

Radiation Therapy and Side Effects

Why radiation therapy?

Radiation therapy (also called radiotherapy) uses high-energy X-rays to kill cancer cells. Radiation is very effective in killing fast-growing cells like breast cancer. Some healthy cells may also be damaged during radiation therapy, but these can recover.

Sometimes radiation is given before surgery to shrink the tumor. But most often it's given after surgery to stop the growth of any cancer cells that may remain. This lowers the chance of the cancer returning (recurrence).

What to expect

The most common radiation treatment for breast cancer is external radiation therapy. It uses a large machine to direct a beam of radiation at the cancer site from outside the body.

A typical course of treatment is 5 days a week for 5 to 7 weeks. During this time, a woman receives small amounts of radiation every day to the entire breast or chest wall if the breast has been removed; and, if necessary, the lymph nodes. By using small amounts of radiation daily, less damage is caused to normal cells, allowing them to recover more quickly. After the first course of treatment, a “boost” dose of radiation is given in the area of the breast where the tumor was removed. This boost is usually given externally (as in the first course), and may last from 1 to 2 weeks. A shorter course of treatment given over three weeks is now used by many radiation oncologists. It is used more often in older women when a boost is not needed.

Clinical trials in radiation therapy are ongoing. Some are looking at giving treatments over a shorter time, or treating only part of the breast that contained the cancer. Other trials are looking at internal radiation therapy, where seeds of radiation are placed into the tumor area after surgery or during surgery itself. These methods may prove to be options for some women in the future.

Step-by-step

1. Your radiation oncologist and radiation physicist will plan your treatment. They will decide on the dose, how it should be given and the number of treatments.
2. You will meet with your radiation oncologist to discuss your treatment in detail.
3. You will have a planning session called a simulation. The exact areas to be treated, called treatment ports, are marked on your skin with ink or tattoos. These marks help the therapist, who runs the radiation therapy machine, aim the radiation at the same area every time you have a treatment. Be careful not to wash these marks off, and tell your therapist if they start fading.
4. You will meet with a radiation therapy nurse to discuss skin care, diet and how to cope with possible side effects.
5. Your treatment will begin 1 to 2 days after the simulation. Daily treatment time ranges from seconds to several minutes, and is done on an outpatient basis. For most people the treatment period is about 5 to 7 weeks. In some cases it may be reduced to 3 weeks.

Coping with side effects

Radiation therapy may involve side effects. Symptoms can vary depending on the area treated. The risk of having side effects increases as more skin and lymph nodes are radiated. Having radiation after chemotherapy increases the risk of side effects. But, there are things you can do to help relieve them.

Skin irritation and redness

These side effects may be seen more often in women who are heavier. This is similar to a sunburn, causing the skin to peel, itch and feel dry. This will go away over time once your treatment ends. In the meantime, treat your skin like you would if you had a sunburn — wear loose, soft clothing over the treated area and use lukewarm water for bathing. Not all lotions and sunscreens can be used during treatment, so check with your doctor before using any on the treated skin. Cover up when you are outside and use a sunscreen of SPF 15 or greater. Wearing a soft cotton bra without an underwire may also help.

Breast changes or swelling

Your breast may become sore. You may help relieve some of the discomfort by wearing loose cotton clothing and not wearing a bra. You may notice that the treated breast has become firmer than the other. Swelling and soreness will lessen over time once treatment ends, but it may take as long as a year.

Fatigue

You may feel tired during treatment. Your body is using a lot of energy to heal. Try to get as much sleep as possible. If you can, adjust your work schedule or activities to give you more time to rest. Exercise may help increase your energy and stamina.

Dry cough or difficulty swallowing

This is most likely to occur if the lymph nodes above the collarbone or near the breast bone are also being treated. Eating cold, soft foods like gelatin or ice cream may help ease your throat discomfort.

Lymphedema (swelling of the hand or arm)

Lymphedema can occur after radiation therapy if the lymph nodes were treated. To reduce your risk of lymphedema, avoid injections or blood pressure checks in the affected arm. Treat infections of the arm and hand right away. Ask your doctor for information about lymphedema and refer to the *Lymphedema* fact sheet.

After radiation treatment

Mammograms are recommended after lumpectomy and radiation therapy to make sure all the cancer has been removed. Mammograms of the affected breast should be done 6 months after completion of radiation treatment and then mammograms of both breasts should be done every 12 months.

It is recommended that you have physical exams every 6 months for 5 years following diagnosis. From then on, you will need physical exams every year.

Resources

Susan G. Komen for the Cure®
1-877 GO KOMEN (1-877-465-6636), www.komen.org
Questions to Ask the Doctor
www.komen.org/questions

National Cancer Institute
1-800-4-CANCER, www.cancer.gov

National Comprehensive Cancer Network
1-888-909-NCCN, www.nccn.org

National Lymphedema Network
1-800-541-3259, www.lymphnetwork.org

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- Clinical Trials
- Getting the Support You Need
- Lymphedema
- Making Treatment Decisions