What Is Prostate Cancer?

Cancer is caused by malignant (cancerous) cells that grow and multiply without control. When cancer begins in the tissues of the prostate gland, it is called prostate cancer. When prostate cancer cells spread to other parts of the body and form tumors (abnormal growths), it is called metastatic prostate cancer.

The prostate is a small, round gland located behind the pubic bone and in front of the rectum. The urethra (the tube that carries urine from the bladder and sperm from the testicles out of the body through the penis) passes through the middle of the prostate. As part of the male reproductive system, the prostate also makes a fluid that is added to sperm in the urethra during ejaculation.

The National Cancer Institute has more information on prostate cancer.

Prostate Cancer Numbers
Prostate cancer is the second-most common form of cancer in American men. The American Cancer Society (ACS) estimates that about 220,800 new cases of prostate cancer would be diagnosed in the United States in 2015, and that the disease would cause about 27,540 deaths.

The ACS adds that about one in seven men will be diagnosed with prostate cancer, but that the outlook is generally positive: "In fact, more than 2.9 million men in the United States who have been diagnosed with prostate cancer at some point are still alive today." Learn more about Mass General Cancer Center’s Survivorship Program.

Prostate Cancer Symptoms
Most men with prostate cancer do not have symptoms from their disease. When present, the signs and symptoms of prostate cancer may be common symptoms or symptoms associated with other medical conditions. Talk to your doctor if you notice any of the following:

- Dull pain in the pelvis
- Sudden urges to urinate
- Frequent urination
- Trouble starting urination
- Problems during urination, such as pain or burning, weak or inconsistent flow, or blood in the urine
- Feeling the bladder is not empty after urinating
- Painful ejaculation
- Low back pain, especially at night
- Loss of appetite and weight

Screening and Diagnosing Prostate Cancer
Early prostate cancer may not present any symptoms. Depending on your age and other risk factors, your doctor may recommend prostate cancer screening tests, such as:

- **Digital rectal exam (DRE):** While wearing a rubber glove, your doctor inserts a finger through the anus and into the rectum to feel the outside of the prostate for lumps or other abnormalities
- **Prostate-specific antigen (PSA) test:** This test measures the level of PSA (a protein that the prostate makes) in your blood. A higher-than-normal PSA level may be a sign of prostate cancer or of several other conditions, such as an enlarged prostate

If the DRE or PSA test raises possible concerns, your doctor may also order tests and procedures such as:

- **Transrectal ultrasound:** A thin probe that is inserted into the rectum produces high-frequency sound waves, creating images of the prostate that show lumps or other abnormalities
- **Biopsy:** A sample of prostate tissue is removed (usually with a needle) and then viewed under a microscope by a pathologist. If cancer is found, the pathologist also performs a Gleason score analysis to determine how likely it is that the cancer will spread

Treating Prostate Cancer
Your care team will work with you to develop a treatment plan that is right for you. This plan will depend on many factors, including stage (extent) of prostate cancer, your general health and your treatment preferences.
Active surveillance may be appropriate for some men with low-risk prostate cancer. This approach involves close monitoring of the cancer (using serial exams, PSA testing, biopsies, and imaging) and selective treatment for men with cancer that show signs of progression.

Treatment options for early-stage prostate cancer include:

- **Active surveillance** may be followed by **hormone therapy** to stop your body from producing testosterone, which can cause prostate cancer cells to grow
- **Surgery** is done to remove part or all of the prostate, some surrounding tissues and/or some lymph nodes
  - Open prostatectomy: The prostate is removed after making one long incision in the abdomen. Other examples of open approaches are nerve-sparing surgery and wide local excision (for high-risk disease)
  - Laparoscopic prostatectomy: The prostate is removed after making several small incisions in the navel and abdomen (minimally invasive)
  - Robotic prostatectomy: The prostate is removed using finely controlled robotic instruments that allow for incredible precision (minimally invasive)
- **Radiation therapy** uses high-energy radiation beams to kill or shrink tumors while sparing healthy tissue. The radiation source can come from outside the body (external radiation therapy) or from radioactive implants inside the body (internal radiation therapy)
- Learn more about planning radiation treatment and what to expect here
- **Clinical trials** may provide access to new and promising therapies for prostate cancer

Treatment options for metastatic prostate cancer (cancer that has spread from the prostate to other parts of the body) include:

- Active surveillance may be followed by hormone therapy
- External radiation therapy also may be followed by hormone therapy
- Bisphosphonate therapy aims to address bone pain associated with prostate cancer
- Transurethral resection of the prostate (TURP) is a type of surgery that requires no incisions and may relieve certain symptoms of prostate cancer
- Clinical trials