

Paying It Forward

BY DANIEL KINGSLEY



Many times in life different obstacles are thrown in our way. For me, my biggest obstacle hit on Aug. 7, 2008, when I was diagnosed with acute lymphoblastic leukemia (ALL) at the age of 12. The attending physician kept telling me, “Well, this could be one of two things: cancer or just a viral infection. We won’t know until we test your bone marrow.” Of course I was hoping for it to simply be something viral; however, it turned out to be cancer. I remember continually asking myself, “Why me? Why do I have to battle this?”

Back when I was 12, I didn’t know that I would decide to become a pediatric oncologist. And if I hadn’t fought cancer, I’m not sure I would have chosen this path. Through my career, I want to be able to encourage other patients and their family members going through a similar ordeal by telling them that there is hope. I am living proof of it, and I believe my experience has given me unique insight into what others are battling. While I would never presume to know exactly what each individual with cancer is facing, I know firsthand the range of emotions they may be feeling in their search for answers.

My Treatment Experience

When being treated for ALL, I received traditional chemotherapy. The worst of the treatments were cytarabine (Ara-C) injections, rounds of steroid shots, and high-dose methotrexate—with the last being the most difficult to endure. High-dose methotrexate is given by liter intravenously; it requires an inpatient stay lasting at least

one week. Sometimes, after the high-dose regimen, my body could barely handle low doses of methotrexate during the maintenance phase. During the weeks that I would receive high-dose treatment, I would be confined to a bed for most of the week; most times I was barely strong enough to walk to the bathroom. Truthfully, I think the only reason I could fight through it was because I slept the majority of the week. Treatments like this made it difficult to continue doing the things I loved, like playing sports and being with friends.

Maintaining a normal life was next to impossible until I completed chemotherapy. The biggest issue with maintaining a normal life was having enough stamina to do everyday activities. Everything became a chore. However, I did the best I could. I played sports to the best of my ability and marched in my school’s band. I went to school when possible, but most of my classwork was done from home. Baseball was the toughest activity to engage in due to the mediport placed beneath the skin in my chest, and because the steroid treatments had weakened my knees so much that I was never able to play the role of catcher again. Thankfully, I avoided the mediport issue by specially modifying my shirts to place a HeartGuard chest protector over the top. I never had to endure a ball to the protector.

One of the best days of my life was when I received my last dose of chemotherapy on Dec. 1, 2011. December 12 is my birthday, and ending chemo was the best birthday present I’ve ever received. I was elated that I could start what would become a normal life;

although, I would still have to make the trip to Rainbow Babies and Children’s Hospital in Cleveland, Ohio, to ensure that I had not relapsed. Two weeks later I was able to travel to Disney World in Florida with my school’s music program, and that spring I was strong enough to play baseball for my high school. It wasn’t much longer before I started planning where I wanted to go to college and eventually medical school.

Life after Cancer

I knew that to be considered as a candidate for either an MD or MD/PhD program I would need research experience. Therefore, I turned to a member of my oncology team, Alex Huang, MD, PhD, the director of the Pediatric Hematology/Oncology Fellowship Training Program at Rainbow Babies & Children’s Hospital. I contacted Dr. Huang in November 2014 to see if he had any lab positions available to summer students, and if he would be willing to invite me to work there. He was very pleased that I was interested in working with him and his team, and so we began looking into possible grants or scholarships to fund my research. Dr. Huang contacted the St. Baldrick’s Foundation (www.stbaldricks.org) and together we completed the necessary paperwork to apply for a grant. We anxiously waited to hear back, and about two months after submitting, I received an email from Dr. Huang saying, “We did it! We got the grant!” I was excited to begin working in his lab on possible immunotherapy treatments.

(continued on page 62)

(continued from page 60)


My Research Efforts

Laboratory research is tough work—but tough as in physical backbreaking labor—but my brain received a huge workout every day from absorbing and learning so much information. I have truly enjoyed my fellowship this summer and hopefully some of the studies that my partner, Dr. Hasan Hashem, and I have been working on will lead to a breakthrough.

Specifically, we have been working on a treatment for Ewing sarcoma (the second most common bone cancer after osteosarcoma) using natural killer (NK) cells. We hope to perfect this treatment because NK cells are not major histocompatibility complex (MHC) restricted; meaning, these cells do not cause graft versus host disease. Therefore, any patient can receive NK cells from another person; screening for a perfect match like in the case of bone marrow transplants is not needed. The osteosarcoma cells that we are studying are to produce a new cell line and immortalize it. We want to create a cell line that will grow quickly and be readily accessible to use in future experiments.

Paying It Forward

I would not have had this incredible experience if it were not for the St. Baldrick's Foundation, a nonprofit dedicated to raising money for childhood cancer research. St. Baldrick's is truly a great group of people who care about kids and are extremely passionate about their cause. Each year they raise and donate millions of dollars to pediatric cancer research and fund fellows, like myself.

Finally, I would not have embarked on this path without the support of the doctors on my oncology team at Rainbow Babies and Children's Hospital (www.uhhospitals.org/rainbow). These cancer care providers inspired me to become a pediatric oncologist. In the end, cancer changed my life forever, redirecting me down a path and career that I might not have chosen. I don't think that—even if I could—I would have had it any other way. 



Daniel Kingsley with Dr. Agne Petrosiute, his primary oncologist and a St. Baldrick's Fellow, and Dr. Alex Huang, who Daniel worked with as a St. Baldrick's Summer Fellow.

Daniel Kingsley is a St. Baldrick's Foundation Summer Fellow and cancer survivor. Read more about his remarkable story at www.stbaldricks.org/blog/post/undergrad-goes-from-childhood-cancer-survivor-to-summer-fellow.

This is not the first time ACCC has covered some of the great work being done by St. Baldrick's. In the September-October 2013 *Oncology Issues*, Kathleen Ruddy, chief executive officer of the St. Baldrick's Foundation, contributed a column entitled "Shaving the Way to Conquer Child Cancers." St. Baldrick's head-shaving events began as a challenge between businessmen and have grown from one event in 2000 to over 1,300 events in 2013, raising critical funds for childhood cancer research. Events take place in pubs, restaurants, schools, churches, parks, malls, military bases, firehouses, and any other place you can imagine. ACCC members can access Ruddy's column online at mynetwork.accc-cancer.org.