

A Pooled Case-only Analysis of Reproductive Risk Factors and Breast Cancer Subtype Among Black Women in the Southeastern United States

Maureen Sanderson, Tuya Pal, Alicia Beeghly-Fadiel, Mary Kay Fadden, Steffie-Ann Dujon, Chrystina Clinton, Cecilia Jimenez, Jennifer Davis, Mieke Fortune, Jasmine Thompson, Kiera Benson, Nicholas Conley, Sonya Reid, Ann Tezak, Xiao-Ou Shu, Wei Zheng, William J. Blot and Loren Lipworth

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Background: We investigated the association between reproductive risk factors and breast cancer subtype in Black women. On the basis of the previous literature, we hypothesized that the relative prevalence of specific breast cancer subtypes might differ according to reproductive factors.

Methods: We conducted a pooled analysis of 2,188 (591 premenopausal, 1,597 postmenopausal) Black women with a primary diagnosis of breast cancer from four studies in the southeastern United States. Breast cancers were classified by clinical subtype. Case-only polytomous logistic regression models were used to estimate ORs and 95% confidence intervals (CI) for HER2⁺ and triple-negative breast cancer (TNBC) status in relation to estrogen receptor–positive (ER⁺)/HER2[−] status (referent) for reproductive risk factors.

Results: Relative to women who had ER⁺/HER2[−] tumors, women who were age 19–24 years at first birth (OR, 1.78; 95% CI, 1.22–2.59) were more likely to have TNBC. Parous women were less likely to be diagnosed with HER2⁺ breast cancer and more likely to be diagnosed with TNBC relative to ER⁺/HER2[−] breast cancer. Postmenopausal parous women who breastfed were less likely to have TNBC [OR, 0.65 (95% CI, 0.43–0.99)].

Conclusions: This large pooled study of Black women with breast cancer revealed etiologic heterogeneity among breast cancer subtypes.

Impact: Black parous women who do not breastfeed are more likely to be diagnosed with TNBC, which has a worse prognosis, than with ER⁺/HER2[−] breast cancer.