is of major clinical importance. Exercise-based assessments provide a quantitative measure of physical functioning not captured by traditional resting parameters. We investigated whether functional capacity predicted mortality after HCT.

**Patients and Methods:** Using a prospective design, 409 patients completed a six-minute walk distance test (6MWD) prior to undergoing HCT. 6MWDs were obtained within 5 days of transplant admission; carbon monoxide diffusing capacity (DLCO) and left ventricular ejection fraction (LVEF) were determined within 1 month of admission. Karnofsky performance status (KPS) was reported immediately prior to admission and hemoglobin (Hgb) was obtained on the day of transplant. Cox proportional hazards regression were used to estimate the risk of mortality due to relapse or progression of disease (RM), non-relapse mortality (NRM), and overall survival (OS) according to 6MWD (<400 m versus ≥400 m) with adjustment for cardiovascular risk factors.

**Results:** Participant characteristics are presented in the Table. Mean 6MWD was 404 ± 113 m (range: 71 to 737 m). Median follow-up was 36 months (range 3 to 61 months). During this period, 43% patients died (n=104, NRM). In univariate analyses, 6MWD predicted NRM (p=0.025) and OS (p=0.028; Figure), but not RM (p=0.468). Compared with patients achieving a 6MWD <400 m, the unadjusted hazard ratio (HR) for NRM and OS was 0.64 (95% CI, 0.44–0.95) and 0.72 (95% CI, 0.53–0.96), respectively for those achieving ≥400 m. In multivariable analyses, the relationship between 6MWD and NRM and OS became non-significant after adjustment for KPS, DLCO, and Hgb concentration. LVEF did not predict any post-HCT outcomes (p’s>0.05).

**Conclusions:** Although 6MWD was not an independent predictor of post-HCT outcomes, the strong univariate association with NRM and OS suggests further investigation of alternative measures of physical functioning (e.g., exercise capacity) are warranted.

### Figure 1. Cumulative incidence of grade 3-4 aGVHD among BM (A) and PBSC recipients (B).
grade 3-4 aGVHD post PBSC alloHCT was 14% and 10% in the Caucasians and Japanese, respectively (Figure 1B). In multivariate analysis, the interaction term between race and graft source was not significant in any of the models, indicating that the impact of race on outcomes does not differ according to graft source. The risk of grade 3-4 aGVHD was significantly lower in Japanese compared to Caucasians (HR 0.74, 95% CI 0.57-0.96), which resulted in lower risk of non-relapse mortality (NRM) in Japanese compared to Caucasian patients (HR 0.69, 95% CI 0.54-0.89). The risk of relapse was also lower in Japanese compared to Caucasian patients (HR 0.75, 95% CI 0.63-0.89). Lower risk of NRM and relapse resulted in lower overall mortality rates in Japanese compared to Caucasians (HR 0.70, 95% CI 0.59-0.83). The risk of grade 3-4 aGVHD was significantly higher in PBSC compared to BM alloHCT recipients (HR 1.63, 95% CI 1.20-2.20), which resulted in higher NRM (HR 1.31, 95% CI 1.04-1.65) in PBSC compared to BM alloHCT recipients.

Conclusions: Irrespective of graft source, the risk of severe aGVHD was lower in Japanese patients, which resulted in the lower risk of NRM. The risk of severe aGVHD was higher in the PBSC alloHCT recipients, which resulted in the higher risk of NRM.

Extracorporeal Photopheresis in Reduced Intensity Conditioning: 14 Year Follow-up of 206 Patients Reveals an Efficacious Regimen with Low Rates of GVHD

Esha Kaul 1, Gunjan L. Shah 2, Aaron Rosenberg 3, Raymond Comenzo 1, Hedy Smith 1, Furha Cossor 4, Grace Kao 1, Andrew Evens 1, Kenneth B. Miller 1, Andreas K. Klein 1, Kellie A. Sprague 1, 1 Hematology/Oncology, Tufts Medical Center, Boston, MA; 2 Department of Medicine, Adult Bone Marrow Transplant Service, Memorial Sloan-Kettering Cancer Center, New York, NY; 3 Hematology/Oncology, UC Davis Medical Center, Davis, CA; 4 Hematology/Oncology, Lahey Hospital & Medical Center, Burlington, MA

Background: Extracorporeal photopheresis (ECP) modulates host antigen presenting cells implicated in graft versus host disease (GVHD) development. Incorporation of ECP into a reduced intensity conditioning (RIC) regimen may prevent acute (a) and chronic (c) GVHD.

Methods: Data were collected from Tufts Medical Center BMT and Center for International Bone Marrow Transplantation Registry (CIBMTR) databases. All patients who received PPT conditioning (ECP on days -6 and -5, Pentostatin on days -4 and -3, 600 cGy TBI on days -2 and -1) at Tufts between 10/1999–12/2013 were included. Cyclosporine and methotrexate were used for GVHD prophylaxis.

Results: 206 pts (56% male) received PPT. Median age was 53 (19-70) with 45% >55. Median time from diagnosis to transplant was 17 months (1-180). 59% had matched related donors. Marrow was the stem cell source in 72%. 8% of transplants were mismatched at 1 antigen. Most common indications were Acute Myeloid Leukemia (AML) (35%), Myelodysplastic Syndrome (16%) and Non-Hodgkin Lymphoma (12%). Of the 73 pts with AML, 33% were in first complete remission (CR1), 18% were in a second or greater complete remission (CR 2) and 49% had active disease.

Figure 1. Overall Survival of Patients Receiving PPT Conditioning by Diagnosis.