

# Radiation Therapy for Prostate Cancer (External Beam)

External beam radiation therapy is a form of radiation treatment used to treat prostate cancer. Radiation beams are directed at the prostate from outside the body. Radiation therapy is considered a suitable treatment for men of any age and is as effective as surgery at treating prostate cancer.

A prostate cancer diagnosis can cause fear and panic. You may want to start treatment right away. However, most prostate cancer grows very slowly, so there's usually no need to rush. Give yourself time to learn about your treatment options. The treatment you choose will depend on your doctor's advice and your feelings about possible side effects. Talk to your doctor if you have questions.

## How does external beam radiation therapy treat prostate cancer?

External beam radiation therapy can be used to:

- destroy cancer cells
- shrink a tumor
- relieve symptoms caused by cancer

If your doctor suggests external beam radiation therapy as an option there are some important factors to consider.

Radiation therapy can be used to treat prostate cancer that has not spread beyond the prostate gland (localized). If it has spread, radiation therapy may still be used to shrink the tumor or reduce symptoms.

External beam radiation therapy treats prostate cancer by directing high energy X-ray beams at the prostate from outside the body. The goal is to attack the cancer cells and stop them from dividing and growing, while causing as little harm as possible to healthy tissue. Cancer cells die, but the healthy tissue can recover more easily.

The whole prostate and the surrounding area are targeted to make sure any stray cancer cells are treated.

## Pros of external beam radiation

- It's as effective as surgery.
- Radiation therapy is non-invasive (it doesn't touch you).
- It usually involves less discomfort than surgery and recovery is faster.
- You can go home the same day you're treated.
- There's no risk associated with anaesthesia.

## Cons of external beam radiation

- Usually, radiation treatments are given five days a week for six to eight weeks.
- You may have side effects like erectile dysfunction and urinary problems.
- It may cause a temporary drop in your energy level.
- Radiation can damage healthy tissue near the prostate.
- If all cancer cells aren't killed, the cancer may return.
- Your doctor may not be able to determine the status of your tumor immediately after treatment.
- PSA tests are less accurate after radiation treatment.

## Questions to ask your doctor

- What is the goal of this treatment?
- Why is it better for me than other options like surgery?
- When will the treatment start?
- How many sessions will I have?
- Will I have hormone treatment?
- What are the side effects?
- What can I do to reduce the risks?
- Will I be able to work or do other normal activities during treatment?
- How will we know if the treatment is successful?
- How soon will I have my PSA checked? How low should it be?
- Who should I call if I have questions during my treatment?



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## What happens during treatment?

### Planning:

You will see a radiation oncologist, a specialist who treats cancer with radiation.

If you agree to have external beam radiation therapy, you will attend a treatment planning session called a simulation. At this time:

- A radiation oncologist and radiation therapist will identify the places in your body that will receive radiation.
- You'll need to lie still while X-rays or CT scans are taken.
- The radiation therapist will draw small dots on your skin to mark the treatment area. These marks will be used throughout your course of radiation therapy.

### Treatment:

When you go for radiation treatment, do not wear jewellery or lotion on or near the treatment area. Do not use deodorant soap before your treatment.

Wear comfortable, loose clothes that are easy to take off, as you may need to change into a hospital gown or show the area being treated.

You will go to a radiation treatment room, where there is a machine called a linear accelerator. It directs high-powered X-rays at the prostate gland.

Coloured lights will be pointed at the marks on your skin. They help the therapist position you for treatment, and are harmless.

Before your treatment starts, the radiation therapist will leave and go to a nearby room to control the radiation machine and watch you on a TV screen or through a window.

You will lie still so the radiation goes to exactly the same place each time. You can breathe normally, without holding your breath.

The machine won't touch you, but will rotate around you, sending radiation to your prostate from many directions. The machine is large and may be noisy.

You cannot feel, hear or smell radiation.

## Side effects

Radiation treatment is completely painless but damage to healthy tissue can cause side effects. Many healthy cells recover and side effects may only last a few weeks or months. However, side effects that take longer to develop can become long term concerns.

There is no way of knowing which of the most common side effects will affect you, or how bad they will be. Ask your doctor for more information.

## Bowel problems

The bowel and rectum are exposed to radiation because they are close to the prostate gland. This may cause inflammation of the bowel lining, leading to other symptoms, such as:

- frequent bowel movements/diarrhoea
- pain in the rectum or stomach
- feeling that bowels are full
- mucus or blood in the stool

Short term bowel problems may ease after your treatments are over. This may take weeks or months. However, for some men symptoms never improve.

Managing bowel problems:

Drink 8 to 12 cups of clear liquid a day.

- Eat several small meals and snacks, rather than three large meals.
- Eat foods that are easy to digest.
- Use baby wipes instead of toilet paper to prevent rectal irritation.
- Tell your doctor about any changes in your bowel habits.



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## Urinary and Bladder problems

Radiotherapy can irritate the lining of the bladder, which may cause inflammation, ulcers and infection.

Symptoms include:

- burning/pain when starting to urinate
- difficulty emptying bladder
- urgent need to urinate or frequent feeling of the need to urinate
- lack of control over urine flow (incontinence)
- blood in urine
- bladder spasms (painful muscle cramps)

Urinary and bladder problems usually start 3 to 5 weeks after radiation therapy begins. Most problems go away 2 to 8 weeks after treatment ends.

Managing urinary and bladder problems:

- Drink plenty of fluids (urine should be clear to light yellow in color).
- Avoid coffee, black tea and alcohol.
- Tell your doctor about symptoms. A urine sample may be needed to see if you have a bladder infection.
- Tell your doctor if you have incontinence. Exercises may help improve bladder control.

## Fatigue (Tiredness)

Many men may feel weak, weary, or worn out after radiation. This can range from mild to extreme tiredness. Fatigue can last up to a year after your last radiation session. Some men never regain their previous energy level.

Managing fatigue:

- Sleep at least 8 hours each night.
- Rest and take naps regularly.
- Exercise regularly.
- Reduce your work schedule or take medical leave if you don't have enough energy to do your job.
- Ask a doctor or nurse about medication that may help you cope with fatigue.

## Nausea and Vomiting

Radiation therapy can cause nausea and vomiting. Your risk depends on how much radiation you are getting and whether you are also having chemotherapy. It is unusual for patients having prostate radiation therapy to develop significant nausea or vomiting.

Managing nausea and vomiting:

- Eat bland food that's easy to digest.
- Learn the best time to eat and drink. Some men feel better when they eat before radiation therapy; others do not.
- Eat small meals and snacks, rather than three large meals a day.
- Talk to your doctor. A special diet may help you cope with nausea and vomiting.



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## Erectile Dysfunction and Infertility

Radiation can damage the nerves that control erections, and affect your ability to have and keep an erection. Erectile dysfunction can be a short term or long term side effect, depending on a man's age and overall health.

The stress of dealing with cancer and the tiredness caused by your treatment can also affect the quality of your sex life.

Managing erectile dysfunction:

Talk with a doctor or nurse. You may be prescribed medication or other treatments.

Before you start radiation therapy, tell your doctor if you plan to father children in the future. You may want to store your sperm before you start treatment, to be used later. Radiation therapy can harm a developing baby, so use condoms if there is a risk that your partner may become pregnant. You should not father children for two years after your treatment ends.

## Skin Changes

Radiation causes skin cells to break down and die. When you have radiation therapy almost every day, your skin cells do not have enough time to grow back between treatments. Towards the end of your treatment, the skin between your legs and around your rectum may become sore and darker in colour. These changes are mild in most men, and should go away in a few weeks after treatment is over.

Managing skin changes:

- Take extra good care of your skin during therapy.
- Do not rub or scratch the treatment area.
- Wash skin with lukewarm water.
- Protect your skin from the sun.
- Do not wear tight fitting clothes.
- Talk to a doctor or nurse about prescription creams that may ease your symptoms.

## Hair Loss

You may start losing hair in the treatment area (pubic hair) two to three weeks after your first radiation session. It may grow back 3 to 6 months after treatment is over.

## What happens after all my radiation therapy treatments are done?

Your PSA level will be checked a few weeks after your treatment finishes, and then regularly for several years. Your doctor may also recommend regular hormone therapy treatments.

The months after treatment can be stressful, which you wait to find out if it was a success. Family and friends can help support you at this time. You may also want to speak to someone who has had the same experience.

