

The Medical Minute: Treatment options for prostate cancer

September 22 2010, By Matthew Kaag

Prostate cancer develops in the glandular tissue of the male prostate, a reproductive gland situated below the bladder and in front of the rectum. The urinary sphincter (muscle that controls the flow of urine) is situated just below the prostate gland, and the nerves which allow a man to have an erection run on either side of the prostate. The prostate produces part of the fluid in semen.

One in six American males will develop [prostate cancer](#) over their lifetime, making prostate cancer the most common nonskin cancer in the country. Prostate cancer is the second only to [lung cancer](#) as a leading cause of cancer-related deaths among men in this country. Screening, in the form of a digital rectal exam (DRE) and PSA blood testing, has allowed physicians to diagnose and treat prostate cancer before symptoms develop. When the information from screening tests suggests that prostate cancer may be present, a biopsy of the prostate is performed under ultrasound guidance to confirm presence or absence of the disease.

After diagnosis, the management of localized prostate cancer (cancer which has not spread or metastasized to other parts of the body) may be divided into three general categories: surgery, [radiation therapy](#) or active surveillance.

Surgery for prostate cancer (radical prostatectomy) involves removing the [prostate gland](#) and seminal vesicles (sacks attached to the prostate which store seminal fluid). Based on the patient's risk the surgeon may

remove some [lymph nodes](#) from the pelvis as well. Patients having a radical [prostatectomy](#) spend two to three days in the hospital and must wear a urethral catheter (catheter in the penis to drain the bladder while the patient heals) for one to two weeks. Total recovery is usually four to six weeks. The surgery may be done through a four-inch incision on the abdomen below the belly button, or more commonly today, through a series of small stab-incisions using long thin instruments guided by a robot which the surgeon controls. The patient's surgeon will provide counseling regarding the appropriate approach for the patient's particular situation. Surgery offers the knowledge that the cancer has been removed from the patient, and the cancer may be examined by the pathologist to confirm complete removal and extent of spread.

Radiation therapy may be delivered as external beam therapy, where a patient comes to the treatment center for a series of treatments which involve being immobilized in front of a radiation beam for a period of time while the carefully planned treatment is delivered. Alternatively, radioactive pellets (seeds) may be placed in the prostate via needles guided by ultrasound. This approach, called brachytherapy, offers the advantage of a one-time treatment. Radiation therapy offers the advantage of a nonsurgical approach, and is particularly attractive for patients who may have too many medical issues to tolerate surgery.

Surgery and radiation therapy are the treatments which are most likely cure prostate cancer in a given patient, but both carry risks of side effects. The most common, lasting effects are urinary incontinence (leakage of urine from the penis) and erectile dysfunction (lack of penile erection when sexually aroused). Both issues may be limited by careful planning of surgery or radiation, but remain a significant concern in most patients.

As doctors have learned more about prostate cancer, it has become clear that some prostate cancers develop very slowly, and active treatment

may not be needed in all patients. Patients with low-risk cancers (low PSA, small amounts of low-grade cancer in the prostate biopsy, no mass felt on rectal examination) may be offered active surveillance. Active surveillance offers patients the chance to avoid the side effects of surgery or radiation. The patient and doctor must understand that the cancer is still present, and about half of men on active surveillance will eventually need treatment for their cancer. An active surveillance regimen typically requires rectal examinations and PSA levels at regular intervals. In addition, at least one more biopsy is usually recommended during follow-up.

Prostate cancer remains a highly treatable disease. Following diagnosis, it is recommended that each patient discuss the treatment options and their risks and benefits with a physician who specializes in the treatment of prostate cancer. The goal is to provide each patient with a treatment plan that is tailored to their overall health, and to their specific cancer.

Provided by Pennsylvania State University

Citation: The Medical Minute: Treatment options for prostate cancer (2010, September 22) retrieved 27 April 2024 from

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