

Black cancer patients 71% more likely to experience heart damage following chemotherapy treatment

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Chemotherapy is associated with an increased risk of treatment-related heart damage, including heart failure and cerebrovascular disease, for many patients. But a new meta-analysis, presented at the American

College of Cardiology's Advancing the Cardiovascular Care of the Oncology Patient 2023 conference, finds that Black patients or patients of African ancestry have 71% higher odds of cardiotoxicity following cancer treatment compared to White patients.

Cardiotoxicity is any heart damage stemming from cancer treatment or drugs, including chemotherapy agents and radiation. It can lead to several heart problems, including [heart failure](#), cardiomyopathy and irregular heart rhythms. Certain cancer treatments have a higher risk of causing cardiotoxicity, including anthracyclines, which are used to treat leukemias, lymphomas, and cancers of the breast, stomach, uterus, ovary and lung.

"Unfortunately, we were not surprised [by the findings]. Research shows that Black patients have poorer outcomes for almost every disease," said Wondewossen Gebeyehu, BSc, a [medical student](#) at the University of Toronto and lead author of the study.

"In this case, one could have expected that the differences would be minimal since it is the chemotherapy that is injuring the heart, and we would expect the same chemotherapy to be given to Black and non-Black patients with a given cancer. However, this [systematic review](#) indicates that the inequities in [health outcomes](#) extends to the odds of cardiotoxicity after cancer treatment."

Researchers performed a systematic search of several databases—including Medline, Embase, Pubmed and others—of all studies reporting on cardiovascular toxicity in cancer patients of different racial/ethnic background receiving chemotherapy. After screening 7,057 studies, 24 studies representing 683,749 participants were included in the final review. Black race or African ancestry was associated with 71% increased odds of chemotherapy-associated cardiotoxicity; it was also associated with increased odds of a congestive

heart failure diagnosis.

"These results may reflect the direct effects of racism, particularly structural racism, which leads to worse determinants of health for Black patients. It is well-documented that most health care settings are not perceived as safe by Black patients, which may increase their vulnerability to disease and decrease opportunities for preventative care," Gebeyehu said.

"Furthermore, decreased representation of Black patients in [clinical trials](#) may lead to treatments being developed that are not as effective or which may be riskier for Black patients. Importantly, these results should prompt further inquiry into the many possible contributors to disparities observed in Black patients."

According to the researchers, the study quantifies the increased odds of chemotherapy-associated cardiotoxicity for Black cancer patients. The study also highlights the need for further study to determine underlying factors contributing to these disparities so they can be reduced.

"The most important message for patients is that they should not avoid chemotherapy, as the most important thing is making sure they get the best [cancer treatment](#) possible, and studies already show Black patients may get less optimal cancer treatments," Gebeyehu said.

"For clinicians, it is important to be aware of these higher odds of cardiotoxicity faced by Black [patients](#). Understanding these disparities will hopefully lead to clinicians having more conversations around reducing cardiovascular risk associated with chemotherapy and targeted efforts to cater to groups at higher risk."

More information: Conference: [www.acc.org/Education-and-Meet ... /2023-CardioOncology](http://www.acc.org/Education-and-Meet.../2023-CardioOncology)

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