OVERALL SURVIVAL AND PROGNOSTIC FACTORS IN PATIENTS WITH TRIPLE-NEGATIVE BREAST CANCER TREATED WITH ADJUVANT CAPECITABINE: REAL-WORLD EXPERIENCE IN A PERUVIAN COHORT

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Introduction

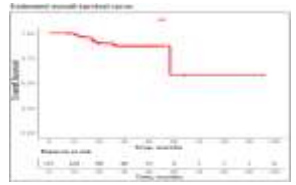
Triple-negative breast cancer is a subtype with a poor prognosis, characterized by high rates of relapse and early mortality. Adjuvant therapy with capecitabine in patients with residual disease after neoadjuvant therapy has shown a benefit in overall survival (OS), as reported in the CREATE-X study with a 5-year OS of 79%; however, there is limited evidence in Latin America (LATAM) from real-world clinical practice.

Variable	Value
Age at diagnosis, years	Median [IQR]: 47.5 [42-56]
ECOG Performance Status	0: 17 (12.7%) 1: 115 (85.8%) 2: 2 (1.5%)
Laterality	Right: 75 (56.0%) Left: 59 (44.0%)
Clinical T Classification	T1: 1 (0.7%) T2: 39 (29.1%) T3: 46 (34.3%) T4: 41 (30.6%) Missing: 7 (5.2%)
Stage at Diagnosis	II: 1 (0.7%) IIA: 25 (18.7%) IIB: 29 (21.6%) III: 3 (2.2%) IIIA: 25 (18.7%) IIIB: 41 (30.6%) IIIC: 10 (7.5%)
Grouped Stage at Diagnosis	Stage II: 55 (41.0%) Stage III: 79 (59.0%)
Histology on Core Biopsy	Ductal: 34 (25.4%) non-ductal: 99 (73.9%) Missing: 1 (0.7%)
Histologic Grade (Biopsy)	G2: 27 (20.1%) G3: 91 (67.9%) Missing: 16 (11.9%)
KI67	Median: 60% Missing: 1
Time From NAC to Surgery (days)	Median [IQR]: 51 [30.5-79.5] Missing: 10
Type of Surgery	Breast-conserving: 26 (19.4%) Mastectomy: 108 (80.6%)

Methods and Materials

A retrospective cohort study was conducted of patients diagnosed with non-metastatic triple-negative breast cancer treated between 2020 and 2023 at a Peruvian cancer center. Clinical, histopathological, and therapeutic variables were collected. OS and its association with clinical and pathological characteristics were estimated using Kaplan-Meier curves.



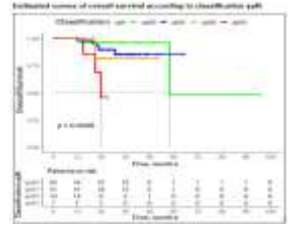


Results

A total of 199 patients were evaluated, 67% of whom received adjuvant capecitabine. The median age was 47 years (range 42-56), with most (98.5%) having an ECOG performance status of 0-1. Regarding anatomical variables, the most frequent were T3-T4 (65%) and N1 (45%); the most common clinical stage was IIIB (31%). Among the pathological characteristics, the most frequent were ductal histology (73%), histological grade 3 (68%), with an average ki67 of 60%.

The median time between the end of neoadjuvant chemotherapy and surgery was 51 days (30.5-79.5). During neoadjuvant therapy, 25% of patients used carboplatin. Regarding surgery, most patients underwent mastectomy (81%), with operative findings of ypT2 (37%), ypN0 (43.3%), and pathological stage III. During adjuvant therapy, 96% of patients received radiotherapy. With a median follow-up of 31 months (9-103), OS rates at 12, 36, and 60 months were estimated at 99%, 87%, and 58%, respectively, with no median OS reached.

Conservative surgery (vs. mastectomy, NR vs. 15 months, p=0.043), absence of lymphovascular invasion (vs. presence, p=0.022), and involvement of ypT1-ypT2 lymph nodes (vs. ypT3, 80% vs. 48%, p=0.002) were associated with higher OS. Regarding recurrence patterns, recurrence was observed in 39% of patients, with distant recurrence being the most frequent in 74%. The most frequent site of metastasis was the lung.



Discussion

In this Peruvian cohort of patients with triple-negative breast cancer (TNBC), adjuvant capecitabine administered after neoadjuvant therapy in the setting of residual disease demonstrated a meaningful improvement in overall survival, consistent with the results of the CREATE-X trial. Notably, our population presented with a higher tumor burden and a greater proportion of locally advanced disease compared with typical clinical trial cohorts, yet the observed benefit supports the efficacy of capecitabine in real-world settings across Latin America. The 5-year overall survival of 58% reflects the aggressive biological behavior of TNBC but also underscores the positive impact of incorporating capecitabine into standard treatment pathways within resource-constrained environments.

The prognostic factors associated with better outcomes in our study breast-conserving surgery, absence of lymphovascular invasion, and lower residual tumor stage (ypT1–T2)—highlight the central role of locoregional control and tumor biology in shaping survival trajectories. The favorable prognosis among patients with lower residual disease burden reinforces the relevance of pathological response to neoadjuvant therapy as a key determinant of long-term outcomes, even when clinical presentation is more advanced.

Conclusions

In this Peruvian cohort of patients with triple-negative breast cancer, adjuvant capecitabine demonstrated an increase in OS at 5 years, showing aggressive disease behavior and a high tumor burden, predominantly locally advanced. Conservative surgery, absence of lymphovascular invasion, and low lymph node involvement were associated with higher OS.

These findings consolidate capecitabine as part of the standard treatment for post-neoadjuvant residual disease in a Latin American population.

Contact

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