

Prostate Brachytherapy

Radioactive Iodine-125 Seed[®] Implant

Treatment — Prostate Brachytherapy



Information for Patients



Introduction

This booklet describes the Radioactive Iodine-125 Seed® Implant. It is one treatment option available for some men with early stage prostate cancer.

There are many methods of treating prostate cancer. In consultation with your doctor, choose the option that is best for you.

Visit www.decisionhelp.qcancercare.com to explore your options for prostate cancer treatment.

If you are having your implant done in Calgary, The Rapid Access Clinic (RAC) information session at the Rockyview Hospital can help you make this decision. Call 403-943-8888 or visit prostatecancercentre.ca/our-programs to find the next information session.

Prostate Brachytherapy with External Beam Radiation Therapy

Sometimes for more advanced prostate cancer, a combination of brachytherapy and external beam radiation therapy is used. Your Radiation Oncologist will talk to you if this is an option for you.

Questions about Treatment

If you have questions or concerns about your treatment, call:

Brachytherapy Office (Mon to Fri 8 am – 4:30pm)

- **Calgary** **403-521-3955**
- **Edmonton** **780-432-8475**

Table of Contents

A	Internal Radiation Therapy	1
	1) Radiation therapy	
	2) Prostate brachytherapy	
B	How is the Implant Done?	3
	1) Radioactive Iodine-125 Seed®	
	2) Ultrasound probe and treatment plan	
C	How do I Prepare for My Implant?	5
D	Radiation Safety After Your Implant	6
	1) Radiation precautions	
	2) Medical treatment after your implant	
E	Managing Your Symptoms After the Implant	8
	1) Precautions after your implant	
	2) Possible short term side effects	
	3) Possible long term side effects	
F	Frequently Asked Questions	12
G	For More Information	14
	1) Prostate gland	
	2) Prostate cancer	
	3) Support groups	

1) Radiation therapy

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

Radiation therapy 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 therapy. This means the radiation source is **close to or inside** the patient. Prostate brachytherapy is a form of internal radiation therapy and is performed by carefully placing **radioactive Iodine-125 Seeds®** inside the prostate gland.

2) Prostate brachytherapy

You could hear several ways to describe prostate brachytherapy:

- Interstitial or internal radiation therapy
- Brachytherapy
- Seed implant
- Iodine-125 Seed® implant

During the procedure, small radioactive Iodine-125 Seeds® are placed inside the prostate gland. Over time, the seeds release radiation into the prostate gland. There will be no radioactivity left in the seeds after 20 months (1 year and 8 months).

What do I need before having 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/CCSGleason to learn more.
- A CT scan or transrectal ultrasound to know the size of your prostate.
- 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 prostate brachytherapy an option for me?

Prostate brachytherapy may be an option if you have a:

- PSA level of 20 or less.
- Small prostate gland. Sometimes medications can shrink the prostate if it is too big. Your Radiation Oncologist will talk to you if this is an option.
- Gleason score of 7.0 or less.

Prostate Brachytherapy with External Beam Radiation Therapy

Sometimes for more advanced prostate cancer, a combination of brachytherapy and external beam radiation therapy is used. Your Radiation Oncologist will talk to you if this is an option for you.

Will the implant cure my prostate cancer?

In many cases the seed implant will destroy all the cancer cells in the prostate. In other cases, the seeds help slow down the growth of cancer cells.

B

How is the Implant Done?

1) Radioactive Iodine-125 Seed®

The seeds are very small, and look like a grain of rice. Below is a picture of some Iodine-125 Seeds® next to a penny.



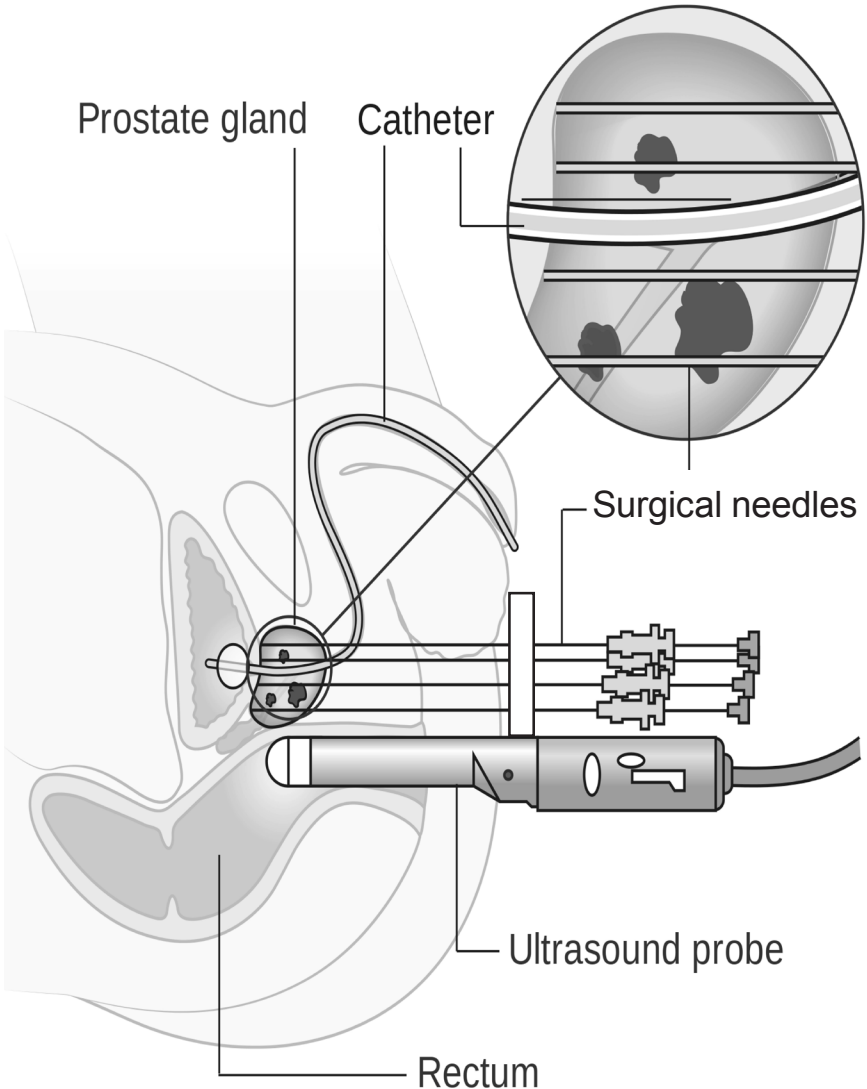
Other things to know:

- The number of seeds placed inside your prostate depends on the size and shape of your prostate.
- The seed implant is done in the operating room under general anesthetic (you will be put to sleep).
- This is a day procedure. You will spend time in the department preparing for your implant, having your seeds placed, and recovering from the procedure.
- **Some** patients will stay in the department until they can pee (urinate) on their own (without a catheter).
- An ultrasound probe is used to place the seeds (see next page). This probe will be placed in your rectum during the procedure. In some clinics, this is also needed for the doctor to plan your treatment.

2) Ultrasound probe and treatment plan

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

Brachytherapy treatments are sometimes planned before you implant, and other times are planned during your implant.



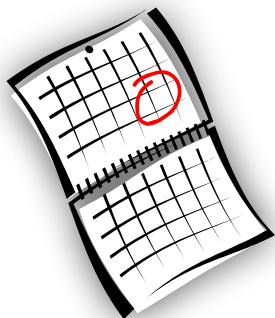
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How do I Prepare for My Implant?

There are several steps to help prepare for your implant procedure.

See your “Preparing for Prostate Brachytherapy Implant” handout for the steps at your cancer centre.

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 remind yourself.



Visit the Pre-admission Clinic

If you have not been seen by the Pre-admission Clinic, call your Brachytherapy Office:

- Calgary 403-521-3955
- Edmonton 780-432-8475



1) Radiation precautions

There are a few things to consider in the **2 months** (60 days) after your implant. Try keeping an “arms length of distance” between you and other people, especially children and pregnant women. It is okay to hug.

Sharing a bed

- Sleeping in the same bed with your partner is safe.
- **Place a pillow between you** for 2 months (60 days) to keep some space between you while sleeping.

Sitting and Visiting

- You can visit and hug people after your implant.
- **Avoid** having pets or kids sit on your lap for 2 months (60 days) after your implant.

Sexual Activity

- **Do not** have sex for 2 weeks (14 days) after your implant.
- **Use a condom** during sex for 2 – 4 weeks (14 – 28 days) after your implant.

Travel

- Avoid **travel by airplane or bus** for 1 month (30 days) after your implant. If you must travel, try to keep your travel time 3 – 4 hours or less. Try to get up and walk around during your trip.
- Keep a seat between you and the person closest to you.
- **Carry your Blue Wallet Card** at all times for the next 20 months (1 year and 8 months). You will get this card after your implant.

Will I set off the airport security detectors?

Yes. For 20 months (1 year and 8 months) after your implant you could set off radioactivity devices in some **airports or border crossings**. You could also set off sensitive metal detectors.

- **Carry your Blue Wallet Card** and be ready to show it to security.
- The **first time you fly or cross the border**, give yourself extra time. Security guards will need to verify your medical procedure.

2) 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.



E**Managing Your Symptoms
After the Implant****1) Precautions after your implant**

For 2 Weeks (14 days) Do	<ul style="list-style-type: none"> • Sit down to urinate to help you relax • If a seed comes out, flush it down the toilet
For 6 Weeks (42 days) Don't	<ul style="list-style-type: none"> • Lift anything over 10 pounds • Ride a bike, stationary bike, or ride horses • Ride a motorcycle

If a seed comes out while you urinate (very rare)

- Flush the seed(s) down the toilet. The amount of radiation from one seed is very low. **This will not affect your cancer treatment.**
- Call the brachytherapy office to let them know.

2) Possible short term side effects**Changes to Urination**

- A burning feeling may happen 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. Relaxing as much as possible and sitting on the toilet can help. Your Flomax® prescription will help relax your muscles and improve your urine flow. It can take a few months for this symptom to improve.

c) Urinary Obstruction

For 1 out of 20 patients, urine flow may stop completely (you cannot pee). If this happens a catheter can be inserted 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 have a feeling of **discomfort** and **fullness** in your bladder, or discomfort **or pain** in your lower back. You may not be emptying your bladder fully.

d) Infection

- Your Ciprofloxacin® prescription will help prevent infections. Take it as prescribed.



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

f) Fatigue can happen, but is not very common. Light to moderate exercise can help. Ask your cancer centre for resources on “How to Manage Cancer-Related Fatigue”.

g) 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.



3) Possible long term side effects

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 this by stretching the urethra. For some people, a surgery may also be needed.



Tell your Radiation Oncologist if this happens before you have any kind of 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 fiber.
- 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 any treatments start.

d) Impotence (inability to get an erection)

- 1 – 3 men out of 10 may develop this up to 5 years after their implant.
- Medications like Viagra® and Cialis® can help.
- If medications don't work, other options are available. Talk to your Radiation Oncologist.

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.

How many seeds will be implanted?

Everyone's treatment is different. On average 60 to 120 seeds can be used, depending on the size of your prostate.

How do you get the seeds into the prostate?

Needles are inserted through the skin between the scrotum and the rectum. The needles are hollow, and allow the seeds to pass through the needle and be placed into the prostate at specific locations.

What happens to the seeds over time?

The Iodine-125® Seed implant is permanent. The seeds will always be in your prostate gland. The level of radiation decreases over time. After 20 months (1 year and 8 months) no radioactivity can be detected.

What should I bring to the hospital?

Bring your health care card, government ID, and 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. You can also pick up a "How to Find Accommodations In Calgary" booklet.
- In Edmonton you can call the Cancer Information Centre at 780-432-8456 to get a list places to stay near by.

Will I be radioactive?

No. The implanted seeds are radioactive, but you are not. Most of the radiation stays inside your prostate. The risk of the radiation affecting anyone else is small.

Who is a part of my brachytherapy team?

- **Radiation Oncologist** – a medical doctor who treats cancer using radiation.
- **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.

How am I followed by my doctor after my implant?

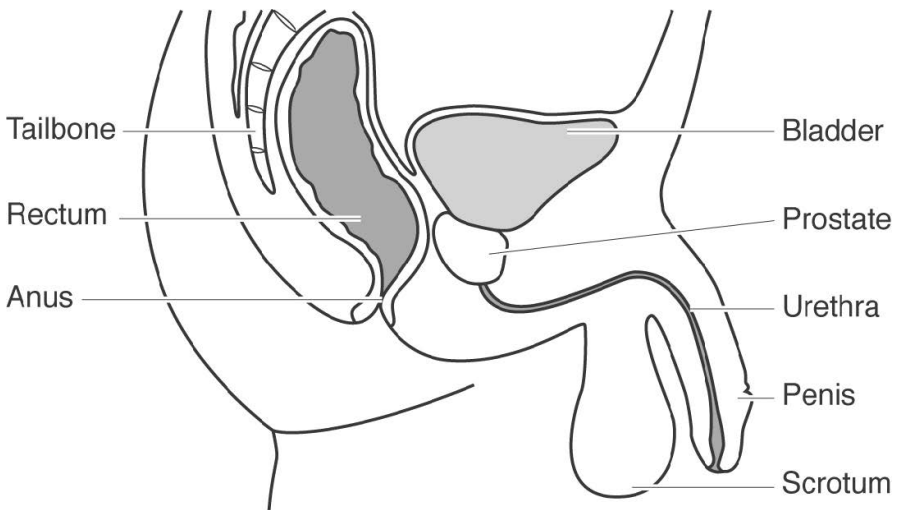
- You will have a follow-up appointment **4 weeks after the implant**.
 - This may include a CT scan or a Chest X-ray.
 - Your Radiation Oncologist will continue to see you. Write the dates of your next appointments below.
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1) Prostate gland

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.



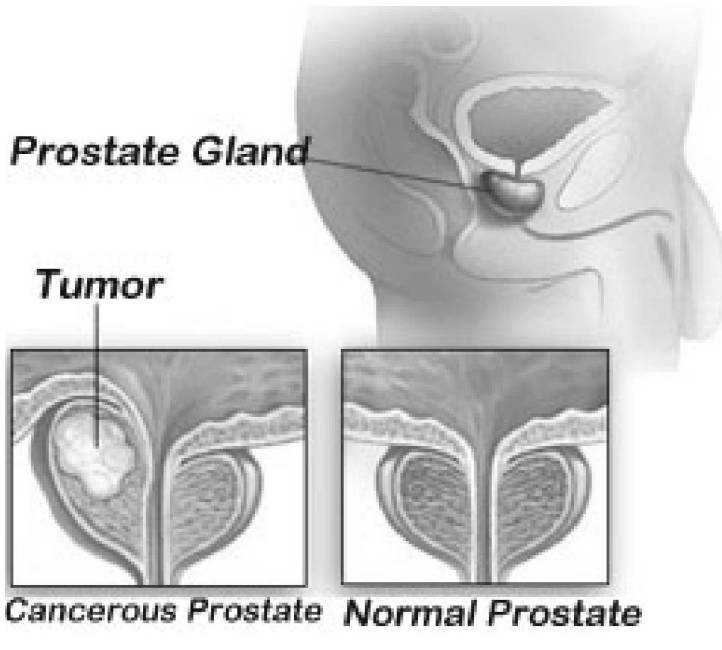
2) Prostate cancer

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.



3) Support groups

Support Groups

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, in person or online. Find out more by calling Psychosocial Oncology:

- Calgary (South) 403-355-3207
- Edmonton (North) 780-643-4303

Prostate Cancer Canada

The 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.prostatecancercentre.ca or call 1-888-255-0333 to find out if there are prostate cancer support groups in your area.

Canadian Cancer Society — Peer Support Program

It can be helpful to talk with someone who has also had prostate cancer and finished treatment. 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.

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. Call 403-943-8888, email info@prostatecancercentre.ca, or visit www.prostatecancercentre.ca for more information.



Cancer Patient Education

