Blood and Marrow Transplant Program
We have:
• Performed 77 BMTs in 2017 and more than 1,000 since our program’s inception in 1985.
• Excellent BMT patient outcomes with 100-plus-day survival rates, better than national average for autologous and allogeneic transplants.
• A unique multidisciplinary Immunohematology Program focused on curing immunodeficiencies and immune dysregulation through BMT.
• Recognition as a national leader in transplanting patients with sickle cell disease, having cured 73 children.
• Accreditation by the Foundation for the Accreditation of Cellular Therapy.

Research
Our clinical and translational researchers are studying:
• Transplantation from half-matched family donors for patients with sickle cell disease who do not have a suitably matched sibling donor.
• Use of novel treatments, such as mesenchymal stromal cells (MSCs) from bone marrow and Abatacept, to reduce, prevent and treat graft-versus-host disease (GVHD) and improve outcomes of BMT.
• The comparison between BMT and standards of care in adolescents and young adults with sickle cell disease (clinical coordinating center for a National Institutes of Health (NIH)-funded national clinical trial STRIDE-II, BMT CTN 1503).
• Long-term and late effects of transplant for sickle cell disease (STELLAR).
• How best to educate families about their options for the treatment of sickle cell disease.
• Gene therapy for sickle cell disease (sponsored by Bluebirdbio Inc.).
• Genetically engineering a patient’s own lymphocytes (chimeric antigen receptor (CAR) T cells) for killing leukemia cells (sponsored by Novartis).
• How to improve the safety and efficacy of a transplant from half-matched family donors for malignant and nonmalignant diseases by reducing the number of lymphocytes administered and adding genetically modified T-lymphocytes after a transplant to aid immune recovery (sponsored by Bellicum Inc.).

PROGRAM OVERVIEW
The Aflac Cancer and Blood Disorders Center of Children’s Healthcare of Atlanta operates one of the leading pediatric blood and marrow transplant (BMT) programs in the country and performs among the largest volumes of autologous and allogeneic transplants. In addition to treating malignant diseases, we are proficient in treating a variety of nonmalignant diseases through BMT, such as bone marrow failure syndromes, hemoglobinopathies, metabolic disorders, immune deficiencies and immune dysregulation disorders.
The focus of our basic research is to:

- Identify the molecular pathways linked to the development and evolution of acute and chronic GVHD.
- Develop novel, non-genotoxic targeted conditioning for BMT.
- Investigate the immunobiology of immune dysregulation diseases.
- Develop gene therapy for hemophagocytic lymphohistiocytosis (HLH).

Our faculty has national leadership roles in the following consortia:

- Pediatric Blood and Marrow Transplant Consortium (PBMTC)
- Blood and Marrow Transplant Clinical Trials Network (BMT CTN)
- Sickle Transplant Alliance for Research (STAR)
- Clinical Immunology Society (CIS)

New program

**Integrated Immunohematology and Immune Dysregulation Program**

Led by Shanmuganathan Chandrakasan, MD, our Integrated Immunohematology and Immune Dysregulation Program brings together unique expertise in immunology, hematology and BMT. In collaboration with hematology, rheumatology, gastroenterology and other subspecialties, the program offers focused immune and genetic evaluation of patients with either early onset or refractory autoimmune conditions with the goal to provide targeted immune modulatory and biological therapies based on immune profiles and genetics. Also, in patients with immunological or genetically defined immune dysregulation conditions, we offer BMT as a curative option. The following categories of patients are currently being evaluated in our program:

- Immunohematology: Refractory multilineage immune cytopenia with or without lymphoproliferation (ALPS and ALPS-like conditions) and post-Rituximab persistent hypogammaglobulinemia
- Very early onset inflammatory bowel disease (IBD), including IPEX and IPEX-like disorders
- Early onset and refractory rheumatologic conditions
- Multisystem autoimmunity
- Autoinflammatory diseases and periodic fever syndromes

**Volumes and outcomes**

**BMT program: cases by type**

**Predicted and actual survival rates for transplant centers with 77-105 transplants**

BOX: Indicates predicted survival with 95 confidence interval  
DASHED LINE: Indicates overall network survival rate of 68.9  
DOT: Indicates a center’s actual survival; a dot below (above) the box indicates an under (over)-performing center relative to the network
Meet our team

Physicians

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Advanced practice providers

Kathleen Spencer, CPNP
Deborah Lutterman, CPNP
Ellen Olson, CPNP
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Karman Ott, CPNP
Kelly Landry, CPNP
Laura Barlow, CPNP
Lisa Berkenkamp, CPNP
Laura Fraser, CPNP

Clinical pharmacy specialist
Rachel Carroll

Social workers
Cindy Zehnder
Jamie Mahaffey

Child life specialist
Becca Johnson

Nutritionist
Alyssa M. Smith

Program coordinators
Audrey Tumlin
Amanda Pritchard
Deborah Leavenworth

Quality manager
Heather Laird

Financial coordinators
Neferteria Ector
Windy Wyche

Referrals and consultations

Visit choa.org/bmt for more information.

Call our BMT Program coordinators at 404-785-1272 for more information, to make a referral or for a consultation.

Some physicians and affiliated healthcare professionals on the Children’s Healthcare of Atlanta team are independent providers and are not our employees.