



# Information for Patients and Families



UNIVERSITY OF COLORADO  
HOSPITAL

ANSCHUTZ MEDICAL CAMPUS

## RADIATION ONCOLOGY

### Radiation Therapy in Breast Cancer

Radiation therapy plays an important role for many women diagnosed with breast cancer. Radiation therapy is a series of high-energy x-ray treatments. These are designed to destroy cancer cells remaining in an intact breast or in the tissues of the chest wall after a mastectomy. Normal cells in our body can repair damage to their DNA, whereas cancer cells cannot. This allows radiation treatments to destroy cancer cells without permanently damaging normal tissue.

#### Uses for Radiation Therapy in Breast Cancer

##### *Non-invasive Breast Cancer (Ductal Carcinoma In Situ or DCIS)*

- DCIS is the earliest form of breast cancer in which the tumor has not invaded local tissues.
- The treatment usually requires 30-33 treatments over a six-week time course.
- Typical side effects include breast swelling, breast skin redness, and itching.
- In the years following completion of radiation treatment, the breast will look and feel as it did prior to therapy.
- No radiation is delivered to surrounding lymph nodes for treatment of DCIS. There is no significant risk of this disease spreading to other areas outside of the breast.

##### *Invasive Breast Cancer after Lumpectomy*

- Women with tumors less than 5 cm and confined to a single area of the breast are often given the choice to choose between a mastectomy or a lumpectomy. Lumpectomy must be followed by breast radiation.
- The treatment may or may not include radiation to lymph nodes in the area, depending upon a variety of factors.
- The treatment usually requires 30-33 treatments over a six-week time course.
- Typical side effects include breast swelling, breast skin redness, itching, and possible peeling of the skin beneath the breast.
- In the years following completion of radiation treatment, the breast will look and feel as it did prior to the radiotherapy.

## *Radiation Therapy after a Mastectomy*

- Radiation therapy is recommended after a mastectomy in specific situations. This includes when the breast tumor was over 5 cm, when 4 or more lymph nodes were involved with tumor, or if there is a concern of residual tumor left behind after surgery. (There is some controversy as to whether or not radiation therapy is indicated when only 1-3 lymph nodes are involved with tumor. Your doctor will discuss this issue with you. You may also be offered the opportunity to participate in a national research study looking at the value of chest-wall radiotherapy for this group of women.)
- Side effects for chest-wall radiation mainly involve irritation of the skin overlying the treated chest wall. This can include redness, peeling, itching, and discomfort.

## *Radiation Therapy to Regional Lymph Nodes*

- Radiation therapy may be used to treat the lymph nodes in the armpit and above the collarbone (clavicle). This treatment may be considered when the armpit lymph nodes were not treated with surgery in any way, or when a sentinel lymph node contains tumor and no further surgery is planned. Radiation therapy may also be used when a large number of removed lymph nodes were involved with tumor.
- Radiation therapy alone results in a lower risk of chronic arm swelling (lymphedema) than an axillary dissection (surgical removal of lymph nodes in your armpit). This risk is estimated at less than 10 percent. If radiation is added in addition to a full removal of the lymph nodes, the risk is increased to approximately 20 percent.

## **Long-Term Side Effects of Breast or Chest Wall Radiation**

- Long-term complications of breast or chest wall radiation are extremely rare. Less than five percent of women ever experience these.
- The ribs on the treated side can become more fragile over time (over the following 5-20 years). This results in an increased chance of fracture if a severe chest impact is experienced, such as in a car accident or fall. The treated ribs will not break on their own. We suggest that all women take a calcium supplement in an effort to increase bone strength.
- Another possible complication is temporary swelling of the lung tissue just beneath the treated breast or chestwall called pneumonitis. This occurs in less than 5% of women. Symptoms would include cough or shortness of breath without an obvious infection. These symptoms may be treated with a medicine called steroids. Pneumonitis is not a long-term problem even for the woman who does experience it. With modern radiation treatment planning techniques, we have observed pneumonitis in less than 1% of our patients.
- When the left breast or chest wall is treated, great care is taken to avoid irradiation of heart muscle. With CT based treatment planning, avoidance of the heart is usually possible for most women. Your doctor will discuss with you the potential increased risk of long-term cardiac disease if in fact treatment of some of the heart is indeed necessary. There is never any heart muscle treated for right sided breast cancers.



# UNIVERSITY OF COLORADO HOSPITAL

## Information for Patients and their Families

### RADIATION ONCOLOGY

---

---

## INSTRUCTIONS DURING BREAST OR CHESTWALL RADIOTHERAPY

### **Skin Care**

Radiation treatments to the breast or chestwall can make the treated skin dry, red, and itchy. Your nurse and doctor will supply you with samples of some skin care products to help moisturize the treated area. However, if you have moisturizers at home that you would like to use, please feel free to do so. No single skin-care product has ever been shown to be more effective than any other product. So feel free to use what you like best!

### **Soaps**

Any gentle soap is fine during your treatment course. Please avoid deodorant soaps if possible. Moisturizing soaps will be more soothing to your skin. Avoid *Ivory™* and *Dial™* soaps because they tend to be very drying. You should wash the treated skin with soap and water each time you bathe.

### **Deodorants and Antiperspirants**

These products often contain chemicals and metallic substances. Once a skin reaction has developed these may further irritate the skin beneath the treated arm. We suggest that you don't use standard deodorants and antiperspirants on the treated side during the weeks you are receiving radiotherapy. Avoid using these products for 2 to 3 weeks after completing your treatment.

Good alternatives include cornstarch, or mineral deodorants. These are available at Wild Oats™ or Whole Foods™ and many supermarkets.

### **Bras**

During the final few weeks of radiation, the skin beneath the treated breast can become irritated or even peel. We recommend that you not wear an underwire bra once you develop any kind of skin reaction. This will lessen your discomfort. Once your radiotherapy is completed and the skin has completely healed, you may wear an underwire bra once again if you choose. Many women find that an inexpensive sports bra provides comfortable support.

### **Swimming and Jacuzzis**

We encourage exercise and soothing activities during your treatment. However, once your skin develops a skin reaction, it is best not to have contact with chlorine and other harsh chemicals.

© 2002, University of Colorado Hospital, Denver

April 2002  
55:ChstWil\_RadOnc

DOD:PED00315



**RADIATION ONCOLOGY**

**Follow Up Instructions after Radiotherapy  
for Breast Cancer**

**Doctor's Visits**

We recommend that you see one of your cancer doctors every 3 to 4 months. Rotate these visits between your surgeon, medical oncologist, and radiation oncologist. That way each of them may have an opportunity to evaluate you at least once a year. Please be assured that your doctors work as a team. They will share the results of your examinations and any tests with your other doctors.

**Mammograms**

The most important test for detecting breast cancer is generally a mammogram. We suggest you get a mammogram of your treated breast six months after finishing radiation therapy. Then have a mammogram of both breasts once a year unless you are otherwise instructed.

**When to Call Your Doctor**

Call your doctor if you develop any of the following symptoms:

- Arm swelling on the treated side
- New bone pain that lasts more than one week
- New lumps in your breast or chest wall or neck
- Any other problem that concerns you

**Important Phone Numbers**

*University of Colorado Hospital*

- Cancer Center 720-848-0300
- Breast Center 720-848-1030
- Mammogram scheduling 720-848-1030, option 1
- Radiation Oncology Department 720-848-0100

*Denver Health Medical Center*

- Breast Center 303-436-6065
- Mammography Scheduling 303-436-7452

*Denver VA Medical Center*

- Cancer Center 303-399-8020 ex. 2261