

Breast Cancer Mortality in Women Ages 20 to 49 Dropped Between 2010 and 2020

Breast cancer deaths declined significantly across all racial/ethnic groups, especially after 2016.

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From 2010 to 2020, breast cancer deaths among women ages 20 to 49 declined significantly across all breast cancer subtypes and racial/ethnic groups, with marked declines starting after 2016, according to an analysis of data from the Surveillance, Epidemiology, and End Results (SEER) registry presented at the [American Association for Cancer Research \(AACR\) Annual Meeting 2025](#), held April 25-30.

Breast cancer incidence rates in women aged 20 to 49 years [have been increasing over the past 20 years](#) across most racial and ethnic groups, but few studies have examined mortality data for patients in this age group, according to [Adetunji Toriola, MD, PhD, MPH](#), professor in the Department of Surgery and Division of Public Health Sciences and Siteman Cancer Center at Washington University School of Medicine.

“Understanding recent trends in mortality will enable us to assess progress over the years and inform where to direct resources to reduce cancer burden in this age group,” explained Toriola, who presented the study.

Toriola and colleagues analyzed data from the SEER Program 17 registry, which included data on 11,661 breast cancer deaths among women ages 20 to 49 between 2010 and 2020. They evaluated breast cancer incidence-based mortality by race and molecular subtypes—including luminal A, luminal B, human epidermal growth factor receptor 2 (HER2)-enriched, and triple-negative breast cancer—and identified differences in trends using annual percent changes (APC). Additionally, they performed relative survival analyses by examining the 10-year survival rate for each group and subtype.

Across all subtypes and racial/ethnic groups, incidence-based mortality declined from 9.70 per 100,000 women in 2010 to 1.47/100,000 in 2020. Luminal A had the most pronounced decline among the four subtypes, with a decline throughout the time period and the largest drop in 2017 (-32.88% APC). Triple-negative breast cancer followed a similar trend, with 2018 marking its largest decline (-32.82% APC).

Even though the decline in incidence-based mortality was the largest for luminal A overall, the 10-year relative survival for women with this breast cancer subtype varied depending on age. Among women ages 40 to 49, luminal A had the highest 10-year survival while among women ages 20 to 39, luminal A (78.3%) had lower 10-year survival than luminal B (84.2%).

“This was unexpected as luminal A is generally the least aggressive subtype with the most favorable prognosis,” Toriola said. “This requires confirmation in other studies but may suggest that luminal A tumors in women ages 20 to 39 may represent a more biologically heterogeneous and potentially aggressive subgroup.”

While incidence-based mortality declined for each of the racial/ethnic groups, non-Hispanic Black women had the highest incidence-based mortality in both 2010 (16.56/100,000) and 2020 (3.41/100,000) and non-Hispanic white women had the lowest incidence-based mortality in 2010 (9.18/100,000) and 2020 (1.16/100,000).

Declines became most pronounced for non-Hispanic Black women in 2016 (-24.15% APC), for non-Hispanic Asian/Pacific Islander women in 2013 (-18.46% APC), for Hispanic women in 2017 (-30.15% APC), and for non-Hispanic American Indian and Alaska Native women in 2018 (-47.97% APC).

The 10-year relative survival analysis found that non-Hispanic Black women had the worst survival outcomes, while non-Hispanic white women and non-Hispanic Asian/Pacific Islander women had the best.

“We have made tremendous advances in reducing mortality from breast cancer in young women but there are still opportunities for improvements, especially in relation to eliminating disparities,” Toriola said.

Toriola explained that the more drastic declines seen after 2016 likely reflect advancements in treatment options, greater uptake of precision medicine, and expanded access to care and screening in women ages 40 to 49. For example, he mentioned how the broader adoption of CDK4/6 inhibitors and optimization of endocrine therapy, which began receiving FDA approval and clinical adoption between 2015 and 2016, likely played key roles in improving mortality rates for hormone receptor-positive, HER2-negative cancers—including luminal A.

“We must continue to perform impactful research to ensure further reduction in breast cancer mortality, including research into understanding the tumor biology and molecular mechanisms driving carcinogenesis and treatment response in younger women,” Toriola said. “Additionally, we must encourage and provide access to population-based screening in women ages 40 to 49 and targeted screening in younger high-risk women, and advocate for access to high-quality treatment and care for all women.”

Key limitations of this study include a follow-up time limited to 10 years and a relatively smaller number of breast cancer deaths in some racial/ethnic groups.

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