**Introduction**

Although novel agents, including proteasome inhibitors (PIs) and immunomodulatory drugs (IMiDs), for patients with multiple myeloma (MM) were introduced to clinical practice with improving their clinical outcomes,1 autologous stem cell transplantation (ASCT) remains an essential procedure in eligible patients.2 A critical and essential step preceding to ASCT is the collection of sufficient amount of CD34+ stem cells mainly from peripheral blood (PB). The minimal CD34+ stem cells dose necessary to achieve neutrophil and platelet engraftment has been known to be 1.5–2.5×106/kg. To achieve earlier neutrophil and platelet engraftment, 3.0–5.0×106/kg CD34+ stem cells dose is required.3 In addition, considering a substantial proportion of patients with MM need to receive tandem ASCT, at least 6 × 106/kg CD34+ stem cells dose may be optimal in patients with MM patients eligible to ASCT. Historically, intermediate-dose (3–4 g/m2) cyclophosphamide (Cy) + granulocyte colony-stimulating factor (G-CSF) (chemomobilization) or G-CSF only (G-CSF mobilization) has been used to collect CD34+ stem cells in patients with MM patients. However,

**References**

1. Naymagon L, Abdul-Hay M. Novel agents in the treatment of multiple myeloma: a review about the future. *J Hematol Oncol* 2016; **9**(1)**:** 52. e-pub ahead of print 2016/07/02; doi: 10.1186/s13045-016-0282-1

2. Attal M, Lauwers-Cances V, Hulin C, Leleu X, Caillot D, Escoffre M *et al.* Lenalidomide, Bortezomib, and Dexamethasone with Transplantation for Myeloma. *N Engl J Med* 2017; **376**(14)**:** 1311-1320. e-pub ahead of print 2017/04/06; doi: 10.1056/NEJMoa1611750

3. Giralt S, Costa L, Schriber J, Dipersio J, Maziarz R, McCarty J *et al.* Optimizing autologous stem cell mobilization strategies to improve patient outcomes: consensus guidelines and recommendations. *Biol Blood Marrow Transplant* 2014; **20**(3)**:** 295-308. e-pub ahead of print 2013/10/22; doi: 10.1016/j.bbmt.2013.10.013