Prostate Cancer Treatment

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Prostate cancer develops when cells of the prostate gland, a walnut-sized organ located under the bladder, grow out of control. It often progresses slowly and doesn't lead to complications, but some men have aggressive tumors that require prompt treatment. Fortunately, recent research has led to new therapies that can slow disease progression, extend survival and improve quality of life.

Treatment depends on how advanced the cancer is when detected and whether it has spread elsewhere in the body, a process known as metastasis.

If a man's prostate-specific antigen (PSA) level is elevated or a digital rectal exam detects a lump, the next steps are an ultrasound scan and a biopsy to see whether a growth is malignant. The Gleason score, indicating how abnormal a tissue sample looks under a microscope, is used to predict how aggressive the cancer is. African-American men tend to have more aggressive disease (see "Turning the Tables").

Men at low risk for progression may opt for active surveillance, meaning treatment is deferred and the cancer is closely monitored with frequent PSA blood tests, digital rectal exams and repeat biopsies.

If the cancer has not spread, surgery to remove the prostate and nearby lymph nodes is often recommended. Less invasive robotic or laparoscopic techniques can reduce pain and bleeding.

Radiation therapy may be used to kill residual cancer cells that remain after surgery or to shrink tumors that can't be removed. Complications from surgery and radiation may include urinary incontinence and erectile dysfunction. But not all men experience these side effects, and they may improve over time.

Prostate cancer treatment may involve chemotherapy and other medications, either after surgery to reduce the risk of recurrence (adjuvant therapy) or to control more advanced cancer that can't be removed.

Testosterone and other male hormones stimulate prostate cancer growth. Androgen deprivation

therapy dramatically reduces testosterone production. If the cancer continues to grow despite low testosterone (known as being castration-resistant), other types of androgen-blocking medications may be used, such as new androgen receptor inhibitors. Side effects of hormone therapy may include hot flashes, reduced sexual desire and thinning bones.

Targeted therapies work against cancers with specific characteristics. For example, they may interfere with proteins involved in cell growth or DNA repair. Medications known as PARP inhibitors have shown promise in recent studies.

Immunotherapy helps the immune system fight cancer. Sipuleucel-T, a personalized prostate cancer vaccine, involves removing a sample of T cells and training them to attack an individual's cancer cells. Checkpoint inhibitors can restore T cells' ability to recognize and destroy cancer. These medications are not very effective against prostate cancer on their own, but combination approaches look more promising.

Treatment for prostate cancer has evolved rapidly in recent years, and a number of new medications—and entirely novel approaches—are under development. Ask your doctor whether a clinical trial might be a good option for you.
