New Research Shows Substantial Racial and Ethnic, Geographic Disparities in Triple Negative Breast Cancer Rates

Researchers at the American Cancer Society stress funding breast cancer research to include representation of racially and ethnically diverse populations

ATLANTA, March 2, 2023 – A new study by researchers at the American Cancer Society (ACS) and the University of Texas Health Science Center shows substantial racial and geographic variations in incidence rates of triple-negative breast cancer (TNBC) among women in the United States. The study found Black women in Delaware, Missouri, Louisiana, and Mississippi have the highest TNBC incidence rate, more than four times as much, compared to Asian or Pacific Islander women with the lowest rate. The study is published today in the *Journal of the American Medical Association (JAMA) Oncology*.

"What we found is that even within racial and ethnic groups, variation based on a women's state of residence was considerable," said Dr. Hyuna Sung, lead author of the study and senior principal scientist at the American Cancer Society. "Within each racial and ethnic group, there were substantial differences in incidence rates across state lines. Intriguingly, for both Black and white women, rates were lowest in Utah and highest in Iowa, Mississippi, and West Virginia among the states with data available for both Black and white women. This data suggests that social, environmental, and structural determinants of health are at play in shaping the geographically patterned risk of TNBC and this merits further study."

TNBC accounts for 10% to 20% of all breast cancer diagnoses and is called "triple negative" because the cancer cells do not have progesterone or estrogen receptors and do not make any HER2 protein – the cells test negative for the biomarkers of these receptors or proteins. Breastfeeding is the one established protective factor for this otherwise aggressive form of breast cancer. Evidence also suggests that increased physical activity and high levels of fruit and vegetable consumption may reduce the risk of TNBC, whereas alcohol consumption and premenopausal obesity may increase the risk of TNBC.

For the study, the team of researchers used population-based cancer registry information from the U.S. Cancer Statistics Public Use Database. This included statistics from all 50 states and Washington, D.C. from January 2015 through December 2019. Racial and ethnic information was included based on self-reported or inferred data from medical records and classified into mutually exclusive categories of Hispanic, non-Hispanic American Indian or Alaska Native, non-Hispanic Asian or Pacific Islander, non-Hispanic Black, or non-Hispanic white. Age-standardized incidence rate of TNBC was calculated by race and ethnicity, then incidence rate ratios were calculated to quantify disparities in state-specific rates.

Results from the study showed that non-Hispanic Black women in Delaware, Missouri, Louisiana, and Mississippi were diagnosed with TNBC at the highest rate of 29 per 100,000 women per year. Asian or Pacific Islander women in Oregon and Pennsylvania saw the lowest rate of less than seven per 100,000 women per year. Black women in Delaware, Missouri, Louisiana, and Mississippi experienced a rate of diagnosis that was more than double what white women in those same states experienced.

"It is important to identify and support states where the benefit of breast cancer prevention and surveillance efforts have the greatest impact," said Sung. "We should also promote and fund breast cancer research that has a broad representation of racially and ethnically diverse populations to better understand the roles of social determinants of health in racial and geographic disparities in the burden of TNBC."

ACS's advocacy affiliate, the American Cancer Society Cancer Action Network (ACS CAN), advocates for increased federal funding for research to help identify, understand, and address the complex factors that prevent all people from benefitting from advancements in cancer care. ACS CAN also advocates for increased funding at the federal and state levels for the Breast and Cervical Cancer Early Detection Program, which provides uninsured and underinsured individuals access to early detection breast and cervical cancer screenings, diagnostic tests, and treatment referral services. Additionally, ACS CAN supports expanding Medicaid in the 11 remaining states that have not done so. This would cover more than 2 million uninsured people who fall into the Medicaid coverage gap – 60% of whom are people of color, and the vast majority of whom live in the American South, which includes a large Black/African American population.

Other ACS authors participating in this study include Dr. Daniel Wiese and Dr. Ahmedin Jemal. Dr. Ismail Jatoi is from the University of Texas Health Science Center.

Resources from the American Cancer Society on breast cancer risks, screening, and treatment can be found here.

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About The American Cancer Society
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For further information: American Cancer Society, Anne.Doerr@cancer.org

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