

## FAQS: BREAST CANCER IN-SITU

### UNDERSTANDING YOUR PATHOLOGY REPORT: A FAQ SHEET

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 pathology report tells your treating doctor the diagnosis in each of the samples to help manage your care. This FAQ sheet is designed to help you understand the medical language used in the pathology report.

#### 1. What is “in-situ carcinoma”?

*In-situ carcinoma is a pre-cancer. The normal breast is made of ducts that end in a group of blind-ending sacs (lobules). Carcinomas originate in the ducts and lobules and when they have not broken out of these structures and are still confined to the breast ducts or lobules, they are considered ductal or lobular “in-situ carcinoma”, respectively.. Once in-situ carcinoma has grown and broken out of the ducts or lobules it is referred to as “invasive” or “infiltrating” carcinoma, which means that the tumor cells now have the potential to spread (metastasize) to other parts of your body.*

#### 2. What does it mean if my in-situ carcinoma is called “ductal carcinoma in-situ”, “intraductal carcinoma”, “lobular carcinoma in-situ” or “in-situ carcinoma with duct and lobular features”?

*In-situ carcinomas of the breast have a variety of appearances under the microscope, the two major types being ductal carcinoma in-situ (DCIS) or lobular carcinoma in-situ (LCIS). “Intraductal carcinoma” and “ductal carcinoma in-situ” are synonymous terms. In some cases, the in-situ carcinoma can have both ductal and lobular features and, in some cases, DCIS and LCIS may both be present in the same breast biopsy.*

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

*E-cadherin is a test that the pathologist uses to help determine if the carcinoma in-situ is ductal or lobular. If your report does not mention E-cadherin, it means that this test was not necessary to make the distinction.*

4. What does it mean if my ductal carcinoma in-situ is described as being “cribriform”, micropapillary”, “apocrine”, “comedo”, “with comedonecrosis”, “papillary”, or “solid”?

*These are different microscopic appearances of ductal carcinoma in-situ and may influence the treatment that your doctor recommends.*

5. What does it mean if my ductal carcinoma in-situ is described as being “low grade”, “intermediate grade”, or “high grade”; or “nuclear grade 1”, “nuclear grade 2”, or “nuclear grade 3”; or “low mitotic rate”, “intermediate mitotic rate”, or “high mitotic rate”?

*These are all different ways of describing the microscopic appearance of ductal carcinoma in-situ (DCIS). DCIS which is high grade, nuclear grade 3, or high mitotic rate( as compared to low grade, nuclear grade 1, or low mitotic rate) is associated with an increased risk of coming back (recurring) following local excision and this may affect subsequent therapy.*

6. What is the significance of the reported size of the ductal carcinoma in-situ (DCIS)?

*The pathologist typically will measure on an excision specimen the greatest dimension of the DCIS as seen under the microscope or by gross (naked eye) examination (if visible). Another way to measure DCIS is to note the number of microscopic slides that contain DCIS. On needle biopsy, DCIS is typically not measured because it may not be accurate, sampling only a portion of the tumor. A more accurate measurement will be done on the subsequent excision (lumpectomy or mastectomy). The more extensive the DCIS the greater the risk of the DCIS coming back (recurrence) and this may affect subsequent therapy.*

7. What is the significance of ductal carcinoma in-situ (DCIS) in terms of prognosis and treatment?

*DCIS is a pre-cancer but its natural history is not well understood. Treatment is aimed at getting rid of all the DCIS, usually by surgery alone. However, in some cases, radiation (radiotherapy) or hormonal therapy will follow surgery in order to help prevent the DCIS from coming back (recurring) or also possibly developing into invasive carcinoma.*

8. What does it mean if my report mentions special studies 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 ductal carcinoma in-situ. 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.*

9. What does it mean if my report on ductal carcinoma in-situ (DCIS) mentions “estrogen receptor (ER)” or “progesterone receptor (PR)”?

*ER and PR are special tests that the pathologist does that are important in predicting response of the DCIS to certain types of therapy. Results for ER and PR are reported separately and can be reported in different ways: 1) negative, weakly positive, positive; 2) percent positive; 3) percent positive and whether the staining is weak, moderate, or strong. How the results of your tests will affect your therapy is best discussed with your treating physician.*

10. What if my report on ductal carcinoma in-situ (DCIS) mentions “margins” or “ink”?

*When an excisional biopsy (lumpectomy) of DCIS is performed, the pathologist coats the outer aspect of the specimen with ink, sometimes different colored ink. If DCIS extends to the ink, it indicates that it may not have been completely removed (i.e. it is at the surgical “margin”). However, the surgeon may have removed additional tissue at the time of the excisional biopsy to guard against this possibility. If the DCIS has not been completely removed, additional treatment (surgery, radiation, or hormone therapy, or a combination of these) is typically used to get rid of the residual DCIS. Management of DCIS at a surgical margin is best discussed with your treating physician.*

11. What is the significance of lobular carcinoma in-situ (LCIS) in terms of prognosis and treatment?

*The presence of LCIS increases the risk of subsequently developing carcinoma in both breasts. Typically, LCIS found on excision is managed with observation, and in some cases, with hormone therapy. In some cases where LCIS is found on needle biopsy, surgical excision may be recommended if the LCIS does not account for the mammographic findings or if the LCIS is pleomorphic or has necrosis (see FAQ 13). The appropriate treatment of LCIS found on needle biopsy is an area of uncertainty and is best discussed with your treating physician.*

12. What does it mean if my report mentions “lobular neoplasia”?

*For many years, women who had lobular carcinoma in-situ in their breast biopsies had no further surgeries. We know through long term studies of these women that most never develop an invasive carcinoma. Because of these studies, many doctors prefer the term lobular neoplasia, instead of lobular carcinoma in-situ, since it does not inevitably become invasive.*

13. What if my lobular carcinoma in-situ (LCIS) is described as “pleomorphic” or “with necrosis”?

*These types of LCIS, when compared to LCIS without these features, may be more aggressive and associated with an increased risk of carcinoma. “Necrosis” means that some of the LCIS cells are dead. “Pleomorphic” means that the LCIS cells look more atypical under the microscope than the usual case of LCIS.*

14. What if my report on lobular carcinoma in-situ (LCIS) mentions “margins” or “ink”?

*When an excisional biopsy (lumpectomy) of LCIS is performed, the pathologist coats the outer aspect of the specimen with ink, sometimes different colored ink. If LCIS extends to the ink, it indicates that it may not have been completely removed (i.e. it is at the surgical “margin”). However, the surgeon may have removed additional tissue at the time of surgery to guard against this possibility. Even if LCIS has not been completely removed, it is typically not treated with further excision. However, in some cases, such as pleomorphic LCIS, LCIS with necrosis, or LCIS that make a mass that is palpable or seen on mammography, it may be treated with additional excision. The management of LCIS at a margin is best discussed with your treating physician.*

15. What does it mean if my report also mentions “atypical ductal hyperplasia (ADH)” or “atypical lobular hyperplasia (ALH)”?

*These are precursors to ductal carcinoma in-situ and lobular carcinoma in-situ, respectively. The significance of these changes often depends on the associated lesions and is best discussed with your treating physician.*

16. What does it mean if my report also says any of the following terms: “usual duct 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 cell change with prominent apical snouts and secretions (CAPSS)”?

*All of these terms are non-cancerous changes that the pathologist sees under the microscope and are of no importance when seen on a biopsy where there is in-situ cancer.*

17. What does it mean if my report mentions “microcalcifications” or “calcifications”?

*“Microcalcifications” or “calcifications” are minerals that are found in both noncancerous and cancerous breast lesions and can be seen both on mammograms and under the microscope. They are reported by the pathologist to show that the abnormal area with calcifications seen on the mammogram was successfully sampled by the biopsy. Without accompanying worrisome changes in the breast ducts or lobules, “microcalcifications” or “calcifications” alone have no significance.*