About the Placement of Fiducial Markers and Rectal Spacers for Radiation Therapy to Your Prostate

This information will help you prepare for the placement of your fiducial markers and rectal spacers at Memorial Sloan Kettering (MSK).

About Radiation Therapy to Your Prostate

Your prostate is a walnut-sized gland located below your bladder, directly in front of your rectum (see Figure 1). It surrounds your urethra, which is the tube that drains urine from your bladder. Your prostate adds fluid to your semen.

Figure 1. Your prostate anatomy
You will be having radiation therapy to your prostate to treat prostate cancer. Before you start your radiation therapy, you will have a procedure to have fiducial markers and rectal spacers placed (see sections below).

You will also have a treatment planning procedure called a simulation. This will be done on a different day than your fiducial marker and rectal spacer placement. Your doctor or nurse will give you more information about your simulation and your radiation therapy treatment.

About Fiducial Markers and Rectal Spacers

You will have a procedure to place the fiducial markers and rectal spacers placed before you start your radiation therapy.

Fiducial markers are tiny metal objects (about the size of a grain of rice). They allow your doctors to line up the beams of radiation to make sure that your radiation therapy is delivered exactly the same way each time. This helps them to target your tumor and avoid your healthy tissue. The fiducial markers will stay in your prostate after your treatment.

SpaceOAR® hydrogel rectal spacers are placed between your prostate and rectum, in order to move your rectum away from your prostate. This protects your rectum from radiation and reduces some side effects of radiation therapy. The rectal spacers will stay in place for 3 months. Then, they will be absorbed by your body and come out in your urine.

Your appointment to have fiducial markers and rectal spacers placed is on:

Date:_________________________ with Dr._________________________

Before Your Procedure

Tell your healthcare provider if you:

- Take medications that thin your blood. Some examples are listed in the “Ask about your medications” section below.
- Take steroids such as prednisone.
- Take any other medications such as herbs, vitamins, dietary supplements, or
natural or home remedies.

- Have taken any antibiotics in the past 3 months.
- Have any heart condition.
- Have implanted devices such as knee or hip replacements.
- Are allergic to the antibiotic ciprofloxacin (Cipro®) or any other medications.
- Are allergic to latex.
- Had a urinary tract infection (UTI) in the last month.
- Had an infection or were ever hospitalized after a prostate biopsy.
- Have a history of Achilles tendon injuries or inflammation of your tendons (tendonitis).
- Have trouble hearing.
- Work in a hospital or nursing home.

**Ask about your medications**

You may need to stop taking some of your medications before your procedure. Talk with your doctor about which medications are safe for you to stop taking. We have included some common examples below.

If you take medication that affects the way your blood clots, ask the doctor performing your procedure what to do. The doctor’s contact information is listed at the end of this resource. Some examples of these medications are:

<table>
<thead>
<tr>
<th>Medication 1</th>
<th>Medication 2</th>
<th>Medication 3</th>
<th>Medication 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>apixaban (Eliquis®)</td>
<td>dalteparin (Fragmin®)</td>
<td>meloxicam (Mobic®)</td>
<td>ticagrelor (Brilinta®)</td>
</tr>
<tr>
<td>aspirin</td>
<td>dipyridamole (Persantine®)</td>
<td>nonsteroidal anti-inflammator drugs (NSAIDs) such as ibuprofen (Advil®) or naproxen (Aleve®)</td>
<td>tinzaparin (Innohep®)</td>
</tr>
<tr>
<td>celecoxib (Celebrex®)</td>
<td>edoxaban (Savaysa®)</td>
<td>pentoxifylline (Trental®)</td>
<td>warfarin (Coumadin®)</td>
</tr>
<tr>
<td>cilostazol (Pletal®)</td>
<td>enoxaparin (Lovenox®)</td>
<td>prasugrel (Effient®)</td>
<td>Vorapaxar (Zontivity®)</td>
</tr>
<tr>
<td>Clopidogrel (Plavix®)</td>
<td>Fondaparinux (Arixtra®)</td>
<td>Rivaroxaban (Xarelto®)</td>
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<tr>
<td>Dabigatran (Pradaxa®)</td>
<td>Heparin (shot under your skin)</td>
<td>Sulfasalazine (Azulfidine®, Sulfazine®)</td>
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Your doctor may or may not tell you to stop taking the medication, depending on the reason you’re taking it. **Do not stop taking any of these medications without talking with your doctor.**

Read our resource *Common Medications Containing Aspirin and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)* ([www.mskcc.org/pe/common_meds](http://www.mskcc.org/pe/common_meds)). This resource has important information about medications you’ll need to avoid before your procedure and what medications you can take instead.

Tell your doctor or nurse if you’re taking any pain medications or antianxiety medications. It’s important to keep taking these medications on schedule, even during your treatment. You may be able to take them on the morning of your procedure if needed.

**About sleep apnea**

Sleep apnea is a common breathing disorder that causes a person to stop breathing for short periods of time while sleeping. The most common type is obstructive sleep apnea (OSA). With OSA, the airway becomes completely blocked during sleep. It can cause serious problems during and after your procedure.

Tell us if you have sleep apnea or if you think you might have it. If you use a breathing machine (such as a CPAP) for sleep apnea, bring it with you the day of your procedure.
Arrange for someone to take you home

You must have a responsible care partner take you home after your procedure. Make sure to plan this before the day of your procedure.

If you don’t have someone to take you home, call one of the agencies below. They will send someone to go home with you. There’s usually a charge for this service, and you will need to provide transportation.

**Agencies in New York**

- Partners in Care: 888-735-8913
- Caring People: 877-227-4649

**Agencies in New Jersey**

- Caring People: 877-227-4649

**Complete a Health Care Proxy Form**

If you haven’t already completed a Health Care Proxy form, we recommend you complete one now. A health care proxy is a legal document that identifies the person who will speak for you if you can’t communicate for yourself. The person you identify is called your health care agent. They can read our resource *How to Be a Health Care Agent* ([www.mskcc.org/pe/health_care_agent](http://www.mskcc.org/pe/health_care_agent)) to understand their role and know what to expect. For more information about health care proxies and other advance directives, read the resource *Advance Care Planning* ([www.mskcc.org/pe/advance_care_planning](http://www.mskcc.org/pe/advance_care_planning)).

If you’re interested in completing a Health Care Proxy form, talk with your nurse. If you have completed one already, or if you have any other advance directives, bring them to your next appointment.

**Buy your supplies**

You will need to buy the following supplies:

- One 5 mg tablet of bisacodyl (Dulcolax®). These are usually sold as a box of 10 tablets.
- One gallon (128 ounces) bottle of NuLYTELY® with flavor packs (cherry, lemon-lime, orange, and pineapple). You will get a prescription from your healthcare provider.

This is also a good time to stock up on clear liquids to drink the day before your procedure. See the table in the “Follow a clear liquid diet” section for examples.
of liquids to buy.
The Day Before Your Procedure

Note the time of your procedure

A clerk from the Admitting Office will call you after 2:00 PM the day before your procedure. If you’re scheduled for your procedure on a Monday, you’ll be called on the Friday before.

The clerk will tell you what time you should arrive at the hospital for your procedure. They will also remind you where to go on the day of your procedure.

If you don’t receive a call by 7:00 PM, call 212-639-5014.

If you have any changes in your health or you need to cancel your procedure for any reason, call your primary radiation oncologist.

Prepare your NuLYTELY bowel preparation solution

On the morning of the day before your procedure, add lukewarm drinking water to the NuLYTELY, filling it to the top of the line on the bottle. Add a flavor pack, if you choose. Use only a flavor pack that was provided with your NuLYTELY.

With the cap on, shake the NuLYTELY bottle until the powder is dissolved. The mixture will be clear, even if you used a flavor pack. If you prefer, you can place the bottle in the refrigerator to chill it. Many people have told us that NuLYTELY tastes better cold. Don’t mix the NuLYTELY earlier than the morning before your procedure.

- You may have solid food for breakfast. Aim to finish your breakfast by 10:00 AM.
- After breakfast, start the clear liquid diet. Drink 4 (8-ounce) glasses of clear liquids for lunch. Do not drink milk or any milk products.
- Limit caffeinated beverages to 2 cups. Do not drink alcohol.
- Do not drink diet liquids, even if you have diabetes. If you do, you may feel weak or dizzy.
Follow a clear liquid diet

<table>
<thead>
<tr>
<th>Clear Liquid Diet</th>
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</thead>
<tbody>
<tr>
<td><strong>Drink</strong></td>
<td><strong>Do Not Drink</strong></td>
</tr>
<tr>
<td><strong>Soups</strong></td>
<td></td>
</tr>
<tr>
<td>• Clear broth, bouillon, or consommé</td>
<td>• Any products with pieces of dried food or seasoning</td>
</tr>
<tr>
<td><strong>Sweets</strong></td>
<td></td>
</tr>
<tr>
<td>• Gelatin (such as Jell-O®)</td>
<td>• All others</td>
</tr>
<tr>
<td>• Flavored ices</td>
<td></td>
</tr>
<tr>
<td>• Hard candies (such as Life Savers®)</td>
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<tr>
<td><strong>Drinks</strong></td>
<td></td>
</tr>
<tr>
<td>• Clear fruit juices (such as lemonade, apple, cranberry, and grape juices)</td>
<td>• Juices with pulp</td>
</tr>
<tr>
<td>• Soda (such as ginger ale, 7-Up®, Sprite®, and seltzer)</td>
<td>• Nectars</td>
</tr>
<tr>
<td>• Sports drinks (such as Gatorade®)</td>
<td>• Milk or cream</td>
</tr>
<tr>
<td>• Black coffee</td>
<td>• Alcoholic drinks</td>
</tr>
<tr>
<td>• Tea</td>
<td></td>
</tr>
<tr>
<td>• Water</td>
<td></td>
</tr>
</tbody>
</table>

At 1:00 PM on the day before your procedure, swallow 1 bisacodyl tablet with a glass of water.

At 3:00 PM on the day before your procedure start drinking the NuLYTELY. Drink an 8 ounce glass of the mixture every 15 minutes. **Drink only half of the NuLYTELY solution (64 ounces). Throw out the other half.** Then, continue drinking clear liquids.

The NuLYTELY will cause frequent bowel movements, so be sure to be near a bathroom when you start drinking it. To help prevent irritation, you can apply petroleum jelly (Vaseline®) or A&D® ointment to the skin around to your anus after every bowel movement.

The Night Before Your Procedure

- Take any medications that your nurse or doctor have told you to take. Take them with a small sip of water.
- Shower with soap and water the night before or morning of your procedure.
Instructions for eating and drinking before your procedure

- Do not eat anything after midnight the night before your procedure. This includes hard candy and gum.
- Between midnight and up until 2 hours before your scheduled arrival time, you may drink a total of 12 ounces of water (see figure).
- Starting 2 hours before your scheduled arrival time, do not eat or drink anything. This includes water.

The Day of Your Procedure

Things to remember

- Take your medications the morning of your procedure as instructed by your doctor. Take them with a few sips of water.
- Don’t wear any lotions, creams, deodorant, or powders.
- Remove any jewelry, including body piercings. The equipment used during your procedure can cause burns if it touches metal.
- Leave all valuables, such as credit cards and jewelry, at home.
- If you wear contact lenses, wear your glasses instead. If you don’t have glasses, please bring a case for your contacts.

Where to park

MSK’s parking garage is located on East 66th Street between York and First Avenues. For questions about prices, call 212-639-2338.

To reach the garage, enter East 66th Street from York Avenue. The garage is located about a quarter of a block in from York Avenue, on the right-hand (north) side of the street. A pedestrian tunnel connects the garage to the hospital.
There are also nearby commercial garages on East 69\textsuperscript{th} Street between First and Second Avenues and on East 65\textsuperscript{th} Street between First and Second Avenues.

**Where to go**

Your procedure will take place at Memorial Hospital at 1275 York Avenue, between East 67\textsuperscript{th} and East 68\textsuperscript{th} Streets. Take the B elevator to the 6\textsuperscript{th} floor to get to the Presurgical Center.

**What to expect**

Once you arrive at the hospital, doctors, nurses, and other staff members will ask you to state and spell your name and date of birth many times. This is for your safety. People with the same or similar name may be having procedures on the same day.

You will change into a hospital gown. Your nurse will place an intravenous (IV) catheter into a vein, usually in your hand or arm.

You will then be brought to the operating room. You will get anesthesia (medication to make you sleep) through your IV.

Your doctor will use rectal ultrasound to see your prostate. They will insert tiny needles into your prostate through your perineum, which is the area of skin between your scrotum and anus.

Your doctor will place 3 fiducial markers into your prostate through the needles and then will remove the needles. Then, your doctor will inject the rectal spacer gel into the space between your prostate and rectum using a needle.

**After Your Procedure**

**In the hospital**

When you wake up, you will be in the Post Anesthesia Care Unit (PACU). You will stay there until you’re fully awake and can urinate without any trouble.

You may get a prescription for an antibiotic before you go home.

Your nurse will talk with you and your caregiver and give you your discharge instructions.
At home
You may have a feeling of fullness in your rectum for the next 2 days. This is normal and won’t affect your bowel movements.

Do not place anything in your rectum for 3 months after your procedure.

If you have any pain, you can take acetaminophen (Tylenol®).

You can drive and do your normal activities 24 hours after your procedure. Don’t lift anything heavier than 10 pounds (4.5 kilograms) for 1 week after your procedure.

Call Your Doctor or Nurse Right Away if You Have:

- Increasing pain or pain that doesn’t get better after taking over-the-counter pain medication
- A fever of 100.4 °F (38 °C) or higher
- Chills
- Trouble passing urine
- Blood in your stool or urine
- Dizziness

You can reach the doctor who placed your markers and rectal spacers Monday through Friday from 9:00 AM to 5:00 PM.

After 5:00 PM, during the weekend, and on holidays, please call 212-639-2000 and ask for the doctor on call for your doctor.
Next Steps in Your Treatment

After the placement of your fiducial markers and rectal spacers, you will have your simulation appointment.

Your simulation appointment is scheduled for:

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Additional notes

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Helpful Phone Numbers

**Anesthesia**
212-639-6840
Call with any questions about anesthesia.

**Bobst International Center**
888-675-7722
MSK welcomes patients from around the world. If you are an international patient, call for help coordinating your care.

**Patient Billing**
646-227-3378
Call Patient Billing with any questions regarding preauthorization with your insurance company. This is also called preapproval.

**Patient Representative Office**
212-639-7202
Call if you have any questions about the Health Care Proxy form or if you have any concerns about your care.
If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

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