

A Comparative Study of BMT Outcomes: Younger MUD vs. Younger & Older Haploidentical Donors

WHAT?

Comparison of blood or marrow transplant (BMT) outcomes between younger matched unrelated donors (MUD) and younger/older haploidentical (half-matched) donors using reduced intensity conditioning (RIC) and post-transplant cyclophosphamide (PTCy) graft-versus-host disease (GVHD) prevention

- There is a need to:
 - Further understand and improve the outcomes of BMT for acute myeloid leukemia (AML)
 - Understand the impact of donor type and donor age on BMT outcomes in patients with AML
 - Guide the selection of donors for BMT using PTCy GVHD prevention

WHY?

WHEN?

Patients underwent BMT from **2011-2018**

- 775 AML patients:
 - 84 with a younger MUD (under 35 years old)
 - 302 with a younger haploidentical donor (under 35 years old)
 - 389 with an older haploidentical donor (35 years old or older)

WHO?

RESULTS

- BMT with a younger MUD showed better overall survival compared to both younger and older haploidentical donor BMT
- Both younger and older haploidentical donor BMT were associated with a higher risk of non-relapse mortality (NRM)
- Older haploidentical donor BMT was associated with a higher risk for acute GVHD compared to the younger MUD group
- Relapse rates and chronic GVHD were not significantly different between the different donor groups

Read the BMT Outcomes Donor Age study results in Transplantation and Cellular Therapy (DOI: [10.1016/j.jtct.2023.03.028](https://doi.org/10.1016/j.jtct.2023.03.028))

IMPACT

- The study highlights the importance of donor selection in BMT, showing improved outcomes with younger MUDs compared to younger or older haploidentical donors
- A young MUD may be preferred over a younger haploidentical donor, and a MUD should be chosen when available

FROM THE EXPERTS

“With a rapidly increasing rate of haploidentical hematopoietic cell transplantations and growing use of HLA-matched unrelated donor transplantations using post-transplantation cyclophosphamide for GVHD prophylaxis, it is crucial to understand how these two platforms compare after accounting for factors including donor age, which is an independent significant predictor of outcomes.”



Rohtesh S. Mehta, MD MPH MS

Associate Professor, Clinical Research, Fred Hutch Cancer Center
Associate Professor, University of Washington School of Medicine



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