

TEN BEST READINGS RELATING TO HIGH-DOSE THERAPY

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Urbano-Ispizua A, Schmitz N, de Witte T, et al. Allogeneic and autologous transplantation for haematological diseases, solid tumours and immune disorders: definitions and current practice in Europe. *Bone Marrow Transplant.* 2002;29:639-646.

Major changes have occurred since the last report in 1998. Haemopoietic stem cell transplantation today includes allogeneic and autologous stem cells derived from bone marrow, peripheral blood, and cord blood. With reduced-intensity conditioning regimens in allogeneic transplantation, the age limit has increased, permitting the inclusion of older patients. New indications have emerged, such as autoimmune disorders and amyloidosis for autologous transplants and solid tumors for allogeneic transplants. Other indications, such as autologous transplantation for breast cancer, have been challenged.

Schmitz N, Pfistner B, Sextro M, et al. Aggressive conventional chemotherapy compared with high-dose chemotherapy with autologous haemopoietic stem-cell transplantation for relapsed chemosensitive Hodgkin's disease: a randomised trial. *Lancet.* 2002; 359:2065-2071.

High-dose carmustine, etoposide, cytarabine, and melphalan and transplantation of haemopoietic stem cells improves freedom from treatment failure in patients with chemosensitive first relapse of Hodgkin's disease irrespective of length of initial remission. Overall survival of patients given either treatment did not differ significantly.

Kaiser U, Uebelacker I, Abel U, et al. Randomized study to evaluate the use of high-dose therapy as part of primary treatment for "aggressive" lymphoma. *J Clin Oncol.* 2002;20:4413-4419.

Results of the randomized trial comparing cyclophosphamide, doxorubicin, vincristine, and prednisone-like chemotherapy with or without early high-dose therapy do not support the use of high-dose therapy with carmustine, etoposide, cytarabine, and melphalan following shortened standard chemotherapy.

Kluin-Nelemans HC, Zagonel V, Anastasopoulou A, et al. Standard chemotherapy with or without high-dose chemotherapy for aggressive non-Hodgkin's lymphoma: randomized phase III EORTC study. *J Natl Cancer Inst.* 2001;93:22-30.

Standard combination therapies remain the best choice for most patients with aggressive non-Hodgkin's lymphoma. The authors recommend that patients with low or low-intermediate risk (based on the International Prognostic Index) not be subjected to high-dose chemotherapy and autologous bone marrow transplantation as a first-line therapy.

Levine JE, Harris RE, Loberiza Jr FR, et al. A comparison of allogeneic and autologous bone marrow transplant for lymphoblastic lymphoma. *Blood.* 2002. (First Edition Paper, prepublished online November 27, 2002; DOI 10.1182/blood-2002-05-1483.)

This retrospective analysis indicates that allogeneic hematopoietic stem cell transplantation (alloSCT)



The 10 best recent articles in the medical literature relating to high-dose therapy are reviewed here.

Ten Best Readings

for lymphoblastic lymphoma is associated with fewer relapses compared to autoSCT, but higher treatment-related mortality offsets any potential survival benefit.

Kroger N, Schwerdtfeger R, Kiehl M, et al. Autologous stem cell transplantation followed by a dose-reduced allograft induces high complete remission rate in multiple myeloma. *Blood*. 2002;100:755-760.

After a median follow-up of 17 months after autologous and 13 months after allogeneic transplantation, 13 patients are alive and 12 of them are free of relapse or progression. The tandem auto-allo-transplant protocol is highly active and provides rapid engraftment with complete donor chimerism and tolerable toxicity.

Childs R, Drachenberg D. Allogeneic stem cell transplantation for renal cell carcinoma. *Curr Opin Urol*. 2001;11:495-502.

The recent observation of metastatic disease regression following nonmyeloablative stem cell transplantation has identified renal cell carcinoma as being susceptible to a graft-vs-tumor effect. Disease responses following such therapy have ranged from partial to complete and have been observed even in patients who have failed conventional cytokine-based strategies.

De Giorgi U, Rosti G, Papianni G, et al. The status of high-dose chemotherapy with hematopoietic stem cell transplantation in germ cell tumor patients. *Haematologica*. 2002;87:95-104.

High-dose chemotherapy as first-line therapy for poor progno-

sis germ cell tumors, and in a salvage setting in good risk germ cell tumors, has been associated with a high rate of complete remissions and long-term disease-free survivors. Results of ongoing randomized trials are needed for validation of these findings.

Traynor AE, Barr WG, Rosa RM, et al. Hematopoietic stem cell transplantation for severe and refractory lupus: analysis after five years and fifteen patients. *Arthritis Rheum*. 2002;46:2917-2923.

In patients experiencing the persistence of organ-threatening lupus following standard, aggressive therapy, hematopoietic stem cell transplantation may be performed safely, with marked improvement and sustained withdrawal of all immunosuppressive medication for most patients. A phase III randomized trial is warranted to determine the relative efficacy and durability of remission of hematopoietic stem cell transplantation compared with standard therapies.

Gertz MA, Lacy MQ, Dispenzieri A, et al. Stem cell transplantation for the management of primary systemic amyloidosis. *Am J Med*. 2002;113:549-555.

The number of organs involved before stem cell transplantation for amyloidosis is the most important factor in predicting subsequent survival. Stem cell transplantation should be considered as a treatment option for selected patients with amyloidosis.