. (*Continued*)

	Group A (Bortezomib)	Group B (No Bortezomib)
CR + VGPR	12 (31%)	22 (31%)
Median PFS (months)	14	23
Median OS (months)	80	82

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LONG TERM SURVIVAL FOLLOWING HIGH DOSE SEQUENTIAL CHEMOTHERAPY WITH AUTOLOGOUS HEMATOPOIETIC CELL RESCUE FOR MULTIPLE MYELOMA

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High-dose therapy (HDT) with autologous hematopoietic cell rescue (AHCR) improves survival in patients with multiple myeloma, but is not curative due to a continuous risk of relapse. One approach to try to reduce relapse is to optimize pretransplant therapy and the preparative regimen. We investigated the outcome of sequential HDT with AHCR. Patients were initially treated with standard dose chemotherapy (primarily VAD) to maximum response. They then received cyclophosphamide 4 gm/m^2 followed by G-CSF and peripheral blood hematopoietic cell collection by apheresis upon count recovery. They were then treated with etoposide 2 gm/m^2 followed by G-CSF and apheresis upon count recovery. The transplant preparative regimen consisted of carmustine 500 mg/m^2 on day -4 and melphalan 200 mg/m^2 on day -2 followed by AHCR on day 0. Seventy-six patients were treated between 1997 and 2001. The patient population included 56% males with a median age at transplant of 54 years (range 39-68 years). Forty patients had IgG myeloma, 11 patients had IgA myeloma, 8 patients had light chain only disease, 5 patients had nonsecretory disease, 1 patient had IgM myeloma and subtype is unknown in 11 patients. Forty patients were transplanted with CD34 selected cells. The Kaplan-Meir estimated median progression-free survival is 4.2 years (CI 3.1-6.0 years) with a median overall survival of 7.2 years (CI 4.8-11.4 years). The median follow up of the 36 surviving patients is 8.46 years with a range of 4.71 to 11.4 years. One patient was lost to follow up. The Kaplan-Meir estimated progression-free survival at 10 years is 35% with overall survival of 45%. Two patients died of interstitial pneumonitis at 21 and 76 days post transplant and two patients died of secondary leukemia at 694 and 712 days post transplant. High dose sequential chemotherapy is well tolerated and results in long term survival in a significant proportion of patients with multiple myeloma.

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RETROSPECTIVE COMPARISON OF SECONDARY MOBILIZATION STRATEGIES IN CANDIDATES FOR AUTOLOGOUS HEMATOPOIETIC CELL TRANSPLANTION WITH A FOCUS ON RESOURCE UTILIZATION: PLERIXAFOR + G-CSF VERSUS OTHER REGIMENS

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Successful autologous transplantation relies on hematopoietic cell mobilization that allows adequate CD34+ cell collection. Depite appropriate mobilization approaches, a significant number of patients (pts) do not mobilize adequate CD34+ cells and require a second round of mobilization therapy. We performed a retrospective analysis of our experience with different secondary mobilization strategies with a focus on resource utilization. Primary endpoint was comparing plerixafor versus other regimens with respect to the rate of successful second mobilization defined as the ability to collect at least 2×10^6 CD34+ cells/kg (cumulative). Included here are 96 pts receiving their primary mobilization therapy between 2000-09. Pts are divided into two groups depending on the secondary mobilization therapy given: Plerixafor + G-CSF (PG; n = 38) or Other (OTH; n = 58). which included chemotherapy + G-CSF in 15 pts, G-CSF alone in 23 pts or G-CSF and GM-CSF in 20 pts. There were no differences in pt characteristics between the two groups except for a higher number of non-Hodgkin's lymphoma pts in the PG group and more pts with multiple myeloma in the OTH group. In the PG mobilized group, 29% were first mobilized with chemotherapy + G-CSF and 71% were mobilized with G-CSF alone. In the OTH pts, 41% received chemotherapy + G-CSF, 43% G-CSF alone, and 16% G-CSF + GM-CSF. Median numbers of CD34+ cells (x 10^6/kg) collected after the first mobilization were 0.39 (0-1.76) in the PG pts and 0.56 (0-2.08) in the OTH pts. Pts in the PG group received a median of 2 doses of plerixafor (range 1-4) during their second mobilization regimen. Eight of the 38 PG pts were enrolled on clinical trials requiring at least 2 doses of plerixafor and a minimum of 2 aphereses. Outcomes following the second mobilization and resource utilization from the first day of second mobilization to the last day of pheresis are shown below. Thirty-two of the 38 PG pts (84%) were able to collect a total of at least 2 $\times$ 10^6 CD34+ cells/kg from both mobilizations to proceed to transplant; this is compared to 47/58 (80%) in the OTH group (p = 0.62). Of those pts that were transplanted, there were no differences in time to neutrophil or platelet recovery. The current data suggest that when using plerixafor plus G-CSF in this setting there is a potential for significant cost savings based on the reduced apheresis and hospitalization requirements when compared to other forms of mobilization.

	PG (n = 38)	OTH (n = 58)	P
Number of aphereses; median (range)	2 (1-4)	3 (1-5)	0.12
Total CD34+ cells collected (x106/kg); median (range)	2.09	1.42	0.003
Number of patients collecting 2 million CD34+ cells in one apheresis	14 (37%)	1 (2%)	<0.0001
# clinic visits (MD/PA)	2 (0-6)	1 (0-9)	0.15
# days IV antibiotics	0 (0-7)	0 (0-14)	0.1
# inpatient days	0 (0-4)	0 (0-13)	0.02
# RBC units transfused	0 (0-6)	0 (0-11)	0.22
Platelet units transfused	0 (0-24)	0 (0-36)	0.6
# of CBC/diff performed	7 (3-15)	7 (2-27)	0.26
# of comprehensive metabolic panels performed	2 (0-6)	2 (0-19)	0.94

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QUALITY OF UMBILICAL CORD BLOOD UNITS STORED FOR AUTOLOGOUS USE AND INFUSED INTRAVENOUSLY IN CHILDREN WITH ACQUIRED NEUROLOGICAL CONDITIONS

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Background: Numerous animal models demonstrate neurological and survival benefits of bone marrow or umbilical cord blood (CB) infusion in the setting of stroke, thermal injury, ischemia, intracranial hemorrhage and spinal cord injury. Based on these data, we initiated a pilot study to determine the safety and feasibility of intravenous (IV) administration of autologous CB (aCB) in young children with acquired neurological disorders. Most units were electively stored in private CB banks at the request and expense of the