Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

Interstitial Brachytherapy to Your Abdomen, Pelvic Sidewall, or Pelvic Lymph Nodes

This information will help you get ready for interstitial brachytherapy (IN-ter-STIH-shul BRAY-kee-THAYR-uh-pee) to your abdomen (belly), pelvic sidewall, or pelvic lymph nodes. It'll also help you know what to expect after your procedure.

About brachytherapy

Brachytherapy is a type of radiation therapy that's used to treat cancer. Radiation therapy works by damaging cancer cells and making it hard for them to multiply. Your body can naturally get rid of the damaged cancer cells.

With brachytherapy, the radioactive material is put close to or inside the tumor. The radiation does not travel far from the radioactive material. This means the tumor gets a high dose (amount) of radiation, while nearby healthy tissue gets little or no radiation.

About interstitial brachytherapy

There are different types of brachytherapy. With interstitial brachytherapy, your healthcare provider will put tiny radioactive implants (also called seeds) in the tumor during a surgical procedure. Each one is about the size of a sesame seed. The number of seeds you'll have depends on the size of the tumor.

The seeds will stay in your body for the rest of your life. They'll give off less and less radiation over time. Eventually, they will not give off any radiation at all.

The seeds will be made of radioactive iodine (I-125) or palladium (Pd-103) and covered with titanium. Your radiation oncologist will tell you which type you'll have.

Before your procedure

Your radiation oncologist will work with an interventional radiologist to place the seeds in the tumor.

- A radiation oncologist is a doctor who treats cancer using radiation therapy.
- An interventional radiologist is a doctor who specializes in image-guided procedures. That means they use imaging scans done before or during a procedure to help guide what they do during the procedure.

You'll have an appointment with an interventional radiologist before your procedure. They'll tell you what to do to get ready for your procedure.

Ask about your medications and dietary supplements

You may need to stop taking some of your medications and dietary supplements before your procedure. Make sure all your healthcare providers know all the medications and dietary supplements you're taking, including over-the-counter medications, prescription medications, vitamins, and herbal remedies.

Talk with your interventional radiologist about which medications are safe for you to stop taking. We have included some common examples below.

Anticoagulants (blood thinners)

If you take a blood thinner (medication that affects the way your blood clots), ask your interventional radiologist what to do. Their contact information is listed at the end of this resource. Whether they recommend you stop taking the medication depends on the reason you're taking it.

Here are some examples of blood thinners. There are others, so be sure your care team knows all the medicines you take. **Do not stop taking your blood**

thinner without talking with a member of your care team.

• Apixaban (Eliquis®) • Aspirin • Celecoxib (Celebrex®) • Cilostazol (Pletal®) • Clopidogrel (Plavix®) • Dabigatran (Pradaxa®) • Dalteparin (Fragmin®) • Dipyridamole (Persantine®) • Edoxaban (Savaysa®) • Enoxaparin (Lovenox®) • Fondaparinux (Arixtra®) • Heparin injection (shot)	• Meloxicam (Mobic®) • Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil®, Motrin®) and naproxen (Aleve®) • Pentoxifylline (Trental®) • Prasugrel (Effient®) • Rivaroxaban (Xarelto®) • Sulfasalazine (Azulfidine®, Sulfazine®) • Ticagrelor (Brilinta®) • Tinzaparin (Innohep®) • Warfarin (Jantoven®, Coumadin®)

Nonsteroidal anti-inflammatory drugs (NSAIDs)

Read the resource *How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil* (www.mskcc.org/pe/check-med-supplement). It has important information about medications you'll need to avoid before your procedure and what medications you can take instead.

Diabetes medicines

You may be taking insulin or other diabetes medicines. If so, talk with your MSK healthcare provider and the healthcare provider who prescribes it. Ask them what to do before your surgery or procedure. You may need to stop taking the medicine or take a different dose (amount) than usual. You may also need to follow different eating and drinking instructions before your surgery or procedure. Follow your healthcare provider's instructions.

Your care team will check your blood sugar levels during your surgery or procedure.

GLP-1 medicines for weight loss

It's important to tell your healthcare provider if you take a GLP-1 medicine. You must follow special eating and drinking instructions before your surgery or procedure. **It is very important to follow these instructions. If you do not follow**

them, your surgery or procedure may be delayed or canceled.

- **Follow a clear liquid diet the day before your surgery or procedure.** Do not eat any solid food. Read *Clear Liquid Diet* (www.mskcc.org/pe/clear-liquid-diet) to learn more.
- **Stop drinking 8 hours before your arrival time.** Do not eat or drink anything after this time, including clear liquids. You can have small sips of water with your medicines.

To learn more, read *Eating and Drinking Before Your Surgery or Procedure When Taking GLP-1 Medicines* (www.mskcc.org/pe/eat-drink-glp1).

Here are some examples of GLP-1 medicines. There are others, so be sure your care team knows all the medicines you take. Sometimes, these are prescribed to help manage diabetes or other conditions. Other times, they're prescribed for weight loss.

• Semaglutide (Wegovy®, Ozempic®, Rybelsus®) • Dulaglutide (Trulicity®)	• Tirzepatide (Zepbound®, Mounjaro®) • Liraglutide (Saxenda®, Victoza®)

Diuretics (water pills)

A diuretic is a medicine that helps control fluid buildup in your body. Diuretics are often prescribed to help treat hypertension (high blood pressure) or edema (swelling). They can also be prescribed to help treat certain heart or kidney problems.

You may be taking a diuretic. If so, ask the healthcare provider doing your procedure what to do before your procedure. You may need to stop taking it the day of your procedure.

Here are some examples of diuretics. There are others, so be sure your care team knows all the medicines you take.

• Bumetanide (Bumex®) • Furosemide (Lasix®)	• Hydrochlorothiazide (Microzide®) • Spironolactone (Aldactone®)

Take devices off your skin

You may wear certain devices on your skin. Before your simulation or treatment, some device makers recommend you take off your:

- Continuous glucose monitor (CGM)
- Insulin pump

If you use one of these, ask your radiation oncologist if you need to take it off. If you do, make sure to bring an extra device to put on after your simulation or treatment.

You may not be sure how to manage your glucose (blood sugar) while your device is off. If so, before your appointment, talk with the healthcare provider who manages your diabetes care.

Arrange for someone to take you home

You must have a responsible care partner take you home after your procedure. A responsible care partner is someone who can help you get home safely. They should be able to contact your care team if they have any concerns. Make sure to plan this before the day of your procedure.

If you don't have a responsible care partner to take you home, call one of the agencies below. They'll send someone to go home with you. There's a charge for this service, and you'll need to provide transportation. It's OK to use a taxi or car service, but you still need a responsible care partner with you.

Agencies in New York

VNS Health: 888-735-8913

Caring People: 877-227-4649

Agencies in New Jersey

Caring People: 877-227-4649

Tell us if you're sick

If you get sick (including having a fever, cold, sore throat, or flu) before your procedure, call your IR doctor. You can reach them Monday through Friday from 9 a.m. to 5 p.m.

After 5 p.m., during the weekend, and on holidays, call 212-639-2000. Ask for the Interventional Radiology fellow on call.

Note the time of your appointment

A staff member from Interventional Radiology will call you 2 business days before your procedure. If your procedure is scheduled for a Monday or Tuesday, they'll call you the Thursday or Friday before.

The staff member will tell you what time to arrive at the hospital for your procedure. They'll also tell you where to go. If you do not get a call by noon the business day before your procedure, call 212-639-5051.

If you need to cancel your procedure for any reason, call the healthcare provider who scheduled it for you.

Instructions for eating

Important: If you take a GLP-1 medicine, do not follow these instructions. Follow the instructions in *Eating and Drinking Before Your Surgery or Procedure When Taking GLP-1 Medicines* (www.mskcc.org/pe/eat-drink-glp1) instead.

Stop eating at midnight (12 a.m.) the night before your surgery or procedure. This includes hard candy and gum.

Your healthcare provider may have given you different instructions for when to stop eating. If so, follow their instructions. Some people need to fast (not eat) for longer before their surgery or procedure.

The day of your procedure

Instructions for drinking

Important: If you take a GLP-1 medicine, do not follow these instructions. Follow the instructions in *Eating and Drinking Before Your Surgery or Procedure When Taking GLP-1 Medicines* (www.mskcc.org/pe/eat-drink-glp1) instead.

Between midnight (12 a.m.) and 2 hours before your arrival time, only drink the liquids on the list below. Do not eat or drink anything else. Stop drinking 2 hours before your arrival time.

- Water.
- Clear apple juice, clear grape juice, or clear cranberry juice.
- Gatorade or Powerade.
- Black coffee or plain tea. It's OK to add sugar. Do not add anything else.
  - Do not add any amount of any type of milk or creamer. This includes plant-based milks and creamers.
  - Do not add flavored syrup.

If you have diabetes, pay attention to the amount of sugar in your drinks. It's easier to control your blood sugar levels if you include sugar-free, low-sugar, or no added sugar versions of these drinks.

It's helpful to stay hydrated before surgeries and procedures, so drink if you're thirsty. Do not drink more than you need. You'll get intravenous (IV) fluids during your surgery or procedure.

Stop drinking 2 hours before your arrival time. This includes water.

Your healthcare provider may have given you different instructions for when to stop drinking. If so, follow their instructions.

Things to remember

- Take only the medications your healthcare provider told you to take the morning of your procedure. Take them with a few sips of water.
- Do not apply body cream, lotion, or petroleum jelly (Vaseline®). You can use deodorant and facial moisturizers.
- Do not wear eye makeup.
- Remove any jewelry, including body piercings.
- Leave all valuable items (such as credit cards and jewelry), at home.
- If you wear contact lenses, wear your glasses instead, if you can. If you do not have glasses, bring a case for your contacts.

What to bring

- ☐ A list of the medications you take at home, including prescription and over-the-counter medications, patches, and creams.
- ☐ Medications for breathing problems (such as inhalers), medications for chest pain, or both.
- ☐ A case for your glasses or contacts.
- ☐ Your Health Care Proxy form and other advance directives, if you completed them. Advance directives are written instructions on how you want medical decisions to be made if you're unable to communicate or make the decisions yourself.
- ☐ Your breathing device for sleep apnea (such as your CPAP or BiPAP device), if you use one. If you cannot bring your device with you, we'll give you one

to use while you're in the hospital.

What to expect

You'll be asked to say and spell your name and date of birth many times. This is for your safety. People with the same or a similar name may be having a procedure on the same day.

When it's time to change for your procedure, you'll get a hospital gown, robe, and nonskid socks to wear.

Meet with a nurse

You'll meet with a nurse before your procedure. Tell them the dose of any medications you took after midnight (including prescription and over-the-counter medications, patches, and creams) and the time you took them.

Your nurse will place an intravenous (IV) catheter into a vein, usually in your hand or arm. The IV line will be used to give you fluids and anesthesia (medication to make you sleep) during your procedure.

During your procedure

When it's time for your procedure, you'll either walk to the procedure room or be taken in on a stretcher. A member of the procedure room staff will help you lie on the exam table. They'll also place compression boots on your lower legs. These gently inflate and deflate to help blood flow in your legs.

Once you're comfortable, your anesthesiologist will give you a sedative medication through your IV. The sedative will make you feel very relaxed and sleepy.

Your interventional radiologist will use a computed tomography (CT) scan to see inside your body as they guide a needle to the tumor. Your radiation oncologist will put the radioactive seeds into the tumor through the needle. Then, your interventional radiologist will remove the needle from your body and cover the area with a dressing (bandage).

After your procedure

After your procedure, a staff member will bring you to the recovery room. There, a nurse will keep track of your body temperature, pulse, blood pressure, and oxygen levels until you're fully awake.

You may have some pain after your procedure. Your healthcare providers will ask you about your pain often and give you medication as needed. If your pain is not relieved, tell one of your healthcare providers.

Your nurse will review your discharge instructions with you and your caregiver before you leave the hospital.

Meet with a radiation safety officer

You'll also meet with a radiation safety officer from the Radiation Safety Service before you leave. They'll check the level of radiation in your body and talk with you about radiation safety precautions to take around your family and friends. These instructions are summarized below.

Radiation safety precautions

The seeds in the tumor will give off small amounts of radiation. The radiation will get weaker and weaker the further it gets from your body.

- You will not make something radioactive by touching it.
- The radiation will not disturb pacemakers, automatic implantable cardioverter-defibrillators (AICDs), or microwave ovens.
- The radiation will not get into your blood, urine (pee), or other body fluids.
- You do not have to do anything special with linens, clothing, dishes, or in the bathroom.

The less time you spend in contact with people, the less radiation they'll be exposed to. The radiation safety officer will give you specific instructions based on the type of seeds you have and the amount of radiation the seeds give off. Make sure to follow all the instructions they give you, including holding children

on your lap and sleeping with another person in a spoon-shaped position.

- **If you have palladium (Pd-103) implants:**
  - Do not sleep with children or pregnant people for 2 weeks after your procedure.
- **If you have iodine (I-125) implants:**
  - Sleep at least 6 feet (2 meters) away from all other people for the first 1 to 4 months after your procedure.
  - Sleep at least 6 feet (2 meters) away from children and pregnant people for the first 2 to 6 months after your procedure.

The radiation safety officer will give you specific instructions based on how much radiation the seeds give off.

Radiation safety wallet card

The radiation safety officer will also give you a wallet card. The wallet card explains why you're giving off radiation and has the date when the radiation will stop. **Keep the wallet card with you for 6 months after your procedure.** Sometimes, security equipment (such as at airports and outside tunnels) can detect very small amounts of radiation. If you're ever stopped, show the card to the security or police officer.

If you need to go to a hospital for any reason before the date on the card, tell the healthcare provider that you had radioactive seeds implanted.

Traveling

You can travel, including flying on airplanes. Remember to bring your radiation safety wallet card.

Side effects

You may have some soreness after your procedure. Taking an over-the-counter pain medication, such as ibuprofen (Advil, Motrin) or acetaminophen (Tylenol), can help. If you're not sure which one to take, ask your healthcare provider.

The soreness should go away after few days. If it does not go away, tell your healthcare provider.

You may also have some side effects from the radiation given off by the seeds. The side effects you have depends on where exactly the seeds are in your body. Your radiation oncologist will talk with you about this before your procedure. They'll tell you what side effects you might have.

Follow-up care

Your healthcare provider will tell you when to make a follow up appointment after your procedure.

When to call your healthcare provider

Call your healthcare provider if you have:

- A fever of 101 °F (38.3 °C) or higher
- Pain that does not get better after taking pain medication
- Any new symptom(s) or physical change(s)
- Any questions or concerns

During the first 24 hours after your procedure, call your doctor in Interventional Radiology. You can reach a staff member Monday through Friday from 9 a.m. to 5 p.m. After 5 p.m., during the weekend, and on holidays, call 212-639-2000. Ask for the fellow on call for Interventional Radiology.

Starting 24 hours after your procedure, call your radiation oncologist. If you need to reach your radiation oncologist after 5 p.m., during the weekend, or on a holiday, call 212-639-2000. Ask for the radiation oncologist on call.

For more resources, visit www.mskcc.org/pe to search our virtual library.

Interstitial Brachytherapy to Your Abdomen, Pelvic Sidewall, or Pelvic Lymph Nodes - Last updated on March 26, 2026
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