Radiation Therapy
To the Chest Wall

You will be receiving five to six weeks of radiation treatments to your chest. Some of the expected side effects of this treatment are skin irritation and fatigue. Heartburn may also occur, but it is rare. The side effects may begin about one to two weeks into treatment. They may last for two to four weeks after the treatments finish. You may have some or all of the side effects. They may occur at different times or all at once. This will give you the information you need to care for yourself during and after your treatment.

Positioning for Your Treatment

Each day, right before your treatment, you will be asked to get into position on the treatment table. The radiation therapists will help you get into the correct position. Some patients are put into “molds”. These molds are made during the treatment planning period.

Tiny dots or marks may also have been put on your skin. These marks relate to your treatment field. They look like tiny freckles and will not be easy to see. Oil based skin markers or a dye may be used to make these marks.

If these marks fade, they will be remarked. After your radiation therapy is finished, you can let the marks to fade. You can also gently remove them using soap and water or baby oil. These marks may rub off on your clothes. If this happens, spray the stains with hair spray or Spray'N'Wash® before you wash your clothes.

Radiation Skin Reaction

Most radiation goes through the skin into body tissues. Even so, the skin in treatment sites can become red and irritated. It can also become dry and itchy. Sometimes, the skin will peel and become moist. This happens most often in skin folds and curves. We will tell you which sites to watch.

Watch your skin closely and report any changes you notice. Use the skin care
products as directed. As your skin reaction develops, we will watch it closely. We may tell you to change the way you care for your skin as it may be painful. Tylenol® or ibuprofen is usually helpful. If you need something stronger or help with skin care, let us know.

If you have questions or concerns after your treatments end, call the Radiation Oncology Clinic (open 8am–5pm) at (608) 263-8500 and ask to speak to a nurse. If the clinic is closed, your call will go to the answering service. Give your name and phone number with the area code. The doctor will call you back.

Skin Care during Treatment
In order to protect your skin during treatment, you should follow the guidelines listed below. You will need to follow these during your treatment and afterwards, until your skin has fully healed.

Remember: Your skin needs to be clean and dry before each treatment. Lotions and creams can be applied 2 – 4 times per day to help your skin feel better. You should not apply lotions or creams in the 1-2 hour period before your treatment. If your treatment is late in the day, you may apply a skin product before your treatment if it will be fully absorbed by the time your treatment is given.

1. You may bathe or shower as usual using lukewarm water. If you need soap, use one that is meant for dry or sensitive skin. Rinse skin well and gently pat it completely dry. Do not rub the skin in treatment fields.

2. Avoid heat—heating pads, very hot water in the bath or shower, and hot water bottles.

3. Avoid cold. Do not allow the skin to become chilled from exposure to ice or very cold water or air.

4. Avoid sunlight or sunlamps on the skin in the treatment site. When you are outside, keep the area covered with clothing. If clothing does not completely cover the area, use a sunscreen with SPF of 30 or higher.

5. Avoid rubbing or using friction on the skin exposed to treatment. Do not rub or scrub the treated area. Wear comfortable, loose, cotton based clothing that will allow good air flow. Avoid clothing made of nylon or synthetics. They tend to hold moisture next to the skin. Clothes that bind can cause further irritation to the radiated skin.

6. Avoid the use of tape on skin in the treated area.

7. In most cases, nothing should be applied to the treated skin unless approved by your doctor or nurse. This includes bath oils, perfumes, talcum powders, and lotions. If a skin reaction is expected, we will suggest a skin moisturizer. Use it each day as instructed.

Care of Skin after Treatment
1. Although rare, late effects may occur. These late effects may occur months to years after the end of treatment. Treated skin may continue to be dry. It may also darken in color, or become firm and tough. It may help to apply skin moisturizer or Vitamin E oil.
2. The skin in treatment areas may always be extra sensitive to sunlight. When outdoors, use a sunscreen of SPF 30 or higher on treated skin exposed to the sun. This is because treated skin is at a higher risk for a certain type of skin cancer.

Indigestion

A few people, whose treatment includes the breastbone area, will have indigestion (heartburn). Nausea is rare. If you have either of these symptoms, try drinking small amounts of clear, non-carbonated fluids. Some patients find 1-2 tablespoons of a liquid antacid soothing. Check with your doctor before using a liquid antacid. If after a few days you still have these symptoms, ask your doctor for other medication. If you have problems swallowing, your nurse can advise you on a soft food, high protein diet.

Feeling Tired

Feeling tired (fatigue) during radiation treatment is a common side effect. The severity of fatigue varies from person to person. Fatigue does not mean that your tumor is getting worse. Some people feel no fatigue and are able to keep up with their normal routines. Others feel the need to take an extra nap each day. Still others change their routines, working only part time, for example. Some people don’t do anything that requires a large amount of energy. Fatigue can begin right away, or it can occur after 1 – 2 weeks of treatment. It can go on for several weeks to months after treatment has ended. Rarely, it can last for up to a year.

Low blood counts may also cause you to feel tired. Your bone marrow makes blood cells. If a lot of bone is in your radiation field, your production of blood cells may be slowed down for a time. This is a short term side effect. Your doctor may order a blood test from time to time to check your blood cell counts.

Here are a few tips that may help with feeling tired.

1. Listen to your body and rest when you need to. A short nap during the day or sleeping a little longer may help.
2. Make time for activities you enjoy. Take a walk in the fresh air, visit with a friend, or pursue a hobby during the times that you feel most energetic. Do things that help you feel good.
3. Stop smoking and do not drink alcohol to excess! Do something healthy for yourself. If you need help with this, talk with your doctor or nurse. There are ways we can help.
4. If you work you may want to keep working. Some people are able to maintain a full time job. Others find it helpful to work fewer hours. Many employers understand and will agree to part time work. We can schedule your treatment times to fit in with your work schedule.
5. Plan regular active exercise – daily walks, riding an exercise bike, or any mild exercise. Go at your own pace. Never exercise to the point of fatigue. A good rule of thumb is that you should feel less tired after the exercise than you did before the exercise.
6. Take advantage of emotional outlets. Pent-up emotions can add to fatigue. Talk with family or friends. Having a good cry or laugh can be helpful.
7. Eat well. Keep foods around that need little effort to prepare – cheese, yogurt, or slices of meat. When you feel well, prepare and freeze meals to eat later when you are tired. Extra calories and
protein are needed to maintain energy while getting treatments. They also help repair normal skin cells damaged by your treatment. Speak with a clinic nurse if you have problems eating.

8. Drink lots of fluid – 8 to 12 glasses per day. The water will help to flush some of the by-products of your cancer fighting treatment out of your body.

9. If you need help with your basic daily needs, ask your nurse or the social worker to help you contact your local resources. You may be able to receive help with meals, housekeeping, personal care, transportation, support groups, and respite care.

10. Accept offers of help from family and friends. If friends ask if they can help, accept it! If they ask you to call if you “need anything,” they may need specific ideas from you. Often people want to help but don’t know what things you need the most help doing. Things like mowing the lawn, baking a casserole or watching the kids, can help both you and your friends to feel good.

11. Visits from family and friends can be pleasant, but also tiring. You do not need to be the perfect host or hostess. Let friends and family fix dinner, and get the drinks and snacks for you!

12. Some people may have pain from cancer or other causes. Pain can be very tiring. Your doctor and nurse can work with you to achieve good pain control. Let them know about any discomfort you have during treatment.

Arm Exercises

Sometimes, after treatment people find they have stiffness in their shoulder. They may also have swelling in their arms or hands on the affected side. There is more than one reason why these side effects may occur. Sometimes, lymph nodes from the armpit are tested or taken out during surgery. This can lead to a blockage of the normal flow of lymph fluid from the arm to the body. When this happens, swelling of the arm can occur (lymphedema). After radiation, changes to the tissues in armpit can also cause lymphedema. These same tissue changes can also cause stiffness of the shoulder muscles. These side effects can occur weeks to months after treatment is over.

To help ease or prevent these problems, we suggest you do shoulder exercises on a regular basis. You should take special care to protect your hand and arm. The exercises listed on the next few pages can be used along with those you learned after surgery. If you have questions, talk with your doctor or nurse.
Shoulder Check

Once a day you stand undressed in front of a mirror. Place both hands beneath your collarbones and lift your elbows up towards your shoulders. Watch closely to see that your elbows move evenly to shoulder height and that both shoulders are level. This helps to maintain normal range of motion in your shoulders. If you see that your affected shoulder shrugs (or moves towards the ear), please contact your doctor.

Axillary Stretch

1. Sit in a straight-back chair with your feet flat on the floor. Let your hands hang loosely at your sides.

2. Grasp your hands together in front of you.

3. Lift your arms up and overhead. Slide your hands to the back of your neck. Slowly twist the upper part of your body toward the side that has not had surgery. This should stretch the armpit area on the side where you received treatment.

Shoulder Rotation and Stretch

1. Sit in a straight-back chair with your feet flat on the floor. Let your hands hang loosely at your sides.

2. Bring both your arms straight out to the side at shoulder height. Keep your arms at shoulder height. Pull backwards as if you were doing the "backstroke" with the arm on the treated side. Do the stroking sequence 5 times. Return to the starting position and relax.
Shoulder Internal Rotation

1. Sit in a straight chair and move forward to the edge of the seat so that your back does not touch the chair. Your feet should be flat on the floor.

2. Reach behind your back with the arm on the treated side and touch the bottom tip of the opposite shoulder blade. Try to hold for 5 seconds. Relax and return to the starting position.

Stretch

1. Stand comfortably with your feet about six inches apart.

2. Put your arms in front of your body and hold one end of a towel in each hand. Bring your arms over your head and stretch towards the upper back. Do not arch your back and do not force the movement if difficult. Try to hold for 5 seconds. Relax and return to starting position.

3. Stand as in (1). Start with your hand grasping the towel behind your back and lift upward as far as possible. Be sure to stand straight. Try to hold the position for 5 seconds. Return to the starting position.

Stretch for the Back and Shoulder Muscles

1. Sit in a straight-back chair with your feet flat on the floor. Let your hands hang loosely at your sides.

2. Place your right hand on your right shoulder and your left hand on your left shoulder (palms down). Try to touch your elbows together in front of your body while keeping your hands in position. Hold for 5 seconds.
Help Prevent Infection

It is important to prevent infection in the arm on the treated side. Below are some simple rules to prevent infection.

- Stop smoking.
- Avoid burns while cooking.
- Avoid sunburns.
- Have all injections, vaccinations, blood samples, and blood pressure tests done on the other arm.
- Use an electric razor to reduce the risk of nicks or scratches.
- Carry heavy items or handbags in the other arm.
- Avoid heavy lifting.
- Wash cuts promptly. Treat them with antibacterial medicine. Cover with a sterile dressing. Check often for redness, soreness, or other signs of infection.
- Never cut cuticles; use hand cream or lotion.
- Wear watches or jewelry loosely, if at all, on arm of the treated side.
- Wear gloves to protect your hands when working in the garden. Use gloves when using strong detergents or chemicals.
- Do not keep your hands in water so long that it becomes wrinkled.
- Use a thimble when sewing.
- Avoid harsh chemicals or abrasive compounds.
- Use insect repellent to avoid bites and stings.
- Avoid elastic cuffs on blouses and nightgowns.
What to do if you have a swollen arm

1. If the swelling occurs suddenly or if the arm is also red, hot, or painful, call your doctor at once. You may have an infection that needs treatment.

2. If the swelling develops slowly, and the arm is not red, hot, or painful, make an appointment with your doctor to discuss treatment. In the meantime, keep the arm raised above the level of your heart as much as possible. Keep doing the exercises described in this handout. Moving your muscles may help some of the lymph fluid to get back into your circulation.

Other Concerns

A diagnosis of cancer brings concerns other than the need to manage the acute side effects of treatment. Often, it affects many other areas of your life. Patients feel its impact on their emotions, marriage, family, jobs, finances, thoughts and feelings about the future, and many other important areas of life. The nurses and social workers can help you cope with these issues. They can suggest support services and resources. Feel free to speak them at any time.

Cancer Resource Services

There are many resources available to cancer patients and their families.

Cancer Connect is a toll-free telephone service of the University of Wisconsin Hospitals and Clinics. The staff of Cancer Connect can answer your questions about treatments available at UWHC and how to get information about them. It can also provide information about available community resources and support services. The number is 1-800-622-8922.

Cancer Information Service is a nationwide telephone service of the National Cancer Institute. It has information about cancer care available around the country as well as locally. The toll free number is 1-800-422-6237.