

CERTIFIED WOMEN'S HEALTH COUNSELOR ONLINE COURSE SESSION 4:

• Breast Health, Diseases, and Herbal Programs

This session covers breast health and diseases and conditions that affect the female breasts. It includes how to do breast self-exams, benign fibrocystic breasts, breast cancer, and a variety of other breast diseases, conditions, and tips for maintaining healthy breasts.

How to Perform a Breast Self-Exam

1 out of 8 women are at risk of developing breast cancer over their lifetime. Monthly breast self-exam is one part of total breast care that includes annual physician exams and mammograms after age 40.



Difficulty Level: average **Time Required:** 10 minutes

Here's How:

1. Stand in front of a mirror. Look for any changes such as puckering, changes in size or shape, dimpling, or changes in your skin texture.
2. Look for changes to the shape or texture of your nipples. Gently squeeze each nipple and look for discharge.
3. Repeat these steps with your hands on your hips, over your head, and at your side.
4. Raise your right arm and examine every part of your left breast. Move in increasingly smaller circles, from the outside in, using the pads of your index and middle fingers.
5. Gently press and feel for lumps or thickenings.
6. Using body cream, if necessary, continue to circle and gently massage the area outside your breast and under your arm.
7. Repeat with your left arm and right breast.
8. Lay down. Put a pillow under your right shoulder, and your right hand behind your head. Again gently massage and feel your breast for lumps or other changes.
9. Repeat with towel under left shoulder with left hand behind head.

Tips:

1. Menstruating women should do breast self-exam a few days after their periods end. Women who use oral contraceptives should do breast self-exam on the first day of a new pill pack.
2. Post-menopausal non-menstruating women should pick a day and do breast self-exam on the same day each month. Notify your physician immediately if you notice any changes or lumps.
3. Breast self-exam should be a routine part of every woman's life. Talk to your daughters about the importance of breast self-exam so it will become a routine part of their lives.

5 Reasons Why Young Women Should Perform Breast Self-Exams

Think you're Too Young for Breast Cancer? Think Again, You're Not!

When you're young, breast cancer is probably the furthest thing from your mind. However, it shouldn't be. Although breast cancer in young women is significantly less common among those from 20 to 39, it does happen. Don't believe it won't happen to you. Finding time to incorporate a breast self-exam into your monthly schedule is easy when you realize just how important it is.



1. Except for certain types of skin cancer, breast cancer is the most common form of cancer diagnosed in women of all ages. Although the most confirmed and noteworthy risk factors for developing breast cancer are gender and growing older.
2. Younger women diagnosed with breast cancer often experience a more aggressive cancer and a lower chance of survival. This fact alone is enough to make early detection and breast self-exam crucial for younger women.
3. Generally, screening mammograms are recommended at age 40. Sadly, this occasionally results in younger women not being diagnosed with breast cancer until the cancer is in a later stage, and can lower their chance of survival.
4. Because breast tissue isn't as thick when you're younger it can make diagnosis of breast cancer difficult. For this reason young women should begin monthly breast self-exams at age 20, so that you can become familiar with how your breasts look and how they feel, thereby making it easier for you to notice any changes in your breasts.
5. Because the lifetime risk of breast cancer is one in seven for American women, establishing good breast health practices while you are still young can reduce your chance of getting breast cancer at a later stage.

Remember, anytime you see or feel any kind of change in your breast(s) you should see your health-care provider. Only a qualified medical professional can definitively diagnose the cause of breast issues. Breast changes don't always mean breast cancer, but they do mean you should see your doctor.

Know Your Breast Lumps: Harmless and Harmful Breast Lumps - Know the Difference

During a breast self-exam, you may notice lumps or a change in texture. Knowing the difference between harmless and harmful breast lumps is important to your health.

There are three kinds of benign breast lumps:

- Cysts
- Fibroadenomas
- Pseudolumps

Breast Cysts

Cysts are one of the findings that can be seen on your mammogram. These are benign fluid-filled masses that can appear in your breast tissue. They can appear alone or in groups, and are very commonly detected by mammography. Cysts are not usually associated with breast cancer.



What does it feel like?

This breast lump will feel smooth and squishy. If you are pressing on a cyst, it will have some *give* to it, like a water balloon. A cyst can move around and can change in size during your menstrual cycle.

Where is it?

Breast cysts can be located near the surface, or deeper inside, close to your chest wall. If the cyst is closer to the surface, it is easy to find and easy to distinguish from other lumps. But if it is deeper inside, it's more difficult to distinguish it from other kinds of breast lumps, because when you press on it, you're actually trying to work through layers of breast tissue, which may be dense and firm.

When does it appear?

Cysts are most common in women who are 35 to 50 years old and are perimenopausal. If you're taking hormone replacement therapy (HRT) you may also experience breast cysts. Breast oil cysts may occur after breast surgery, breast reconstruction, an injury to your breast, or they may grow spontaneously.

Causes of Breast Cysts

During your regular menstrual cycle, your breast produces and absorbs fluid in response to hormonal changes. Excess estrogen may stimulate the breast to make more fluid than is absorbed and subsequently this fluid may collect in small sacs or pockets. Many of us have small cysts without realizing it, or without being bothered by any pain or bumpiness. These usually don't require any treatment, but they can be drained if they are uncomfortable.

Cysts Show Up on Your Mammogram

A mammogram will show dense areas of tissue. If a cyst or a solid area (fibroadenomas or a tumor) appears on a mammogram, a radiologist sees those as dense masses.

Dealing with Dense Masses

If your radiologist finds a dense mass on your mammogram, and thinks it may be a cyst, the next step is to perform an ultrasound on it. An ultrasound sends sound waves through breast tissue, which will pass through a fluid-filled spot. Solid masses will reflect sound waves, and will make a different image on the ultrasound than will a cyst.

Treatment

Your doctor can help you determine that a lump is a harmless cyst, by doing a fine needle aspiration with a syringe. This procedure removes the fluid from inside the cyst, which deflates and most likely will not return.

Breast Fibroadenomas

What is it?

Fibroadenomas are one of the findings that can be seen on your mammogram. They are benign (not cancerous) breast tumors that are made of glandular and fibrous breast tissue. These lumps can occur alone, in groups or as a complex. If you have multiple or complex fibroadenomas, this may raise your risk of breast cancer slightly.

Can You Feel a Fibroadenoma?

While doing your regular breast self-exam, you may feel a breast fibroadenoma. These feel firm, round, smooth, rubbery, and are movable. They are so mobile that women sometimes refer to them as “breast mice” because they tend to run away from your fingers. These masses may feel tender, especially right before your period, when it may swell due to hormonal changes.

How Big Are They?

Fibroadenomas range in size from one to five cm, (0.39 inches to nearly two inches). Giant fibroadenomas can be the size of a small lemon, about 15 cm (5.9 inches).

Where is it?

These can be located near the surface of the breast and are easily felt.

Treatment

A fibroadenoma can be removed, if needed, with a lumpectomy, a laser ablation, or cryoablation. If there is some doubt about the fibroadenoma, it can be biopsied; to make sure that it is harmless.

When does it appear?

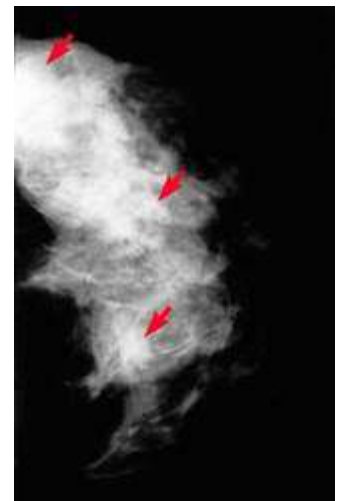
These are most common in women who are from 15 to 30 years old and in pregnant women. Fibroadenomas occur in 10 percent of all women, but in 20 percent of African-American women. They are much less common in postmenopausal women, unless the woman is on estrogen therapy. About 10 percent of all fibroadenomas will disappear over time, and twenty percent of them will recur. If they don't disappear, they usually stop growing when they reach two or three cm.

What Do These Look like on a Mammogram?

Fibroadenomas appear as round or oval smooth-edged masses. The outline of the mass will be clearly defined, not blurry. Sometimes they are accompanied by coarse calcifications. Fibroadenomas can look like cysts or a well-contained tumor.

How Can You Be Sure This Lump is Benign?

Your doctor or radiologist may send you to have an ultrasound study done. This is because a fibroadenoma will be easier to distinguish from other tissue, because of the way it responds to sound waves. It will appear as a dark area, with a definite outline, homogeneous, round or oval, and may have smooth-edged bumps. If the ultrasound doesn't give a definite result, the next study may be an MRI (magnetic resonance image). The most conclusive test is a fine needle biopsy or a core needle biopsy, to get a sample of the cells for a pathologist to examine.



Treatment or Removal of Fibroadenomas:

Since fibroadenomas are benign, treatment will vary depending on your diagnosis. If it is small, painless, remains the same size, and a biopsy shows no problems, you would not need further treatment, but may have follow-up ultrasounds. However, if it is large (more than three cm), painful, growing, or a biopsy results in atypical (very active) cells, you can have it surgically removed with a lumpectomy. If you qualify, you can have fibroadenomas removed with a laser ablation (using heat) or cryoablation (freezing). In-situ ablation of fibroadenomas can be done in-office, leaves tiny scars, and has fast recovery.

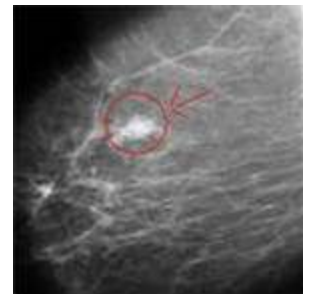
What Causes These Lumps?

The exact cause of fibroadenomas is unknown. They seem to be influenced by estrogen, because they appear most often in premenopausal or pregnant women, or in women who are postmenopausal and taking HRT (hormone replacement therapy). Most fibroadenomas come and go during your menstrual cycle, when your hormone levels are changing.

Breast Pseudolumps

What is it?

These are benign, and may be scar tissue, hardened silicone, necrotic (dead) fat, or a rib bone pressing into breast tissue and compressing it. Your mammogram may show cysts, fibroadenomas, tumors, or other lumps that may be normal breast tissue, other kinds of tissue, or a foreign substance.



What does it feel like?

Your breasts will always have a characteristic texture, with their own cyclical lumpiness. Hormonal ebb and flow affects the lumpiness of your breast tissue, which is why you should always do your breast self-exam at the same time each month. Pseudolumps can feel more prominent than other breast tissue, particularly if they are near your skin. These breast masses may feel hard or soft, depending on what is inside of them. This kind of breast lump can feel quite hard and usually doesn't change shape or size during a menstrual cycle. It may or may not be movable, depending on what it is actually composed of.

Where is it?

Pseudolumps can be located near the surface, or deeper inside the breast, close to the chest wall.

Treatment

To be sure that a pseudolump is harmless, get a mammogram and ultrasound, and if those are not clear, have a needle biopsy done, so that a tissue sample can be analyzed by a pathologist. If it is bothersome, you can have it surgically removed.

When does it appear?

If you've previously had breast surgery or enhancement done, or if a rib has shifted, then a pseudolump may occur.

Can Pseudolumps Show up on a Mammogram?

A mammogram or ultrasound can help your doctor see what the lump may be. If you have dense breast tissue, or are nursing, it may be difficult to get clear results. A trained radiologist will be able to diagnose most common breast masses (cysts, fibrocystic masses, tumors) but may recommend more testing if there is some doubt about the composition of a breast lump.

If Pseudolumps Are Suspected, What Happens Next?

If the lump appears to be due to hormones, you will wait through two or three menstrual cycles and watch carefully for changes. Go for a follow-up visit with your doctor if the lump(s) doesn't disappear or shrink significantly. A definite diagnosis can only be made with a biopsy, such as a core needle biopsy. The resulting tissue sample will reveal the true composition of the lump.

Breast Cancer

What is it?

A cancerous tumor in the breast is a mass of breast tissue that is growing in an abnormal, uncontrolled way. The tumor may invade surrounding tissue, or shed cells into the bloodstream or lymph system.



What does it feel like?

A malignant breast lump will have an irregular shape (not round) with a pebbly surface, somewhat like a golf ball. It will be very hard, like a slice of raw carrot. It may not be movable during a breast self-exam, but since tissue around it may move, it's sometimes hard to know if the lump is moving, or if healthy tissue around it is moving. A clinical breast exam and a mammogram will help to clear up the diagnosis. A needle biopsy would provide more information about the lump.

Where is it?

Breast cancer can be located near the surface, or deeper inside the breast, close to the chest wall. It can also occur in the armpit area, where there is more breast tissue.

When does it appear?

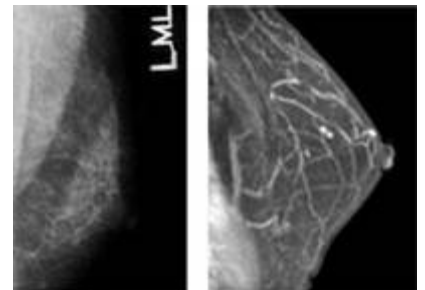
Breast cancer may appear in women who are pubescent, in their fertile years, perimenopausal, or postmenopausal.

What Causes Breast Tumors:

Many factors may increase your risk for breast cancer, but we don't yet know the exact cause. The BRCA 1 and 2 genes, when they are healthy, act as tumor suppressor for breast and ovarian tumors. But you may inherit mutated BRCA genes, or those genes may become damaged from exposure to radiation or chemicals in your environment. Some genetic mutations develop as part of the cancer.

How They Appear on Mammograms

A breast tumor is a dense mass and will appear whiter than any tissue around it. Benign masses usually are round or oval in shape, but a tumor may be partially round, with a spiked or irregular outline as part of its circumference. If a mass has a multi-pointed star-shaped outline, it is described as spiculated. Keep in mind that to the untrained eye, other masses may appear like tumors, but are not. Only a trained radiologist should make the call.



Breast Cancer in Right Breast

What Happens If You Have a Tumor

If your mammogram shows a very dense mass which appears to be a tumor, you will need to have an ultrasound of that particular breast mass. If that image shows a mass that has an irregular outline, or appears to have fuzzy edges and is pressing on tissue around it, then you will need to have a biopsy done of the mass. An analysis of the tissue sample from the mass is the most accurate way to diagnose its actual nature.

Breast Cancer Risk Increases with Age:

About 17 percent of women who were diagnosed with invasive breast cancer were in their 40s, and 78 percent of women with invasive breast cancer were older than 50.

Treatment

The lump itself may be treated with one, or a combination of therapies: surgery, chemotherapy, radiation, and hormone suppression therapy. Talking with your doctor will help you decide on the best treatment plan for your particular diagnosis.

How does Radiation Work on Breast Cancer? Internal and External Radiation

If you're using a flashlight in a dark room, you can see the light as a beam, which you can aim at objects. The beam from a flashlight starts out the same size as the lens, and widens until it touches a surface, such as the floor, or the wall. If you aim the light through a window, it will pass right through and illuminate whatever is on the outside.



Radiation therapy behaves in a similar way to the flashlight beam, but it possesses much more energy and is not visible to our eyes. Like the light of the flashlight passing through a window, the beam of radiation will pass through breast tissue as it hits your cells. During treatment, high-energy beams of radiation will be carefully aimed at the area of the breast from which the cancer was removed. These beams of radiation will affect:

- cancer cells
- healthy cells

Cancer cells grow and divide much more quickly than healthy cells, and their internal functions are not well organized. This makes them more susceptible to damage from radiation treatment, and therefore less able to repair themselves and recover. That is the reason that they are *destroyed* by the radiation.

Healthy cells grow and divide at a normal speed, and they are well organized and robust. When healthy cells receive radiation, alongside of cancer cells, the healthy cells will get damaged, but most are able to recover and repair themselves. They can *survive* the radiation treatment.

Two Methods of Radiation

External Radiation

The most commonly given treatment is external radiation, given as whole breast radiation (WBI) or partial breast radiation (EB-PBI). It is given daily for 5 to 7 weeks, and should be painless. Your doctor will explain how much radiation is needed, and what you can expect to experience. Be sure to ask about how to prevent, or deal with these possible side effects:

- skin changes during and after treatment
- discomfort near recent surgical scars
- fatigue from radiation
- swelling or stiffening of breast tissue
- pain related to radiation
- scar tissue in the lungs or heart

Internal Radiation -- Brachytherapy

This kind of radiation treatment is less common, but can be used at the end of a course of radiation as a boost. Small pieces of radioactive material, which are sometimes called seeds, will be placed inside your breast, where the tumor used to be. The radiation from the seeds will affect the tissue around them, which includes any cancer cells. When the booster treatment is completed, the seeds will be removed.



#ADAM

Talking with your oncologist will help you decide which method will give you the most benefit, and will lower your risk of recurrence. A radiation oncologist will be able to guide you through the decision and treatment process, as well as explain the results of any x-rays that may be needed.

What are Aromatase Inhibitors and How Do These Drugs Prevent Recurrence?

Aromatase inhibitors are a class of drugs that are given as follow-up treatment to postmenopausal women who have had estrogen-receptor positive breast cancer. These drugs prevent the production of estradiol, a type of estrogen, by inhibiting the enzyme aromatase.

The hormone estrogen fuels 80% of all breast cancers. Aromatase inhibitors are prescribed after primary treatment (surgery, chemotherapy, radiation) to prevent a recurrence of breast cancer. Before menopause, your ovaries and other tissues (adrenal glands, liver, kidney, and fat tissue) are producing and storing estrogen, keeping your levels of the female hormone high. These drugs are given to postmenopausal women because the ovaries (the primary source of estrogen) stop producing estrogen after menopause.



Aromatase inhibitors differ from SERMs (selective estrogen receptor modulators) in that they lower your levels of circulating estrogen by preventing estrogen production. SERMs do not prevent the production of estrogen, but they help to slow or stop the growth of estrogen-sensitive cancer cells by starving them of a full dose of natural estrogen. Aromatase inhibitors can also be given after a course of SERMs, such as Tamoxifen, to increase your chance of recurrence-free survival. Progestin therapy, such as Megace (megestrol acetate) could be used for metastatic disease.

There are risks and benefits of taking aromatase inhibitors. While they help prevent a recurrence of estrogen-receptor positive breast cancer, they may also:

- increase your risk for osteoporosis (bone thinning)
- raise your cholesterol levels (Femara and Arimidex)
- may cause stomach upset and nausea - these effects usually decrease after a few weeks
- cause menopausal symptoms (hot flashes, vaginal dryness, low libido)

There are four kinds of aromatase inhibitors currently available:

- Arimidex (anastrozole)
- Aromasin (exemestane)
- Femara (letrozole)
- Fadrozole - a third-generation AI

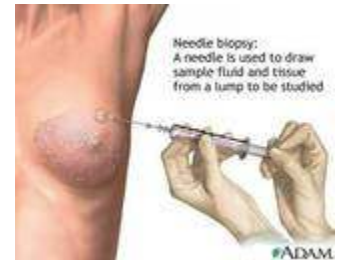


Breast Biopsy Overview: Four Types of Procedures

If you've had a mammogram or a breast exam that has caused concern, or if you've felt a lump in your breast, you should talk to your doctor or nurse practitioner about it. If the doctor recommends it, you may need to have a breast biopsy done, to determine whether the affected tissue is actually worrisome, is only a cyst, or is just a normal change. There are several kinds of breast biopsy techniques, and each one has advantages and disadvantages.

A biopsy is a procedure that takes a sample of tissue, so that it can be sent for testing by a lab. It's important to get accurate results from a biopsy, because if there is any disease, the biopsy result will help to determine what your next course of action should be.

- **Fine-needle aspiration:** During a fine-needle aspiration, the surgeon will put a thin needle through the skin and into the lump. Cells will be drawn into the needle, and given to a pathologist to look at under a microscope. Needle aspiration might also be done to determine if the lump is solid or liquid (a cyst). If the lump is a cyst, after the fluid has been removed, the cyst will deflate and disappear. If there is no fluid, and the tissue in the lump is too hard to draw into the needle, then you may need a different type of biopsy, in order to get the best results.



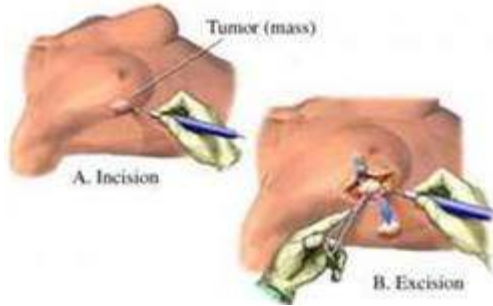
- **Core needle biopsy:** For a core needle biopsy, the surgeon will use a large, hollow-core needle, which has a special tip. The surgeon puts this needle through the skin and into the lump. A very small tissue sample will be taken into the core needle. Sometimes the surgeon will also use suction, in order to remove a slightly larger sample of tissue. The sample is then sent for lab tests. If the surgeon has difficulty targeting the lump, and the tissue sample does not give a clear result, you may need to have this done again, or your doctor may suggest a different type of procedure.



- **Stereotactic biopsy:** This kind of biopsy is used to get a tissue sample from a lump that cannot be felt during a breast exam, but can be seen on a mammogram or an ultrasound. The lump may be too deep inside the breast to be palpable (felt by your fingers.) The surgeon will use a special type of X-ray imaging, to find the lump that the needle must target, in order to get an accurate tissue sample. The needle will follow the X-ray to the area of concern, and take a tissue sample. Recently, some surgeons have begun to implant a small bit of metal at the biopsy site, after taking a tissue sample, so that in future mammograms or ultrasounds, they can see where a biopsy was done. This kind of biopsy will create some scar tissue, where the biopsy occurred, but the metal tag will help your doctors distinguish between scar tissue and a benign area in your breast.



- **Open biopsy, or surgical biopsy:** This surgical technique requires a cut in the skin, in order to remove a sample of the lump, or sometimes, the entire lump. An open surgical biopsy will be done in a hospital or surgical center. If your surgeon cannot feel the lump, and does not know where to take a tissue sample, then you will be asked to have a mammogram done just before the surgery. The mammogram will show the target area, and a needle will be placed in the suspicious area, to guide the surgeon right to the site. A tissue sample will be surgically removed and sent for testing immediately. If the surgeon missed the target area, they may have to take another sample,



during the same procedure. This helps you get the most accurate results from the lab tests, which the lab does on the tissue sample. This can be a minimally invasive procedure, which may leave a small scar on your skin, and will create some scar tissue at the biopsy site.

You may need further tests or biopsies, if problems are found during the first biopsy, or if the results of the tests are unclear, or if your doctor is concerned about a particular area of your breast.

Breast Cancer Surgery Options: Therapeutic Breast Cancer Surgery Overview

Prevention of cancer recurrence is the top priority when it comes to breast cancer surgery. The goal is to remove the tumor so that it won't reappear in your breast, or spread to other parts of the body.

If you need breast cancer surgery, you have some choices in procedure depending on the tumor location, size, grade, and node status. The surgical procedures can be done by a general surgeon or one who specializes in breast surgery.

Breast Cancer Surgeries

The three surgical procedures used for breast cancer are:

- **Lumpectomy:** removal of the cancerous lump along with a margin of surrounding tissue
- **Quadrantectomy:** removal of the cancer and nearby tissue
- **Mastectomy:** removal of all of the breast tissue and sometimes part of the chest wall muscle

Lumpectomy – Surgery for Breast Cancer

A lumpectomy is the least invasive type of breast cancer surgery. It is technically classified as a partial mastectomy, because some of the breast is removed. But since a lumpectomy takes the least amount of tissue and leaves the smallest scar of all the breast surgeries, it should make minimal changes in your breast. A lumpectomy also may be referred to as a wide local excision (WLE).

Lumpectomy - A Breast-Conserving Procedure

The goal of a lumpectomy is to remove just the tumor and a small margin of tissue. Your surgeon's task will be to locate the lump itself, and a margin of tissue, which surrounds the lump. Sometimes a wire localization procedure is used to help mark the position of the lump. A surgeon will work by feel, and use information that is included in your mammogram or ultrasound report. Your surgeon may mention that getting "clear margins" around the tumor is important, and that is why a bit more than just the cancer must be removed. Since a tumor typically has bumpy ("spiculated") surfaces that may be trying to branch out and spread, the surgeon will try to ensure that when the tumor is removed, no bits of the bumps or spikes of the tumor are left in the breast tissue, which could cause a recurrence of cancer.



Preparing for Radiation Treatments

After a lump has been removed, if you will need radiation, your surgeon may place a radiation catheter device, sometimes called a balloon catheter, into the lumpectomy cavity. This device allows your radiologist to give you brachytherapy, a method of radiation that is delivered from inside your breast, instead of external beam radiation.

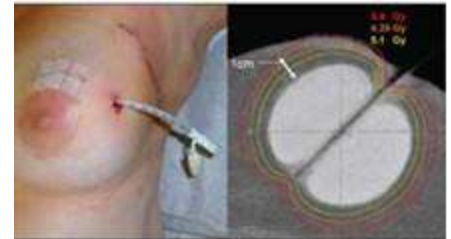


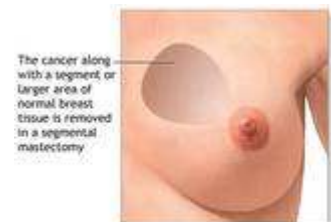
Figure 2: MammoSite Balloon Brachytherapy—External (left) and sagittal (right) views of balloon with dosimetric target coverage. Photographs courtesy of Douglas Arthur, with permission from the *Journal of Clinical Oncology*.

New Shape, New Texture

Depending on how much tissue is removed, you may or may not need a prosthesis, or extra padding, in a bra after you've recovered from a lumpectomy. Your body will generate some scar tissue in the surgery area, which may fill in the place where the lump was. This will change the texture of your breast somewhat, and this area will show up on future mammograms as different from the undisturbed breast tissue. You will have a scar on the skin where your incision was made, but with good care, this will fade into a small line that is just a bit lighter than the surrounding skin. Ask your surgeon or family doctor how you can take the best care of the incision and promote healing.

Quadrantectomy

A quadrantectomy is one type of breast cancer surgery. It is also called a partial or segmental mastectomy. A quadrantectomy requires the removal of more breast tissue than a lumpectomy, but leaves most of your breast intact.



Quadrantectomy - A Breast-Conserving Procedure

During a quadrantectomy, your surgeon removes one-quarter of your breast. Your surgeon will take out the tumor and 2 to 3 centimeters of surrounding breast tissue, to be sure that the margins around the tumor are clear of cancer. Skin that is lying over that quarter of your breast also will be removed, and some of the muscle of the chest wall, beneath the tumor, also may need to be taken out. The lymph nodes that are closest to the tumor will be removed and tested for cancer cells, as will your tumor, skin and the tissue around the tumor. You may need a surgical drain to help with healing after surgery.

Dealing with a New Shape

A quadrantectomy will change the size and shape of your breast. After you recover, you may want to put some additional padding in your bra to balance your appearance. You also may wish to have a plastic surgeon remodel the breast into a smaller size with a natural shape, and this is best done before starting any other treatments, such as radiation or chemotherapy. Radiation will change the texture of the skin in the surgery area, and during chemotherapy your body may not have the resources to heal properly from surgery. The skin at the incision will have a scar, and will change in texture, but if you care for the incision, it will fade into a small line with time.



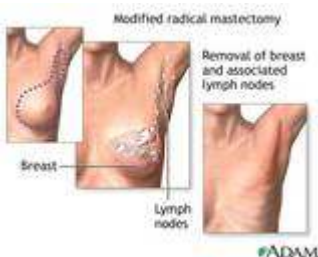
Regaining Symmetry

After surgery, your breasts will no longer be a matched pair. If you want to balance the size of your post-surgical breast with your unaffected breast, you might consider having a breast reduction done on the healthy breast. This would also balance the weight of your breasts on your chest and back muscles.

Mastectomy - Surgery for Breast Cancer

Four Types of Mastectomy to Remove Breast Cancer

A mastectomy is the oldest known treatment for breast cancer. Before the development of the lumpectomy and quadrantectomy, a mastectomy was only surgery for this disease. A mastectomy removes the entire breast and may include the removal of skin and muscle.



Four Types of Mastectomy

Mastectomy is surgery to remove breast tissue. The breast may be removed because of cancer or fibrocystic disease. There are several different degrees of mastectomy.

- A simple or total mastectomy is the removal of all the breast tissue and skin, including nipple and areola. Lymph nodes and chest muscles are left undisturbed. Prophylactic mastectomies for women at high risk for breast cancer are usually simple mastectomies.
- The modified radical mastectomy removes the nipple and areola, most of the breast skin, the breast tissue, and the lymph nodes in the armpit area (axilla). No muscle is removed during a modified mastectomy.
- A radical or Halstead mastectomy removes the nipple and areola, the breast skin and tissue, and may also remove a part of the chest wall muscle underneath the breast. The lymph nodes in the armpit area (axilla) also are removed and tested for cancer.
- For women who are planning on immediate reconstruction, a skin-sparing mastectomy can be done. During a skin-sparing mastectomy, the breast tissue, nipple and areola are removed, and most of the breast skin is retained. This remaining skin is closed over the reconstruction site.

A New Silhouette

If you do not have breast reconstruction, post-mastectomy you will have a slightly curved scar at the incision, and the skin in the breast area will be flat. Taking good care of the scar will result in a fine light line, over time. You can use a prosthetic bra, which has pockets to hold breast prosthesis, if you like, to balance your appearance.



Completing The Picture - Breast Reconstruction



After you've finished all your treatments for breast cancer, you may decide on breast reconstruction at a later date. You can consult with a plastic surgeon to see which options will best suit you. A reconstructed breast is not an instant substitute for a natural breast, and won't look or feel quite the same. Many women do report that having breast reconstruction helps improve their self-image and esteem, after recovering from a mastectomy.

What Is Fibrocystic Breast Disease?

It is not uncommon for women to be told by their physician that they have fibrocystic breast disease or other benign breast conditions. Other terms women may hear include benign breast disease, chronic mastitis (inflammation), and mammary dysplasia.

Fibrocystic breast disease is usually a benign (non-cancerous) condition. Symptoms include swollen, tender breasts, and/or one or more lumps. Frequently, symptoms worsen just before a woman's menstrual cycle and lessen near the end. For the majority of women these symptoms are a temporary discomfort; however, some women experience severe pain.



Fibrocystic breast disease may affect one or both breasts. Women often discover the existence of this condition during a breast self-exam when they may detect a lump. As frightening as discovering a lump in your breast is, it's important to remember the majority of breast lumps are *not* cancerous. However, all breast lumps must be investigated to rule out breast cancer and/or to begin immediate treatment if breast cancer is diagnosed.

Controversy exists about the name "fibrocystic breast disease." Some argue that fibrocystic breast disease is not a disease, but a common and harmless condition experienced by women as they encounter hormonal changes during their menstrual cycles.

Others argue that fibrocystic breast changes are a precursor for future breast cancer. Current research suggests that women with fibrocystic breast disease or other benign breast conditions are more likely to develop breast cancer later only if a breast biopsy shows abnormal breast cells. Most women with fibrocystic breasts will not have abnormal breast cells when a biopsy is performed.

What to Do When You Find a Lump in Your Breast

Call your physician to schedule an appointment and ask yourself the following questions:

- What is the date of your last period?
- When did you discover the lump?
- Do you have a family history of breast problems?
- Have you had any previous breast problems?
- Have you had a previous breast biopsy or other breast surgery?
- How does the lump feel? Is it hard or soft? Does it feel grainy?
- How big is the lump? Has it grown larger or smaller since you discovered it?
- Do you have any nipple discharge?
- Are you taking any medications?

Steps to Reduce and/or Eliminate Symptoms Naturally

- One of the most important dietary changes you can make to prevent or reduce the symptoms of fibrocystic breast disease is eliminating all forms of caffeine-containing foods from your diet. This includes foods such as chocolate, sodas, coffee and tea. Reducing sugar may also help reduce overall symptoms.
- It may also help to decrease sources of estrogen from your diet, such as commercially raised meats. And don't forget about pharmaceutical sources of estrogen such as birth control pills.
- According to Dr. John Lee's book, "What Your Doctor May Not Tell You About Premenopause," applying natural progesterone cream at a dose of "15 to 20 mg per day from ovulation until a day or two before your period returns will usually result in a return to normal breast tissue in three to four months." Dr. Lee further advises that once the desired results have been obtained, you should taper down your dose until you have reached the minimum dosage required for you to maintain your results. It's best to discuss this treatment with your physician before taking any action.
- Dr. Lee also recommends the use of vitamin E in doses ranging from 400 to 600 IU per day to reduce symptoms associated with fibrocystic breast changes. Other vitamin suggestions include vitamin B6, a B complex, and magnesium. Be sure to talk to your doctor before you take any supplements.
- If you have tried everything and still find yourself suffering with unbearably painful breasts, some physicians recommend wearing a good support bra during intolerable episodes.



Types of Benign Breast Changes - General Breast Lumps - Solitary Lumps - Nipple

Common benign breast changes fall into several broad categories. These include generalized breast changes, solitary lumps, nipple discharge, and infection and/or inflammation.

Generalized Breast Changes

Generalized breast lumpiness is known by several names, including [fibrocystic disease](#) changes and benign breast disease. Such lumpiness, which is sometimes described as "ropy" or "granular," can often be felt in the area around the nipple and areola and in the

upper-outer part of the breast. Such lumpiness may become more obvious as a woman approaches middle age and the milk-producing glandular tissue of her breasts increasingly gives way to soft, fatty tissue. Unless she is taking replacement hormones, this type of lumpiness generally disappears for good after menopause.

The menstrual cycle also brings cyclic breast changes. Many women experience swelling, tenderness, and pain before and sometimes during their periods. At the same time, one or more lumps or a feeling of increased lumpiness may develop because of extra fluid collecting in the breast tissue. These lumps normally go away by the end of the period.

During pregnancy, the milk-producing glands become swollen and the breasts may feel lumpier than usual. Although very uncommon, breast cancer has been diagnosed during pregnancy. If you have any questions about how your breasts feel or look, talk to your doctor.

Solitary Lumps

Benign breast conditions also include several types of distinct, solitary lumps. Such lumps, which can appear at any time, may be large or small, soft or rubbery, fluid-filled or solid. Cysts are fluid-filled sacs. They occur most often in women ages 35 to 50, and they often enlarge and become tender and painful just before the menstrual period. They are usually found in both breasts. Some cysts are so small they cannot be felt; rarely, cysts may be several inches across. Cysts are usually treated by observation or by fine needle aspiration. They show up clearly on ultrasound.

Fibroadenomas are solid and round benign tumors that are made up of both structural (fibro) and glandular (adenoma) tissues. Usually, these lumps are painless and found by the woman herself. They feel rubbery and can easily be moved around. Fibroadenomas are the most common type of tumors in women in their late teens and early twenties, and they occur twice as often in African-American women as in other American women.

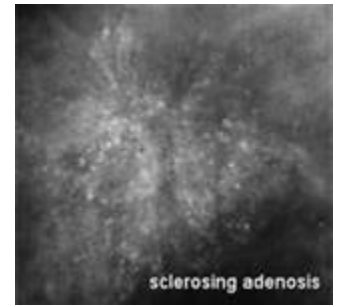


Fibroadenomas have a typically benign appearance on mammography (smooth, round masses with a clearly defined edge), and they can sometimes be diagnosed with fine needle aspiration. Although fibroadenomas do not become malignant, they can enlarge with pregnancy and breast-feeding. Most surgeons believe that it is a good idea to remove fibroadenomas to make sure they are benign.



Fat necrosis is the name given to painless, round, and firm lumps formed by damaged and disintegrating fatty tissues. This condition typically occurs in obese women with very large breasts. It often develops in response to a bruise or blow to the breast, even though the woman may not remember the specific injury. Sometimes the skin around the lumps looks red or bruised. Fat necrosis can easily be mistaken for cancer, so such lumps are removed in a surgical biopsy.

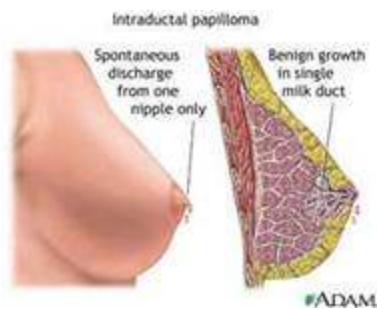
Sclectrosing Adenosis is a benign condition involving the excessive growth of tissues in the breast's lobules. It frequently causes breast pain. Usually the changes are microscopic, but adenosis can produce lumps, and it can show up on a mammogram, often as calcifications. Short of biopsy, adenosis can be difficult to distinguish from cancer. The usual approach is surgical biopsy, which furnishes both diagnosis and treatment



Nipple Discharge

Nipple discharge accompanies some benign breast conditions. Since the breast is a gland, secretions from the nipple of a mature woman are not unusual, nor even necessarily a sign of disease. For example, small amounts of discharge commonly occur in women taking birth control pills or certain other medications, including sedatives and tranquilizers. If the discharge is being caused by a disease, the disease is more likely to be benign than cancerous. Nipple discharges come in a variety of colors and textures. A milky discharge can be traced to many causes, including thyroid malfunction and oral contraceptives or other drugs. Women with generalized breast lumpiness may have a sticky discharge that is brown or green. The doctor will take a sample of the discharge and send it to a laboratory to be analyzed. Benign sticky discharges are treated chiefly by keeping the nipple clean. A discharge caused by infection may require antibiotics.

One of the most common sources of a bloody or sticky discharge is an intraductal papilloma, a



small, wartlike growth that projects into breast ducts near the nipple. Any slight bump or bruise in the area of the nipple can cause the papilloma to bleed. Single (solitary) intraductal papillomas usually affect women nearing menopause. If the discharge becomes bothersome, the diseased duct can be removed surgically without damaging the appearance of the breast. Multiple intraductal papillomas, in contrast, are more common in younger women. They often occur in both breasts and are more likely to be associated with a lump than with nipple

discharge. Multiple intraductal papillomas or any papillomas associated with a lump, need to be removed.

Infection and/or Inflammation

Infection and/or inflammation, including mastitis and mammary duct ectasia, are characteristic of some benign breast conditions.

Mastitis (sometimes called "postpartum mastitis") is an infection most often seen in women who are breast-feeding. A duct may become blocked, allowing milk to pool, causing inflammation, and setting the stage for infection by bacteria. The breast appears red and feels warm, tender, and lumpy.



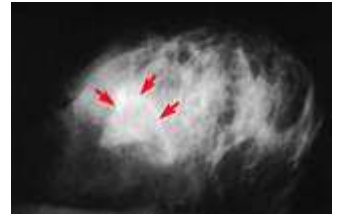
In its earlier stages, mastitis can be cured by antibiotics. If a pus-containing abscess forms, it will need to be drained or surgically removed.

Mammary duct ectasia is a disease of women nearing menopause. Ducts beneath the nipple become inflamed and can become clogged. Mammary duct ectasia can become painful, and it can produce a thick and sticky discharge that is grey to green in color. Treatment consists of warm compresses, antibiotics, and, if necessary, surgery to remove the duct.

A word of caution: If you find a lump or other change in your breast, don't use this article to try to diagnose it yourself. There is no substitute for a doctor's evaluation.

Breast Calcifications: What Are They?

Calcifications are one of the findings that can be seen on your mammogram. These are very small bits of calcium can appear within the soft tissue of your breast. Calcifications are not breast cancer. These aren't always a sign of breast cancer. Sometimes calcifications are an indication of a precancerous condition. They appear as white dots on your mammogram.



Calcifications are divided into two kinds

- **Macrocalcifications** are bigger bits of calcium, and are not usually linked to breast cancer.
- **Microcalcifications** are quite tiny bits of calcium, and may show up in clusters or in patterns (like circles or lines) and are associated with extra cell activity in breast tissue. Usually the extra cell growth is not cancerous, but sometimes tight clusters of microcalcifications can indicate early breast cancer. Scattered microcalcifications are usually a sign of benign breast tissue.

What happens next, if you have Microcalcifications?

If your mammogram shows microcalcifications in tight clusters, your doctor or radiologist may recommend that you have a diagnostic mammogram, an ultrasound, or a biopsy.

If you have a couple of microcalcifications that look questionable, you may be asked to come back in six months for a comparative mammogram. That will help the doctors see if any changes are happening.

It's good to do these follow-up exams to make sure that you get the best information on your health.

Some benign causes will make calcifications show up on a mammogram:

- old injury to breast tissue, natural wear and tear
- mastitis, or inflammation caused by a breast infection
- calcium collected inside a dilated milk duct
- calcium mixed with fluid in a benign breast cyst
- powders, ointments or deodorants deposit calcium on the skin
- radiation treatment for breast cancer
- calcification in the arteries within your breast
- calcifications in a fibroadenoma (benign growth)

Where and How Often Do Calcifications Appear?

- macrocalcifications show up in about 50 percent of women over 50, and 10 percent of women under 50 years of age
- macrocalcifications are usually not worrisome and won't require a biopsy
- 80 percent of microcalcifications are benign
- microcalcifications can help detect ductal carcinoma in situ (DCIS)

Core Needle Biopsy for Breast Masses

A core needle biopsy is used when your doctor needs more information about a breast lump than a mammogram, ultrasound, or fine needle aspiration can give.

A core needle, or hollow core needle, can be used to get small tissue samples from a breast lump. The tissue samples will be sent to the pathology lab for examination. This procedure can be done in an office, clinic or hospital by a doctor who is trained in the technique.



Having a core needle biopsy might help you avoid an open surgical biopsy.

Other Names for a CNB

- CNB
- hollow core needle biopsy
- incisional needle biopsy

Reasons to Have This Kind of Biopsy

Having a breast biopsy of any kind can be stressful, but it's a good way to find out the true nature of a breast mass that is causing concern. You may have already had a fine needle aspiration (to remove fluid or tissue), but didn't get clear results. A hollow core needle (16-, 14-, or 11-gauge needle) can take larger tissue samples of a breast mass as well as nearby healthy breast tissue. Your pathologist can do more accurate tests and microscopic examinations on larger tissue samples, giving you and your doctor a better idea of how to proceed.

Four Different Techniques

Core needle biopsies are done several different ways, depending on the size or location of the breast mass being sampled. **Freehand needle biopsy** can be used for lumps or masses that can easily be felt. But if a lump is too small to be felt, or too deep to aim a needle at, there are other methods that use imaging and mechanical assistance: **ultrasound-guided needle biopsy**, **stereotactic needle biopsy**, and **vacuum-assisted biopsy**.

What to Expect

You will be awake during the procedure, but your breast will be numbed with a local anesthetic. Your doctor will locate the lump by touch or with guidance from imaging technology. Your doctor will insert the core needle through your skin into the lump to take tissue samples. To ensure accuracy of results, three to six samples will be taken. You should expect to feel some pressure during the procedure, but be sure to let your doctor know if you feel significant pain. After the procedure, you may have some bruising at the needle sites, but no scars. You will be able to return to work or home right away.

Getting Results

Your tissue samples will be tested in the pathology lab, and a written report will be sent to your doctor. A *negative result* means that no cancer was found. A *positive result* means that the mass is malignant, and more tests will be needed to get an accurate diagnosis.

Accuracy of This Test

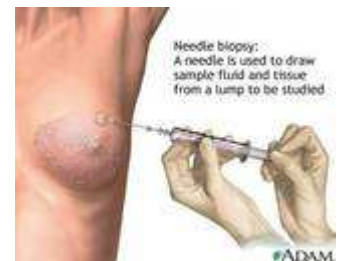
Because a core needle can remove a larger tissue sample, and more samples are taken for comparison, a core needle biopsy is more accurate than a fine needle aspiration. A core needle biopsy may be between 97 and 100% accurate in giving a diagnosis. If you have very small breasts or very hard lumps, a core needle may not be able to take a good tissue sample, and other biopsy methods may be required.

Benefits and Risks of This Procedure

A core needle biopsy is more accurate than an aspiration and less invasive than an open surgical or excisional biopsy. The needle biopsy will leave no external or internal scars, and so it will not affect future breast imaging studies. There is always the chance that the needle may miss a malignant area, but your doctor will try to minimize this possibility. A core needle biopsy is not a treatment, and it will not remove all of a malignancy. If your results come back positive for cancer, you will need to consider more tests and treatment.

Fine Needle Aspiration of a Breast Cyst

A breast cyst is a harmless, fluid-filled sac that shows up easily on an ultrasound. Other types of breast lumps may feel similar to a cyst, but one way to be sure that your breast lump is a cyst and not a different mass is to have a fine needle aspiration. Your doctor will use a very fine needle (smaller than a blood-draw needle) to suction out some fluid, which will be examined under a microscope. This procedure can be done in an office or clinic – by a doctor who is trained in the technique and has access to a pathology lab that can examine the resulting fluid.



Also Known As:

Breast cyst aspiration, fine needle aspirate of breast, breast FNA, fine needle aspiration biopsy, FNAB

Reasons to Have a Fine Needle Aspiration Biopsy

Getting any breast lump checked out is a wise move. Having a fine needle aspiration may seem scary, but it can give you the clearest information about the nature of the lump. If the lump turns out to be a cyst, the fluid can be drained out, relieving any pressure it may have been causing. Most breast lumps are not cancerous, but a small percent of them are malignant. In either case, the examination of the fluid resulting from your aspiration can give your doctor enough information to determine what the next steps should be, to deal with the lump.

What to Expect During a Fine Needle Aspiration Biopsy

You will be awake during the procedure, but you can ask for local anesthetic to numb the area of your breast that the needle will enter. Your skin will be cleaned to prevent infection. Your doctor will locate the lump by feeling it, or by using an ultrasound to see it. Then your doctor will immobilize the lump and use a very fine-gauge needle, to pierce the lump, and draw fluid out with a syringe. If no fluid comes out, the doctor may reposition the needle and try again. Once fluid is captured, the needle is removed, pressure is applied to prevent a bruise, and a bandage is used to cover the site.

Getting Results from an Aspiration

The color of the fluid drawn out of the lump will give some clues about its nature. If the fluid is clear or watery and not bloody, and the lump shrinks as a result of the aspiration, it is most likely a cyst. Sometimes the fluid will be white, yellow-green, brown, or bloody – only in rare cases will this mean that the lump is cancerous. If the needle draws out small bits of tissue and very little fluid, that indicates a solid mass. Those tissue samples should be examined by a pathologist, to determine their nature.

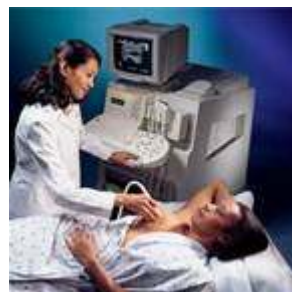
Accuracy of this Procedure

A needle aspiration is 80 to 85% accurate in giving a clear indication as to whether a breast lump is a cyst or a solid breast mass. But since some possibility of error exists, it is important to go for your follow-up visits. A cyst can refill, and need more aspiration, or if a lump grows or the needle biopsy site becomes bruised, infected, or tender, your doctor should examine it again.

Benefits and Risks

A fine needle aspiration may result in draining a cyst, and the lump will go away. This is a good indication that the lump was not cancerous. However, some cysts do refill, and if they become bothersome, can be surgically removed. If the needle biopsy misses a cancerous lump, or if the fluid or tissue sample does not give a clear diagnosis, then your doctor may recommend doing another FNA biopsy, or a core needle, stereotactic, or open surgical biopsy.

Breast Ultrasound - Imaging for Breast Abnormalities



A breast ultrasound examination is not considered a screening test, but an investigative technology used for taking a closer look at areas of your breast that your doctor still has questions about after doing a mammogram and clinical breast exam. An ultrasound test may be useful if your mammogram shows an indistinct mass, or if a lump can be easily felt during a clinical breast exam.

An ultrasound uses high-frequency sound waves that are transmitted through breast tissue from a hand-held unit called a transducer. These sound waves bounce off breast tissues. The "echoes" created as a result are then recorded by a computer that makes an image of the breast tissue and displays it on a monitor. No radiation is used, and very little pressure is required.

Ultrasounds produce sharp, high-contrast images. In dense breast tissue, the ultrasound can create an image that often allows a doctor to distinguish between a fluid-filled cyst and a solid mass. Mammograms do not make this distinction as accurately, though they are better than ultrasounds at detecting microcalcifications (which can be an early sign of breast cancer).

Ultrasound imaging requires a skilled operator who can examine suspect areas of the breast by positioning the transducer in several positions. The operator must decide when to reposition the transducer, or the patient, in order to get the best images.

Often, breast abnormalities that are suspected to be cancerous after a mammogram can be identified as benign with a follow-up ultrasound examination. Benign breast abnormalities can include cysts and plugged milk ducts. If your doctor sends you for an ultrasound, it doesn't always mean that you have cancer -- just that a clearer picture of your breast is needed.

What can be seen on an Ultrasound?

- Ducts
- Lobes
- Muscle layers
- Cysts
- Abscess
- Fibroadenomas
- Breast masses

Disadvantages of Ultrasound

- Can't image areas deep inside the breast
- Requires a well-trained and experienced operator
- Equipment can sometimes have problems
- May have trouble distinguishing between abnormality and surrounding tissue
- Cannot show microcalcifications

Advantages of Ultrasound

- High-contrast images
- Can image nonpalpable masses (lumps that you can't feel)
- No compression, pain-free
- No radiation
- Less expensive than CAT scan or Breast MRI

More Uses for Ultrasound

Ultrasound can also be used to guide a surgeon during a breast biopsy, so the most accurate tissue sample can be taken. Your surgeon can also use an ultrasound to guide the needle during an aspiration of a cyst in order to remove fluid. Lymph nodes can be imaged by ultrasound because they make a characteristic image which distinguishes them from malignant tumors.

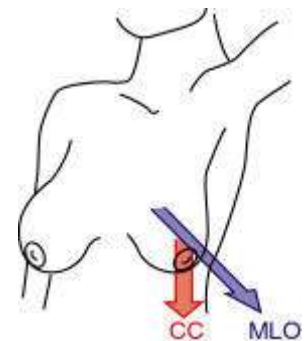
What Are the Two Angles of View for a Routine Mammogram?

During a routine mammogram, each of your breasts will be imaged separately with two different views of each breast. Each view shows somewhat different details and territory.

- Cranio-caudal (CC) view is taken from above a horizontally-compressed breast
- Mediolateral-oblique (MLO) is taken from the side and at an angle of a diagonally-compressed breast

Cranio-Caudal View (CC)

A CC view of your breast may be taken during a routine mammogram as well as during a diagnostic mammogram. It will show as much as possible of your glandular tissue (ducts and lobes), the surrounding fatty tissue and the outermost edge of your chest wall muscle. Your nipple will be shown in profile. The CC view can't capture much of the breast tissue that is in your armpit and upper chest.



Mediolateral-oblique (MLO)

An MLO view of your breast may be taken during a routine mammogram. The angle of an MLO allows more of your breast tissue to be imaged (it covers the main area of your breast) as well as the tissue in your armpit. It will show glandular as well as fatty tissue, and it covers a larger area than a CC view.

Other Views May be Taken for a Diagnostic Mammogram

- Lateromedial (LO) - from the outside towards the center
- Mediolateral (ML) - from the center towards the outside
- Spot compression - compression on only a small area, to get more detail
- Cleavage view - both breast compressed, to see tissue nearest center of chest
- Magnification - to see borders of structures and calcifications

Why Use So Much Compression?

The goal of a mammogram is to get the clearest possible image of your breast tissue, while using the least amount of X-ray dose to get that image. Proper compression helps create the best image because:

- less motion results in clearer edges (less blurring)
- more breast tissue can be seen all at once if it's compressed (spread out, fewer shadows)
- X-rays can pass through a thinner amount of tissue more efficiently
- a smaller dose of X-rays are needed to create the image

What to Expect During Your Mammogram

What is a mammogram?

A mammogram is an x-ray of the breast and surrounding tissues which can effectively detect cancers long before you might feel any changes during your monthly breast self-exam. Mammography can detect breast changes which could signify very early breast cancer.

Is mammography safe?

A very small dose of radiation is used in mammography, an amount equal to about two hours in the sun which places mammography in the safe range. In the United States, mammography clinics are certified to assure quality and safety. The American Cancer Society can provide a list of certified clinics in your area by calling your local office or 1-800-ACS-2345. It is important to remember where your mammograms are performed so that results in future years can be compared.

Mammograms – Benefits, Drawbacks, and Myths Weigh Your Benefits and Risks, Dispel Myths about Mammography

Mammograms – the annual squeeze that many women dread – is an effective screening tool for breast cancer as well as benign breast conditions. It is not a perfect tool, and is sometimes misunderstood by women who have had less-than-pleasant experiences with it. Here you can weigh the benefits and drawbacks, and learn some myths about mammography.

Benefits of Mammograms - Early Detection

Before you can feel a lump, a mammogram can detect it. When a cancer is that small, it may be well-contained (as in not spreading), and may be successfully treated. Standard breast cancer treatments are most effective on smaller tumors. Women over 50 reap the most benefit from mammograms, because their breasts are less dense, which are more effectively imaged by mammography. Women who are 40 to 49 years old still benefit from mammograms, but are more likely to have more benign findings. In certain women and circumstances, routine mammography is supplemented with other imaging technologies such as ultrasound, MRI, and molecular breast imaging (MBI).

In Situ, Invasive Breast Cancer and Age Factors

Mammograms are good at catching invasive breast cancer, whether you are under or over 50. Invasive breast cancer means it has broken out of its original site and invaded nearby tissues. In situ breast cancers such as ductal carcinoma in situ and lobular carcinoma in situ are contained in one place, such a milk duct or lobe. For women under 50 with dense breasts, mammograms may miss a small percentage of in situ breast cancers.

Drawbacks of Mammograms

False Positives: Abnormal Results from Your Mammogram

If you get abnormal results from your mammogram stay calm. Only one out of every 10 women who have abnormal mammogram results will have breast cancer. The emotional cost of a false positive can't be put into financial terms – but getting such news can be a real blow. There are several reasons that you may get a false positive: Mammograms are less accurate on women under 50 years old, results can vary among radiologists (more experienced radiologists have higher accuracy), and going to a different clinic every year can throw off your results. Digital mammography may prove to be faster, safer, and more accurate than film mammography.

False Negatives: Mammograms And Dense Breasts

Mammograms work most accurately on breasts with a good amount of fatty tissue – and not as well on breasts that are dense (less fatty tissue). Lumps and bumps can hide from mammograms in dense breast tissue, or may appear to be suspicious when they are really benign. A two-year study of 2,809 women found that mammograms were highly accurate in detecting cancer in dense breasts, but when combined with ultrasounds, more cancers were found, but also more false positives resulted. False positives (inaccurately diagnosed masses that are not cancerous) were confirmed by breast biopsy.

Myths about Mammograms

Mammograms Cause Breast Cancer

Your breast receives about two "rads" or less during a mammogram, according to the U.S. Food and Drug Administration (FDA), the agency that regulates and certifies mammography machines as well as doctors and technicians. Two rads (radiation absorbed dose) is about the same as you absorb when you have dental x-rays, and is less than the radiation used for a standard chest x-ray. The Mammography Quality Standards Act (MQSA) has set the required level of radiation to the lowest possible dose that will obtain the best possible image. Twenty years ago (1988 and earlier) a mammogram used 50 times the amount of radiation than is used today. Modern mammography equipment uses a very low dose of radiation, which should cause no long-term side effects.

Mammograms Are Always Painful: Yes, But -

A breast is a three-dimensional part of your body, and a sensitive one at that. A screening mammogram takes a two-dimensional x-ray of your breast. In order for the x-rays to effectively make the image, your breast tissue must be compressed and must be quite still. You can do three things to lessen the pain of a mammogram: use lidocaine gel in advance of your appointment to numb the breast, schedule your appointment about one week after your period starts, cut down on caffeine for two weeks prior to your mammogram, and request a comfort pad (if your clinic has these) to cushion your breast during the imaging process. Patients who participated in a study of the BioLucent MammoPad said that it reduced their breast pain by nearly half of what it would be without a pad or pain medication.



Understanding Your Mammogram Report

Understanding your mammogram report is important, whether it says “no sign of cancer” or it indicates that changes have occurred which need follow-up. Your mammogram report will have several kinds of information on it, much of it expressed in medical terms. Discuss your results with your doctor to make sure you understand what it means for your breast health.

Waiting for the Results

You can expect to get a written report in the mail within 30 days of the mammogram. When you arrive for your appointment, check at the desk to be sure that the office has your most current address and phone number. Your doctor also will receive a copy of the report.

Information that Appears on Your Mammogram Report

- patient information
- medical history
- procedures
- findings
- impression (BIRADS classification)
- recommendation for further tests, if needed

Findings -- the Critical Information on Your Mammogram:

The findings section is a list of things found on a radiologist’s reading of your mammogram. If you have nothing of concern and all appears well, it will be assessed as normal or negative or benign (not cancerous). If the radiologist sees anything that causes concern or appears abnormal, or is a change from your previous mammogram, it will be assessed as suspicious or abnormal, or suggestive of malignancy (cancerous).

Descriptions of Abnormalities:

If you have abnormalities or changes on your mammogram, some details will be included in the report. These details can include:

- size of the finding
- location
- shape or outline
- density of breast tissue

Warning Signs of Breast Cancer

Lumps and bumps and other abnormalities may be described with these terms, if the radiologist thinks you may have breast cancer:

- clustered calcifications, microcalcifications
- spiculated mass (spiky lump)
- asymmetrical density of breast tissue
- skin thickening
- retraction (skin or nipple pulling inwards)
- focal distortion (something is pressing on tissue)

Impressions from Your Radiologist:

Your mammogram report may include a Breast Imaging Reporting and Data System - BIRADS classification, which is a number that indicates your radiologist's overall impression of your mammogram. The scale for BIRADS goes from one to five, with higher numbers indicating a greater possibility of breast cancer.

Possible Recommendations for Follow-Up:

Your radiologist may make some recommendations based on your mammogram results. The kinds of follow-up that may be needed are:

- no other studies needed
- three-month or six-month follow-up imaging
- spot views
- magnification
- diagnostic mammogram
- breast ultrasound (for lumps and masses)
- biopsy (for a tissue sample)

Be Sure You Understand Your Results:

If your mammogram report states anything other than normal or negative (clear of cancer), please discuss it with your doctor. Research has shown that although 70 percent of patients clearly understand a normal mammogram result, 50 percent of patients who have an abnormal result do not understand what it means. This study also showed that a patient showed the best understanding of a mammogram when the results were explained in person or on the phone, by a health professional. Follow-up tests can clear up results, and give you a plan of action to protect your breast health.

Mammogram Images, Descriptions and Details

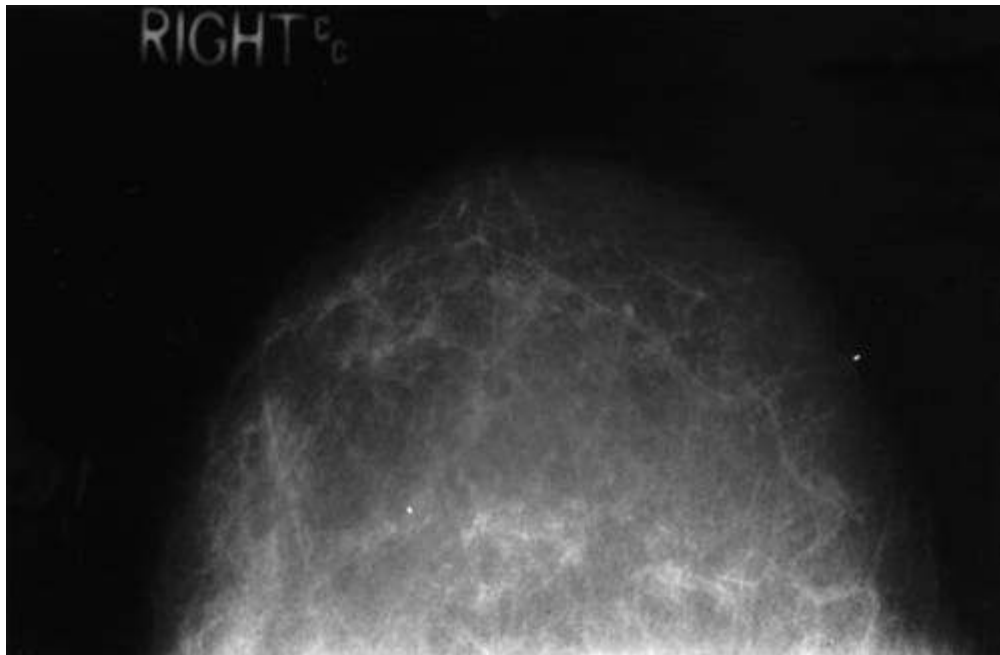
What Do Breast Masses Look Like on a Mammogram?

What shows up on your mammogram, and what does it look like? See what benign and malignant masses look like on a mammogram. Mammograms help with early detection and screening for breast cancer. You can see areas of dark and light, which correspond to normal and dense breast tissue. Breast masses will appear light (whiter) because they are denser than other features in the breast. Images are of actual mammograms, courtesy of the National Cancer Institute.

Please note: **Red arrows were added to help you see the part of the image that is being featured.**

Normal Fatty Breast Tissue on a Mammogram

On this mammogram you can see dark areas that are normal fatty tissues; the lighter areas are denser tissue which contains ducts, lobes, and other features.

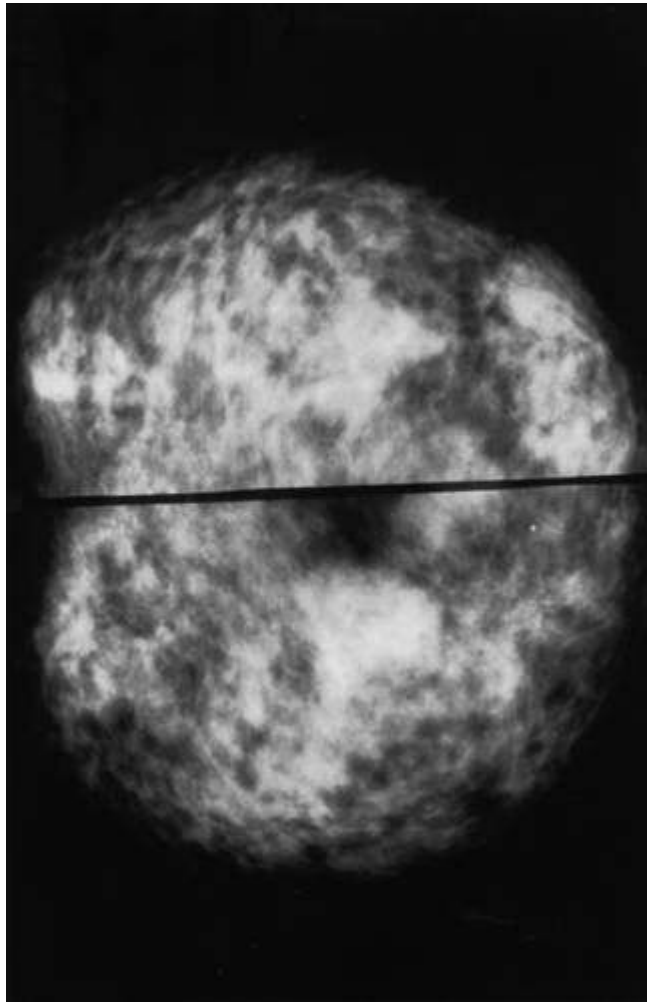


This is a mammogram of a normal fatty breast, typical of older women. A mammogram image of abnormal lesions, benign lumps, or breast cancer is more accurate in non-dense breasts. Any diagnosis would require a biopsy to confirm the findings on the mammogram.

Normal Dense Breast Tissue on a Mammogram

Updated February 06, 2012

On this mammogram image, dark areas are fatty tissue; light areas are denser tissue which contains ducts, lobes, and other findings. Lighter areas of a mammogram reveal breast tissue that may be glandular (part of the milk system) or breast masses.



Shown are 2 mammograms of normal dense breasts. A dense breast makes a mammographic image difficult to read when -- and if -- cancerous lesions are present. These images are typical of younger women's breasts.

Premenopausal women, especially women who have never been pregnant, may have dense breast tissue. These are normal dense breasts.

Breast Calcifications on a Mammogram

Updated February 07, 2012

In this mammogram, the dark areas are normal fatty breast tissue and the lighter areas are denser tissue. The whiter spots are calcifications, indicated by the red arrows.



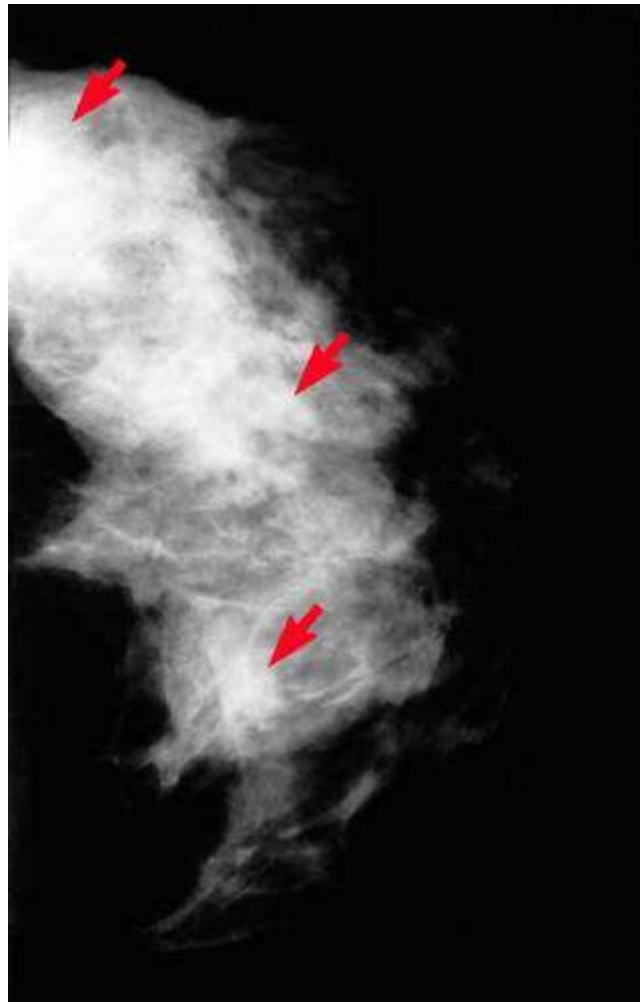
The findings on this abnormal mammogram are not necessarily cancerous. Here you can see breast calcifications through ductal patterns. This patient would have a follow-up mammogram in three months for a comparison.

Microcalcifications are tiny bits of calcium that may show up in clusters or in patterns (like circles) and are associated with *extra cell activity* in breast tissue. Usually the extra cell growth is not cancerous, but sometimes tight clusters of microcalcifications can indicate early breast cancer. Scattered microcalcifications are usually a sign of benign breast tissue.

Fibrocystic Breast Tissue on a Mammogram

Updated February 06, 2012

A mammogram will show dense and fatty areas of tissue. A cyst, fibroadenoma or a solid area (tumor) appears on a mammogram as a dense mass.



This mammogram shows thickened areas that are typical of fibrocystic changes. You can also see some ducts, by the patterns they form.

Normal fibrocystic changes in your breast can be affected by monthly hormonal fluctuations that may taper off in menopause. About half of all women experience fibrocystic changes in their breasts, especially during their fertile years.

Fibroadenomas and cysts are benign masses that can appear in fibrocystic breast tissue. These can appear alone, or in groups, and are common on mammograms. These are *not the same* as fibrocystic changes in the breast.

Fibrocystic changes in the breast are usually not a sign of disease and do not require treatment. It can cause breast pain and lumpiness, so if this becomes a problem, visit your doctor for help.

Breast Tumor on a Mammogram

Updated February 06, 2012

This mammogram shows dark areas of normal fatty breast tissue. Lighter areas are dense breast tissue that includes ducts and lobes. The whitest area is the densest, indicating a tumor (breast cancer).



Shown is a mammogram of a fatty breast with an obvious cancerous tumor, indicated by a red arrow in the lower right corner of the image.

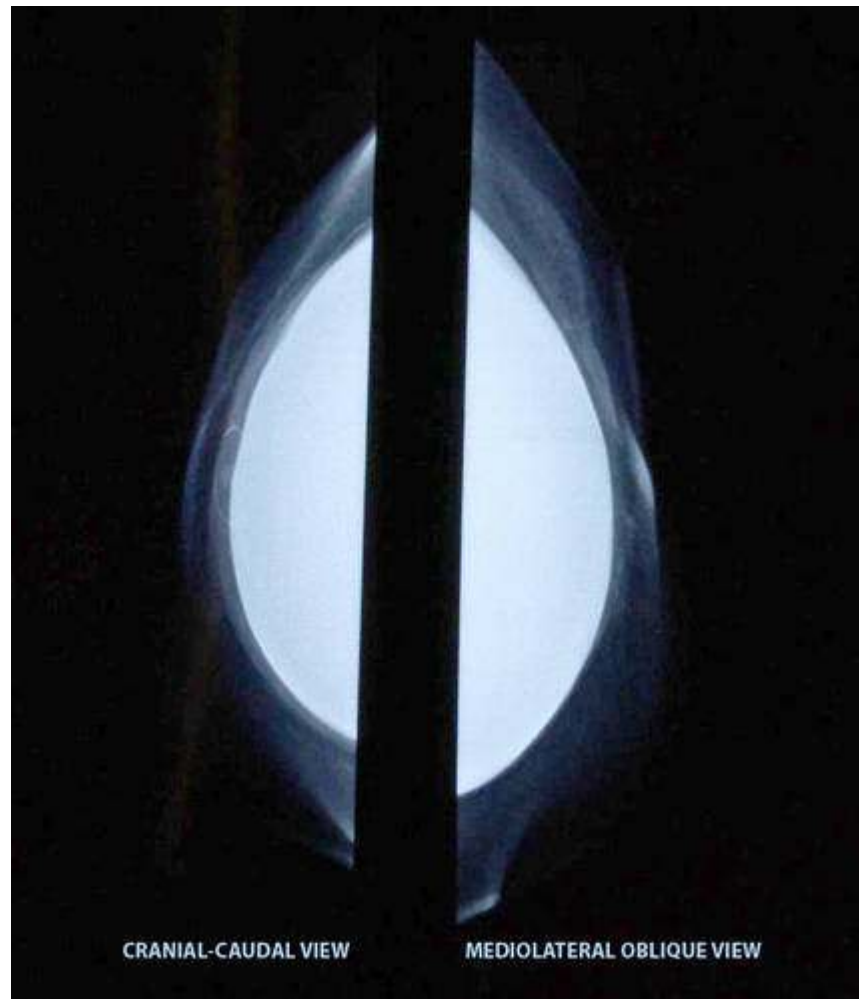
A cancerous tumor in the breast is composed of a mass of cancer cells that are growing in an abnormal, uncontrolled way. The tumor may invade surrounding tissue, or it may shed cells into the bloodstream or lymph system. If the tumor cells migrate beyond the original site and spread to other parts of the body, it is considered metastatic breast cancer.

A breast tumor requires treatment by surgery, and may require chemotherapy, radiation, targeted biological therapy, and hormonal therapy. When a breast tumor is found at an early stage of breast cancer, it is more likely to be successfully treated, to prevent its spread or recurrence.

Breast Implant on a Mammogram

Updated February 09, 2012

This mammogram shows *two views* of a reconstructed breast with a silicone breast implant. Mammograms taken after a diagnosis of breast cancer are important screening tests. There is no evidence of breast cancer in these images.



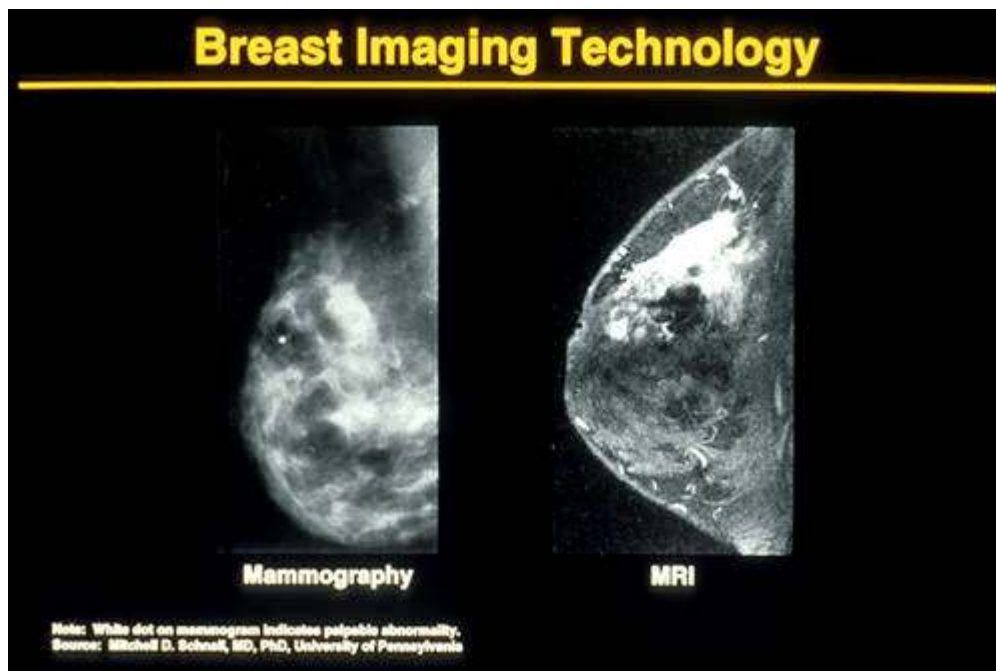
Shown is a mammogram taken after a left breast mastectomy and reconstruction with a breast implant. Original diagnosis of this patient was Invasive Ductal Carcinoma.

Mammograms can be performed on breast implants, if *less compression* is used than what is required on natural breast tissue. In both views of this breast reconstruction, the implant appears as a light, smooth-sided area. This implant is inserted into a pocket of chest wall muscle. The chest wall muscle appears as the medium-dark areas just outside the implant. Note that the cranial-caudal view (taken from overhead) shows a smaller area than the mediolateral view (taken on a diagonal). This clearly shows the benefit of two different views of the same breast. In the mediolateral view (on the right) axillary tissue as well as chest wall muscle can be seen.

Mammogram and MRI Breast Images Comparison

Updated February 07, 2012

Mammograms are the primary screening used for breast health, but for greater detail of a particular area, an MRI can capture a high contrast detailed image.



Breast imaging technology has changed over the years. Shown are mammography on the left and MRI on the right. Note that MRIs have an enhancement ability to confirm diagnosis.

MRI (Magnetic Resonance Imaging) can be used to get a clear, high contrast image of tissue. If a mammogram has shown a breast mass that seems worrisome, an ultrasound or an MRI can help get more accurate information about it. If the MRI confirms that a mass looks cancerous, a biopsy is the next step. Breast MRIs are much more expensive than mammograms, and the equipment is not as widely available. MRI technology is not used for routine breast screening, but for additional diagnostic imaging of abnormal tissue.

Mammograms from Age 40 To 49

The USPSTF now recommends women age 40 and older should have mammograms every 1 to 2 years, and the decision to screen annually is up to you and your doctor. They state that doctors should "take patient context into account, including the patient's values regarding specific benefits and harms." However, if you are under 50, have a family history of breast or ovarian cancer, find a lump while doing your breast self-exam, or have nipple changes, see your doctor for a clinical breast exam and a referral for a diagnostic mammogram, even if you had a screening mammogram the previous year.

Mammograms from Age 50 To 74

All of the government and non-profit institutions that make recommendations about mammograms agree that women aged 50 to 74 should have breast screening *every two years*. For women with a strong family history of cancer, or who have had a recent bout with breast cancer, your doctor may want you to be screened yearly. Your risk of breast cancer increases as you age. Women who are age 55 or older account for 2 out of every 3 cases of invasive breast cancer. If you find lumps or bumps between regularly scheduled mammograms, have them checked out, and ask if you should have diagnostic breast imaging done.

Mammograms Over 75

When you're 75 and over, decisions like whether or not to have a screening mammogram should be discussed with your doctor and weighed with any other health issues you may have. There is not enough clinical evidence on the potential harm or benefits of having a mammogram past age 74, so you will need to consider your own health history before deciding. Even if you are in good health and expected to live to a good old age, your doctor may be unwilling to refer you for a mammogram, even though it's likely that Medicare *will* help pay for it.

Choose Your Mammogram Date Wisely

Younger women should schedule a mammogram during the first 14 days of their menstrual cycle, to reduce pain and increase accuracy. Prepare carefully - remember not to use deodorant that day, and wear a comfortable bra under a two-piece outfit. Two images of each breast will be taken, to be sure that as much breast tissue as possible is included. Digital mammography is currently being used, which requires low amounts of radiation, and shorter exposures.

Hands-On Screening

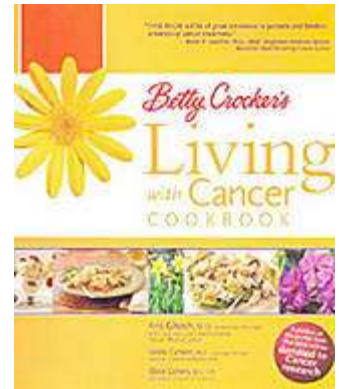
You can still do your monthly breast self-exam, to keep in touch with changes in your breasts. Your breasts will age along with the rest of your body, so allow for cyclical and natural changes. If you are concerned about a lump, bump, breast pain, a strange rash, a change of skin color, or nipple discharge, get your doctor to check it out or do a clinical breast exam. Remember that between 80 and 85% of all breast lumps are benign - and having a mammogram can help rule out breast cancer.

Top 10 Strategies to Reduce Breast Cancer Risk

What can you do to lower your risk of getting breast cancer? Here are some great ways that you can take control of an important aspect of your health and well-being. Raise your defenses against cancer and give yourself a better chance of keeping and maintaining your good health.

1. Proper Diet for Good Health

Eat a healthy diet that is rich in fruits and vegetables, to take advantage of their antioxidants. Doing so can help prevent damage to your tissues. Look for these colors when buying vegetables: green, red, yellow, and orange. When shopping for fruits, choose from these colors: red, green, and purple. Here is a wonderful cookbook about cancer and diet.



2. Exercise for Prevention

There is a link between exercise and breast cancer prevention, as well as prevention of cancer recurrence. Doing regular exercise helps reduce body fat and improves muscle tone.

The American Cancer Society says; *"Evidence suggests that one third of the 550,000 cancer deaths that occur in the United States each year are due to unhealthy diet and insufficient physical activity."*

3. Stay Slim

Having extra weight increases your risk for breast cancer. Many breast tumors thrive on estrogen. Body fat can store estrogen, and on a high-fat diet, your estrogen levels can increase beyond normal. Adopting a low-fat diet or a vegetarian diet can help reduce the amount of estrogen in your body. If you want to try a vegetarian diet, it will eliminate your intake of animal fats and reduce the saturated fats in your diet. Don't give cancer a good place to hide.

4. Stop Smoking

Tobacco smoke carries carcinogens, which can accumulate in fluid around the breasts. Active smoking can greatly raise your risk of breast and lung cancers, and passive smoking *may* also raise your risk. Get help to kick the habit and improve your long-term health. The evidence is piling up for a link between smoking and breast cancer. It's another good reason to stop smoking.

5. Drink less Alcohol

Regular and modest amounts of alcohol can raise your estrogen levels. Even one drink a day can expose breast tissue to higher hormone levels. Since some breast tumors are estrogen-sensitive, alcohol can increase the risk that the cells in that tissue will become cancerous. Limit your intake to lower your risk. Read more to find out just how much alcohol is safe to consume.



6. Have a Regular Checkup

Have a regular checkup and communicate often with your doctor to stay well. Keep good records of your health. Request copies of any test results or screenings. Keep an eye on any changes in your health. Your doctor can help you keep an eye on critical areas, suggest proper diagnostic tests, and refer you to other experts.

7. Take Advantage of Early Detection

Screening for breast cancer has the goal of detecting possible tumors before they reach a palpable (easy to feel) size. Larger tumors are more likely to have spread beyond the breast. Detecting a small tumor (cancer at a very early stage) increases the effectiveness of treatment, and improves your chances of survival. Have an annual mammogram starting at age 40, as long as your general health is good. Do your breast self-exam (BSE) (BSE) on a regular basis.



8. Hormone Replacement Therapy - Good or Bad

Current and long-term users of hormone replacement therapy (HRT) have an increased risk of developing breast cancer, according to the Feb. 13 issue of the *Journal of the American Medical Association* (Vol. 287, No. 6: 734-740). HRT was found to raise the number of breast cancers that are ductal and lobular. Talk with your doctor about whether HRT will benefit you, and what alternative therapies would be good to try. Estrogen and progesterone status can affect a diagnosis of breast cancer.

9. Pregnancy & Breastfeeding

Pregnancy and breastfeeding combined with regular exercise, maintaining a healthy weight, and avoiding alcohol can help lower your risk. Both pregnancy and breast-feeding reduce a woman's total number of lifetime menstrual cycles, which is thought to be the reason that this helps lower your risk. Having children before age 30 also reduces your risk of breast cancer.



10. Maintain Good Emotional Health

A good attitude affects your overall health - physical, mental, emotional and spiritual. Build a good future for yourself by bringing balance into your life: healthy food and regular exercise combine to fight the blues and pave the way to a good attitude.

Can wearing deodorants and antiperspirants cause breast cancer?

There have been tons of warnings circulated through email and the internet that the use of deodorants and antiperspirants can cause breast cancer. The suggestion is that a chemical is absorbed through the skin through a shaving nick or cut, and causes breast cancer.

According to the National Cancer Institute, "researchers at the National Cancer Institute (NCI) are not aware of any conclusive evidence linking the use of underarm antiperspirants or deodorants and the subsequent development of breast cancer. The U.S. Food and Drug Administration, which regulates food, cosmetics, medicines, and medical devices, also do not have any evidence or research data that ingredients in underarm antiperspirants or deodorants cause cancer."

Herbal Programs for Breast Problems

Successful Program for Assymetrical Tissue

4 caps Breast Assured/day
2 caps All-Cell Detox/day
2 caps Red Clover/day
3,000 mg/Vitamin C/day

Successful Program for Infection at Breast/Nipple

6 tsp. Silver Shield/day
6,000 mg/Vitamin C/day
12 capsules Echinacea/day

The following are programs from Footprints on the Path by HerbAllure

Breasts

Primary Formula

Breast Assured

General

Female Comfort or FC II
Vitamin E Complete w/Selenium – For hormone balance
C-X or Black Cohosh (Hormone Balance)
Master Gland (Glandular Balancing)
Safflowers – To thin and remove cholesterol buildup
All Cell Detox (Whole Body Cleansing) – for breast lumps
Nature's Fresh Enzyme Spray – For breast lumps

Swollen/Tender

FCS II or Female Comfort (Female Correctives)
Lymphatic Drainage, Lymph Gland Cleanse or Lymph Cleanse–HY if Hypoglycemic
Vitamin E Complete w/Selenium – For hormone balance
C-X or Black Cohosh
Pro-G-Yam Cream – For progesterone balance
Safflowers – To thin fluids

To Enlarge Breasts

Breast Enhance
Master Gland
Safflowers + Saw Palmetto
Essential Oils: 2 parts Geranium + 3 parts Ylang Ylang + 1 teaspoon carrier oil. Massage daily with mixture for 1 month, then 2 to 3 times a week.

Sagging

L-Carnitine – Internally
Essential Oils (same as to Enlarge Breasts above)

Breast Cancer

Paw Paw Cell-Reg + Breast Assured

Diet

Eliminate coffee, tea, alcohol and chocolate. Avoid commercial red meat and fowl due to estrogen content; buy organic instead.

Other

Do not use antiperspirant. Use natural deodorant if necessary.

Breasts – Fibroid Cysts

Primary Formula

Breast Assured

Herbals

FCS II or Female Comfort (Female Corrective)

Lymphatic Drainage, Lymph Gland Cleanse or Lymph Gland Cleanse-HY if Hypoglycemic

Tiao He Cleanse + Liver Balance: Follow with Para-Cleanse, wait 8 days, Para-Cleanse again

E-Tea, All Cell Detox or Burdock (whole body cleanse)

Thyroid Support, Thyroid Activator, TSII w/Hops or Kelp

Mineral Chi Tonic, Super Algae or Alfalfa (trace minerals)

Sarsaparilla – to balance hormones

Chickweed (Fat Emulsifier)

Vitamins, Minerals and Other Supplements

Lymphomax (Lymph System Support)

Vitamin E Complete w/Selenium, Vitamin A & D

Evening Primrose or Black Currant Oil

Master Gland (Glandular Balance)

Grapine High Potency or Thai-Go (Powerful Antioxidant)

Lecithin, Krill Oil, or Super Omega-3 EPA (Fat Emulsifiers)

Germanium Combination or Korean Ginseng – To oxygenate the cells

CoQ10 – For the Circulation

Ionic Minerals

Nature's Fresh Enzyme Spray

Essential Oils

Frankincense, Lavender, Helichrysum

Homeopathic

Menstrual Remedy

Diet

Use Herbal Beverage instead of coffee with caffeine. Eliminate red meat, chocolate, sugar and junk food. Eat a high fiber diet.

Other

Use castor oil pack on breast with heating pad 30 minutes a day. Do not use antiperspirants; use a natural deodorant if necessary. Lose weight and don't smoke. Consider a weekly fast. Cleanse the Liver.

CERTIFIED WOMAN'S HEALTH COUNSELOR ONLINE COURSE - SESSION 4 QUESTION & ANSWERS

NAME: _____

ADDRESS: _____

CITY, STATE, ZIP, PC: _____

PHONE: _____

FAX: _____

E-MAIL: _____

Please be sure to fill out the information above, complete the test and e-mail or mail it back to us at iridology@netzero.net or P.O. Box 485, Weimar, CA, 95736-0485. We will grade your question & answer session and will let you know if we have any questions or concerns. **Please use a separate sheet to do this assignment.**

1. Why should young women perform breast self-examinations?
2. What are the three types of benign breast lumps?
3. What are breast cysts?
4. What are breast fibroadenomas?
5. What happens if you have a tumor?
6. Can pseudolumps show up on a mammogram?
7. What are pseudolumps?
8. What is breast cancer?
9. How does breast cancer show up on a mammogram?
10. What are the 3 surgical procedures used for breast cancer and how do they differ from each other?
11. What are the 4 types of mastectomy and how do they differ from each other?
12. What is fibrocystic breast disease and what are the treatments available?
13. What are the two methods of breast radiation and how do they differ?
14. What are solitary lumps?
15. What is sclerosing adenosis?
16. What are breast calcifications?
17. Where and how often do calcifications occur?
18. What is fat necrosis?
19. What is a core needle biopsy, what is it used for, and how accurate is it?
20. What is a fine needle aspiration biopsy?
21. What are the warning signs of breast cancer?
22. What can be seen on a breast ultrasound?
23. What is a Mediolateral-oblique (MLO) ultrasound and why would anyone have one of these?
24. What are the top 10 strategies to reduce breast cancer risk?