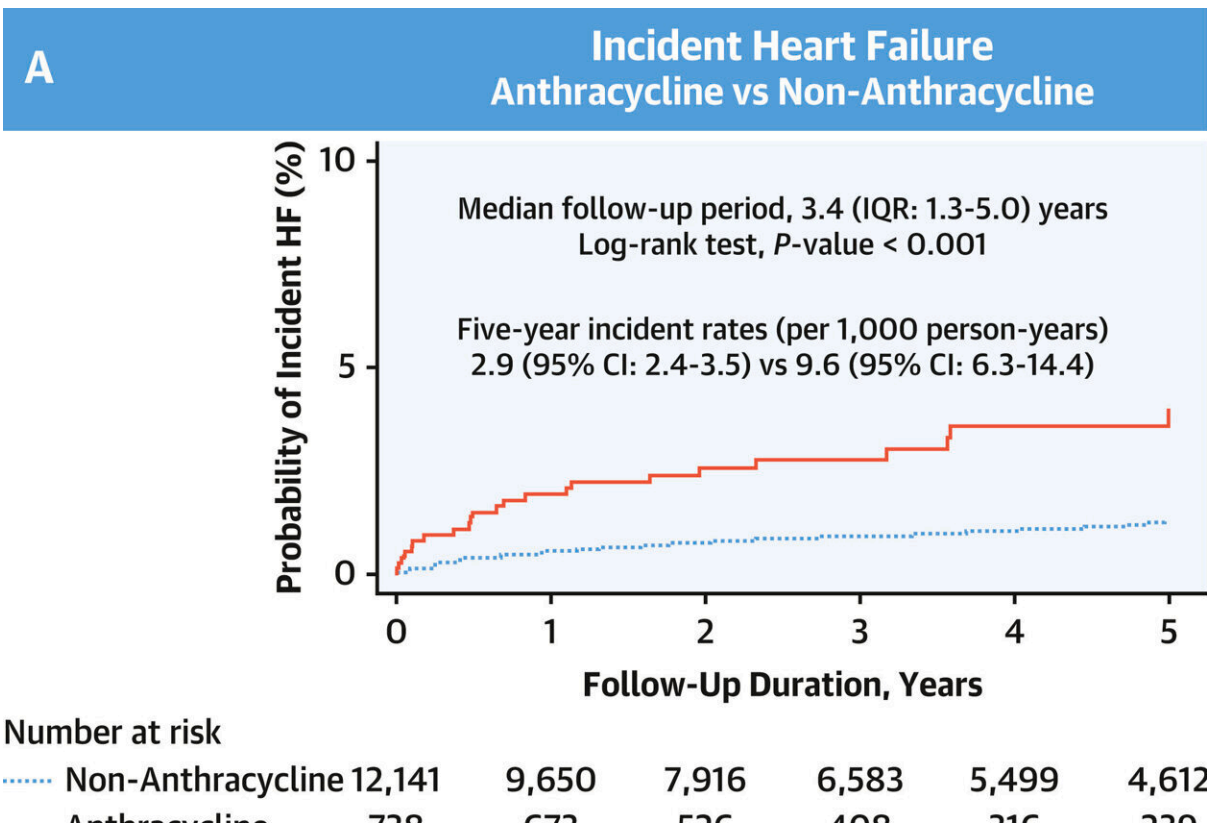


# Some young cancer survivors face higher risk of premature heart failure

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Incident Heart Failure Among YA Cancer Survivors (A) Comparison of history of anthracycline treatment vs none. (B) Stratified by young adult (YA) cancers commonly treated with anthracyclines compared with all other cancer types (breast, kidney, leukemia, lymphoma, and orthopedic cancers). The results show significantly higher risk for heart failure for YA cancer survivors exposed to anthracycline chemotherapy and with histories of cancer commonly treated with anthracycline chemotherapy. Credit: *JACC: CardioOncology* (2023). DOI: 10.1016/j.jacc.2023.03.009

Imagine surviving cancer only to learn the drug that saved your life has introduced a completely different health risk: heart failure.

A new Northwestern Medicine study has found young adult cancer survivors (between 18 and 39 years old at diagnosis) were at higher risk (2.6 times) of [heart failure](#) when treated with anthracyclines, a specific category of chemotherapy that damages DNA in [cancer cells](#).

The large study of 12,879 young adult cancer survivors is the first study to estimate the risk of heart failure among young adult cancer survivors treated with anthracyclines.

The incidence of heart failure was highest for cancer survivors of leukemia. Additionally, survivors of kidney, lymphoma, bone and [breast cancer](#) also had a higher incidence of heart failure compared with study participants diagnosed with other cancer types. These types of cancer are more likely to be treated with anthracyclines.

"Thankfully, people are increasingly surviving early onset cancer, but once they do, they're at risk of long-term side effects, like heart failure and infertility," said corresponding study author Elizabeth Hibler, assistant professor of epidemiology and prevention at Northwestern University Feinberg School of Medicine. "I'm interested in not only helping people survive their cancer, but once they do, helping them improve their health and longevity as cancer survivors."

The study was published May 16 in the journal *JACC: CardioOncology*.

The mean age of heart failure diagnosis was 32 years old, which not only indicates an increased risk, but also early onset of heart failure, said senior study author Dr. Sadiya Khan.

"We often think about heart failure as a disease people get when they are old, but this work highlights that this is also a short-term risk for patients who survive cancer," said Khan, assistant professor of cardiology and epidemiology at Feinberg and a Northwestern Medicine physician. "It raises awareness for patients and clinicians to monitor symptoms and consider strategies for prevention."

## More about anthracycline chemotherapy

The relationship between anthracycline chemotherapy and heart failure risk also has been shown among childhood and older adult cancer survivors, but this is the first study to estimate the risk of heart failure among the young adult population.

Hibler said while anthracycline chemotherapy is effective at treating cancer, physicians are moving away from it because of the cardiotoxic side effects.

"What we're trying to do is apply our findings to studying other cancer medications to try to understand if they impact the heart," Hibler said. "Our goal is to improve early detection because there are early treatments for heart failure if the patient is showing signs."

The results of this study provide more evidence for the overlap between [cardiovascular disease](#) and cancer, but future research is needed to understand if other (newer) types of cancer treatment also can impact the risk of heart failure, even for [young people](#), Hibler said. Future research also is needed to understand how shared risk factors can impact the risk of both cancer and [heart disease](#).

**More information:** Risk of Incident Heart Failure Among Young Adult Cancer Survivors, *JACC: CardioOncology* (2023). [DOI: 10.1016/j.jacc.2023.03.009](https://doi.org/10.1016/j.jacc.2023.03.009).

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Provided by Northwestern University

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