Breast Cancer Guide

A Journey Through Your Care

MOUNT CARMEL

If you have just been told that you have breast cancer, you are likely feeling overwhelmed with emotions, information, and decisions. Mount Carmel's team of expert physicians and Breast Oncology Nurse Navigators are here for you from your diagnosis and treatment through your recovery and survivorship.

Our Breast Cancer Guide contains information to help you better understand the different aspects of your care and the resources that are available to you through your journey in the coming weeks and months.

Although you may not be a healthcare professional, you are an important part of your healthcare. As you go through your diagnosis and treatment, keep these suggestions in mind:

- Don't be afraid to ask questions. Keep a written list of your questions to take with you to your doctor's appointments.
- Bring someone with you to your appointments to help you listen, ask questions, and take notes. It is hard to absorb everything by yourself.
- Keep a log of your healthcare journey as you go along.
- Feel free to get a second opinion about what treatment options are best for you.
- Express your feelings — talk with friends and family members and seek support.

For your continued health education, this booklet and others are available on mountcarmelhealth.com.

This Breast Cancer Guide is dedicated with love to the many women diagnosed with breast cancer. Our hope is that by sharing the knowledge we have gained over the years from working with women with breast cancer, we may ease the way for all those to come.

THE MOUNT CARMEL BREAST ONCOLOGY NURSE NAVIGATORS

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Breast Cancer

What Is Breast Cancer?

Breast cancer begins when cells in the breast undergo certain changes. A normal cell becomes malignant, or cancerous, when it grows and reproduces itself without normal control mechanisms. In most cases we do not know what causes these changes to occur. If the abnormal cells are not eliminated, they can continue to grow and eventually spread to other areas of the body.

Most breast cancers begin months to years before they can be detected. Because of this, breast cancer is not usually a medical or surgical emergency. It is often fine for you to take the time you need to learn about your breast cancer. Together with your doctors and loved ones, you can make thoughtful decisions about surgery and treatment.

There are many different types of breast cancer. Each breast cancer has various characteristics that affect how it may behave. After studying the tissue specimens from any biopsies or surgeries, the pathologist will report the numerous characteristics of the breast cancer. Your surgeon and your oncologist will look at all the factors about you and your breast cancer in determining what treatment to recommend for you.

Having a basic knowledge of the lymphatic system will help you understand certain aspects of your treatment for, and recovery from, breast cancer. The job of the lymphatic system is to keep the tissue around the cells of the body free from excess fluid, proteins, bacteria, viruses, and destroyed cells. Lymph nodes and lymph vessels act as filtering stations. They remove and destroy bacteria, viruses, and dead cells. The remaining cleaned lymph fluid is channeled back into the bloodstream.

> ***"Breast cancer is just a diagnosis. It does not limit me or define me as a person."***
>
> – TISH JOHNSON, *Silver Linings*

The lymph nodes may play an important part in your treatment decisions. Lymph nodes are places where cancer cells may collect. For certain types of breast cancer, removing and studying some of the lymph nodes (most often from under the arm near the affected breast) helps to determine whether the breast cancer has begun to spread outside of the breast.

Types of Breast Cancer

There are many different types of breast cancer. The two most common types are:

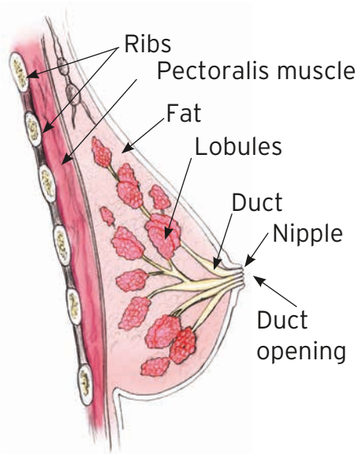
- Ductal carcinoma — begins in the ducts of the breast and occurs in about 80% of all breast cancers.
- Lobular carcinoma — occurs in 10% to 15% of breast cancers and begins in the lobules or milk glands of the breast.

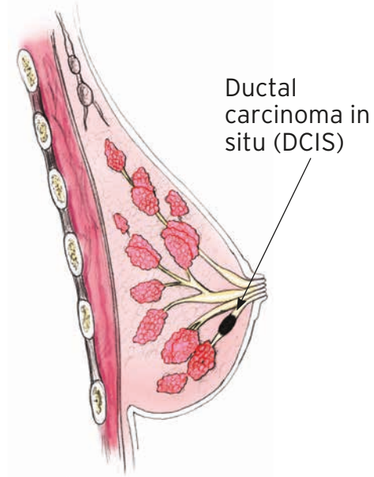
Other types of breast cancer that are not as common are:

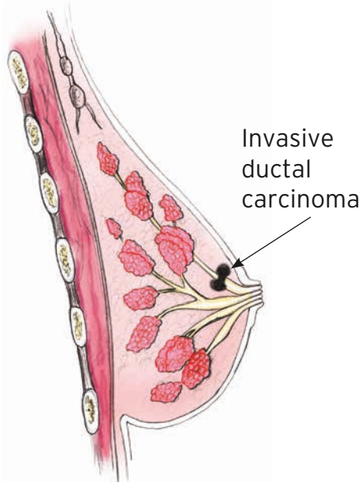
- Tubular — about 2% of breast cancers.
- Mucinous — about 2% of breast cancers.
- Inflammatory — about 1% of breast cancers, and usually appears as a red and warm area of the breast with "orange peel" appearance of the skin.

Breast cancers are either ***in situ*** or ***invasive***:

- ***In situ*** cancers begin within the walls of the duct or lobule. They are very unlikely to spread to other parts of the body (metastasize).
- ***Invasive*** cancers have broken through the walls of the duct or lobule and have the ability to spread to other parts of the body.







Understanding Your Pathology Report

Some women want to know the results of their surgery on their pathology report. Other women prefer not to know the details. The following will help you to understand what you would like to know about your report.

The tissue removed at the time of the biopsy or surgery is sent to a pathologist. A pathologist is a doctor who has had specialized training looking at tissue under a microscope. While you may not meet this doctor, he or she plays a key role in your care.

At Mount Carmel, when a diagnosis of breast cancer is made, two pathologists review the tissue to ensure an accurate diagnosis. They examine the tissue very closely and provide your doctor with a report of the findings. The report with the diagnosis, including the grade of the tumor, estrogen receptor status, progesterone receptor status, HER2/neu status, and the status of the lymph nodes, is usually available within several days after surgery. Because the report has many parts and can be confusing, talk with your doctor to be certain that you understand the findings.

Each hospital or lab has its own format for pathology reports, but the basic information is the same. Mount Carmel pathologists follow the College of American Pathologists' guidelines for reporting your breast cancer. The pathology report is divided into sections:

- One section includes the diagnosis before the biopsy (pre-op), the procedure (what was done), and the statement of the type of tissue that was removed.
- Another section describes the size of the tissue removed and what it looks like.
- The last section is the microscopic diagnosis that states:
  - Size of tumor
  - Type of cancer
  - Grade of cancer
  - Angiolymphatic invasion
  - ER/PR status
  - HER2/neu status
  - Margin status
  - Lymph node status
  - Staging

Grade

If the tissue is cancerous, it will be graded as to the amount of change the cancerous cells have from normal cells. The grade is based on a combination of growth pattern and tubule formation, nuclear changes, and cellular proliferation (mitotic rate).

The grading is done using this system:

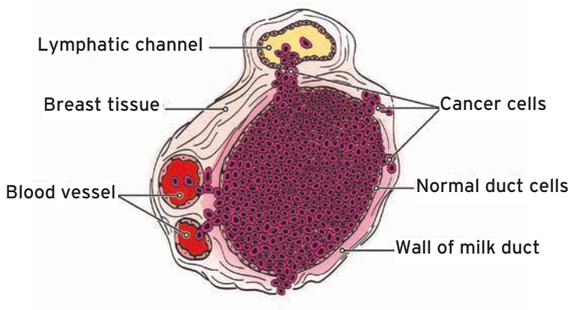
Grade 1 (well differentiated/low grade): The cells are similar to normal cells.

Grade 2 (moderately differentiated/ intermediate grade): The cells show some amount of change from the normal cells.

Grade 3 (poorly differentiated/high grade): The cells are unlike normal cells.

Angiolymphatic Space Invasion

This tells whether your cancer has spread to the blood vessels or lymphatic system around your tumor. It is best when no invasion is seen.



ER/PR Status

Tumors are tested for whether or not they depend on estrogen and progesterone to grow:

- ER (estrogen receptor) positive — depend on estrogen to grow.
- ER negative — do not depend on estrogen to grow.
- PR (progesterone receptor) positive — depend on progesterone to grow.
- PR negative — do not depend on progesterone to grow.

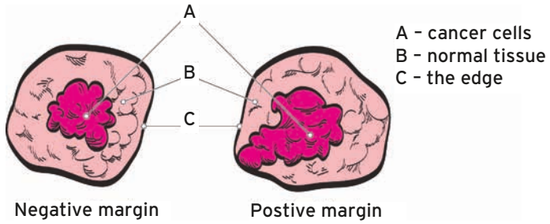
If the tumors are positive, a percentage is given that shows how positive the tumor is for estrogen and/or progesterone. ER and PR status is very helpful in deciding what type of treatment is needed.

HER2/neu Status

This test is done to note the number of HER2/ neu receptors on the surface of the tumor cells. The amount of HER2/neu receptors present may help your doctor know if your cancer will respond to certain treatments.

Margin Status

The margins are the edges of the tissue that was removed. The report will state if there is cancer at these edges. The goal is to have a margin of healthy tissue that is free of cancer cells removed from around the tumor. If the margins are not free of cancer cells, your surgeon may want to remove more tissue.



Status of Lymph Nodes

This part of the report tells how many lymph nodes were found. Some patients may have a single node or several sentinel lymph nodes removed. Others may have multiple nodes removed. When sentinel lymph nodes have breast cancer in them, often more lymph nodes are removed in a procedure called an axillary lymph node dissection. Your doctor cannot tell the number of nodes removed at the time of an axillary node dissection. It is only after the pathologist looks closely at the tissue removed and finds the lymph nodes that your doctor will know how many were removed. All lymph nodes are examined, and the report will tell how many were found and how many nodes have cancer in them. These are called positive lymph nodes. The presence and number of positive lymph nodes are very important factors in determining treatment.

Stage

The stage of your cancer is determined by combining:

T – the size of your tumor.

N – the number of lymph nodes positive for cancer.

M – metastasis, which is determined from the results of other tests such as bone, liver, and brain scans. These tests are often performed to help in treatment decisions or if you have symptoms that make your doctor concerned about possible spread of your cancer.

Your Healthcare Team

Doctors

Many doctors work together in providing your care. Each has responsibility for different aspects of care. Although it can be hard to decide which doctor you should call, contact the doctor who is most involved with your care for the problem you are having. Be assured that if you do contact the wrong doctor, you will be directed to the correct one.

Surgeon – The surgeon operates to remove the cancerous area and continues to monitor your health over time.

Pathologist – The pathologist studies and identifies cancerous cell types and their characteristics in the tissues removed from your breast. The pathologist provides a report to the surgeon and to the medical and radiation oncologists, which helps them determine what treatment will best meet your needs.

Medical Oncologist – The medical oncologist specializes in the medical treatment of cancer, prescribes and manages your chemotherapy, and often oversees hormone therapy. He or she monitors your health over time and checks for the development or recurrence of other cancerous areas.

Radiation Oncologist – The radiation oncologist specializes in treating cancer with radiation. He or she manages the radiation therapy treatments you receive and sees you about once a week while you are receiving radiation therapy.

Plastic Surgeon – For women choosing breast reconstruction, this doctor operates to rebuild your breast and may alter your healthy breast so that your breasts look similar.

Primary Care Doctor – Primary care doctors are often family practice or internal medicine physicians. Your primary care doctor may see you for certain healthcare needs during your treatment for breast cancer.

Radiologist – The radiologist specializes in interpreting mammograms, X-rays, ultrasound readings, scans, and other imaging procedures.

Other Healthcare Team Members

Breast Oncology Nurse Navigator – This nurse works for the hospital and provides information, education, and support to you and your family. She is available through all of your treatments and even afterward if you desire. She can refer you to support groups, classes, and other resources in the community.

Registered Nurses – Registered nurses are important resources for you as you move through your cancer care. They will be caring for you in the hospital for your surgery and during other treatments such as chemotherapy and radiation therapy.

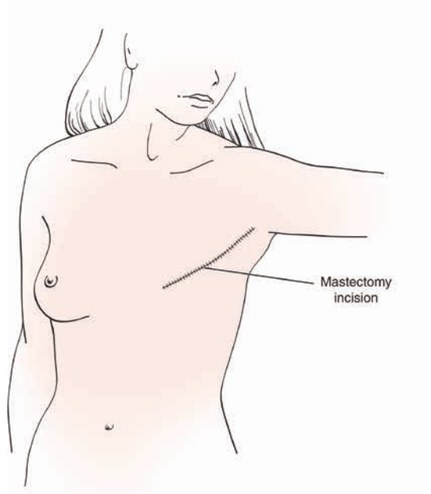
Other Team Members – A number of other clinicians will work with you as needs arise. These include social workers, discharge planners, case managers, dietitians, and hospital chaplains. You may also be referred to an occupational, physical, or lymphedema therapist.

Surgery

Types of Surgery

A woman has many different options for treatment of her breast cancer: mastectomy without reconstruction, skin-sparing mastectomy with reconstruction, nipple-sparing mastectomy, lumpectomy (also known as partial mastectomy or breast-conserving surgery) followed by breast radiation, and oncoplastic surgery. A sentinel lymph node biopsy, or less commonly an axillary lymph node dissection, may also be performed as a part of surgery for invasive breast cancers. Your surgeon will help you decide which treatment option may be the best choice for you.

Mastectomy (Simple Mastectomy, Skin-Sparing Mastectomy)



During a simple or skin-sparing mastectomy, all of the breast tissue and nipple-areola complex are removed. This surgery is typically performed with a sentinel lymph node biopsy or an axillary lymph node dissection. Mastectomies may also be performed prophylactically (removal of a normal breast to decrease risk) in patients with a strong personal or family history of breast cancer.

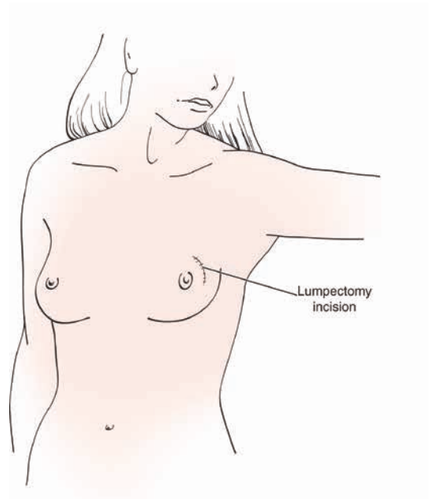
> ***"Knowledge is power.... When you understand, you can become an active participant, choosing treatment because it is in your best interest. Having made the choice, you will feel much more in control, and much less like a victim."***
>
> – RONNIE KAY, *Spinning Straw into Gold*

A skin-sparing mastectomy leaves much of the breast skin, which allows the reconstructed breast to look more natural. In some cases, a nipple-sparing mastectomy can be performed, in which all the breast tissue is removed, but the nipple-areolar portion is left intact. This is not possible in all breast cancers. The size and location of the cancer within the breast may eliminate this as an option.

A modified radical mastectomy includes removal of the entire breast, nipple-areola complex, and axillary lymph nodes. An axillary lymph node dissection is usually needed if your lymph nodes contain cancer.

The mastectomy incision leaves a horizontal, slightly curved line across the side of the chest where the breast was removed. Women may choose to have breast reconstruction as part of their surgery, or use a breast prosthesis afterward. Options for breast reconstruction include implants (may be performed in two stages, with the first stage often performed by the plastic surgeon at the time of mastectomy) or tissue (flap) reconstruction. After the removal of the breast, with or without reconstruction, one or more drains are placed in the surgical area, and a woman may stay overnight in the hospital.

Partial Mastectomy or Lumpectomy



Partial mastectomy, also known as lumpectomy or breast-conserving surgery, involves removal of the cancerous area of the breast with a border or margin of normal breast tissue surrounding the cancer.

A breast wire or tag localizer may be done before a lumpectomy or partial mastectomy.

A sentinel lymph node biopsy or an axillary lymph node dissection may be performed at the time of the lumpectomy.

In most patients, the lumpectomy or partial mastectomy is followed by radiation therapy to the affected breast. There are several types of radiation after breast-conserving surgery, and your surgeon and radiation oncologist will discuss these types with you. Most women receive whole-breast radiation therapy after surgery.

Lumpectomy/partial mastectomy with radiation is a treatment that provides the same survival benefit as a mastectomy.

A partial mastectomy or lumpectomy may not be a good choice for a woman who:

- Is pregnant and therefore should not expose the unborn child to the effects of radiation.
- Has two or more areas of cancer that are not close together in the same breast.
- Has a pacemaker or defibrillator on the same side of her cancer.
- Has already had whole-breast radiation therapy to the same breast.
- Has a tumor that is located near the nipple or chest wall.
- Is unable or unwilling to have radiation therapy.
- Has a large tumor in a relatively small breast.

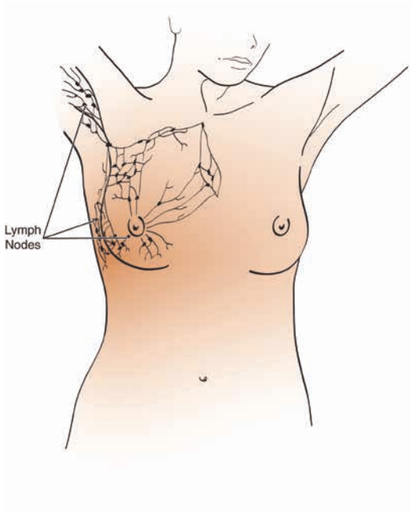
However, a patient with a large tumor may receive chemotherapy before surgery (called neoadjuvant therapy) in an attempt to shrink the cancer down, which can make her a better candidate for a lumpectomy. If this is an option for you, your surgeon and medical oncologist will discuss this with you.

Localization Procedure Before Breast Surgery

Your surgeon may order the placement of a breast localization device before your surgery. The localization device marks the clip that was placed at the time of your biopsy. The clip marks the cancer area to be removed. The localization device guides your surgeon during surgery to the exact tissue that needs removed.

Either a wire or a tag can be used to localize a positive biopsy clip. Your physician will order the one best for your situation.

Sentinel Lymph Node Biopsy and Axillary Node Dissection



For most women with early-stage breast cancer, the cancer has not moved from the breast. For stage 0 cancer (DCIS – ductal carcinoma in situ), the cancer has been caught early enough that, by definition, it will not be seen in the lymph nodes. For stage 1 and above breast cancers, your surgeon needs to make sure there is not microscopic spread of cancer to the lymph nodes, and this is done with a sentinel lymph node biopsy. Your surgeon will discuss whether you need a sentinel lymph node biopsy.

The sentinel nodes are the first lymph nodes in the chain of nodes draining the breast. If the breast cancer has moved from the breast to the axilla (underarm area), it will be seen in the sentinel lymph nodes. A patient has anywhere from 1 to 4 sentinel lymph nodes, and for each patient, it is a different number. During surgery, these nodes are identified and removed and are inspected by a pathologist to see if they contain cancer cells.

In order for the surgeon to locate the sentinel nodes, a radioactive substance is injected into the breast, near the nipple, before surgery. This may cause stinging, which will ease. Many doctors also inject a blue dye into the breast during the surgery, which also aids in detecting the nodes. During the surgery, the surgeon finds the sentinel nodes using an instrument that is like a Geiger counter, and also looks for blue discoloration of the nodes.

Sometimes women who have had the blue dye injected into their breast find that their urine is bluish-green for a short time after surgery or that their skin may be somewhat blue.

For staging purposes of your breast cancer, it is critically important to see if there are cancer cells in the lymph nodes and, if so, how many lymph nodes are involved.

If the sentinel nodes do not contain cancer cells, the surgeon does not need to remove any more lymph nodes. If the sentinel nodes do contain cancer cells, the surgeon may remove more lymph nodes.

This is called a complete axillary lymph node dissection. You may need to have a drain placed in the axilla after a complete node dissection.

There may be numbness or tingling in the underarm or the upper back of the arm after lymph node removal. If this occurs after only sentinel nodes are removed, it will last only days or weeks. When this occurs after an axillary node dissection, it may be more noticeable and may last longer. Although the degree of numbness will decrease over time, some slight numbness may be permanent.

For some women, it is known before surgery that cancer is in the lymph nodes. In these cases, a sentinel node biopsy may not be needed. Instead, the patient may undergo an axillary node dissection.

Your Surgical Experience

If you have a lumpectomy and a sentinel node biopsy, you will likely go home the day of your surgery. If you have a mastectomy and/or an axillary node dissection, you may spend the night in the hospital. Breast reconstruction surgery also requires at least an overnight hospital stay. If you have a drain in place after surgery, the nurses will instruct you and your family how to care for the drain before you go home. It is not difficult. Also, you will be asked to wear your surgical bra as much as possible after surgery, to decrease swelling at the breast and underarm sites. It is best to be fitted for your surgical bra in the days before your surgery so you know it will be comfortable. Some surgeons allow patients to shower with the drain in place and some do not. Be sure to ask your surgeon if you are allowed to do so.

Before Surgery

Before your surgery, you may need to have pre-admission testing. This can be done at the hospital or by your family doctor. You will be asked your medical history and will have a physical exam and blood work. You may also need an EKG or a chest X-ray.

You will need to bring a list of your medications. If you are taking a blood thinner, you may need to stop taking it a few days before surgery.

If you have a history of heart problems, the surgeon will need to have your cardiologist okay you for surgery (called “clearance”). Most women with early-stage breast cancer do not need bone scans, CT scans, or PET scans, just baseline blood work, which will be ordered before surgery.

Your Breast Oncology Nurse Navigator will contact you to schedule your My Plan appointment before your surgery. At this appointment you will receive information that supports your doctor’s plan of care and information about survivorship programming. You will also have a surgical bra fitting. Your navigator can connect you to other resources that may be helpful to you.

The pre-operative nurses will call you the day before your surgery to tell you what time to be at the hospital and what medications you may take before your surgery.

You will also be reminded to:

- Not eat or drink anything after midnight the night before your surgery.
- Wear comfortable clothing that is easy to change.
- Remove your jewelry and any piercings before coming to the hospital.
- Not bring any valuables.
- Have someone drive you to and from the hospital.
- Arrange for someone to stay with you for 24 hours if you go home the same day.

Day of Surgery

First, you will go to the registration department. From there, you will go to the pre-operative holding area to get ready for your surgery:

- You will be asked to give your name, date of birth, and Social Security number.
- Your surgical site will be marked.
- Your anesthesiologist will review your medical and surgical history and ask you about any problems you may have had with anesthesia.
- You will sign a consent form for anesthesia.
- You will also need to sign a consent form for surgery after all your questions have been answered.
- You will have an identification bracelet placed on your arm. You will also be given an allergy bracelet (if applicable).
- An IV (intravenous) line will be placed in the arm opposite from the side of your surgery.

You will also meet the operating room nurse, who will check your ID bracelet and ask about any allergies, the last time you had anything to eat or drink, and your birth date. The correct surgical procedure and site marking will be verified again.

You may have family members stay with you until your surgery. Your surgeon will see you before surgery. This will be a chance for you to review any questions you may still have.

Your Surgery

The operating room will feel cool and the lights will be bright. There will be several other people in the room besides the surgeon and anesthesiologist — nurses, aides, and scrub techs. The staff will get you positioned on the table and can cover you with warm blankets. You will have leg pumps placed to prevent blood clots. Your surgical team will once again verify the surgery site and procedure before the start of your surgery. The anesthesiologist will place an oxygen mask on your face and give medication in your IV to help you drift off to sleep. The length of your surgery will depend on the type of surgery you are having. A lumpectomy with sentinel lymph node biopsy takes 1 to 2 hours, a mastectomy without reconstruction takes 1½ to 3 hours, and a mastectomy with implant reconstruction takes 2½ to 4 hours. A mastectomy with a flap type reconstruction will take longer.

After Surgery

When your surgery is finished, you will be moved to the recovery room — the Post Anesthesia Care Unit (PACU). When you wake up, your throat may feel sore and your mouth may feel dry from the tube that was placed into your airway during surgery. You may be able to have some ice chips.

Your nurse will be checking your pain level and will ask you to rank your pain on a scale from 0 to 10. You will be given medication for pain as needed. Many women report less pain than they expected to have after surgery, but tell the nurse how you are feeling so you can keep the pain managed.

You will stay in the recovery room about 1 to 2 hours. If you are going home, you may be given something for pain to help you stay comfortable during the ride home. You will need someone to drive you home and stay with you for 24 hours. You cannot be left alone during the first 24 hours because the anesthesia and pain medication may cause you to feel dizzy and unsteady.

If you are staying in the hospital, once you are awake you will be moved from PACU to another room. Nurses and patient care assistants will be taking care of you. The first time you get up, you need to call for help to make certain you can walk safely.

You can have liquids and food, as tolerated, as long as you do not have nausea from anesthesia. Your IV will remain in place until you are taking liquids well, your pain is controlled, and any ordered IV antibiotics are completed.

Your incision will be covered with a dressing. This will be left in place until your doctor allows you to remove it. Your drains will be emptied as needed. These help to keep fluid from building up at the site of your surgery, and if you have them, the nurses will instruct you how to care for them at home. You will be asked to wear your surgical bra after surgery to decrease swelling at the surgery site. Some swelling and bruising are normal. If swelling continues to increase, contact your surgeon.

Follow-up Care

You will need time to recover from your surgery. You may feel tired, and it often takes several weeks to regain your usual energy level. Sleep and rest as needed. You should not drive as long as you are taking any pain medication, if your pain remains high, or if you are unable to use your arm normally on the surgical side. Your emotional recovery may take longer than your physical recovery. Be patient with yourself and ask for support from others.

Call your doctor if:

- You have nausea or vomiting that persists — this is usually due to narcotic pain medications, so if possible, stop these medicines and try Tylenol or ibuprofen.
- Your drains are accidentally pulled out.
- Your drains are clogged.
- There is a foul odor, discharge, or redness at the drain site.
- Your dressings are soaked with drainage.
- You have a temperature over 101.5°F.

You will see your surgeon in about 1 to 3 weeks. Please call the office to make your follow-up appointment. Do not hesitate to call if you think you are having surgical issues before your scheduled appointment.

Your surgeon will have your final pathology report to review with you in the office and will give you a copy for your records. Drains will be removed in your surgeon's office. You may have Steri-Strips or skin glue placed on the incision, which likely has dissolvable sutures as well. If Steri-Strips are still in place, they will usually be removed in the surgeon's office. These look like small pieces of tape and are used to protect your incision until it is more healed.

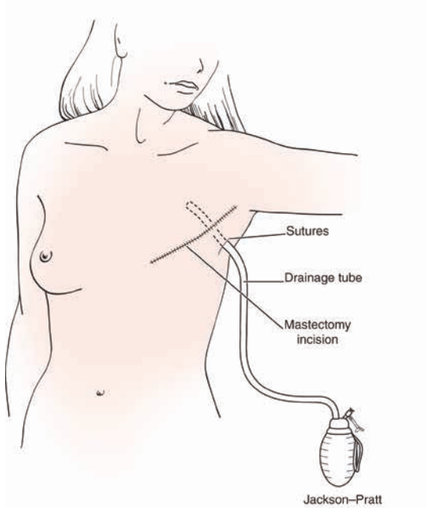
During the first follow-up visits after surgery, any needed referrals to a radiation oncologist or a medical oncologist will be made unless you met with these doctors before surgery. Your surgeon will give you a long-term follow-up plan for your breast cancer. After recovery, you will see your surgeon between 1 and 4 times yearly, for at least the first 5 years after surgery. You may also have follow-ups with the radiation and medical oncologists.

Caring for Drains

You may go home with at least one drain. Your nurse will show you how to care for it before you leave. You may attach the drainage bulb to your surgical bra to prevent it from pulling loose or tugging on the skin.

Emptying Your Drains

Empty your drain(s) at least twice a day or when it is nearly full. Follow these steps:



1. Wash your hands well before and after emptying your drain.
2. Pop off the top of the container.
   - Be careful to keep the end of the drain clean.
   - Avoid touching the inner tip.
3. Turn the container upside down and empty the fluid into the plastic measuring cup you have been given. Leave the top off of the drain.
4. "Strip" the drain tubing. The tubing can get clogged, which prevents fluid from draining to the bulb. You can break up these clogs by using your fingers to squeeze or "strip" the length of the tubing. Strip the tubing in the morning and evening after emptying the drain. To strip the tubing:
   - Firmly hold the top of the drain tube closest to where it exits your skin to prevent the drain from pulling on the skin.
   - Using your other hand, pinch the tubing with your thumb and index fingers until the tubing is flat.
   - Slowly pull your pinched fingers down the entire length of the tubing towards the bulb. Avoid damaging the tubing with your fingernails. You may pause and slide your top hand down to meet the bottom hand and continue stripping the tubing. This may be done several times to allow easier stripping along the entire length of the tubing.
   - Add any fluid from stripping the drain to the measuring cup
   - Use the Breast Surgery Drain Record to record the amount of fluid emptied, along with the date and time.
5. Squeeze the container to remove the air and close the top.
6. If you have a dressing around the drain site, change it to keep it clean and dry.

Call your doctor with questions about caring for your drain or if you have signs of infection such as odor or redness around the skin. The drains will be removed in your physician's office once the output is less than 30 ml for several days. Be sure to take the Breast Surgery Drain Record with you to your post-surgery visit with your doctor.

Diet

Eat a well-balanced diet and drink at least 8 glasses of water a day. Be sure you eat enough protein (from lean meats, fish, and poultry, as well as tofu, eggs, cheese, beans, yogurt, and milk) to promote healing. Protein helps strengthen your immune system and connective tissues, which helps prevent lymphedema. You should also avoid alcohol and smoking.

Activities

Some women find that their underarm area is the most uncomfortable part of their body after surgery. You may find that:

- You are not able to fully raise that arm for a time after the surgery.
- Your underarm area feels tight.
- You have some numbness or tingling at first in that underarm or in the upper back part of that arm.
- These areas may also feel hypersensitive.

The symptoms should gradually decrease as the area heals and more normal sensation returns. It is important to use your arm for:

- Washing your face and bathing
- Brushing your hair
- Dressing

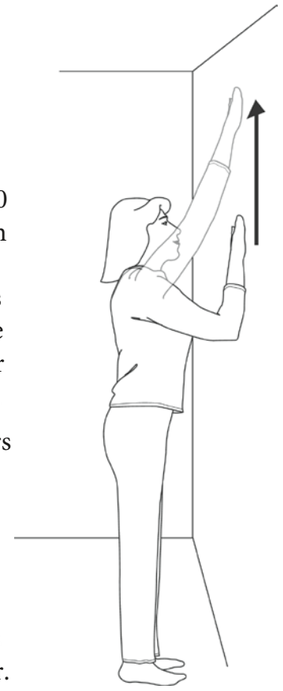
Questions to ask your doctor about activity include:

- When can I shower?
- When can I drive?
- When can I go back to work?
- When can I do housework?
- When can I begin exercising?
- When can I resume lifting?

Once your drains have been removed, your surgeon may recommend you begin the wall climbing exercises (below). Another way to begin to work your hand and arm muscles is to squeeze a ball. Avoid lifting anything over 5 pounds with your operative arm for the first 2 weeks.

You can do wall climbing (or walking) different ways, exercising one or both arms at a time. Doing both of the ways shown below will work your rotator cuff muscles in different directions. This will increase your range of motion.

Climbing the Front Wall – Facing the Wall



1. Stand facing the wall with your toes about 8 to 10 inches away from the baseboard. Place your hands on the wall at eye level. This is your starting position.
2. Walk your fingers straight up the wall, climbing as high as you can. Feel your shoulder joint and arm muscles working together. Move your body closer to the wall if you are able to reach up that high.
3. Hold your hands at the highest point you can manage for about 15 seconds.
4. Relax your arms and let them slide down to your starting position.

Repeat 3 to 5 times. Your goal is to be able to raise your arms overhead as far as possible.

Climbing the Side Wall – Side to Wall

1. Stand with your surgery side to the wall with the side of your foot about 8 to 10 inches away from the baseboard. Move this hand about 2 hand-widths forward or at least at a 30-degree angle from your body. This is your starting position.
2. Walk your fingers up the wall, climbing as high as you can. Feel your shoulder joint rotating and your upper arm muscles stretching. Walk your hand up the wall, straightening your elbow as you go. Move your body toward the wall if you are able to reach higher.
3. Hold your hand as high as you can manage for about 15 seconds.
4. Relax your arm and return to your starting position.

Repeat 3 to 5 times with each arm. This helps work your shoulder joint and upper arm muscles for greater flexibility.

Once you have completely healed from your surgery, one of the best forms of exercise for arm strength and range of motion is swimming. This may help to prevent any lymphedema.

Avoid sudden overuse and repetitive motion with your operative arm. When you overuse your muscles, they may tire and not contract properly to move lymph fluid.

Breast Reconstruction

Insurance Covers Breast Reconstruction

The 1998 Federal Breast Reconstruction Law mandates that insurance companies cover reconstruction after mastectomy. This includes all types of breast reconstruction, including operations on the healthy breast to make your breasts look similar.

You Don't HAVE to Have Reconstruction – It's an Option

Breast reconstruction is a personal decision, and each woman should learn about her options. You may decide that you do not want the extra surgery, or that you don't need it because you feel comfortable with your appearance. If you don't have reconstruction, you may opt to wear a breast prosthesis.

A reconstructed breast will not look, function, or have sensation like a natural breast. Your plastic surgeon will create a new breast and nipple using an implant or your own tissue.

When to Have Reconstruction

Breast reconstruction can be done at the time of your surgery (immediate reconstruction), or it can be done months or years later (delayed reconstruction). Immediate reconstruction allows you to have fewer surgeries. But if you decide breast reconstruction is not for you at this point, you can always change your mind anytime in your life and have reconstruction when you and your plastic surgeon think you are ready.

Some medical conditions such as diabetes, obesity, high blood pressure, and smoking may affect when you have reconstructive surgery and the type of surgery you can have. Your doctors will discuss this with you.

Breast reconstruction is performed by a plastic surgeon. With immediate reconstruction, your breast surgeon and plastic surgeon will work together as a team during your surgery. In delayed reconstruction, your surgery will be done by your plastic surgeon and may even be done as outpatient surgery depending on the type of surgery you choose. You can have the surgery when you and your surgeon feel you are ready.

Reconstruction Options

There are two main types of breast reconstruction: using a tissue expander to stretch the skin and muscle and then exchanging that for an implant, or using your own tissue to create a breast. Your plastic surgeon will discuss with you what types may be an option for you, based upon your overall health and physical condition.

Reconstruction with Implants and Tissue Expanders

The tissue expander is like a water balloon that is temporarily placed under the chest muscle and breast skin after your mastectomy. It is expanded with saline as much as possible during the operation — but the amount of skin left after your mastectomy limits full expansion. Patients usually stay in the hospital 1 to 2 days.

After you recover from this operation, you will follow up in the plastic surgeon's office to have the tissue expander filled with more saline to gradually stretch the expander to its full size. This will help your body create new skin and muscle to cover the expander and create a full-sized breast.

The amount of time it takes to fill the expander depends on how large a breast is being made and how much fluid you can tolerate being put into your expander each time. With each fill, you will feel a tightness under the muscle as the expander gets larger. The entire filling process usually takes about 1 to 4 months.

The tissue expander is then exchanged for a permanent breast implant in a short outpatient procedure — you can go home the same day. The permanent implants used are the same as are used for breast augmentation: saline or silicone.

Flap Reconstruction

A flap is a piece of one's own tissue (skin, fat, and sometimes muscle) that is moved from one area of the body to the chest to create a new breast. Because your own tissues are used, a flap procedure may result in a breast that appears and feels more natural.

In general, flap reconstruction procedures are more involved than implant reconstructions. The length of surgery is about 4 to 5 hours for one breast and 6 to 7 hours for both breasts. Longer times may be needed for difficult cases. In addition to the scars on the reconstructed breast, there will also be incisions and scarring on the abdomen.

Flap reconstruction procedures can be described according to the method by which they are moved:

Pedicled Flaps

Pedicled flaps remain attached to the body by a bridge of tissue when they are rotated to a new location. These generally require muscles to be included with the flap tissues. The most common type is:

Pedicled TRAM (Transverse Rectus Abdominis Musculocutaneous) Flap

With a TRAM flap, one end of the muscle remains attached in the abdomen. The muscle and fat are tunneled under the skin to reach the breast area. There is a risk of muscle weakness because the "six-pack muscle" is removed from the abdomen.

Free Flaps

Free flaps are completely removed from the body and transplanted to a new location. The surgeon uses microvascular techniques to reattach the blood vessels of the flap to the blood vessels on the chest. This type of surgery allows the muscle to remain intact and prevents muscle weakness because the flap only consists of skin and fat, not muscle. There is less pain and less risk of abdominal weakness and bulging (hernia). Types of free flaps include:

Latissimus Dorsi Flap

This flap uses the tissue from your upper back to create a new breast. Because the amount of available tissue is often not enough to create a full breast, an implant is usually used as well.

DIEP (Deep Inferior Epigastric Artery) Flap

The DIEP flap leaves the muscle and its fibrous covering (fascia) largely intact. Skin, fat, and the deep inferior epigastric vessels are completely separated from the abdomen and reattached at the chest.

SIEA (Superficial Inferior Epigastric Artery) Flap

The SIEA flap is similar to the DIEP flap, but uses blood vessels that are closer to the surface of the abdominal wall. While it can reduce pain and the risk of abdominal bulging (hernia), it is rarely an option because the blood vessels closer to the surface are often not large enough.

Muscle-Sparing Free TRAM Flap

To make this flap, a small portion of six-pack muscle is used along with the skin and fat. Because it is a free flap, blood vessels need to be reattached.

After Flap Reconstruction

You will be in the hospital about 3 to 5 days. You may have one or more of the following right after surgery:

- Oxygen by mask over your mouth and nose, or by a tube in your nose
- An IV line for pain and antibiotic medications
- Compression or support stockings, which may be attached to plastic sleeves placed over your lower legs and connected to a pump that inflates and deflates to help promote circulation in your lower legs and prevent blood clots
- A catheter to drain your bladder
- Ice chips after surgery, then liquids, progressing to a regular diet

Breast reconstruction may not be for everyone. Carefully consider all of the reconstruction options and spend time talking to your plastic surgeon to decide if it is right for you. Your breast surgeon, medical oncologist, and radiation oncologist also need to have input on your final decision.

The Other Breast

If your other breast is a very different size than your reconstructed breast, your plastic surgeon can perform a procedure to make your breasts more symmetrical. These types of procedures are generally covered by your insurance company as well. Your other breast may need a lift (mastopexy), reduction, or augmentation (enlargement) to look similar to the reconstructed breast.

Nipple Reconstruction

This can be done 3 to 6 months after your first surgery. The plastic surgeon creates a three-dimensional nipple using the tissue on your breast. The areola (the dark part around your nipple) is created using a skin graft or a tattoo. This is an outpatient procedure, so you can go home the same day.

Breast Prostheses

If your treatment includes a total mastectomy, you may want to visit a store that sells and fits breast prostheses, mastectomy bras, swimsuits, and lingerie. Partial prostheses for women who have had a partial mastectomy/lumpectomy are also available. Mount Carmel has certified fitters who can meet with you, so please ask your Breast Oncology Nurse Navigator or surgeon for a referral.

It's best to wait to be fitted for a permanent prosthesis and mastectomy bra until about 6 to 8 weeks after surgery. A temporary, fiber-filled prosthesis will be provided by the fitter at the time of your surgical bra fitting or by the Breast Oncology Nurse Navigator before your surgery. This temporary prosthesis can be worn in a surgical or other bra until you have a permanent prosthesis.

To obtain a permanent, silicone-filled breast prosthesis and bras with pockets to hold it, your surgeon will write a prescription so that your insurance or Medicare can be billed for these items. You will want to check to make sure the shop you visit accepts your insurance. An appointment for a fitting should be made in advance so that you have enough time with a fitter to make a decision about which prosthesis and bra styles you prefer.

The Mount Carmel Cancer Care Boutique also carries swimsuits, exercise and leisure wear, and other items.

For information about various boutiques and their services, refer to the insert sheet in the front pocket of this booklet.

Treatments

Radiation Therapy

Radiation therapy is likely to be part of your breast cancer treatment if you have a partial mastectomy/lumpectomy. It is sometimes part of the treatment after a mastectomy. The purpose of radiation therapy is to use high-energy X-rays to destroy any cancer cells that may remain in the breast and to limit the risk of cancer recurring at the surgery site.

Before your radiation treatments begin, you will meet with a radiation oncologist, a doctor who specializes in the use of radiation to treat cancer, to discuss which treatment is best for you. In the case of breast cancers, there are multiple ways to give radiation therapy:

- The most common way to receive radiation is through external beam radiation to the whole breast. It is given by a machine called a linear accelerator. The treatment is daily, Monday through Friday, and can last anywhere from 4 to 6 weeks. Side effects to the breast are usually mild. The two most common side effects during the course of treatment are skin irritation and fatigue, which can increase as you receive more treatment.
- Some women can have partial breast irradiation using HDR (high-dose-rate) brachytherapy. A catheter is implanted into the breast by your surgeon and then treatment is delivered twice a day for 5 days. The catheter is removed after treatment is completed. Side effects with partial breast irradiation are usually mild as well. There is a small risk of infection at the catheter insertion site and inside the cavity. Your doctor and nurse will watch for any signs of infection. There could be red or bloody drainage around the catheter for the first few days. As with external beam radiation, patients can have some skin irritation and fatigue from these treatments.
- Intraoperative radiation therapy (IORT) is a new form of radiation therapy delivered in a single dose that is given in surgery while under anesthesia. IORT can reduce the time of treatment, radiation exposure and some of the potential side effects of conventional radiation therapy for women undergoing breast conservation surgery (lumpectomy or partial mastectomy).

  There is very specific criteria that must be met to be eligible to receive IORT. Your physicians will determine whether IORT is an appropriate treatment for your cancer type.

> ***"I read somewhere that you can't change the direction of the wind, but you can adjust the sails. It reminds me that we have the power to chart the course of our own lives regardless of the circumstances. Healing comes in the attitude that we bring to our lives and to our illness."***
>
> — VELMA WAGNER, *Silver Linings*

Oncotype Dx Test

The Oncotype Dx test is used in women with early-stage breast cancers that are estrogen and/or progesterone receptor positive and lymph node negative. Breast cancer tissue that has already been removed from the breast is sent to a special lab where certain genes are analyzed to rate that specific woman's risk for a breast cancer recurrence.

The breast cancer is designated as being at low, intermediate, or high risk for recurrence. These results are used to help guide decisions regarding needs for chemotherapy.

- Breast cancers that are at low risk for recurrence generally do not need treatment with chemotherapy.
- Results that come back as intermediate risk are discussed further by the oncologist and patient to decide what treatment would be best.
- Results that are high risk generally do need chemotherapy.

This test allows some women who are at low risk, who in the past would have had chemotherapy, to forgo this treatment and avoid all its potential side effects and risks. However, this test, though helpful, should not be the sole factor in deciding whether chemotherapy should be given. Results need to be used in the context of the complete clinical picture.

The Oncotype Dx test is covered by most, but not all, insurers. It is important to check your coverage before agreeing to the test, as it is quite costly.

Oncotype Dx is the most widely used risk stratification tool in the United States, but there are others using different methods that may also be used by the oncologist in certain circumstances, such as Mammostrat and Mammoprint.

Chemotherapy

Following surgery, systemic (body-wide) anti-cancer treatment is often recommended to eliminate any microscopic tumor cells that might remain in the body. This type of therapy is called adjuvant therapy, and it is a very important part of breast cancer treatment. Adjuvant systemic therapy may significantly decrease the chance that the cancer will return (or recur), and it may also improve a woman's chance of surviving her cancer. In certain circumstances, systemic therapy is given before surgery, and this is called neoadjuvant chemotherapy.

There are three options for systemic adjuvant therapy of early-stage breast cancer: endocrine therapy (anti-hormone therapy), chemotherapy, and biologic targeted therapy with trastuzamab (Herceptin). The choice of which of these treatments is recommended depends upon whether the breast cancer is hormone responsive (estrogen/progesterone positive), and how much it makes of a protein called HER2/neu.

Chemotherapy medications can be used in a number of different combinations. Most of the time, they are given by IV once every 1, 2, or 3 weeks. Because chemotherapy is based on each woman's pathology, needs, and overall health, you may have a different schedule than someone else. Also, as new findings emerge from breast cancer research, the medications, combinations, doses, and schedules can change. Your chemotherapy nurse can provide you with more information on your specific medications, what to expect, and how side effects are managed.

Chemotherapy agents target cells in the body that grow quickly. This can result in side effects such as hair loss, changes in blood cell counts, and nausea. The most important thing to remember when chemotherapy

is recommended is that each person has a somewhat different response to these medications. Some people have many side effects while others have very few. No matter what stories you may hear about how other people felt during their treatment, your experience may be different.

Biologic Agents/ Targeted Agents

These types of drugs act only on the cancer cells. The most common of these in breast cancer treatment is Herceptin (trastuzumab). Herceptin may be used when a breast cancer is found to overexpress a specific protein called HER2/neu, which occurs in about 25% of cases.

Herceptin tends to have fewer side effects than standard chemotherapy does. It usually does not cause nausea, hair loss, or blood cell count changes. If you start treatment with standard chemotherapy agents and continue Herceptin after the other chemotherapy is completed, your hair may grow back while having IV Herceptin treatments. Herceptin can occasionally cause a reversible form of heart failure. Your doctor will likely have you get periodic evaluation of your heart with an echocardiogram or MUGA scan while you are on Herceptin.

There are other "targeted" agents that may be used for breast cancer in certain circumstances.

Anti-hormone Therapy

Anti-hormone therapy is medication that alters how the body's hormones behave. It is used to decrease the chance of recurrence and/or the spread of some breast cancers.

Estrogen and progesterone are female hormones produced in the body, mainly by the ovaries. They are also produced in smaller amounts by other organs. If your pathology studies reveal that the tumor cells are "estrogen/progesterone receptor positive," it means that these hormones may contribute to the growth of your breast cancer. If your tumor is "estrogen/progesterone receptor negative," these hormones do not affect the breast cancer's growth.

When the pathology report shows the breast cancer to be estrogen or progesterone receptor positive, and you are premenopausal, your oncologist may prescribe tamoxifen. This is a pill that helps prevent naturally occurring estrogen in the body from acting on breast cancer cells. Tamoxifen is the only anti-hormone medication that is effective in women who have not yet undergone menopause. The recommended length of time for a woman to take tamoxifen is 10 years.

In women who have gone through menopause, and have estrogen- and/or progesterone-positive breast cancer, anti-hormone medications called aromatase inhibitors, or AIs, may be prescribed. AIs are used only in women who have already gone through menopause, due to the way in which these medications work. Although AIs work differently than tamoxifen, the end result is the same — a decreased effect of estrogen on breast cancer cells. Arimidex, Femara, and Aromasin are commonly used AIs. Sometimes in women who are postmenopausal, tamoxifen may be given alone or after an AI has been taken. The length of time of anti-hormone treatment for this group of women may be 5 years or longer.

Anti-hormone medications, like all medications, may cause some side effects. Tamoxifen may bring about side effects like those of menopause. These may include hot flashes, vaginal dryness, menstrual periods stopping, or decreased sexual desire (libido). Side effects of AIs can also include joint and muscle arthritis-like discomfort and bone loss (osteoporosis). Women who have been through menopause who are taking AIs may have renewed or increased menopausal symptoms.

If you were taking any hormone replacement medication before your breast cancer diagnosis, you will likely be told to stop taking it. Stopping hormone replacement medications may also bring about symptoms of menopause. See page 38-40 for ways to deal with these symptoms.

Clinical Trials

A clinical trial is a research study conducted with patients to evaluate a new treatment or a change in a treatment that is already in use. The goal of this research is to find new and better ways to treat cancer and to help cancer patients. Before a new treatment is offered, it is carefully studied in the laboratory and needs to show promise of good results. Clinical trials help find out if new or changed treatments are safe and effective for patients.

Participation in a clinical trial is entirely voluntary. You may be interested in or asked to enter into a clinical trial. Learn as much as you can about the trial before you decide whether to participate.

Patients take part in clinical trials for many reasons. One reason may be a hope of feeling better or of living longer. Patients often want to take part in a research effort that may help others in the future.

Every clinical trial has an action plan, called a protocol, which explains how the study will work. This is reviewed by an independent committee to ensure that the research will not expose patients to extreme or unethical risks. Each study's protocol describes what is required for patients to take part in the study.

It is important that you know your rights and protections with clinical trials:

- Taking part in a clinical trial (study) is up to you.
- You will receive the same quality of care whether or not you take part in a study.
- If you do enter a study, doctors and nurses will carefully follow your response to treatment throughout the research.
- If your doctor suspects that a treatment may be harming you, you will be taken out of the study immediately. You may then receive other standard treatment.
- You have the right to leave a study at any time.

Before deciding to participate in a clinical trial, you must give informed consent. This means that you must be given all the facts about the study. These include details about the treatments and tests you may receive and about possible risks and benefits. You must sign an informed consent form before you can enter a study. Ask your doctor and the staff any questions you may have before signing the consent form.

You can also request a copy of the booklet *Taking Part in Cancer Treatment Research Studies.* Call the National Cancer Institute at 1-800-4-CANCER, or go to www.cancer.gov or www.clinicaltrials.gov.

Family History

Most breast cancers happen by chance and the cause is often unknown. About 90% to 95% of breast cancers are this type.

About 5% to 10% of breast cancers are thought to be hereditary — caused by abnormal genes passed on from parent to child. There is a greater chance that a person with the gene may develop cancer in a lifetime, but not all people with it will develop cancer.

Using your medical and family history, your doctor will assess your risks for hereditary breast cancer. Based on this, your doctor may refer you to a genetic counselor.

A genetic counselor is an expert in changes in genes that are related to disease. The counselor can tell you more about how likely you are to have hereditary breast cancer. He or she may suggest that you have genetic testing to look for changes in genes that increase your chances of developing breast cancer.

Cancer Genetics Program

The Mount Carmel Genetics Program provides cancer risk assessment, education, and research to identify high-risk families. The genetic counselor helps family members understand their risk for developing cancer as well as their options for preventing, detecting, and treating the disease. If you would like more information, please talk with your Breast Oncology Nurse Navigator or call the Mount Carmel Genetics Program at 614-234-6848.

Who should consider genetic counseling?

People who can benefit from genetic counseling include those who:

- Are very anxious about their cancer risk due to the number of cancer occurrences in their family
- Want more information about the genetic basis of their cancer — either acquired or hereditary

What happens when you see a genetic counselor?

During genetic counseling, your personal and family cancer history will be reviewed. This includes types of cancer and ages of diagnosis. A certified genetic counselor will then:

- Evaluate your risk of inherited cancer
- Describe genetic testing options
- Discuss the benefits and limitations of testing including insurance coverage and confidentiality
- Help you decide if genetic testing is right for you
- Explain the procedure for ordering genetic testing
- Talk to you about medical management options based on your family history and testing options
- Discuss the emotional impact on you and your family

If you have breast cancer and have a positive genetic test, your doctor will discuss with you how this result may affect your treatment decisions.

Managing Side Effects

Fatigue

Fatigue can occur during or after treatment. You may have a lack of energy for doing daily activities, including things that you normally enjoy.

Some of the causes of your fatigue may be:

- Stress, anxiety, or distress
- Trouble sleeping
- Nausea, vomiting, and diarrhea
- Problems with nutrition
- Low blood count such as anemia, a decrease in the number of red blood cells that carry oxygen to tissues

Some of the things you can do to help ease your fatigue include:

- Getting enough rest and sleep. Take a short nap in the morning or afternoon if you feel tired, but don't spend most of the day in bed.
- Staying active. Light, regular exercise such as walking can help your energy level. Plan to get some form of exercise each day.
- Eating as healthful and varied a diet as you can. Drink plenty of water or other fluids each day, unless you have been told by your doctor to limit fluids.
- Eating smaller meals throughout the day to give you more energy. Your body uses less energy to digest small meals.
- Allowing time to do the activities that you enjoy. Accept help from your friends or family members with meals, chores, and errands.
- Talking about your feelings with friends and family members with whom you feel comfortable.

> ***"The purpose of life, after all, is to live it, to taste the experience to the utmost, to reach out eagerly and without fear for newer and richer experience."***
>
> – ELEANOR ROOSEVELT, *quoted in The Climb of My Life by Laura Evans*

Hair Loss

One of your first thoughts when you learn that you need chemotherapy may be about losing your hair. These may be some of the questions that you need answers to:

Is there a medical term for hair loss? Yes. You may hear the word "alopecia," which means hair loss.

What causes hair loss during chemotherapy? Chemotherapy affects rapidly growing cells, and hair follicles are rapidly growing cells. Low-dose chemotherapy causes the hair shaft to constrict and break off. High-dose chemotherapy destroys the hair shaft.

Will I lose all my hair during chemotherapy? Depending on the type of chemotherapy you receive, your hair may thin, or you may lose all of it.

Will my hair come back? Hair loss due to chemotherapy is temporary. Your hair will grow back after your chemotherapy ends. It may grow back a different color or texture. For example, if your hair was straight, it may grow back curly.

What are some helpful ways to deal with hair loss?

- Wash your hair gently with a mild shampoo and conditioner.
- Cut hair as short as possible.
- Avoid teasing, curling, perming, bleaching, dyeing, and using hair spray.
- Use a soft-bristled brush.
- Wear a hairnet at night to prevent shedding.
- You may choose to wear a wig, scarves, and/or hats. Most women use a combination of these items over time. Some women prefer to go without any head covering.
- Depending upon the weather, you may need to keep your head covered to prevent sunburn or heat loss.

When should I buy a wig? Selecting a wig while you still have your hair will help you match your hair color and style, if that is your preference.

You may want to ask your doctor for a prescription, as some insurance companies cover at least part of the cost.

For detailed information about where to purchase these items, see the insert sheet in the front pocket of this booklet.

Lymphedema

Lymphedema is swelling of the breast area, arm, or hand that is caused by the accumulation of a protein-rich fluid. It may also include numbness or rashes on the affected arm. Lymphedema may occur right after your surgery, or sometimes weeks or years after surgery or radiation for breast cancer. Surgical removal of lymph nodes, radiation, infection, and trauma can all result in lymphedema. If you have had any lymph nodes removed from under your arm, you are at risk for lymphedema. There is a higher risk of lymphedema if you have a full axillary node dissection, because more lymph nodes are removed in that procedure.

The lymphatic system is a giant filtration system that keeps the body's fluids balanced and removes waste products. Lymph nodes are a part of this system and act as filters that remove waste products from your body. You have about 600 to 700 lymph nodes throughout your body.

There are lymph nodes under your arm, as well as in and around your breast. When lymph nodes or lymphatic tissues are damaged or removed in surgery, the lymph fluid may not drain as well from these areas. This backup of fluid is called lymphedema.

You are at risk for lymphedema in the arm that is on the same side where lymph nodes were removed or the same side where you had radiation. Chemotherapy, infections, and obesity (having a BMI greater than 30) also increase your risk of lymphedema.

Preventing Lymphedema

The most important thing you can do is to learn ways to help prevent lymphedema from occurring. You can become your own advocate by knowing ways to protect your arm and breast. If lymphedema does occur, recognizing early warning signs are important. It can be controlled if it is recognized and treated at an early stage. About 90% of those who develop lymphedema will show signs in the first 3 years.

Early Warning Signs

Know these early warning signs of possible lymphedema that should be checked by your doctor:

- Pain in your breast, arm, or hand that does not go away as you heal after surgery
- Heaviness, numbness, fullness, tightness, or tingling in your arm, hand, or fingers
- Redness or swelling in your hand, arm, or breast area
- Problems fitting into your shirt sleeves or cuffs
- Tightening of rings or watches

Safety Measures

These measures will help keep your arm safe:

- Keep your skin well moisturized with mild lotions as needed.
- Dry your skin carefully.
- Avoid cuts when shaving under the arm. Use electric razors as needed.
- Once you are cleared to resume exercise by your surgeon, be certain to increase the intensity slowly. While any exercise for the affected arm is helpful, do not continue to increase intensity if your arm gets sore or swollen after exercising.
- If your arm gets tired with any activity, stop and rest.
- Drink plenty of fluids to stay hydrated.
- Maintain a normal body weight.
- If possible, have injections, blood pressure measurements, blood draws, and IVs on the unaffected side. If lymph nodes were removed from both sides, use the arm with the fewest number of lymph nodes removed. Be sure to keep injection sites clean and covered for 24 hours after the puncture occurs.
- If a break in the skin occurs, watch for redness and signs of infection. Call your doctor right away if you see signs.
- Avoid exposure to extreme temperatures, hot or cold. Be cautious about using hot tubs and saunas and wear gloves during cold weather.
- Try to avoid any accidental cuts, burns, or bites to the affected arm by:
  - Wearing gloves for gardening and oven mitts while cooking
  - Using sunscreen and insect repellent
  - Being extra careful around sharp objects
  - Not cutting your cuticles
- Do not wear tight jewelry or elastic bands on your arm
- Keep regularly scheduled follow-ups with your doctor for ongoing surveillance.
- See your doctor for any signs of infection in your at-risk hand, arm, or breast area:
  - Redness
  - Warmth
  - Pain
  - Swelling
  - Fever
- Don't ignore changes in your hand, arm, forearm, or chest. Report any changes in size, sensation, color, temperature, or skin condition to your doctor.

Lymphedema Treatments

Lymphedema treatment is done by a physical therapist that has specialized training. While treatments for lymphedema will not cure it, they can be very effective in decreasing swelling and relieving discomfort. You can learn to manage the swelling. Treatments will usually include manual lymphatic drainage to move the proteins within the lymphatic system and compression (bandages or garments) to move fluid within the system.

Limb Elevation

This may help control early arm swelling. Elevate your arm on a pillow while you are sitting in a chair or lying in bed to promote lymph drainage. Mention this swelling to your doctor. Eventually in most cases, if untreated, elevating your arm will not resolve the swelling.

Manual Lymph Drainage (MLD)

MLD is not like traditional massage therapy that targets deep tissues and muscles. MLD uses light, gentle skin massage to create pathways within the body to move fluid toward healthy lymph nodes. A physical therapist will do your MLD and teach you a modified version to do at home.

Compression Therapy

Compression therapy is the use of foam and specialized bandages to compress the affected area to continue to move fluid. These bandages are worn just at night or all day depending on the severity of the edema and whether you are in the acute or chronic phase of managing the edema.

Compression Sleeves/Gloves

These are garments that are made from stretchy, tight elastic fabric. You will need to be measured and fitted by a professional therapist to get the correct fit for your arm and hand. The fit should be checked every 6 to 12 months or if you have a significant change in your body or arm size. These garments are worn during the day and removed for sleep. The purpose is to prevent the swelling from returning between MLD and compression sessions. The garments also need to be worn for air travel, especially if you are taking a long flight.

Exercise

Gentle strengthening and stretching of the affected area can help to move fluid out of the affected area and prevent episodes of worsening swelling. It is important that the intensity of any exercise is increased slowly to prevent a worsening of the edema.

Digestive Side Effects

Constipation

Constipation is common in people undergoing cancer treatment. You may feel bloated and uncomfortable or have difficulty having a bowel movement. Your stools may become dry and hard. During cancer treatment, constipation may be caused by:

- Chemotherapy or other treatments
- Pain medication
- A low-fiber diet
- Ignoring the urge to have a bowel movement
- Decreased fluid intake
- Too little exercise

Talk to your doctor about taking a stool softener or laxative if you are taking pain medication.

To help prevent constipation:

- Drink at least 8 to 10 cups of fluid each day. Try water, prune juice, warm juices, tea, and hot lemonade. Your body needs the fluids to keep your stools soft.
- Eat high-fiber foods if you are able. Whole grains, bran cereals, fruits, vegetables, nuts, and popcorn, as well as cooked dried beans, peas, and lentils, are good sources of fiber.
- Eat at regular times each day to help form good bowel habits.
- Take short walks or do other light exercise.
- Check with your doctor before taking any over-the-counter laxatives or enemas.
- Your doctor may want to prescribe a stool softener.

Nausea and Vomiting

Nausea and vomiting are common side effects of chemotherapy. Medications are given to prevent and manage nausea. Many people have little or no nausea. Be sure to talk to your doctor, nurse, or dietitian if you continue to feel nauseated despite taking anti-nausea medications. Some anti-nausea medications work better than others for certain people. If one has not helped with your nausea, your doctor may have you try another.

If you are feeling queasy or nauseated, you may want to try to:

- Eat 6 to 8 small meals a day, instead of 3 large meals.
- Sip small amounts of fluid often instead of drinking large amounts.
- Drink your fluids between meals instead of with meals to avoid vomiting.
- Eat dry foods, such as crackers, toast, dry cereals, or bread sticks, when you wake up, and every few hours during the day.
- Eat bland foods that do not have a strong odor.
- Eat cool foods instead of hot, spicy foods.
- Avoid foods that are overly sweet, greasy, fried, or spicy, such as rich desserts, French fries, and other fried foods.
- Sit up or recline with your head raised for at least 1 hour after eating if you need to rest.
- Suck on hard candy, such as peppermint, lemon, or ginger. Try drinking ginger ale or ginger tea.

Diarrhea

Diarrhea can also occur as a side effect of cancer treatment. To help prevent and manage diarrhea:

- Identify foods that may be causing diarrhea.
- Eat small, frequent meals and snacks throughout the day.
- Eat low-fiber foods such as white bread, crackers, white rice, cooked vegetables, and Cream of Wheat. Choose foods with soluble fiber such as applesauce, bananas, and potatoes without skin. Limit foods high in insoluble fiber such as bran cereals, cooked dried beans, raw vegetables, and whole grain breads, cereals, and pasta.
- Avoid gas-producing foods such as broccoli, cauliflower, Brussels sprouts, cooked dried beans, and cabbage.
- Try not to eat spicy, fatty, fried, or very sweet foods.
- Avoid sugar-free foods containing sorbitol or other sugar alcohol products like sugar-free candy and sugar-free gum.
- Avoid alcohol and caffeinated products such as coffee, tea, or chocolate, which can irritate your bowels and worsen diarrhea.
- Drink plenty of clear liquids such as water, broth, or sports drinks.
- Avoid very sweet liquids.
- Limit milk and milk products or choose lactose-free options.
- Talk to your doctor about medications to help control diarrhea.

If you are having soreness, protect the skin around the rectum by washing with warm water and mild soap. Gently pat the area dry. Ask your doctor or nurse to suggest a protective ointment or gel to keep your skin from getting worse. Remember to wash your hands well to avoid infection.

Nutrition, Exercise, and Weight Management

Good nutrition is an important part of cancer treatment. A healthful diet can boost the immune system and provide strength and energy. You may want to consult a dietitian to help plan for your individual nutrition needs during and after cancer treatment.

There are many books and a lot of information on the Internet about breast cancer and nutrition. Some of these books and information are not based on science-proven evidence. You may read about recommendations for supplements or radical diet changes that could affect your cancer treatment. Talk with your doctor, nurse, or dietitian before you make any major changes in your diet or start taking any vitamins, minerals, or herbal products.

Nutrition and Cancer Treatment

While having chemotherapy, you need to stay well enough to maintain your treatment schedule. This means avoiding infections during times when your white blood cell count is low, and eating nutritious foods that can help you to maintain and manage your weight. You may find that your appetite is good most days. The prescription anti-nausea medications are helpful in preventing and reducing nausea. Chemotherapy often alters taste, so some foods may not be appealing. Other foods may leave a strange taste in your mouth. Some women find that salty or sour foods taste best during chemotherapy.

If you have a low appetite at times, try to:

- Eat foods that are appealing.
- Keep favorite foods close at hand.
- Eat small amounts of food often throughout the day — schedule small meals and snacks every 2 to 3 hours.
- Eat whenever you are hungry.
- Drink fluids if you can't eat solids. Try milk shakes, soups, juices, and nutrition drinks such as Ensure®, Boost®, or Carnation Breakfast Essentials®.
- If possible, let others prepare, serve, and clean up meals. Try frozen meals.

Remember that changes in your taste or appetite will go away after your treatments are completed.

Weight Gain

Weight gain may occur during breast cancer treatment. Do not try to lose weight while receiving chemotherapy or radiation therapy. Your treatments are determined from your body weight, so it is important that your weight remains stable. Eat as healthful and nutritious a diet as possible. If you would like to lose weight, you can make some changes in your diet after you have finished chemotherapy and radiation treatments. For the best approach to weight loss:

- Do at least 30 minutes of moderate activity three or more times each week.
- Choose lean cuts of meat such as chicken, turkey, fish, and lean beef.
- Try to eat protein-rich foods with all meals and snacks.
- Increase the amount of fruits and vegetables you eat and eat a colorful variety.
- Avoid high-fat, high-calorie snacks such as chips, cookies, candy, and ice cream.
- Reduce added fats in your diet such as salad dressing, margarine, mayonnaise, and gravy, or try low-fat varieties.
- Prepare your food with low-fat cooking methods such as broiling, baking, and steaming.
- Use nonstick pans while sautéing so no added fat is needed.
- Reduce the amount of calorie-dense baked foods you eat, including muffins, cookies, cakes, and quick breads.

Other Nutrition Issues

Safe Food Handling

Some cancer treatments can make you more likely to get infections, including food-borne illnesses. It is important to be careful in handling, preparing, and storing food. Follow these guidelines if you have been told that you are at high risk for infections:

- Keep hot foods hot, and cold foods cold. Put any leftovers in the refrigerator immediately after a meal.
- Scrub all raw fruits and vegetables before you cut them and eat them. Do not eat foods that are difficult to clean such as raspberries, strawberries or sprouts. Use clean water — do not use soap, bleach, or detergent.
- Wash your hands, knives, and countertops before and after preparing food. Use one cutting board for meat, fish, and poultry and another cutting board for fruits and vegetables.
- Thaw meat, fish, and poultry in the refrigerator, not on the countertop at room temperature.
- Cook meat, fish, and poultry until thoroughly cooked. Meats from the deli and hot dogs should be heated until steaming. Eggs should be cooked hard, not runny.

- Do not eat sushi, uncooked oysters, or any raw fish or shellfish.
- Only consume milk, juices, and honey that have been pasteurized.
- Avoid cheese made from unpasteurized milk and moldy cheeses such as blue cheese and Roquefort.
- Do not consume foods or beverages that are past their freshness date.
- Do not buy foods from bulk bins.
- Do not eat from buffets, salad bars, or self-service counters.

Soy

Recent research involving large populations of breast cancer survivors have shown that eating moderate amounts of soy foods is safe for breast cancer patients and breast cancer survivors. A moderate intake of soy is 1 to 2 servings per day of whole soy foods such as tofu, soy milk, and edamame or soy nuts. Including whole soy foods in your diet is a good way to include quality protein while eating more plant-based foods.

Organic Foods

There have not been any direct human studies that have shown that eating organic foods will prevent cancer. There is also not consistent evidence that organically grown foods are more nutritious.

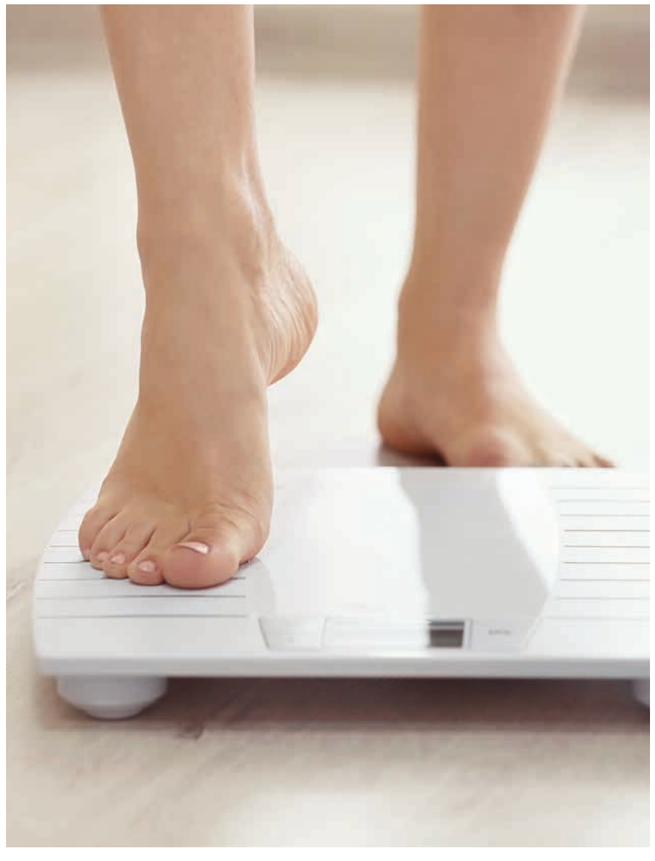
Some people will choose organic foods in order to limit their intake of chemical fertilizers, insecticides, and herbicides. The important thing is to eat lots of plant foods — whether grown organically or conventionally. Eating a diet containing lots of fruits, vegetables, and whole grains outweighs any health concerns about chemicals used in the growing of food.

Alcohol

Research has shown that high alcohol intake may increase breast cancer risk. Alcoholic drinks may also worsen hot flashes in women who are menopausal. Women should drink no more than one alcoholic beverage per day.

Body Weight

Excess body weight may play a role in the development of breast cancer, especially after menopause. Fat cells store estrogen, and it is the exposure to this extra estrogen that may increase the risk of breast cancer or risk of breast cancer recurrence.



Survivorship – New Beginnings

Your Survivorship

At the time you receive a cancer diagnosis, you become a "cancer survivor." Survivorship can be a new beginning with new directions and a new meaning to life. Survivors often find new interests, opportunities, relationships, spiritual awakenings, and identities as a result of their cancer diagnosis and treatment.

An important part of your cancer care is your Survivorship Care Plan. This is a treatment summary that organizes all your cancer treatment into one document.

At Mount Carmel we want you to know that we will be a source of support to you even after you've completed your active treatment. Your Survivorship Care Plan is an essential part of the transition from cancer patient to long-term cancer survivor. It provides a record of your care so you can move forward feeling confident that you will be supported and guided through your post-treatment care.

Your Survivorship Care Plan will include:

- A detail of your diagnosis
- A summary of the treatment you received — surgery, radiation, chemotherapy
- Contact information for your care team
- Guidelines for follow-up care — who you will see and how often
- Important recommendations for healthy behavior and preventative care — managing the effects of cancer treatment, watching for long-term effects, and monitoring possible signs of recurrence or second cancers
- The chance to address any concerns you may have with the transition into long-term survivorship

> ***"Today I reach out to hold the hand of others with cancer, knowing that our shared journey binds us for life."***
>
> – PHYLLIS KATZ, *Silver Linings*

Adopting healthy lifestyle behaviors such as exercising, choosing healthy foods, and maintaining your recommended weight may help to decrease the risk of cancer recurrence. Following your doctor's recommendations for ongoing follow-up and surveillance is important for early detection of cancer recurrence.

Your Survivorship Care Plan summarizes your cancer treatment and will provide you with guidelines for ongoing surveillance and follow-up. The care plan helps you to coordinate care between all your doctors.

There are possible treatment-related side effects that you should discuss with your doctor:

- Fatigue
- Weight gain
- Pain, numbness, or loss of sensation in your hands or feet
- Impaired range of motion or swelling in your hand, arm, shoulder, or chest
- Joint or bone pain
- Shortness of breath or chest pains
- Radiation skin changes
- Menopausal symptoms
- Self-image concerns
- Depression

Breast Cancer Survivorship Care Recommendations

Adopt healthy lifestyle behaviors:

- Eat a plant-based diet with a wide variety of fruits, vegetables, and whole grains. Limit red meats and processed meats. Control portion sizes as needed for weight management.
- Maintain a healthy weight.
- Limit alcohol to no more than one drink per day.
- Quit smoking.
- Limit physical inactivity: Limit computer, TV, tablet and other screen time in order to reduce the amount of time spent sitting. If you need to work on a computer during the day, take short walks whenever you can.
- Exercise regularly: Get at least 150 minutes of moderate exercise every week. You can do this by exercising at least 30 minutes for 5 days every week. Examples of moderate exercise include brisk walking (15 minutes per mile), dancing, bicycling, and pushing a lawn mower.

There are many positive benefits of regular exercise for survivorship. Regular exercise:

- Helps to reduce fatigue that may occur as a result of your cancer treatment.
- Improves your heart, lung, and lymphatic circulation.
- Benefits your bone health and may help prevent fractures.
- Improves mood and helps decrease feelings of depression.
- Improves sleep patterns and may even help with hot flashes.

Take Care of Your Body, Mind, and Spirit

These are some suggestions that may help you care for yourself as a cancer survivor:

- Join a support group or survivorship program, where you can share and celebrate stories of survivorship.
- Volunteer.
- Utilize church or spiritual support services.
- Include family, friends, partners, and support persons in working through and coping with survivorship and stressors that may occur.
- To reduce your stress level, you may want to try journaling, exercising, traveling, reading, gardening, cooking, or listening to music. Meditation, guided imagery, massage, and acupuncture may also be helpful to you.

Keep Up with All of Your Follow-up Care in Your Survivorship Care Plan

- Keep follow-up surgical, medical, and radiation appointments.
- Get your vaccines for flu, pneumonia, and shingles as recommended by your oncologist.
- Follow your care plan order for physical exam, monthly breast self-exam, Pap test, mammogram, colonoscopy, and bone density testing.
- Maintain your overall health through regular dental and vision care, blood pressure checks, and lab work for cholesterol, blood glucose, and vitamin D levels.
- Take all prescribed medications as ordered. If you have financial concerns, check into resources for assistance.

Fertility After Cancer Treatment

If you are diagnosed with breast cancer at a young age, you may be wondering if you can safely have a child after treatment. Information is limited about the effects of pregnancy on a woman who has had breast cancer. However, women have had healthy babies after breast cancer treatment. You should talk to your medical oncologist to learn about the risk of infertility with your specific treatment plan.

Pre-treatment Consultation

If you want to get pregnant after breast cancer treatment, it is important to talk to your doctors about your fertility options before you start treatment. Some chemotherapy drugs can cause early menopause and lead to infertility. All premenopausal women should be informed about the potential impact of chemotherapy on their fertility. They should be asked about their desire for future pregnancies. Women who may want future pregnancies should be referred to fertility specialists before chemotherapy and/or hormone therapy to discuss their options based on their specific kind of tumor (which determines the type, sequence, and urgency of treatment). If it is decided that a pregnancy after treatment would be relatively safe, options for preserving fertility will be examined.

Individual Considerations

The success rate of fertility preservation depends on the women's age and the type of treatment they are considering. It can be difficult to give a woman an accurate idea of her chances of keeping her fertility after breast cancer treatment. Doctors will consider individual factors when planning the type of treatment.

Your decision about pregnancy following breast cancer treatment is an individual one. It is important to gather as much information as you can so you can make an informed decision. Your doctors can assist you by providing information and answering your questions.

Pregnancy After Treatment

It is generally recommended to wait 2 years after the completion of cancer treatment to get pregnant. There may be different recommendations based on your situation. It is important to talk to your doctors about your desire for pregnancy and the timing of pregnancy after treatment.

Birth Control After Treatment

The use of hormonal birth control is generally considered unsafe for premenopausal women with a personal history of breast cancer. Most doctors recommend using barrier methods of birth control such as condoms, diaphragm, or non-hormonal intrauterine devices (IUDs). If oral contraceptives are felt necessary, those containing the lowest amount of estrogen are generally preferred. The risks and benefits need to be discussed carefully with both your oncologist and your gynecologist.

Menopause

Menopause is defined as the end of the menstrual cycles. It can occur naturally or suddenly as a result of having both ovaries removed (bilateral oophorectomy) or with chemotherapy. Natural menopause is gradual and occurs when a woman has not had a period for 12 months. Women who are premenopausal at the time of their diagnosis of breast cancer and become menopausal as a result of surgery or chemotherapy often have an abrupt onset of menopausal symptoms.

Not every premenopausal woman who receives chemotherapy becomes menopausal. Some women return to having normal menstrual cycles. The closer a woman is to a natural menopause when she receives chemotherapy, the greater the chance is she will become menopausal. About 50% of women under the age of 40 will restart their periods after chemotherapy.

Most women who are diagnosed with breast cancer are postmenopausal. Some women may have been taking hormone replacement therapy for menopausal symptoms even before their final period. When a woman is diagnosed with breast cancer, she is told to stop taking her hormone therapy, especially if her breast cancer depended on estrogen to grow.

Hot Flashes

Hot flashes are the most common menopausal symptom experienced by breast cancer survivors. They often occur due to decreased levels of estrogen. Some women may have an increase in the number and severity of their hot flashes due to treatment with tamoxifen or aromatase inhibitors.

During a hot flash, women may notice a feeling of warmth, flushing, sweating, and an increase in their pulse rate. Some women notice a chill following the hot flash. Hot flashes that occur during the night are called night sweats. These can cause severe sweating and interfere with sleep. A lack of sleep often impacts how we feel during the day and may lead to irritability.

Methods of Dealing with Hot Flashes

Layered Clothing

Being able to add or remove clothing can be helpful in relieving heat and adjusting to feeling cool after a hot flash.

Diet

Certain foods and drinks such as those with caffeine (found in coffee, cola, and chocolate), hot spicy foods, and alcohol (especially wine) may increase hot flashes. It can be helpful to keep a food diary and note what you have had to eat or drink before a hot flash to see if certain things seem to trigger your hot flashes. Avoiding these foods and drinks may be helpful. Also, drinking ice water or eating frozen grapes when a hot flash is about to begin can help decrease the severity of symptoms.

Exercise

Moderate exercise, such as walking or doing housework or yard work, for 30 minutes a day can reduce hot flashes. Exercise can also be helpful in relieving stress, depression, and fatigue and may even improve self-esteem. It is important to note that excessive exercise can actually increase the number of hot flashes.

Relaxation

Practicing relaxation techniques may reduce hot flashes. These techniques include deep breathing, meditation, muscle relaxation, visualization, Qigong, and yoga. Other management techniques include positive affirmation and aromatherapy. The aromas of cinnamon and eucalyptus are uplifting, while the aroma of lavender and orange can be soothing. Relaxation techniques can also be helpful for insomnia.

Acupuncture and Hypnosis

Both acupuncture and hypnosis, two types of alternative and complementary therapy, have been shown to be effective in reducing the severity and frequency of hot flashes.

Medications

There are medications that may reduce hot flashes. Please discuss your options with your doctor.

Dietary Supplements and Herbals

Check with your oncologist before taking any dietary supplements or herbals

Other Issues Related to Menopause

Vaginal Dryness

The loss of estrogen from a woman's body can lead to thinning of the vaginal walls and vaginal dryness. This can cause itching, burning, and pain with intercourse. Methods to reduce vaginal dryness include:

- Personal lubricants
- Vaginal moisturizers
- Vaginal estrogen

Lubricants are used to decrease friction and reduce discomfort during intercourse. It is best to use water-based lubricants such as K-Y Personal Lubricant, Astroglide, Lubrin, Moist Again, or Slippery Stuff.

Avoid using oil-based products such as petroleum jelly and baby oil. These can cause irritation, damage condoms, and increase the risk of vaginal infections.

Vaginal moisturizers are used to decrease dryness, irritation, and burning. Replens and K-Y Long Lasting Vaginal Moisturizer are two of these products. These are used 2 to 3 times per week to help keep the vaginal walls moist. They can be used anytime, day or night, but should be used at least 2 hours before intercourse. Some women notice a vaginal residue when using moisturizers like Replens. Using it less often may reduce the amount of residue.

If vaginal dryness is affecting your quality of sex life, discuss with your doctor if vaginal estrogen is an option for you. Estrogen can be absorbed through the body, which could increase the risk of breast cancer recurrence.

It is very important to tell your doctor if you have any vaginal spotting or bleeding while using vaginal estrogen.

Problems Sleeping

If you are having problems sleeping, you may want to:

- Avoid heavy meals in the evening.
- Avoid alcohol, caffeine, and nicotine throughout the day.
- Exercise regularly, but not within 2 hours of bedtime.
- Seek counseling to help you cope with stress.
- Talk with your doctor if you feel you need medication for sleep.

Mood Changes

A diagnosis of breast cancer can result in feelings of grief and loss, guilt, and anxiety. These feelings may be compounded by the side effects of chemotherapy, such as fatigue, nausea, and hair loss. Some women become depressed while others have higher levels of anxiety. Medications, relaxation techniques, support groups, and individual or group counseling are all helpful options.

Urinary Incontinence and Urinary Tract Infections

The lining of the bladder wall and the urethra can become thinner after menopause. These changes can cause increased urinary incontinence or urinary tract infections.

To deal with incontinence:

- Avoid bladder irritants, such as coffee, tea, and alcohol.
- Avoid smoking.
- Limit fluids to 64 ounces per day.
- Lose weight — obesity may increase incontinence.
- Perform Kegel exercises.
- Have biofeedback treatments.
- Empty your bladder on a schedule.

To reduce the risk of urinary tract infection:

- Wipe from front to back.
- Wear cotton underwear.
- Change underwear daily.
- Avoid tight pants, hot tubs, perfumed powders, and bubble baths.
- Limit bladder irritants such as tea, coffee, and alcohol.
- Drink cranberry juice to increase the acidity of urine.
- Urinate after intercourse.

Skin Changes

As women age, their skin becomes more dry and flaky. There is also a loss of collagen, which contributes to wrinkles. Sun exposure can result in increased damage to the skin.

To improve the health of your skin:

- Avoid smoking.
- Avoid overexposure to sunlight.
- Avoid stress.
- Get enough exercise and sleep.
- Drink plenty of water throughout the day.
- Avoid coffee, tea, soft drinks, and alcohol.
- Avoid hot soapy showers and baths.
- Use bath oil or heavy lotions on your skin after bathing.
- Use sunscreen, but be sure to take a vitamin D supplement, as sunscreens can block the absorption of vitamin D by the skin.

Sexuality

Sexuality can be defined as how we see ourselves as sexual beings. It is affected by our mind, body, and spirit and can be influenced by our culture, religious beliefs, and relationships.

Just as each woman's sexuality is her own, every woman is unique in her response to sexuality after being diagnosed with breast cancer. When first diagnosed, you may not have any thoughts about sexuality. Your thoughts may be turning to things that affect your self-image, such as losing part or all of a breast or losing your hair.

Our society has placed an emphasis on women's breasts. They can be seen as signs of femininity, motherhood, or sexuality. Each woman has her own feelings about her breasts.

No matter what type of surgery you have, there can certainly be an impact on your self-image. How you feel about yourself and how attractive you feel have a strong impact on sexuality. Taking time with your appearance in ways that you enjoy, such as clothes and makeup, can boost your self-image and have a positive impact on your sexuality.

Sexual Response

The normal sexual response includes four phases: desire, excitement, orgasm, and resolution. Breast cancer treatment may have an effect on desire, excitement, and the ability to have an orgasm.

It is very common to not have your usual level of interest in sex when going through a stressful life event such as a cancer diagnosis. Libido, or the desire for sexual activity, is affected by many things, both physical and emotional. As time goes on, you may wonder what you can do to increase your interest in sexual activity.

How You Are Feeling Physically

- Taking extra care of yourself — eating well, controlling any side effects such as nausea, and staying active — can impact your well-being and libido.
- Getting the rest you need — through naps or at night as needed — is also key to your overall feeling of well-being and your libido.
- Using lubricants and moisturizers can help you feel more comfortable and improve your response during sexual activity. See page 39 for information.
- Talking to your doctor about your concerns helps in learning all your options.

A decrease in how often there is vaginal penetration can lead to a decrease in the elasticity of the vagina. Sexual activity, including self-stimulation, and the use of vaginal dilators can help to maintain elasticity and reduce discomfort during intercourse. There are products that can be applied to the clitoris to enhance sexual response and increase the chance of orgasm.

How You Are Feeling Emotionally

- Getting the support you need, whether through counseling, talking with family members, or through community groups, can help your overall adjustment during your diagnosis and treatment, including your feelings about your sexuality.
- Checking into the facts about your concerns can be very helpful. For example, some women think estrogen levels are increased during sexual activity, which may increase the risk of cancer spreading. This is not true.
- Seeking treatment if you feel you may have depression or anxiety benefits your interest in and enjoyment of life and the sexual aspect of it.

You and Your Partner

At times, you may be feeling the desire for sex, but your partner may not be showing interest. You might assume that your partner doesn't find you attractive, but it may be due to a fear of hurting you during sexual activity or not wanting to put any demands on you at this stressful time.

It is important for you and your partner to discuss your feelings and concerns to avoid misunderstandings. It may be helpful to focus on hand holding, hugging, kissing, massage, and other ways of feeling close. Take the time to do the things that you enjoy doing together.

When one person in a marriage or relationship is going through cancer treatment, both people are dealing with it — with their own concerns and responding in their own way. One person may want to talk about it a great deal while the other person may prefer to work out his or her feelings privately without talking much about it.

How your relationship was before your diagnosis influences how you and your partner deal with it. There are times when the diagnosis of breast cancer can strengthen a relationship. If there are problems within the relationship already, those problems may be worsened by the diagnosis and treatment. In these cases, therapy for both partners may be helpful.

Concerns for Single Women

Not every woman who is diagnosed with breast cancer has a partner. Single women have special concerns. You may often wonder if someone will see you as desirable after a diagnosis and the loss of one or both breasts. It can be difficult as you begin new relationships to know when to share your experience with the new person in your life. Some women may view their experience as a test in a new relationship to see how the person reacts as they share their story. You may find counseling to be helpful regarding these concerns.

Finances

The diagnosis of breast cancer may have a financial impact. The costs of diagnosis and treatment can be high. Even the cost of a prosthesis, special bra, or wig can often be more than a woman can afford.

The federal Women's Health and Cancer Rights Act, enacted in 1998, requires coverage of certain costs. Insurance companies, HMOs, and other health plans must cover some costs of certain needs of women with breast cancer.

All insurance companies and payers will require a doctor's prescription for breast prostheses, bras, wigs, and lymphedema treatment before you purchase any of these items or begin treatments.

Insurance companies provide different amounts and types of coverage for breast prostheses, bras, and wigs. Contact your insurance company before purchasing any of these items to find out what costs will be covered and to locate preferred providers.

Medicare currently covers breast prostheses and a reasonable number of bras at 80% of a predetermined allowable amount. There is no Medicare coverage for wigs.

Medicaid also provides coverage for reasonable and necessary breast prostheses, bras, and wigs. All of these items require "preauthorization" from Medicaid. It is important to obtain this approval before purchasing any of these items.

If you are having difficulty affording a prosthesis, bra, or wig, community resources may offer help. The **Columbus Cancer Clinic** is one of these resources. **Call 614-263-5006** for more information. The **American Cancer Society** can also assist you with locating a variety of resources. **Call 1-800-227-2345** for more information.

Your Mount Carmel Breast Oncology Nurse Navigator may be able to help you obtain a wig if you are unable to afford one.

Drug companies may also help women who have financial concerns. They are often able to supply certain medications to patients who are in need. You can visit **www.needymeds.com** and enter the brand or generic name of your prescription drug for more information. You can review drug company program eligibility requirements and obtain an application for assistance directly from this site. If you qualify, please speak with your doctor or nurse navigator about completing the paperwork.

If you are on Medicare, have a low income, and have no prescription drug coverage, you may qualify for a prescription savings program called Together Rx Access. This program provides savings on more than 300 medications. Medicare recipients may also be eligible for assistance in obtaining prescription coverage at a reduced rate. Call the Ohio Department of Insurance, **Ohio Senior Health Insurance Information Program (OSHIIP)** at **1-800-686-1578** for more information.

If you have a low income and are uninsured, check with the **PrescriptionEase (Medication Assistance Program)** at Mount Carmel. Call **614-546-4224** for more information.

Lymphedema therapy can be very costly and should be covered by all payers according to the Women's Health and Cancer Rights Act. Contact your Breast Oncology Nurse Navigator if you need lymphedema therapy but are unable to afford it.

If you feel you may be eligible for state or federal benefits, like Medicaid, please visit **www.jfs.ohio.gov** to inquire about food, cash, or medical assistance. Please visit **www.ssa.gov** to inquire about Social Security and disability benefits. If you need assistance in accessing the Internet, please ask your nurse navigator or social worker for help.

If you find you are not eligible for Medicaid or Medicare, and you do not have access to employer-sponsored health insurance, please visit **www.healthcare.gov** to check for plans available through the Affordable Care Act.

Helping Your Children Cope

You may have concerns about how to help your children cope with your diagnosis and treatment — what to tell them and where to get support. Answers to these questions will depend on the ages of your children. Each child is unique in how he or she will respond to your cancer.

Even very young children are aware when something has changed within the family, and they know when their parents are upset. Do not pretend that nothing is happening. Doing so only increases anxiety and teaches that secrets are okay. When children sense that something is wrong but are not given a reason, they tend to imagine or make up reasons, even blaming themselves. Although young children can't understand and don't need to know details of your diagnosis and treatment, they do need basic explanations about why things may be changing. They also need to hear that these changes are not their fault.

Older children need information geared to their level of understanding — honest information about your diagnosis and future health. They need to feel it's okay for them to ask questions and to bring up the subject. Even in normal times, communicating with teenagers can be a challenge. When talking with your teen about your diagnosis, share information with truthful reassurance. Avoid the common mistake of asking your teen to take on too much extra responsibility in the home or with their younger siblings. Try not to rely too heavily on your teenagers for emotional support that you really need to receive from other adults.

Talking with Your Children

The following tips may help you talk to your children about your cancer:

- Explain information in simple terms. Avoid too many details.
- Try not to discuss heavy topics before important activities or bedtime.
- Ask your children what support they think they will need. Let them know your plans for helping them during this time.
- Allow your children to express their feelings. Be willing to share some of your feelings, but don't rely on them as your sole support.
- Be patient. Children often need to repeat questions to be reassured.
- Avoid using clichés such as "Be the man of the house" or "Be brave."
- Tell your children that you will try to keep things as normal as possible in their daily routine. Allow them to make decisions about things that directly affect them if possible.

Common Issues

You may need to address some of the following issues with your children.

Fear and Worries

Fear can take many forms: fear that they caused the cancer, fear that they will "catch" cancer, fear that their life will change, and fear of their parent dying.

Children often do not share their fears or worries. Listen to children's play to learn about their concerns. Help them to cope by addressing their concerns and by reassuring them. Keep them involved in their normal activities. This can help them work through their feelings.

Anger

Anger can also take on many forms: anger at you for getting cancer, anger at the cancer for attacking you, anger at what this event is doing to their life now and what it might do to them in the future. Sometimes children will act out and become more demanding and unruly. They may not do as well in school or may do things they would not normally do.

Encourage children to express their thoughts and feelings. Try not to respond to their acting out with anger. Help them to redirect their anger in more healthy ways. Sometimes physical activity can help defuse anger.

Sadness

Because you may be crying more often, younger children may think they are causing you to be sad. Tell them you are sad because of your illness, but be sure they know that they did not make you sad.

At times older children may share in your sadness or grief and openly cry with you. Often they will not. Some will try to be cheerful when around you, but express their sadness when they are alone or with friends. Others will not appear to express any sadness or emotion. It may be too overwhelming for them to handle and they will appear to ignore it.

Although children may have different reactions to learning that their parent has cancer, it is better to tell them than to pretend nothing has changed. It is important to provide children with the amount of information that they want or need, at a level that they can understand.

There are no perfect answers or responses when you help your children deal with your illness. Your relationship with your children is key. Try to provide more family time and do things together.

Support Resources

National Organizations

Listed below are contact numbers for national organizations that may interest you.

- American Cancer Society
  800-227-2345
- Breast Cancer Network of Strength
  800-222-2141 (English or Spanish)
- Cancer Information Services
  (National Cancer Institute)
  800-4-CANCER
  Email: NCIinfo@nih.gov
- National Breast Cancer Coalition
  202-296-7477
- National Lymphedema Network
  800-541-3259
  Email: NLN@lymphnet.org
- Reach to Recovery —
  American Cancer Society
  800-227-2345
- SHARE: Self-Help for Women with Breast or Ovarian Cancer
  866-891-2392
- Sisters Network Inc.
  (A National African American Breast Cancer Survivorship Organization)
  713-781-0255 or 866-781-1808
- Susan G. Komen
  Breast Cancer Network
  877-465-6636

> ***"Hope is the thing with feathers that perches in the soul, and sings the tune without the words, and never stops at all."***
>
> – EMILY DICKINSON

Websites

Finding health information on the Internet can be easy, but finding reliable information takes a little more time and care. Not everything on the Internet has been reviewed and evaluated.

When using websites, check how current the information is, and if the authors or sponsoring organizations are noted and well known. Also be aware of the sponsors and any potential for biases.

You may find many of these websites helpful:

- African American Breast Cancer Alliance — an advocacy group for women with breast cancer and their families. Provides educational and emotional support.
  www.aabcainc.org
- American Cancer Society — information about cancer and local resources.
  www.cancer.org
- Avon Foundation Breast Center at Johns Hopkins
  www.hopkinsbreastcenter.org
- Black Women's Health Imperative (BWHI) — promotes black women's physical, emotional and spiritual wellness through community events and education.
  www.blackwomenshealth.org

- BreastCancer.org
  www.breastcancer.org
- CancerCare — provides free professional support services for anyone affected by cancer.
  www.cancercare.org

  Spanish version also available.
  www.cancercare.org/espanol
- Cancer Hope Network — provides free, confidential, one-on-one support to people with cancer and their families.
  www.cancerhopenetwork.org
- Cancer.Net — Trusted, compassionate information for people with cancer and their families and caregivers, from the American Society of Clinical Oncology.
  www.cancer.net
- CenterWatch — Clinical Trials Listings Service
  www.centerwatch.com
- FORCE: Facing Our Risk of Cancer Empowered — for women with increased risk of cancer due to family history or genetic status.
  www.facingourrisk.org
- Imaginis — The Women's Resource
  www.imaginis.com
- Inflammatory Breast Cancer Support — offers information about IBC and a mailing list for communicating with others who have IBC.
  www.ibcsupport.org
- International Cancer Alliance for Research and Education — patient cancer information and hope.
  www.icare.org
- Living Beyond Breast Cancer — nonprofit organization dedicated to empowering all women affected by breast cancer.
  www.lbbc.org
- LIVESTRONG Foundation — LiveSTRONG works to empower the cancer community to address the unmet needs of cancer survivors.
  www.livestrong.org
- Locks of Love — a nonprofit organization that provides hairpieces to financially disadvantaged children using donated hair. Explains how to donate your own hair.
  www.locksoflove.org
- Look Good Feel Better — for women in cancer treatment.
  www.lookgoodfeelbetter.org
- National Breast Cancer Coalition — grassroots advocacy in action.
  www.breastcancerdeadline2020.org
- National Cancer Institute — information about cancer and clinical trials.
  www.cancer.gov

  Spanish version also available.
  www.cancer.gov/espanol
- National Comprehensive Cancer Network (NCCN) — guidelines to the latest advances in cancer care. These guidelines are the recognized standards for cancer treatment.
  https://www.nccn.org/patients/guidelines/cancers.aspx
- National Lymphedema Network — international nonprofit organization that provides education and guidance to lymphedema patients and healthcare professionals.
  www.lymphnet.org
- NeedyMeds — information on assistance programs that help with the cost of medicine.
  www.needymeds.org
- The North American Menopause Society (NAMS)
  www.menopause.org
- Patient Advocate Foundation — national nonprofit organization that seeks to safeguard patients.
  www.patientadvocate.org
- Susan G. Komen for the Cure
  ww5.komen.org

  Spanish interpretation available on site.
- Dr. Susan Love Research Foundation
  www.drsusanloveresearch.org
- Young Survival Coalition — directed to young women with breast cancer.
  www.youngsurvival.org

Books

These and many other books are available in libraries and bookstores.

- *Be a Survivor: Your Guide to Breast Cancer Treatment,* 6th edition, Vladimir Lange (2015)
- *Breast Cancer Clear & Simple, Second Edition: All Your Questions Answered,* American Cancer Society (2016).
- *Breast Cancer Journey: The Essential Guide to Treatment and Recovery,* 3rd Edition, Ruth O'Regan, MD; Sheryl G. A. Gabram, MD, MBA, FACS; Terri Ades, DNP, FNP-BC, AOCN; Rick Alteri, MD; Joan Kramer, MD; Kimberly A. Stump-Sutiff, MSN, RN, AOCNS (2013).
- *Chicken Soup for the Soul: Hope and Healing for Your Breast Cancer Journey: Surviving and Thriving during and after Your Diagnosis and Treatment,* Julie Silver (2012)
- *Diagnosis: Breast Cancer: The Best Action Plan for Navigating Your Journey,* Cara Novy-Benniwitz (2012)
- *Dr. Susan Love's Breast Book,* 6th edition, Susan Love, with Karen Lindsey and Elizabeth Love (2015)
- *The Breast Cancer Survival Manual: A Step-by-Step Guide for the Woman with Newly Diagnosed Breast Cancer,* 5th edition, John Link (2012)
- *Your Breast Cancer Treatment Handbook: Your Guide to Understanding the Disease, Treatments, Emotions and Recovery from Breast Cancer,* Judy Kneece (2012)
- *100 Questions and Answers about Life after Breast Cancer — Sensuality, Sexuality, Intimacy,* Michael Krychman, Susan Kellogg Spadt, and Sandra Finestone (2010)
- *100 Questions and Answers about Advanced and Metastatic Breast Cancer,* 2nd edition, Lillie Schockney and Gary Shapiro (2011)

Glossary

Adenocarcinoma: Cancer that starts in glandular tissue, such as the lobules or ducts of the breast.

Adenoma: A benign (not cancerous) growth that starts in glandular tissues.

Adjuvant therapy: Treatment used to improve how well primary therapy works, such as hormone therapy, chemotherapy, or postsurgery radiation. It can increase the chance of curing the disease or keeping it from spreading.

Adrenal gland: Gland that produces hormones that regulate metabolism and control fluid balance and blood pressure. This gland also produces small amounts of male hormones (androgens) and female hormones (estrogens and progesterone). One adrenal gland is located near each kidney.

Alopecia: Hair loss that can occur because of chemotherapy or radiotherapy to the head.

Antibody: A protein in the blood that defends against invading foreign agents such as bacteria.

Anti-estrogen: A substance that blocks the effects of estrogen on tumors.

Areola: The dark area of flesh that surrounds the nipple of the breast.

Asymptomatic: To be without obvious signs of disease. Many cancers can develop and grow without producing symptoms.

Atypical: Abnormal; not usual.

Axillary dissection: A surgical procedure in which the lymph nodes in the armpit (axillary nodes) are removed and examined.

Benign: Not cancerous; not malignant. The main types of benign breast problems are fibroadenomas and fibrocystic changes.

Bilateral: Occurring on both sides of the body.

Biopsy: A procedure in which tissue samples are removed from the body to be examined under a microscope. A biopsy can be done with a needle or by surgery.

Bone scan: An imaging method that reveals important information on the growth and health of bones, including the location of cancer that may have spread to the bones.

BRCA1, BRCA2: Genes that, when damaged (mutated), increase the chance of a woman developing breast and/or ovarian cancer, compared to women who do not have the mutated gene.

Breast-conserving surgery: Surgery to remove a breast cancer and a small amount of benign tissue around the cancer, without removing any other part of the breast.

Breast implant: A manufactured sac that is filed with silicone gel (a synthetic material) or saline (sterile saltwater). The sac is surgically inserted to increase breast size or restore the shape of a breast after mastectomy.

Breast reconstruction: Surgery that rebuilds the breast shape after mastectomy. A breast implant or the woman's own tissue provides the shape.

Breast self-exam (BSE): A technique of checking one's own breast for lumps or suspicious changes.

Calcifications: Tiny calcium deposits within the breast, alone or in clusters, often found by mammography.

Capsule formation: Scar tissue that may form around a breast (or other) implant as the body reacts to the foreign object. Sometimes called a contracture.

Carcinogen: Any substance that causes cancer or helps cancer grow.

Carcinoma: A malignant tumor that begins in the lining layer (epithelial cells) of organs. At least 80% of all cancers are carcinomas, and almost all breast cancers are carcinomas.

CT (computed tomography) scan: An imaging procedure in which multiple X-rays are taken of a part of the body for pictures of cross-sections of internal organs.

Core needle biopsy: Type of biopsy that may be done if a lump has been found. A special needle is used to remove tissue from the lump. Ultrasound may be used to help locate the lump. This biopsy is done in an outpatient setting or in a doctor's office.

Cyst: A fluid-filled mass that is usually benign.

Dimpling: A pucker or indentation of the skin; on the breast, it may be a sign of cancer.

DNA: Abbreviation for deoxyribonucleic acid. DNA holds genetic information on cell growth, division, and function.

Duct: A hollow passage for gland secretions. In the breast, a passage through which milk passes from the lobule (which makes the milk) to the nipple.

Ductal carcinoma in situ (DCIS): A highly curable breast cancer that starts in the milk passages (ducts) and has not penetrated the duct walls into the surrounding tissue.

Edema: Buildup of fluid in the tissues, resulting in swelling.

Endocrine glands: Glands that release hormones into the bloodstream. The ovaries are one type of endocrine gland.

Estrogen: A female sex hormone produced mainly by the ovaries, and in smaller amounts by the adrenal glands.

Fibroadenoma: A type of benign breast tumor composed of fibrous tissue and glandular tissue that usually occurs in younger women.

Fibrocystic changes: Benign changes involving breast swelling or pain in the breast; also called fibrocystic disease.

Fine needle aspiration: A type of biopsy that may be used on lumps that can be felt. A needle is inserted into the lump to remove cells or fluid from the lump. It is done in an outpatient setting or in a doctor's office.

Frozen section: Microscopic examination of a specimen of tissue that has been quick-frozen. This method gives a quick diagnosis, sometimes while the surgeon is waiting to complete a procedure.

Hormone: A chemical substance released into the body by the endocrine glands, such as the thyroid, adrenal, or ovaries.

Hormone replacement therapy: Another term for estrogen replacement therapy.

Human epidermal growth factor receptor 2 (HER2): A protein on the edge of a cell that sends signals for the cell to grow.

Hyperplasia: An abnormal increase in the number of cells in a specific area, such as the lining of the breast ducts or the lobules.

Invasive ductal carcinoma: A cancer that starts in the milk passages (ducts) of the breast and then breaks through the duct wall, where it invades the fatty tissue of the breast.

Invasive lobular cancer: A cancer that starts in the milk-producing glands (called the lobules of the breast) and then breaks through the lobule walls to involve adjacent fatty tissue.

Lobular carcinoma in situ (LCIS): A very early type of breast cancer that develops in the lobules that produce milk in the breast and does not penetrate through the wall of the lobules.

Lumpectomy: Surgery to remove the breast tumor and a small amount of surrounding normal tissue.

Lymph: Clear fluid that passes within the lymphatic system and contains cells known as lymphocytes. These cells are important for fighting infection and may also help fight cancer.

Lymphedema: Swelling in the arm caused by excess fluid that collects after lymph nodes and vessels are removed by surgery or treated by radiation.

Magnetic resonance imaging (MRI): A method that allows cross-sectional images of the inside of the body to be viewed. MRI uses a powerful magnet and transmits radio waves through the body.

Malignancy: A mass of cancer cells that may invade surrounding tissue or spread (metastasize) to distant areas of the body.

Mastitis: Inflammation or infection of the breast.

Medullary carcinoma: A type of infiltrating ductal carcinoma with especially sharp boundaries between tumor tissue and normal tissue.

Metastasis: The spread of cancer cells to distant areas of the body by way of the lymphatic system or bloodstream.

Multicentric breast cancer: Breast cancer occurring in multiple areas of a breast.

Needle aspiration: Removal of fluid from a cyst or cells from a tumor using a needle and syringe.

Needle biopsy: Removal by needle of fluid, cells, or tissues for examination under a microscope.

Needle localization: A procedure used to guide a surgical breast biopsy when the lump is difficult to locate.

Neoadjuvant treatment: A treatment given as a first step to shrink a tumor before the main treatment, which is usually surgery. Examples of neoadjuvant therapy include chemotherapy, radiation therapy, and hormone therapy.

Nipple discharge: Any fluid coming from the nipple. It may be clear, milky, bloody, tan, gray, or green.

Nodal status: Indicates whether a breast cancer has spread (node-positive) or not spread (node-negative) to lymph nodes in the armpit (axillary nodes).

Nodule: A small, solid lump that can be located by touch.

Oophorectomy: Surgery to remove the ovaries.

Ovary: Reproductive organ in the female pelvis. Normally a woman has two ovaries that contain eggs and are the primary source of estrogen.

Paget's disease of the nipple: A rare form of breast cancer that begins in the milk passages (ducts) and spreads to the skin of the nipple and areola.

Partial mastectomy: A surgery to remove only the part of the breast in which the cancer is present and a margin of healthy breast tissue.

Precancerous: Abnormal changes in cells that may become cancer.

Primary cancer: The site where cancer begins. Primary cancer is usually named after the organ in which it starts.

Progesterone: A female sex hormone released by the ovaries to prepare the uterus for pregnancy and the breasts for milk production.

Prognosis: A prediction of the course of disease; the outlook for the cure of the patient.

Prophylactic mastectomy: Surgery that removes the breast tissue beneath the skin before any evidence of cancer can be found for the purpose of preventing cancer.

Prosthesis: An artificial form — a breast prosthesis can be worn under the clothing after a mastectomy.

Recurrence: Cancer that has come back after treatment. Local recurrence is at the same site as the original cancer. Regional recurrence is in the lymph nodes near the site of origin. Distant recurrence is in organs or tissues farther from the original site than the regional lymph nodes (such as the lungs, liver, bone marrow, or brain). Metastasis means that the disease has recurred at a distant site.

Remission: Complete or partial disappearance of signs and symptoms of cancer in response to treatment; the period during which a disease is under control. A remission may not be a cure.

Risk factor: Anything that increases a person's chance of getting a disease such as cancer.

Sarcoma: A malignant tumor growing from connective tissues such as cartilage, fat, muscle, or bone.

Sentinel node biopsy: Surgical procedure that investigates whether a cancerous area of the breast has drained to the next lymph nodes in the chain. The first lymph node is called the "sentinel node."

Staging: The process of determining and describing the extent of cancer. Staging of breast cancer is based on the size of the tumor, whether regional axillary lymph nodes are involved, and whether distant spread (metastasis) has occurred.

Stereotactic breast biopsy: A type of core needle biopsy that may be used to check a very small area seen on a mammogram or an area that cannot be felt. The doctor will do this biopsy using a special needle and the guidance of a computer in an outpatient setting.

Volume displacement: A method to shift breast tissue during an operation to fill a gap.

Wire localization: A procedure used to guide a surgical breast biopsy when the lump is difficult to locate or in areas that look suspicious on the X-rays but do not have a distinct lump.

Notes

MOUNT CARMEL

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