

Stem Cell Options for Transplant Patients

BLOOD AND MARROW TRANSPLANT PROGRAM

In 1968, Robert Good, M.D., performed the world's first successful human bone marrow transplant at the University of Minnesota, using a matched sibling donor. Since that time, the options for transplant have expanded to include not only bone marrow, but also peripheral blood and umbilical cord blood stem cells. This has made it possible to offer blood or marrow transplant (BMT) to almost everyone who needs one.

At University of Minnesota Medical Center, our BMT specialists lead the country with more than 40 years of experience and expertise in BMT treatment.

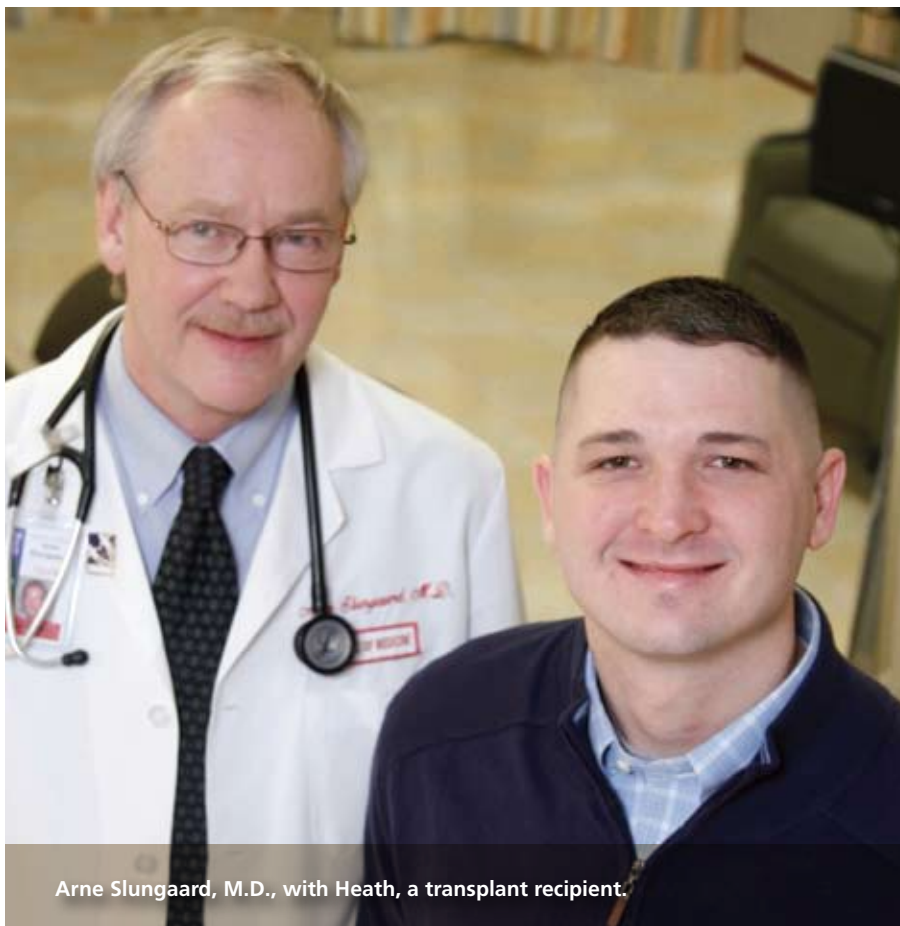
Our transplant team individually tailors treatment and care to meet the unique needs of each patient. Through ongoing research, we continue to develop new and innovative treatment options using all available stem cells sources. These include related and unrelated hematopoietic stem cells from:

- Bone marrow
- Peripheral blood
- Umbilical cord blood

In 1985, our physicians were among the first in the country to successfully transplant bone marrow from an unrelated donor. We began using stem cells from unrelated donor peripheral blood and umbilical cord blood in the 1990s. This greatly expanded treatment options for our patients.

World renowned expertise in cord blood transplantation

Together with University of Minnesota Physicians, we perform more umbilical cord blood transplants for adults than at any other center in the world. John Wagner, M.D., who co-directs the BMT Program, performed the world's first cord blood transplant for



Arne Slungaard, M.D., with Heath, a transplant recipient.

For more information or to make a referral to the Blood and Marrow Transplant Program, please call: 612-273-2800 or 888-601-0787.

Clinic Location:

Blood and Marrow Transplant Program
University of Minnesota Medical Center
Phillips-Wangensteen Building, Clinic 5B
516 Delaware St. S.E.
Minneapolis

BMT Program Mailing Address:

MMC 803, 420 Delaware St. S.E.
Minneapolis, MN 55455

www.uofmbmt.org



leukemia in 1990. Since then, our physicians have continued to take the lead in cord blood research and transplantation. Today, the majority of allogeneic transplants we perform in adult patients and children are cord blood transplants. This depth of experience vastly increases our success in finding a suitable donor match for our patients.

Advantages of cord blood transplant

Umbilical cord blood transplant offers a new chance for cure for many patients, including those with leukemia, bone marrow failure, storage disease, or immunodeficiency.

The use of cord blood for transplant has a number of advantages:

- There is less need for a perfect tissue type HLA match.
- Cord blood is more rapidly available than unrelated bone marrow.
- There is a low risk of contamination of cord blood with common viruses.
- There is a lower risk of graft-versus-host disease (GVHD) with cord blood.
- Cord blood is easy to harvest without risk to the newborn donor or mother.

Pioneers in double cord transplant and the “Minneapolis Regimen”

In the past, a major obstacle to using cord blood in adults was the limited number of stem cells in one unit of cord blood. If too few cells are available, there is a greater chance of life-threatening complications.

To overcome this barrier, researchers at University of Minnesota have pioneered new treatments using partially matched cord blood units from two different donors. This increase in the number of stem cells is resulting in better patient survival. Using two cord blood units also appears to have a stronger anti-cancer effect. This may reduce the risk of cancer relapse, especially for acute leukemia.

Double cord blood transplants are now also an option for many patients who cannot tolerate the usual high doses of chemotherapy and radiation prior to transplant. In the mid 2000s, breakthrough research by our physicians allowed the use of lower-dose pre-transplant therapy that successfully prepares patients for BMT. This therapy is now known worldwide as the “Minneapolis Regimen.” Because of its highly promising results, more and more BMT centers around the United States and world are now adopting this treatment plan.

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