Radioactive Seed Localization for Breast Surgery

What is radioactive seed localization?

This is an alternate procedure to having breast wire localization.

During wire localization, a wire is placed in the breast to mark the location of the cancer on the day of surgery.

A patient must arrive early on the day of surgery for this procedure.

A radioactive seed is a tiny metal piece about the size of a sesame seed or point of a pencil. It contains radioactive material that is sealed inside the seed. It will stay inside the seed so that items you touch, people you talk to, and the clothes you wear do not become radioactive.

The figure to the left shows the size of the radioactive seed compared to a dime.

The seed can be placed several days prior to surgery. It will not move out of place. Having this placed in advance will decrease the time spent at the hospital on the day of surgery.
Like wire localization, the radioactive seed is placed by a radiologist and is done in the breast imaging department.

This may allow the surgeon to be more precise in locating the area of the breast to be removed. Use of the seed instead of a wire may result in the surgeon being able to remove less tissue from the breast.

**What to expect during seed localization**

**During the Procedure:**

You will begin by having an ultrasound or mammogram of your breast. The breast imaging technologist will locate the area of concern.

1. The technologist will clean your breast with an antiseptic solution.

2. The doctor will inject the numbing medicine (Lidocaine®) into your breast. You will feel a stinging during this injection, but it will numb your breast quickly.

3. The doctor will place small needle into your breast at the site of concern. You may feel pressure during the procedure. If you feel pain, please let the staff know so additional numbing medicine can be given.

4. When the needle placement is confirmed, the radiologist will remove the needle leaving a radioactive seed in place. Because the seed is so small, you will not be able to feel it.

5. After the procedure is complete two or more mammography pictures are taken to confirm the seed placement. Your surgeon will refer to these during the surgery.

6. A small strip of tape called a steri-strip will be placed over the site.

**Care After the Seed Localization.**

You will meet with a nurse after the seed placement. The nurse will assess the insertion site for any bleeding and place a protective bandage over the site. You can remove the bandage the next day; however, keep the steri-strips in place.

If you are not having surgery the same day, avoid vigorous arm movements and heavy lifting (more than 10 pounds) for the next 24 hours. You may return to work and most activities the next day.

You may apply ice to the insertion site. This may help to reduce swelling and pain. Do not place ice directly on the skin.

It is recommended you wear a comfortable supportive bra to minimize breast movement. A sports bra works best.
You may shower the next day and allow water to run over the insertion site. Pat this area dry. Do not soak in a tub or pool for 48 hours.

You may have some mild discomfort and bruising. If you need something for discomfort, Tylenol will often manage this pain. Take as directed.

Monitor for any signs of infection such as a temperature over 100.4°F, significant swelling, firmness or warmth, increased redness or drainage around the site that is pus-like.

Please call the Breast Center if you are having heavy bleeding from the insertion site (bleeding that soaks the bandage or that is flowing from the site). Hold firm pressure to the site if this occurs. It is normal to have a small amount of blood (dime to quarter size) show through on the bandage.

**Will I or those around me be exposed to harmful radiation if I have a radioactive seed localization?**

The radiation in the seed is not dangerous. It gives off only enough radiation to act as a marker for the surgeon. Those who are in close contact with you may be exposed to very small amounts of radiation. While there is no evidence that this causes harm, there are ways to reduce exposure to others:

- **Distance**
  - The amount of radiation coming from your body is very small. It decreases a great deal at one foot and is almost zero at three feet.

- **Time**
  - Radiation exposure to others depends on how long you remain in close contact with them. You cannot harm anyone by shaking hands, hugging or kissing. You can sleep with a spouse or partner in the same bed. You can continue with most daily activities.
  - You should avoid placing an infant, child, or young animal on your chest for longer than 30 minutes per day while the seed is in place.
  - Once the seed is removed, the radiation is gone. The seed is disposed of according to strict guidelines developed by UW Hospital.

- **Radiation amount**
  - The amount of radiation a person will receive over a one hour period of being within one foot of the radioactive seed is five times less than the radiation exposure you would receive with a dental x-ray.
  - The limit for workers that handle radioactive materials is 50 units per year. A worker could be within 1 foot of a seed for an entire year straight and only be exposed 9 units of radiation, less than one-fifth of the workers limit.
Day of Surgery

On the day of surgery, the surgeon will make an incision into your breast and use a special tool to remove the seed and the tissue around it. After the tissue is removed, it is x-rayed to assure that the tissue contains the seed and the same area of concern that was seen on breast imaging.

The tissue is sent to our lab where a pathologist will look under a microscope to see what types of cells are present in the tissue removed. You will be given the results in 3-5 working days. Your surgeon will contact you to discuss results.

Seed removal and disposal

It is important you return for your scheduled surgery to have the seed removed. UW Hospital and Clinics is required to assure proper disposal of every seed placed.

If there is any event that would keep you from having the radioactive seed removed on the scheduled surgery date, please call the UW Hospital Breast Center immediately to inform your breast surgeon. If you are unable to call, be sure that someone on your behalf contacts the Breast Center.

Phone Numbers

If you have questions or concerns or are not able to keep your surgery date, please call:

UW Health Breast Center Triage Nurse Line (608) 262-1368, this line is checked frequently. Or call the UW Health Breast Center (608) 266-6400 and ask to speak to a nurse. Hours are Monday through Friday, 8:00 a.m. to 5:00 p.m.

For medical emergencies, call 911.

After hours and weekends, call (608) 262-2122. This will give you the paging operator. Ask to speak to the blue surgery resident on call. Give the operator your name and phone number with the area code. The doctor will call you back.

If you live out of the area you may also call toll free at 1-800-323-8942.