

Non-myeloablative Stem Cell Transplantation

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Allogeneic stem cell transplantation is an established treatment modality for a variety of hematologic malignancies. Unfortunately, it carries a high risk of complication and toxicities related to the intensive preparative regimen, which is traditionally used for pre-transplant myeloablation and the graft-versus-host disease, which may be life threatening. Allogeneic stem cell transplantation, therefore, has been limited to use only for younger patients with a good performance status excluding many other potential candidates due to advanced age or comorbidities. Non-myeloablative or reduced intensity preparative regimens for allogeneic stem cell transplantation (NST) or so-called “mini transplant” have been proposed as a strategy that would allow exploiting the graft-versus-tumor effect of allogeneic transplantation without the toxicity of myeloablative therapy. After more than five years of cumulative clinical experience, it is now well established that NST is a feasible treatment option for elderly patients, and also for patients with suboptimal performance status and is mostly effective in slow proliferating malignancies, which gives time for a graft-versus-malignancy effect to take place. For young patients, NST may be offered with no risk of impairment of growth and development, sterility and multiple endocrinopathy which are currently unavoidable with conventional myeloablative procedures.