

# Breast Cancer

## Invasive Lobular Carcinoma

### Definitions

#### **Invasive, Infiltrating:**

Capable of spreading to other parts of the breast or body.

**Lobular:** Relating to the breast lobule, the part of the breast that produces milk in a woman who has been recently pregnant or who is breastfeeding.

**Carcinoma:** A type of cancerous, or malignant, tumor.

**Malignant:** Cancerous and capable of spreading.

**Pathologist:** A physician who examines tissues and fluids to diagnose disease in order to assist in making treatment decisions.

**Lymphatic:** Relating to lymph glands, especially those located near the breast.

### What is invasive lobular carcinoma (ILC)?

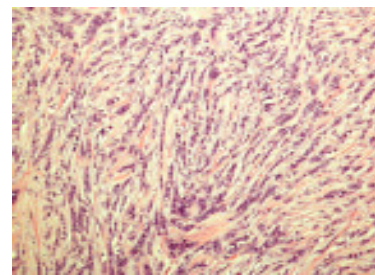
Invasive lobular carcinoma, also known as infiltrating lobular carcinoma, is a type of breast cancer that starts in a lobule and spreads to surrounding breast tissue. If not treated at an early stage, ILC also can move into other parts of the body, such as the uterus or ovaries. ILC is the second most common type of invasive breast cancer, accounting for 10 to 15 percent of all breast cancer cases.

### Who is most likely to have ILC?

Women between the ages of 45 and 56 are most likely to have ILC. Less than 10 percent of women with breast cancer have a family history of the disease. Other factors increasing the risk of having breast cancer include having no children or the first child after age 30, early menstruation, and consuming three or more alcoholic drinks a day.

### What characterizes ILC?

ILC is characterized by a general thickening of an area of the breast, usually the section above the nipple and toward the arm. You may not be able to feel a breast lump or hard mass. Instead, an area of breast tissue may only feel differently than the rest of your breast. ILC also is less likely to appear on a mammogram. When it does appear, it may show as a mass with fine spikes radiating from the edges or appear as an asymmetry compared to the other breast.

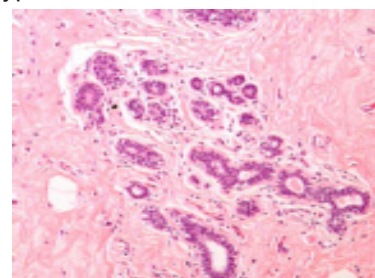


Invasive lobular carcinoma is characterized by malignant cells that follow a line and invade the surrounding tissue.

### How does the pathologist make a diagnosis?

The pathologist examines a **biopsy specimen**, along with other tests if necessary. A biopsy is the most widely used method for detecting ILC breast cancer. During a biopsy procedure, the surgeon removes cells or tissues from the suspicious area for the pathologist to examine more closely in the laboratory. In some cases, a biopsy may be performed with surgery. The surgeon removes all or part of the tumor for the pathologist to examine.

Laboratory testing enables the pathologist to determine the type of cancer and whether it is invasive. The pathologist examines the tissue sample under a microscope and assigns a histologic type and **histologic tumor grade** to it. Grade 1 cancers tend to grow the slowest, while Grade 3 tumors spread more aggressively. The pathologist also notes the size of the tumor, how close the cancer is to the edge of the tissue removed by the surgeon, and whether the tumor invaded blood or lymphatic vessels. These factors help pathologists determine the likelihood of the cancer remaining in or returning to the affected area.



Normal breast cells.

### What else does the pathologist look for?

The biopsy sample is tested for the presence of **estrogen (ER)** and **progesterone receptors (PgR)** using a method called **immunohistochemistry**, or **IHC**. Women with cancers containing these receptors are more likely to respond positively to hormonal therapy such as tamoxifen. If breast cancer cells have estrogen receptors, the cancer is called ER-positive breast cancer. If breast cancer cells have progesterone receptors, the cancer is called PgR-positive breast cancer. About 75 percent to 80 percent of breast cancers are ER- and/or PgR-positive. Low-grade cancers are even more likely to be ER- and/or PgR-positive.

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## What kinds of questions should I ask my doctors?

Ask any question you want. There are no questions you should be reluctant to ask. Here are a few to consider:

- Please describe the type of cancer I have and what treatment options are available.
- What stage is the cancer?
- What are the chances for full remission?
- What treatment options do you recommend? Why do you believe these are the best treatments?
- What are the pros and cons of these treatment options?
- What are the side effects?
- Is your medical team experienced in treating the type of cancer I have?
- Can you provide me with information about the physicians and others on the medical team?
- Is the laboratory doing the testing for my cancer following the new guidelines for the ER, PgR and HER2 tests?

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The College of American Pathology (CAP) and the American Society of Clinical Oncology (ASCO) have issued a joint guideline aimed at improving the accuracy of IHC testing for the presence of ER and PgR in breast cancer.

Pathologists also may check for a protein called **HER2**. There is also a guideline developed by the CAP and ASCO in 2007 that details how this test should be done so that it will be accurate and reproducible. Laboratories doing testing for HER2 should be following these guidelines. The recommendations are very similar to the new ER and PgR recommendations. Cancers with too much HER2 are very likely to respond to targeted therapy with trastuzumab or lapatinib. Due to continual advances in research, other tests may be used as well.

After reviewing the results of the laboratory tests, your clinician may recommend additional tests to determine to what extent malignant cells may have spread to other parts of the body. Depending on your situation, these tests may include **a chest x-ray; a bone scan;** and imaging tests including **computed tomography (CT), magnetic resonance imaging (MRI),** or **PET (positron emission tomography)**. All these tests can detect signs that the cancer may have spread to other parts of the body.

By completing necessary tests, pathologists determine the cancer's **stage**. Stage 1 ILC tumors are confined to the breast, and Stage 4 tumors spread beyond areas near the breast. Stages 2 and 3 describe conditions between these two extremes.

## How do doctors determine what surgery or treatment will be necessary?

The pathologist consults with your primary physician after reviewing the test results and determining the cancer's stage. Together, using their combined experience and knowledge, they determine treatment options most appropriate for your condition.

## What kinds of treatments are available for ILC?

ILC is treated through one or more of the following: **surgery, chemotherapy, hormonal therapy,** and **radiation therapy**. It's important to learn as much as you can about your treatment options and to make the right decision.

Most women choose surgery. Advancements in surgical techniques have enabled about 70 percent of women to choose breast-conserving surgical treatments like **lumpectomy** rather than **mastectomy**, where the entire breast and often some or all lymph nodes near the breast are removed. Mastectomy reduces the chances the cancer will return. Lumpectomy is an option when the cancer is in a relatively small part of one breast. How far your tumor has grown and advanced will determine if breast-conserving treatments are possible. If your breast cannot be conserved, breast reconstruction surgery may be a possibility after you recover from your initial operation to remove the cancer.

Most women with invasive breast cancer will be offered chemotherapy and/or hormonal therapy. Chemotherapy drugs kill rapidly dividing tumor cells that may be spreading through the body, reducing the risk of the cancer coming back in another body site. Drugs affecting hormone responsiveness also kill tumor cells, which require hormones to grow, and prevent these cells from spreading or coming back. Drugs targeting HER2 receptor specifically kill cells having large amounts of this protein and prevent these cells from spreading or coming back. Radiation therapy is used to rid the body of any microscopic remnants of the cancer in the area where the original tumor was found and removed.

**Clinical trials** of new treatments for ILC may be found at [www.cancer.gov/clinicaltrials](http://www.cancer.gov/clinicaltrials). These treatments are highly experimental in nature but may be an option for advanced cancers.

**For more information,** go to [www.cancer.org](http://www.cancer.org) (American Cancer Society), [www.y-me.org](http://www.y-me.org) (Y-ME National Breast Cancer Organization), or [www.cancer.net](http://www.cancer.net) (American Society of Clinical Oncology).