259 Incidence and Mortality of Adenovirus Infection After Pediatric Allogeneic SCT — A Comparison Between Bone Marrow and CD3/19 Depleted PBSC
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Objective: The goal of this retrospective study was to analyze the clinical outcomes of a large cohort of pediatric and adolescent/young adult (AYA) patients with high-risk acute leukemia (AL) who underwent allogeneic hematopoietic stem cell transplantation (HSCT) with a uniform preparative regimen at Stanford University over the past decade.

Patients and Methods: Data was analyzed for 152 pediatric and AYA patients between the ages of 0-21 years who received HSCT for acute leukemia at Stanford University since 2001. This cohort included patients with acute lymphoblastic leukemia (ALL, n=86), acute myelogenous leukemia (AML; n=61), and biphenotypic leukemia (n=5). Both related and unrelated donors were used, including bone marrow, cord blood, and peripheral blood stem cell sources. The majority of patients received FTBI/cyclophosphamide or FTBI/etoposide conditioning. Kaplan-Meier curves were generated to evaluate overall survival (OS)and relapse free survival (RFS) based on era of treatment, diagnosis, donor source, and disease status at time of transplant.

Results: Significant improvement in early outcomes at 1 and 3 years was noted for patients who were treated over the last decade regardless of diagnosis or disease status at the time of transplant and 1 and 5 year overall survival for ALL improved from 57% and 46% prior to 2001 to 92% and 74% since 2006. The best long term survival (69% at 5 years) was observed for ALL in first complete remission (CR1). Five year OS decreased incrementally for patients in CR2 (59%) and CR3+ (34%). Interestingly 5 year OS in ALL was greater in patients who received an unrelated donor (URD) transplant for ALL (67%) as compared to those who had a sibling donor (51%).

Conclusions: The improved outcomes seen in pediatric and AYA patients transplanted for leukemia indicate the beneficial effects of improved supportive care, earlier use of SCT in high risk patients, and improved identification of alternate donors (URD). Importantly, patients with ALL had higher early and long-term overall and relapse-free survival, with better outcomes for patients transplanted in CR1. The data presented demonstrate that HSCT can be beneficial and should be considered, even for patients with advanced disease. The improved overall and relapse free survival in our