

Type 2 diabetes associated with risk of aggressive breast cancer in black women

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African American women with type 2 diabetes (often referred to as adult-onset diabetes) are at a greater risk for developing breast cancer.

The findings appear in the journal *Cancer Research*.

Evidence has emerged in recent years that the two major subtypes of [breast cancer](#)—estrogen receptor positive (ER+) and estrogen receptor negative (ER-) [breast cancer](#)—differ in some causes. Thus, the investigators focused on whether type 2 [diabetes](#) had differing associations with ER+ and ER- cancer.

The research was based on data of 54,337 African American women enrolled in Boston University's Black Women's Health Study who were cancer free at enrollment in the study in 1995 and were followed for up to 18 years. During follow-up, 914 ER+ cases and 468 ER- cases were identified.

African American women with type 2 diabetes were estimated to have a 43 percent increase in risk of ER- breast cancer relative to women without diabetes; in contrast, there was no increase in the risk of ER+ breast cancer among women with diabetes relative to women without diabetes. The increased risk of ER- breast cancer among women with diabetes was not explained by obesity status.

"While we observed no association for the most common type of breast cancer, the type that is responsive to estrogens, women with diabetes were estimated to be at increased risk of developing estrogen receptor negative breast cancer, a more aggressive type of breast cancer which is twice as common in U.S. black women as in white women," explained corresponding author Julie Palmer, ScD, associate director of Boston University's Slone Epidemiology Center, professor of epidemiology at Boston University School of Public Health, and associate director for population sciences at the BU-BMC Cancer Center.

According to Palmer plausible explanations for an increased risk of ER- breast cancer among women with diabetes include chronic inflammation resulting from diabetes which, among other actions, can promote carcinogenic processes. "Given that the prevalence of diabetes is twice as high in African Americans as in whites, the current finding, if confirmed, may help to explain the higher incidence of ER- breast cancer in African American [women](#)."

Provided by Boston University School of Medicine

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