Table
Multivariate analysis for overall survival after HCT

Variable	Hazard ratio	95% CI	*P* value
Race Ethnicity			
White	1.0		
Non-white/ Hispanic	**1.72**	**1.03 to 2.87**	**0.04**
Age			
<50	1.0		
≥ 50	1.60	0.95 to 2.70	0.07
Disease			
Lymphoma	1.0		
Leukemia/ MDS	1.18	0.58 to 2.42	0.64
Others	1.36	0.42 to 4.41	0.6
Disease risk			
Low	1.0		
Intermediate	1.24	0.66 to 2.35	0.5
High	**2.36**	**1.39 to 4.00**	**0.001**
Donor			
Related	1.0		
Unrelated	1.45	0.94 to 2.22	0.08
Conditioning			
Reduced intensity	1.0		
Myeloablative	1.39	0.85 to 2.3	0.19
Karnofsky performance score			
100	1.0		
<100	**2.92**	**1.82 to 4.69**	**< .001**
HCT-CI score	1.08	0.97 to 1.19	0.13
CMV status			
D-/R-	1.0		
Others	1.5	0.85 to 2.64	0.16
Employment status			
Employed	1.0		
Unemployed	1.03	0.63 to 1.69	0.9
Retired	1.44	0.84 to 2.48	0.18

Higher risk of mortality from HCT in the ethnic minorities underscores the need for better understanding of the factors responsible for differential outcomes and continued efforts to eliminate disparities in access and outcomes of HCT.

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Outcome of Second Transplants in Pediatric Patients with Hematological Malignancies After a Hematopoietic Stem Cell Transplant (HSCT) From a Different Donor. Assessment of Chimerism by Real -Time PCR to Determine the Risk of Relapse

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A retrospective analysis of 13 patients (9 males, 4 females) aged 1-16 (median, 9) years were transplanted at Lurie Children's between 2002 to 2011 (AML n= 2, ALL n=11). Donor sources for the 1st HSCT were 8 match related sibling (MRS) and 5 unrelated (2/5 cord blood) and for the 2nd HSCT were 5 MRS and 8 unrelated. Two conditioning regimens; A: fractionated TBI 1200cGy in 150cGy fractions from day -7 to -4, Etoposide 1000 mg/m^2 from day -3 and Cyclophosphamide 60 mg/Kg day -3 to day -1, 1st HSCT (n=7) and 2nd HSCT (n=6), B: Fludarabine 30 mg/m^2/day from day -10 to -6, Busulfan (dose based on PK of the test dose to achieve an AUC 4000microM-min/day) day -5, -4 and ATG (rabbit ATG) 2 mg/kg from day -4 to -9, 1st HSCT (n=3) and 2nd HSCT (n=10). GVHD prophylaxis was regimen specific for regimen A (CSA/Tacro, short course MTX ± ATG) and regimen B (CSA/Tacro, MMF ±ECP). Chimerism was evaluated by real-time PCR (Applied Biosystems 7500) using AlleleSEQR (Cellera), weekly after the second week, full donor chimerism (FDC) was defined as >98% ± 1%. Median time from diagnosis to 1st HSCT was 202 days. The median time from the 1st to the 2nd HSCT was 531 days. ANC > 500 /μL was achieved at a median of 15 (10-39) days in the 1st, compared to 18.5 (10-25) days after the 2nd ($P = .7$). Un-sustained platelet count >20.0/ μL was attained at a median of 16.5 (1-54) days and 19 (0-54) days at 1st and 2nd ($P = .8$), respectively. FDC was achieved at a median of 34.5 (12-63) days in 13/13 after the 1st and a median of 44 (22-108) days in 10/13 after the 2nd. The median follow-up after the 2nd HSCT was 1259 (35-3508) days. The Kaplan- Meier estimates of survival at 3 and 5 years were 69.2% and 43.3%, respectively (median follow up of 1735 days). Seven patients (1 with partial chimerism, 6 with FDC) are alive after the 2nd HSCT, free of disease with a median follow up of 1562 (range 915-3508) days. Six patients have expired, three of cGVHD complications in remission (3 with FDC) and three patients expired from progressive leukemia (2 with partial chimerism). Patients who relapse after the 1st myeloablative HSCT can be successfully treated with a 2nd HSCT from a different donor. Patients who did not achieve a FDC after the 2nd transplant were at a higher risk of relapse. One patient with partial chimerism has remained in CR after developing graft failure after the 2nd HSCT, but achieving FDC from the first donor. Patients who developed cGVHD after the 2nd transplant with a FDC did not relapse but died of cGVHD complications in remission. All but one of the surviving patients has cGVHD. Chimerism analysis is the index for which the risk of relapse is determined. Larger number of patients will be needed to confirm these preliminary observations.

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Outcome of Allogeneic Hematopoietic Stem Cell Transplantation for Severe Aplastic Anemia Using Fludarabine, Reduced-Dose Cyclophosphamide, and ATG

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Background: Although allogeneic hematopoietic stem cell transplantation (HSCT) has been widely performed for severe aplastic anemia (SAA), the standard conditioning regimen has yet to be established. Recently, the outcomes of a variety of reduced-intensity conditioning regimens using fludarabine have been reported.
Aims: We have retrospectively evaluated the safety and efficacy of allogeneic HSCT for SAA using fludarabine, reduced-dose cyclophosphamide, and ATG.
Patients & Methods: Six patients (median age 30 (range: 22-61)) with SAA who underwent allogeneic bone marrow transplantation from an HLA-identical sibling (n=3) or an HLA-matched unrelated donor (n=3) were evaluated. Conditioning included fludarabine (120 mg/m^2), cyclophosphamide (100 mg/kg), and ATG (Thymoglobulin; 3.75 mg/kg). In addition, 2 Gy of TBI (with ovarian shielding for young female patients) was delivered for heavily transfused patients or HSCT from an unrelated donor. For the prophylaxis of graft-versus-host disease (GVHD), cyclosporine A or tacrolimus with short-term methotrexate was given.
Results: The transplant procedure was generally well-tolerated and there were no life-threatening complications. All patients achieved neutrophil and platelet engraftment and became transfusion independent. Full donor chimerism was confirmed on whole bone marrow cells at day 28 after transplantation. Only one patient developed acute GVHD (grade II) and none developed chronic GVHD. With a median follow-up period of 15.9 months (range: 11.6-22.4 months),