group demonstrated an increase in PC only (5%, 12% for day 7 and day 14 respectively) (Figure 2).

Conclusions: This study documents the difference in OxS of the two most common conditioning regimen for aHSCT. It demonstrates OxS markers are more likely elevated with BEAM over Melphalan conditioning. The clinical significance of these elevations could suggest a biochemical correlation with the observed difference in toxicity between the two regimens.

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The Effect of the Use of Chemotherapy and Growth Factor on the Success of Stem Cell Product and Mobilization at Autologous Peripheral Stem Cell Mobilization for the Elder Multiple Myeloma Patients

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Introduction - Objective: Autologous peripheral stem cell mobilization (APSCM) with support of chemotherapy and recombinant human granulocyte-colony stimulating factor (rhG-CSF) is a commonly used method for the treatment of Multiple Myeloma (MM). In this study, the major objective was to show the efficacy of the use of chemotherapy and rhG-CSF in stem cell mobilization for patients over 60 years old.

Materials and Method: A total of 21 multiple myeloma patients, who underwent stem cell mobilization for ASCT over the age of 60 were retrospectively reviewed between January 2012 and May 2015. On the first day, all of the patients were given 4mg/m^2 cyclophosphamide for APSCM and uromitexan for hemorrhagic cystitis prophylaxis. 5 μg/kg of rhG-CSF was subcutaneously given between third and seventh days. From the eighth day until the apheresis time 10 μg/kg of rhG-CSF was subcutaneously given. The defined target for each patient was CD 34+cell≥2 x 10^6/kg. The operation of stem cell collection was carried out in peripheral blood while CD34+cell≥10 x 10^6/μL. The collection operation was done daily and continued until the target was reached.

Results: In our study, the median age for the patients enrolled to the study was 67 (61-71) (Table 1 Patient Characteristics). The median time after chemotherapy until apheresis was 10 days, and the median time for neutropenia was 4 days. On the day when WBC was ≥1 x 10^9/L the median was 9, on the first day of apheresis the mean for the number of WBC was 5.85x10^9 and the mean for the number of CD34+cell was 27x10^6/kg. The mean for total number of CD34+cell was calculated as 9.5x10^6/kg. The median for number of apheresis was 2 and >2x10^6CD34+cell/kg was collected after one apheresis for 17 patients. After all of the processes, mobilization of stem cells was succeeded for 20 patients (95.2%) out of 21, but the process was unsuccessful for 1 patient.

Discussion and Conclusion: Transplantation is generally considered for patients <65 years old and the older patients whose performance status is good and who have no specific comorbidity. Even though bone marrow reserves for older patients are thought to be lower than that of the younger ones, there are no studies to prove this in the literature. Furthermore, even though there is no standard approach for stem cell mobilization for older patients, the most commonly used method is the combination of chemotherapy+ rhG-CSF as in the cases of younger patients. In our study, the number of stem cell products and the results of success for mobilization were found to be similar to the results of younger patients in the literature.

In conclusion these conditions can make us believe that age is not a significant factor in obtaining the highest CD34+cell number and success of mobilization for older patients after chemotherapy and rhG-CSF, multiple centered randomized studies are required for more exact data.

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Toxicities and Outcomes for Patients with CNS Lymphoma (CNSL) Consolidated with High-Dose Therapy and Autologous Stem Cell Transplantation (HDT-ASCT) Using Thiotepa, Pharmacokinetically-Targeted (PK) Busulfan (Bu), Cyclophosphamide (TBC) Conditioning

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Introduction: HDT-ASCT with TBC conditioning is an effective consolidation strategy for patients (pts) with primary (PCNSL) or secondary (SCNSL). Omuro et al (Blood 2015) showed that chemosensitive PCNSL pts in first remission proceeding to HDT-ASCT with TBC conditioning experienced a favorable 2-year progression-free (PFS) and overall survival (OS) of 75% and 81%, respectively, at the expense of 11.5% transplant-related mortality (TRM). Toxicities of TBC conditioning, including outcomes of PK targeted Bu, need further evaluation.

Methods: Thirty-four pts (age ≥ 18 with chemosensitive PCNSL or SCNSL) received TBC conditioned ASCT between 2006-2015. We recorded clinically significant grade 3-5 non-hematologic toxicities per CTCAE 4.0 occurring in >20% of pts from conditioning to 6 months post-ASCT. Fisher's exact test was used to evaluate pre-ASCT variables and their association with grade 3-5 non-hematologic toxicities (≥4 vs. <4). PFS and OS were estimated by Kaplan-Meier. Twenty-two of these pts (64%) received PK targeted Bu (AUC goal 4100-5200 umol*min/L) and dose adjustments per PK were made with the third Bu dose.

Results: Grade 3-5 non-hematologic toxicities are detailed in Figure 1; 33/34 pts (97%) experienced ≥ 1 toxicity. The number of prior regimens (>2) was associated with more grade 3-5

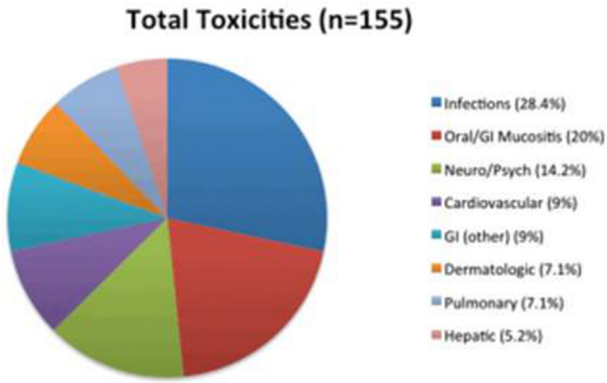

Figure 1. Analysis of Grade 3-5 Non-Hematologic Toxicities