

# Existence of HLA-Mismatched Unrelated Donors Closes the Gap in Donor Availability Regardless of Recipient Ancestry

A CIBMTR® (Center for International Blood and Marrow Transplantation®) and National Marrow Donor Program® (NMDP)/Be The Match® observational study

## Highlights for Physicians:

This study demonstrates that allowing for a 5/8 HLA match level could bridge the donor availability gap for ethnically diverse patients in the Be The Match Registry®. Considering mismatched unrelated donor (MMUD) sources, given the many advances in preventing graft-versus-host disease following allogeneic hematopoietic cell transplantation (HCT), can ensure more patients have access to safe and effective transplants. Key findings revealed:

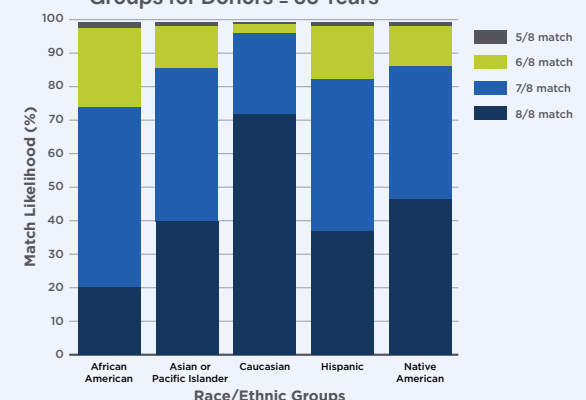
- **The likelihood of finding an 8/8 HLA match in the donor registry varied widely** between ethnically diverse groups, ranging from 16% to 74%.
- **Using a 5/8 HLA match level increased the registry coverage to greater than 99% for all ethnic diversity groups**, even when only considering donors aged ≤ 35 years.
- The study suggests that **using MMUDs with more flexible HLA match levels could potentially close the donor availability gap** across ethnically diverse backgrounds.

## Results at a Glance:

The study used a modeling approach that sampled from HLA haplotype frequencies across 21 detailed race and ethnic groups using data from the Be The Match Registry through 2020, including 23.3 million adult donors. The model estimated match rates at high resolution across four HLA loci (HLA-A, -B, -C, and -DRB1), accounting for partial and ambiguous typing in the actual donor registry.

- The ≥ 5/8 HLA match likelihood increased to ≥ 99% for all groups when considering donors of all ages and donors age ≤ 35 years.
- Real-world data of searches of the Be The Match Registry for patients with no available 8/8 matches from January 2021 to January 2023 indicated that all had numerous mismatched donor options: the median number of donors was 9 for a 7/8 match, 330 for a 6/8 match, and 6654 for a 5/8 match. All but 1 patient had a match at the 5/8 level.
- As the HLA allele match level decreased from 7/8 to 4/8, the number of available donor options increased by a factor of 20 per additional mismatch.

Figure: Match Likelihoods for Racial/Ethnic Groups for Donors ≤ 35 Years



## Advancing Practice and Improving Outcomes:

NMDP/Be The Match and the CIBMTR are committed to ensuring all patients have access to transplantation. Our research programs are dedicated to evaluating novel strategies to increase access and equity, especially for ethnically diverse patients.

You can support your patient's journey both pre- and post-transplant by:

- Performing HLA typing at the time of diagnosis to start the donor search early for all patients.
- Referring early for a consult to discuss not just transplant, but all options for the patient to reduce barriers to care.
- Accessing tools and resources to stay updated on recent evidence-based practice that can potentially transform the standards of care for your patients, including the use of MMUD donor sources.

Read the publication in *Transplantation and Cellular Therapy* (DOI:10.1016/j.jtct.2023.08.014).

To review more clinical research, visit [BeTheMatchClinical.org/Research](https://BeTheMatchClinical.org/Research)