may be warranted to discern if DM pts may benefit from different methods of mobilization or if long term transplant outcomes are impacted.

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Hematopoietic Cell Transplantation (HCT)-Specific Comorbidity Index in Autologous Stem Cell Transplant Indicating Patients with Advanced Age and Increased Comorbidity Index Should be Hospitalized Through Engraftment
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The hematopoietic cell transplantation specific comorbidity index (HCT-CI) has been proven to be a valuable tool in allogeneic stem cell transplant (ASCT) recipients to predict overall survival. There are few studies that use the HCT-CI for evaluating autologous stem cell transplantation. Our institution performs autologous stem cell transplants in a variety of settings, from completing the whole transplant process inpatient to instituting their preparative regimen through transplant and engraftment in the outpatient setting. We retrospectively reviewed our experience of 250 autologous stem cell transplants who had a diagnosis that included Multiple Myeloma, Non-Hodgkin’s Lymphoma, Hodgkin’s lymphoma, and Testicular Carcinoma that were either treated inpatient for their hospital course or were prepared in the outpatient setting and/or were discharged very early in their transplant course (day-1 or within three days of their autologous transplant). The median age of the inpatient transplant group was 63.5 compared to the outpatient group that was 58, P < 0.006. The average comorbidity index for the inpatient group was 2.086 compared to the outpatient group 1.23, P < 0.001. In conclusion, our institution, using the HCT-CI and age for autologous stem cell transplantation helps to identify those candidates that are more successfully treated in the inpatient setting and the outpatient setting. This study was limited by its retrospective nature, small size and single center experience. Prospective randomized studies are needed to determine whether or not the HCT-CI in autologous stem cell transplantation is truly effective.

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Autologous Hematopoietic Stem Cell Transplant (aHSCT) is a Safe and Reasonable Treatment in Patients with Primary Systemic Amyloidosis (AL amyloidosis)
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Background: There is no current standard of care for patients with newly diagnosed AL amyloidosis. Autologous HSCT is a potential option, but has been limited in its use due to increased treatment-related mortality (TRM) (38% from one randomized study). Two large retrospective analyses showed improved overall survival (OS) (70% at 4 years and 47% at 5 years) of AL amyloid patients undergoing aHSCT compared to control (40% at 4 years) with TRM of 13%.

Methods: We retrospectively analyzed the outcomes of 29 newly diagnosed AL amyloidosis patients who underwent aHSCT between 10/1998 and 5/2012. Hematologic responses were evaluated, along with post-transplant survival and TRM. Progression-free survival (PFS) and (OS) were determined using the Kaplan-Meier method.

Results: Of the patients transplanted, 13 were female and 16 were male. Median age at aHSCT was 56 (range 26-71). Eleven (38%) had involvement of at least 2 organs. Median brain natriuretic peptide and troponin available in 20 patients were 109 pm/ml (range 24-502) and 0.02ng/ml (range 0.01-117). Twenty-one patients (72%) received high dose Melphalan 200 mg/m². Median CD34+ infused stem cells was 5.00 x 10⁶/kg.

No patients received filgrastim or other colony stimulating factor. Time to neutrophil and platelet engraftment were 12 and 17 days, respectively. Three months hematologic response was available in 22 patients and showed complete response, partial response, and stable disease in 15 (68%), 2 (10%) and 5 (22%), respectively. The 1, 3, and 5 year PFS were 78%, 68% and 41%, respectively. One, 3, and 5 year OS from diagnosis and from aHSCT were 81, 66, and 66% and 89, 66 and 66% respectively (Table 1). The 100-day and 1 year TRM were 3.4% (1 patient) and 6.9% (2 patients), respectively.

Conclusion: Our results show that autologous HSCT is a reasonable option for patients with newly diagnosed AL amyloidosis. The 100 day and 1 year TRM compares favorably to multiple myeloma patients undergoing autologous HSCT.

Table 1

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Censored 1 yr survival rate (%)</th>
<th>3 yr survival rate (%)</th>
<th>5 yr survival rate (%)</th>
<th>Median (months)</th>
<th>95% CL (months)</th>
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<td>PFS</td>
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<td>18</td>
<td>78</td>
<td>68</td>
<td>41</td>
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<tr>
<td>OS-HSCT</td>
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<td>20</td>
<td>81</td>
<td>66</td>
<td>66</td>
<td>112.0</td>
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<tr>
<td>OS-DX</td>
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<td>20</td>
<td>89</td>
<td>66</td>
<td>66</td>
<td>117.2</td>
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</tbody>
</table>

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Safety and Efficacy From Intravenous Busulfan with PK-Directed Dosed Adjustment and Bortezomib Conditioning Regimen in Relapsed Multiple Myeloma Patients Undergoing a Second Autologous Hematopoietic Stem Cell Transplantation
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