

## NMDP/CIBMTR donor selection guidelines

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Dehn J, Spellman S, Hurley CK, Shaw BE, Barker JN, Burns LJ, Confer DL, Eapen M, Fernandez-Vina M, Hartzman R, Maiers M, Marino SR, Mueller C, Perales M-A, Rajalingam R, Pidala J. Selection of unrelated donors and cord blood units for hematopoietic cell transplantation: guidelines from the NMDP/CIBMTR. *Blood*. 2019;134(12):924-934.

**1. Your patient is a 36-year-old man with therapy-related leukemia for whom hematopoietic cell transplantation (HCT) from unrelated adult donors or umbilical cord blood is being considered. According to the updated evidence-based National Marrow Donor Program (NMDP)/Center for International Blood and Marrow Transplant Research (CIBMTR) guidelines by Dehn and colleagues, which of the following statements about the selection of adult unrelated donors for HCT is correct?**

- When 8/8 HLA-matched unrelated donors are unavailable, only related haploidentical donors should be used
- For HCT utilizing adult unrelated donors and conventional graft-versus-host disease prophylaxis, sufficient high-resolution donor-recipient HLA match is of primary importance
- When no 8/8, but multiple 7/8, unrelated donors are available, HLA-C\*03:04 vs HLA-C\*03:03 is the only mismatch for which outcomes posttransplant are worse
- When the patient has donor-specific antibody, DQA1 and DPA1 allotype mismatches can be disregarded

**2. According to the updated evidence-based NMDP/CIBMTR guidelines by Dehn and colleagues, which of the following statements about the selection of umbilical cord blood units for HCT is correct?**

- Optimal unit selection for cord blood transplantation (CBT) requires consideration of unit quality, cell dose, and HLA match, with non-HLA factors as critical as HLA matching
- For a traditional match, donor-recipient HLA match must be  $\geq 5/6$  HLA-A,-B antigen and HLA-DRB1 high-resolution
- The minimum total nucleated cell dose per kilogram for single-unit CBT using cryopreserved cells is  $\geq 1.5 \times 10^7/\text{kg}$  and for CD34<sup>+</sup> cells is  $\geq 1 \times 10^5/\text{kg}$
- In terms of bank practices, use of red blood cell-replete units is mandatory

**3. According to the updated evidence-based NMDP/CIBMTR guidelines by Dehn and colleagues, which of the following statements about adult donor search, optimal HLA donor-recipient matching criteria, and other factors affecting graft selection is correct?**

- Search should be based only on high-resolution HLA-A, HLA-B, HLA-C, HLA-DRB1, and HLA-DPB1 HLA typing
- The NMDP search algorithm, HapLogic, does not consider frequencies of alleles and haplotypes defined by ethnic populations
- The optimal number of potential donors to select from the search report for additional HLA typing should be the same for each patient
- Transplant centers should set an acceptable time limit for donor search while initiating concurrent activities for other acceptable options (eg, cord blood or mismatched related or unrelated donor)