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Overall Survival (OS) of Pediatric Patients with Moderate to Severe Chronic Graft Vs. Host Disease (CGVHD). a Single Institution Experience

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CGVHD is a major complication with high morbidity and mortality post allogeneic hematopoietic cell transplants (HCT). An IRB approved retrospective review of 338 pediatric survivors of HCT (>1yr) between 1992-2012 at Lurie Children's Hospital was performed. Forty nine patients met NIH criteria for moderate to severe CGVHD. Patient characteristics are shown in table 1. The prevalence of CGVHD was 14%. The median time from transplant to diagnosis of CGVHD was 0.49 (0-9.6) years. Hazard ratios (HR) & 95% CI for OS by Cox Log rank analysis were: related vs. unrelated donor (2.54, CI 1.11-5.7) Fig 1; BM vs. PBSC (0.33, CI 0.13-0.85) Fig 2; degree of matching (0.56, CI 0.20-1.5) Fig 3 and Myeloablative conditioning (MCR) vs. Reduced Intensity (RIC) (1.9, CI 0.80-4.8 p=0.14). The OS at 5 years was 55% and at 10 years 46%. The major causes of mortality were: CGVHD (6), Infection (9), Disease progression (2), Cardiac (2), renal failure (1) and unknown (2). Factors associated with a poorer survival are degree of matching (≥2 antigen mismatches), related vs. unrelated and BM vs. PBSC. We could not find a difference in OS between RIC vs. MCR. The main cause of death was infection and progression of CGVHD (pulmonary).

Table 1
Patient Characteristics

Age (median)	11 ± 6.4 y
Gender	
M/F	33/16
Ethnicity	
Caucasian	31
Hispanic	8
African American	8
Other	2
Diagnosis	
Malignancy	40
Other	9
Stem Cell Source	
Related	25
Un-related	24
Marrow	10
PBSC	36
UCB	3
CD 34 cell dose (median)	6.7 X10^6/kg (.26-29)
HLA Matched	
Matched	32
1 Antigen Mismatch	13
≥2 Antigen Mismatch	4
Conditioning Regimen	
Myeloablative	34
Reduced intensity	15
Disease Status at transplant (Malignancy patients)	
CR 1	12
CR2	21
≥CR3	7
CGVHD organ involvement	
Moderate	12
Severe	37

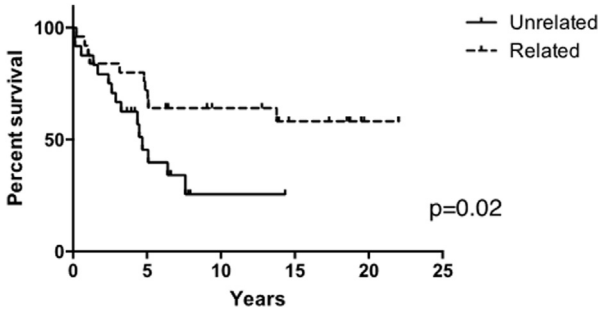

Figure 1. OS of Unrelated vs Related

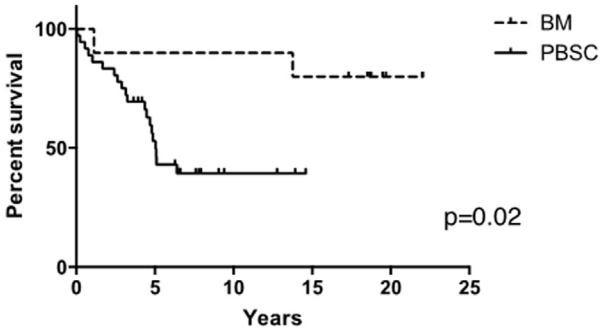

Figure 2. OS of BM vs. PBSC

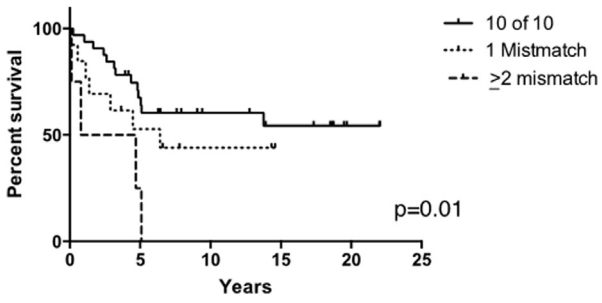

Figure 3. OS by Degree of Matching

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Treatment with Human Mesenchymal Stem Cells (Remestemcel-L) Is Effective in Pediatric Patients with Refractory Acute Graft Versus Host Disease

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