

Breast Irradiation: Patient Care Packet

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This handout includes:

- * Tips & instructions for skin care
- * Guide for exercise after surgery

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Radiation Treatments

INTRODUCTION

This brochure has been designed to educate you about a variety of topics associated specifically with breast irradiation treatments. It is meant to give you some insight on what to expect during your treatments and what side effects that may or may not be involved. This brochure is meant to be a supplement to reconfirm many of the topics that have already been discussed with you by your Radiation Oncologist and is not intended to be a substitute for good communication. If you find that you still have questions after reading this brochure, please do not hesitate to ask the Radiation Therapists who will be administering your daily treatments. If they are unable to answer your questions, they will be glad to refer the questions to the doctor for a more detailed answer.

RADIATION TREATMENTS

Radiation treatments of the breast are usually administered five days a week, Monday through Friday, for a number of consecutive weeks. The total number of treatments that are given during the 7-8 week period is determined by a variety of factors and is specifically planned out for each individual.

After your consult at the facility, you will return to our department for a localization Computerized Tomographic (CT) scan, which will take approximately half an hour to forty-five minutes. The intent of this scan is for treatment planning purposes. Before we start the CT scan, you will be positioned on the CT table in the “actual treatment position.” The radiation therapist will place various marks on your skin to serve as reference points. Later, we will use the CT images to derive a specialized computer plan to help us determine the exact parameters necessary to give you an accurate radiation treatment that is uniquely designed for you.

The next visit you will have with us will be for the actual set-up of the treatment fields, also known as a Simulation, which can take about forty-five minutes to an hour. Once your treatment plan has been designed, it is used along with the CT films to recreate the field parameters on the actual radiation therapy machine (Linear Accelerator). At this time, you will be placed in the treatment position and the treatment area will be “mapped out” on your skin using marking pens. X-ray type films will then be taken with the radiation machine to verify the accuracy of the marks on your skin. These films will be taken at least once a week during your course of treatment to verify the consistency of the original set-up.

In order to be able to reproduce the treatment fields consistently on a daily basis, we will need to make the vital marks permanent by “tattooing” them. The skin marks will be made with small permanent pinpoint dots under the skin that are similar in size to that of a small freckle. These “tattoos” are usually not noticeable except to the therapists who will use them daily as a guide to recreate your daily treatment set-up.

Your third visit to radiation therapy will be your first treatment. This appointment will take approximately 15 minutes and should be similar to what you will expect as “normal” for your daily treatments. You will also be

introduced to the radiation therapists that will be operating the machine and administering the radiation treatments. There are 4 radiation therapists (see cover page) that will be overseeing your care, and therefore the therapist treating you may vary from day to day. You will be placed in the treatment position once again and the therapists will then proceed to align you for delivery of your first radiation treatment.

During the first few visits that you are here with us, we will do our very best to explain each step of the process. Once again, your questions are welcomed and we will try to be as informative as possible. We realize that radiation treatments are new and unfamiliar to you, and may seem overwhelming at first. It is our goal here at the Cancer Center of Irvine (CCOI) to make this experience as smooth as possible for you these next few weeks while you are here with us. Thank you for taking the time to read this information and for giving us the opportunity to serve you here in CCOI's Radiation Therapy Department.



A Linear Accelerator (LINAC) is an electrical device used to produce high energy X-rays and most commonly used for External Beam radiation treatments for patients with cancer. The produced x-ray beam comes out of a part of the accelerator called a [Gantry](#), which rotates around the patient. The patient lies on a moveable treatment couch and lasers are used to make sure the patient is in the proper position. Radiation can be delivered to the tumor from any angle by rotating the gantry and moving the treatment couch.

A Linear Accelerator is made up of many complex electrical elements that contribute to the production of X-rays. Consequently, when just one of these elements becomes impaired due to “wear and tear,” the machine is temporarily non-operational. During your radiation treatment, such an event may or may not occur. At that time, we ask for your patience and understanding while our machine servicemen repair the problem. Once repaired, the machine undergoes a thorough quality assurance check to ensure treatment requirements prescribed by Dr. Tokita or Dr. Wilder are perfect.

Cancer Center of Irvine currently has two Linear Accelerators that are identical in delivering radiation treatments. In the time that one machine may be temporarily non-operational, patients may be transferred to an available treatment machine to continue their radiation treatment without interruption.

FATIGUE

Fatigue, feeling tired and lacking energy, is the most common symptom reported by cancer patients. The exact cause is not always known. It may be due to the disease itself or to treatment. It may also result from lowered blood counts, lack of sleep, pain, and poor appetite.

Most people begin to feel tired after a few weeks of radiation therapy. During radiation therapy, the body uses a lot of energy for healing. You also may be tired because of stress related to your illness, daily trips for treatment, and the effects of radiation on normal cells. Feelings of weakness or weariness will go away gradually after your treatment has been completed.

There are a few things that you can do to combat the general feeling of fatigue:

- Have a structured daily routine.
- Ask for help and delegate when you can.
- Use methods to reduce stress, such as deep breathing, visual imagery, meditation, prayer, talking with others, reading, listening to music, painting, or any other activity that gives you pleasure.
- Balance rest and activities. Avoid too much bed rest, which can lead to feeling weak. Schedule activities so that you have time for plenty of rest. Shorter rest periods are reported to be better than one long one.
- Discuss physical activity with your doctor before you start any program. Get fresh air, if possible.

- Unless you are given other instructions, eat a balanced diet that includes protein (meat, milk, eggs, and legumes) and drink plenty of water each day.

Let your doctor or radiation therapist know about your fatigue and talk with them if:

- Your fatigue does not get better, keeps coming back, or becomes severe.
- You are more tired than usual during or after an activity.
- You are feeling tired and it is not related to an activity.
- Rest or sleep does not relieve your fatigue.
- You become confused or cannot concentrate.
- You are unable to get out of bed for more than 24 hours.

SKIN CARE TIPS: DO'S AND DON'TS

During your radiation therapy, you will need to be very gentle with the skin in your treatment area. Below are some basic skin care tips. It is important that you do your best to abide by them in order to avoid irritating the treated skin.

We suggest the following to protect your skin:

- 1) When you wash, use only lukewarm water and mild soap. DO NOT RUB THE SKIN.
- 2) Don't rub, scratch, or scrub any sensitive spots.
- 3) Don't wear tight clothing over the area, but wear a soft cotton bra without wires.
- 4) Don't use heating pads or ice packs on your treated skin. Jacuzzi's and hot tubs should also be avoided during therapy.
- 5) Don't use ICY HOT or BENGAY.
- 6) Don't shave underneath your affected arm. The skin in this area is sensitive and while under treatment, the skin in this area can be compromised and can easily be irritated by shaving. We also ask you stay away from any hair removal lotion or waxing which may further irritate the skin.
- 7) Don't use any home remedies such as powder, creams, or ointments in the treatment area without permission from the Doctor during treatment. If you have certain creams or powders you have used in the past and prefer to continue using them, please bring in a sample of the product so that the Doctor can review the ingredients and approve it.
- 8) Avoid exposing any of the radiated area to the sun during the treatment and for at least one year after treatment. If you are planning to be out in the sun in the future, you should use sun block that has a high SPF. If you go out into the sun, cover the area with clothing as much as possible (i.e. with a high collar and/or hat.) Consider purchasing clothing with sun protection properties.

Towards the end of the treatments, the skin may become increasingly red, sore, or more sensitive. At this time, you may experience some side effects from the radiation that are considered to be normal.

These may include:

- Irritated hair follicles that appear to be a rash;
- Soreness and inflammation of the cartilage in the sternum (i.e. breast bone), unusual until well after the radiation, but can occur during radiation. This is not serious.
- Shooting pains through the nipple region due to the nerves regenerating after surgery; again not serious and can go on for a year, getting better with each passing month.
- Swelling and fullness of the breast that is desirable since the breast that is being treated tends to contract in size after the treatments are completed.

The effects are temporary and will begin to subside a few weeks after the treatments are finished. Since each person's body is unique, you may or may not experience any of these. Therefore, each person tolerates the radiation differently. The therapists will provide a prescription for any necessary cream/lotion throughout treatment. Please advise the therapist's of any other symptoms, and they will guide you through any additional skin care products if needed.

After the radiation course, the skin in the treated area may remain somewhat darker than it originally was.

The first two weeks or so after treatment, the radiation continues to have effects on the skin and the reaction may increase. This is normal and we will advise you to continue with your skin care regimen.

SKIN CARE PRODUCTS

You may notice that the skin in the treatment area may begin to look reddened, irritated, sunburned or tanned. After a few weeks, your skin may also become very dry from the therapy. The following is a general practice of skin care that we teach our patients here at the Cancer Center. We have found that the skin reactions have been lessened in severity for patients who follow these instructions properly.

MOISTURIZERS

- 1) Apply moisturizers such as 100% natural Aloe Vera gel and/or Aquaphor to the entire treatment area in a thin coating, three times per day. Once in the morning, once during the day, and once in the evening. Do not apply any of these moisturizers before treatment.

* REMEMBER, SINCE EACH PERSON'S BODY IS UNIQUE,
YOU MAY OR MAY NOT EXPERIENCE ANY OF THESE
SKIN CHANGES. EACH PERSON TOLERATES THE
RADIATION DIFFERENTLY. HENCE, NOT EVERYONE
WILL HAVE THE SAME SIDE EFFECTS. *

Helpful Terms to Know

- Erythema - Abnormal redness and inflammation of the skin.
- Dry Desquamation - Dryness, itching, scaling, flaking, and peeling of the skin.
- Moist Desquamation - Blister formation, serous drainage, and pain.
- Port Films - non-diagnostic films that confirm the treatment area (taken on a weekly basis for QA purposes)
- Wedge- a treatment device used to conform the radiation beam to match the surface of the breast.
- Lasers - red lasers in the treatment room that the therapists will use to align you in the correct treatment position.
- Linear Accelerator - the machine that delivers the radiation.
- Gantry - the C-arm part of the machine that rotates around you.

Exercising

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Introduction

We at the Cancer Center of Irvine strive to give the best care to our patients, both physically and emotionally. We have put together this handout so that you can begin to heal and resume normal daily activities. There are various surgical interventions that may impact the range of motion and flexibility of the affected side. This may subsequently affect the way you dress, bathe, brush your hair, and many other daily activities of living. The procedure may have been a:

- ❖ Breast biopsy
- ❖ Lymph node biopsy or removal
- ❖ Lumpectomy
- ❖ Mastectomy
- ❖ Mastectomy with reconstruction

Any of the above may affect the activity of the given side. We recommend incorporating some of the following exercises into your daily routine. Exercising can help:

- ❖ Increase energy levels
- ❖ Relieve stress
- ❖ Decrease anxiety and depression
- ❖ Improve flexibility and range of motion of affected arm

The exercises covered in the following pages are suggestions only, and should be discussed and reviewed by your physician. Some of the exercises are not suggested for patients who have had reconstructive surgery.

General Guidelines

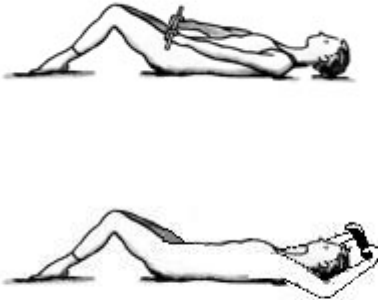
- ❖ Wear comfortable, loose clothing while exercising.
- ❖ After surgery you may experience a sensation of tightness across the breast and underarm areas. This is normal, and should decrease with exercise.
- ❖ During surgery nerves may be irritated, resulting in a feeling of burning, numbness, or tingling over the back of the arm and breast. This sensation may increase for approximately 2 weeks after surgery. However we recommend continued exercising, unless you experience unusual swelling or tenderness. If this occurs, please notify a therapist or physician.
- ❖ It may be helpful to exercise while in the shower, when muscles are relaxed from the warm water.
- ❖ Do not do “bouncy” movements while exercising; instead do a slow gradual movement until you feel a stretch.
- ❖ Perform each exercise two times a day; during each session, complete each exercise 5 times.
- ❖ If any of the exercises cause pain or are too difficult, STOP, and consult with your physician.

Exercises in Lying Position

These exercises should be performed on a bed or the floor while lying on your back with your knees and hips bent, feet flat.

Wand Exercise (Figure 1)

Increases the forward motion of the shoulders. Use a broom handle, yardstick, or other similar object to perform this exercise.



1. Hold the wand in both hands with palms facing up.
2. Lift the wand up over your head (as far as you can) using your unaffected arm to help lift the wand, until you feel a stretch in your affected arm.
3. Hold for five seconds.
4. Lower arms and repeat five to seven times.

Figure 1

Elbow Winging (Figure 2)

Increases the mobility of the front of chest and shoulder. It may take several weeks of regular exercise before your elbows will get close to the bed (or floor). This exercise may also be done sitting or standing.

1. Clasp your hands behind your neck with your elbows pointing toward the ceiling. (If sitting or standing point elbows horizontal to head)
2. Move your elbows apart and down toward the bed (or floor). (If sitting or standing move elbows laterally away from head)
3. Repeat five to seven times.

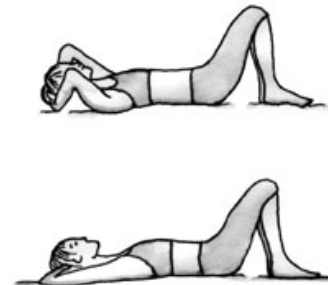


Figure 2

Exercises in Sitting Position

Shoulder Blade Stretch: Increases the mobility of the shoulder blade (Figure 3)



Figure 3

1. Sit in a chair close to a table with your back against the chair back.
2. Place the unaffected arm on the table with your elbow bent and palm down. Do not move this arm during the exercise.
3. Place the affected arm on the table, palm down with your elbow straight.
4. Without moving your trunk, slide the affected arm toward the opposite side of the table. You should feel your shoulder blade move as you do this.
5. Relax your arm and repeat five to seven times.

Shoulder Blade Squeeze: Increases the mobility of the shoulder blade (Figure 4)

1. Facing straight ahead, sit in a chair in front of a mirror without resting on the back of the chair.
2. Arms should be at your sides with elbows bent.
3. Squeeze shoulder blades together, bringing your elbows behind you. Keep your shoulders level as you do this exercise. Do not lift your shoulders up toward your ears.
4. Return to the starting position and repeat five to seven times.

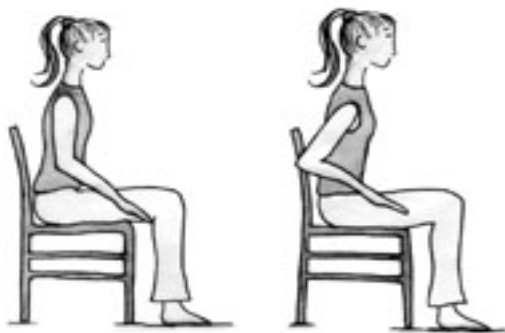


Figure 4

Side Bending:

Increases the

mobility of the trunk/body (Figure 5)

1. Clasp your hands together in front of you and lift your arms slowly over your head, straightening your arms.
2. When your arms are over your head, bend your trunk to the right while bending at the waist and keeping your arms overhead.
3. Return to the starting position and bend to the left.
4. Repeat five to seven times.

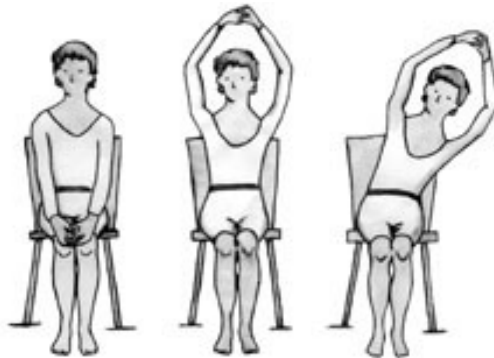


Figure 5

Exercises in Standing Position

Chest Wall Stretch: Stretches the chest wall (Figure 6)

1. Stand facing a corner with toes approximately eight to ten inches from the corner.
2. Bend your elbows and place forearms on the wall, one on each side of the corner. Your elbows should be as close to shoulder height as possible.
3. Keep your arms and feet in position and move your chest toward the corner. You will feel a stretch across your chest and shoulders.
4. Return to starting position and repeat five to seven times.



Figure 6

Shoulder Stretch: Increases the shoulder mobility (Figure 7)

1. Stand facing the wall with your toes approximately eight to ten inches from the wall.
2. Place your hands on the wall. Use your fingers to "climb the wall," reaching as high as you can until you feel a stretch.
3. Return to starting position and repeat five to seven times.

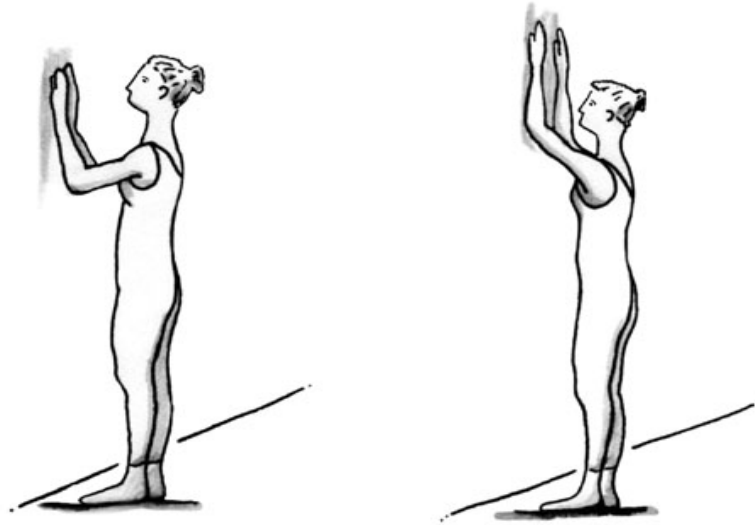


Figure 7

Hair brushing: Increases range of shoulder rotation

Imagine brushing or combing your hair. With your head up, raise your arm, moving your elbow away from your side. Pretend to brush or comb your hair from front to back. Start with the same side, gradually increase to cover greater areas, eventually covering the whole head.

What Not To Do!!

- ❖ Do not lift weights
- ❖ Do not pick up heavy objects with affected arm
- ❖ Do not continue exercises if swelling, pain, or discomfort occurs