

Childhood Cancer Linked to Later Medical Problems

People who had cancer during childhood or adolescence are prone to endocrine problems, new malignancies and heart disease.

January 23, 2024 By [Sukanya Charuchandra](#)

People with a history of cancer during childhood or adolescence have a greater risk of physical and cognitive problems later in life, according to findings published in [JAMA](#).

An estimated 500,000 people with a history of childhood cancer are currently living in the United States, and some 15,000 individuals ages 19 and under are diagnosed with cancer every year. More than 85% of these children and adolescents survive at least five years, but around 95% of people with a history of childhood cancer will experience subsequent problems linked to their cancer or its treatment by the age of 45, including a third who will experience severe or life-threatening problems.

Smita Bhatia, MD, MPH, of the University of Alabama at Birmingham, and colleagues reviewed 73 studies to assess clinical outcomes among people with a history of childhood or adolescent cancer.

They found that individuals who had childhood cancer in the 1990s and survived at least five years after their diagnosis had a reduced lifespan—by about nine years—compared with children who did not have cancer in the 1990s.

Subsequent problems connected to cancer during childhood or adolescence are most often due to treatment with radiation and chemotherapy. These medical issues can arise at any point after initial exposure to these therapies.

People at greatest risk for treatment-related medical problems later in life include those who received cranial radiation for brain cancer or allogenic (from a donor) stem cell transplants; about 70% and 60%, respectively, develop severe or life-threatening health problems. On the other hand, people with certain solid tumors who underwent surgical resection alone or with only minimal chemotherapy were at lower risk for treatment-related problems; their risk was similar to that of people who did not have childhood or adolescent cancer.

The most common severe chronic health problems among people with cancer during childhood or adolescence were endocrine disorders, such as hypothyroidism or growth hormone deficiency

(44%). New malignancies, including breast and thyroid cancer, accounted for 7% of subsequent health problems, while cardiovascular disease accounted for 5%. People developed new cancers in areas that were previously targeted by radiation therapy, with higher radiation doses leading to greater risk.

Besides physical problems, people with a history of childhood or adolescent cancer also experienced mental health problems, with higher rates of depression, anxiety and suicide. What's more, they were likely to experience financial hardship.

The study authors recommended that physicians should inform people with a history of childhood and adolescent cancer of their increased risk for medical problems, and they should be offered preventative care to diagnose them early. "There is a need for clinicians and patients to have heightened awareness of these complications," they wrote.

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