

# Childhood cancer treatment may raise adult heart disease risk

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(HealthDay)—Children who survive cancer may face a higher risk of

heart disease as adults, new research suggests.

The lingering effects of the treatments that saved their lives as children may trigger the development of heart abnormalities that might not cause apparent symptoms, the researchers explained.

The investigators found that [heart disease](#) appears to affect between 3 percent and 24 percent of pediatric cancer survivors by the time they reach their 30s. Those figures rose to between 10 and 37 percent among patients 40 and older, the study found.

However, while the study revealed a link between [childhood cancer](#) treatment and later heart disease, it didn't prove cause-and-effect.

"The prevalence of these cardiac findings might be expected in an older adult population, but not necessarily in this young a population," said study lead author Dr. Daniel Mulrooney.

"Survivors of childhood cancer exposed to cardio-toxic cancer therapies are at risk for premature cardiovascular disease, much of which may present asymptotically (without symptoms), and require long-term surveillance," he said.

Mulrooney, who's with the department of oncology in the division of cancer survivorship at St. Jude Children's Research Hospital in Memphis, Tenn., and his colleagues released their findings online Jan. 4 in the *Annals of Internal Medicine*.

As cancer therapies have improved, the chances of surviving childhood malignancies have increased markedly. In the United States, four in five young patients now survive at least five years following their initial diagnosis. Adult survivors of childhood cancer number nearly 390,000, according to the researchers. That figure is projected to grow to more

than half a million by 2020, the study authors said.

The problem? In the past, a return of cancer was the biggest concern among pediatric patients. But today, experts believe that adult survivors may have to contend with [cancer treatment](#) side effects.

To explore the subject, the study authors focused on almost 1,900 men and women initially treated for childhood cancer at St. Jude Children's Research Hospital.

Participants ranged from 18 to 60 years old. All had been treated with various types of chemotherapy and/or radiation. All had survived a minimum of 10 years, according to the study.

The researchers found that although almost none of the patients showed any outward signs of heart disease, more than 7 percent had some form of [heart muscle disease](#) (cardiomyopathy), such as an enlarged, thickened, weakened, and/or rigid heart. This problem was more prevalent among those who had undergone chest radiation treatment than those who had not, the research showed.

Nearly 4 percent had coronary artery disease and 28 percent had narrowing of the blood vessel or heart valve leakage. Heart rhythm abnormalities were seen among more than 4 percent of the survivors, the study found.

"In our study, we only included [childhood cancer survivors](#) exposed to cardio-toxic cancer treatments, [such as] anthracyclines and/or cardiac radiation," Mulrooney explained.

There weren't any patients in the study who weren't given treatment for their pediatric cancer. So, "it is difficult to say if the cancer itself may also contribute to these cardiac outcomes," he added.

Dr. Nicholas Zaorsky, a resident physician in radiation oncology at Fox Chase Cancer Center in Philadelphia, suggested that it's most likely childhood cancer treatment itself that raises the risk for adult heart disease.

"It is known that certain types of chemotherapy increase the risk of heart disease," Zaorsky said. In addition, radiation therapy directed toward the chest cavity region also increases heart disease odds, he said.

"Most likely, the increased risk of heart disease is from the treatment of the cancer with chemotherapy and radiation therapy, more so than the actual cancer," Zaorsky said.

That point was seconded by Dr. Stephen Freedland, a professor of surgery, chair of the department of prostate cancer, and director of the Center for Integrated Research on Cancer and Lifestyle at Cedars-Sinai Medical Center in Los Angeles.

"This is basically a modern phenomenon. Because 20 to 40 years ago there were no survivors of childhood cancer. So we threw anything we had in the arsenal at it. And some of it worked," Freedland explained.

"But now we realize that those drugs can cause harm," he added. "So the question now is can we make cancer treatment kinder and gentler for the heart, without reducing its efficacy? That's where a lot of [pediatric cancer](#) research is now focused."

**More information:** There's more on cancer treatment and the heart at the [MD Anderson Cancer Center](#).

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