

Male breast cancer patients face high prevalence of heart disease risk factors

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Male breast cancer patients were found to have a high prevalence of cardiovascular conditions, in a small study of this rare patient population presented at the American College of Cardiology's Advancing the

Cardiovascular Care of the Oncology Patient Virtual course.

"Due to the rarity of male [breast cancer](#), there is no cardiovascular data from larger clinical trials or population studies. The lack of large data makes it even more important to individualize cardiovascular assessment and management based on each patient's unique oncologic, therapeutic and pre-existing cardiovascular risk profile to support them through [cancer treatment](#) into survivorship," said Michael Ibrahim, fourth year [medical student](#) at Georgetown University and one of the study authors.

Researchers from Georgetown Lombardi Comprehensive Cancer and MedStar Washington Hospital Center in Washington conducted a retrospective chart review of 24 male breast cancer patients evaluated at the medical centers. The patients were between 38 and 79 years old with 42% being African American, 29% being Caucasian, 4% Hispanic and 25% another ethnicity. Half of the patients had a family history of breast cancer.

The majority of patients—79%—had invasive ductal carcinoma, which is the most common type of breast cancer. Invasive ductal carcinoma occurs when the cancer started in the breast ducts and spread into the surrounding breast tissue.

All patients underwent a mastectomy, while 4% received anthracycline chemotherapy, 8% received HER2-targeted therapy, 16% received radiation and 71% received hormone therapy. Six patients were diagnosed with a secondary primary malignancy and three with a third primary malignancy.

Researchers found 88% of patients were overweight, 58% had [high blood pressure](#) and 54% had high cholesterol. Tachyarrhythmia, or an abnormally increased [heart rate](#), preexisted in 8% of patients and developed in 13% of patients while undergoing treatment. Two patients

were found to have decreased [ejection fraction](#) or decrease in how much blood the heart pumps out with each beat. Two patients developed heart failure—a chronic condition where the heart doesn't pump blood as well as it should—after treatment.

"How similar or dissimilar male and female breast cancer patients are is the fundamental, unanswered question. Contrary to most other medical conditions, data on breast cancer are driven from female patients. We extrapolate the evidence from female breast cancer patients, or the age matched male general population, and apply it to the cardiovascular care for male breast cancer patients," Ibrahim said. "However, in reality, we do not truly know the difference. For example, the median age of male breast cancer patients is older than their female counterparts. An older population could mean more cardiovascular comorbidities. More comorbidities could require more comprehensive and frequent serial monitoring. It is also unknown if risk of cardiotoxicity from anthracycline or HER-2 targeted therapy is greater or less in male versus female breast cancer patients, and more studies are warranted."

According to the researchers, the high prevalence of cardiovascular conditions in male breast cancer patients requires further investigation to better understand the risk of preexisting heart disease on long term outcomes for these patients. The findings also highlight the need for cardiologists and cardio-oncologists to be involved in male breast cancer treatment due to the common risk factors and potential cardiotoxic effects of breast cancer treatment.

Ibrahim added, "The field of cardio-oncology is well positioned to ensure that cardiologists and oncologists work closely together to address both the patients' oncologic and cardiac concerns. Cardio-oncologists or cardiologists should pay close attention to the proposed treatment plan and be part of a multidisciplinary cancer care team to evaluate the patients' cardiovascular risk prior to and through cancer treatments. On a

more personal level, cancer patients are already surprised by their cancer diagnosis. Similar to the pretreatment consultation with radiation oncology, breast surgery, and medical oncology, an upfront cardiovascular risk assessment provides greater comfort and further minimizes psychological surprise with cardiovascular complications going into cancer treatment."

Provided by American College of Cardiology

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