Radioactive Seed Localization

A Guide for Patients

Baystate Regional Cancer Program

COMPREHENSIVE BREAST CENTER
Radioactive Seed Localization

As the technology behind screening mammograms becomes more refined, we are able to detect a greater number of breast abnormalities and cancers before they can be felt with a physical exam. While this allows us to catch problems earlier than ever, it also makes the affected tissue more challenging to precisely locate and remove.

The standard method is the wire-localization procedure (WLP). During this procedure, the surgeon places a guide-wire into the area of concern using mammography. The surgeon then removes the tissue surrounding the guide-wire and sends it to the laboratory for biopsy.

While WLP is very useful, it also presents several challenges. Since the guide-wire cannot be placed into the breast until the day of surgery, scheduling the surgery is more complicated. The wire may shift or be dislodged, decreasing the accuracy of the procedure. The wire is very thin and can be difficult to feel within the breast tissue. The location where the wire exits the skin does not always reflect the location of the tumor, making incision planning difficult. Finally, the wire and the mammograms showing the wire placement provide only a limited view of the location of the tumor. This may make removal of the tissue inaccurate.

Radioactive seed localization (RSL) offers a new alternative. With this procedure, a radiologist uses mammography to place a very low-energy radioactive seed into the abnormal tissue or tumor. During the surgery, the surgeon uses a handheld Geiger counter (a device that detects radioactivity) to more precisely identify the location of the tumor. The Geiger counter also allows the surgeon to obtain a three dimensional view of the tumor’s location.

RSL offers multiple benefits over WLP. The radiologist can implant the seed up to a week before the surgery, thereby making the scheduling process easier and reducing the wait time for patients.

More importantly, RSL provides increased accuracy over WLP. With RSL, the surgeon knows the precise location of the tumor and can more accurately plan the surgical incision. This also reduces the length of the surgery. In addition, studies show that RSL reduces the need to have a second surgery due to incomplete removal of the abnormal tissue.

Seed Implantation

You will have an appointment at the Chestnut Surgery Center at Baystate Medical Center up to a week prior to your surgery for the implantation of the seed. A radiologist who has been trained in this procedure performs the seed implantation, assisted by a mammography technician.

The seed placement procedure is very similar to the needle biopsy procedure you underwent to obtain your diagnosis. The radiologist will inject a local anesthetic to numb the area before starting the procedure. The local anesthetic may cause a brief burning sensation before the area becomes numb. Since mammography is used to place the seed, you will feel pressure from the paddles.

The seed (called Iodine 125 or I-125) is of very low energy, and its placement is not considered to be dangerous to you. Once the seed is removed with the breast tissue, all of the radioactivity is gone.

Pre-Surgical Preparation

A nurse from Baystate’s Department of Anesthesia will call you a week before your surgery to ask questions that will determine whether you need to come to the hospital for pre-testing or to meet with an anesthesiologist.

In the days before your surgery, please call us if you have an emergency or if you are getting sick. We may need to postpone your surgery. You can also call if you have any questions.

The night before your surgery, do not eat or drink anything after midnight, including water, gum, and hard candy.
Your Surgery

On the day of your surgery:

• Do not eat or drink anything. You may take your regular medications with just a sip of water unless your doctor has instructed you not to.

• Wear or bring a supportive bra with you to the hospital. You will need to wear the bra when you go home. It will provide support that will decrease the amount of bruising and pain.

• Do not wear finger or toe nail polish or any makeup.

• You will be sore after the surgery and will not be able to drive yourself home, so be sure to make arrangements in advance.

Plan to arrive at the Chestnut Surgery Center at Baystate Medical Center 1 1/2 hours before your scheduled surgery. Check in at the reception desk, and you will be escorted to the pre-operative care area. You will change your clothes, talk to an anesthesiologist, and receive an IV with light sedation.

Once you are in the operating room, your breast will be washed and you will receive a local anesthetic to numb the area. The surgeon will perform the surgery to remove the abnormal tissue or tumor, along with the radioactive seed. Your incision will be closed with sutures (stitches) under the skin, which will dissolve on their own. The area will be bandaged, and you will be brought to the recovery area where your family can join you. You can leave the hospital when you are fully awake and able to drink liquids.

The tissue will be sent to our laboratory for testing. We will have the test results (pathology report) back in about one week. Your surgeon will discuss these results with you during your follow-up appointment.

After Your Surgery

Call us immediately if:

• The bandage becomes soaked with blood or other fluids, or the area becomes red and warm. A little blood on the bandage is normal.

• You have severe pain that does not go away after taking your pain medicine.

• You have a temperature over 101.5°F.

Driving. We do not recommend you drive until after you are evaluated by your doctor during your follow-up visit.

Activity. Avoid activities that increase breast movement or have repetitive arm movement.

Pain. Some pain is normal. You will receive a prescription for a strong narcotic pain medicine. If you prefer a milder pain medicine, take two extra strength Tylenol (acetaminophen) every 4 to 6 hours. During the first 48 hours, avoid medicines that can cause bleeding (like aspirin or ibuprofen/Motrin).

Clothing. Wear a bra at all times during the first 48 hours after surgery. This prevents movement that may cause pain and bleeding.

Showering. You may shower 48 hours after your surgery. Do not take baths that would soak the incision area until after your follow-up appointment. Remove the outer bandage first. There will be a row of small white tape strips directly over the incision. Do not remove these before your follow-up visit. Afterward, gently pat the area dry and return to wearing your bra.

Sleeping. Avoid sleeping on the side of the surgery. Wear your bra to bed.

Special Cautions

The only way to remove a seed implanted in your breast is with surgery. You must not have a seed placed unless you are committed to undergoing surgery to remove it. Prolonged exposure to the seed increases your risk of radiation-related problems.

While rare, if you notice the seed exiting your skin, place it into the envelope that is provided to you and bring it to the Security Department at Baystate Medical Center.

While the seed is implanted, people and objects around you are not at risk for radiation. However, to ensure the utmost safety, we recommend that you not allow children to sit on your lap while the seed is in place. We also recommend if you are nursing/lactating that you not breastfeed with the seed in place.

If you are pregnant, there is likely little risk to the fetus because the seed uses a low energy radiation. Since it is best to avoid any radiation exposure to the fetus, however, you must inform your surgeon of the pregnancy. We will then schedule you for the wire-localization procedure and will not use the radioactive seed.

Bruising. Bruising is normal. This will go away over a couple of weeks. You may also notice a hardened area where the tissue was removed. This is normal. As the area heals, it first becomes hard, and then softens over the next several months.

Swelling. If your breast feels swollen, you may place an ice pack over the incision.
## Your Appointments

### Seed Implantation
- **Day:**
- **Date:**
- **Time:**
- **Location:** Baystate Medical Center, Chestnut Surgery Center, 759 Chestnut Street, Springfield

### Pre-Surgical Testing (if necessary)
- **Day:**
- **Date:**
- **Time:**
- **Location:** Baystate Medical Center, 759 Chestnut Street, Springfield

### Surgery
- **Day:**
- **Date:**
- **Time:**
- **Location:** Baystate Medical Center, Chestnut Surgery Center, 759 Chestnut Street, Springfield

### Follow-Up Exam
- **Day:**
- **Date:**
- **Time:**
- **Location:** Baystate’s Comprehensive Breast Center, 3400 Main Street, Springfield

### Other Appointments (if necessary)
- **Purpose:**
- **Day:**
- **Date:**
- **Time:**
- **Location:**

## Directions

### Baystate’s Comprehensive Breast Center
- **Address:** 3400 Main Street, Springfield, MA

#### From the East:
- Take Exit 6 off the Massachusetts Turnpike. Beyond the toll booth, turn left on to Route 291. Remain on 291 until it merges with Route 91 North. Follow the Northampton sign. Take Exit 10 “Main Street.” Turn left at the stop sign onto Main Street. 3400 Main Street is the third building on the left after the lights.

#### From the West:
- Take Exit 4 off the Massachusetts Turnpike. Pick up Route 91 South after the toll booth. Stay on Route 91 South and take Exit 11 “Birnie Ave.” Take a sharp right off the exit. Follow Birnie Avenue north. Take the next right on to Walter Street. At the lights, take a left on to Main Street. 3400 Main Street is the third building on the left.

#### From the North:
- Take Route 91 southbound. Take Exit 11 “Birnie Ave.” Take a sharp right off the exit. Follow Birnie Avenue north. Take the next right on to Walter Street. At the lights, take a left on to Main Street. 3400 Main Street is the third building on the left.

#### From the South:
- From Route 91 northbound, take Exit 10 “Main Street.” Turn left at the stop sign onto Main Street. 3400 Main Street is the third building on the left after the lights.

### Baystate Medical Center
- **Address:** 759 Chestnut Street, Springfield, MA

#### From the East:
- Take Exit 6 off the Massachusetts Turnpike. Beyond the toll booth, turn left on to Route 291. Remain on 291 until it merges with Route 91 North. Follow the Northampton sign. Take Exit 10 “Main Street.” The hospital is two blocks straight ahead as you come down the exit ramp. Take a right on Chestnut Street and your second left into Baystate Medical Center.

#### From the West:
- Take Exit 4 off the Massachusetts Turnpike. Pick up Route 91 South after the toll booth. Stay on Route 91 South and take Exit 11 “Birnie Ave.” From the exit, follow the blue “H” signs to the hospital. Take a right on Chestnut Street and your second left into Baystate Medical Center.

#### From the North:
- From Route 91 southbound, take Exit 11 “Birnie Ave.” From the exit, follow the blue “H” signs to the hospital. Take a right on Chestnut Street and your second left into Baystate Medical Center.

#### From the South:
- From Route 91 northbound, take Exit 10 “Main Street.” The hospital will be two blocks straight ahead as you come down the exit ramp. Take a right on Chestnut Street and your second left into Baystate Medical Center.

**Free valet parking is available at the entrance to the Chestnut Surgery Center.**

## Your Notes and Questions

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