Graft-versus-host-disease (GvHD) prophylaxis included Tacrolimus based (n=52), Cyclosporine based (n=27) and other regimens (n=2). 37 patients received PBPC and 44 received BM transplant. The overall survival (OS), disease free survival (DFS) and non-relapse mortality (NRM) at 1 year were 38%, 31%, and 32% respectively. Results of the univariate analysis for various potential prognosis factors are shown in the Table. First CR of more than 1 year and performance status of 0 at transplantation were predictors of better OS, and DFS at 1 year. **Conclusion:** In patients with untreated First Relapse AML/MDS, longer duration of first CR and better performance status were predictors of better outcomes of allogeneic HSCT in this patient population. These patients could be considered for allogeneic HSCT upon their first relapses. Development of better treatment strategies may help to improve outcomes in other patients without these good prognostic factors.

Univariate Analysis of Prognostic Factors for Outcomes

Variable	OS at 1 Year	p Value*	DFS at 1 Year	p Value*	NRM at 1 Year	p Value*
AML	33%		25%		30%	
MDS	29%	NS	21%	NS	48%	NS
AML/MDS	43%	NS	43%	NS	33%	NS
Duration of first CR >1 year	66%		61%		16%	
Duration of first CR <1 year	30%	0.01	26%	0.003	25%	0.9
Absence of PB blast at relapse	45%		38%		31%	
Presence of PB blast at relapse	37%	NS	35%	NS	25%	NS
BM Leukemic Infiltrate <10%	32%		25%		33%	
BM Leukemic Infiltrate >10%	52%	NS	40%	NS	18%	NS
Poor risk cytogenetic results at relapse	34%		24%		37%	
Other cytogenetic results at relapse	41%	NS	40%	NS	25%	NS
Performance status 0 at transplant	46%		46%		16%	
Performance status >0 at transplant	32%	0.02	25%	0.01	31%	0.1

*By log rank test, NS indicates not significant.

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DEVELOPMENT OF GRAFT-VERSUS-HOST DISEASE DEPENDS UPON ESTABLISHMENT OF COMPLETE DONOR T CELL CHIMERISM AFTER T CELL DEPLETED, REDUCED INTENSITY HEMATOPOIETIC STEM CELL TRANSPLANTATION

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Introduction: As part of a protocol to study the influence of host immunodepletion on engraftment, in which we administered DLI after TCD-RIST, we were able to analyze the effect of donor engraftment on the development of GVHD. **Methods:** Eighteen patients with metastatic breast cancer were enrolled. Each received 1–2 cycles of cyclophosphamide (600 mg/m^2/day) and fludarabine (30 mg/m^2/day) for four days, to a target CD4 count of 50 cells/μl. Pts then received fludarabine (30 mg/m^2/day) and cyclophosphamide (1200 mg/m^2/day) from day −6 to −3 prior to matched sibling donor allotransplantation. The allografts were TCD by sequential CD34 positive-selection and negative selection using monoclonal antibodies against CD2, CD6, and CD7, with T cell add-back to an adjusted dose 1×10^5 CD3$^+$ cells/kg. Pts received a minimum of 5×10^6 CD34$^+$ cells/kg. Pts received full dose cyclosporine A (CsA) until day +28 followed by tapering over twelve days. Pts without GVHD received 1, 5, and 10×10^6 CD3$^+$ cells/kg on days +42, +70, +98, respectively. Pts were eligible to receive additional DLI beyond day +98. **Results:** Two pts died before day 28 and were not included in the analysis. All remaining pts achieved complete donor T cell engraftment upon completion of scheduled DLI. Nine pts (56%) developed grade II-IV acute GVHD. Four of 14 evaluable pts (29%) developed chronic GVHD, two extensive. Development of GVHD was associated with complete (>90%) donor T cell chimerism ($p<.005$); only one patient with mixed T cell chimerism developed GVHD. There was no association between the absolute lymphocyte count and either GVHD or establishment of chimerism. Three of 16 pts (19%) did not receive DLI due to GVHD. Five of 16 pts (31%) received one or two of three planned DLI. Six received more than three DLI, for disease control. There was no correlation between the number or dose of DLI administered and the development of GVHD. **Conclusions:** In marked contrast to reports of non-myeloablative HST, we found a strong association between complete donor T cell engraftment and the development of GVHD following RIST, suggesting a suppressive effect of recipient T cells. This could be from direct cytotoxicity or the activity of a regulatory subset, controlling alloreactivity until full donor chimerism is established. While lower rates of GVHD following RIST have been reported, T cell chimerism may be confounding.

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ESTABLISHMENT OF A NATIONAL CORD BLOOD BANKING NETWORK THROUGH THE NATIONAL MARROW DONOR PROGRAM

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The majority of patients in need of a bone marrow or stem cell transplant do not have a matched related family member to serve as their donor. Over 17 years ago, the National Marrow Donor Program was established to provide a registry of volunteer adult unrelated donors for patients in need of a hematopoietic stem cell transplant. The NMDP lists >5,000,000 adult donors and has facilitated >20,000 transplants to date. Despite this success, approximately 30% of Caucasian and 80% of African American and Asian patients are unable to find a suitably matched adult volunteer donor. Over the past 11 years, studies have demonstrated that banked unrelated donor, partially HLA mismatched umbilical cord blood (UCB) could serve as an alternative source of hematopoietic stem and progenitor cells for allogeneic transplantation. UCB may increase access to transplantation therapy for patients lacking a matched donor, particularly those of ethnic or racial minority backgrounds. To date, approximately 14 public cord blood banks have been established in the U.S. creating a heterogeneous inventory of approximately 50,000 cord blood units (CBUs). Uniform standards were not followed by the different banks and all lack sufficient inventory of HLA diverse, large CBUs. Over the past year, 13 U.S. banks have voluntarily joined together to create a network of public cord blood banks as part of the NMDP. A steering committee was established comprised of cord blood bank directors, transplanters, experts in HLA, an ethicist, representation from FDA and HRSA with experts in information technology (IT) and administrative support from the NMDP. The committee adopted uniform standards for cord blood donor recruitment and screening, donor education and consent, medical histories, infectious disease and hemoglobinopathy testing, cord blood collection, processing, testing, cryopreservation and storage. Subcommittees for quality standards, collection, education, research, IT, economies, bank/transplant center interface and proficiency testing were developed with active ongoing agendas. Management systems for UCB donor searches, collection, analysis and distribution of clinical outcomes data back to the banks are being established. This NMDP Cord Blood Banking Network represents the first cooperative effort unifying the majority of public cord blood banks in the U.S. Importantly, all CBUs will be listed on a single web-based search registry providing easy access to all NMDP Transplant Centers.