

## **Comparison of Dual Cord Transplant Outcomes for Myeloablative and Non Myeloablative Preparative Regimens**

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**Background:** Non-myeloablative and reduced-intensity conditioning regimens have been used to retain the desirable effects of standard high-dose conditioning regimens, while significantly reducing transplant-related mortality (TRM) and expanding the number of patients eligible for hematopoietic cell transplants. Fully myeloablative regimens remain as the standard conditioning used for the majority of patients undergoing hematopoietic cell transplantation. A retrospective analysis of patients receiving dual cord blood transplants with one or both units provided by the St. Louis Cord Blood Bank (SLCBB) was performed to compare transplant outcomes for dual cord blood recipients receiving myeloablative and non myeloablative conditioning regimens.

**Methods:** Patients for whom neutrophil recovery could be attributed to a SLCBB product were included in this study. Additional inclusion criteria included transplant for malignant disease and a maximum two Human Leukocyte Antigen (HLA) mismatch for the SLCBB unit. Patients receiving myeloablative (n=75) and non myeloablative (n=44) preparative regimens were evaluated for differences in overall survival, neutrophil recovery, platelet recovery (20,000 and 50,000), incidence and severity of Acute and Chronic graft versus host disease, transplant related mortality, and relapse.

**Results:** Although the non myeloablative group had a significantly higher mean patient age (p=0.007) there was no difference in overall survival, neutrophil recovery, and platelet recovery at counts of 20,000 and 50,000 (p values = 0.88, 0.73, 0.50, and 0.09 respectively). Further, the analysis did not yield significant findings for relapse (p=1.0), transplant related mortality (p=0.38), and incidence and severity of AGVHD (p values = 0.16 and 0.31) and CGHVD (p values = 0.29 and 1.0).

**Conclusions:** This analysis shows that non-myeloablative conditioning regimens have successfully expanded the use of cord blood transplantation to traditionally non-eligible recipients with favorable outcomes.