

Radiation to the Breast

What to expect before, during, and after treatment

This handout is for people having radiation treatments to the breast. It explains what to expect, side effects, how to prevent problems, and follow-up care.

Why do I need radiation treatment?

Even if surgery has removed your tumor, there may still be some cancer cells inside your breast. Radiation therapy uses high-energy particles or waves, such as X-rays, gamma rays, electron beams, or protons, to destroy these remaining cancer cells.

Cancer cells divide much faster than normal cells. This makes them very sensitive to radiation. Radiation damages the genes of cancer cells so that they can no longer grow and divide.

What can I expect?

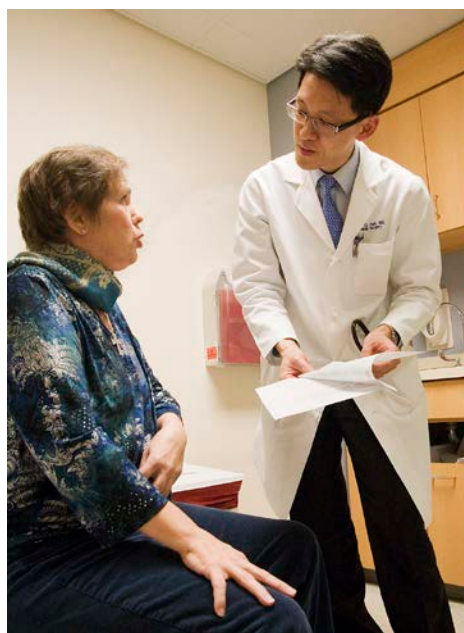
Most times, radiation treatment is started after surgery. It can be given alone or along with chemotherapy.

On your first visit to Radiation Oncology, you will meet with your radiation oncologist, a resident doctor, and a nurse. They will do an evaluation, explain your expected treatment plan, and answer any questions you have.

Most people who receive radiation therapy for breast cancer have the external form of radiation. Most times, this is done as an outpatient (in a clinic), 5 days a week, for 6 or 7 weeks.

Simulation Visit

Before you begin treatment, we will schedule your *simulation visit*. At this visit, we will:



Be sure to ask your doctor any questions you have about your radiation treatment.

- Take measurements and X-ray films. These help your doctor locate the exact area to be treated.
- Make a foam and plastic cradle to help keep your arm and body still during your radiation treatments.
- Place tiny permanent tattoos on your skin to make sure the treatment is delivered to the same site each time.
- Do a *computed tomography* (CT) scan to help with treatment planning.

Will my radiation treatment put my loved ones at risk?

External radiation does not make your body radioactive. There is no risk of radiation exposure for other people when you hug, kiss, or have sexual relations with them.

Does radiation therapy hurt?

You will not feel anything during your radiation treatment. Radiation is energy, but you cannot see it, smell it, or feel it.

What will happen during treatment?

- Your radiation therapist will help you get into your treatment position. You will lie on your back in the cradle, with your arm on the affected side extended over your head.
- The therapist will then leave the room and deliver the radiation treatment. The therapist can hear you and see you on a monitor.

“Boost” Treatment

Your doctor may order a “boost” treatment, which gives an extra dose to the area where your tumor was removed. This site has a higher chance of the cancer returning.

You will need a 2nd simulation visit for your “boost.” This is usually done toward the end of your treatment.

What are the side effects?

Radiation therapy has side effects. These vary for each person. You may not see side effects right away. They usually begin in the 2nd or 3rd week of treatment. Your doctor and nurse will monitor you for side effects throughout your treatment.

Common side effects to radiation treatment include skin reactions, fatigue, swelling, changes in your interest in sex, stress, and anxiety.

Skin Reactions

Skin reactions most often occur after 2 to 3 weeks of treatment. They can take 4 to 6 weeks after treatment to heal.

Your skin may become red, itchy, and even inflamed and tender to the touch. Your hair follicles may get darker and your skin may flake. Rarely, the skin can become moist and blistered, and drainage can occur. Your symptoms may be more severe if you have also had chemotherapy.

Your nurse or doctor will check your skin often during treatment. If your reaction is very severe, they may schedule a break in your treatment.

Make sure to follow the instructions under “Skin Care During Radiation” below. Here are some other helpful tips:

- Wear loose, soft clothing. If you choose to wear a bra, make sure it does not have underwire. You may find that soft camisoles and natural fabrics like cotton are more comfortable.
- Use a mild soap like Ivory, Sensitive Skin Dove, Basis, or Neutrogena.
- Pat your skin dry. Do not rub with a towel or washcloth.
- Do not shave in the treatment area.
- Avoid regular deodorants. Some deodorants contain aluminum, which can increase the radiation effect on your skin. Natural deodorants without aluminum are OK.
- Avoid creams, lotions, and ointments unless your nurse or doctor advises you to use them.
- If your nurse or doctor says it is OK to use lotions, creams, or ointments, do **not** apply them right before your treatment.
- Protect your skin from the sun, both during and after your course of treatment.

Skin Care During Radiation

Your nurse will give you a supply of RadiaCare Gel. Start using this gel the first day of your treatment, before any redness starts. Apply it liberally to your chest, breast, arm, underarm, and back. Do this 3 or 4 times a day. Do **not** apply the gel right before your treatment.

Here are some skin problems you may have, and what to do:

Flaking or Peeling

This side effect is often called *dry desquamation*. It usually occurs later in treatment. Your doctor may advise that you use both Aquaphor Healing Ointment and RadiaCare Gel.

If itching is also a problem, talk with your nurse or doctor. They may advise you to use 1% hydrocortisone cream.

Some of these products will need to be washed from the skin before your radiation treatment. Ask your nurse or doctor for instructions.

Irritation or Inflammation

Your nurse will give you a supply of Domeboro solution. Mix as instructed and apply as a wet dressing 2 or 3 times a day.

To use Domeboro as a wet dressing:

- Dissolve 1 to 3 packets in a pint (16 oz.) of cool or warm water.
- Stir until fully dissolved. Do not strain or filter.
- Soak a clean, soft cloth or gauze in the solution.
- Apply cloth loosely to affected area for 15 to 30 minutes as needed, or as directed by your doctor.
- Discard solution after each use.
- Apply gel after this treatment.

Blisters and Drainage

This side effect is often called *moist desquamation*. It is less common, and usually occurs toward the end of treatment. It can be painful. It can also lead to infection if not treated.

Your nurse may give you some gel sheets to place over the open areas between treatments. These are soothing and lessen pain during treatment. Your doctor may prescribe other products as well. If you have a severe reaction, your doctor may schedule a break in your treatment so your skin can recover.

Fatigue

Some people start to feel very tired after having several radiation treatments. This fatigue is often mild, but it varies for each person.

When fatigue is severe, it can affect how you feel about many areas of your life, including sexual activity. Your fatigue may be more acute if you have had chemotherapy.

Anxiety about your diagnosis and treatment, as well as hormonal changes, can also add to fatigue. These tips may be helpful:

- You may keep doing your usual activities during your treatment, but you can expect to be more tired. Pace yourself.
- Plan extra rest breaks. Ask friends and family for help.

- Nutrition is very important. Eat a healthy diet to help sustain your energy level.
- Regular exercise, such as walking for 10 to 30 minutes a day, can help you feel less tired. Talk with your doctor or nurse about your fitness goals. Try working with a personal trainer to help meet these goals.
- Make sure you are getting enough sleep at night. If you have problems sleeping, talk with your nurse or doctor.
- Report any pain to your nurse or doctor. Pain can make you tired and can interfere with your sleep. It is very important to keep pain under control during your treatment.

While you can expect to feel tired, especially near the end of your treatment, severe fatigue could mean more serious problems. Tell your doctor or nurse if you are sleeping a lot during the day or if you feel very anxious or depressed.

Breast or Chest Wall Swelling

The soft tissues of your breast and the muscles of your chest can develop swelling and irritation during radiation treatment. Breast tissue can feel tender and full and your nipple may become sore and red. The soft tissue below your armpit can also become swollen and tender.

To help ease tenderness:

- Your doctor may advise 2 tablets of acetaminophen (Tylenol) or ibuprofen every 4 hours as needed.
- You can apply cool (not icy cold) compresses over the swollen areas for comfort. Place a clean towel between the compress and your skin so that your skin does not get too cold.
- Follow the skin care instructions.

Changes in Sexuality for Women

For some women, treatment for breast cancer can lower their self-esteem and affect their sexual identity. Many cultures view women's breasts as a sign of beauty and femininity. If this is true for you, the loss of a breast or radiation treatment to your breast can affect how you feel about your sexuality.

Some women have early menopause from chemotherapy or hormonal treatment. If this happens, you may have hot flashes and vaginal dryness. You may also feel cranky or very moody. Fatigue and painful, swollen breasts can make it hard to enjoy intimate activities.



Drink 8 glasses of water every day while you are having radiation treatment.

These changes can seem overwhelming during treatment. But, none of them will affect your long-term ability to feel sexual desire or to reach orgasm. Managing your symptoms during and after treatment can help you keep a positive sense of your body and satisfying sexual relationships.

If you are sexually active and are of child-bearing age, you must use effective birth control during your radiation treatment. If you become pregnant, your treatment may have to be stopped. Talk with your doctor about the type of birth control that will work best for you.

Tips for Managing Sexual Changes

- Share your feelings about having cancer with your partner. Talk about how your illness and your treatment affect your sexual desire.
- Plan time for yourself and your partner to be alone when you are less tired and feel relaxed. Be open to finding new ways to express love and intimacy.
- Walk or do other exercise 20 to 30 minutes a day. Regular exercise can reduce menopausal symptoms, help keep your bones strong, and help manage fatigue.
- Drink 8 glasses of water every day.
- Avoid alcohol and caffeine. They can make your symptoms worse.
- Medicines may help treat hot flashes and irritability. Talk with your primary care provider, your oncologist, or your gynecologist if you have these symptoms.
- Use a water-based lubricant for intercourse. You can buy these at your local drugstore. Do not use oil-based lubricants such as petroleum jelly, since these can irritate mucous membranes in your vagina. One of the best ways to prevent vaginal dryness, even after menopause, is to remain sexually active.
- Try different positions during intercourse to avoid damaging tender, swollen tissue.

How can I lessen side effects?

Follow this advice to help lessen radiation side effects:

- **Do not smoke.**
- Eat a healthy diet. Ask to talk with our dietitian if you have questions about your nutritional needs.
- Do moderate exercise every day to reduce fatigue and other side effects.
- Get plenty of rest. Set aside quiet time each day to relax or take a nap.

- If you have diabetes, keep your blood sugar level under good control.
- Avoid taking antioxidant supplements such as vitamin E and vitamin C while you are being treated. They might interfere with how well the radiation works.
- Check with your radiation oncologist or medical oncologist before you take any herbal or mineral supplements. Since supplements may contain many ingredients, it is usually best not to take them during treatment.

Coping with Breast Cancer

Cancer treatment can dramatically affect your routine and lifestyle. These changes can make people feel less in control. It is common to feel overwhelmed or anxious. Even the most capable people may need help. Use these tips to help you cope during your treatment:

Be Proactive

- Realize that you are dealing with a major health issue. Do **not** minimize your situation.
- Get clear about the problems that bother you most.
- Ask for help from family and friends.
- Use your emotional support system.

Support Groups and Classes

Support groups can be a good source of emotional support and information. You may find it comforting to be with others who understand what the diagnosis of cancer means, in a way that family and friends sometimes cannot.

If you do not want to attend a support group, find a counselor or another breast cancer survivor who can answer your questions, provide emotional support, and act as your advocate. Some local resources are listed on the last page of this handout.

Dealing with Stress and Anxiety

- Many people find that relaxation techniques, meditation, and guided imagery help them manage stress, feel better, and have more energy to cope with their diagnosis and treatment. You may want to try listening to “Letting Go of Stress” by Dr. Emmett Miller. You can buy the CD or mp3 at www.drmler.com/buy-letting-go-of-stress/.
- Exercise is a good way to reduce stress. Even a short 20- or 30-minute walk can help ease some tension and anxiety.

- Sharing your personal story about living with cancer can help you learn, solve problems, and find meaning in what you are going through. Try joining a support group or talking with a counselor or spiritual advisor.

Managing Information

These tips can help you feel better informed and more in control of your treatment process:

- Place all the instructions and information you receive about your cancer and your treatment in a notebook or binder. Keeping all papers and handouts in one place makes it easier to find what you're looking for when you need it.
- Keep a calendar of your appointments.
- Write down questions for your doctors before your visits. Take notes during your doctor visits. Bring someone with you to take notes and help you remember what the doctors say.

Researching

Ask your doctor to write down the exact type and stage of your cancer, then do your own research. Your doctor may be able to recommend articles about your illness and treatment. Or, you may find helpful websites with cancer information.

It can be confusing and overwhelming to search the internet. Different sites often have different ideas about cancer treatments. If you want to use the internet, start with websites of well-known groups. Two of these are:

- American Cancer Society: www.cancer.org
- People Living with Cancer: www.plwc.org

Taking Care of Yourself

It is important to make your health your top priority during your treatment. Let go of some of your responsibilities and ask others for help. Take extra time for yourself. Focus on:

- Exercise and nutrition
- Activities you enjoy
- Your spiritual needs
- New, creative activities that you have not allowed yourself time for in the past, such as art or music

What should I tell my children about cancer?

Many people wonder what to tell their children about their cancer and treatment. It is common to feel torn between wanting to tell your children and wanting to protect them. There is no one right approach, but these tips may be helpful:

- Be honest with your children. Talk with them about your cancer. When you are under stress, they know that something is not right. If you do not talk with them, they may have fears that are worse than the reality. They may overhear or misunderstand what someone says.
- Children need to be reassured that they are not responsible for your illness in any way. They also need to know that their needs for care and comfort will still be met.
- Children can be very resilient. They can learn to cope with almost any event, if they feel informed and included.

Late Side Effects of Radiation Therapy

Even after your radiation treatment is done, you may still deal with some of these side effects:

- **Radiation pneumonitis:** This is a rare side effect. If it happens, it must be treated promptly. Symptoms can occur within the first few months after radiation treatment. They include an ongoing dry cough, shortness of breath with activity, weakness, tiredness, and sometimes fever. Your doctor may prescribe steroids to reduce lung inflammation or antibiotics to prevent or treat infection. The condition usually clears up in 2 to 3 months.
- **Rib fractures:** There is a small risk of getting a rib fracture after radiation treatment. They most often occur between 6 months and about 3 years after treatment. This happens less than 3% of the time, which means it happens for fewer than 3 patients out of 100.
- **Lymphedema:** Lymphedema is swelling of the arm. It can occur if some of the lymph nodes under your arm were removed during a mastectomy or lumpectomy. The more lymph nodes that were removed, the higher your chances of having lymphedema. There is also a higher risk of infection and arm injury on the side of your surgery. If it is caught early, lymphedema can often be reversed. If you have arm swelling at any time, tell your doctor. You may need to be referred to a special physical therapist who can help you manage your lymphedema.

How to Avoid Lymphedema

Obesity and infection are both linked with a higher risk of lymphedema. But, many suggestions for avoiding lymphedema are confusing. For example, they may say exercise to lose weight but don't get overheated.

Use common sense, talk with your doctor, and follow these tips:

- Avoid injury, cuts, or burns to the affected arm. If you get any injuries, watch them closely. See your doctor if the area gets red or the wound takes a long time to heal.
- If your arm suddenly swells, see your doctor **right away**. You may have an infection.
- Have all injections, blood draws, and blood pressure readings done on the unaffected arm.
- Lose weight, if needed. Do moderate exercise to reduce body fat and improve muscle tone in your arms.
- Moisturize your skin often.
- If you often travel by airplane, you may want to wear a compression sleeve. The sleeve will protect your arm during changes in air pressure.
- Protect your arm from sunburn.
- When resting, elevate your arm above shoulder level. Rest it on a pillow. Do not hold it up in the air. If your muscles get too tired, it can increase the fluid.
- Do **not** drink much alcohol.
- Do **not** smoke.
- Do **not** carry heavy bags with the affected arm.
- Do **not** wear tight jewelry or watches.
- Avoid wearing sleeves with elastic bands.
- To avoid infection, wear gloves when:
 - Gardening or doing yard work
 - Doing household chores that use products or abrasives that could harm your skin
 - Playing or working with animals that might scratch or bite

When Treatment Ends

You have put a lot of time and energy into fighting your cancer. When treatment ends, you may feel anxious about what will happen next.

The end of treatment can be a stressful time. Most people are glad not to have to come to the hospital every day. But it takes time to adjust to a change in daily routine. You may also feel a sense of loss when you no longer have contact with treatment staff and other patients.

During this time of adjustment:

- Create new daily routines for yourself.
- Keep in mind that an emotional letdown is normal.
- Ask your doctor or nurse about resources to help you after your treatment.

Follow-up Care

- Your radiation oncologist will want to see you 1 month after the end of your treatment to make sure your side effects are going away.
- For 1 year after your treatment ends, have a follow-up every 3 months with one of your oncologists.
- You will need to have regular follow-up visits for at least 5 years after your treatment ends.
- Talk with your doctor about your follow-up care plan.

My Follow-up Plan

Follow-up Visits

Radiation Oncology: _____

Medical Oncology: _____

Surgical Oncology: _____

Local Cancer Resources

At UWMC

- **Seattle Cancer Care Alliance (SCCA) Patient and Family Resource Center** on the 1st floor of the SCCA building, next to Radiation Oncology and the information desk. Open during clinic hours.
- **Living Well with Cancer Program:** Provides ongoing classes and support groups for cancer patients and their caregivers.
- **Social work services:** Ask your nurse for a referral to Social Work and Care Coordination.
- **Psychiatry and psychology services:** Ask your doctor for a referral.
- **UW School of Nursing:** There may be studies for breast cancer patients that are free of charge. Ask your nurse or social worker if you are interested.

In the Community

- **Cancer Lifeline:** Offers free support and education programs for cancer patients and their families. To learn more, call 206.297.2100 or visit www.cancerlifeline.org.
- **Cancer Pathways** (formerly Gilda's Club Seattle): Offers free support and education programs for cancer patients. To learn more, call 206.709.1400 or visit <http://cancerpathways.org>.
- **Team Survivor Northwest:** Offers women cancer survivors a range of fitness and health education programs. To learn more, call 206.732.8350 or visit <http://teamsurvivornw.org>.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

**Radiation Oncology
Reception Desk:**
206.598.4100

**Radiation Oncology
Treatment Desk:**
206.598.4141

After hours and on weekends and holidays, call 206.598.6190 and ask for the Radiation Oncology Resident on call to be paged.