RESEARCH

NATIONAL MARROW DONOR PROGRAM® BE THE MATCH®

A comparison of blood or marrow transplantation outcomes for the four most common adult donor types among patients with myelofibrosis

WHAT?

- Observational study using the Center for International Blood and Marrow Transplant Research (CIBMTR) database
- Conducted by the CIBMTR Chronic Leukemia Working Committee

WHY?

A prior study comparing donor sources for blood or marrow transplant (BMT) to treat myelofibrosis demonstrated superior outcomes for matched sibling donors (MSD) versus matched unrelated donors (MUD). A comparison of outcomes for the four common adult donor types had not been reported.

WHEN?

2013–2019

WHO?

1,057 adult patients receiving a first BMT using peripheral blood stem cell grafts from one of the following donor sources to treat myelofibrosis:

- Matched sibling donor (MSD)
- Matched unrelated donor (MUD)
- Mismatched unrelated donor (MMUD)
- Haploidentical (half-matched) related donor (HD)

RESULTS

Alternative donor sources had roughly equivalent outcomes as MSD BMT, indicating that availability of a particular donor choice shouldn't be a barrier to transplant.

Additionally, a recent randomized study established the superiority of post-transplant cyclophosphamide (PTCy) based GVHD prophylaxis with any donor type and that study did not include patients with myelofibrosis. This study included PTCy with HD but the majority patients with other donors did not use PTCy. Additional analysis in the study are underway to investigate outcomes with HD and other donors who specifically received PTCy.

IMPACT

When it's available, a transplant from a MSD is preferable for patients with myelofibrosis. When a MSD isn't available, MUD, MMUD and HD were shown to be safe options.

FROM THE EXPERTS

Access to transplantation, which remains the only potential curative approach for myelofibrosis, is a critical unmet need. Our study elucidates the role of haploidentical (half-matched) donor blood or marrow transplantation (BMT) in myelofibrosis and demonstrates that long-term outcomes are nearly equivalent between all donor types.

As has been previously shown in other diagnoses, haploidentical donors often offer the only opportunity of BMT in patients with non-White/Caucasian ethnicities in myelofibrosis. In a malignancy where timing to BMT is of the essence, our study supports identifying the donor who is most readily available. Limitation of donor matching should not preclude timely BMT in these patients. Efforts are now needed to develop strategies to improve engraftment and lower relapse rates with BMT."

Tania Jain, MBBS
Assistant Professor of Oncology
Director, Immune Effector Cell Therapy Program
Division of Hematological Malignancies and Blood or Marrow Transplantation
The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University

#BeTheMatch