Some of these symptoms may also be caused by noncancerous enlargement of the prostate, known as benign prostatic hyperplasia. Men with metastatic prostate cancer may experience other symptoms, such as bone pain, as the cancer spreads.

How is prostate cancer diagnosed?

The process of diagnosing prostate cancer starts with a physical exam and health history. A doctor may do a digital rectal exam to determine the size and location of tumors. A biopsy, or small tissue sample, may be taken and examined in the laboratory to see if a growth is cancerous or benign. PSA tests and transrectal ultrasound imaging may be done to determine how advanced the cancer is. Other imagining methods such as computed tomography (CT) and MRI scans may be used to check whether the cancer has spread.

How is prostate cancer treated?

Treatment for prostate cancer depends on how advanced the cancer is when it is detected, including how large it is and whether it has spread to nearby lymph nodes or other parts of the body.

Active surveillance: with this approach, meaning treatment is not started immediately but the cancer is carefully monitored with regular scans and PSA tests to see whether it progresses. For some men, a less intensive approach known as watchful waiting is appropriate.

Surgery: Surgery for prostate cancer usually removes the entire prostate gland, known as radical prostatectomy. This can lead to side effects including urinary incontinence and problems getting an erection.

Focal therapies: Methods including freezing (cryotherapy) and heat may be used to destroy cancer cells, especially for small tumors.

Radiation: Radiation may be used to kill any cancer cells that remain after surgery or to shrink tumors that cannot be surgically removed. It is often used in conjunction with other forms of treatment.

Chemotherapy: Traditional chemotherapy works by killing fast-growing cells, including cancer cells. It can also destroy rapidly dividing healthy cells, such as those in the gut or hair follicles, leading to side effects including nausea and hair loss.

Hormone therapy: Androgen deprivation therapy works by depriving tumors of testosterone, which stimulates their growth. If cancer continues to grow despite low testosterone (known as being castration-resistant), other types of androgen-blocking medications may be used. Side effects may include reduced sexual desire, hot flashes, bone loss and breast enlargement.

Targeted therapy: Targeted drugs work against cancers with specific characteristics. For example, they may interfere with signaling pathways that regulate cell growth or the process of DNA repair. Medications known as PARP inhibitors have shown promise for prostate cancer.

Immunotherapy: The newest type of treatment helps the immune system fight cancer. One method involves removing a sample of T cells, training them in the laboratory to attack cancer cells and putting them back into the body. So far this type of vaccine is only approved for prostate cancer that has stopped responding to hormone therapy. Checkpoint inhibitors are not very effective against prostate cancer on their own, but researchers are studying combination approaches.

Click here for a list of approved medications used to treat prostate cancer.

For more information on prostate cancer, visit:

American Cancer Society
American Society of Clinical Oncology

National Cancer Institute

Prostate Cancer Foundation

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