

Younger unrelated donors are better for transplant patients

What were researchers trying to learn?

Researchers wanted to better understand how to choose the best volunteer adult unrelated donor for patients with blood cancer. They studied more than 11,000 donor-patient pairs who had a transplant from 1988 to 2011.

The researchers looked at many different factors related to the donors, patients, and transplants, including:

- For donors:
 - Age
 - Sex (male or female)
 - If female, whether the donor had ever been pregnant
 - Exposure to a virus known as cytomegalovirus
- For patients:
 - Age
 - Sex
 - Exposure to cytomegalovirus
 - Ability to do daily activities, such as pushing a vacuum cleaner or walking several blocks
 - Disease type
 - And how advanced the disease was at the time of transplant
- How well donors and patients matched:
 - HLA (human leukocyte antigens)
 - Blood type
- For transplants:
 - Graft type (bone marrow or peripheral blood)
 - Preparative regimen (treatment given to prepare a patient's body to receive transplant)
 - Medicines given to prevent graft-versus-host disease (GVHD), a serious side effect of transplant

What did they find?

The researchers found that patients who had younger donors (aged less than 32 years) lived longer after transplant. The researchers also found that a close HLA match was important to a patient's survival after transplant. In this study, patients who closely matched their donor lived longer than those who didn't.

Important Points:

- **The best unrelated donors are aged 18-32 years old and closely HLA-matched to the patient.**

Why is this important?

These results can help transplant doctors pick the best donors for their patients. The study tells doctors that a donor's age and HLA match are important.

What else should I keep in mind about this study?

Research studies are always limited in what they can and can't tell you. This study found 2 donor factors that affect survival after transplant. Both are equally important when choosing an unrelated donor. For patients with a rare tissue type, it may be harder to find a young donor who is closely HLA-matched to the patient. So when looking for the patient's best HLA-match, the doctor may have to choose an older donor if that's all that is available.

Questions to ask your doctor

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

- Which factors will you look at when you search for my donor?
- Why do you think this donor is the best donor for me?
- What donor factors could affect my chance of getting GVHD?

Learn more about

- [This research study](#)
- [Blood and marrow transplant](#)

Source:

Kollman C, Spellman SR, Zhang M-J, et al. The effect of donor characteristics on survival after unrelated donor transplantation for hematologic malignancy. *Blood*. 2016 Jan 14; 127(2): 260-267. Epub 2015 Nov 2. PMC4713163.

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.
