Eligibility for CDK4/6 inhibitor treatment in 861 patients with invasive lobular carcinoma of the breast: the importance of nodal staging for adjuvant therapy decisions

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Background

Cyclin-dependent Kinase 4 and 6 Inhibitors (CDK4/6i)

- CDK4/6i, such as ribociclib and abemaciclib, suppress cell cycle progression
- NATALEE and MonarchE trials demonstrated 2-3 years of adjuvant CDK4/6i therapy improves invasive disease-free survival and overall survival compared to endocrine therapy alone
  - Study populations: Hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative early breast cancer

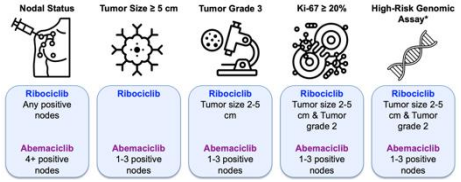
Invasive Lobular Carcinoma (ILC)

- ~90% are HR-positive, HER2-negative
- Higher stage, but more indolent presentation
- Diffuse growth pattern (loss of E-cadherin) → difficulties with accurate imaging/staging
- 2nd most common subtype of breast cancer (10-15% of all breast cancers)

Background Questions:

- What proportion of patients had an indication for adjuvant CDK4/6i treatment?
- What were the most common indications for CDK4/6i treatment?
- How many patients were eligible based on nodal status alone?

Current Indications for CDK4/6i



*High-risk genomic assay: Mammaprint high-risk or Oncotype Dx ≥ 26

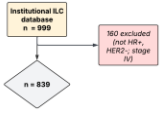
Hypothesis

Given the clinical presentation and features of ILC, most patients become eligible for CDK4/6i treatment based on nodal status alone

If true, this has implications for the role of surgical staging of the axilla in patients with ILC

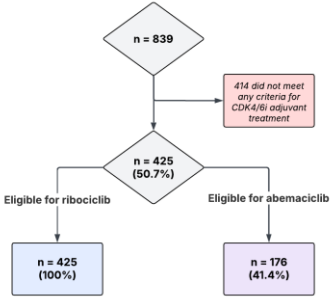
Methods

- We analyzed an institutional ILC database with pathology and treatment characteristics
- Study population: stage I-III HR+HER2- ILC



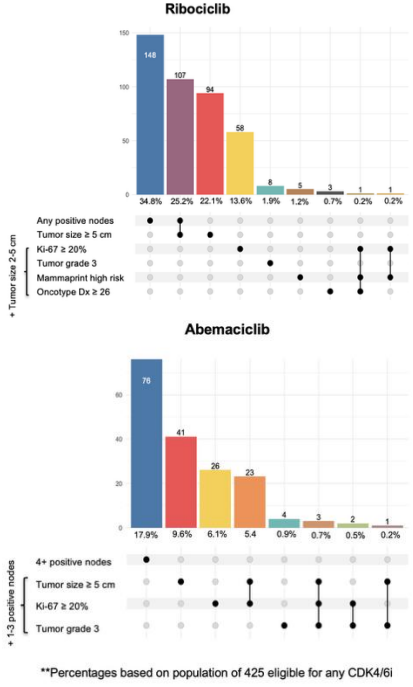
Study Population	
Median Age at Surgery	59 years (50-69)
Median Tumor Size	2.40 cm (1.20-4.80)
Node-positive	255 (30.4%)
Tumor Grade	
1	219 (26.1%)
2	566 (67.5%)
3	36 (4.30%)

Results: Patient Cohort



In patients with early stage ILC, nodal positivity is the most common indication for treatment with CDK4/6 inhibitor

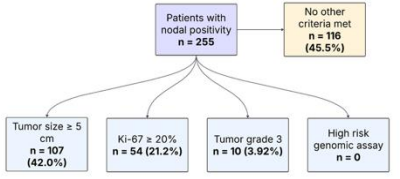
Indications for Adjuvant CDK4/6i Treatment



**Percentages based on population of 425 eligible for any CDK4/6i

Summary

- Of 839 patients in the cohort of HR+, HER2+, non-stage IV cancer, 435 (50.7%) met any of the eligibility criteria for adjuvant CDK4/6i therapy
- 116 (27.3%) would not have been eligible in the absence of nodal staging



Conclusions

In patients with early stage ILC, nodal positivity is the most common indication for treatment with CDK4/6 inhibitor, consistent with our hypothesis.

Therefore, surgical de-escalation strategies (namely omission of sentinel node surgery), should be applied with caution in patients with ILC.

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