



Patient Guide: Your Radiation Therapy Treatment

Hours of Operation



Regular Business Hours:

CancerCare Manitoba (CCMB)

Radiation Therapy Department
675 McDermot Avenue, Winnipeg, MB

204-787-2252 Treatment Floor Reception Desk
8:00 am to 5:00 pm Monday to Friday

204-787-2197 CCMB Main Floor Reception Desk
8:00 am to 4:00 pm Monday to Friday

Western Manitoba Cancer Centre

Radiation Therapy Department
300 McTavish Avenue East, Brandon, MB

204-578-2222 Reception Desk
8:00 am to 4:00 pm Monday to Friday



After Hours:

If you have an urgent medical issue outside of regular business hours or it is a holiday, please contact:

Radiation Oncologist on-call at 204-787-2071

Emergencies: Go directly to your closest Emergency Department, or dial 911.

Cancer Helpline

204-787-8900

Monday to Friday from 8:00 am to 6:00 pm
A registered nurse will ask questions about your symptoms and provide you with further guidance.

Urgent Cancer Care

675 McDermot, 1st Floor

Monday to Friday 8:00 am to 5:00 pm
If you are uncertain whether or not to attend Urgent Cancer Care, call the Cancer Helpline.

Welcome to the Radiation Therapy Department

Our team is here to help you with this part of your cancer treatment.

This Radiation Therapy Patient Guide will help you prepare for your radiation appointments. It will give you information about radiation therapy and what to expect before, during and after your treatment.

You don't have to read this book front to back. This is a book for all radiation therapy patients, so not all of the information may apply to your care plan. Keep this book nearby and refer to it when you have questions.

Your *radiation therapy healthcare team* at CancerCare Manitoba will also give you more information about your radiation treatment.

You can ask any member of your team questions at any time. This will help us provide you with the best possible care.

Take it one day at a time.
Ask for help when you need it.

YOUR RADIATION THERAPY TEAM

Radiation Therapy Team

The radiation therapy team includes: radiation oncologists, radiation therapists, nurses, medical physicists, nuclear electronic technologists, dosimetrists, communication clerks, unit assistants, social workers and dietitians.

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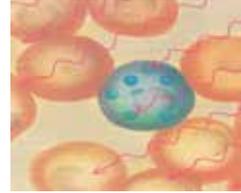
Basic Radiation Therapy Information



Radiation therapy, radiotherapy and irradiation all mean the same thing. Intense beams of energy are used in a safe way to kill cancer cells.

Radiation therapy may be used to:

- cure cancer
- slow the growth of cancer cells, or
- reduce discomfort such as pain



Radiation stops cells from growing, and spreading. When the cancer cells die, your body is able to get rid of them just like it gets rid of other waste products in the body.

Normal cells may also be damaged by the radiation, but they are able to repair themselves.

There are limits on how much radiation different parts of your body can be given. This is because the normal healthy cells that are being treated must be able to repair themselves. Your radiation oncologist uses this information to decide the best care plan for you.

It is important that you have all of the treatments prescribed by your radiation oncologist. However, we understand that things can occur which prevent you from making it in. (e.g. illness, weather, bad road conditions etc.).

Your Step-by-Step Journey to Treatment

STEP 1 - Your First Appointment with Your Radiation Oncologist and Primary Nurse.

- Talk about your treatment options

STEP 2 - Signing the Consent Form.

You have decided to have radiation therapy.

- Planning for your treatment starts after you have signed the consent form.

STEP 3 - Preparing for Your Treatment.

These appointments get you ready for treatment:

1. Simulation
2. Making an Immobilization Aid (may not be needed)
3. Patient Education session

STEP 4 - Treatment

- Patients often see their doctor/nurse in clinic once a week. If scheduled, this appointment will be on your weekly treatment schedule.
- On your last day of treatment, the radiation therapists will talk with you about your follow-up care.

Your Radiation Healthcare Team

If you have any questions/concerns about your treatment talk with a member of your radiation healthcare team:

- **radiation oncologist:** you may be scheduled to see them in clinic.
- **radiation therapists:** you will see them at every treatment.
- **primary nurse:** someone will call you back within 24 hours depending on the urgency of your concern.
- **radiation treatment nurse:** you may ask to see them while you are in the department for your treatment.

If you can't reach someone from the above list, please call the **Cancer Helpline at 204 787-8900**. A registered nurse will ask questions about your symptoms and provide you with further guidance. Patients at CCMB should go to **Urgent Cancer Care** clinic if they have severe symptoms related to their cancer or side effects of their treatment.

Note: If you are pregnant or think that you may be pregnant, tell your radiation healthcare team right away.

Do not try to become pregnant during radiation therapy treatment. Radiation can harm your unborn child.

Your First Appointment with Your Radiation Oncologist and Primary Nurse



During your first appointment, the radiation oncologist will decide on a care plan for you. This is based on:

- the size and location of your cancer
- the type of cancer
- the reason for the treatment
- your general health



Questions you may want to ask:

- Why do you think radiation is the best treatment for my type of cancer?
- What is the goal of the treatment?
- Is there a chance the cancer will spread or come back if I don't have radiation therapy?
- What will my treatment be like?



Notes:

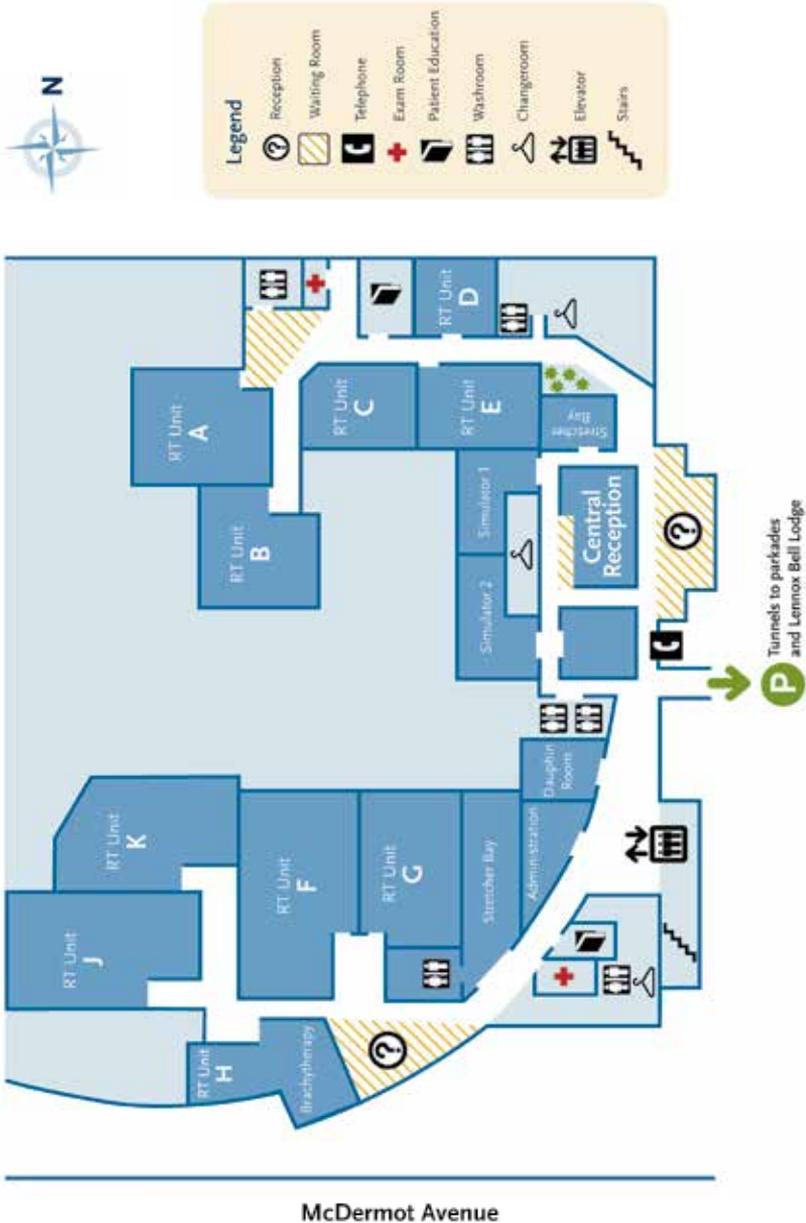
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Map of the Radiation Therapy Department

Floor Level 0 – 675 McDermot Ave, Winnipeg, Manitoba



Signing the Consent Form (Patient Consent)

When you agree to have treatment, you will need to sign a consent form. This allows the radiation therapy team to begin preparing your treatment.



- For your appointments you may need to change into hospital gowns.
- Radiation therapists will keep your body covered as much as possible.
- Please talk to the team if you feel we could do things differently to make you feel safe and calm.

Preparing for Your Treatment: Simulation



Simulation is the process of taking images (pictures), measuring your body and marking your skin or mould (a mesh-like plastic shell that holds you still during treatment). **Radiation therapists will use these marks to make sure the beam of radiation is treating the right place every time you have a treatment.**

During the simulation, you may be asked to swallow or drink a contrast agent, or you may get this by an injection through an IV. This contrast is used to get better images.

During simulation, the radiation therapists will:

- carefully position you on the couch (flat bed)
- ask you to lie still
- tell you to breathe normally
- take scans or images of your body

These scans or images will help plan your treatment. This visit lasts 30 to 60 minutes. You do not receive any treatment during the simulation.

Markings:

There are two ways that marks are put on skin:

- *With a marker* - **Do not wash off these marks.** Radiation therapists will darken them when they fade.
- *Tattoos* - Small permanent marks that are about the size of a freckle.

Preparing for Your Treatment: Making an Immobilization Aid (Thermoplastic Shells or Moulds)

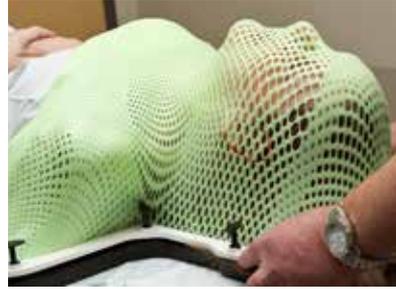
Immobilization aids may be used to help you hold your body still during simulation and treatment. The type of aid you may need will depend on the area of your body being treated.

There are two types of immobilization aids:

- thermoplastic shells
- vacuum cushions

Thermoplastic Shells (mould) - How it's made:

The mould is made of broadly woven plastic mesh that you can see through and breathe through.



This process takes about 15 minutes.

1. A board is placed under your body.
2. A warm, wet, flexible sheet of special plastic is placed over you and gently smoothed down.
3. You will be able to breathe normally.
4. When the sheet cools, it hardens.
This only takes a few minutes.
5. The mould will then be ready to be lifted off.

Preparing for Your Treatment: Making an Immobilization Aid (Vacuum Cushions)



How it's made:

- Vacuum cushions create a mould of your body position and help you lie still during treatment.
- These bags are filled with tiny pellets, just like a large “beanbag”.

This process takes about 15 minutes.

1. A vacuum cushion is placed under your body.
2. Radiation therapists move you into the correct position for your treatment.
3. A vacuum pump will remove the air out of the cushion.
4. The vacuum cushion then becomes firm and conforms to your body.

Some patients may also have:

- a) A thermoplastic shell in addition to the vacuum cushion.
- b) Along with the vacuum cushion placed under the body:
 - A clear plastic film covers you from the armpit/upper chest level down past the feet.
 - A vacuum pump is used to remove the air from between the film and the bag.

Preparing for Your Treatment: Patient Education Session

This session will usually take place the same day as your simulation appointment or your first treatment appointment.

A radiation therapist will sit down with you and review:

- what to expect during a radiation treatment
- your appointment schedule
- possible side effects that you might have while on treatment
- suggestions on what you can do to help feel better
- support services available

You will be given an information sheet to take home. You are welcome to bring a family member or friend to this session. If you have any questions, please ask.



Preparing for Your Treatment: Treatment Planning

How is your treatment plan made?



Members of the radiation therapy team review the information from the simulation, along with your previous medical tests.

- Radiation therapists will use a special computer system to design your treatment plan
- This process may take up to 2 weeks

Some patients will not need this type of planning for treatment.

- Their treatment may start within 5 days of the simulation.
- Other patients may start treatment the same day as their simulation.

Treatment: Radiation Treatment Schedules

Please check in with the reception clerks to let them know you have arrived for your radiation appointment.

- Weekly schedules are handed out every **Thursday**.
- We ask that you are changed and ready for treatment at your appointment time.
- Our treatment units are busy, but we do our best to run on time.
- Please try to call the treatment unit if you are going to be late. Come to your appointment even if you are late. We will do our best to fit you in.



Tell us as soon as you can when you have another medical appointment. If we have some notice it will be easier to reschedule.

Most patients will have one radiation treatment every day from Monday to Friday. Every treatment care plan is different. Please ask your radiation therapist if you have questions about your treatment schedule.

Some patients may need 2 radiation treatments given in one day. If this happens, there needs to be at least 6 hours between the two appointments.

Treatment: Medical Imaging & During Treatment Clinic Visits

Medical Imaging

Medical imaging (similar to x-rays or CT scans) will be done before each treatment to confirm you are in the correct position.

These images may be used in the education of health care members and for clinical development within Radiation Oncology.

CancerCare Manitoba follows the Personal Health Information Act of Manitoba. This means that your personal health information is protected.

During Radiation Treatment - Clinic Visits

While on treatment you may also be scheduled for a clinic appointment with your radiation oncologist, a resident, or nurse.

- The time on your schedule is not necessarily the time you will be seen.
- Patients are seen in order of their arrival to clinic.
- Please allow for extra time on these days.



Treatment: Follow-up Clinic Visits

After Your Radiation Treatment - Follow-up Clinic Visits

A follow-up appointment may be booked a few weeks after your last radiation treatment. You will receive more information about care during your treatment.

During a follow-up clinic visit, your radiation oncologist and/or nurse will check how you are doing. Your doctor may order other lab work, x-rays and tests be done. Reports on your treatment may also be sent to your other doctors.

You may be followed up by your radiation oncologist for several years. At first, you may be scheduled to come back every few months. As time goes by, these visits may not be needed as often.

If follow-up is not at CancerCare Manitoba, please contact your Family Physician for any issues that occur.



Treatment: Treatment Machines (Units)

Talk to your radiation therapy healthcare team if you want to know which machine they will use for your treatment.



Linear Accelerators: All of CancerCare Manitoba's linear accelerators use electricity to make high-energy x-rays or electron beams. The radiation passes through your skin and the surrounding healthy tissue to reach the cancer. You do not feel or see the radiation.

What will happen?

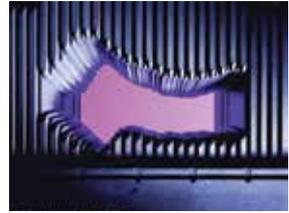
- During set up and treatment, the machine will move around you, but will not touch you.
- Once you are in position, the radiation therapists will leave the room.
- Images are taken to check your position and you may feel the bed move slightly.
- It is important that you **lie very still, but breathe normally, unless instructed otherwise.**
- The treatment will begin and you will hear a "humming" sound when the treatment beam is on.
- All machine and bed movements are controlled by the radiation therapists.
- Do not move until the radiation therapists tell you treatment is done.
- You will be in the treatment room between 15-45 minutes. Certain treatments may take longer.

The radiation therapists sit just outside the room while you are having your treatment. Don't worry, they can see and hear you at all times on their monitors. Tell them if you are uncomfortable or feel ill, so they can stop the treatment and come back inside to help you.

Shaping the treatment beams:

Tumours are not smooth round balls; they come in different shapes and sizes.

- The treatment units have internal shielding that lets your radiation oncologist conform (shape) the radiation beam to match the size and shape of the treatment area.
- This reduces the radiation dose given to the surrounding normal healthy tissue.



Types of Conformal Radiation Therapy:

Your radiation oncologist will discuss which type of conformal radiation therapy may be suitable for you.

- **Three-Dimensional Conformal Radiation Therapy (3D-CRT):** Conformal radiation therapy uses your images obtained during the simulation and other medical imaging scans to outline your tumour in 3 dimensions (3-D).
- **Intensity Modulated Radiation Therapy (IMRT):** This is a form of 3D-CRT. It allows changes in the intensity (strength) of each radiation beam.
- **Stereotactic Body Radiation Therapy (SBRT):** This type of external beam radiation therapy may be used to treat small, well-defined tumours of the spine, lung and liver.

Treatment: Treatment Machines (Units) cont'd

Superficial X-ray (Orthovoltage) Unit:

This machine is smaller than the other treatment units and produces a lower energy.



What will happen?

- It treats areas close to the surface of the skin (e.g. skin cancer or overgrown scar tissue).
- Unlike the other machines, this one gently touches your skin during treatment.
- Some patients may need to have a lead cutout to protect the surrounding normal tissue from the radiation.
- There will be a “humming” sound when the machine is on.
- You will be in the treatment room for about 15 minutes. This may be longer on your 1st day.



Internal Radiation Therapy (inside of the body): Internal radiation therapy (brachytherapy) can be divided into two types: intracavitary or interstitial radiation. Some patients have both brachytherapy and external beam radiation therapy treatments.

HDR Unit: How is this given?

Treatment catheters (tiny hollow tubes) are placed in the body. Their location is checked with x-ray images.



- During **intracavitary radiation**, the catheters are placed in a cavity (space) inside of the body. One example might be into the uterus (womb).
- During **interstitial radiation**, the catheters are placed into or near the cancer.

Tiny radioactive sources travel up the catheters and remain in position for a certain amount of time. Treatment usually lasts for a few minutes. However, some patients may need to stay in the department for up to 2 hours.

For some treatments anesthetic (medicine that puts you to sleep) may be required. This medicine, sometimes called “conscious sedation”, puts you in a light sleep and prevents you from feeling any pain during the treatment.

- Because this requires a recovery period after treatment, you will need to bring someone with you to drive home after the treatment.

Frequently Asked Questions & Concerns

Can you feel the radiation as it is being given?

No, you can't feel radiation.

Can I still take my medications?

Tell your radiation oncologist or nurse about any medication you are taking (bring a list or bring the bottles the medicine came in). This includes all vitamins, herbs, supplements, drops and lotions.

Will I be radioactive?

No. Patients treated with x-rays do not become radioactive. The radiation does not stay in your body after treatment.

- This applies to both External Beam Radiation Therapy and Internal HDR treatment.
- After you have had radiation treatment, it is safe for you to be around other people, including children and pregnant women.
- There is no restriction on crossing the United States border after having radiation therapy treatment. You will not set off any security equipment due to recent radiation treatments.

Patients who have had prostate seed implants will be given an information sheet on safety precautions to follow.

Is it a problem if I miss a treatment?

- Yes. Each treatment is needed to complete your radiation care plan.
- Missed treatments need to be rescheduled.
- If you are going to miss a treatment or if you are going to be late please call your treatment unit. The phone number is **204-787-2252 (Winnipeg) or 204-578-2222 (Brandon).**

Can I tell if the treatments are working?

No, it is difficult to tell if the radiation has worked while you are still on treatment.

- You will get the maximum benefit from treatment a few weeks after your last treatment.

Can I be treated with radiation again?

Sometimes people have more than one course of radiation treatments. Everyone's cancer is different so talk with your radiation oncologist about whether or not this is a safe or reasonable choice for you.

Will I get the side effects?

Some patients have little or no side effects. Your radiation healthcare team will go over the possible side effects that you might have while on treatment. Radiation therapy can cause early and late side effects.

- *Early side effects* may happen during treatment or soon after the end of treatment. They may last for several weeks. Some patients notice they reach a peak about 10 days after their last treatment, then they slowly recover.
- *Late side effects* may take months to years to develop and may not go away.

Are side effects the same for everyone?

No, the side effects of radiation therapy can be different for each patient.

- You may experience little or no side effects over your course of treatment. However, some people do experience serious side effects.
- Radiation therapy is a local treatment only. This means you can only get side effects in the part of your body being treated.
- The side effects can also depend on the radiation dose given and the length of the treatment course.

Frequently Asked Questions & Concerns cont'd

Should I avoid activity while on treatment?

No, but you may want to plan to take it easy. Fatigue is a very common cancer side effect no matter what area of the body is being treated.

- Fatigue is a daily lack of energy; a feeling of tiredness, weakness or exhaustion. It may come on suddenly and it does not result from activity or exertion.
- Some patients find their energy level is better at different times of the day.
- We encourage you to stay active as much as possible.
- Avoid staying in bed unless your doctor tells you to. Staying in bed all of the time can cause more health problems.
- If you need to take a nap during the day, limit it to only 15 - 20 minutes.
- Talk with a member of your radiation healthcare team for more information.

Can I work while I am on treatment?

The effects of radiation treatment are different for everyone. Generally, radiation causes fatigue, which many people struggle with if they continue to work.

- Pay attention to your energy level.
- Talk with your radiation oncologist if you have any questions about whether you should take time off or not.

Can I drive while I am on treatment?

Most patients are able to drive while they are having radiation therapy treatment unless your radiation oncologist tells you it is not recommended.

- Talk to your radiation healthcare team if you have any other questions about driving while on treatment.

Can I drink alcohol?

Be cautious about drinking alcohol while on treatment. Alcohol may worsen your side effects, depending on the area being treated. Talk to a member of your radiation healthcare team.

Can I smoke?

We recommend you do not smoke while you are on treatment. This is because smoking lowers the oxygen levels in your body and radiation treatment works best with higher levels of oxygen. Smoking may also worsen your side effects.

If you are interested in joining the Quit Smoking Program

- Call 204-787-1202 or Toll Free 1-888-775-9899 and leave a message.
- Ask a member of your radiation healthcare team to call the Quit Team.
- A Quit Team member will call you to discuss the program and set-up an appointment.

Frequently Asked Questions & Concerns cont'd

How will I feel emotionally?

Many patients feel tired during radiation therapy, and this can affect your emotions.

- You might feel overwhelmed and anxious at times.
- Some may experience unexpected and unsettling mood swings.
- You may feel depressed, angry and frustrated.

The Department of Patient and Family Support Services includes social workers, psychologists and psychiatrists who are specially trained to help you cope.

- Many individuals and families have found it helpful to talk to a professional counsellor.
- A counsellor can meet with you, or together with you and your family or caregiver.
- All support services are offered at no cost to you and your family.



To arrange to talk with a counsellor or for information on support groups and programs call **Patient and Family Support Services** at CancerCare Manitoba at 204-787-2109 or Toll Free 1-866-561-1026 (Winnipeg) or 204-578-2206 (Brandon). You may also ask a member of your radiation healthcare team to refer you.

Will having radiation treatments affect my ability or desire to enjoy sex?

Living with cancer can affect sexual functioning in various ways. Radiation to the *pelvis* may result in sexual changes for both men and women.

- For men it is common to experience difficulty achieving and/or maintaining an erection as well as decreased ejaculate (sperm).
- Women may experience vaginal and/or vulval dryness, as well as shortening and tightening of the vagina.
- Changes in the ability to be sexual with one's partner often lead to decreased desire and feelings of guilt. It is not uncommon for this to cause problems in the couple's relationship.



- Counselling may help you and your partner deal with sexual and intimacy concerns.
- Sexuality information and counselling services are offered through Patient and Family Support Services. Call the office at 204-787-2109 (Winnipeg) or ask a member of your radiation healthcare team to refer you. All the counsellors are available to discuss sexual concerns.



- **Sexuality Counsellor:** Dr. Anne Katz specializes in this area. She is available by appointment by calling 204-787-4495 (Winnipeg).

Radiation Oncology Contact Information:



Your radiation oncologist is:

Your primary nurse is:

Phone number:



All funds raised stay in Manitoba.

CancerCare Manitoba Foundation provides funding for clinical trials, research and other programs that support our patients.