

With Pediatric Cancer Survival Rates on the Rise, Researchers Look to Help Survivors

Children's Hospital Colorado faculty are among the researchers investigating issues such as long-term side effects and continuity of care.

September 19, 2025 By University of Colorado Cancer Center

There's good news on the [pediatric cancer](#) front — thanks to advances in genomics, immunology, surgical techniques, radiation therapy, and supportive care, five-year survival rates for childhood cancers have dramatically improved in recent years — from 58%-68% in the 1970s to 83%-88% and even higher today, according to the American Association for Cancer Research.

But along with that good news come new challenges, says [Lia Gore](#), MD, co-director of the [Developmental Therapeutics Program](#) at the [University of Colorado Cancer Center](#).

"There are over half a million survivors of childhood cancer in the United States today," she says. "Many of these kids are treated when they're toddlers, and in theory, if we have achieved our goal, they're going to live to be 80 or 85 years old. Which means that they could be living for 80 years with the side effects of that therapy. So, it's no longer just five-year survival that matters to us; it's 80-year survival."

Looking at long-term side effects

Standard cancer treatments such as chemotherapy and radiation can have significant, long-lasting side effects, Gore explains, including stunted growth, osteoporosis, heart failure, thyroid and/or fertility issues, and neurocognitive problems. It's estimated that at least two-thirds of childhood cancer survivors are living with at least one long-term side effect from the treatment they received — and the longer they live, the greater the chance that other complications will arise.

"There are certain drugs that we know are more likely to lead to some of those side effects than others, so we try to modify those drugs, limit their use, or decrease the total dose," Gore says. "The goal will always be to cure somebody, but the question is at what cost, and what are the things we can do to reduce the long-term impact on patients?"

To that end, Gore and the team at [Children's Hospital Colorado](#), along with other pediatric cancer researchers, is studying the effectiveness of cellular therapies, gene-modifying therapies, and other chemo-free treatments, as well as incorporating patient-reported outcomes and real-world data to help create a better quality of life for long-term pediatric cancer survivors.

"We would like everybody to grow up and be a healthy, productive, contributing member of society, but we know that the cost of cure can be very high for some patients," Gore says. "We're working to develop options that take advantage of new findings and new technology, like targeted therapy. How do we reduce radiation exposure to young children, which we know contributes to many of the long-term side effects?"

A passport for cancer care

Another top-of-mind issue for pediatric oncologists as the number of survivors grows is continuity of care — making sure that survivors who move away from home for college or a job have easy access to their medical records when they go to see a new provider.

"We have a very mobile society — a child might be treated in Denver, but they go to college in Michigan, or they move to California for a job," Gore says. "One of the things we are excited about in the pediatric oncology community is a platform called [Passport for Care](#), which is an individualized treatment summary that's electronically available to all patients, so they can essentially take their whole treatment summary with them. Then the people who take over their medical care have access to the list of drugs they received and what they might be at risk for."

It's an especially important issue to address since many children who are treated for cancer at a young age remember nothing about their treatment. Even if their parents do, there may be issues there as well, Gore says.

"What if they don't have a great relationship with their parents? What if their parents aren't around?" she says. "There are many things that can compromise that transfer of information. This Passport for Care is something we're trying to make more accessible and robust. It not only includes treatment summaries, but it also incorporates the best guidance we have about what tests people should have for surveillance. How often should they see a doctor? Are they at risk for cataracts because they had radiation exposure? Do they need to see an orthopedic surgeon because their growth plates fused too early?"

The work continues

Despite encouraging news about the growing number of survivors, pediatric cancers are still the leading cause of death from disease among children in the U.S., with around 1,600 children and adolescents dying from cancer each year. CU Cancer Center researchers are on the front lines of treatment advances — Gore and her colleagues were behind a recent breakthrough in a specific childhood [blood cancer](#) called B-acute lymphoblastic [leukemia](#), co-leading the first clinical trial of

an immunotherapy drug called blinatumomab that ultimately was shown to reduce relapse and improve overall survival — as well as new ways to help children with new diagnoses through the early stages of their treatment.

“One of the things we’re very excited about at the CU Cancer Center and Children’s Hospital Colorado is that we’ve developed a much deeper dive into cancer rehabilitation,” Gore says. “We’re working with patients in the hospital to get them up and moving, doing more activities, working on their learning. Sometimes we need to make interventions that help them be more successful in school. Cancer rehabilitation is not just about getting physical therapy after surgery; it’s a very holistic, multidisciplinary approach.”

But the ultimate goal of Gore and her colleagues is to continue to make strides in curing children with cancer, especially those who live in countries or areas where advanced care is difficult to access.

“We have some exciting new clinical trials that are very promising, so there are lots of reasons to be optimistic,” she says. “We’re just going to continue to try to push forward. Our goal is to be unemployed because no one needs us anymore. Until that happens, we have more work to do.”

This story was published by the [University of Colorado Cancer Center](#) on September 15, 2025. It is republished with permission.