

# Having a Breast Biopsy

A Review of the Research for Women  
and Their Families



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## Is This Information Right For Me?

### This information is right for you if:

- You are a woman. The information in this summary is from research on women.
- Your doctor\* has found a breast lump or shadow on your mammogram and has recommended a breast biopsy.

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### Fast Facts

- For a breast biopsy, a small amount of breast tissue is taken out. A biopsy tells if the lump is breast cancer.
- Most women who have a breast biopsy do not have breast cancer. About four out of every five breast biopsies are negative for cancer.
- There are two main kinds of breast biopsies: core-needle biopsy and open surgical biopsy.
- Side effects are less common with core-needle biopsy than with open surgical biopsy.

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\* In this summary, the term doctor refers to your health care professional, including your primary care physician, gynecologist, radiologist, surgeon, nurse practitioner, or physician assistant.

## Introduction

### **What does this summary cover?**

This summary can help you talk with your doctor or nurse about breast biopsy. If you have a breast lump or shadow on your mammogram, a breast biopsy tells if it is cancer or not. This summary will tell you about the different kinds of breast biopsies. It will tell you what to expect if you have a breast biopsy.

This summary covers research about how well different kinds of biopsies work to find breast cancer. It will also tell you about possible side effects. It is based on a government-funded review of research reports about breast biopsy.

### **What is not covered in this summary?**

This summary does not cover a kind of breast biopsy called fine-needle biopsy. This type of biopsy was not included in the research review. This summary does not cover breast biopsies for men because the research did not include men. It also does not cover treatments for breast cancer.



## Finding Breast Cancer

Breast cancer can be found through screening tests, a breast self-exam, or when symptoms start.

### Screening

Screening tests can find breast cancer before it causes symptoms and when it is most treatable. Two common tests used to check for breast cancer are:

- **Mammogram (MAM-mo-gram):** This test is a breast x-ray. It looks for changes in breast tissue that may be cancer. These changes may look like a shadow on the x-ray. A mammogram can find breast cancer even when it is too small to be felt. This is considered the best screening test for breast cancer.
- **Breast exam by your doctor or nurse:** This is usually part of a woman's yearly exam. But if you find a breast lump or other change that worries you, do not wait. See your doctor to have it checked.



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## Self-exam

A woman can do a breast self-exam at home to check for changes in breast tissue. If you find a breast lump or any other changes, see your doctor right away to have it checked.

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## Symptoms

Many women with early breast cancer have no symptoms. The most common symptom of breast cancer is a breast lump. Other possible symptoms include:

- Changes in the skin of the breast (such as skin irritation, dimples in the skin, redness, scaly skin, or thickening of the skin)
- Swelling of all or part of the breast
- Pain in the breast or nipple
- The nipple draws back into the breast
- Discharge from the nipple (other than breast milk)

If you have any of these symptoms, see your doctor right away.

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## Followup tests and breast biopsy

If a shadow is seen on your mammogram, a lump is felt, or you have other symptoms, your doctor will likely do more tests. Your doctor may recommend another mammogram or a breast ultrasound. These tests tell your doctor if you need a biopsy.

Most women who have followup tests find out they do not need a biopsy. But, if the results of the followup tests are of concern, your doctor will recommend a biopsy.

## What Is a Breast Biopsy?

A biopsy is the only test that can tell for sure if a shadow or lump is breast cancer. During a breast biopsy, the doctor removes a small amount of tissue from the breast.

There are two main kinds of breast biopsy: *core-needle biopsy* and *open surgical biopsy*.

The kind of breast biopsy a doctor recommends may depend on what the shadow or lump looks like on the mammogram. It may also depend on the size of the shadow or lump and where it is located in the breast.

After the biopsy, a doctor will look at the tissue under a microscope. This doctor, called a pathologist (puh-THOL-o-jist), looks for changes in the tissue. The doctor's report will tell if there is cancer or not. It takes about a week to get the report.

## Kinds of Breast Biopsies

### Core-Needle Biopsy

Your doctor will probably suggest a core-needle biopsy. It is done using local anesthesia (an-ess-THEE-zhuh), which means that the breast will be numbed.

The doctor puts a hollow needle into the breast and takes out a small amount of tissue. The doctor may place a tiny marker inside the breast to mark the spot where the biopsy was done.

There are several ways to do core-needle biopsies. Some of these use different types of imaging equipment.

- **Ultrasound-guided core-needle biopsy** uses ultrasound to guide the needle to the lump. Ultrasound uses sound waves to create a picture of the inside of the breast. It is like the ultrasound used to look at the baby in the womb while a woman is pregnant. You will lie on your back or side for this procedure. The doctor will hold the ultrasound device against your breast to guide the needle.

- **Stereotactic-guided core-needle biopsy** uses x-ray equipment and a computer to guide the needle. Usually for this kind of biopsy, you lie on your stomach on a special table. The table will have an opening for your breast. Your breast may be squeezed and flattened as it is for a mammogram.
- **MRI-guided core-needle biopsy** is similar to stereotactic-guided core-needle biopsy, but magnetic resonance imaging (MRI) equipment is used to guide the needle.
- **Freehand core-needle biopsy** does not use ultrasound, x-ray, or MRI equipment. It is used less often and only for lumps that can be felt through the skin.

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## Open Surgical Biopsy

An open surgical biopsy is usually done only if you have a high risk of cancer or if the lump is in an area of the breast that cannot be reached with a core-needle biopsy. It is done using general anesthesia. You will be given medicine to make you sleepy through an IV needle placed in a vein in your arm.

The surgeon makes a 1-inch to 2-inch cut in the breast and removes part or all of the lump. Some of the tissue around the lump also may be taken out.

If the lump can be seen on a mammogram or an ultrasound but cannot be felt, a radiologist (a doctor who specializes in medical imaging) usually inserts a thin wire to mark the spot for the surgeon before the biopsy.

**Note:** It is not unusual to feel nervous about having a biopsy. Ask your doctor or nurse what to expect. It may help to talk with your family and friends. You also might want someone to come to your appointment with you.

## Research About Breast Biopsy

### Accuracy

Open surgical biopsies and core-needle biopsies both work well for finding breast cancer. But, biopsies are not 100-percent accurate. In a few cases, a biopsy can miss breast cancer. Or, a biopsy that appears to show cancer can be wrong.

Open surgical biopsies and ultrasound-guided or stereotactic-guided core-needle biopsies have about the same accuracy. Freehand core-needle biopsies appear to be a little less accurate. There is not enough research to know the accuracy of MRI-guided core-needle biopsy.

Kind of breast biopsy	Out of 100 women who <i>do</i> have breast cancer, this kind of biopsy correctly identifies:	Out of 100 women who <i>do not</i> have breast cancer, this kind of biopsy correctly identifies:
<b>Ultrasound-guided core-needle biopsy</b>	97 to 99 of these women, depending on the exact method used	97 to 99 of these women, depending on the exact method used
<b>Stereotactic-guided core-needle biopsy</b>	97 to 99 of these women, depending on the exact method used	92 to 99 of these women, depending on the exact method used
<b>Freehand core-needle biopsy</b>	91 of these women*	98 of these women*
<b>Open surgical biopsy</b>	At least 98 of these women	Not reported in the research

\* More research is needed to know this for sure.

### Side effects

Bleeding, bruising, and infection can happen after a breast biopsy. Core-needle biopsies have a lower risk of these side effects than open surgical biopsies.

Side effects are rare with any kind of core-needle biopsy.

- Less than 2 out of 100 women who have a core-needle biopsy have a side effect like severe bruising, bleeding, or infection.



Side effects happen more often with open surgical biopsy.

- Up to 10 out of 100 women who have open surgical biopsy get severe bruising.
- Up to 6 out of 100 women who have open surgical biopsy get an infection.

Some medicines, including aspirin, increase the risk of bleeding and bruising. Your doctor will ask you about the medicines you take. You may need to stop taking some medicines a few days before the biopsy.

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## Pain

Women who have an open surgical biopsy sometimes need prescription pain medicine after the procedure. Women who have a core-needle biopsy rarely need prescription pain medicine.

## Biopsy Results

After the biopsy, the pathologist who looked at the tissue will send a report to your doctor. The report will tell if the lump is cancer or not. Your doctor will go over the report with you. Waiting for these results can be difficult. It can take about a week to get the results.

- **If no cancer is found**, the biopsy result is called benign (be-NINE). Benign means it is not cancer. Some benign results need followup. Talk with your doctor or nurse about what is recommended for you.
- **If cancer is found**, the report will tell you the kind of cancer you have. It will help you and your doctor talk about the next steps. Often, this may include seeing a breast cancer specialist. You also may need more imaging tests or surgery. All this information will help you and your doctor think through your treatment options.

Take time to think. Most women with breast cancer have time to think about their options.

**Note:** Ask your doctor if you do not understand your test results. After going over the results with your doctor, ask for a copy of the report for your records.

## Questions for Your Doctor or Nurse

### Talking about options

- What kind of biopsy do you recommend? Why?
- Are there any other options?
- How long will the biopsy take?
- What are the possible side effects?
- Could the biopsy cause scarring or bruising?

### Preparing for a biopsy

- How many days before my biopsy should I stop taking aspirin? Are there other medicines I should avoid?
- Can I have someone in the room with me during the biopsy?
- Do I need someone to drive me home?
- When will I get the results?
- Who will give me the results?

### If my biopsy does not show cancer:

- What kind of followup do I need?
- When should I have my next mammogram?

### If my biopsy shows cancer:

- What are the next steps?
- What are my options for treatment?
- Can you tell me about support groups for women with breast cancer?

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## **Ask your doctor or nurse**

**Questions:**

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**Write the answers here:**

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## Source

The information in this summary comes from a detailed review of 316 research studies. The review is called *Core Needle and Open Surgical Biopsy for Diagnosis of Breast Lesions: An Update to the 2009 Report* (2014) and was produced by the Brown Evidence-based Practice Center through funding by the Agency for Healthcare Research and Quality (AHRQ). It is an update to a 2009 review, *Comparative Effectiveness of Core Needle and Open Surgical Biopsy for the Diagnosis of Breast Lesions*, by the ECRI Institute Evidence-based Practice Center.

For a copy of the updated report or for more information about AHRQ, go to [www.effectivehealthcare.ahrq.gov/breast-biopsy](http://www.effectivehealthcare.ahrq.gov/breast-biopsy).

Additional information came from the MedlinePlus® Web site, a service of the National Library of Medicine and the National Institutes of Health. This site is available at [www.medlineplus.gov](http://www.medlineplus.gov).

The summary of the 2009 research review was prepared by the John M. Eisenberg Center for Clinical Decisions and Communications Science when located at Oregon Health & Science University, Portland, OR. Women who had breast biopsies reviewed this summary. Based on the 2014 research review, the summary was updated by the Eisenberg Center located at Baylor College of Medicine, Houston, TX.

