



THE

# SISTER STUDY

BREAST CANCER RESEARCH

LATINA SISTERS PLAY A KEY ROLE IN THE SISTER STUDY!

SPRING 2023

**"Latinas** may have different exposures, reproductive history, and cultural beliefs which could impact our breast cancer risk and experiences. **Sister Study Latinas** are making unique and lasting contributions." - *Dr. Mary Díaz Santana*

**You are helping the Sister Study team learn more about Latinas' health!**

The Sister Study would like to know important changes in your health or contact information!

- Have you moved or changed your telephone number or e-mail address?
- Have you been diagnosed with cancer or another major illness?
- Have you had any major injuries or surgeries?
- Would you like to share any other information with the study?



## Study Suggests Black, Hispanic Women with Low Vitamin D More Likely to Develop Breast Cancer

Findings link sufficient vitamin D blood levels with lower breast cancer rates, particularly among Latinas.

Among women who identified as Black/African American or Hispanic/Latina, those with **low blood levels of vitamin D were more likely to develop breast cancer than those with adequate levels**. In the study published by Wiley online in *CANCER*, a peer-reviewed journal of the American Cancer Society, the link between low vitamin D and breast cancer was particularly evident among Hispanic/Latina women.

Black/African American or Hispanic/Latina have **lower average vitamin D levels than non-Hispanic white women**. Although research suggests that vitamin D may protect against breast cancer, few studies have considered the role of race/ethnicity in this link. To investigate, Katie O'Brien, PhD, of the National Institute of Environmental Health Sciences, and her colleagues collected blood samples from 415 women (290 Black/African American, 125 non-Black Hispanic/Latina) who later developed breast cancer, as well as from 1,447 women (1,010 Black/African American, 437 Hispanic/Latina) who did not develop breast cancer.

Over an average follow-up of 9.2 years, **women with sufficient vitamin D levels had a 21% lower breast cancer rate than women with vitamin D deficiency (<20 ng/mL)**. The link was strongest among Hispanic/Latina women, who had a 48% lower rate if they had sufficient vitamin D levels. The link was weaker among Black/African American women, who had an 11% lower rate if they had sufficient vitamin D.

"Together with prior studies on this topic, this article suggests that **vitamin D may be associated with reduced risk of breast cancer**, including among women who self-identify as Black, African-American, Hispanic, or Latina," said Dr. O'Brien. "Because women who identify as members of these groups have lower vitamin D levels, on average, than non-Hispanic white women, they could potentially receive **enhanced health benefits from interventions promoting vitamin D intake**. However, questions remain about whether these associations are truly causal and, if so, what levels of vitamin D are most beneficial." **Read more:** <https://tinyurl.com/LowVitD>

The Sister Study

877-4SISTER (877-474-7837)

[sisterstudy.niehs.nih.gov](https://sisterstudy.niehs.nih.gov)



## Breast Cancer Screening Use by Birthplace and Race/Ethnicity

In the US, Hispanic/Latina women are **more likely to be diagnosed with a later stage of breast cancer** than non-Hispanic White women. Efforts to increase screening and reduce this disparity could be more effective if we understood the factors that contribute to this disparity.

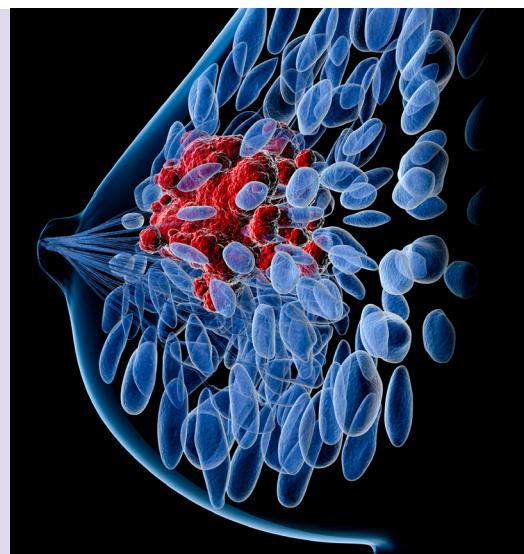
We wondered if birthplace played a role. We asked about screening methods, including mammography, ultrasound, and magnetic resonance imaging (MRI) on the initial Sister Study questionnaire. We categorized women as recently screened ( $\leq 2$  years ago), formerly screened ( $> 2$  years ago), or never screened, finding that compared to US-born non-Hispanic/Latina white women, US-born Hispanic/Latina women were **more likely to be formerly screened for breast cancer** and foreign-born Hispanic/Latina women were **more likely to have never received breast cancer screening**. The intersectional identity of foreign-born Hispanic/Latina women amounts to unique barriers to accessing preventive healthcare services in the US.

Read More: <https://tinyurl.com/BrScreenRace>

## Aggregation tests and breast cancer

Genetic data from the Sister Study was pooled with data from many other studies to examine how the combined effects of multiple mutations within the same gene might contribute to breast cancer risk. The investigators found that among women of European descent, 14 genes were significantly associated with breast cancer risk. Two of these, *FMNL3* and *AC058822.1*, had never before been linked to breast cancer. In an analysis that additionally included individuals of Asian, African, and Latin American and Hispanic ancestry, investigators observed a very strong association between breast cancer and *ESR1*, the gene that encodes estrogen receptors. While the information about these genes is not yet clinically useful, the findings highlight the importance of studying genetic risk factors in diverse populations and considering the combined impact of multiple mutations within the same gene.

Read More: <https://tinyurl.com/AggrTestBC>



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As always, please contact us at the Sister Study helpdesk toll-free at 877-4SISTER (877-474-7837) or email us at [update@sisterstudy.org](mailto:update@sisterstudy.org) if you have updates or questions.