

# DIFFERENCE IN MODE OF CLINICAL PRESENTATION BETWEEN INVASIVE LOBULAR CARCINOMA AND INVASIVE DUCTAL CARCINOMA

Joanne Swithenbank, Simon Lowes,  
Preet Hamilton, Alan Redman, Alice Leaver  
Queen Elizabeth Hospital, Gateshead



Gateshead Health **NHS**  
NHS Foundation Trust

## Background

A recent study carried out at the Gateshead Breast Screening Unit (BSU) demonstrated that mammography is of minimal value in the measurement of invasive lobular carcinoma (ILC), showing very poor correlation between mammographic measurement and size of invasive disease at final surgical pathology.<sup>1</sup> However, the UK National Health Service Breast Screening Programme (NHS BSP) relies upon mammography to detect invasive breast cancer of all cell types. In this study we assess the value of digital mammography in the initial diagnosis of invasive lobular carcinoma (ILC) versus invasive ductal carcinoma (IDC).

## Aims

- To determine the proportion of invasive lobular carcinomas versus invasive ductal carcinomas identified via the NHS BSP in our Trust, compared to the proportion of each diagnosed through our symptomatic breast service.
- To assess and compare the number of cases of ILC and IDC that were mammographically occult (mammo occult) at presentation.
- To determine and compare the mean size of the largest focus of ILC and IDC at final surgical pathology.

## Methods

- 24 month retrospective analysis of paper and electronic records of patients who attended the Gateshead BSU through the screening and symptomatic services between January 2013 and December 2014.
- Patients who underwent imaging that included mammograms and were subsequently diagnosed with IDC or ILC on surgical histology (or on biopsy histology if surgery was not performed) were included.
- Descriptive statistics performed.
- Exclusions: patients who underwent neo-adjuvant chemotherapy or primary endocrine therapy prior to surgery were excluded from the analysis of mean size of largest focus of invasive disease. Patients upon whom no surgery was performed, or for whom there was no information regarding invasive cancer size in the surgical pathology specimen report, were also excluded from analysis of mean size of largest focus of invasive disease.

## Results

766 patients were included in this study. Findings were subdivided by diagnosis (IDC versus ILC) and mode of presentation (screening versus symptomatic). Breakdown of this, and of the mean age of each patient group is represented in Table 1.

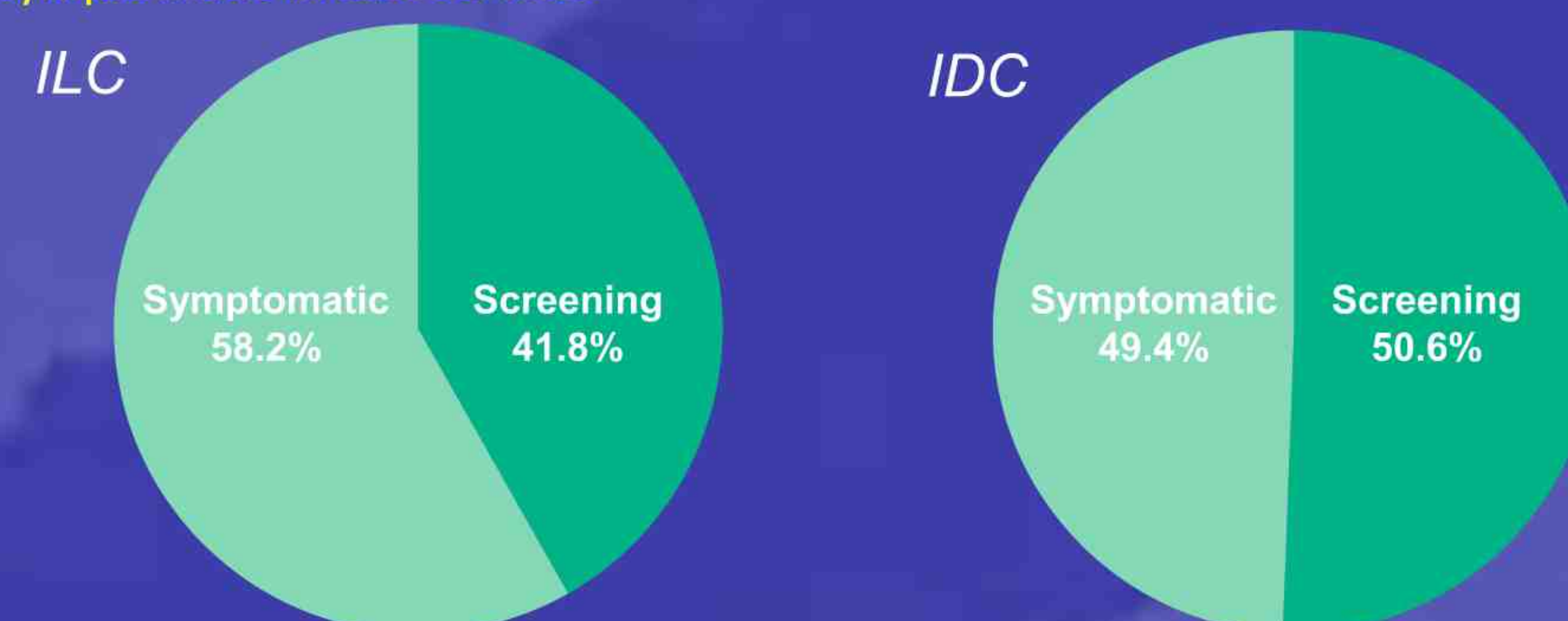
**Table 1:** Number of patients included in the study, classified by mode of presentation and diagnosis.

	IDC Screening	IDC Symptomatic	ILC Screening	ILC Symptomatic
Number of patients	332	324	46	64
Mean age	60y 9m	64y 4m	60y 10m	65y 4m

## Results continued

Of the 766 patients, 656 were diagnosed with IDC and 110 with ILC. Of all ILC patients, 41.8% were initially identified via the NHS BSP, compared with 50.6% of all IDCs. The remaining cancer detection was through the symptomatic service as seen in Figure 1.

**Figure 1:** Percentage of ILC and IDC patients detected by screening versus symptomatic breast service.



Invasive carcinoma was considered mammographically occult in 39 patients in total. This corresponds to 5.1% of all patients; data are broken down in Table 2; 4.6% of IDCs were mammo occult, 8.2% of ILCs were mammo occult. These cancers were visible on other imaging modalities (ultrasound, MRI).

**Table 2:** Number of patients with ILC/IDC not initially detected on mammogram.

	IDC Screening	IDC Symptomatic	ILC Screening	ILC Symptomatic
Number of mammo occult cases	2 (both clinical recalls)	28	0	9

After exclusion of 96 patients as described in Methods, analysis of the mean size of the largest focus of invasive disease at operative pathology was carried out for the remaining 670 patients (Table 3).

**Table 3:** Mean size of largest focus of invasive disease.

	IDC Screening	IDC Symptomatic	ILC Screening	ILC Symptomatic
Mean size	15.3 mm	25 mm	21.6 mm	28.2 mm

## Conclusion

A lower percentage of treated ILC is identified through the NHS BSP than by the symptomatic service in our Trust, when compared with IDC (41.8% versus 50.6%).

Although a significant proportion of both lobular and ductal cancers are visible on mammography, a higher proportion of ILC is mammographically occult compared to IDC (8.2% versus 4.6%). NHSBSP two view mammography is, however, an effective tool for detection of both ILC and IDC, detecting cancers that are, on average, smaller than those diagnosed through the symptomatic service.

### Reference

- Carpenter S, Lowes S, Potterton J, Hamilton P, Redman A, Leaver A. Comparison of preoperative ultrasound, mammographic, and MRI measurement of invasive lobular carcinoma with operative histology. *Breast Cancer Research*, 20(Suppl 1):PB.12.