

Prostate Cancer



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City of Hope is a new model of cancer center. Here, medical research and clinical care are joined, speeding the application of scientific discoveries to newer, more effective patient treatments. From breakthroughs in basic biology to smarter technologies for diagnosis and therapy, progress at City of Hope is accelerated by the need to offer more positive outcomes to patients everywhere. Our research innovations become advances in clinical care as quickly as possible, because people battling cancer and other serious diseases need better options — now.

What Every Man Needs to Know

Cancer of the prostate gland is a serious health risk for men. In fact, this year more than 218,000 American men will be diagnosed with it. The good news is that prostate cancer is the most survivable form of cancer in men, especially if it is detected early, before it can spread.

As a patient at City of Hope, your odds of surviving prostate cancer are excellent. Our innovative treatment options and technologies can help you recover faster, with fewer side effects. Our doctors have performed more advanced procedures for prostate cancer than any other facility on the West Coast. City of Hope is a world leader in high-precision robotic-assisted prostate surgery. And our team of experts was the first in the western United States to offer TomoTherapy® — a targeted radiation therapy

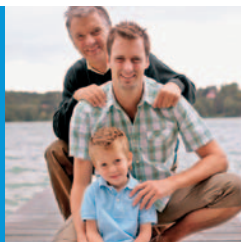
that can kill cancer cells while sparing healthy tissues nearby.

Prostate Cancer: Risk Factors

First, you need to understand your risk factors for prostate cancer. Then, you need to take steps to detect it early, before it can spread.

Ask Yourself

Did your father, brother or uncle have prostate cancer? The disease can run in the family.



Are you over age 50? More than 70 percent of all prostate cancers occur in men over 65. Beginning at 50, you should have a prostate examination every year.

What is your ethnicity? African-American males over 40 have the highest rate of prostate cancer. Men of African-American descent and those with a first-degree relative are considered high risk, and should begin screenings at age 40.

Symptoms

Prostate cancer is often called a “silent disease” because it can grow without any noticeable symptoms. Sometimes, even the symptoms it can cause go unnoticed.

The most common symptoms of prostate cancer include:

- A weak flow of urine, and difficulty urinating completely
- Frequent urination, especially at night
- Pain or burning sensation while urinating
- Blood in the urine or semen
- Frequent pain in the lower back, pelvis or upper thighs

These symptoms may be caused by a benign

(noncancerous) enlargement of the prostate, which is very common in older men. But they can also be caused by a cancerous prostate tumor. If you experience any of these symptoms, see your physician.

Your Annual Exam

Starting at age 50, or earlier if you are at high risk, schedule an annual prostate exam with your doctor.

Discuss your risk factors for prostate cancer. If you are experiencing any symptoms, tell your doctor.

Testing

The annual prostate exam typically includes a digital rectal exam. You may also be given a simple blood test called a PSA (prostate specific antigen) test. This will tell if your PSA level is higher than normal. A high PSA reading can be caused by either a benign or cancerous growth of the prostate, or simply by a prostate infection. There is even a chance of having cancer when your PSA level is low. The only sure test for prostate cancer is a biopsy, in which a small piece of tissue is removed and examined for cancer cells.

Remember

Prostate cancer can develop without any symptoms. The best strategy: Have an annual exam.



Reduce Your Risk

The better you take care of yourself, the better your overall health:

Eat Well

- Enjoy a balanced diet high in fruits and vegetables and low in fat.
- Eat less red meat. Cut down on high-fat dairy like ice cream and butter.

- Watch your weight. Get some exercise every day.
- Limit your alcohol consumption.
- Know your risk factors. And always have your annual exam.

Treatment Options

In recent years, medical researchers have discovered more effective ways to treat prostate cancer than ever before.

That is especially true at City of Hope. As one of the world's leading cancer treatment facilities, we have a staff of highly respected physicians trained in the most advanced techniques:

- Robotic-assisted laparoscopic prostatectomy (*da Vinci*® Surgical System)
- Radiation therapy, including TomoTherapy, brachytherapy and intensity-modulated radiation therapy (IMRT)
- Innovative chemotherapy and clinical trials of advanced treatments

State-of-the-Art Robotic-assisted Surgery

City of Hope was one of the first cancer treatment centers in the country to adopt this amazingly precise, minimally invasive surgical technology. The procedure requires five tiny incisions. First, a pencil-thin laparoscope (a lighted tube with a video camera) is inserted, so live images can be transmitted to a computer. Through the remaining incisions, four slender robotic arms with miniature surgical instruments go to the surgical site. The surgeon sits at a nearby console, viewing the procedure while using grippers to remotely control the tiny tools.

Because the robotic arms can rotate 360°, these instruments can move with a full range of motion as they cut and suture with great precision. A highly magnified real-time three-dimensional image helps the surgeon avoid delicate nerves and muscles surrounding the prostate. Less surgical trauma means less risk of side effects for our patients.

Benefits

Patients who undergo robotic surgery experience less pain and recover faster. Typically, recovery from conventional surgery takes three to four days in the hospital, and up to six weeks at home. With robotic-assisted surgery, the hospital stay is reduced to one or two days. Recovery time is only two to three weeks — less than half as long as traditional surgery.

With smaller incisions, patients also experience less blood loss. This helps reduce the need for transfusions, keeps blood pressure stable, and lowers the risk of complications. Patients typically emerge from surgery stronger, and can get back to normal life sooner.

Finally, because robotic-assisted surgery does not require a large abdominal incision, there is less pain, and less need for pain medicine. Most patients are on their feet within hours of surgery.

Fast Recovery

Our patients spend less time in the hospital and get back to life sooner.



Erectile Dysfunction and Incontinence

Erectile dysfunction and loss of bladder control are potential — most often temporary — side effects of prostate gland removal. At City of Hope, patients report a 70 percent continence rate six months after surgery. Regaining sexual potency depends on the extent of your surgery, and how functional you were before the operation. Most men find that their erections return a week to 18 months after their surgery. Sometimes, medications may be used to assist with recovery.

Many men find City of Hope's Prostate Support Group helpful, as well as our Continence Recovery Program and assistance for potency recovery.

Advanced Radiation Therapies

TomoTherapy

Traditional radiation therapy uses large beams of energy aimed at the prostate tumor from up to six different directions. Healthy tissue is unavoidably damaged in the process. Now, a major advance called TomoTherapy improves the targeting of the tumor, and provides much more effective and precise radiation delivery.

Combining three-dimensional imaging with IMRT (intensity-modulated radiation therapy) technology, TomoTherapy bombards the tumor from all directions with hundreds of pencil-thin energy beamlets. The radiation matches the contours of the tumor precisely, delivering the optimal dose while avoiding normal tissues nearby. With less unwanted exposure, TomoTherapy offers better results, reduced risk of complications and fewer side effects.

More Options

Surgery is not the only choice. Other treatments exist as well.



Brachytherapy

“Brachy” is the Greek word for “short,” and brachytherapy refers to radiation given a short distance from the tumor. In this procedure, tiny pellets of radioactive material smaller than a grain of rice are inserted directly into the cancerous tissue. The radiation attacks the tumor from the inside out.

By directly targeting cancer, brachytherapy minimizes radiation to healthy tissue. In most cases, complications are few, and recovery is relatively rapid.

Radiation Therapy Side Effects

Any radiation treatment affecting the pelvic region can cause difficulties with urination,

bowel problems and sexual side effects such as erectile dysfunction. These are often temporary, and can usually be treated with medication or other strategies if necessary.

Other Treatment Options

Hormonal Therapy

Male hormones called androgens help the prostate develop normally during adolescence. But as time goes on, these hormones can promote the growth and spread of prostate cancer. By lowering androgen levels in your body, those same cancers can be made to shrink, or at least grow more slowly. While not a cure, hormonal therapy can put the cancer in a kind of “hibernation” for many years.

There are three kinds of hormonal therapy:

- Anti-androgens — drugs that block your body’s ability to use androgens. They are often used in conjunction with the two methods described below.
- Luteinizing Hormone-releasing Hormone Analogues — drugs that decrease the production of androgens. They are injected either monthly or every four months, depending on which medication is used.
- Orchiectomy — surgery to remove the testicles, where most of the body’s androgen is produced.

Chemotherapy

Chemotherapy is an option if the cancer has spread beyond the prostate, or if hormonal therapy has been unsuccessful. “Chemo” drugs kill cancer cells, but they can also damage normal cells in the process. In many cases, cancer cells can become resistant to the medication, so a combination of two or more drugs may be given at the same time, to improve the effectiveness of treatment.

Side effects depend on the medications given, and the length of treatment. Early in the course of therapy, common side effects include nausea

and vomiting, loss of appetite and mouth sores. Some patients may experience low blood counts, and become susceptible to infections, bleeding and fatigue. But most side effects disappear once treatment is completed.

At City of Hope, we understand the challenges that chemotherapy presents. Our researchers are continually seeking new ways to improve treatment and reduce unwanted side effects.

Clinical Trials

Patients at City of Hope can take part in the fight against cancer by participating in research studies of new therapies, called clinical trials. Your physician may discuss open clinical trials that may be most appropriate for your situation.

Supportive Care

Our patients also have access to the Sheri & Les Biller Patient and Family Resource Center, which offers a wide array of support and educational services. Patients and loved ones may work with a coordinated group of social workers, psychiatrists, psychologists, patient navigators and spiritual care providers at the center, as well as participate in programs such as music therapy and meditation.

To Become a Patient

For more information, or to become a patient at City of Hope, please call 800-826-HOPE or visit us at www.cityofhope.org.

Support the Search

City of Hope's cancer breakthroughs are made possible by the generous donations of compassionate, committed people like you: individuals who value the way we speed the translation of laboratory research into practical results. We are proud of the support that enables us to innovate and inspire.

Help accelerate the pace of progress against cancer at City of Hope. Join our worldwide network of donors who fuel new discoveries leading to treatments that save lives everywhere. To arrange a donation, please call 800-544-3541.

Providing New Hope

City of Hope works to move scientific discoveries rapidly from the laboratory to the clinic, benefiting patients everywhere.

