

Comprehensive Breast Cancer Patient Cohort Dashboard

Overview

This dashboard provides an in-depth analysis of a breast cancer patient cohort, summarizing key clinical, pathological, and treatment variables. It delivers actionable insight into patient demographics, tumor characteristics, treatment patterns, survival outcomes, and recurrence, supporting clinical research, quality monitoring, and strategic decision-making.

Overall Insights

- Post-menopausal patients have much higher hormone therapy uptake (1022 received vs 482 not) while pre-menopausal patients more often did not receive hormone therapy (270 no vs 143 yes).
- Luminal A and Luminal B PAM50 subtypes are overwhelmingly HER2-negative (LumA: 659 neg vs 21 pos; LumB: 413 neg vs 43 pos).
- The Her2 PAM50 subtype has a high proportion of HER2-positive cases (121 pos vs 91 neg), distinguishing it from other subtypes.
- Basal and claudin-low subtypes are predominantly HER2-negative, indicating HER2 positivity is concentrated in the Her2 subtype.
- Overall cohort mortality exceeds survival: 57.3% deceased vs 42.7% living.
- Median overall survival by age peaks at 40–49 years (129 months), is intermediate for <40 (118 months) and 50–59 (112 months), and declines with older age, lowest at 70+ (105 months).
- Higher histologic grade correlates with shorter median overall survival (Grade 1: 129 mo; Grade 2: 119 mo; Grade 3: 112 mo).
- Recurrence rates increase with histologic grade (Grade 1: 36.1%; Grade 2: 39.5%; Grade 3: 41.2%), indicating progressively worse outcomes at higher grades.



Living Patients

818



Total Patients

1917



Median Age at Diagnosis

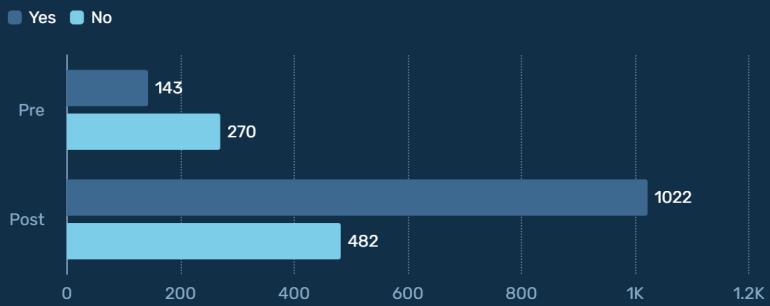
62



Median Overall Survival

116 mo

Hormone Therapy Uptake by Menopausal State



Key Insights

- Post-menopausal patients have substantially higher hormone therapy uptake (1022 Yes) compared with pre-menopausal patients (143 Yes)
- A majority of pre-menopausal patients did not receive hormone therapy (270 No vs 143 Yes), while post-menopausal patients are more likely to have received it (1022 Yes vs

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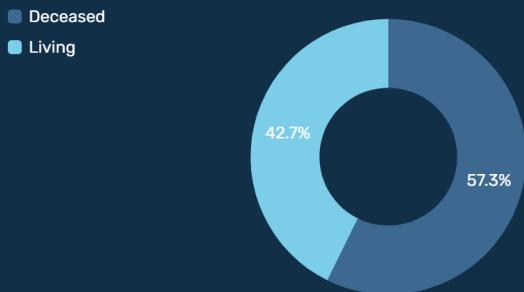
Key Insights

- LumA and LumB subtypes are predominantly HER2-negative (LumA: 659 neg vs 21 pos; LumB: 413 neg vs 43 pos)
- The Her2 PAM50 subtype shows a high proportion of HER2-positive cases (121 pos vs 91 neg), distinguishing it from other subtypes
- Basal and claudin-low subtypes are largely HER2-negative, indicating HER2 positivity is concentrated in the Her2 subtype

HER2 Status by Pam50 Subtype



Overall Survival Status Proportions



Key Insights

- Median overall survival peaks in the 40-49 age group (129 months) and declines in older age groups, reaching the lowest in 70+ (105 months)
- Younger (<40) and 50-59 groups show intermediate median survival (118 and 112 months respectively), suggesting a non-linear age effect with the best outcomes in

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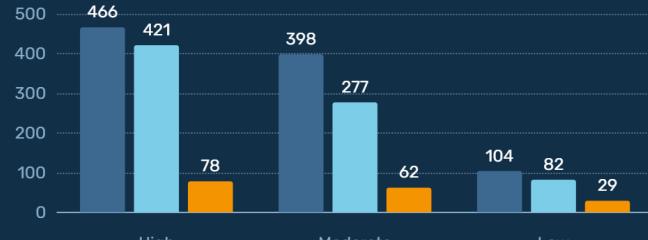
Median Overall Survival by Age Group



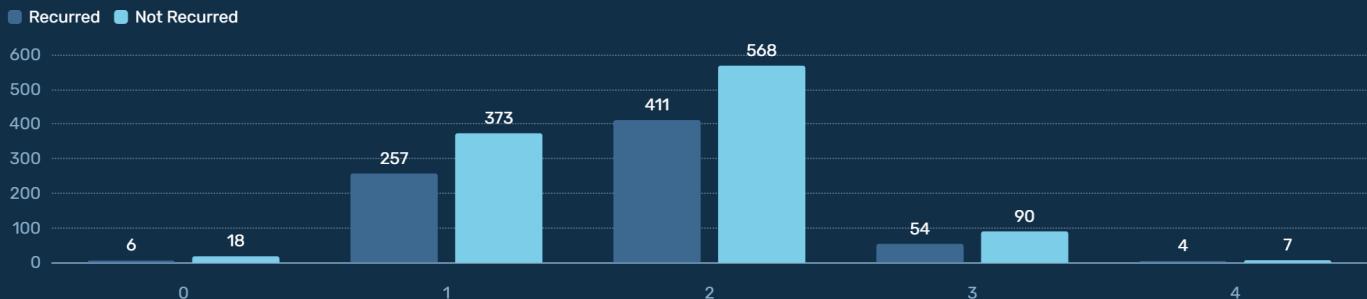
Distribution of Breast Surgery Types vs. Chemotherapy



Tumor Cellularity Distribution by Histologic Grade



Recurrence Status by Tumor Stage



Survival and Recurrence by Histologic Grade

Neoplasm Histologic	Patient Count	Median Overall Survival	Percent Recurred
1	169	129	36.10%
2	780	119	39.50%
3	968	112	41.20%

Distribution of Integrative Clusters

Integrative Cluster	Count
4ER+	8
	3
	255
	10
	7
	5
	9
4ER-	1
	6
	2

Key Insights

- Higher histologic grade is associated with shorter median overall survival (Grade 1: 129 months; Grade 2: 119; Grade 3: 112)
- Recurrence percentage increases with grade (Grade 1: 36.1%, Grade 2: 39.5%, Grade 3: 41.2%), indicating worse outcomes at higher grades

Top 5 Most Common Cancer Types Detailed

Cancer Type Detailed	Patient Count
Breast Invasive Ductal Carcinoma	1481
Breast Mixed Ductal and Lobular Carcinoma	210
Breast Invasive Lobular Carcinoma	140
Invasive Breast Carcinoma	43
Breast Invasive Mixed Mucinous Carcinoma	23