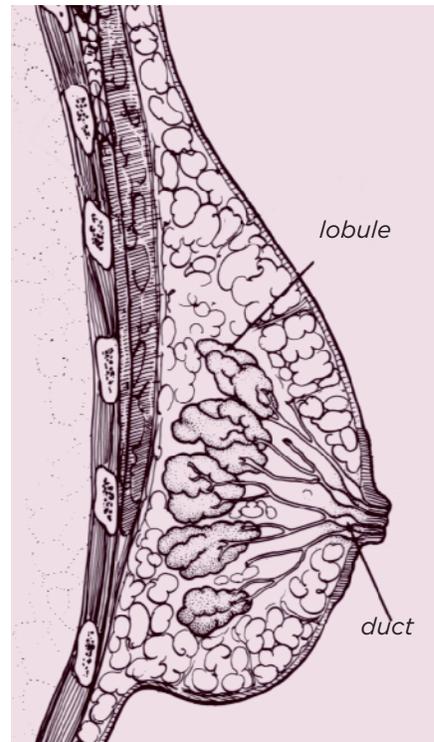


What is carcinoma in situ?

An abnormal growth of cells that stays within the area in which it started and has not spread into surrounding breast tissue is called a *carcinoma in situ (CIS)* [kar-sin-OE-ma in SY-too]. The term in situ means “in place.” CIS is noninvasive because it hasn’t spread to surrounding breast tissue or other areas of the body. Invasive breast cancer is more serious because it can spread to the lymph nodes and to other areas of the body. There are two types of CIS: *lobular carcinoma in situ (LCIS)* and *ductal carcinoma in situ (DCIS)*. To correctly diagnose both LCIS and DCIS, a biopsy (removal of a sample of tissue) must be done.



An abnormal growth of cells can arise in the breast lobules or in the breast ducts.



Did you know?

- About 37 percent of breast cancers diagnosed will be carcinomas in situ.¹
- About 85 percent of carcinomas in situ are DCIS, not LCIS.¹
- About 20-30 percent of women with DCIS will develop invasive breast cancer.²

Remember, every woman is different. Whatever your diagnosis, it is important to keep up with your age-recommended breast screenings.

¹ American Cancer Society, Cancer Facts & Figures 2008.

² Morrow M, Harris JR, Osborne CK (2004) Chapter 33: Ductal carcinoma in situ and microinvasive carcinoma. Diseases of the Breast.

Lobular carcinoma in situ (LCIS)

Lobular carcinoma in situ (LCIS) develops in the area of the breast where milk is made (the lobule). The normal lining of cells of the lobule grows more than usual and fills the entire lobule. LCIS cells stay within the lobule of the breast and rarely develop into breast cancer. It usually cannot be diagnosed by a physical exam or mammogram. LCIS is often found by accident when a biopsy is done to diagnose another breast problem or suspicious lump.

Treatment options

When biopsy results indicate LCIS, treatment options may include follow-up, tamoxifen [tah-MOX-ah-fin] or surgery. Follow-up includes mammograms every year and clinical breast exams every 6 to 12 months. Tamoxifen is a hormone therapy that blocks the growth of some breast cancers and precancer cells. Tamoxifen is a proven method to reduce the risk of breast cancer in women with LCIS.

LCIS increases a woman's risk of developing invasive breast cancer in either breast. Because of the increased risk, some women choose to have both breasts removed as a preventive measure, also known as a *prophylactic* [pro-fil-lak-tik] *bilateral mastectomy*. Some women at higher risk, such as those who have a strong family history of breast cancer, consider bilateral mastectomy their best option. Women then have the option to have reconstructive surgery to recreate the removed breasts. However, it is important to weigh the pros and cons of each treatment and to seek a second or even third opinion before having a prophylactic bilateral mastectomy.

Many women choose tamoxifen and lifelong follow-up, instead of preventive surgery, especially if they do not have other risk factors. Though not as well studied as tamoxifen, the drug raloxifene reduces the risk of breast cancer among postmenopausal women at high risk for developing breast cancer.

Ductal carcinoma in situ

Ductal carcinoma in situ (DCIS) is an abnormal growth of cells that is still within the ducts of the breast. Breast ducts carry milk from the lobules to the nipple of the breast. DCIS is a precancerous or pre-malignant (not yet cancer) condition, and if left untreated or if not treated properly, it can develop into invasive breast cancer. However, DCIS is highly treatable because it has not invaded or spread. On a mammogram, DCIS looks like small clusters of abnormal calcium deposits called microcalcifications [MY-krow-kal-si-fi-KA-shunz]. These microcalcifications are seen long before a lump can be felt. For more information on the different types of DCIS and treatment options, see the *Ductal Carcinoma in Situ* fact sheet.

Related fact sheets in this series:

- Biopsy
- Breast Health Resources
- Calcifications
- Ductal Carcinoma in Situ
- Medical Vocabulary
- Prophylactic Mastectomy
- Tamoxifen