Early results suggest people live equally long after half-matched transplants using either peripheral blood or bone marrow

People with blood cancers may have more treatment options

A transplant of blood-forming cells can come from either the donor's bone marrow or from the bloodstream, called peripheral blood stem cells (PBSC.) For people with certain blood cancers, a transplant may be equally helpful using PBSC or bone marrow, according to new research. This is good news, because some people want or need to do one type of donation instead of the other.

Scientists studied transplants in people who had these types of cancer: acute myeloid leukemia (AML), acute lymphoblastic leukemia (ALL), myelodysplastic syndrome (MDS), non-Hodgkin lymphoma (NHL) and Hodgkin lymphoma (HL.) Everyone got a transplant from a half-matched donor, also called a haploidentical transplant.

PBSC and marrow worked well, though each person is different

People who got half-matched transplants from either bone marrow or PBSC lived equally long during the 2-year study. People who got marrow had a lower rate of graft-versus-host disease (GVHD) than people who got PBSC. But, for people with leukemia or MDS, the disease was more likely to come back (relapse) when they got marrow compared to PBSC.

Here are the details. From 2009 to 2014, researchers looked at 681 adults who got transplants in the United States. They all took similar medicines to prevent GVHD. And, they all had half-matched, or haploidentical, transplants.

Half-matched transplants are becoming more common. Doctors look at human leukocyte antigen (HLA) markers to match patients and donors. HLA matching is much more complicated than blood typing. While a full match may be best, it also may be hard to find. Your biological parents and children are always a half match for you. Your brothers and sisters have a 50% (1 out of 2) chance of being a half match for you.

Researchers compared how patients did after a half-matched transplant using either PBSC or marrow. The process to donate PBSC is different from the process to donate marrow. Some donors prefer one type of donation over the other. Other donors can only do one type for health reasons. So, learning that both types of donation work well for patients is good news for everyone.

More research is needed

To be certain of the results, scientists need to study a larger group of people for more time. Then, they will know with more certainty whether PBSC or marrow is better.

Questions to ask your doctor

If you are considering a haploidentical transplant, you may want to ask:

- For people my age and with my disease, what are the benefits and risk of transplant?
- What is better for me: bone marrow or PBSC?

Learn more about

- This research study
- Blood and marrow transplant
- Haploidentical (half-matched) transplant

Source

Bashey A, Zhang M-J, McCurdy SR, et al. Mobilized peripheral blood stem cells versus unstimulated bone marrow as a graft source for T-cell—replete haploidentical donor transplantation using post-transplant cyclophosphamide. Journal of Clinical Oncology. 2017 Sep 10; 35(26):3002-3009. doi:10.1200/JCO.2017.72.8428. Epub 2017 Jun 23. PMC5590802.

About this research summary

Ground-breaking research into blood and marrow transplant is happening every day. That research is having a significant impact on the survival and quality of life of thousands of transplant patients. But the research is written by scientists for scientists. By providing research news in an easy-to-understand way, patients, caregivers, and families have access to useful information that can help them make treatment decisions.

This information is provided on behalf of the Consumer Advocacy Committee of the CIBMTR® (Center for International Blood and Marrow Transplant Research®). The CIBMTR is a research collaboration between the National Marrow Donor Program®/Be The Match® and the Medical College of Wisconsin.

Milwaukee Campus
Medical College of Wisconsin
9200 W Wisconsin Ave, Suite C5500
Milwaukee, WI 53226 USA
(414) 805-0700

Minneapolis Campus
National Marrow Donor Program/
Be The Match
500 N 5th St
Minneapolis, MN 55401 USA
(763) 406-5800