

DEFINITIONS

YOU NEED TO KNOW

Biopsy

removal of tissue samples for microscopic examination; used to diagnose and assess the presence of cancer

Bone Scan

an imaging test which determines if the cancer has spread to the bones

Clinical stage

assesses the size and extent of the tumour, number and location of lymph nodes involved, and the presence of distant metastases

Malignancy

describes a tumour as being cancerous; a *benign* tumour is non-cancerous

Metastasis

the spread or extent of cancerous cells from a tumour to nearby or distant parts of the body

PROSTATE CANCER TREATMENT

OPTIONS



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The Calgary Prostate Cancer Institute has an excellent Resource Centre that is staffed by volunteers. The Resource Centre is open from 8 am to 4:30 pm excluding weekends and holidays.

QUESTIONS? WONDERING WHAT THE NEXT STEPS MAY BE?



You are not alone in deciding what treatment option is right for you. This brochure provides you with a simple overview of different treatment options. Your doctor and healthcare providers can provide you with more information. Use this guide as you talk to your family, friends and support group - they are there to help.

OPTIONS

TREATMENT

WHAT IS THE PROSTATE GLAND

STAGES OF PROSTATE CANCER



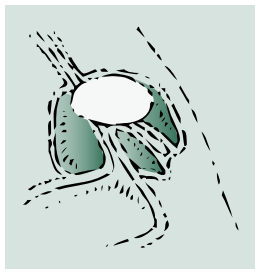
Stage 4

Tumour has spread into surrounding tissue



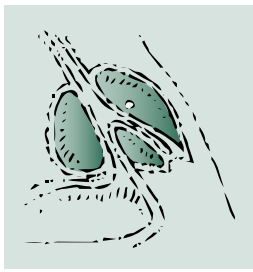
Stage 3

Tumour involves both lobes and is spread locally outside the prostate capsule



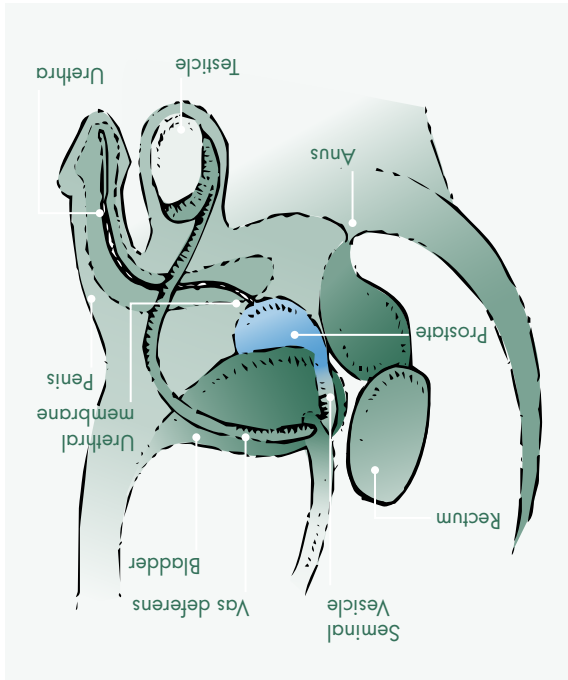
Stage 2

Tumour growth within the capsule in one or both lobes of the prostate; can be felt in examination



Stage 1

The tumour is very small; can't be felt on DRE



WHAT THE PROSTATE GLAND DOES AND THE EFFECTS OF THE TREATMENT

The prostate gland, about the size of a walnut, produces the fluid that carries and protects the sperm that is stored in the testicles. This is the prostates only function and you can survive without it.

Cancer treatment often affects sexual function. Some possible side effects (depending on the type of treatment) are erectile dysfunction (impotence) and incontinence (urine leaking). These side effects can be temporary, or permanent and may or may not respond to treatment.

Watchful Waiting

Because many prostate cancers are slow to progress, this approach is one of the options for certain patients. It is best suited to older men with low grade cancer. In these patients, it is uncommon for the cancer to cause death.

The patient is examined at regular intervals to see if the cancer is growing. Repeated DRE and PSA measurements are the main tools . How often these tests are done depends on your age and the test results. Occasionally, repeat biopsy can also be done. Your doctor or nurse may also inform you about certain preventative measures you may take. This may include modifying your diet.

Radical Prostatectomy

An operation to remove the entire prostate with the aim of curing the cancer. Surgery is suitable for patients whose disease is believed to be confined within the prostate gland, and are fit for surgery.

The surgery is done through an incision in the lower abdomen. It may also be done using minimally invasive surgery (laparoscopically). In this approach, instruments are placed in the abdomen through small puncture holes, rather than an incision. The operation takes from 2 to 5 hours under general anesthesia, depending on which approach is used. The surgeon may check the lymph nodes at the same time to see if the cancer has spread.

Radiation

Therapeutic radiation is delivered to the prostate to eradicate cancer cells with the aim of curing the cancer. External beam radiation therapy is suitable for patients whose disease is confined within the prostate gland but can also be used if the disease has penetrated through the capsule or outer lining of the prostate. Radiation therapy may also be used in conjunction with hormonal treatment.

High-energy x-rays are produced by a special machine called a linear accelerator. Beams of x-rays are focused on the prostate from a number of different angles on a daily basis (Mon-Fri) for 4-8 weeks. As each person (and prostate!) is shaped differently, an individual treatment plan is devised for each patient to achieve therapeutic radiation intensity while protecting normal tissues in the area surrounding the prostate. It is an outpatient treatment.

Brachytherapy

Uses radiation to kill cancer cells with the aim of curing the cancer. Brachytherapy is the insertion of radioactive seeds directly into the prostate. Brachytherapy is only used if the disease is confined within the prostate, is low grade under the microscope and with patients having a low PSA.

Small metal seeds, each about the size of a grain of rice, are inserted into the prostate. It is a minor surgical outpatient procedure, done under general anaesthetic. Each seed contains radioactive material (iodine or palladium) which delivers a high dose of radiation to a small area over several months. Often referred to as an “implant” procedure, the seeds are inserted using a long needle that enters the skin between the scrotum and the anus. An ultra-sound probe in the rectum allows the physician to see and guide the needle to the precise position within the prostate. Usually 80 to 120 seeds are required, depending on the size and shape of the prostate. The seeds remain in place permanently.

Cryoblation

Extremely low temperatures are used to kill cancer cells (similar to frostbite). It is used when the disease is confined to the prostate, but can also be used if the cancer has penetrated through the capsule, or outer lining of the prostate.

Small needles are placed in the prostate through the skin, between the scrotum and the anus. An ultrasound probe in the rectum is used to monitor positioning. It is a minor surgical procedure, done under spinal anaesthetic. The tip of these needles freezes to -170C, thus forming an iceball that surrounds the entire prostate.

Hormonal Therapy

The male hormone, testosterone, acts like a fertilizer for prostate cancer cells. Hormonal therapy is targeted at reducing or stopping the production of testosterone. Although usually indicated for more advanced prostate cancer, it is also be used in earlier stages, in association with radiation, where it has been shown to be of benefit.

The reduction of testosterone can be achieved in one of two ways: medical therapy (injections called LHRH agonists and/or tablets called anti-androgens) or orchiectomy (surgical removal of the testicles). If used in combination with radiation, the injections are used, and started months before the radiation treatments. This is called neo-adjuvant therapy. If used after surgery/radiation treatment it is called adjuvant tzztherapy.

WHAT IS IT

WHAT'S DONE

WHAT TO EXPECT

Depending on your DRE and PSA test results, your doctor will monitor the status of your health every few months. If your PSA begins to rise, or the feel of the prostate changes, your doctor will advise you of your treatment options.

Hospital stay is usually three days. It is not a risky surgery. It is not a painful operation. You will have a catheter to drain urine. It will remain in place for 1 to 2 weeks. It takes about 6 weeks to reach full recovery, and normal activity. PSA levels should become undetectable.

The main procedure is called “Simulation” which involves a CT scan so the doctor and physicist can see exactly the size and shape of the prostate for treatment planning. For this CT scan, you can expect to be placed in exactly the position (on your back or on your stomach) in which you will have your treatment. Sometimes 3 or 4 non-radioactive gold seeds may be placed in the prostate before simulation. These gold markers help guide the radiation beams to the prostate during treatment. You will be given specific instructions on hydration and bowel habits for the simulation and treatments. Each daily treatment takes 15-20 minutes.

An ultrasound scan of the prostate is first performed. A sophisticated computer is then used to work out the size and shape of the prostate. This allows the physician and physicist to approximate the number, strength and positioning of the seeds. The implant procedure is carried out with the patient under general or spinal anaesthetic. The distribution of the radioactive seeds is further refined in real-time and the procedure takes 1-2 hours to complete. The patient can usually go home within about 2 hours. A catheter is left in the bladder overnight.

The procedure is done using ultrasound to “see” the freezing process. The urethra (water passage) is protected by keeping it warm. A suprapubic catheter is placed in the bladder to drain urine. It is a relatively painless procedure. Overnight stay in hospital is usual.

With hormone therapy you should expect an injection every 1- 4 months for as long as your doctor feels the treatment is needed. Sometimes tablets are continued for this time as well.

SIDE EFFECTS

None, in the short term - but some men experience anxiety or depression. As time progresses, there is a risk of difficulty passing urine. Talk to your doctor, or your local support group. They will be able to help.

Some men will have some temporary urinary incontinence (leaking of urine) after the catheter is removed. This usually settles quickly, but may take months. In the long term, 15 to 25% of men experience mild degrees of incontinence (called stress incontinence). Difficulty or inability to get or maintain an erection is another risk of surgery. These results depend on the age of the patient, the extent of the cancer, and the surgical technique used. Talk to your urologist about these side effects.

Short-term side effects usually begin 2-3 weeks into treatment. Discomfort, pressure, urgency sensations associated with urination and/or bowel movements may result in more bathroom visits. Burning and soreness around the anus is usually treated with simple moisturising cream. Rarely does fatigue interfere with normal work. Patients with pre-existing bladder problems, hemorrhoids, and/or diabetes may have worse side effects. Long-term effects include reduction in erectile function, occasional rectal bleeding or urgency, but rarely damage to bladder or rectum that need surgery.

A small amount of blood is usually seen in the urine for the first couple of days with bruising around the scrotum. Burning passing urine, urinary frequency, and slowing of the urinary stream are also common. These symptoms tend to be at their worst 2 to 4 weeks after the implant, and then usually get better over the next 4 to 6 months. Occasionally, they can persist for longer. A small number of men experience inability to pass urine, and a catheter has to be used. Rectal symptoms are very uncommon. Impotence can occur, and the incidence increases over time.

As takes about 2 weeks for the prostate swelling to settle, it takes this long to pass urine through the penis again. Urinary incontinence (leakage) occurs in less than 10%, and if it occurs, is usually minimal. All men experience loss of erections (impotence) in the short term. Approximately 47% recover potency over 1 year.

The most common side effect is hot flashes - a feeling of warmth throughout the body that lasts a few seconds. This can occur many times/day. Other side effects include a decline in sexual desire (libido), inability to obtain an erection (impotence) and some tiredness. There is rarely swelling of the breasts. Longer term use may also lead to loss of body hair, softening of the skin and some loss of bone and body mass.