

Invasive Lobular Carcinoma: What You Need to Know

Information for Secondary Healthcare Professionals

What is Invasive Lobular Carcinoma (ILC)?

ILC is the second most common type of breast cancer, accounting for up to 15% of all breast cancer cases.¹ ILC has distinct clinical, histological, molecular and biological characteristics compared with the more common invasive ductal, or no special type, carcinoma (IDC/NST).¹ The hallmark of ILC is the loss of E-cadherin resulting in a more linear growth pattern, with neoplastic cells invading the stroma in a single-cell fashion, like a spider's web.^{1,2} ILC tumours therefore rarely form a lump, as seen in IDC/NST, and instead grow more diffusely through the breast without destroying the underlying anatomic structure or inciting a substantial connective tissue reaction.² ILC is associated with nodal involvement, oestrogen-receptor (ER) positivity, and lower expression of human epidermal growth factor receptor 2 (HER2).^{2,3,4} It is also more often multifocal, where two or more tumours originate from the primary tumour in the same breast quadrant, and/or multicentric, with two or more tumours in different breast quadrants.^{2,3}

Unique Challenges for Detecting ILC and Further Metastatic Disease

ILC grows in linear sheets with a lower density of tumour cells and metabolic activity, and this unique growth pattern can be difficult to detect through self-examination or standard mammography screenings. Mammograms have low sensitivity for detecting ILC, with up to 30% of cases not visualised using this technique. The sensitivity is even lower when breast tissue is dense, with 52%–70% of cases not visualised on mammograms.² Owing to difficulties detecting ILC, it tends to present at a larger size and later tumour stage.¹

ILC has lower metabolic activity which, alongside the diffuse growth pattern, presents challenges for detecting metastatic disease. ILC has a distinct metastatic pattern compared with IDC/NST,³ with the potential for metastases to present in different parts of the body including the ovaries and uterus, gastrointestinal tract, peritoneum, the leptomeninges and eyes.⁴ Furthermore, recurrence of ILC often occurs later than IDC/NST as lobular cells can lie dormant for long periods, sometimes recurring more than 10 years after the primary diagnosis.³ This highlights the importance of ensuring patients who have had ILC in the past receive appropriate imaging referrals, even several years after the initial diagnosis.

Current and Future Treatment Strategies for ILC

The main treatments for localised ILC are surgery, chemotherapy, radiotherapy, endocrine therapy and targeted therapy (such as Herceptin, an HER2-targeted therapy).⁵ Given the potentially larger tumour size at diagnosis and higher rates of multifocality and multicentricity in ILC, mastectomy is one of the main treatments and is more often carried out in patients with ILC than IDC/NST.³ Endocrine therapy is also a commonly used, effective treatment for both primary and metastatic ILC, given the associated ER positivity.^{3,6} Neoadjuvant chemotherapy may not be effective for ILC due to the low proliferation rate and high ER expression,^{5,6} however, there is a significant association between the histological subtype of ILC and effective outcomes with adjuvant chemotherapy.⁶ Therefore, improvements in screening and histopathology for ILC are necessary to improve treatment selection and outcomes for patients.

More research is needed to better understand the dormancy and growth pattern of ILC cells, and to investigate effective treatments that are specific to ILC.⁴

The Key to Change

ILC is not currently recognised as a distinct disease in guidelines from the National Institute for Health and Care Excellence (NICE) or Scottish Intercollegiate Guidelines Network (SIGN) for breast cancer diagnosis and management, which further exacerbates challenges with identifying and diagnosing ILC. You can be the key to change by supporting and getting involved with #DistinctlyLobular, our Lobular Breast Cancer UK Treatment Guidelines campaign, which aims to increase understanding of ILC as a distinct disease and ensure patients are diagnosed early and receive the most effective treatments.



Want to know more?

Please visit our Lobular Breast Cancer UK website lobularbreastcancer.org.uk or contact us on info@lobularbreastcancer.org.uk