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Blood 142 (2023) 4932–4934

The 65th ASH Annual Meeting Abstracts

POSTER ABSTRACTS

722.ALLOGENEIC TRANSPLANTATION: ACUTE AND CHRONIC GVHD, IMMUNE RECONSTITUTION

Score to Guide Donor Choice in Haploidentical Stem Cell Transplant Using Post-Transplant Cyclophosphamide for Patients with Acute Myeloid Leukemia: A Study from the Acute Leukemia Working Party of the EBMT

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Introduction: There is paucity of information to guide selection of the most appropriate stem cell donor for haploidentical (Haplo) hematopoietic stem cell transplant (HSCT).
Patients and Methods: We retrospectively analyzed the characteristics of haploidentical family donors that may affect transplant outcomes in patients with acute myeloid leukemia (AML) who received graft-versus-host disease (GVHD) prophylaxis with postransplant cyclophosphamide (PTCy) registered in the EBMT database. The primary endpoint was GVHD and relapse-free survival (GRFS).
Results: Overall, 2200 patients were included with a median age of 56 years (range, 18-75); 1742 (79%) were in complete remission and 1246 (56.6) received reduced intensity conditioning. Regarding donors, the median age was 37 years (range, 8-71), 820 (37%) were females of which 458 (21%) were used for male recipients, 1252 (57%) had positive CMV serostatus, 1631

(74%) donated peripheral blood (PB) and 1638 (75%) had ≥ 4/8 HLA mismatch with the recipient. 100-day acute GVHD grade II-IV and III-IV and 2-year chronic and chronic extensive GVHD were 28% (95% CI 26-30), 11% (95% CI 10-12), 33% (95% CI 31-35) and 14% (95% CI 12-15), respectively. After median follow-up of 24 months, the cumulative incidence of relapse and non-relapse mortality (NRM) and the probability of leukemia-free survival (LFS), overall survival (OS) and GRFS were 26% (95% CI 24-28), 22% (95% CI 20-24), 52% (95% CI 50-55), 57% (95% CI 55-60) and 41% (95% CI 39-43), respectively. In multivariable analysis, donor-related risk factors with a negative impact on GRFS were older age (HR 1.1; 95% CI 1.04-1.15), use of PB (HR 1.19; 95% CI 1.04-1.37), and female donors to male recipients (HR 1.25; 95% CI 1.09-1.43). We further developed a score that distinguished 4 groups with 0 (241), 1 (913), 2 (863) or 3 (183) donor-related risk factors. GRFS was 57% (95% CI 50-63), 43% (95% CI 39-46), 37% (95% CI 33-40), and 30% (95% CI 23-38), respectively ($P < 0.001$) (Figure 1). The score was also able to stratify risk groups for acute and chronic GVHD, NRM, LFS and OS.
Conclusion: Donor variables have an important impact on AML patient's outcome after Haplo-HSCT using PTCy. With three simple donor characteristics, age, gender and stem cell source, we were able to generate a score that may help to select the most appropriate donor in clinical practice.

Disclosures Blaise: *Jazz Pharmaceuticals:* Honoraria. **Chevallier:** *Sanofi:* Honoraria; *Mallinckrodt Pharmaceuticals:* Honoraria; *Incyte:* Honoraria, Research Funding; *Takeda:* Honoraria; *Immedica Pharma:* Honoraria; *Servier:* Honoraria. **Forcade:** *Novartis:* Consultancy, Other: Travel support, Speakers Bureau; *Alexion:* Other: Travel support, Speakers Bureau; *Gilead Sciences:* Other: Travel support, Speakers Bureau; *GSK:* Speakers Bureau; *Astellas:* Speakers Bureau; *Sanofi:* Speakers Bureau; *MSD:* Other: Travel support. **Kröger:** *Neovii Biotech:* Honoraria, Research Funding; *Takeda:* Consultancy; *BMS:* Honoraria, Research Funding; *Novartis:* Honoraria, Research Funding; *Riemser:* Honoraria, Research Funding; *Pfizer:* Honoraria; *MSD:* Honoraria; *Jazz:* Honoraria; *Kite/Gilead:* Honoraria; *Sanofi:* Honoraria. **Giebel:** *Roche:* Consultancy, Honoraria, Speakers Bureau; *Amgen:* Consultancy, Honoraria, Speakers Bureau; *AstraZeneca:* Consultancy, Honoraria, Speakers Bureau; *Abbvie:* Consultancy, Honoraria, Speakers Bureau; *Gilead:* Consultancy, Honoraria, Speakers Bureau; *Janssen:* Consultancy, Honoraria, Speakers Bureau; *Pfizer:* Consultancy, Honoraria, Speakers Bureau; *Zentiva:* Consultancy, Honoraria; *BMS:* Honoraria, Speakers Bureau; *Angelini:* Honoraria, Speakers Bureau; *Novartis:* Consultancy, Honoraria, Speakers Bureau; *Servier:* Honoraria, Speakers Bureau; *Swixx:* Honoraria, Speakers Bureau. **Mohty:** *JAZZ PHARMACEUTICALS:* Honoraria, Research Funding. **Ciceri:** *ExCellThera:* Other: Scientific Advisory Board .

https://doi.org/10.1182/blood-2023-180075

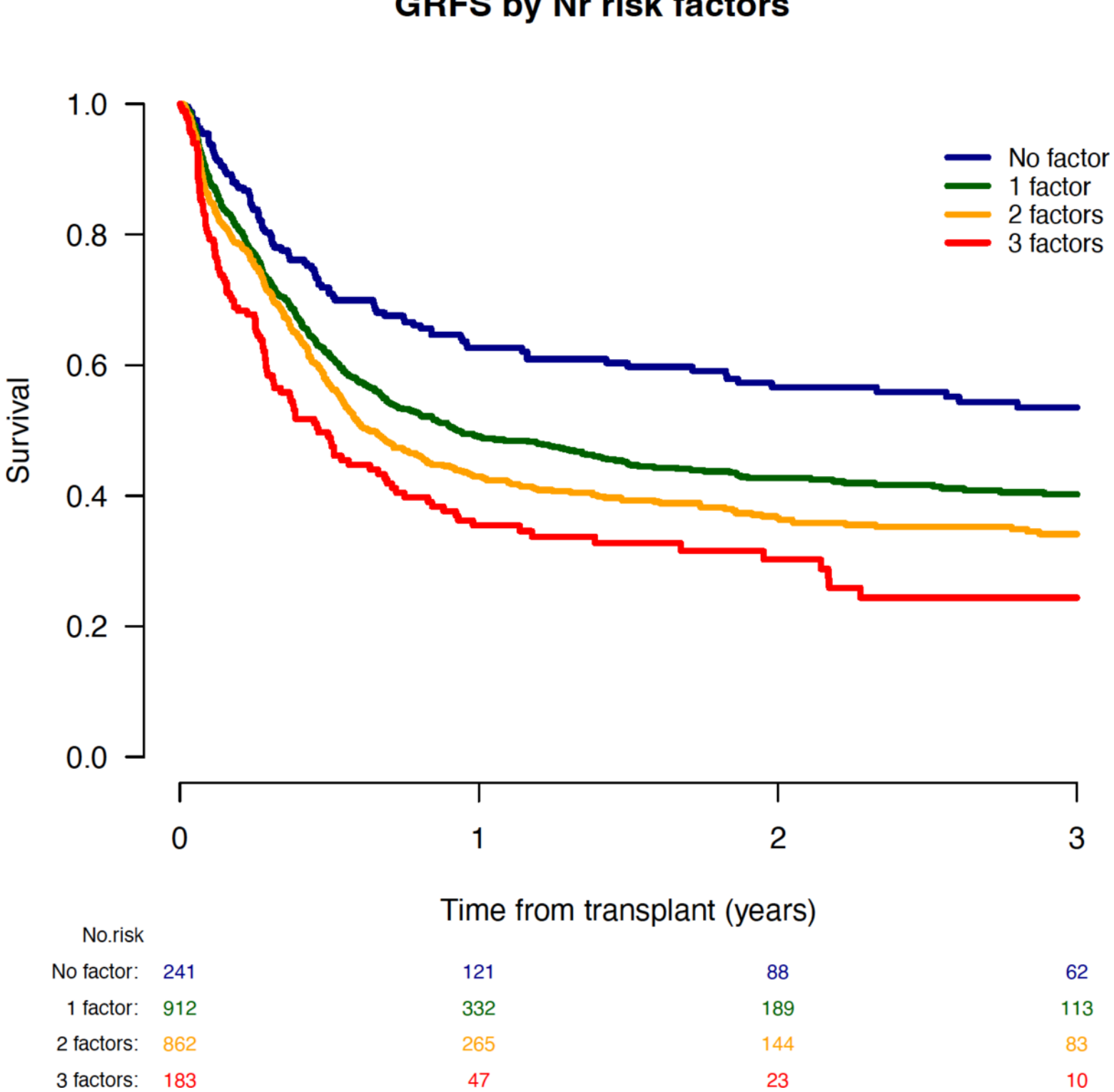

Figure 1