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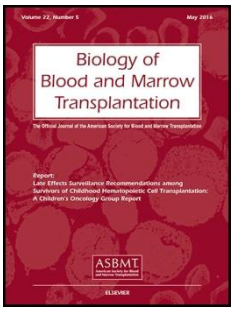

Title: Total Marrow Lymphoid Irradiation/Fludarabine/Melphalan (TFM) Conditioning for Allogeneic Hematopoietic Cell Transplantation (HCT)

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Total Marrow Lymphoid Irradiation/Fludarabine/Melphalan (TFM) Conditioning for Allogeneic Hematopoietic Cell Transplantation (HCT)

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There are no conflicts of interest to disclose.

Highlights

- Focused radiation is a potential strategy to augment reduced intensity conditioning for allogeneic stem cell transplant
- On a prospective trial, patients not eligible for standard myeloablative therapy were treated with total-marrow lymphoid irradiation, fludarabine, and melphalan
- Treatment was well-tolerated with acceptable toxicity and non-relapse mortality
- Outcomes compare favorably with reduced intensity conditioning regimens

ABSTRACT

Background: Reduced intensity conditioning regimens (RIC) for hematopoietic stem cell transplantation (HCT) can reduce morbidity and mortality, but patients with advanced disease may require alternate approaches. In an initial report of RIC (Fludarabine (FLU) and Melphalan (MEL)) with total-marrow-lymphoid irradiation (TMLI) in HCT for advanced hematological malignancies in 33 patients, we found the addition of TMLI to RIC was feasible and safe. Here we report long-term outcomes for these patients.

Methods: This prospective study included 61 patients treated with TMLI to a dose of 12 Gy (1.5 Gy BID x 4 days), FLU (25 mg/m^2/d x 5 days), and MEL (140 mg/m^2/d x 1 day). Overall survival (OS), event free survival (EFS), cumulative incidence of relapse (CIR) and non-relapse mortality (NRM) were measured from date of HCT. Survival outcomes