



[cancer.org](https://www.cancer.org) | 1.800.227.2345

## Understanding Your Pathology Report: Lobular Carcinoma In Situ (LCIS)

When your breast was biopsied, the samples taken were studied under the microscope by a specialized doctor with many years of training called a *pathologist*. The pathologist sends your doctor a report that gives a diagnosis for each sample taken. Information in this report will be used to help manage your care. The questions and answers that follow are meant to help you understand medical language you might find in the pathology report from a [breast biopsy](#)<sup>1</sup>, such as a needle biopsy or an excision biopsy.

In a needle biopsy, a needle is used to remove a sample of an abnormal area. An excision biopsy removes the entire abnormal area, often with some of the surrounding normal tissue. An excision biopsy is much like a type of [breast-conserving surgery](#)<sup>2</sup> called a *lumpectomy*.

### What is carcinoma?

This is a term used to describe a cancer that begins in the lining layer (epithelial cells) of organs like the breast. Nearly all breast cancers are carcinomas.

### What is in-situ carcinoma (or carcinoma in situ) of the breast?

This term is used for the earliest stage of breast cancer, when it is confined to the layer of cells where it began. The normal breast is made of tiny tubes (ducts) that end in a group of sacs (lobules). Cancer starts in the cells lining the ducts or lobules, when a normal cell becomes a carcinoma cell. As long as the carcinoma cells are still confined to the breast ducts or lobules, and do not break out and grow into surrounding tissue, it is considered in-situ carcinoma (also known as carcinoma in situ, or CIS).

Once the carcinoma cells have grown and broken out of the ducts or lobules, it is called

*invasive or infiltrating carcinoma*. In an invasive carcinoma, the tumor cells can spread (metastasize) to other parts of your body.

### **What does it mean if my diagnosis says lobular carcinoma in situ (LCIS), lobular neoplasia, or in-situ carcinoma with duct and lobular features?**

There are 2 main types of in-situ carcinoma of the breast: [ductal carcinoma in situ \(DCIS\)](#)<sup>3</sup> and [lobular carcinoma in situ \(LCIS\)](#)<sup>4</sup>. They are diagnosed based on how the cells and tissue look under the microscope, and are sometimes both found in the same biopsy.

LCIS and a condition called [atypical lobular hyperplasia \(ALH\)](#)<sup>5</sup> are both considered **lobular neoplasia**.

**In-situ carcinoma with duct and lobular features** means that the in-situ carcinoma looks like DCIS in some ways and LCIS in some ways (when seen under the microscope), so the pathologist can't call it one or the other.

**Lobular carcinoma in situ (LCIS)** is a type of in-situ carcinoma of the breast. While DCIS is considered a pre-cancer, it is unclear whether LCIS is definitely a pre-cancer or if it is just a general risk factor for developing breast cancer. This is because LCIS rarely seems to turn into invasive cancer if it is left untreated. Women with LCIS do have a higher risk of getting breast cancer, but the cancer occurs just as often in the opposite breast (the one without any LCIS). Because it isn't clear if LCIS is a pre-cancer, many doctors prefer to use the term *lobular neoplasia* instead of lobular carcinoma in situ.

If LCIS is found in an excision biopsy, it does not need further treatment. Because it increases the risk of a later cancer, your doctor might discuss taking medicine to lower your risk of breast cancer.

The best way to treat LCIS found on a needle biopsy is not clear. In some cases where LCIS is found on needle biopsy, the doctor might recommend that it be removed completely (with an excisional biopsy or some other type of breast-conserving surgery). This may occur if the LCIS is pleomorphic or has necrosis (discussed in a later question). An excisional biopsy may also be needed if the abnormal area seen on the mammogram doesn't look typical for LCIS. If you have LCIS found on needle biopsy, you should discuss your case with your doctor.

### **What does it mean if my report mentions E-cadherin?**

E-cadherin is a test that the pathologist might use to help determine if the carcinoma in

situ is ductal (DCIS) or lobular (LCIS). (The cells in LCIS are usually negative for E-cadherin.) If your report does not mention E-cadherin, it means that this test was not needed to make the distinction.

**What does it mean if my report mentions special tests such as high molecular weight cytokeratin (HMWCK), CK903, CK5/6, p63, muscle specific actin, smooth muscle myosin heavy chain, calponin, or keratin?**

These are special tests that the pathologist sometimes uses to help make the diagnosis of LCIS (or DCIS). Not all cases need these tests. Whether your report does or does not mention these tests has no bearing on the accuracy of your diagnosis.

**What if my lobular carcinoma in situ (LCIS) is described as pleomorphic or with necrosis?**

**Pleomorphic** means that the LCIS cells look more atypical under the microscope than the usual case of LCIS. **Necrosis** means that some of the LCIS cells are dead. LCIS with either of these features (when compared to LCIS without them) may be more likely to grow faster and to spread, and is linked to an even higher risk of invasive cancer. LCIS with either of these features may be treated differently than most cases of LCIS.

**What if my report on lobular carcinoma in situ (LCIS) mentions margins or ink?**

When the entire area of LCIS is removed, the outside surface (edges or margins) of the specimen is coated with ink, sometimes even with different colors of ink on different sides of the specimen. The pathologist looks at slides of the LCIS under the microscope to see how close the LCIS cells get to the ink (the edges or margins of the specimen). If LCIS is touching the ink (called *positive margins*), it can mean that some LCIS cells were left behind. Sometimes, though, the surgeon has already removed more tissue (at surgery) to help make sure that this isn't needed.

Still, since LCIS doesn't usually turn into invasive cancer if left behind, having positive margins often doesn't mean that you will need more treatment. In fact, you may only need further surgery if it was pleomorphic LCIS or LCIS with necrosis, or when the LCIS caused a lump that could be felt or seen as a tumor on a mammogram. The best way to treat LCIS with a positive margin should be discussed with your doctor.

**What does it mean if my report also mentions atypical ductal hyperplasia (ADH) or atypical lobular hyperplasia (ALH)?**

[ADH and ALH](#)<sup>6</sup> are atypical conditions that are less serious than LCIS. Talk with your

doctor about what these findings may mean to your care.

**What does it mean if my report also uses any of the following terms: usual ductal hyperplasia, adenosis, sclerosing adenosis, radial scar, complex sclerosing lesion, papillomatosis, papilloma, apocrine metaplasia, cysts, columnar cell change, collagenous spherulosis, duct ectasia, fibrocystic changes, flat epithelial atypia, or columnar alteration with prominent apical snouts and secretions (CAPSS)?**

All of these are terms for [benign \(non-cancerous\) changes](#)<sup>7</sup> that the pathologist might see under the microscope. They are not important when seen on a biopsy where there is LCIS.

**What does it mean if my report mentions microcalcifications or calcifications?**

Microcalcifications or calcifications are calcium deposits that can be found in both non-cancerous and cancerous breast lesions. They can be seen both on mammograms and under the microscope. Because certain calcifications are found in areas containing cancer, their presence on a mammogram may lead to a biopsy of the area. Then, when the biopsy is done, the pathologist looks at the tissue removed to be sure that it contains calcifications. If the calcifications are there, the doctor knows that the biopsy sampled the correct area (the abnormal area with calcifications that was seen on the mammogram).

## Hyperlinks

1. [www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/breast-biopsy.html](http://www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/breast-biopsy.html)
2. [www.cancer.org/cancer/breast-cancer/treatment/surgery-for-breast-cancer/breast-conserving-surgery-lumpectomy.html](http://www.cancer.org/cancer/breast-cancer/treatment/surgery-for-breast-cancer/breast-conserving-surgery-lumpectomy.html)
3. [www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report/breast-pathology/ductal-carcinoma-in-situ.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report/breast-pathology/ductal-carcinoma-in-situ.html)
4. [www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/lobular-carcinoma-in-situ.html](http://www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/lobular-carcinoma-in-situ.html)
5. [www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/hyperplasia-of-the-breast-ductal-or-lobular.html](http://www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/hyperplasia-of-the-breast-ductal-or-lobular.html)
6. [www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/hyperplasia-of-the-breast-ductal-or-lobular.html](http://www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/hyperplasia-of-the-breast-ductal-or-lobular.html)
7. [www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions.html](http://www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions.html)
8. [www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-)

[your-pathology-report/faq-initiative-understanding-your-pathology-report.html](https://www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report/faq-initiative-understanding-your-pathology-report.html)

Last Medical Review: March 9, 2017 Last Revised: August 6, 2020

Copyright 2017 Association of Directors of Anatomic and Surgical Pathology, adapted with permission by the American Cancer Society.

### **Written by**

This series of Frequently Asked Questions (FAQs) was developed by the Association of Directors of Anatomic and Surgical Pathology to help patients and their families better understand what their pathology report means. These FAQs have been endorsed by the College of American Pathologists (CAP) and reviewed by the American Cancer Society.

Learn more about the FAQ Initiative ([www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report/faq-initiative-understanding-your-pathology-report.html](https://www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report/faq-initiative-understanding-your-pathology-report.html))<sup>8</sup>

**cancer.org | 1.800.227.2345**