

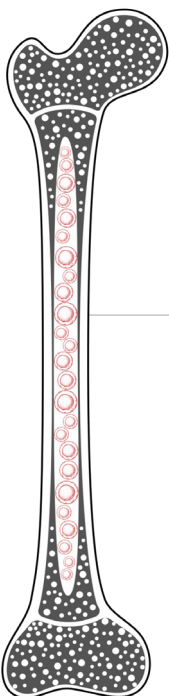
WHY STEM CELL MOBILIZATION MATTERS IN MULTIPLE MYELOMA

Autologous Stem Cell Transplantation

Autologous stem cell transplantation (ASCT) is an important part of treatment for a number of blood cancers, including multiple myeloma. This process starts by taking the patient's own stem cells from blood or bone marrow which are removed or harvested through a procedure called apheresis. Stem cells are collected, frozen and stored. The patient typically then undergoes conditioning chemo, and the stem cells are then thawed and returned (transplanted) back into the patient.¹

In the U.S., as many as 8,000 ASCTs are performed each year in patients with multiple myeloma, the second-most common hematologic malignancy.²⁻³ The current ASCT standard of care includes 4-6 cycles of induction therapy (an initial drug-combination regimen to position the patient for as deep a treatment response as possible). To begin the stem cell mobilization process, a patient will receive a daily dose of filgrastim for four days. Daily doses of filgrastim will continue until the target collection goal is met with the addition of up to four daily doses of plerixafor as needed.⁴

Successful ASCT Prolongs Survival in Patients with Multiple Myeloma



ASCT Used With Modern
Therapeutic Options Has
Demonstrated Improvements in:

- ✓ Overall survival⁵
- ✓ Event-free survival⁶
- ✓ Progression-free survival⁷

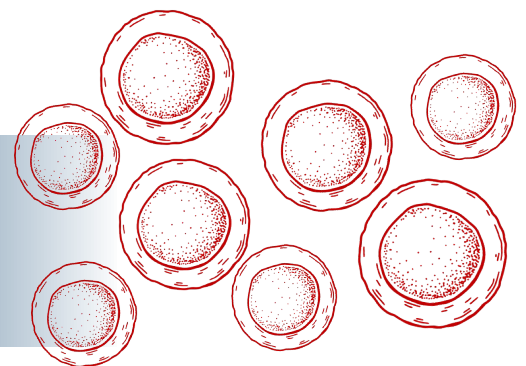
The success of ASCT depends on adequate mobilization and collection of stem cells, which may pose a challenge in some patients¹⁰



Historically, multiple myeloma
SURVIVAL WAS
less than 3 years⁸



Due to therapeutic advancements,
OVERALL SURVIVAL IS NOW
45-82 months⁵⁻⁹



ASCT is a critical cancer procedure that has been available for several decades and that has delivered improved survival for patients with multiple myeloma.⁵ However, challenges and unmet needs in ASCT remain and there is significant opportunity to improve on this life-extending procedure, the treatment journey and clinical outcomes for patients with this cancer type.¹¹⁻¹²

Why Mobilization Matters

ASCT is dependent on adequate mobilization of stem cells during the treatment process. For patients unable to mobilize sufficient numbers of cells for harvesting during this primary mobilization phase, rescue therapy may be carried out followed by an additional number of apheresis sessions as necessary.¹³ Adequate stem cell mobilization during ASCT is critical for:

Achieving Guideline-Directed Goals. In recent years, experts in ASCT have developed clinical recommendations to further define the targets for stem cell collection that can best position patients for successful stem cell transplantation.¹³⁻¹⁴ Transplanting a minimum number of stem cells is associated with faster recovery of patients' platelets and neutrophils during the ASCT process, and collection of a number of stem cells sufficient to perform 2 transplantations is recommended.¹⁴⁻¹⁵

Patient Experience. For patients and their caregivers, not mobilizing sufficient stem cells early in the ASCT process can be burdensome. The need for additional apheresis sessions not only delays treatment time, but also increases costs including for transportation to/from apheresis centers, associated housing/sustenance for patients and missed work, among other factors.¹¹

Provider Resource Planning. For transplantation centers, ensuring collection of sufficient stem cells can strain resources due to the need for additional days of collection, increased doses of filgrastim (G-CSF), antibiotics, transfusion support, and more frequent hospitalization.¹¹ For payers, additional apheresis sessions may also incur additional costs, administration fees, and other ancillary services.

While stem cell mobilization in the transplant process is critical, data has shown that historically, depending on induction regimens and mobilization strategies, up to 47% of patients have had challenges collecting target numbers of hematopoietic stem cells for ASCT after one apheresis session.¹⁶⁻¹⁷



Additional Challenges in Today's Treatment Landscape

Understanding the clinical barriers to guideline-directed stem cell mobilization and collection continues to grow. Risk factors for poor stem cell mobilization in the modern multiple myeloma patient population include:

Advanced Age. The proportion of older patients receiving ASCT has increased over the last decade, with 37% of patients being 65 years of age or older in 2020.³ As age increases, the number of available stem cells that can be used for ASCT is reduced.¹⁷

Newer Induction Regimens. Evolving induction regimens in multiple myeloma treatment, including four-drug combination regimens that have grown more common, can further impair stem cell mobilization.¹⁸⁻¹⁹

Additional Resources

For more information about multiple myeloma, visit the American Cancer Society website: www.cancer.org/cancer/multiple-myeloma.html and/or the Multiple Myeloma Research Foundation website: www.themmr.org

For more information on Autologous Stem Cell Transplantation, visit the Multiple Myeloma Research Foundation website: www.themmr.org/diagnosis-and-treatment/treatment-options



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