



Children's National™

2015 Ben's Run

In April 2015, Ben's Run will mark its fifth anniversary—five years of coming together, inspired by an amazing boy who brought joy and incredible spirit to the world. For half a decade, the Ben's Run community has taken countless steps to fight childhood cancer. Together, we are helping the “sickest of the sick,” funding experimental research that holds the potential to give children with relapsed leukemia and other cancers new hope. Our goal for this milestone year is to harness the passion of individuals and groups to raise \$100,000, making this the best, most impactful Ben's Run yet!



Getting Inspired: Reflections from Kirsten Williams, MD, 2013 & 2014 Ben's Run Grant Recipient

“My first pediatric patient was a sweet two-year-old girl with leukemia dotting her skin in tiny blue marks. In many ways she seemed normal, playing through chemotherapy, riding a toy car through the hospital's halls, and laughing with her family. But those marks stood as a constant visual reminder that we were failing. After each round of chemotherapy, more marks appeared. After trying everything else, we offered a high-risk cord blood transplant. This required high doses of radiation and chemotherapy, followed by new cells transplanted from a healthy child. She grew more spots through chemotherapy and radiation. However, after 10 days, they disappeared. In a month, we couldn't find a single one. We were elated! Her new cells had done what our treatments could not, literally attacking her cancer cells one by one. Unfortunately, our joy was short-lived. Her cancer returned with a vengeance, and she lived just one day after new spots appeared. This heart-breaking moment is repeated far too often. The bravery of that girl, and so many others who have come after her, inspire my research every day.”

Accelerating the Pace: Advancing Pioneering Research

Dr. Williams is at the forefront of pediatric oncology, focusing on how the immune system can be used to treat children with the most difficult leukemia cases. Through groundbreaking research, she strives to understand exactly how immune cells are able to kill leukemia cells that are resistant to even the most aggressive chemotherapy and radiation. Funding from Ben's Run is helping Dr. Williams pursue the answers to important scientific questions that arose from that very first patient's experience:

- Why did the new cells kill the cancer so successfully initially, but then lose the fight?
- Can we help the new cells be more effective with the strategic use of other treatments?
- Is it possible to modify transplanted cells so they are better able to attack the cancer?
- Are there ways to predict who might need this therapy earlier, so that the new cells have more time to work, are fighting the lowest possible level of disease, and are tailored specifically to this task?

Making a Strong Finish: Novel Solutions for Children at Greatest Risk

Today, more than 90 percent of children with standard risk ALL leukemia can expect to survive, as compared to just 30 percent for those with high risk. To save more lives, we need to respond faster and more effectively if a child's cancer returns after transplant. For too long, tests to determine relapse were too physically difficult for a sick child to endure frequently, giving cancer cells time to reproduce undetected. Through the innovative research projects funded by Ben's Run, Dr. Williams and her team seek to radically improve the odds for these children, giving them and their families new hope.

1. Improving Early Detection through a Simple Blood Test. Dr. Williams and her team have developed a less invasive technique to improve detection. Rather than having to put a needle in a child’s hip, a simple blood test now accurately detects the cancer’s return. This means we can test children more frequently and intervene earlier—vital to achieving a successful outcome. In conjunction with this test, the team also wrote and opened a clinical trial to give two new medicines to help the new transplanted cells kill the leukemia more effectively. This early progress, sparked by funding from Ben’s Run in 2013, enabled Dr. Williams to secure a \$250,000 grant from Hyundai’s Hope on Wheels Program; a pilot clinical trial is now underway.

2. Advancing Diagnostics to Save Children’s Lives: A second trial now underway is focused on identifying leukemia earlier with a single radiology study, like a CT scan. Dr. Williams began this trial in April 2011 at the National Institutes of Health, and she has already found that this novel approach enables her to predict leukemia relapse up to 80 days sooner! This is truly revolutionary, as at this point in a child’s recovery, relapse is still undetectable even using the most sophisticated blood tests. Just as extraordinary, Dr. Williams experimental scans predicted exactly where the patients would relapse in 2 of 3 cases, suggesting doctors might be able to use this technique to focus on a particular cancerous target—maximizing therapeutic benefits while minimizing adverse side effects. This new test has already proven safe in the hundreds of adult patients who have lymphoma and is being tested in children with brain tumors, but Dr. Williams was the first to use it in patients with leukemia undergoing bone marrow transplantation. She now seeks to bring this tool to pediatric patients undergoing transplant; funding from the 2015 Ben’s Run will make this possible.

Leveraging Seed Funding to Achieve a Brighter Future for Children

Funding for medical research is at an all-time low, with pediatric medicine especially hard hit by budget cuts. The pervasive lack of funding often means that lifesaving treatments are stopped in their tracks, as fewer researchers are able to secure the dollars required to advance their work. Today, most physician-scientists focused on childhood cancer are able to initially pursue research thanks to short-term government grants in their early careers. After these grants, however, the funding landscape becomes more difficult. Most large grants from the National Institutes of Health are awarded to researchers with a large body of scientific data—evidence that requires sustained financial investment. Too often, the best ideas stall, as young innovators compete for increasingly competitive private funds.

Philanthropic investment in cancer research is critical to improving overall survivability and helping children thrive. Although private funding is limited, its strength is that it can be used to take calculated risks—sparking the transformation from the lab bench to the child’s bedside. Childhood cancers collectively receive only 4 percent of U.S. federal funding, making individual donations essential to pushing scientific boundaries and catalyzing innovation. Proceeds generated by Ben’s Run are essential to filling this gap, advancing experimental research to the stage that a viable NIH application can be submitted and helping turn promising research from Ben’s Run into real solutions for kids.

Every Dollar Counts: How Each Participant’s Contribution Leads to Lifesaving Breakthroughs for Kids with Cancer

