Factors predicting outcome after unrelated donor stem cell transplantation in primary refractory acute myeloid leukaemia.

Treatment options for adults with primary refractory acute myeloid leukaemia (PREF AML) are extremely limited. Although sibling allogeneic stem cell transplantation can result in long-term survival, most patients lack a matched family donor and are destined to die of refractory disease. Greater availability of unrelated donors and improvements in supportive care have increased the proportion of patients with PREF AML in whom allografting is technically feasible, but the outcome of unrelated donor transplantation in this population has not been studied. We therefore analysed overall survival in 168 patients with PREF AML, who underwent unrelated donor transplantation between 1994 and 2006. The 5-year overall survival for the whole group was 22%. In multivariate analysis, fewer than three courses of induction chemotherapy, a lower percentage of bone marrow blasts at transplant and patient cytomegalovirus seropositivity were associated with improved survival. This allowed the development of a scoring system that identified four groups with survival rates between 44±11% and 0%. This study demonstrates an important role for unrelated donor transplantation in the management of selected patients with PREF AML and confirms the
importance of initiating an urgent unrelated donor search in patients with no matched sibling donor, who fail to respond to induction chemotherapy.