

# HDR (High Dose Rate) Prostate Brachytherapy

Radioactive Iridium-192 Temporary Implant



**Information for  
Patients and Families**



## Introduction

This booklet describes **brachytherapy treatment with Radioactive Iridium-192 temporary source implant**. This treatment is called HDR Prostate Brachytherapy. It is a treatment option available for some men with prostate cancer that is more advanced.

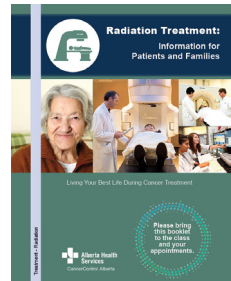
There are many methods of treating prostate cancer. Your doctor will talk to you about your options and help you choose the option that is best for you.

### To find out more about prostate cancer treatments

- Visit [decisionhelp.qcancercare.com/](http://decisionhelp.qcancercare.com/)
- Consider going to the Rapid Access Clinic (RAC) information session at the Rockyview Hospital. Ask your Urologist to register you in the next information session.

## Prostate Brachytherapy with External Beam Radiation Treatment

In addition to HDR prostate brachytherapy you will also get external beam radiation Treatment. You can learn more about external beam radiation in the book called 'Radiation Treatment: Information for Patients and Families'. Ask for a copy if you were not given one already.



## Questions about Treatment

If you have questions or concerns about your treatment, call the Brachytherapy Office (Mon to Fri 8 am – 4:30pm)

**403-521-3955**

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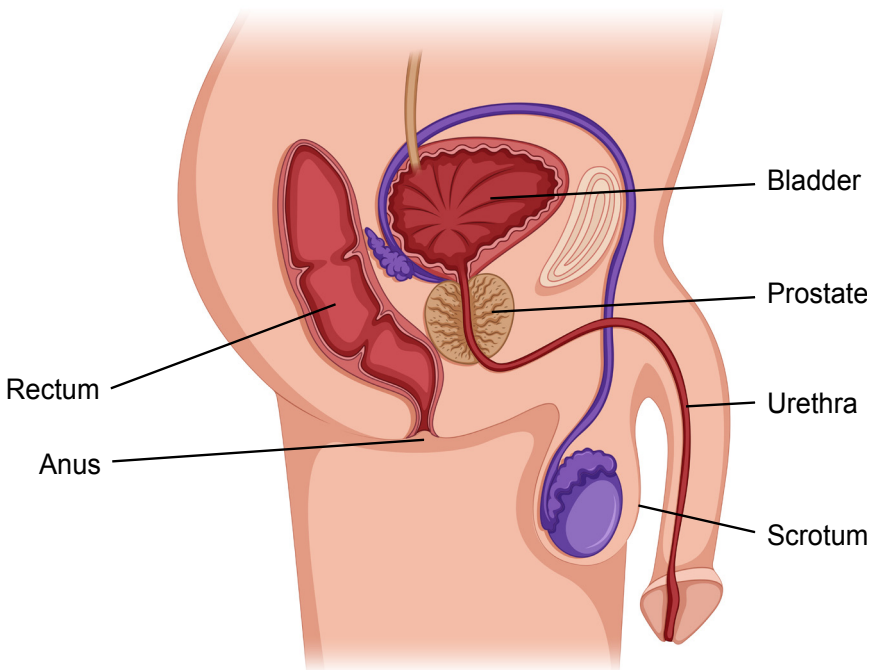
# Just Diagnosed

## 1) What is the prostate?

The prostate gland is part of the male reproductive system. Its main function is to produce the fluid portion of semen. The size of the prostate can vary among men, but it is usually the size of a large walnut.

It is located just below the bladder near the internal base of the penis. The prostate surrounds the urethra, the tube that transports urine from the bladder and out through the penis.

The prostate gland secretes its fluid into the upper part of the urethra during ejaculation. This fluid helps to transport sperm out of the penis. The prostate gland slowly increases in size from birth to puberty. Enlargement of the gland may occur after age 45.

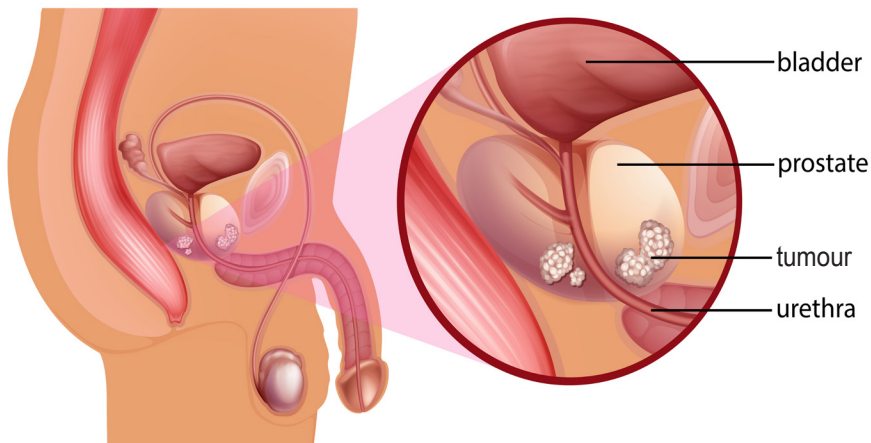
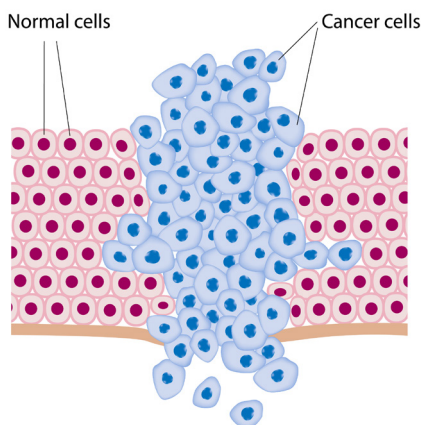


## 2) Prostate cancer

In a healthy body, new normal cells grow to replace old cells. Genes inside each cell instruct it to grow, function, reproduce and die according to a plan.

For many people, this process continues normally throughout their lives. But in some people, some cells begin to reproduce abnormally because the instructions become confused. Groups of abnormal cells can grow together and form tumours.

Prostate cancer is usually slow-growing. It can develop over a long period of time without showing any symptoms. As it grows, it can put pressure on the urethra, making urination difficult, slow or painful. Prostate cancer can be detected using many different tests.



# In Treatment

## Internal Radiation Treatment

### 1) What is radiation treatment?

Radiation treatment is a treatment for cancer that works by destroying cancer cells, stopping them from growing and dividing.

Radiation treatment can be external (outside) or internal (inside). External radiation comes from outside the body and is aimed at the tumour. Internal radiation happens when a radiation source is placed in the body, either inside the cancer, or close to it.

**Brachytherapy** means “short distance” radiation treatment. This means the radiation source is **placed inside** the patient.

### 2) What is HDR prostate brachytherapy?

HDR prostate brachytherapy is performed by carefully placing **radioactive Iridium-192 source** inside the prostate gland. The radiation source will be placed there for a certain amount of time and removed before you leave the operating room.

You could hear HDR prostate brachytherapy described in any of the following ways:

- Interstitial or internal radiation therapy
- High Dose Rate (HDR)
- Temporary implant
- Iridium-192 Source implant

**There is NO radiation left inside you after the procedure - you are not radioactive.**

## What do I need before I have prostate brachytherapy?

- A blood test to know your PSA (prostate specific antigen) level
- A biopsy to know your Gleason score (a rating system for prostate cancer). Visit [www.bit.ly/CCSGleasonScore](http://www.bit.ly/CCSGleasonScore) to learn more.
- A CT scan or transrectal ultrasound to know the size of your prostate and to plan your external beam radiation.
- A visit to the pre-admission clinic to assess your general health and ability to have anesthetic.
- Other tests may be requested by your doctor.

## Is HDR prostate brachytherapy an option for me?

Speak with your Radiation Oncologist to find out if this treatment is an option for you.

## Will the implant cure my prostate cancer?

In many cases the HDR implant will work together with the external radiation to destroy all cancer cells in and around your prostate. In other cases, it will help slow down the growth of cancer cells.

### 3) The brachytherapy team

- **Radiation Oncologist** – a cancer doctor for radiation treatment who prescribes your treatment and helps you manage any side effects.
- **Medical Physicist** – a specialist of medical physics who helps plan the treatment and ensures the quality of the implant.
- **Radiation Therapist** – delivers radiation treatments, and helps you before, during and after the implant.

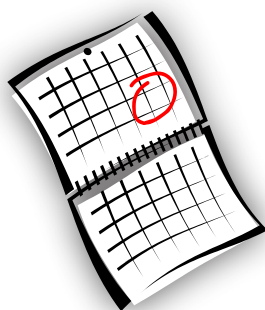
- **Dosimetrist** – a radiation therapist specializing in the treatment planning for radiation.
- **Anesthesiologist** – a medical doctor who provides you with care during your implant and recovery. They may talk to you about the medications you take before and after the implant.
- **Nurse** – may assist in the operating room and during your recovery.
- **Ultrasonographer** – a technologist trained in ultrasound to produce pictures of your prostate gland and anatomy.



## Preparing for the Implant

To help prepare for your implant procedure.

- See your “Preparing for Prostate Brachytherapy Implant” handout for the steps you need to follow.
- If you use a calendar at home or on your phone, write these instructions down on the dates you need to do them, to help you remember.



### Visit the Pre-admission Clinic

If you have not had an appointment at the Pre-admission Clinic, call the Calgary Brachytherapy Office: 403-521-3955.





## What should I bring to the hospital?

Bring:

- your health care card
- government ID
- someone to drive you home

## What if I need a place to stay before the implant day?

There are several hotels and motels close by.

In Calgary you can stay at the hospital hostel. To reach the hostel, call 403-944-1156.

## The Implant Procedure

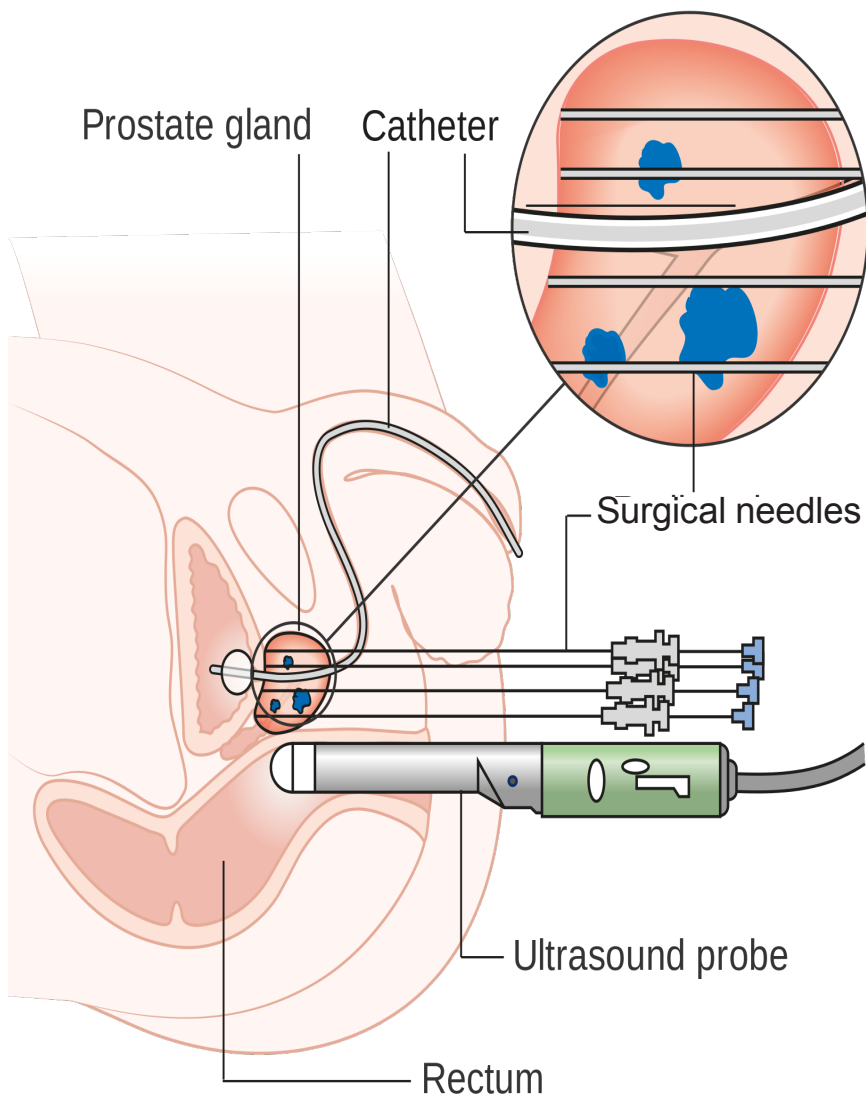
### 1) The treatment plan

Your treatment is planned so that your prostate gland will get a certain amount of radiation. The plan also helps keep the amount of radiation to the tissues around your prostate low.

Brachytherapy treatments are sometimes planned before your implant, and sometimes they are planned during your implant.

## 2) Ultrasound probe

An ultrasound probe is used to move the radiation source in to the right place (see next page). The probe will be placed in your rectum during the procedure. In some clinics, this ultrasound is also needed for the doctor to plan your treatment.



### 3) Iridium-192 source

The Iridium-192 source is very small. It is about 3.5 mm long and 0.6 mm thick.

#### **How do you get the radiation source into the prostate?**

Needles are inserted through the skin between the scrotum and the rectum. The needles are hollow, and let the source pass through the needle and be placed in the prostate at specific locations.

#### **How is the radiation source removed?**

The source has a thin wire attached to it. This wire is used to remove the source when the brachytherapy treatment is finished.

#### **Will I be radioactive?**

**NO you will not be radioactive.** There is no radiation left inside your prostate after the procedure.

#### **Other things to know:**

- **This is a day procedure.** You will spend time in the department preparing for your implant, having your brachytherapy treatment, and recovering from the procedure.
- The implant is done in the operating room. Usually a spinal anesthetic is used. This means you are awake but do not have any feeling in the area of the prostate and penis. Sometimes a general anesthetic is used (you are put to sleep). The Anesthesiologist will talk with you about what option will be used for your implant procedure.
- **Some** patients will stay in the department until they can pee (urinate) on their own (without a catheter).

## After Your Implant

### Precautions After Your Implant

<b>Do</b>	<ul style="list-style-type: none"><li>• Sit down to urinate. This helps you relax</li></ul>	For 2 Weeks (14 days)
<b>Do NOT</b>	<ul style="list-style-type: none"><li>• Lift anything over 10 pounds</li></ul>	For 1 Week (7 days)
	<ul style="list-style-type: none"><li>• Ride a bike or stationary bike</li><li>• Ride a horse</li><li>• Ride a motorcycle</li></ul>	For 6 Weeks (42 days)

### Possible Short Term Side Effects

#### a. Changes to urination

- You may have a **burning feeling when you urinate** if you do not drink enough fluids (like water, unsweetened cranberry juice). Avoid alcohol and caffeine (like tea, coffee, and cola).
- You may **urinate more slowly**. Your Flomax® prescription will help your muscles relax and improve your urine flow. Sitting on the toilet can also help. It can take a few months for this symptom to improve.

## b. Urinary obstruction

For 1 out of 20 patients, urine flow may stop completely (you cannot pee). If this happens, we can insert a tube called a catheter into your bladder for a short time until you can urinate again.



### Go to the nearest Emergency Room if:

You are unable to urinate for **5 to 6 hours or more**  
**OR**

You are still urinating, but you feel **discomfort** and **fullness** in your bladder, or discomfort **or pain** in your lower back. You may not be emptying your bladder fully.

## c. Infection

Sometimes an infection can develop in the days after the procedure. You will get antibiotics in the operating room to help prevent infection.



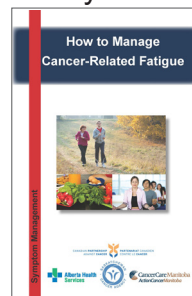
### Go to the nearest Emergency Room if:

- You have burning or pain while you urinate
- Your urine smells bad or is cloudy
- You have fever and chills

## d. Fatigue

Fatigue (or tiredness) can happen, but is not very common. Light to moderate exercise can help.

Get more tips and check out the booklet “How to Manage Cancer-Related Fatigue”



## e. Sexual activity

- Sexual function can vary after the treatment. It may take time before your sexual function returns to how it was before the implant. You may need medication. Talk to your Radiation Oncologist for more information and ask for a copy of “Sexual Health for Men” from your cancer centre.
- Because the prostate gland produces fluid, many men will notice less ejaculate (fluid/semen) after the procedure. This is common and normal.



“Sexual Health Information for Men with Cancer”

## Possible Long Term Side Effects

### a. Narrowing of the urethra

The urethra is the tube that carries urine (pee) from the bladder, and out through the tip of the penis. Sometimes the urethra can become more narrow because the:

- treatment might cause the prostate to swell
- radiation can “scar” the urethra.

If the urethra gets more narrow, it can cause you to:

- urinate more often
- feel an urgent need to urinate
- have burning when you urinate
- have difficulty starting to urinate
- have difficulty emptying your bladder

A Urologist can treat narrowing of the urethra by stretching the urethra. For some people, a surgery may also be needed.



Tell your Radiation Oncologist if this happens before you seek any other treatment.

## **b. Incontinence (unable to hold your bladder)**

- This is rare after the implant. Talk to your Radiation Oncologist if this happens.
- Underwear liners or pads (like Depends®) can help.

## **c. Rectal bleeding**

- This can happen from radiation scar tissue forming in the rectum.
- Try changing your diet by adding more fibre.
- Sometimes scar tissue is removed with a laser. Sometimes major surgery may be needed to if you have had additional biopsies or treatments.



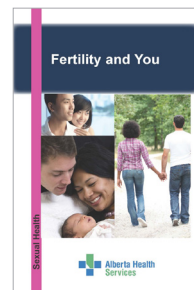
Tell your Radiation Oncologist if this happens before you seek any other treatment.

## **d. Impotence (inability to get an erection)**

- 1 – 3 men out of 10 may develop this up to 5 years after their implant.
- There are medications that can help. Talk to your Oncologist or family doctor to see if medications are an option for you.
- If medications do not work, other options are available.

## **e. Infertility (unable to have a child)**

- Your fertility may be reduced. Having treatment close to your testicles can reduce the number of sperm or their ability to fertilize an egg.
- Talk with your Oncologist or family doctor and ask for the booklet: 'Fertility and You'.



“Fertility and You”

# Living Your Best

## Supportive Care

### **CancerControl Alberta Psychosocial Oncology**

Difficult emotions often arise during cancer and its treatments. Psychosocial Oncology experts can offer counselling to patients and family members to help reduce emotional distress and explore coping techniques. They help with things such as communication, stress, coping with treatment side effects, mood changes, quality of life, body image or loneliness.

Support groups give those living with cancer an opportunity to interact with others in similar situations. Some are led by health care professionals while others are led by community members.

Patients and family members are welcome to call and ask for an appointment or information.

Find out more by calling:

- Calgary (South) 403-355-3207





## Prostate Cancer Canada

Prostate Cancer Canada website has information for people who have been diagnosed with prostate cancer and their families including information on support groups.

Visit [www.prostatecancer.ca](http://www.prostatecancer.ca) or call 1-888-939-3333 to find out if there are prostate cancer support groups in your area.

## Canadian Cancer Society — Peer Support Program

The Canadian Cancer Society's **Cancer Connection** program is a support network that offers peer-to-peer support to cancer patients and their caregivers. You can talk with caregivers or current and former patients with your same type of cancer. Call 1-800-263-6750 or visit [www.cancerconnection.ca](http://www.cancerconnection.ca).

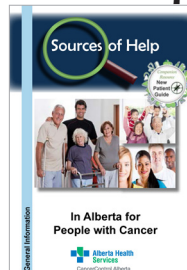
## Prostate Cancer Centre

Calgary's Prostate Cancer Centre (PCC) has programs for men and their family members dealing with prostate cancer. The centre provides diagnostic services, educational resources, information sessions, post operation care and research.

For more information call 403-943-8888, email [info@prostatecancercentre.ca](mailto:info@prostatecancercentre.ca), or visit [www.prostatecancercentre.ca](http://www.prostatecancercentre.ca).

For other kinds of supports look in

### Sources of Help



## After Treatment

### Follow-up with your Radiation Care Team

- You will have a follow-up phone assessment with the Brachytherapy Coordinator **4 weeks after the implant**
- You will have a follow up appointment with your Radiation Oncologist **3 months after the implant.**
- Your Radiation Oncologist will continue to see you. Write the dates of your next appointments below.

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### Medical Treatment After your Implant

If you need future medical treatment, especially abdominal surgery, the doctor may wish to have information about your implant.

- Call your Radiation Oncologist to discuss any concerns that might relate to your future treatment.
- If needed, your Radiation Oncologist can discuss any concerns with your doctor.



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**Find other Alberta cancer care resources  
at your cancer centre and online:**

[www.cancercontrolalberta.ca](http://www.cancercontrolalberta.ca)

This book is meant to support the information your health care team gives you. It does not replace any information that your health care team gives you.

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