

# Vaginal High Dose Rate (HDR) Brachytherapy: Information for Patients

*For patients with a gynecological cancer, including vaginal, cervical or uterine/endometrial cancer.*

## In this document you will learn about:

- What brachytherapy is.
- What to expect when getting vaginal HDR brachytherapy using an intravaginal applicator.
- The steps of the brachytherapy treatment.
- How to manage possible side effects from your treatment.
- What to expect after you finish your treatment.

## Important registration and check-in instructions:



Please check in at the Hudson Regional Cancer Centre (at RVH) at the Radiation Therapy Reception Desk on **Level 1**. Each treatment appointment takes about 1 hour.

## What is vaginal high dose rate brachytherapy?

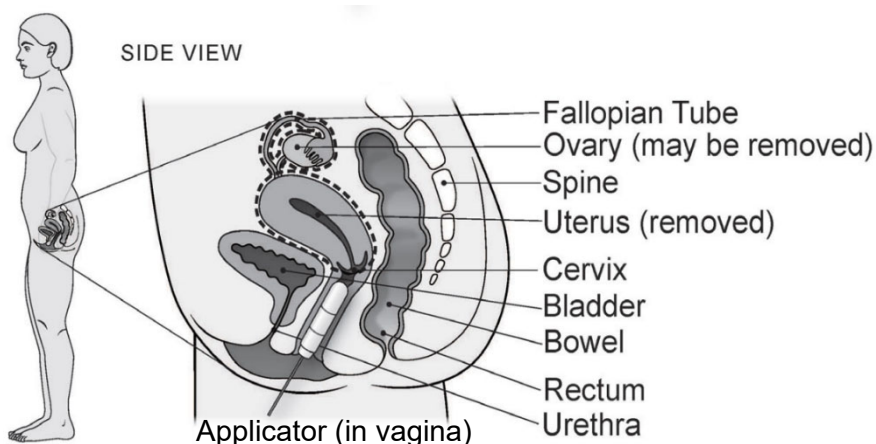
High dose rate (HDR) brachytherapy (also called internal radiation therapy) is a type of radiation treatment which places a radiation source near or into the tumour area using a special applicator inside your body.

For patients with a gynecological cancer (such as vaginal cancer, cervical cancer or uterine (endometrial) cancer), the applicator is inserted into the vagina. This allows the radiation to be as close to the cancer as possible while avoiding radiation to the normal healthy cells. This is why the treatment is called vaginal high dose rate (HDR) brachytherapy.

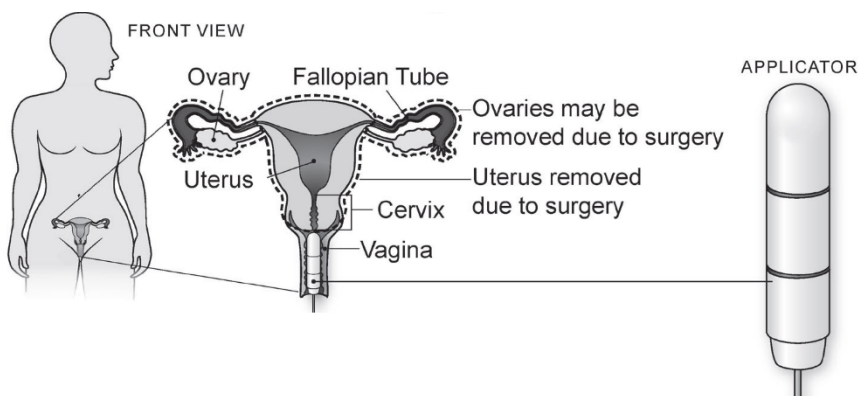
See **Figure 1** for the location of the vagina, cervix, and uterus in a female with the applicator in the vagina. See **Figure 2** for a view of the applicator on its own and when it is inserted into the vagina during treatment.

The applicator is inserted into your body and stays in place during treatment. The applicator is removed after each treatment session. The radioactive material does not leave the applicator. Your body is not radioactive after your HDR brachytherapy treatment.

There are several sizes of applicators to fit different people. On your first day of treatment, your radiation oncologist (a doctor that treats cancer using radiation) will do a physical examination of your vagina. The oncologist will find the applicator size that is best for you. The goal is to find the applicator size that will create a close fit inside your vagina without being too tight.



**Figure 1:** Side view of the female pelvic area with the applicator inserted in the vagina during treatment.



**Figure 2:** Views of the applicator on its own (see drawing on the right) and when it is inserted into the vagina during treatment (see drawing in the middle).

This applicator attaches to the treatment unit by a connecting tube. When treatment starts, the radioactive source travels from the unit, through the tube, and into the applicator placed in the vagina. The radioactive source never leaves the HDR unit and applicator. See **Figure 3** on page 6 for more details.

## How do I prepare for my treatment?

There is no special preparation that needs to be done for your treatments. You can eat and drink normally before your treatment. You can drive yourself to and from the treatment appointment.

When you arrive for treatment, you will use the washroom and empty your bladder (pee) before your treatment begins. Bring an extra sanitary napkin or pad in case you have any discharge from your vagina after your treatment.

## How long does the treatment take?

Each treatment takes about one hour in total. This includes registration, changing into a hospital gown, and discussions with your Care Team members. You can go home after your treatment is done. The actual time the radiation is running through the HDR unit and applicator can vary between patients, but generally it will be around 10 to 15 minutes. The first day of treatment may take more time as the oncologist will take some measurements before treatment begins.

## How many treatments will I have?

Your oncologist will decide how many treatments are right for you. Most patients will have 2 to 3 treatments.

## What happens during my treatment?



**For a video version** of the steps in vaginal brachytherapy, please see the vaginal vault brachytherapy video (made by Sunnybrook Health Sciences Centre) at

<https://sunnybrook.ca/content/?page=vaginal-vault-brachytherapy>. Or search online using search terms “Sunnybrook vaginal brachytherapy”.

Please note that the treatment process in the Sunnybrook video is similar to the process at RVH, but it is not exactly the same. The clinical staff and the equipment used are slightly different. Please speak with your Care Team if you have concerns or questions.

### **Step 1: Inserting the applicator**

You will lie on your back with your legs in stirrups.

Your oncologist or radiation therapist will examine your vagina and use a lubricant to place the applicator inside your vagina. A clamp is attached to the applicator to prevent the applicator from moving.

### **Step 2: Connecting the applicator to the treatment unit**

The applicator is connected to a tube which is attached to the treatment unit. See **Figure 3** on the next page for details. You will need to lay still and breathe normally. Your oncologist and radiation therapists will leave the room just before your treatment begins. Your Care Team will watch you on a monitor and you will be able to speak to them through an intercom if needed.

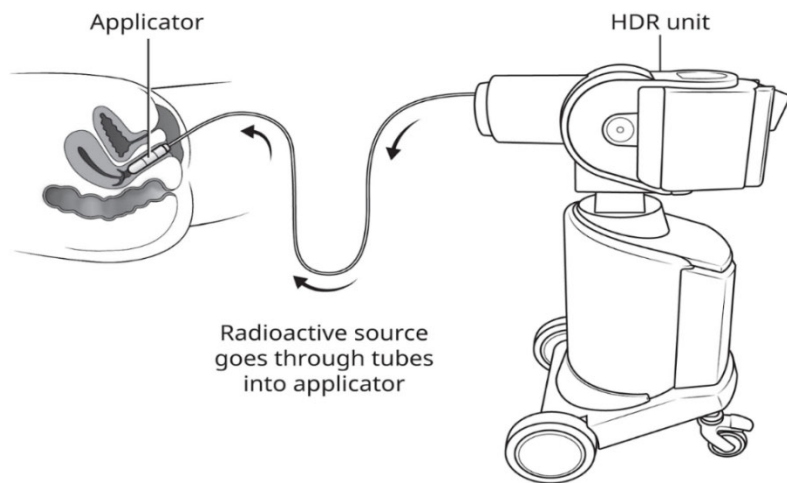
### **Step 3: Starting the treatment**

When your treatment begins, the radioactive source will travel from the treatment unit to the applicator.

The radioactive source will stay in the applicator for the treatment time, usually for 10 to 15 minutes.

If you start to feel discomfort your Care Team can stop the treatment at any time and enter the room.

When your treatment is finished, the radioactive source will automatically return to the treatment unit.



**Figure 3:** The high dose rate (HDR) brachytherapy treatment unit connected to the applicator via the connecting tube. The radioactive source never leaves the HDR unit and applicator.

#### **Step 4: End of treatment**

A radiation physicist comes in the room first with an instrument to survey the room and make sure no radiation is present in the room.

Your radiation therapist or oncologist then comes into the room and removes the applicator.

It is normal to have lubricant or discharge coming out from your vagina after your treatment.

Once you are dressed, you will be able to go home.

#### **What are the possible side effects and how do I manage them?**

Side effects caused by brachytherapy may vary from person to person. These side effects may be affected by other treatments, such as external beam radiation therapy, surgery, chemotherapy, and medications. In this booklet, we

have listed some of the more common side effects and helpful tips to manage them. If you do have side effects, they may continue for 2 to 4 weeks after your treatments are complete. You may have other side effects related to your radiation treatment that are not discussed here. For more information, please speak to a member of your Care Team.

### **Helpful tip:**



Write down the side effects you are having to make it easier to tell your Care Team at your next appointment. If you need help with your symptoms right away, please call the Symptom Support Telephone Service (see last page of brochure for details).

## **Possible side effects and how to manage them**

### **Fatigue**

- Do light exercise, such as walking.
- Take frequent rests during the day.
- Try a relaxing activity to reduce stress.
- Drink more fluids daily to keep your body hydrated. If you have fluid restrictions, please speak with your oncologist.
- Ask family/friends for help with daily activities or chores.

The tiredness may start to improve about 2 weeks after treatment is complete. The fatigue may take up to a few months to resolve, depending on the cause.

## **Softer stools (poop) or diarrhea**

- Drink more fluids daily to keep your body hydrated. If you have fluid restrictions, please speak with your oncologist.
- Limit drinks with caffeine or alcohol.
- Remove skins, seeds and membranes from vegetables and fruits.
- Eat small, frequent meals and snacks.
- Avoid deep fried or greasy foods.

Try these eating tips to help with your diarrhea:

Eat LESS of:

- |                          |                |
|--------------------------|----------------|
| • Green leafy vegetables | • Peas         |
| • Corn                   | • Legumes      |
| • Broccoli               | • Berries      |
| • Beans                  | • Dried fruits |

Eat LESS or AVOID foods with insoluble fibre such as:

- Whole grains
- Nuts
- Seeds

Eat MORE foods with soluble fibre such as:

- Unsweetened applesauce
- Ripe bananas
- Melons
- Rolled oats
- Psyllium

Soluble fibre helps to control diarrhea by making your stool (poop) thicker and slowing down the movement of food through your gut.

Need more help? Speak with one of our dietitians or a member of your Care Team.



Over the counter medications, such as Imodium® (loperamide) may be used. Follow the directions on the box for Imodium®. If diarrhea continues after you have used Imodium®, tell your Care Team.

### **Soreness in the genital area (such as the outer labia)**

- Try a sitz bath. Ask for a copy of the sitz bath pamphlet for instructions on how to make one and how often you can use it. You can also find the pamphlet by going to [www.rvh.on.ca](http://www.rvh.on.ca) and typing “sitz bath” in the search bar.

### **Burning when you urinate (pee)**

- Increase the amount of clear fluids you drink during the day.
- Try to have 2 cups of pure cranberry juice each day.

### **Narrowing and shortening of the vagina (stenosis)**

Radiation to the vaginal area may cause the vagina to narrow and/or shorten. A vaginal dilator is a smooth plastic tube that is inserted into the vagina to reduce narrowing and/or shortening of the vagina after radiation treatment. Your Care Team will give you more information about vaginal dilators and instructions on how to use them at your last treatment.

## How will I feel during and after my treatment?

You won't feel the radiation during treatment. However, you may feel discomfort or mild pain when the applicator is inserted. You may be sore and tender in the pelvic area once you finish the brachytherapy treatment because the applicator has sat in the vagina for a length of time.

## Will I be radioactive?

No, you are not radioactive at any time. You can see and interact with your family, friends and pets in the same way you did before your treatment.

## When can I go home?

You can go home as soon as the treatment is completed each day. Patients can drive themselves to and from appointments with no concerns after treatment appointments.

## When can I have sex again?

You can have sex when you are not having any pain or discomfort in the pelvic or vaginal area and when you feel ready. Most women find it helpful to use a vaginal lubricant (water or silicone-based) and a moisturizer (e.g. Replens). Please see the Cancer Centre's pamphlet *Vaginal Dryness and Discomfort* (available on [www.rvh.on.ca](http://www.rvh.on.ca)) for more information. If you have questions or concerns, please speak with your oncologist, primary nurse or radiation therapist.

The Cancer Centre has a sexual health workshop for women called *Low Down on Down There* which runs monthly.

The Sexual Health, Intimacy and Cancer (SHIC) Clinic at the Cancer Centre can also help with your sexual health and emotional concerns. For more information or to register, please call 705-728-9090 x 43520 or visit [www.rvh.on.ca](http://www.rvh.on.ca).

## **What happens when all my treatments are finished?**

At your last treatment visit, we will give you:

- The date and time for a follow-up telephone appointment.
- A vaginal dilator and instructions on how to use.

Your treatments and care plan are unique to you. There may be more information you need to know as you get closer to the end of your treatments. Your Care Team will give you any special medical instructions that you will need to know.

### References

Mayo Clinic. (2020, June 19). Brachytherapy. Mayo Clinic.

<https://www.mayoclinic.org/tests-procedures/brachytherapy/about/pac-20385159>.

Radiation Medicine Program. (2019, June 1). What to Expect When Getting High-Dose Rate (HDR) Brachytherapy to the Pelvis Using an Intravaginal Applicator.

[https://www.uhn.ca/PatientsFamilies/Health\\_Information/Health\\_Topics/Documents/What\\_to\\_Expect\\_When\\_Getting\\_HDR\\_Brachytherapy\\_Pelvis\\_Intravaginal\\_Applicator.pdf](https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/What_to_Expect_When_Getting_HDR_Brachytherapy_Pelvis_Intravaginal_Applicator.pdf).

### Credits

Figures 1, 2, 3: adapted with permission from University Health Network Patient Education & Engagement.

[https://www.uhn.ca/PatientsFamilies/Health\\_Information/Health\\_Topics/Documents/What\\_to\\_Expect\\_When\\_Getting\\_HDR\\_Brachytherapy\\_Pelvis\\_Intravaginal\\_Applicator.pdf](https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/What_to_Expect_When_Getting_HDR_Brachytherapy_Pelvis_Intravaginal_Applicator.pdf).

Video icon by Aybige on thenounproject.com.

## Help is a phone call away

If you are having side effects related to your cancer treatment, please contact:

Symptom Support Telephone Service



During the day:  
Cancer Centre Symptom Support  
705-728-9090 x43333



Evenings, weekends and holidays:  
CAREchart 1-877-681-3057

Please visit [www.rvh.on.ca](http://www.rvh.on.ca) for the latest information and hours of operation.

To cancel or change your appointment, please call 705-728-9090 x43333.



Hudson Regional Cancer Program  
201 Georgian Drive  
Barrie, ON L4M 6M2  
Phone: 705-728-9090 x43333  
[www.rvh.on.ca](http://www.rvh.on.ca)

Content last updated November 2021  
Logo last updated July 2024