



Smilow Cancer Hospital Pediatric Bone Marrow Transplant Program

The Pediatric Sickle Cell Program at Smilow Cancer Hospital is a comprehensive program dedicated to the care of children living with sickle cell disease. Each year about 2,000 children are born with sickle cell disease in the United States and it is most commonly found in African Americans.

Our doctors and nurses work together to provide compassionate, patient-driven care to patients with sickle cell disease. Patients often suffer from chronic pain and have complicated medical courses due to their sickle cell disease. In collaboration with the Pediatric Stem Cell Transplant Program, we offer bone marrow transplants to patients with sickle cell disease. Our goal is to successfully cure your child's sickle cell disease through transplant when they are experiencing severe problems due to their sickle cell disease.

What is Sickle Cell Disease?

Sickle cell disease is an inherited blood disease that affects red blood cells. In sickle cell disease, the red blood cells are shaped like sickles, or crescent moons, rather than being round. The sickle-shaped cells can prevent the blood from flowing properly in the body. This variation can affect many organ systems and can lead to severe pain. The risk of developing serious complications in the brain, lungs and heart increases with age.

With specialized medical care, children with sickle cell disease can lead long, healthy lives. Despite newer supportive care, the average life expectancy has remained approximately 20-30 years less than the general population for men and women with sickle cell disease.

Role of Bone Marrow (Stem Cell) Transplant for Sickle Cell Disease

Bone marrow transplant is the only cure for sickle cell disease at this time. Bone marrow transplants have been used for the treatment and cure of a variety of cancers, immune system diseases, and blood diseases for many years. Through The Pediatric Bone Marrow Transplant Program at Smilow Cancer Hospital, children with sickle cell disease are treated with bone marrow transplants and benefit from life-altering, improved outcomes.

Results of many studies show that transplants from matched-related donors offer about an 85 to 90 percent chance of cure.

The American Society of Hematology considers transplant a standard of care for patients with sickle cell disease that have an HLA matched sibling donor and have experienced complications such as:

- Multiple pain crisis
- Recurrent acute chest syndrome
- Pulmonary hypertension
- A history of stroke or high-risk for developing stroke
- Developed antibodies to red blood cells

Patients without a matched sibling donor still have the option of receiving a transplant from an unrelated donor, from a parent or half matched sibling. Transplant from a parent or a half matched sibling is called haplo-identical transplant and is currently done through a clinical trial. The Pediatric Bone Marrow Transplant Program will work with you to determine if there is an HLA-match within your family, and if not, will help to find an unrelated donor.

What are the Risks of Transplant?

Even though a stem cell transplant is the only cure for sickle cell disease, there are risks. These risks include: infection, graft-versus-host disease (GVHD), effects on liver and kidneys or other organs and long term side effects of infertility. In a small percentage of cases there is a risk of rejection of the transplant if your child's body does not accept the new cells. With the help of our experienced doctors, nurses and staff, along with the use of reduced toxicity transplant therapy to cure sickle cell disease, these risks can be reduced and a transplant can be successfully performed.

Location/Contact:

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