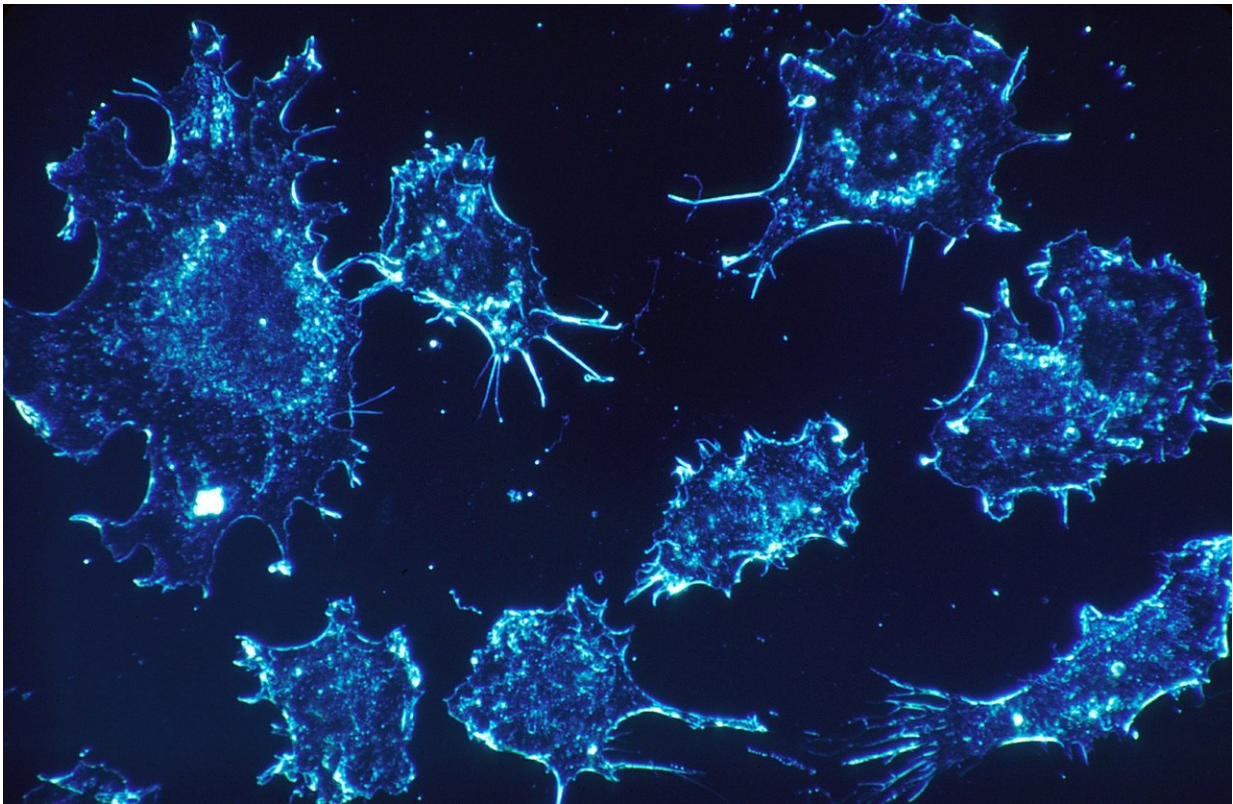


# Adolescent and young adult cancer survivors may have an elevated risk of hospitalizations

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Adolescent and young adults who survived at least two years after a cancer diagnosis had nearly double the risk of being hospitalized compared with their siblings and unrelated, age-matched people without cancer, according to results published in *Cancer Epidemiology*,

*Biomarkers, & Prevention*, a journal of the American Association for Cancer Research.

"Few studies have investigated health risk in adolescents and young adults after [cancer](#) treatment," said Chelsea Anderson, Ph.D., MPH, a postdoctoral fellow at the American Cancer Society. "Our results underscore the importance of long-term, risk-based follow-up care to prevent and treat severe late effects and other health conditions in this patient population."

Approximately 70,000 American adolescents and young adults, defined as those between the age of 15 and 39 years, are diagnosed with cancer each year. As five-year survival rates have steadily climbed higher over the past few decades to more than 80 percent for all cancer types combined, more [cancer survivors](#) have an increased risk of adverse health outcomes later in life as a result of their cancer treatment.

Previous studies on the impact of cancer treatment on late morbidities and hospitalizations among survivors of childhood cancer, such as the [Childhood Cancer Survivor Study](#), have included survivors from birth to 20 years and focused on selected cancers common among children, such as leukemia and central nervous system tumors. As a result, hospitalization patterns have not been well-characterized for adolescents and [young adults](#), especially those with breast, colorectal, and other cancer types that are more common at the older end of the age group.

Anderson and colleagues at the University of Utah and the University of North Carolina examined the risk of first hospitalization and rate of total hospitalizations among adolescents and young adult cancer survivors using data from the Utah Population Database. The resource links statewide population records to [cancer diagnosis](#) information in the Utah Cancer Registry, which is part of the National Cancer Institute's Surveillance Epidemiology and End Results (SEER) program, as well as

[hospital](#) discharge information from the Utah Department of Health.

The researchers analyzed data for 6,330 cancer survivors, 12,924 siblings, and 18,171 age-matched people without cancer.

The risk of a first hospitalization among adolescent and young adult cancer survivors was 1.78 times higher compared with their siblings and 1.93 times higher than unrelated, age-matched people without cancer.

Compared with controls, the risk of a first hospitalization increased 4.76-fold for survivors of leukemia, 3.45-fold for survivors of central nervous system tumors, 2.83-fold for survivors of colorectal cancers, 2.76-fold for survivors of non-Hodgkin lymphoma, and 2.37-fold for survivors of breast cancer. The lowest risks of a first hospitalization were for cervical/uterine cancers and melanoma.

The rate of total hospitalizations increased by 56 percent for adolescent and young adult cancer survivors compared with controls.

Cancer survivors also had more than double the risk for several other conditions, including infectious and parasitic diseases, nervous system diseases, circulatory diseases, skin diseases, respiratory conditions, injury, and poisoning. They also had a somewhat elevated risk for digestive, mental, musculoskeletal, and genitourinary diseases.

"A better understanding of the burden of hospitalizations among AYA cancer survivors may help to anticipate future health care utilization in more recently diagnosed patients," Anderson said. "These findings may also inform the development of guidelines for follow-up care for adolescent and young adult cancer survivors."

The main limitation of the study was that the number of hospitalizations was too small to perform analyses on specific cancer types or diagnostic

codes within groups. The research was limited to hospitalizations that occurred in Utah. The study authors were not able to identify patients who were undergoing active [cancer treatment](#) during the follow-up period; therefore, some hospitalizations could reflect toxicities associated with some cancer therapies.

**More information:** Paulo S. Pinheiro et al. Cancer Site–Specific Disparities in New York, Including the 1945–1965 Birth Cohort's Impact on Liver Cancer Patterns, *Cancer Epidemiology Biomarkers & Prevention* (2018). [DOI: 10.1158/1055-9965.EPI-18-0194](https://doi.org/10.1158/1055-9965.EPI-18-0194)

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