

# Southern Europeans, non-Europeans less likely to have matched stem cell donors

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Although the pool of registered bone marrow donors has increased in recent years, a new study suggests that most people of southern-European and non-European descent are unlikely to have a suitable match if they need a life-saving bone marrow transplant.

If an immediate registry search does not identify a [donor](#), alternative transplant strategies should be considered according to Juliet Barker, MBBS, Director of the Cord Blood Transplant Program at Memorial Sloan Kettering Cancer Center in New York City, author of a study published online today in *Blood Advances*, a Journal of the American Society of Hematology (ASH).

A bone marrow transplant is a potentially life-saving procedure in which the patient's cells are replaced with healthy new ones. The ideal donor is usually a brother or sister with the same genetic markers as the recipient. However, for those who do not have a suitable sibling, transplant from a matched unrelated volunteer donor is usually considered the next best option.

At the Memorial Sloan Kettering Cancer Center's Adult Bone Marrow Service, a large and ethnically diverse transplant program where this study was conducted, approximately 75 percent of [patients](#) do not have a sibling match.

Dr. Barker and her team followed 1,312 patients who needed a bone marrow transplant for treatment of life-threatening blood cancers and who initiated donor searches from 2005-2017. All patients shared their family history as far back as known, including where they were born, what they considered their race and ethnicity to be, and where their parents and grandparents were born. Researchers categorized the patients into groups in terms of their racial and ethnic origins and tracked if they could go to transplant with a matched adult donor, or whether they required a mismatched adult donor or a transplant using

neonatal cord blood cells.

Dr. Barker and colleagues report that people of European descent were more likely to receive a transplant from an unrelated fully matched donor than were non-Europeans. Of the total Europeans in the study, 67 percent received a matched transplant compared to 33 percent of non-Europeans (including Asians, White Hispanics, and Africans).

Compared to people from other parts of Europe, the majority of Southern Europeans were unlikely to have a fully matched donor (41% Southern Europeans v. 64-77% for other European patients). Southern Europeans' rate of receiving a match was closer to the rates observed with Asians and White Hispanics. Individuals of African descent were least likely to undergo transplantation from a fully matched donor.

"We have identified tremendous racial and ethnic disparity in transplant access," said Dr. Barker. "What's more, it has been thought by some that if you just increase the number of registered adult donors that it would resolve this problem, but it hasn't. This study provides a clear demonstration of how important it is to fund initiatives that will improve outcomes of alternative donor transplantation including the use of unrelated donor cord blood."

"It has been previously recognized that non-European patients have difficulties finding a match. But we have also found that those originating from the south of Europe can also be difficult to match. This hasn't always been widely appreciated," said Dr. Barker. "It is also important to fully understand the patient's ancestry as it cannot be assumed that a patient who is predominantly European, but may have part non-European origins, is going to have a match."

The majority of those who did not have a full match

either received partial match (17% of all patients) or cord blood transplant (24%). Of all patients, 4 percent did not receive any type of [transplant](#). The majority of these individuals were of African descent.

"Transplant centers now have the technology to search adult donor registries and immediately estimate the chance their patient will have a matched donor," said Dr. Barker. "If the search is poor, centers should immediately pursue alternative donors. Futile adult donor searches and donor drives should be abandoned. This is more and more important as our population increasingly becomes more diverse."

**More information:** Racial disparities in access to HLA-matched unrelated donor transplants: a prospective 1312-patient analysis, *Blood Advances*, DOI: [10.1182/bloodadvances.2018028662](https://doi.org/10.1182/bloodadvances.2018028662) , [www.bloodadvances.org/content/3/7/939](http://www.bloodadvances.org/content/3/7/939)

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