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POSTER ABSTRACTS

721.ALLOGENEIC TRANSPLANTATION: CONDITIONING REGIMENS, ENGRAFTMENT AND ACUTE TOXICITIES

Sequential Conditioning Does Not Improve Outcomes of Allogeneic Stemcell Transplantation in CMML Patients

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Background:
Allogeneic stem cell transplantation (SCT) is potentially curative therapy for patients with CMML.
Data on optimal allo-SCT conditioning in CMML Patients is scarce.
Methods:
This retrospective study from the Department of Stem Cell Transplantation at the University Medical Center Hamburg, Germany, compared allo-SCT outcomes in CMML patients across three conditioning regimes: Thiotepa-Busulfan (TB), Sequential FLAMSA-Busulfan Fludarabine (FLAMSA-FB), and Treosulfan-Fludarabine (Treo-Flu). TB consisted of Thiotapa (5mg/Kg; a total dose of 10mg/Kg) on day -6 and -5 and Busulfan (3.2mg/Kg; total dose 6.4mg/Kg or 9.6mg/Kg) on days -4 and -3 or -4 to -2. FLAMSA-FB regimen consists of fludarabine (30 mg/m ^{2} ; total dose 120 mg/m ^{2}), amsacrine (100 mg/m ^{2} ; total dose 400 mg/m 2), and cytarabine (1 g/m ^{2} ; total dose 4 g/m ^{2}) therapy from days -11 to minus -8, followed by a three-day interval without therapy and Busulfan from day -4 to -2 with a total dose of 6.4mg/Kg and Fludarabine on day -4 and -3 (30 mg/m ^{2}, total dose 60mg/m 2).Treo-Flu regimen consisted of Treosulfan (12 g/m ^{2} , total dose 36 mg/m ^{2}) on days-6 to -4 and fludarabine (30 mg/m ^{2} ; total dose 150 mg/m ^{2}) on days -6 to -2.
Results
Sixty-nine consecutive patients with CMML who underwent allo-SCT between the years 2006-2022. Twenty-two received TB, 27 received FLAMSA-FB, and 20 received Treo-Flu conditioning. Transplant sources included matched related donors (MRD, 8 patients), mismatched related donors (MMRD, 8 from TB), matched unrelated donors (MUD, 31), and mismatched unrelated donors (MMUD, 23) with significant group variations ($p<0.001$). Most Patients received ATLG for GVHD prophylaxis (TB 68%, FLAMSA-FB 93%, Treo-Flu 85%, $p=0.08$). Regarding CPSS-mol scores, the TB group exhibited a significantly higher proportion of high (46%) and intermediate-2 scores (32%) than FLAMSA-FB (11% high, 7% intermediate-2) and Treo-Flu (40% high, 20% intermediate-2) ($p=0.001$). One TB patient experienced primary graft failure, but engraftment times were comparable across groups. Although not statistically significant ($p=0.07$), the TB group showed a trend towards improved 3-year OS rates (84%) compared to FLAMSA-FB (37%) and Treo-Flu (49%). The TB group also displayed significantly higher 3-year PFS rates (79%) compared to FLAMSA-FB and Treo-Flu (both 30%), ($p=0.03$). (Figure 1) No significant differences were observed in 3-year non-relapse mortality (NRM) across the TB (17%), FLAMSA-FB (30%), and Treo-Flu (26%) groups ($p=0.7$). Interestingly, no TB patients relapsed at 3 years, contrasting with the FLAMSA-FB (41%) and Treo-Flu groups (43%, $p=0.02$). Lastly, cumulative incidences of acute GVHD grade II-IV (TB 41%, FLAMSA-FB 35%, Treo-Flu 30%, $p=0.75$) and all-grade chronic GVHD (TB 50%, FLAMSA-FB 65%, Treo-Flu 40%, $p=0.35$) were similar across groups.
Conclusion
Our study suggests that sequential conditioning with FLAMSA-FB does not improve Transplant outcomes in patients undergoing allo-SCT for CMML.

Disclosures No relevant conflicts of interest to declare.

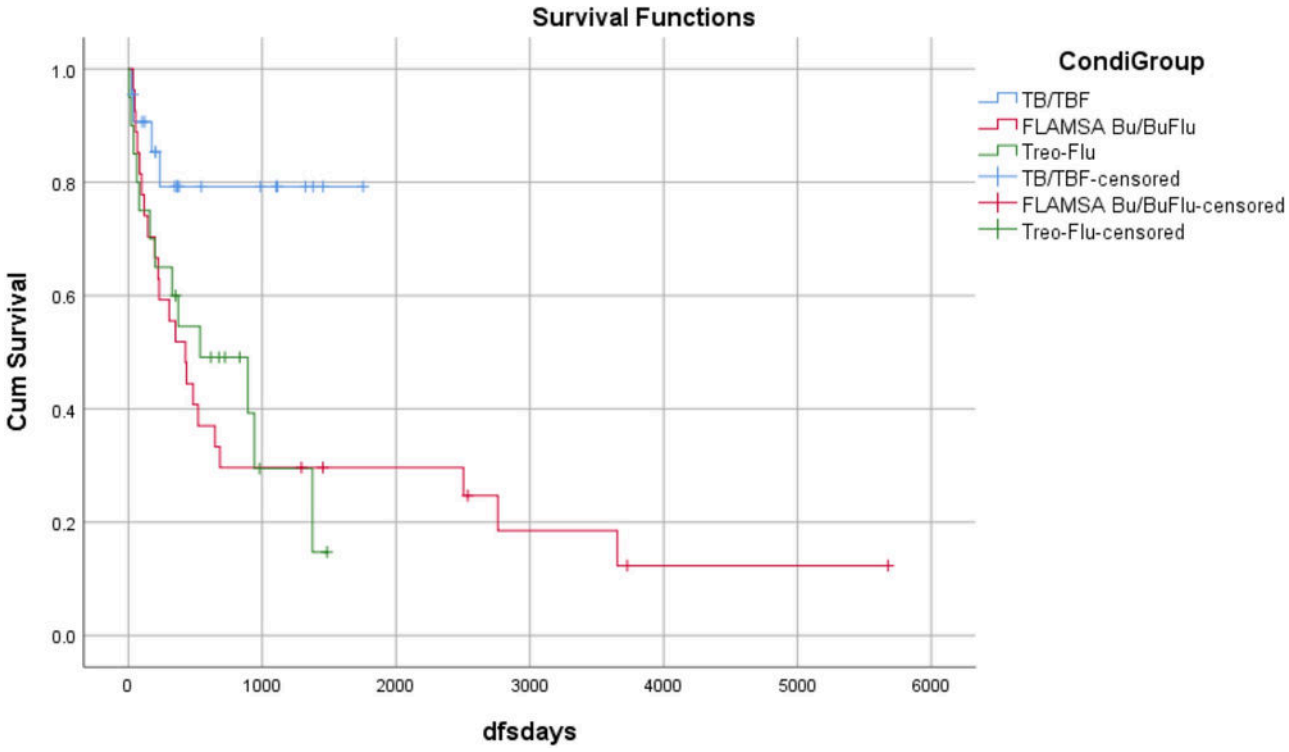

Figure 1

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