regimens produce encouraging long term survival, with a low incidence of and low-toxicity rejection, especially in patients with early disease. The addition of MEL or TBI reduces RRD, but increases significantly TRM and does not improve survival. Disease phase remains a major predictor of outcome.

225 KEPIVANCE USE IN ALLOGENEIC STEM CELL TRANSPLANTATION
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Kepivance (palifermin) is a human keratinocyte growth factor produced by recombinant DNA technology. Kepivance is indicated to decrease the incidence and duration of severe oral mucositis in patients with hematologic malignancies receiving myelo-toxic therapy requiring hematopoietic stem cell support. Graft vs. host disease remains as one of the major obstacles in allogeneic stem cell transplantation. The role inflammatory cytokines play in GVHD is well known. It has been postulated that if mucositis can be lessened, cytokine storm will be less and hopefully GVHD. When looking at the allogeneic stem cell transplant patients during 2005 and 2006 at our institution a trend for a decrease in severity of acute GVHD was noted in patients treated with Kepivance (66 mcg/kg). We reviewed 10 patients prior to the institution of Kepivance and 10 after. Only 6 of 10 patients received all six doses of the drug. 4 out of 10 received only 5 doses. In both groups 8/10 patients had reduced intensity transplants and 2/10 had fully ablative transplants. Average length of stay was 40 days for those patients who received the drug and 43 for those who did not. There did not seem to be any major differences between the incidence of oral and GI mucositis or in the use of narcotics and IV antibiotics. 9 out of 10 patients who did not get Kepivance had neutropenic fever and all 10 with Kepivance did. With respect to GVHD 3/10 who did not get Kepivance developed acute GVHD and 2/10 patients who received the drug developed acute GVHD. In the non Kepivance group 2 patients had grade 2/3/4 GVHD, and one had grade 2. In the Kepivance group 2 patients had grade 2 GVHD. In the ke pivance group 5 patients completed all planned methotrexate doses for GVHD prophylaxis, and 8 patients in the non-ke pivance group. This review suggests that Kepivance may lessen the severity of acute GVHD, but not via the mechanism described above.

226 DIFFERENTIAL REQUIREMENT FOR NKG2D IN THE REJECTION OF HAPLOMISMATCHED AND MHC-1 DEFICIENT BONE MARROW
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Mouse Natural Killer (NK) cells mediate rejection of MHC-mismatched or MHC-deficient bone marrow allografts. Countering activating and inhibitory signals regulate NK cell activity. The ability of F1 mice to reject parental bone marrow (BM) cells (hybrid resistance) has been attributed to the presence in the recipient of a subset of NK cells that lack inhibitory receptors for the MHC class I antigens expressed by the donor cells. Evidence supporting the "missing self" hypothesis of hybrid resistance was provided by demonstration that MHC class-I deficient donor BM is rejected by otherwise syngeneic recipients. We have previously demonstrated a role for NKG2D, an activating NK cell receptor, in rejection of Balb/c donors despite NKG2D blockade. These results suggest that rejection of MHC class I-bearing BM requires activation via NKG2D, whereas MHC class I-deficient BM elicits a sufficiently strong NK response that augmentation by NKG2D signaling is not essential for rejection. Therefore, the hybrid resistance model in which MHC class I-bearing BM are used for transplantation may better reflect the situation in human hematopoietic stem cell transplantation.

227 DETERMINATION OF ALEMTUZUMAB DOSE FOR REDUCED INTENSITY CONDITIONING IN ALLOGENEIC TRANSPLANTATION
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From June, 2002, to August, 2006, our institution utilized reduced intensity conditioning (RIC) regimens for 40 adult at-risk older patients or those with comorbid conditions. Malignancies included multiple myeloma, AML, CML, NHL, MDS, CLL and one renal cell carcinoma. Thirteen (32%) were in CR at time of transplant while 27 (68%) had relapsed or refractory disease. Median age was 50 years (range 24-66) and median follow-up was eight months (1-36 months). Nine patients were single antigen or allele mismatches at either A, B or DR. The other 31 patients were 6/6 or better antigen matches at A, B and DR. Three RIC regimens were used: fludarabine 30 mg/m² x 5 days and melphalan 140 mg/m² x 1 day in all groups, and Alemtuzumab 20 mg/d x 5 days (protocol 1), x 3 days (protocol 2), and x 2 days (protocol 3). Twenty-three patients received MUD products and 17 received MRD products; cell source was bone marrow (17), PBSC (19), cord blood (one) and combination products (3). All patients received an adequate CD34+ cell dose or TNC dose (cord blood transplant). GVHD prophylaxis was tacrolimus tapering after day +30. Determination of the optimal dose of Alemtuzumab was a goal of this study. All patients except one achieved a WBC graft. Relapse or disease progression occurred in only 37% of protocol 3, 40% of protocol 2 and 67% of protocol 1. Although A lemtuzumab dose was given in a standard fashion not adjusted for body weight or surface area it was found that lack of consideration of patient size did not represent the intent of the given protocols. Weight-based Alemtuzumab dose adjustment showed that a much broader dose range than expected had occurred. Those receiving protocol 1 were in a dose range of 1.01-1.90 mg/kg; for protocol 2 the range was 0.36-1.08 mg/kg; for protocol 3 the range was 0.36-0.70, overlapping the previous group. The median dose of Alemtuzumab for the cohort was 0.68 mg/kg. A clustering of acute GVHD grades I-II appeared below the median dose at approximately 0.55 mg/kg; only one patient had grade IV acute GVHD. In summary, formulation of a conditioning protocol that balances engraftment and recurrence of primary disease on the backstop of a newly reconstituted immune system is problematic. These data indicate that using the patient’s body weight in the determination of an optimal Alemtuzumab dose is a more reasonable approach to developing and standardizing RIC protocols with this drug.

228 NONMYELOABLATIVE ALLOGENEIC STEM CELL TRANSPLANTATION (NST) FOR HEMATOLOGIC MALIGNANCIES (HM) USING PENTOSTATIN/LOW-DOSE TOTAL BODY IRRADIATION (PT-TBI)
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