Germline Predisposition Traits in Allogeneic Hematopoietic Cell Transplant for Myelodysplastic Syndromes

A study from the European Society for Blood and Marrow Transplantation (EBMT)

Study Details:

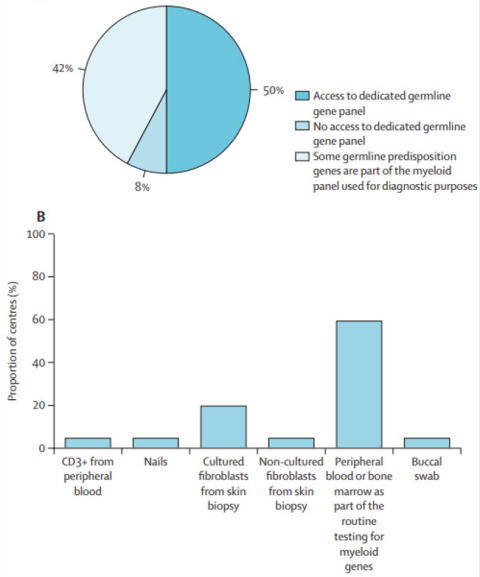
This study focused on understanding the usage of genetic testing for myelodysplastic syndrome (MDS) and establishing guidelines for detecting genetic predispositions. Recognizing the growing awareness of germline (inherited) variants that increase susceptibility to myeloid neoplasms like MDS, the research sought to address the need for standardized patient management, genetic counseling, and donor selection strategies.

An electronic survey was disseminated among selected EBMT centers and a panel of 19 global experts to gather insights into current practices and opinions on evaluating germline predisposition in the context of allogeneic hematopoietic cell transplantation (alloHCT).

Results at a Glance:

- Significant variability was observed in genetic testing practices among 26 responding centers across 12 countries.
- Results suggest that the identification of a germline variant known to be linked to MDS pathobiology should prompt an automatic unrelated donor search to understand options for alloHCT.
- Germline predisposition for MDS also has implications for donor selection since donors with these mutations may produce greater chances of donor-derived leukemia in the patient.
- Findings underscore the need for systematic and standardized methods for identifying germline variants linked to MDS.
- Suggested guidelines emphasize genetic predisposition screening without age limitations, with a focus on pediatric and younger adults, alongside specific protocols for testing and interpreting germline variants.

Figure: Variation in Type of Panel and Source of Germline DNA from EBMT Centers



Clinical Impact:

The study underscores the critical importance of recognizing germline predispositions in the treatment of MDS in the context of alloHCT. It highlights the need for a multidisciplinary approach and specialized care to improve patient outcomes, encourage the use of unrelated donors, and standardize practices across providers. By addressing the variability in genetic testing practices and establishing clear guidelines, this research aims to enhance the management and therapeutic strategies for patients with MDS, ultimately leading to better clinical outcomes and a more personalized approach to treatment.

Scan to review more recent clinical research

Read the published paper in *The Lancet Haematology* (DOI: 10.1016/S2352-3026(23)00265-X).

nmdp FIND CURES. SAVE LIVES.