

Public/Lay Abstract

Racial disparities in breast cancer outcomes continues to be a major health care challenge. Black women with breast cancer die at a much higher rate than non-Black women. There is now wide-ranging evidence for basic differences for this disparity. Two main differences are in tumor biology and the patient's immune response to their cancer. Understanding these differences will help us discover new treatments that will ultimately reduce health disparities.

Survivin is a protein found in many cancers including breast cancer. This protein is often associated with cancer that grows and spreads quickly and does not respond to treatment, leading to worse outcomes. Many research studies have looked into the role of survivin in cancer cells. However, none have looked at the relationship of survivin with the patient's race and their immune response to the cancer. Our research indicates that survivin levels are higher in Black patients with breast cancer. In this study, we propose that the survivin protein and a poor immune response to cancer, contribute to poor outcomes in Black patients with advanced and metastatic breast cancer.

Our first goal is to thoroughly understand the role of survivin and the immune response in Black patients with breast cancer. Additionally, we will study how both the survivin protein and the immune response to cancer can affect survival in patients with advanced and metastatic breast cancer. This deeper understanding will allow us to design a clinical study using new treatment strategies, such as immunotherapies that target survivin and the immune system in breast cancer.

Immunotherapy is a rapidly growing treatment option in breast cancer. It has shown promise in treating breast cancers lacking targeted therapies, like triple negative breast cancer. However, Black patients are underrepresented in immunotherapy clinical studies. This has led to gaps in our knowledge about the breast cancer immune response in Black patients.

This will be the largest study of its kind to investigate the immune responses in Black patients with breast cancer. The results of this study will provide critical information to support future studies for new immunotherapy treatments in Black patients with breast cancer. The goal is to improve clinical outcomes in Black patients and to reduce health disparities in breast cancer.