Triple-Negative Breast Cancer among Black Women in the U.S. Varies by Birthplace

Study suggests the notion of higher triple-negative breast cancer incidence among black women is not generalizable

A new study finds substantial variation in the prevalence of triple-negative breast cancer among black women with breast cancer by birthplace in the United States. The prevalence of triple-negative breast cancer was highest among U.S.-born and Western-African–born black women, followed by Caribbean-born, and Eastern-African-born black women. The study is published in the journal *Cancer* and its findings suggests that the typical notion of higher proportional burden of triple-negative breast cancer among black women is not generalizable to all women of African descent.

> *"the similarity in breast cancer subtype prevalence between U.S.-born and Western-African–born blacks, contrasted against the differences with Eastern-African–born blacks, may in part reflect shared ancestry-related risk factors"*

Triple-negative breast cancer –breast cancer that is negative for estrogen receptor, progesterone receptor, and human epidermal growth factor 2 receptor— occurs infrequently, tends to be aggressive, and has fewer treatment options. It is approximately twice as common, both in proportion of breast cancers and in incidence rates among black women than white women in the U.S., a factor that is often considered as one contributor to lower breast cancer survival among black patients.

Black populations in the United States are diverse, comprising people born in the U.S. as well as immigrants from various countries. Rapidly growing numbers of immigrants from different national and social backgrounds during the most recent three or four decades have reshaped the overall black population in the United States. In 2013, about 9% of the black population was documented as being born outside the United States, with approximately one-half born in the Caribbean, 35% born in Sub-Saharan Africa, and 9% born in Central and South America.

It is also notable that the highest levels of within-population genetic diversity have been reported among persons who self-identified as blacks than among those in other racial groups. Still, nativity and geographic origin among black women has seldom been examined, even as nativity-related differences may improve the understanding of the etiologic heterogeneity of breast cancer.

To learn more, investigators led by Hyuna Sung, Ph.D., of the American Cancer Society examined the prevalence of triple-negative and hormone receptor-negative breast cancer (negative for estrogen receptor and progesterone receptor) among black women in the National Program of Cancer Registries and U.S. Cancer Statistics. The authors identified 65,211 non-Hispanic black women who were diagnosed with invasive breast cancer from 2010 through 2015 and who were recorded as being born in the United States, East Africa, West Africa, or the Caribbean.

They found that compared with U.S.-born black women, the prevalence rate ratio of triple-negative breast cancer was 13% lower among Caribbean-born women, and 46% lower among Eastern-African–born black women.

"It is not clear what risk factors conferred by birthplace are associated with subtype prevalence," said Dr. Sung. "However, the similarity in breast cancer subtype prevalence between U.S.-born and Western-African–born blacks, contrasted against the differences with Eastern-African–born blacks, may in part reflect shared ancestry-related risk factors."

The authors conclude that "presenting breast tumor subtype in black women as a single category is not reflective of the diverse black populations in the nation, and that their study "calls for a concerted effort for more complete collection of birthplace information in cancer registries…."

Article: Breast Cancer Subtypes Among Eastern-African–Born Black Women and Other Black Women in the