

Background

Invasive lobular carcinoma (ILC) represents approximately 10-15% of invasive breast cancers. Oncotype Dx (ODX) is used to predict recurrence in early-stage breast cancer based on risk categories, however, ILC is frequently in the low to intermediate risk groups and frequently would not require chemotherapy. The aim of this study is to first assess the predictors of high-risk ODX recurrence score (RS) in ILC and secondly, to compare ILC with invasive ductal carcinoma (IDC) and invasive lobular carcinoma with mixed ductal and lobular features (IMC) based on clinicopathologic factors.

Design

- All newly diagnosed patients with either IDC, ILC or IMC from 2010-2018 with available ODX-RS were identified.
- A chart review and review of pathology reports was performed.
- Patient's with ER-/PR-, HER2+ or lymph node macrometastasis were excluded.

Results

- Our cohort included 582 patients with mean age of 60.1 years (range, 25-80 years) and median follow-up of 49 months (range, 0-145 months).
- There were 414 (71%), 102 (18%) and 66 (11%) cases of IDC, ILC and IMC, respectively. ILC was significantly associated with ODX-RS based on TAILORx cutoffs, tumor grade, tubule formation, nuclear pleomorphism, mitotic count, modified Magee score, and associated LCIS.
- ILC had the lowest percentage of grade 3 tumors and ODX high-risk RS when compared to IDC and IMC.
- Significant predictive factors of high-risk ODX-RS in ILC were nuclear pleomorphism, mitotic count, ER modified H-score, PR modified H-score and MME.

ODX-RS based on TAILORx

	<11	11-25	>25	Total	p-value
Age, n (%)					0.534
<50	2 (14)	12 (86)	0	14	
>50	18 (20)	65 (74)	5 (6)	88	
Tumor Grade, n (%)					<0.0001
1	3 (22)	11 (78)	0	14	
2	16 (19)	66 (78)	3 (3)	85	
3	1 (33)	0	2 (67)	3	
ILC Variants, n (%)					0.169
Classic	18 (20)	68 (77)	3 (3)	89	
Pleomorphic	2 (15)	9 (70)	2 (15)	13	
Associated LCIS Variants, n (%)					<0.0001
Classic	15 (19)	62 (79)	2 (2)	79	
Solid	0	0	1 (100)	1	
Pleomorphic	0	8 (80)	2 (20)	10	
Mixed Pleomorphic and Classic	5 (42)	7 (58)	0	12	
Locoregional Recurrence, n (%)					0.12
Yes	0 (0)	3 (75)	1 (25)	4	
No	20 (20)	74 (76)	4 (4)	98	
Distant recurrence, n (%)					0.605
Yes	0	3 (100)	0	3	
No	20 (20)	74 (75)	5 (5)	99	
Modified Magee Score, mean (SD)	13 (6.5)	17.3 (5)	16.7 (9.8)	16.4 (5.8)	0.010

Table 1. Clinicopathologic features of patients with ILC based on ODX-RS risk categories.

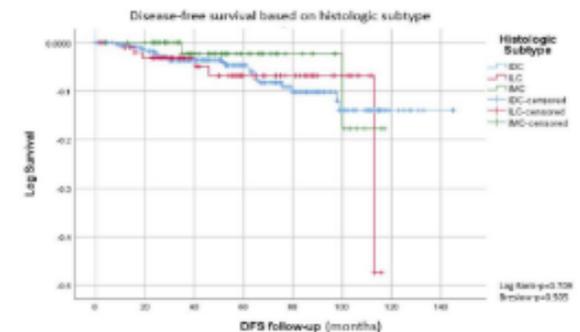


Figure 1. Comparing overall disease-free survival.

Results

- For IDC, predictive factors included tumor grade, PR modified H-score and MME.
- Locoregional recurrences were similar between ILC and IDC.
- ILC variants and ODX-RS were not significantly associated.
- DFS was better in IMC compared to IDC and ILC.
- DFS was better in patients with classic variant ILC compared to pleomorphic variant of ILC.

Discussion

- ILC was similar to IDC and IMC based on tumor stage, tumor grade, ODX-RS categorical distribution, however they displayed different predictors of high-risk ODX-RS.
- Overall DFS was best in IMC compared to ILC and IDC and in patients with ILC classic variants compared to pleomorphic variant.

Disclosures

The authors of this study have no disclosures.