

Race, genes, and other things affect how well BMT works



Both race and genes may affect how well blood or marrow transplant (BMT) works, according to a new study.

Scientists studied 27,000 people who got BMT during 1988 to 2016 in North America or Japan. Everyone got BMT from a donor who was not related to them.

People's survival after transplant was linked to both their race and their genes. The researchers looked specifically at human leukocyte antigen (HLA) genes.

Previous studies have shown that BMT works best when:

- Donor and patient have fully matched HLA genes
- Patient has TT leader HLA-B genes
- Patient has FEY-negative HLA-DRB1 genes

These ideal circumstances were most common for Japanese patients. They lived longer than White American patients. In turn, White American patients lived longer than Black and African American patients.

Keep in mind

This study did not look at social and economic inequities. However, other studies have shown that lower income and poor health insurance coverage also can contribute to worse health. However, there are now more programs available to help people afford BMT and other healthcare.

This study did find that Black and African American patients now live longer after BMT than they did years ago.

What's next

More research is needed to look at genetics beyond the HLA genes, as well as to find new therapies to help people with high-risk types of cancer. Also, research is needed to consider modern therapies, such as post-transplant cyclophosphamide.

Ask your doctor

What treatments are the best choice for me? What programs can help me pay for BMT?

Learn more about

- [Support for you and your family at BeTheMatch.org](https://www.bethematch.org)
- [Clinical trials and BMT at CTsearchsupport.org](https://www.ctsearchsupport.org)
- [More study summaries at CIBMTR.org](https://www.cibmtr.org)

Source

Morishima Y, Morishima S, Stevenson P, et al. [Race and Survival in Unrelated Hematopoietic Cell Transplantation](#). *Transplantation and Cellular Therapy*. 2022. Epub 2022/04/12. doi: 10.1016/j.jtct.2022.03.026

About this research summary

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.

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This plain-language summary was written by Jennifer Motl at the Medical College of Wisconsin and reviewed by an author of the full article. © 2022 by CIBMTR, license [CC BY-SA 4.0](#).