days vs. 13.1 days, \( P < 0.001 \)) in the ID-CY pts, likely because of higher infused CD34+ cell dose. Rate of adverse events were higher in the ID-CY cohort including neutropenic fevers (\( P = 0.02 \)), intravenous antibiotic use (\( P = 0.03 \)), hospitalization (\( P = 0.05 \)) and packed red cell transfusions (\( P = 0.007 \)).

**Conclusion:** In the era of novel agents compared to P, ID-CY produced a more robust PBPC mobilization, faster engraftment, but was associated with significantly higher (but manageable) toxicity, and no difference in mobilization failure rates. These data support use of either intermediate dose - cyclophosphamide or plerixafor-based PBPC mobilization in MM pts undergoing stem cell collection following novel induction therapies.

### Hematopoietic Cell Yield Declines Predictably Over Time During Apheresis

Allison E. Hazlett 1, Elaine Wang 1, Jennifer Anderson 2, Harold Chung 1, John Michael McCarty 1, William Clark 1, Catherine H. Roberts 1, Amir Ahmed Toor 1, 1 Bone Marrow Transplant, VCU Massey Cancer Center, Richmond, VA; 2 Pathology, VCU Massey Cancer Center, Richmond, VA

Hematopoietic cell (HC) mobilization to support high dose therapy is generally carried out using cytokines with or without chemotherapy. The resulting HC yield and the duration of cell collection have been well studied and tend to be variable. No consistent unifying relationship has been described which would reliably represent the kinetics of this process between different patients. To accomplish this, the HC yield from the mobilization procedures for 431 patients was examined. The diagnoses were multiple myeloma (N=220), non-Hodgkin's lymphoma (155) and Hodgkin's lymphoma (56). Mobilizing regimens included chemotherapy + GCSF (97), GCSF (232), GCSF + plerixafor (84). To normalize the HC yield between patients, the total number of CD34+ cells collected on a given day was divided by the volume of blood (L) processed and was termed the HC mobilization index (HCMI). For the combined cohort the mean HCMI value on day 1 of apheresis (HCMI1) was 19.7 (± 38.9) × 10^6 CD34+ cells/L/day. A significant asymptotic decline was found between HCMI1 and the circulating CD34+ cell count on day 1 (R² = 0.69, \( P < 0.01 \)), and the total HC yield in each patient (0.97, \( P < 0.01 \)) in the ID-CY pts, likely because of higher infused CD34+ cell dose. Rate of adverse events were higher in the ID-CY cohort including neutropenic fevers (\( P = 0.02 \)), intravenous antibiotic use (\( P = 0.03 \)), hospitalization (\( P = 0.05 \)) and packed red cell transfusions (\( P = 0.007 \)).

**Conclusion:** In the era of novel agents compared to P, ID-CY produced a more robust PBPC mobilization, faster engraftment, but was associated with significantly higher (but manageable) toxicity, and no difference in mobilization failure rates. These data support use of either intermediate dose - cyclophosphamide or plerixafor-based PBPC mobilization in MM pts undergoing stem cell collection following novel induction therapies.

### Fluid Retention and Weight Gain During Peripheral Blood Hematopoietic Stem Cell Mobilization in Light Chain Amyloidosis

Josh Howell 1, Simrit Parmar 1, Qaiser Bashir 1, Nina Shah 1, Chitra Hosing 1, Uday Popat 1, Megan Cornelison 2, Richard E. Champlin 1, Mazaffar Qazilbash 1, 1 UT MD Anderson Cancer Center, Houston, TX; 2 MD Anderson

**Background:** High-dose chemotherapy and autologous hematopoietic stem cell transplantation (auto-HCT) is an effective treatment for systemic light chain amyloidosis (AL). Fluid retention and weight gain during peripheral blood hematopoietic stem cell (PBSC) mobilization with growth

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**Figure 1.**

(A) Representative NHL patient from cluster 1; (B) Representative MM patient from cluster 2; (C) Representative NHL patient from cluster 3.