



# PREFACE

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Since 1991 our Family Risk Assessment Program has counseled women at increased risk for breast cancer. One of the risk factors we focus on is the history of benign breast disease (BBD). Our patients have taught us that they are so happy to hear the word “benign” when undergoing any type of breast screening, that this is often the only thing they discuss with their providers. While our scientific knowledge has expanded to better understand the risks associated with benign breast disease, our patients are not always armed with the most complete information on what else there is to know beyond “it’s benign.”

Our goal in writing this book is to pull together everything women need to know about what BBD is, what the steps are in finding it, and what women with BBD can do to reduce their risk of breast cancer. We’ve learned a lot from our patients and their experiences. Many of our patients and coworkers have reviewed this booklet along the way to ensure that we are providing a useful tool. Their input has been invaluable and we thank them.

We hope this booklet will help women with a diagnosis of BBD to further understand the importance of learning more and of continuing discussions with their healthcare providers about the best strategies for reducing their risk for breast cancer.



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# BENIGN BREAST DISEASE: WHAT IT MEANS FOR ME

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This booklet has been developed to help women with a diagnosis of benign (not cancer) breast disease. This booklet will:

- Define the meaning of “benign breast disease” (BBD)
- Explain the kinds of benign changes that can occur in the breast and what they mean for you
- Describe how BBD is diagnosed
- Discuss the possible connection between some kinds of BBD and cancer
- Explain the screening options available to women with BBD
- Discuss some options you may choose to reduce your risk of both BBD and breast cancer

# WHAT IS BBD?

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The term BBD (benign breast disease) refers to a wide variety of changes that are seen by a **pathologist** (a medical doctor who studies tissue samples under a microscope to diagnose diseases) in tissue removed from the breast for diagnosis. BBD is diagnosed by having a procedure called a biopsy to remove breast tissue. The need for a biopsy is most often triggered by an abnormal finding on a mammogram, but it's sometimes recommended to evaluate a new or abnormal lump that is felt in the breast.

*Most BBD changes are completely harmless, but a significant fraction (30%) of changes may affect a woman's risk of future breast cancer.*

The changes seen in BBD can range from benign **cyst** (fluid-filled sac) formation to pre-cancerous changes in the cells of the breast. BBD is a common diagnosis, particularly in premenopausal women. In fact, it is reported that there are over 700,000 new cases of BBD diagnosed each year. When you compare this to the approximately 212,000 new cases of breast cancer diagnosed each year, you can see that BBD is over 3 times more common than breast cancer. The regular use of mammography for screening has led to an increase in the discovery of changes in the breast before they can be felt, leading to increased biopsy rates and therefore an increase in the diagnosis of BBD. Most BBD changes are completely harmless, but a significant fraction (30%) of changes may affect a woman's risk of future breast cancer.

BBD is often confused with another condition called “**fibrocystic breast disease**,” a term which is used to describe breasts that feel lumpy and/or painful. A diagnosis of fibrocystic breast disease is not necessarily based on a biopsy, but can be based on the degree of breast discomfort a woman experiences or how her breasts feel when she or her physician examines them. Many people argue that fibrocystic changes in the breast are normal and this condition should not be called a “disease,” but rather should be referred to as fibrocystic change.

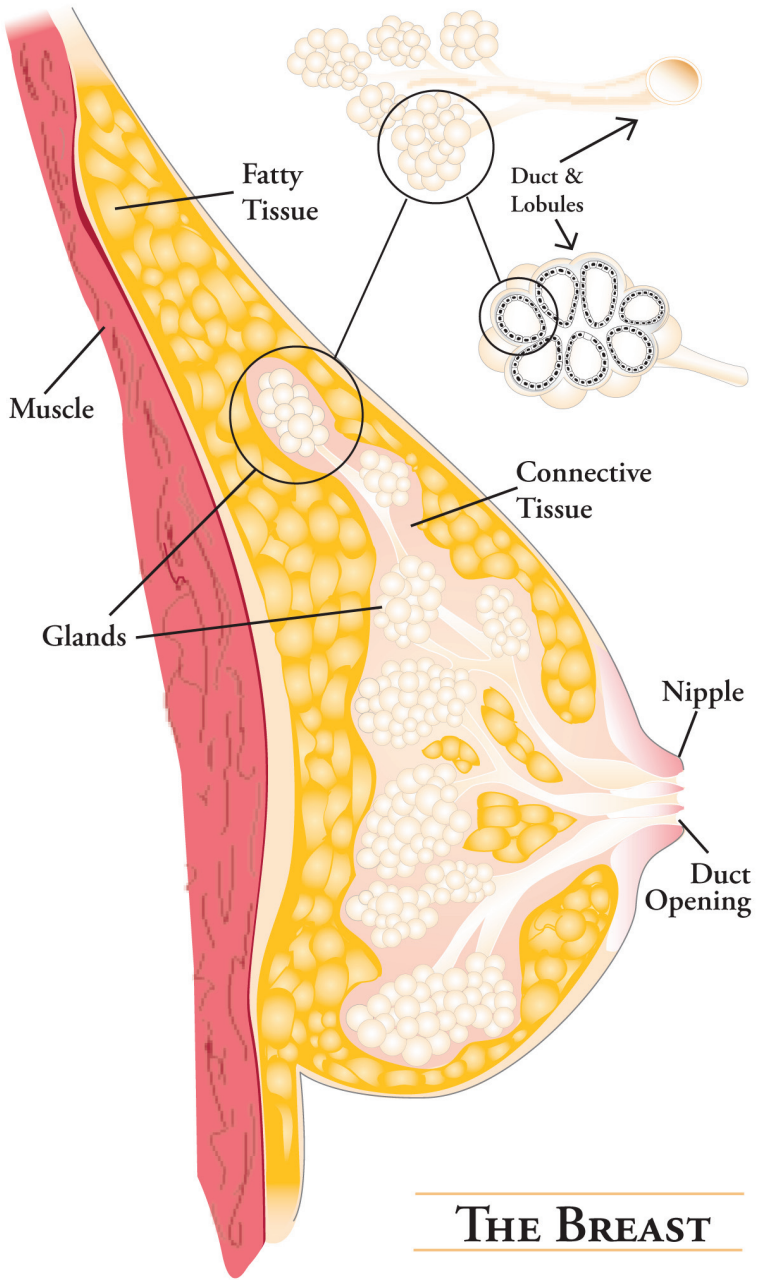
## WHERE DOES BBD OCCUR?

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Before describing the different kinds of BBD, it is helpful to review the normal breast, and to point out the parts of the breast where BBD can happen (see picture on page 4).

The **glands** are the milk-producing parts of the breast. The **lobules** within the glands are where milk is made. The **ducts** are the tiny tubes which carry milk to the nipple. The structure of the glands resembles a tree, with the lobules resembling the leaves and the ducts resembling the branches. During each menstrual cycle the glands enlarge and then shrink. This causes the monthly breast tenderness that many women experience toward the end of each cycle.

In addition to the glandular portion of the breast, there is another portion called the “**stroma**.” The stroma is the mixture of fatty tissue and connective tissue that surrounds and supports the glands. The stroma has a rich blood supply and is thought to help deliver hormones to the glands.



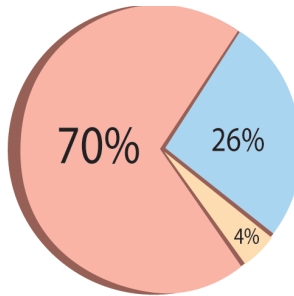
# WHAT ARE THE KINDS OF BBD AND HOW ARE THEY RELATED TO RISK FOR BREAST CANCER?

There are several different kinds of benign breast disease (see picture on page 6). Some (30%) are associated with an increased risk for future breast cancer, while the majority (70%) are not.

70% of BBD diagnoses are **not** associated with an increased risk of breast cancer

26% of BBD diagnoses are associated with a **mildly** increased risk of breast cancer

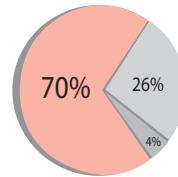
4% of BBD diagnoses are associated with a **high** increased risk of breast cancer



## THESE FINDINGS DON'T INCREASE RISK:

**Fibroadenomas** - These are the most common form of BBD and generally occur in young women in their 20's and 30's.

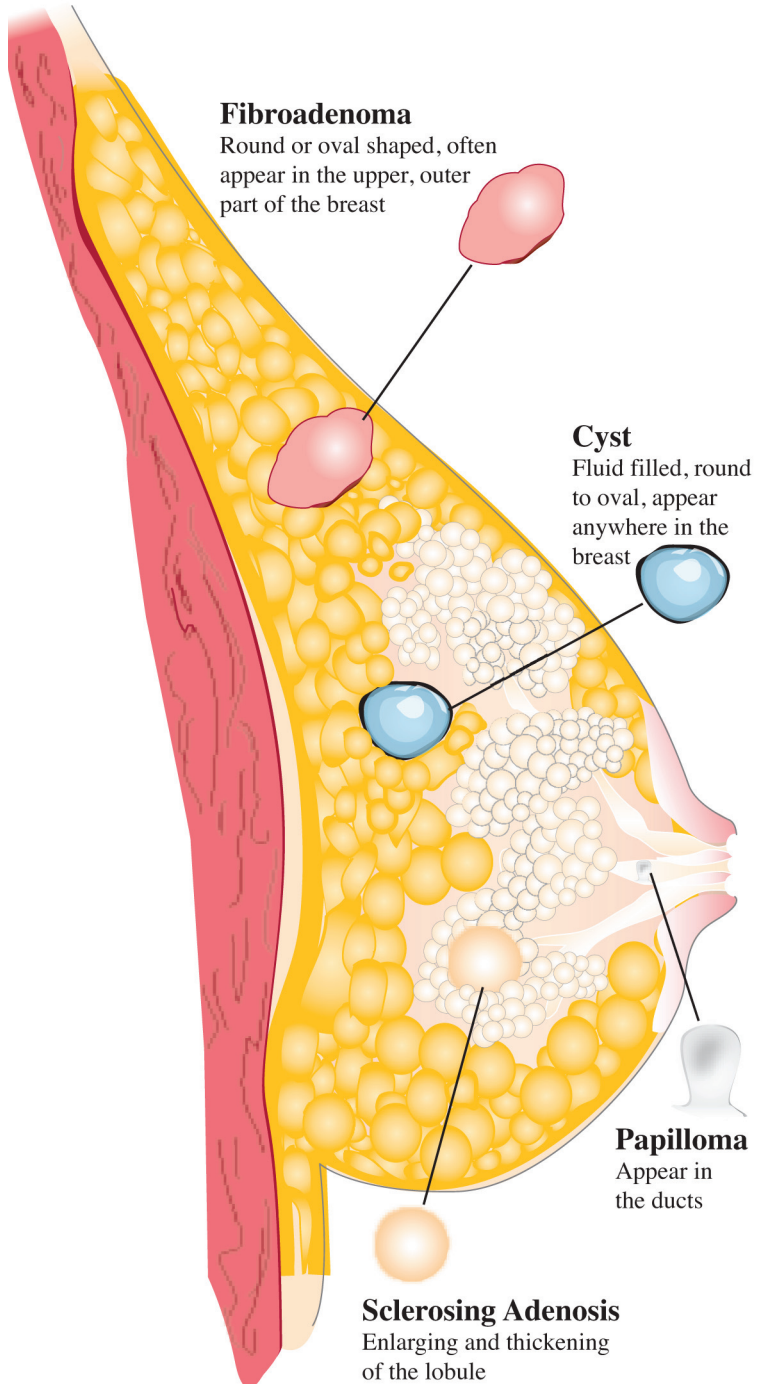
Fibroadenomas are benign solid lumps, which are a mixture of fibrous or connective tissue from the stroma and glands. They usually feel smooth, are moveable and are not tender or painful. On mammogram, they appear round or oval with smooth edges. Fibroadenomas are **not** thought to be related to breast cancer risk.



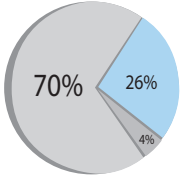
**Cysts** - These are fluid filled sacs within the breast, which form when normal milk glands (or lobules) become enlarged. The cause of the enlargement is unknown, but may be due to a change in the normal fluid balance in the body, or a blockage of the lobule, which prevents the fluid in it from emptying into the duct. Breast cysts vary widely in size and often change in size with the menstrual cycle. A woman can have more than one cyst. Breast cysts may or may not cause breast tenderness. If they are very painful, they are sometimes drained with a needle (called a **fine needle aspiration**) to relieve the pain. Breast cysts do not increase the risk of breast cancer.



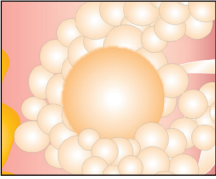
# FINDINGS OF BBD



**THESE FINDINGS MILDLY INCREASE RISK:**

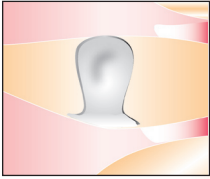


**Sclerosing adenosis** - This is a combination of too much fibrous and gland tissue found in the lobules of the breast. These changes are small but can produce lumps and/or thickening of the breast on physical exam, or microcalcifications (tiny specks of calcium deposited in the breast tissue that can be seen on a mammogram).

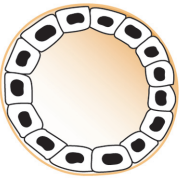


Without a biopsy, it is hard to tell the difference between this condition and breast cancer.

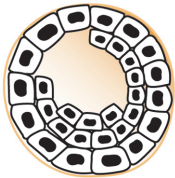
**Intraductal papillomas** - These are small polyp-like growths in the milk ducts just behind the nipple. They are usually found because they often cause a bloody nipple discharge. In younger women, several may occur together while in older women, single intraductal papillomas are more common.



**Hyperplasia (or hyperplastic)** - This means that the cells lining the lobules or the ducts are growing faster than normal, and instead of forming a single layer, cells have begun to pile up in layers. Hyperplasia which starts in the ducts is called ductal (or intraductal) hyperplasia. If



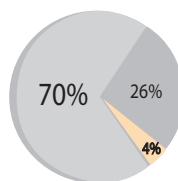
Normal Lobule



Lobular Hyperplasia

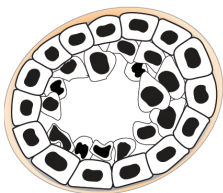
the hyperplasia starts in the lobules, it is called lobular hyperplasia.

## THESE FINDINGS HIGHLY INCREASE RISK:



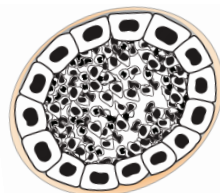
**Atypia (or atypical)** – This term means that the cells lining the lobules or the ducts have begun to grow in abnormal (or atypical) shapes. For example they may become enlarged, irregular in shape or turned in the wrong direction. Atypia often follows the development of hyperplasia.

If the cells in the ducts are growing too fast and also look abnormal, they are called atypical ductal hyperplasia. The same kind of findings, atypical lobular hyperplasia, can be found in the lobules. Together, these categories are often referred to as “proliferative lesions” meaning that cells are growing too fast and in an abnormal way. Women with “atypical hyperplasia,” have a risk for breast cancer that is three to four times higher than women with no BBD. There is an interaction



between age and a diagnosis of proliferative lesions. Younger women (less than 50 years) who develop proliferative lesions are more likely to develop breast cancer than older women who are diagnosed with the same finding.

**Lobular carcinoma in situ (LCIS)** - This is the term used to describe abnormal cells which completely fill the lobules. “In situ” means that the abnormal cells have not moved outside of the lobules. LCIS is often found in more than one area in the breast, and may also be seen in both breasts. Although the term includes the word “carcinoma,” LCIS is not cancer, but a marker for an increased risk for breast cancer, even in the opposite breast. LCIS carries an increased risk of breast cancer, which can arise in either the lobules or the ducts. This risk is about 20 - 25% and continues up to 20 years after diagnosis.



## WHO GETS BBD?

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### **Women are more likely to get BBD if:**

- They are premenopausal
- They are between the ages of 40 and 50
- They have never been pregnant
- They have dense breasts
- They have a family history of breast cancer

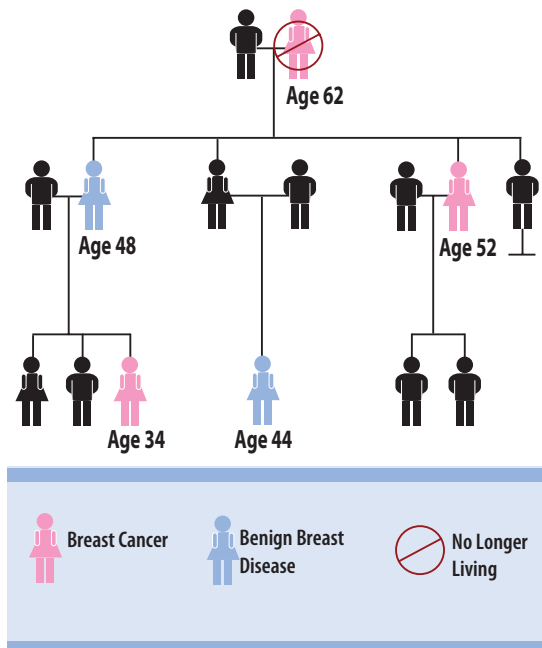
**Premenopausal** – There is a strong relationship between the monthly rise and fall in hormones (e.g. estrogen and progesterone) that control the menstrual cycle, and abnormal changes in breast tissue. This monthly rise and fall of hormones helps prepare the breasts for pregnancy and breast feeding. Every month in response to these hormone peaks, the glands in the breast divide and grow, causing them to become larger as they begin to prepare for pregnancy. If a pregnancy does not occur, the glands shrink back to their normal size and the cycle starts over. This constant activity in the cells, first to increase and then to decrease the number of cells in the breast, creates the chance for mistakes, which can lead to the changes we call BBD.

**Age** – The monthly changes in cell division and growth which can lead to BBD tend to peak between the ages of 40 and 50. This is when the highest rates of BBD are found.

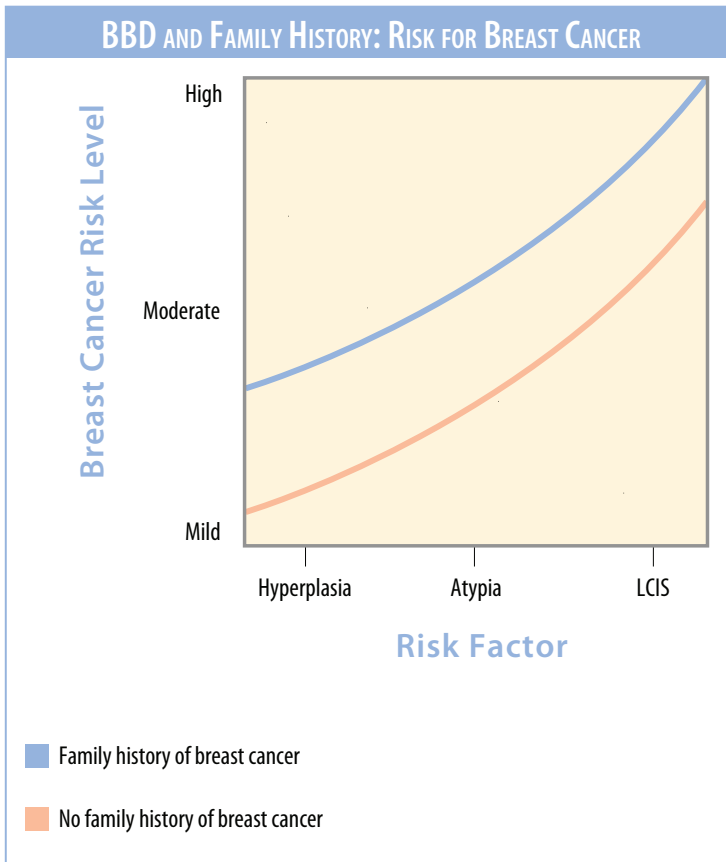
**Pregnancy and Breast Cancer** - Pregnancy appears to protect women from breast cancer by causing the glands to become fully mature. So women who have not been pregnant have less mature glands, which may predispose them to abnormal changes in the cells.

**Breast Density** - This is a measure of how well tissue can be seen on a mammogram (see pictures on page 12). Some tissues (such as milk glands) are dense and appear white on a mammogram. Women who have more glands and less fat have "denser" breasts on mamograms. This density makes it harder for doctors to see tumors which also appear white. Fatty tissue is less dense and appears clear on the mammogram allowing better tumor detection. Women with dense breasts are more likely to develop BBD but we don't yet understand the connection.

**Family History** - Having a family history of breast cancer increases a woman's risk for breast cancer. Women who have both a personal history of BBD, and a family history of breast cancer have a risk higher than with either risk factor alone.



One way to think about some of these risk factors is to look at the breast cancer risk of a woman with one or more risk factors. The graph below shows the association of different types of BBD with and without a family history of breast cancer.



For example, a woman with hyperplasia, but no family history of breast cancer, has a **mild** increase in her own risk. A woman with hyperplasia **and** a family history of breast cancer has a **moderate** increase in her own risk.

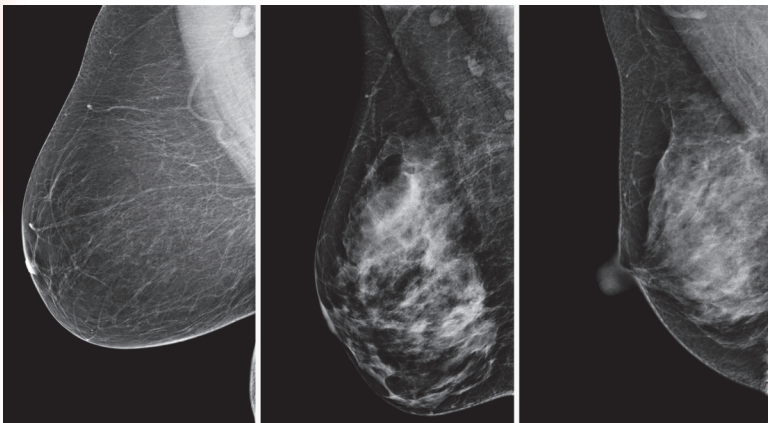
# STEPS FROM SCREENING TO DIAGNOSIS

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## DIAGNOSTIC IMAGING

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**Mammograms** – More and more women under the age of 50 are having mammograms, an x-ray of the breast. Regularly scheduled every one to two years after age 40, these are referred to as **screening mammograms**. A **diagnostic mammogram**, on the other hand, is done to further study either a finding on breast exam, or an abnormal finding on screening mammogram. Sometimes additional views or pictures are taken to enlarge a particular area (magnification views) or to even press out a particular area (compression views). As the number of women having screening mammograms continues to increase, a grow-

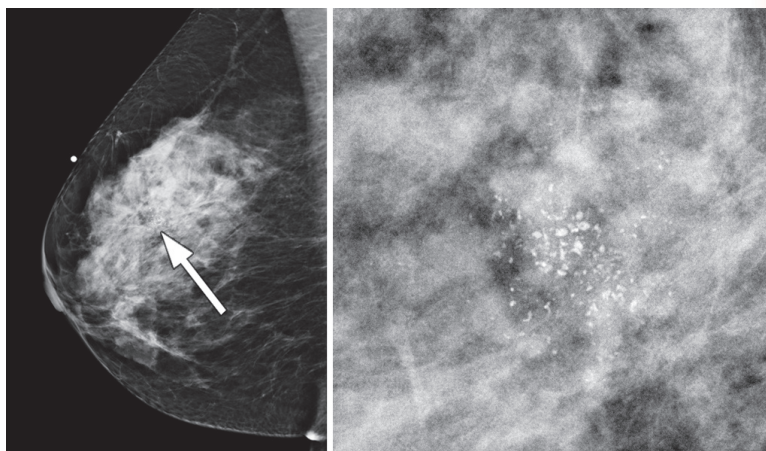


Normal fatty breast

Normal mix of fatty  
+ dense breast tissue

Very dense breast

ing number of women are being referred for biopsy of findings found on mammogram. Benign breast disease often shows as a growth that is smooth and round with a clearly defined edge. In contrast, breast cancer usually has a jagged outline and irregular shape. Calcifications are calcium deposits that show up on mammograms as white specks. **Calcifications** (also called microcalcifications) can be found in clusters or may be sprinkled like salt throughout the breast. Calcifications can be caused by injury or inflammation, older age or in areas of rapidly dividing cells. Calcifications can be a sign of BBD and/or breast cancer. If calcifications are thought to be suspicious they may lead to a breast biopsy.



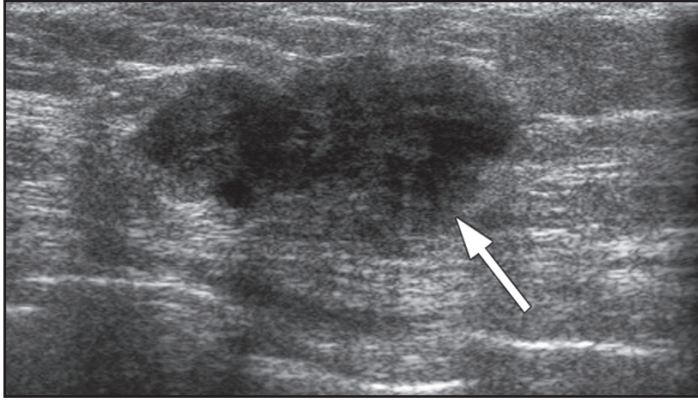
Mammogram showing clustered (suspicious) calcifications

Magnification of calcifications

**Digital Mammography** - The most recent advance in the technology of mammograms is **digital mammography**. In digital mammography, the picture taken by the camera is fed into a computer where the image can be adjusted (similar to how you can adjust a photograph from a digital camera) by the computer to improve the clarity of the picture. Digital mammograms are better at finding abnormal changes than regular mammograms, especially for premenopausal women and women with very dense breasts. The doctor who reads your mammogram uses a category number to further explain the result (see page 18 for list of categories).

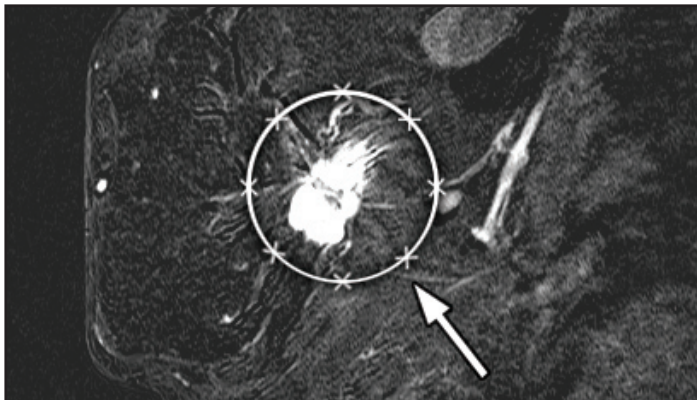


**Ultrasound** - Depending on the findings from your mammogram, your doctor may order more imaging tests. **Ultrasound** or sonogram of the breast uses sound waves to make pictures, and can show whether a lump is solid or filled with fluid. An ultrasound may not find all abnormalities but can help your doctor decide if more tests are needed.



Ultrasound of a suspicious mass

**Magnetic Resonance Imaging (MRI)** - This is the newest imaging technology used to screen the breast. MRI scans use magnetic waves rather than x-rays to create the picture. MRIs are very sensitive in finding abnormal changes, both benign and malignant, and they may lead to an increased rate of breast biopsies.



MRI of a suspicious mass

## American Cancer Society (ACS) Guidelines for Breast MRI Screening

The ACS recommends breast screening with MRI, in addition to mammography for:

- Women in families with known or suspected hereditary breast cancer gene mutations or syndromes (e.g. *BRCA1*, *BRCA2*, Li Fraumeni, Cowden syndrome)
- Women with a calculated lifetime risk for breast cancer of 20% or greater
- Women who have had radiation to the chest wall between age 10 and 30 years

The ACS does not currently recommend breast MRI screening for women with BBD, unless they also fit into one of the categories above.



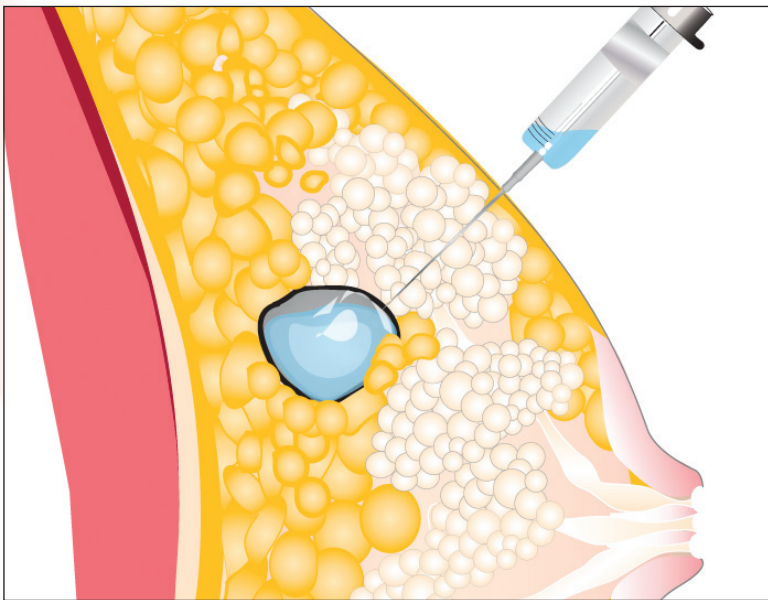
MRI machine

## BREAST BIOPSIES

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Often a **biopsy** is needed to tell if a breast change is BBD or cancer. There are several different types of biopsies, all of which remove a sample of tissue that is sent to a lab to be studied. Some biopsies can be done in a doctor's office while others require special equipment at hospitals or surgical centers. The two main types of biopsies are **percutaneous**, meaning a needle through the skin, or **surgical** which requires cutting through the skin.

**Percutaneous biopsy** - These use different types of needles to remove samples of fluid, cells or tissue. There are two types of percutaneous biopsy. The first is called **fine needle aspiration** and uses a thin needle to remove fluid and/or cells from a growth. This procedure only takes a few minutes and can be done in your doctor's office. Fluid or cells can easily be removed from a lump and if it turns out to be a cyst, removing the fluid should make it disappear. However, cysts can return and may need to be drained again. If the lump is solid, samples of the cells will be sent to the pathology laboratory for study.



Fine needle aspiration

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The second type of percutaneous biopsy is called a **core needle biopsy**. This procedure uses a needle with a special cutting edge to remove a small sample of breast tissue. A small cut is made in the skin and sample(s) are then removed through the special needle. If the abnormal area is hard to feel, some form of imaging is used to guide the needle to the specific area of change in the breast. Ultrasound can be used to guide the needle during a biopsy when the abnormality is clearly seen on ultrasound. Stereotactic (three-dimensional - 3D) x-rays may also be used to guide a needle biopsy. This procedure involves the use of a special exam table. You will lie face down on the table and your breast will extend through a hole in the table. The x-ray machine and needle are located below the table. MRI scanning can also be used to guide the needle if the abnormal area can only be seen on MRI. You may experience some bruising from these needle biopsies, but rarely a scar.

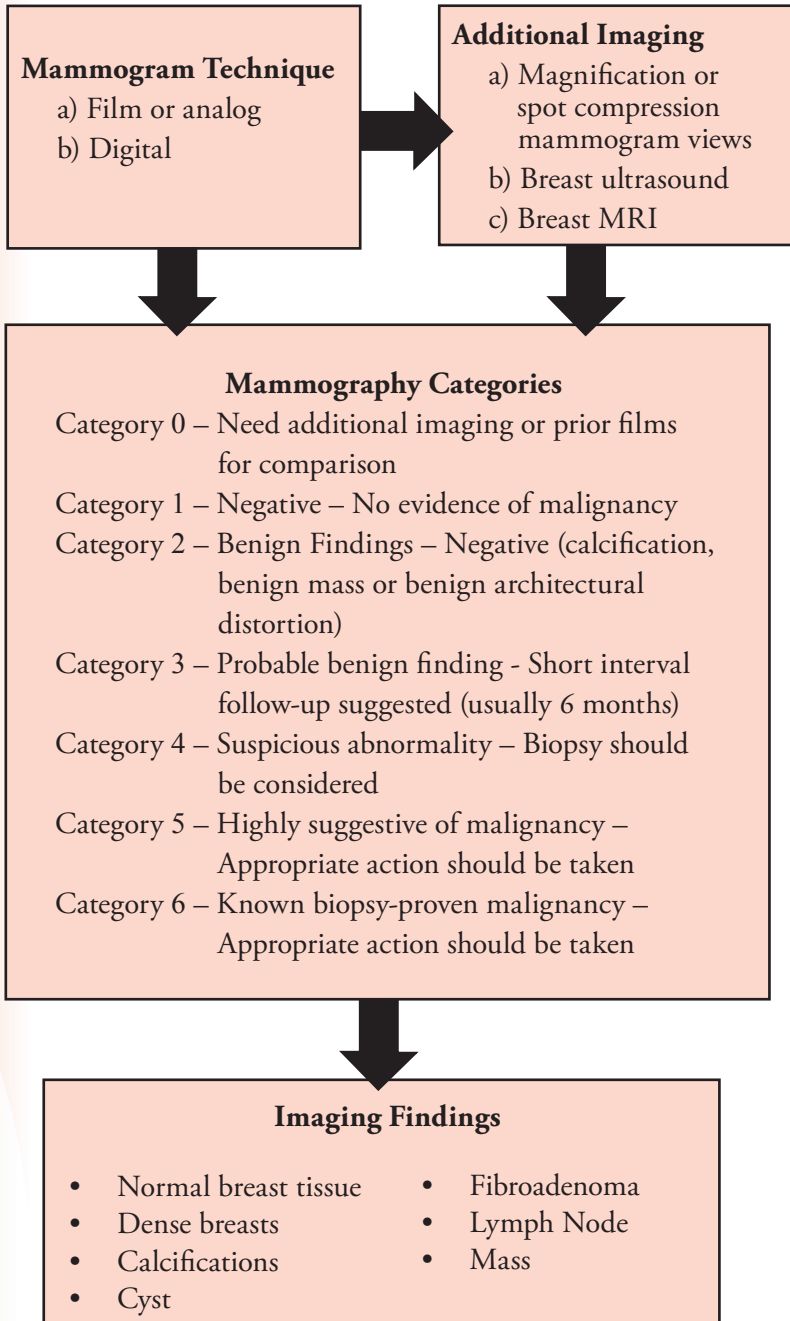


Stereotactic biopsy table

In some cases, doctors use a needle to guide a surgical biopsy. A mammogram or ultrasound is used to locate the breast changes that cannot be felt, then a radiologist puts a needle into the breast to clearly identify the area of the change. This is known as **needle localization**. A thin wire is placed through the needle and the doctor uses the tip of the wire to choose which tissue to remove.

**Surgical biopsy (also called excisional biopsy)** - These are done to remove more tissue after a core needle biopsy, or to remove an entire breast lump. This may either be done as a first step in diagnosing an abnormal breast change, or as a second step after needle biopsy to obtain more information. These biopsies are done by a surgeon and involve anesthesia.

# SUMMARY OF STEPS FROM



# SCREENING TO DIAGNOSIS

## Biopsy Options

**Percutaneous** – Non-surgical, can be performed by a radiologist

- a) Fine Needle Aspiration
- b) Core Needle Biopsy (guided by touch, stereotactic mammogram, ultrasound or MRI)

**Surgical** – Performed by a surgeon



## Biopsy Results

### No increased risk for breast cancer

- Fibroadenoma
- Cyst

### Mildly increased risk for breast cancer

- Sclerosing Adenosis
- Intraductal Papilloma
- Ductal Hyperplasia
- Lobular Hyperplasia

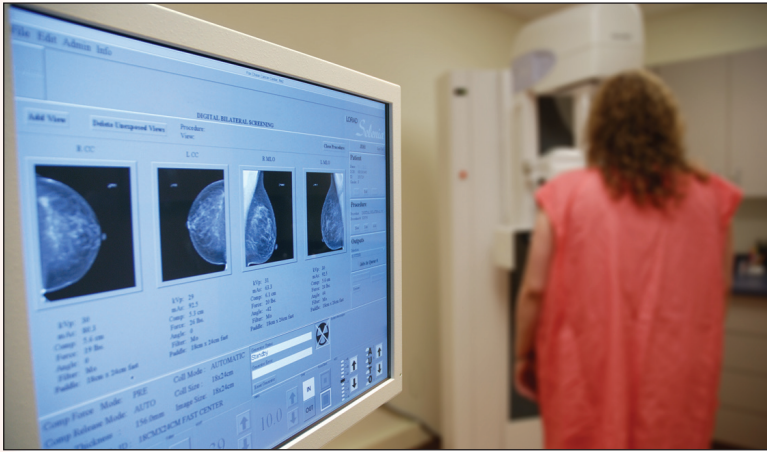
### High increased risk for breast cancer

- Atypical Ductal Hyperplasia
- Atypical Lobular Hyperplasia
- Lobular Carcinoma In Situ (LCIS)

### Cancer

- Ductal Carcinoma In Situ (DCIS)
- Invasive Breast Cancer

# WHAT CAN WOMEN AT RISK DO?



Annual mammography is the recommended screening guideline.

There is a range of health care choices for women with BBD:

**Screening** - Annual mammography starting at age 40 is the recommended screening guideline. Digital mammograms are replacing the older film (analog) mammograms because of their increased sensitivity (greater accuracy). Digital mammograms are more accurate for women who:

- Are under the age of 50
- Have very dense breasts
- Are pre- or perimenopausal

**Lifestyle** - All women are recommended to maintain a healthy lifestyle, with a diet rich in fruits and vegetables, low in alcohol and include a regular form of physical activity.

**Chemoprevention** - The use of **chemopreventive** agents (medicines such as tamoxifen, or natural products) to prevent the development of cancer in women with BBD has been widely studied. Tamoxifen is approved by the Food and Drug Administration (FDA) in the United States to reduce breast cancer risk

in women aged 35 and older at increased risk for the disease. This approval is based on the Breast Cancer Prevention Trial, which compared tamoxifen to a placebo pill over a 5-year period in women who were at increased risk for developing breast cancer.

Over 13,000 women participated in this trial and all new cases of breast cancer were recorded during the trial. The trial found tamoxifen:

- reduced the risk of invasive breast cancer by 49% compared to those on placebo pill
  - reduced cancer risk by 56% in women with LCIS
  - reduced risk by 86% in women with atypical hyperplasia
- Side effects include hot flashes (common), blood clots in the veins and cancer of the uterus (very uncommon).

A second study, the STAR trial, compared tamoxifen to raloxifene (Evista™), an osteoporosis drug. Raloxifene was equally effective in reducing the risk of invasive breast cancer, but not in reducing in-situ cancers or BBD. Raloxifene caused less blood clots and uterine cancers than tamoxifen. Raloxifene is now FDA approved for reducing the risk of breast cancer in **postmenopausal** women.



**Risk Reducing Surgery** - Occasionally, a woman with BBD may make a personal decision to have both breasts removed (**bilateral prophylactic mastectomy**). This decision is usually made when there is a very strong family history of breast cancer and/or a personal history of multiple breast biopsies. Prophylactic mastectomy has been shown to reduce the risk for breast cancer by close to 95%. The risks associated with this surgical procedure are mostly related to problems with breast reconstruction.



## **SUMMARY OF HEALTH CARE CHOICES:**

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- Follow recommended screening schedule
- Healthy lifestyle choices
- Use of a chemopreventive medicine (tamoxifen or raloxifene)
- Prophylactic mastectomy (risk reducing surgery)

# BREAST CANCER

## CHEMOPREVENTION:

### A DECISION AID FOR WOMEN AGED 35 YEARS AND OLDER

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These next several pages are designed to help you make your decision about using tamoxifen or raloxifene to reduce your risk of breast cancer. If you have already made your decision, this decision aid may help you to clarify the reasons behind it. You may find it helpful to discuss your answers with your healthcare team and with people close to you who are assisting you with your decision.

#### **PERSONAL INFORMATION**

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This section is a place to record information about yourself that may help you:

- Define your risk of getting breast cancer
- Think through the implications of taking a chemopreventive medicine

## BIOPSY RESULTS

Check off the appropriate boxes indicating what your breast biopsy (biopsies) showed. Fill in other information about your biopsy (biopsies).

Biopsy Result	Date(s) Done	Describe Your Understanding of the Results	What questions do you have about the results?
<input type="checkbox"/> Fibroadenoma			
<input type="checkbox"/> Cyst			
<input type="checkbox"/> Sclerosing Adenosis			
<input type="checkbox"/> Intraductal Papilloma			
<input type="checkbox"/> Hyperplasia			
<input type="checkbox"/> Atypical Ductal Hyperplasia (ADH)			
<input type="checkbox"/> Atypical Lobular Hyperplasia (ALH)			
<input type="checkbox"/> Lobular Carcinoma In situ (LCIS)			
<input type="checkbox"/> Other			

## AGE

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**Your Age:** \_\_\_\_\_

Simply getting older increases a woman's risk of breast cancer. Although BBD is more likely to occur in women before menopause, breast cancer itself is more likely to be diagnosed after menopause.

## FAMILY HISTORY OF BREAST CANCER

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List here the names of family members with breast cancer, and the age at which they were diagnosed. Be sure to include relatives on both your mother's and your father's side.

Name	Relationship to You	Age at Diagnosis

Having one or more close relatives with breast cancer can increase your risk for breast cancer. Close relatives include mother, sisters, daughters, aunts and grandmothers. The relatives can be on either your mother's side or your father's side.

Your risk increases with each relative you have with breast cancer, and the younger they were when they were diagnosed. It is thought that having a family history of breast cancer may

suggest some shared genetic risks, shared environmental risks, or both. Having a family history of breast cancer increases the risk for women with BBD over and above what it would be just from the BBD risk alone.

## **PREGNANCY HISTORY**

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**Have you had any children?**    **Yes**                       **No**

If yes, list the first names of each child, and your age when they were born.

Name	Your Age at Birth

Your pregnancy history can affect your breast cancer risk. Women who have their first pregnancy at a young age (before age 20) have a **reduced** risk of breast cancer. It is thought that the early pregnancy causes some permanent protective changes in the breast cells that make them immune from future carcinogens (cancer causing agents). If women have their first pregnancy late, (after age 35) they have an **increased** risk of breast cancer. It is thought that the breast cells are left in an immature state for several years, during which time hormones, chemicals or other environmental factors can cause genetic changes in the cells that could lead to cancer. The same is true

for women who have never been pregnant. The effect of breast-feeding is less clear. It does not increase risk of breast cancer, and it may help to protect some women from breast cancer.

## **AGE AT FIRST PERIOD**

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**How old were you when you first started having your menstrual period?**

\_\_\_\_\_ **Years old**

The earlier a girl starts her periods, the higher is her future risk of breast cancer. This may simply be a matter of how many total years the breast cells are exposed to monthly hormone cycles. Below age 11 is considered young, 11-12 is considered average, and 13+ is considered late. Girls who are very active physically tend to have a later start to their periods. Exercise at a young age could protect women from breast cancer as they age.

## **BREAST DENSITY**

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**Have you ever been told that your mammograms show dense breasts?**

Yes

No

Breast density may increase your risk for breast cancer. If your breasts have more glands and less fat the mammogram looks more dense. Breast density may be a marker for the level of activity of the breast cells, or some other biologic difference that causes the increased risk.

## SUMMARY

Below is a checklist of the different factors that have been found to affect risk for breast cancer. Please check the boxes that may apply to you.

	Low Risk	Medium Risk	High Risk
BBD Diagnosis	<input type="checkbox"/> Fibroadenoma <input type="checkbox"/> Cyst	<input type="checkbox"/> Sclerosing Adenosis <input type="checkbox"/> Intraductal Papilloma <input type="checkbox"/> Hyperplasia	<input type="checkbox"/> ADH <input type="checkbox"/> ALH <input type="checkbox"/> LCIS
Age	<input type="checkbox"/> Below age 60	N/A	<input type="checkbox"/> Age 60 and older
Family History	<input type="checkbox"/> No family history of breast cancer	N/A	<input type="checkbox"/> One or more close relatives with breast cancer
Pregnancy	<input type="checkbox"/> 1st birth 20 or younger	<input type="checkbox"/> 1st birth age 21-35	<input type="checkbox"/> 1st birth after age 35 or no pregnancies
Age at Menarche	<input type="checkbox"/> 13 or older	<input type="checkbox"/> Age 11-12	<input type="checkbox"/> Below age 11
Breast Density	<input type="checkbox"/> Low Density	<input type="checkbox"/> Moderate Density	<input type="checkbox"/> High Density
Total # of Factors (add up the number of boxes you checked in each column)			

You can use this checklist to help in considering your choices and in discussing them with your physician.

## WEIGHING THE PROS AND CONS OF TAKING CHEMOPREVENTIVE MEDICINE

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The questions below will be helpful to you as you consider chemoprevention.

How soon would you like to make your decision?  
(There is no definite deadline, but you may wish to set a date with your doctor if this is helpful to you.)

Which of the following statements describe your thoughts at this point? Underline the best choice.

- I have decided to start taking a chemopreventive medicine to reduce my risk of breast cancer.
- I am pretty sure I will start taking a chemopreventive medicine to reduce my risk of breast cancer.
- I am still unsure of my decision, but I am leaning toward taking a medicine.
- I am completely undecided about whether or not to take a chemopreventive medicine.
- I am still unsure of my decision, but I am leaning away from taking a medicine.
- I am pretty sure I won't take the medicine.
- I have decided not to take the medicine.

**In the space below, write down your most important reasons for this choice:**

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## REASONS FOR TAKING A CHEMOPREVENTIVE MEDICINE

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There are a number of reasons why women choose to take a chemopreventive medicine. Read through the following statements and decide how closely each one applies to you. Check a box for each reason.

Reason for taking Chemopreventive Medicine	Agree Strongly	Agree	Neither Agree nor Disagree	Disagree	Disagree Strongly
I want to reduce my risk of breast cancer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry about the impact of breast cancer on my quality of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am more concerned about breast cancer than about the side effects of medicine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am confident I can manage the side effects of the medicine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I take chemopreventive medicine, I will have peace of mind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I take chemopreventive medicine, it will give my loved ones peace of mind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Do you have any other reasons for taking a chemopreventive medicine? List them here:**

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## REASONS FOR *NOT* TAKING A CHEMOPREVENTIVE MEDICINE

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Read through the following statements about why women may choose **not** to take chemopreventive medicine, and decide how closely each one applies to you. Check the most appropriate box for each reason.

Reason for not taking Chemopreventive Medicine	Agree Strongly	Agree	Neither Agree nor Disagree	Disagree	Disagree Strongly
I am not worried about getting breast cancer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am more concerned about the side effects of the medicine than I am about getting breast cancer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not certain about my ability to manage the side effects of the medicine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would prefer to try natural products, such as vitamins, to reduce my risk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not a pill taker.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would prefer to delay my decision about taking the medicine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Do you have any other reasons for not taking a chemopreventive medicine? List them here.**

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**What steps do you plan to take now?**

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## **NEXT STEPS: PUTTING IT ALL TOGETHER**

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**Has thinking about all of these issues helped you make your decision? Explain.**

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**What else do you need before you can make a decision or begin to take action? List your needs here. Examples may include the following:**

- Talking with your health care provider again about your breast biopsy
- Learning more about the possible effects of taking a chemopreventive medicine
- Talking with other women who have had breast biopsies
- Talking with your family members

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## FREQUENTLY ASKED QUESTIONS (FAQs)

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### **Are all breast lumps cancerous?**

No, in fact, about 80% of lumps are caused by benign (non-cancerous) changes in the breast. The number of lumps which turn out to be cancer does increase somewhat in older, postmenopausal women.

### **Can too much calcium in your diet, or calcium supplements, cause microcalcifications in your mammogram?**

There is no direct relationship between calcium in the diet and calcifications in the breast. Calcium is deposited in the breast tissue in response to inflammation or increased rates of cell division, not because there is too much calcium in the bloodstream. The same thing can happen in blood vessels and joints in response to inflammation.

### **What effect do breast implants have on developing BBD?**

Breast implants don't cause BBD. However, depending on how they are inserted, they may make it more difficult to have a mammogram or to perform a breast exam.

### **What is the difference between tamoxifen and raloxifene?**

Both tamoxifen and raloxifene:

- Reduce risk of breast cancer by blocking estrogen
- Reduce the risk of osteoporosis
- Often cause hot flashes

However, there are some important differences:

#### **tamoxifen:**

- reduces the risk of DCIS and invasive breast cancer by 50%
- is used for both pre- and postmenopausal women
- is more likely to cause blood clots and uterine cancer than raloxifene but the risk is still low

#### **raloxifene:**

- reduces the risk of invasive breast cancer by 50%
- is used only for postmenopausal women
- is more likely to cause vaginal dryness than tamoxifen

### **Can a woman get both LCIS and DCIS?**

Yes. These are two different diagnoses and getting one doesn't keep you from getting the other.

## LINKS AND RESOURCES

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[www.cancer.org](http://www.cancer.org) - American Cancer Society

[www.cancer.gov](http://www.cancer.gov) - National Cancer Institute

[www5.komen.org](http://www5.komen.org) - Susan G. Komen For The Cure®

[www.womenshealth.gov](http://www.womenshealth.gov) - National Women's Health Information Center

[www.breastcancer.org](http://www.breastcancer.org) - Breast Cancer.Org

[www.imaginis.com](http://www.imaginis.com) - Imaginis, The Women's Health Resource

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## GLOSSARY

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**Atypia** - cells growing in abnormal or atypical shapes within the breast glands

**Atypical hyperplasia** - a combination of abnormal shapes and excessive number of cells. Atypical hyperplasia can occur in the lobules (atypical lobular hyperplasia-ALH) or ducts (atypical ductal hyperplasia-ADH)

**Biopsy** - a procedure to remove tissue from part of the body which is sent to a laboratory for diagnosis

**Breast density** - a measure of the concentration of glandular breast tissue which can be seen on a mammogram

**Calcifications (also called microcalcifications)** - tiny specks of calcium in the breast, can be seen on mammogram and may be a sign of BBD or breast cancer

**Carcinoma in situ** - cancer confined to the ducts or lobules which does not spread to the surrounding tissues in the breast or other parts of the body

**Chemoprevention** - medicines or other products used to prevent cancer from developing

**Core needle biopsy** - a type of biopsy using a hollow needle with a special cutting edge put through the skin to remove a piece of tissue

**Cysts** - fluid filled sacs within the breast which form when normal milk glands become enlarged and/or blocked

**DCIS (ductal carcinoma in situ)** - cancer found only in the ducts which does not spread to the surrounding tissues in the breast or other parts of the body

**Diagnostic mammogram** - mammogram used to further study something felt during a breast exam or seen during a screening mammogram

**Digital mammogram** - image of the breast captured in a computer instead of on x-ray film

**Duct** - the part of the breast that carries milk to the nipple

**Fibroadenoma** - benign solid lump

**Fibrocystic breast disease (also called fibrocystic changes)** - lumpy, sometimes painful breasts

**Fine needle aspiration** - uses a thin needle to remove cells or fluid from a growth

**Glands** - milk producing parts of the breast, made up of ducts and lobules

**Hyperplasia (also called hyperplastic)** - cells lining the lobules or ducts grow faster than normal and pile up in layers instead of forming single rows

**Invasive breast cancer** - cancer which has started to break through normal breast tissue barriers and invade surrounding areas; can spread cancer to other parts of the body through the bloodstream and lymph system

**LCIS (lobular carcinoma in situ)** - abnormal cells filling the lobules which is considered a precancerous marker for breast cancer

**Lobule** - within the part of the breast where milk is made

**MRI (magnetic resonance imaging)** - uses magnetic waves instead of x-rays to create picture

**Mammogram** - an x-ray of the breast



**Needle localization** - a needle and thin wire are used with imaging to guide the doctor to the part of the tissue to be removed

**Papilloma (also called intraductal papilloma)** - small polyp-like growths inside or behind the nipple

**Pathologist** - medical doctor who studies tissue samples under a microscope to diagnose disease

**Percutaneous biopsy** - uses different types of needles put through the skin to remove tissue

**Proliferative** - cells growing too fast and in an abnormal way

**Sclerosing adenosis** - overgrowth of fibrous and glandular tissue found in the lobules

**SERMs** - Selective Estrogen Receptor Modulators (like tamoxifen and raloxifene) are a class of drugs that act on estrogen receptors; they block estrogen in the breast and act like estrogen in the uterus

**Stereotactic biopsy** - special exam table and 3D x-ray used to guide a needle biopsy

**Stroma** - fatty and connective tissue in the breast which helps deliver hormones to the breast glands

**Surgical biopsy (also called excisional biopsy)** - uses an open incision to remove tissue

**Ultrasound (also called sonogram)** - uses sound waves to make pictures; can show if a lump is solid or fluid filled

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