

Clinicopathological Characteristics and Long-Term Outcomes of Breast Cancer in Pakistani Women Younger than 40 Years

A large hospital-based cohort study

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BACKGROUND

- Women under 40 make up less than 5–7% of breast cancer diagnoses in Western populations, but a considerably higher proportion in South Asia, including Pakistan.
- Young age is an adverse prognostic factor, yet long-term data from Pakistan remain limited.

Objective: to evaluate clinicopathological characteristics, treatment patterns, recurrence and long-term outcomes of Pakistani women diagnosed with breast cancer before 40 years of age.

METHODS

- Design:** retrospective cohort, SKMCH&RC Lahore; women younger than 40 years diagnosed January 2010 – January 2020, irrespective of stage.
- Data:** institutional electronic medical record (ICD-10 codes): pathology, biomarkers, treatment, recurrence, mortality.
- Outcomes:** recurrence (primary); breast cancer-specific and all-cause in-hospital mortality.
- Analysis:** logistic regression (OR, 95% CI); Kaplan–Meier; IBM SPSS v26.

PRESENTATION

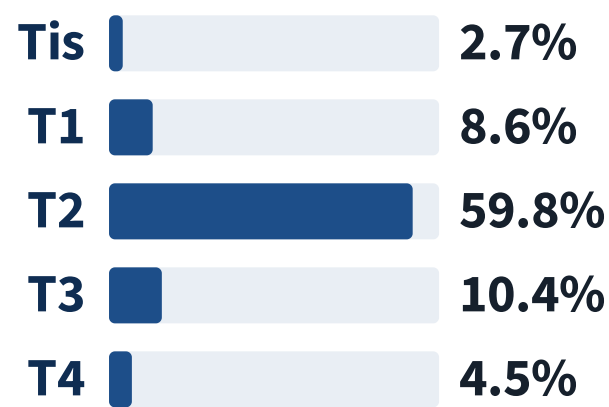
1098
women

36.7
mean age, y

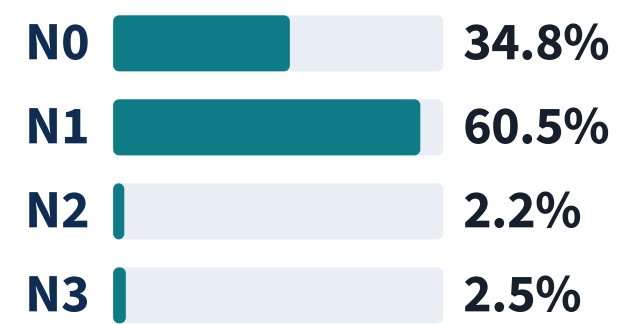
9.1%
pregnant

7.8%
stage IV

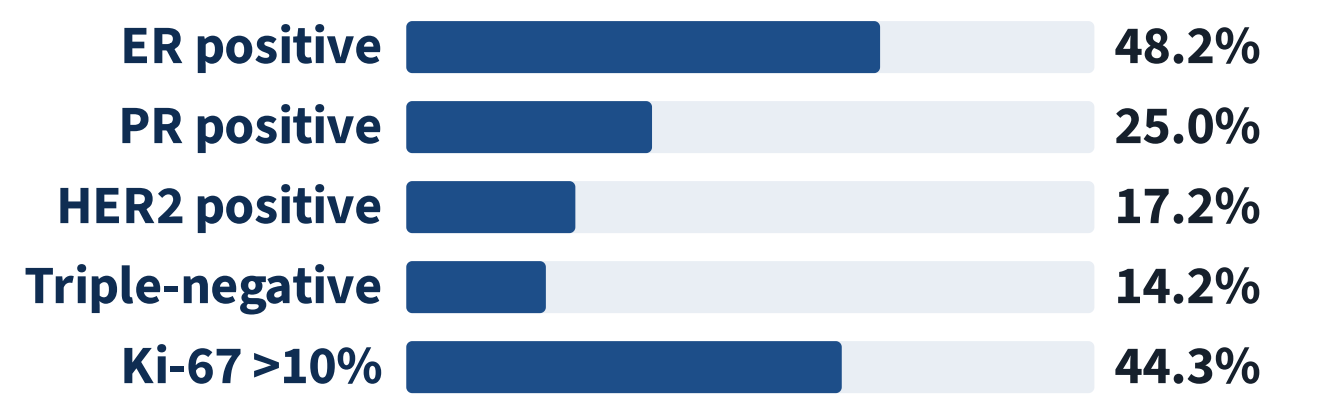
Tumour category



Nodal status



TUMOUR BIOLOGY



Invasive ductal carcinoma in 979 patients (89.2%).

TREATMENT

91.1%
chemotherapy

86.7%
neoadjuvant

82.1%
radiotherapy

RECURRENCE AND MORTALITY

Mean follow-up 7.0 ± 1.8 years.

19.7%
recurrence within 5 years
(n = 217)

2.5 y
mean time to recurrence

- Distant recurrence in 163 (75.1% of recurrences); locoregional in 71 (32.7%).
- In-hospital mortality: breast cancer-specific 97 (8.8%); all-cause 163 (14.8%).

Associated factors (logistic regression)

Factor	OR (95% CI)	P
Recurrence		
Nodal stage	1.88 (1.28–2.75)	.001
Pregnancy-associated	1.73 (0.98–3.04)	.057
HER2 positive	1.48 (0.99–2.21)	.056
In-hospital mortality		
Pregnancy-associated	2.05 (1.14–3.69)	.017
Nodal stage	1.64 (1.08–2.49)	.020

CONCLUSION In this large cohort of Pakistani women diagnosed with breast cancer before 40 years of age, disease commonly presented with substantial tumour burden and axillary nodal involvement. Despite extensive multimodality treatment, about one in five patients developed recurrence within 5 years, with distant disease predominating. Nodal involvement was associated with both recurrence and in-hospital mortality.

Limitations: single-centre, retrospective; deaths outside the institution were not captured.