Prevalence of HER2-low status in Ecuadorian women with Hormone Receptor Positive Breast Cancer

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SAN ANTONIO BREAST CANCER SYMPOSIUM®

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BACKGROUND

Breast cancer (BC) is the most frequent neoplasia in women worldwide. According to GLOBOCAN (2022), 9.6% of new cases globally occur in the Caribbean and Latin America. The prevalence of HER2-low status in South America and particularly in Ecuador is limited. Although many HER2-low tumors coexpress hormone receptors (HR), their exact global prevalence remains undetermined. Therefore, this study aims to determine the prevalence of HER2-low status in Ecuadorian women with HR-positive BC.

METHODS

A retrospective, cross-sectional study of BC patients' medical records (2011-2021) from Ecuador's SOLCA oncological hospital. Simple random sampling included 508 patients (p). HR-positive patients express estrogen receptors; HR-negative do not. HER2-low status is defined as HER2 1+ or HER2 2+/ SISH- (silver in situ hybridization). Univariate analyses measured frequencies and percentages.

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RESULTS

Among the 723p evaluated, 215 were omitted from the analysis owing to missing data on HER2 status. Of 508p with evaluable HER2 expression, 144 (28.3%) were HR-negative and 364 (71.7%) HR-positive. Of the 364p HR-positive, 135 (26.6%) presented with HER2 0+, 66 (13.0%) with HER2 1+, 64 (12.6%) with HER2 2+ (42 SISH-, 11 SISH+ and 11 SISH not available), and 99 (19.5%) with HER2 3+. Therefore, 108p (21.3%) had tumors classified as HER2-low and HR-positive. Clinical stage II was the most prevalent among HER2-low HR-positive patients.

Table 1. Baseline characteristics of patients n=508; results in frequency and (%)

Age years, mean (s.d.)	54.4 (12.7)
Initial Clinical Stage	
I	59 (11.6)
II	241 (47.4)
III	157 (30.9)
IV	22 (4.3)
Progesterone receptors	
Positive	345 (67.9)
Negative	163 (32.1)
Estrogen receptors (ER)	
Positive	364 (71.7)
Negative	144 (28.3)
Ki-67	
< 14	100 (19.7)
≥ 14	403 (79.3)
HER2	
0+	172 (33.9)
1+	84 (16.5)
2+ SISH-	48 (9.4)
2+ SISH+	13 (2.6)
2+ SISH (NA)	13 (2.6)
3+	178 (35.0)
HER2-low y ER+	108 (21.3)

s.d.: standard deviation, SISH: silver in situ hybridization, ER: estrogen receptor, NA: not available

CONCLUSIONS

The prevalence of HER2-low status in Ecuadorian women with HR-positive BC was 21.3%. Among HR-positive patients, 108 of 364 (29.7%) exhibited HER2-low status, which is comparable to the 34% reported in a Thai cohort of HR-positive cases. Conversely, among HER2-low patients, 108 of 132 (81.8%) were HR-positive, exceeding the 71.1% reported in a ten-country study spanning Europe, Asia, and North America.

CONTACT INFORMATION

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