

Childhood cancer treatment takes toll on hearts of survivors

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Cancer treatment takes a toll on the hearts of child survivors, according to research presented at the American Heart Association's Scientific Sessions 2013.

Cancer is the leading cause of disease-related death among U.S. children, but the rate of survival has increased significantly from a 5-year survival rate of 58.1 percent in 1975-77 to 83.1 percent in 2003-09.

"Research has shown [childhood cancer survivors](#) face heart and other health problems decades after treatment," said Donald R. Dengel, Ph.D., study lead author and a kinesiology professor at the University of Minnesota in Minneapolis. "But researchers had not—until now—looked at the heart health effects of childhood [cancer treatment](#) while survivors are still children."

Dengel and colleagues measured artery stiffness, thickness and function in 319 U.S. boys and girls (ages 9-18) who had survived leukemia or cancerous tumors. Participants had survived 5 years or longer since their initial [cancer diagnosis](#). Comparing the survivors to 208 sibling children not diagnosed with cancer, researchers found:

- Premature heart disease, as demonstrated by a decline in arterial function, was more likely among the children who survived cancer.
- Childhood leukemia survivors had a 9 percent decrease in arterial health after completing chemotherapy compared to the non-cancer group.

"Given this increased risk, children who survive cancer should make lifestyle changes to lower their cardiovascular risk," Dengel said. "Healthcare providers who are managing chemotherapy-treated childhood cancer survivors need to monitor [cardiovascular risk factors](#) immediately following the completion of their patients' cancer therapy."

"The children in the study were predominately white, so the findings might not apply to other racial and ethnic groups," Dengel said.

And because of differences in [childhood cancer](#) treatment protocols, we are unable to attribute the changes in vascular structure and function to a specific chemotherapy agent," he said.

Provided by American Heart Association

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