

Radiation Therapy for Cancer of the Cervix: High Dose-Rate (HDR) Brachytherapy Procedure

This handout offers information on HDR radiation therapy procedure (treatments) to your cervix. We give you and your family member/care partner support during your treatments. We also answer any questions you have.

After each radiation treatment, it is safe for you to be around other people (including children) and pets.
You are not radioactive.

Your appointments

Your HDR cervix brachytherapy treatments will start near the end of your external beam radiation treatments. The number of HDR cervix brachytherapy treatments you have depends on what your radiation oncologist orders. Most patients have 3 HDR cervix brachytherapy treatments. Some patients need 4 treatments. These treatments are booked over 2 to 3 weeks.

The radiation therapy receptionist will call to provide you with your appointment dates and times. Add these appointments to the table below. If you have any questions or concerns, call the radiation therapy receptionist at 905-576-8711, extension 33856 between the hours of 8 am and 6 pm from Monday to Friday. After these hours, you may leave a voicemail message and your call will be returned the next business day. The cancer centre is closed on weekends and holidays.

1. Education and blood work appointments

The appointments listed below may be scheduled during the time you are having external beam radiation treatments. For these appointments, you will be in the cancer centre for about 2 hours.

Appointment	Date/Time	Location	Instructions
teaching - brachy electrocardiogram (EKG) - this test checks for problems with the electrical activity of your heart.		B1 level, cancer centre	You will meet with a nurse for this appointment. The nurse will: • Give you information about this procedure and how to prepare for it. • Review your medications with you. You may also meet with the oncologist at this appointment.
blood work		main level, cancer centre	

2. Telephone call

An anesthesiologist may call you 1 to 2 weeks before your procedure. Not everyone needs a call from the anesthesiologist. An anesthesiologist is a doctor with special training in giving medication(s) to put you to sleep before a surgery or procedure.

3. Education appointment with a radiation therapist

This appointment will be near the end of your external beam radiation treatments.

Appointment	Date/Time	Location	Instructions
radiation therapist (patient education)		B1 level, cancer centre	

Questions to think about when you come for your appointments

- Do you understand what is happening with your treatment?
- Do you have any questions about your treatment?
- Are you having any symptoms or side effects from treatment, or changes in the treatment area?
- Do you need any prescription renewals before your next appointment with your radiation oncologist?

Talk to a member of your healthcare team if you have any questions.

4. Pre-treatment MRI appointment

This appointment is not scheduled for every patient. If you are scheduled for this appointment, it will be scheduled the week before your first HDR cervix brachytherapy treatment. This appointment helps your radiation oncologist plan your HDR cervix brachytherapy treatments. This appointment will be in the Magnetic Resonance Imaging (MRI) Department at Lakeridge Health Oshawa.

Appointment	Date/Time	Location	Instructions
		MRI department N Wing, B1 Level	

5. HDR cervix brachytherapy treatment appointments

Date/Time	Location	What you need to do
#1	B1 level, cancer centre	Arrive at the cancer centre 1 hour before your appointment. Check in at one of the computers on the B1 level of the cancer centre.
#2	B1 level, cancer	Arrive at the cancer centre 1 hour before your appointment. Check in at one of the computers on the B1 level of the cancer

Date/Time	Location	What you need to do
	centre	centre.
#3	B1 level, cancer centre	Arrive at the cancer centre 1 hour before your appointment. Check in at one of the computers on the B1 level of the cancer centre.
#4 (if needed)	B1 level, cancer centre	Arrive at the cancer centre 1 hour before your appointment. Check in with the receptionist on the B1 level of the cancer centre.

Preparing for your HDR cervix brachytherapy treatments

1 week before starting your HDR cervix brachytherapy treatments

- Ask your radiation oncologist when to stop taking your blood thinner medication.
- Ask someone to drive you to and from the cancer centre for each of your HDR cervix brachytherapy treatments. You need someone to stay with you for 24 hours after each treatment.

The night before each HDR cervix brachytherapy treatment appointment

- Take 2 tablets of Immodium **before midnight**.
- **Do not eat or drink anything after midnight.**
- Remove nail polish from your hands and feet.
- Remove all body piercings (tongue rings, belly rings or studs, etc.).

The morning of each HDR cervix brachytherapy treatment appointment

- **Do not eat or drink anything!** You may take your morning medications with a small sip of water.
- Take 2 tablets of Immodium **at 6 am** with a small sip of water.
- Wear loose, comfortable clothing.
- Do not wear make-up or apply any creams or lotions.

What to bring to every HDR cervix brachytherapy treatment appointment

- A list of all of your medications (except vitamins).
- Your Ontario Health Card (OHIP).
- Glasses or contact lenses, hearing aids, dentures and their containers. You need to remove all these things before each treatment.
- The contact information for the person who will drive you home.
- Bring someone that can translate for you if English is not your first language or you are hearing or speech impaired.
- If you are diabetic, bring your glucometer and the medications you take for your diabetes.
- If you have sleep apnea, bring your CPAP machine.
- A water bottle or other choice of drink/drink container and a snack for you to have after your procedure.
- A bag to put your clothes in after you change into a hospital gown.

It is important to follow all of the instructions above before each of your HDR cervix brachytherapy treatment appointments.

What happens on the day of your HDR cervix brachytherapy treatments

You do not need to stay in hospital after your HDR cervix brachytherapy treatments. You will be given an anesthetic (a medication to put you to sleep) for each treatment. Plan to be at the hospital for 6 to 8 hours.

When you arrive at the cancer centre

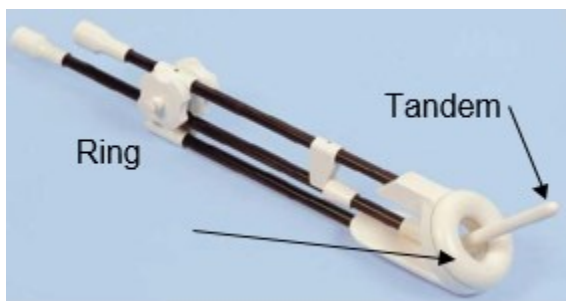
Go to the B1 level of the cancer centre and check in at one of the computers. You need to do this even if you completed pre-check in on MyChart. This is how we know you have arrived for your appointment. Take a seat in the waiting room until your name is called. Your nurse will review your chart and check your blood pressure, heart rate and temperature. You will be asked to change into a hospital gown and a nurse will put an intravenous (IV) line in your arm.

You will meet your anesthesiologist (doctor that gives you the general anesthetic to put you to sleep) and an operating room nurse (OR nurse). The OR nurse will take you to the brachytherapy suite.

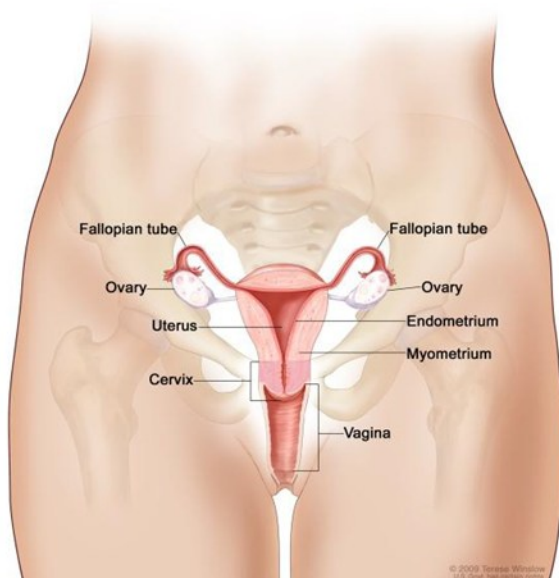
Having your applicator inserted

Brachytherapy is a type of internal radiation treatment that uses an applicator to deliver radiation into or near your cancer.

An applicator (see picture #1) is inserted into your vagina and cervix (see picture #2) while you are asleep. A small tube (or tandem) is put into your cervix through the centre of a ring that sits in your vagina. Other treatment catheters may be placed in your tissue near the applicator. This depends on your cancer.



Picture #1 – the applicator (picture found at: nucletron.com)



Picture #2 – your anatomy

During each treatment, there will be several people with you in the brachytherapy suite. This includes your radiation oncologist, 2 radiation therapists, 2 OR nurses and the anesthesiologist. A member of the healthcare team will help you lie down on the operating room table. After you are put to sleep, your legs will be fully supported in stirrups.

The radiation oncologist will clean the area around your vagina. A catheter (thin, flexible tube) is inserted into your bladder to empty your urine. Next, the radiation oncologist will insert the applicator through your vagina into your cervix. Other treatment catheters may be placed in your tissue near the applicator.

It is important the applicator and catheters do not move until your treatment is complete. Gauze packing inside your vagina holds the applicator and catheters in place. Stitches may be used to keep the applicator in place. The end of the applicator and catheters will stick out between your legs. When you wake up, you may feel the applicator and catheters touching your inner leg. You will have markings drawn on your legs for your healthcare team to make sure the applicator does not move. You will wear mesh underwear to help hold everything in place.

Recovering from your general anesthetic

From the brachytherapy suite, you will go to the recovery room. A nurse will care for you as you wake up from the general anesthetic. You are given medications to keep you comfortable if needed. The recovery room nurse will remind you to stay lying down on the stretcher. If you need to change your position, you **need to ask for help from the nurse so the applicator and catheters do not move**. Your family member/care partner cannot come into the recovery room. Your nurse will keep them updated on how you are doing.

Planning CT Scan – Radiation Therapy

Planning MRI Scan- Diagnostic Imaging

Next a radiation therapist and a nurse will take you to have CT and an MRI scans done.

After you have the scans, you will return to the recovery room in the radiation therapy department at the cancer centre. You will stay there until it is time to have your treatment. During this time the radiation therapy team will look at your scans to plan the treatment the radiation oncologist has ordered for you.

A nurse will care for you during this time. You will stay on the stretcher until your treatment is over so the applicator and catheters do not move. Check with your nurse before you drink any fluids. The IV line may still be in your arm to give you fluids during the day.

Each patient's experience is different. Tell the nurse if you feel pain or sick to your stomach. You can have medications to help you feel more comfortable.

Treatment Delivery – Radiation Therapy

When we have your treatment plan ready you will be taken back to the brachytherapy suite. Your radiation oncologist, a medical physicist, a radiation therapist and a nurse will be with you. We will connect your applicator and catheters to the brachytherapy treatment machine (see picture #3). A radioactive source is placed inside the applicator and catheters. The radioactive source moves through the tube and into the applicator and catheters for your treatment.



Picture #3 - brachytherapy treatment machine.

The treatment team will leave the room while you receive your treatment. You are alone in the room but your treatment team watches you on a camera. They can hear you and are able to talk to you over an intercom. You will not feel the radiation. You will hear the machine clicking and humming. The treatment time is about 5 to 20 minutes depending on your treatment plan. You need to lie still during this time. The radioactive source is removed after your treatment is finished.

Your radiation oncologist will take the applicator and catheters out. You may have some discomfort (mild pain) when the applicator and catheters are taken out. Your nurse can give you medication to manage this discomfort.

Recovery before going home

After the applicator is removed, you will return to the recovery room for a nurse to care for you. The nurse will check your blood pressure, heart rate and temperature and take out your IV and the catheter in your bladder. You need to empty your bladder before you can leave the cancer centre. The nurse will help you get up and walk. We give you a sanitary napkin and disposable underwear to wear home.

You have had a general anesthetic so you cannot drive yourself home. You need someone to drive you home and stay with you for 24 hours after each of your HDR cervix brachytherapy treatments. If this is not arranged your treatment may be cancelled.

After your HDR cervix brachytherapy treatments

- Do not drive for 24 hours after your treatment.
- Do not make any legal and or financial decisions for 24 to 48 hours.
- You may feel weak after the anesthetic. Rest when you get home.
- You may feel nauseated (sick to your stomach), dizzy or have a headache from the anesthetic for up to 24 hours. This is normal.

Managing your side effects

You may have side effects from your HDR cervix brachytherapy treatments. If you had external beam radiation you may already have some of these side effects. The HDR cervix brachytherapy treatments may make these side effects worse.

Cramping

You may have cramping in your vaginal/pelvic area after your HDR cervix brachytherapy treatments.

What you can do to help:

- Take an over-the-counter pain medication if needed (example: acetaminophen). Your radiation oncologist may prescribe a stronger medication if you need it.

Bleeding

You may have spotting or a small amount of blood from out of your vagina.

What you can do to help:

- Wear a sanitary napkin or pad.
- Do not use a tampon.
- Call your radiation oncologist or nurse if you have increased bleeding.

Burning while urinating

You may feel a mild burning sensation when you urinate after we remove your catheter.

What you can do to help:

- Drink 8 to 12 cups of fluids (1 cup = 250ml) within the 24 hours after you go home.
- Call your radiation oncologist or nurse if this burning does not go away after 24 hours.

Vaginal Symptoms

Radiation therapy to your pelvis area may cause your vagina to feel dry and tight. It can also cause scarring. This scarring can make your vagina narrower and less flexible. This may cause you to have pain with a pelvic exam or with sex.

What you can do to help:

- Wear cotton underwear and pantyhose with ventilated lining.
- Your healthcare team can recommend creams or suppositories that may help with your vaginal dryness.
- Using a water based lubricant can make sex more comfortable.
- A vaginal dilator is a device that you put inside your vagina to keep it open for a period of time. At your last treatment appointment, you will be given a vaginal dilator and told how to use it. It is important you read the handout on “Using a Vaginal Dilator.”

Relationships, body image and intimacy symptoms

Radiation therapy can affect your relationships, body image and intimacy. It may change the way you feel about sex. It is also common to have fears and worries that may affect your relationships with others. This can cause changes in your stress level and emotions.

What you can do to help:

- Talk to any member of your healthcare team about your fears and worries.
- Talk to your family and friends about your fears and worries.
- Ask your healthcare team about community programs that can help support you such as Hearth Place, Canadian Cancer Society, and the Look Good Feel Better Program.
- Keep a daily journal throughout your treatment.

For more information read the “Intimacy and Sex For People With Cancer and Their Partners” booklet found at cancercareontario.ca/sites/ccocancercare/files/IntimacyandSex.pdf

Go to the Emergency Department at the hospital closest to you if you:

- Have a fever above 38.3° C/100.9°F at any time or above 38.0° C/100.4°F for more than an hour
- Have a severe pain in your abdomen
- Have increased bleeding
- Still have burning when you urinate more than 24 hours after your procedure
- Have foul smelling discharge from your vagina

If you have a problem or concern about a symptom or side effect from your cancer treatment:

1. Call your primary nurse at the cancer centre from Monday to Friday, 8:30 am to 4 pm, (except on holidays). Use the phone number your primary nurse gave you.
2. Contact CareChart Digital Health from Monday to Friday, 4 pm to 8:30 am and anytime on weekends and holidays for symptom management support.

Talk to a nurse using one of these options:

- Call the after-hours telephone line at 1-877-681-3057.
- Request a video call by going to carechart.ca.
- Use the CareChart Digital Health App. This App is available to download for iOS or Android devices.

Call 911 or go to the Emergency Department at the hospital closest to you for a medical emergency.

The next steps in your care

We give you an appointment to see your radiation oncologist 4 to 6 weeks after your last HDR cervix brachytherapy treatment. You will be given a handout to read called [After Your HDR Cervix Brachytherapy Procedure](#). You can also find this handout on the Lakeridge Health website at lh.ca.

Talk to a member of your healthcare team if you have questions or do not understand any of the information in this handout.

You can find more information about brachytherapy treatment in the Canadian Cancer Society booklet “Radiation Therapy: A Guide for People with Cancer.” Go to the Canadian Cancer Society’s website at cancer.ca and search in publications to find this booklet.

Last reviewed: May 2026