Donor options and making treatment decisions

If an allogeneic blood or marrow transplant (BMT) is an option for you, you may be wondering about your options for a donor and what they mean for you.

This fact sheet tells you:

- What doctors consider when looking for your best donor
- What HLA typing is
- What the different donor options are
- Questions to ask your doctor

How do doctors choose the best donor for transplant?

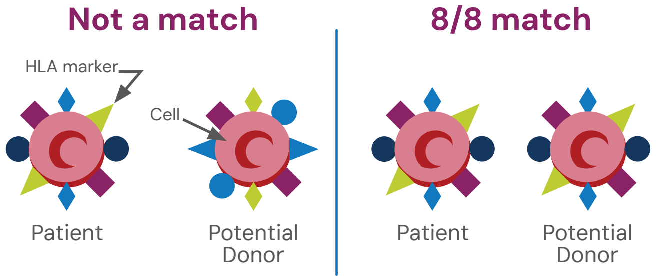
There are many things that doctors think about when they choose your best donor. Three of the most important things are:

1. **Which donors are available?** The best donor may be the person that's available to donate when you need a transplant. Your disease could come back or worsen if doctors delay transplant to look for other donors.

2. **Which donors have closely matching HLA?** Human leukocyte antigens (HLA) are proteins—or markers—on most cells in your body. Your immune system uses these markers to know which cells belong in your body and which don't.

3. **How old are the donors?** Patients tend to do better after transplant with a donor younger than 31 years old.

HLA matching



What is HLA typing?

HLA typing is more complicated than blood typing. To do HLA typing:

- You and any potential donors will give a blood sample
- The blood is tested in a lab to determine HLA type
- Your HLA is compared to potential donors to see if there is a suitable match

Doctors generally use 8 HLA markers to look for a donor. Your donor options could range anywhere between a 4/8 match to an 8/8 match. Each option has its own risks and benefits.

You may need to take a medicine called cyclophosphamide after transplant. This medicine can help lower your risk of side effects after transplant, like graft-versus-host disease (GVHD).

Remember, everyone is different. Your doctor will help you decide which option is best for you based on your overall health and your diagnosis.

Comparing donor options

Finding a donor is not your responsibility. Your doctor will look at all your options and choose the best donor for you within your family or on the NMDP Registry^{SM}.

Related (family member)

Family members may be able to donate sooner than unrelated donors. However, family members may not be an option due to their health or other reasons. And if they are an option, they may be older than the ideal age range of 18–31 years old.

HLA match		**Likelihood of a donor**	**Benefits**	**Risks**
8/8	Matched	Each sibling who has the same parents as you has a 25% chance (1 in 4) of fully matching you.	• Typically the best choice. • Lower risk of complications after transplant, like GVHD.	Most patients don't have a fully matched donor in their family.
4/8	Half match (haplo-identical)	• Your biological parents and children are always a half-match for you. • Your siblings have a 50% (1 in 2) chance of being a half-match for you.	Many patients have a half-matched donor in their family.	• May be less likely to work to treat your disease as a fully matched donor. • You may have more complications after transplant, like GVHD. But with medicines like cyclophosphamide this is improving.

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Unrelated (NMDP Registry)

Unrelated donors tend to be in the ideal age range of 18-31 years old. Many new donors join the registry every day, increasing the chances of patients finding a suitable match.

Depending on your diagnosis, your doctor may prefer an unrelated donor.

HLA match		Likelihood of a donor	Benefits	Risks
7/8 or 8/8	Closely matched	Depending on your ancestry, you may have a 75% to 97% chance of finding a closely matched donor.	• Typically the second-best choice. • Lower risk of complications after transplant, like GVHD.	Disease could worsen or come back while waiting to find a closely matched donor.
4, 5 or 6/8	Partial match (mis-matched)	Nearly every patient has at least 1 donor.	Even if you don't have a closely matched donor, transplant could still be a good option. A partial match offers an option for those who otherwise wouldn't have been able to get a transplant in the past. **Learn more:** go.nmdp.org/DonorForAll	• May be less likely to work to treat your disease as a closely matched donor. • You may have more complications after transplant, like GVHD. But with medicines like cyclophosphamide, this is improving.

Cord blood unit

These are blood-forming cells from a baby's umbilical cord that's donated after they're born. The baby could be related or unrelated to you.

HLA match		Likelihood of a donor	Benefits	Risks
4/8 or more	Matched or partial	• Depending on your ancestry, you may have about a 40% to 90% chance of finding matching cord blood. • Chances are higher for children.	• Often available right away. • Because the cells haven't matured yet, a partial match may still be an effective option for you. • May work well to treat your disease, with a lower risk of complications after transplant, like GVHD.	• There may not be enough cells. • The cells can take longer to engraft (grow) in your body.

Questions to ask your doctor

- What are my donor options? What are their risks and benefits?
- Which family members will you test? What would they have to do as a donor?
- How will I get updates about my donor search? Who should I call if I have questions about my donor search?
- How do the doctors at this center choose between donor options?
- How much experience does this center have with each donor type?
- Are there clinical trials that may be an option for me?

We're here to help throughout your journey

NMDP℠ has a team dedicated to providing information and support to you before, during and after transplant. You can contact our Patient Support Center to ask questions, get professional or peer support, or request patient education materials.

There's no cost to you.

Call or text: **1 (888) 999-6743**

Email: patientinfo@nmdp.org

Web: nmdp.org/one-on-one or scan QR code

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