

## Advance Hematology/Oncology Programs

### Bone Marrow and Stem Cell



Certain diseases and treatments can deplete a child's healthy stem cells. Sometimes the body needs help to replenish those cells. When this happens, your child may require a very complex process called a stem cell or bone marrow transplant.

Since 1986, Cook Children's Bone Marrow and Stem Cell Transplant program has performed more than 1,000 transplants in children with cancer, blood disorders or inherited conditions. That's what makes this program one of the more diverse and experienced pediatric transplant programs in the Southwest.

Cook Children's is a member of:

- The Center for International Blood and Marrow Transplant Research (CIBMTR)
- Pediatric Blood and Marrow Transplant Consortium (PBMTTC)
- The Children's Oncology Group (COG) stem cell transplant section.
- We are accredited through the Foundation for Accreditation of Cellular Therapy (FACT).

Over the last three years, 30 to 40 transplants were performed every year for a variety of diseases, with leukemia being the most common primary diagnosis.

#### Why our stem cell program?

The goal of the program is to provide a stem cell or marrow transplant to any child who needs one and to improve the outcomes for these patients who do not have better therapy options. We work to achieve this goal through excellent clinical care from several services within Cook Children's, quality initiatives and ongoing comparison of our processes and performance against large academic transplant centers and international data.

Common referral diagnoses:

- Acute lymphoblastic leukemia
- Chronic myelogenous leukemia
- Myelodysplastic syndrome (MDS)
- Lymphoma
- Neuroblastoma
- Anemia/hemoglobinopathy
- Immune deficiency
- Inherited disorders of metabolism

#### What are stem cells?

Stem cells are cells in the body that have the potential to turn into anything, such as a skin cell, a liver cell, a brain cell, or a blood cell. Stem cells that turn into blood cells are called hematopoietic stem cells. These cells are capable of developing into the three types of blood cells:

- Red blood cells that carry oxygen
- White blood cells that fight infection
- Platelets that help blood to clot
- Hematopoietic stem cells can be found in bone marrow (the spongy tissue inside bones), the bloodstream, or the umbilical cord blood of newborn babies.

#### Where do stem cells come from?

Stem cells may come from the patient or from a donor. Stem cells that come from a patient may come from their own cord blood cells if they were harvested from the mother's placenta immediately after the child was born and frozen for later use. Stem cells may also be harvested and frozen before the child or teen undergoes treatment. These stem cells are thawed and put back into the patient's body after treatment is complete.

Donor stem cells come from a compatible family member or through a match from a national registry of donors.

Depending on the particular needs of your child, one or all three types of a donor's stem cells will be harvested:

- Peripheral blood stem cells are harvested from donated blood. The stem cells are separated and collected and the rest of the blood is returned to the donor.
- Bone marrow stem cells are collected from the donor's hip bone through a surgical procedure.
- Cord blood stem cells are collected from a mother's placenta immediately after a child is born.

While all three types can replenish a patient's blood and bone marrow cells, there are advantages and disadvantages to each. The doctor will discuss these issues and suggest the best type of stem cell for your child's illness.

National Marrow Donor Program (NMDP) transplant center since August 1990

Cook Children's Bone Marrow and Stem Cell Transplant Program has performed multiple autologous and allogeneic transplants, making it one of the more diverse and experienced pediatric transplant programs in the Southwest.

#### Our specialty care team



**Gretchen Eames, MD, MPH**  
**Medical Director, Hematology/Oncology and Stem Cell Transplant Program**

Education: University of Iowa  
 Residency: University of Minnesota  
 Fellowship: University of Minnesota  
 Board Certification: Pediatrics and Pediatric Hematology/Oncology  
 Languages: English



**Meaghan P. Granger, MD**  
**Hematology/Oncology**

Education: University of Arkansas for Medical Sciences  
 Residency: Vanderbilt University  
 Fellowship: Children's Memorial, Chicago, IL & Children's Medical Center of Dallas (Both Hem/Onc.)  
 Board Certification: Pediatrics and Pediatric Hematology/Oncology  
 Languages: English



**Richard P. Howrey, MD**  
**Medical Director Apheresis Program; Associate Medical Director Stem Cell Transplant Program**

Education: University of Michigan School of Medicine  
 Residency: Children's Medical Center, Dallas  
 Board Certification: Pediatrics and pediatric hematology/oncology  
 Languages: English

Need help referring a patient?

Please call the International Patient Services department at +1-682-885-4685, send faxes to +1-682-885-2557, or email [international@cookchildrens.org](mailto:international@cookchildrens.org)