

## [ABSTRACT WM2.5]

### **THE ROLE OF AUTOLOGOUS TRANSPLANTATION IN WALDENSTROM'S MACROGLOBULINEMIA**

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The published experience on high-dose treatment (HDT) supported by autologous stem cell transplantation (ASCT) for Waldenstrom's Macroglobulinemia (WM) consists mostly of retrospective single Institution reports<sup>1-6</sup> with small number of patients and 3 registry analysis from US,<sup>7</sup> France<sup>8, 9</sup> and EBMT;<sup>10</sup> the last 2 are presented (or updated) in this Workshop. Table 1 summarizes available data. The limited experience with HDT in WM is mostly due to the advanced age at the time of disease diagnosis and the relatively indolent nature of the disease, which makes such an aggressive treatment option less attractive. However, all studies confirm that HDT with ASCT is feasible in WM patients even in heavily pretreated with a non relapse mortality rate at 6% in the largest series.<sup>10</sup> Harvest of auto SC should be done prior to nucleoside analogue exposure – since these agents may impair SC collectability<sup>11</sup> and before extensive bone marrow infiltration occurs. The occurrence of 2nd cancers in WM patients after autografting (at least 5 cases reported) should be taken into consideration.<sup>7, 8</sup> A small series of 7 patients received HDT as part of their induction regimen with promising results.<sup>2</sup> Most patients have been transplanted in advanced phase of their disease, beyond 1st relapse. A variety of preparative regimens have been used such as BEAM, high dose melphalan or cyclophosphamide with or without total body irradiation. A high response rate and prolonged remissions have been observed in patients who were clearly resistant to conventional chemotherapy. With the available data we can argue that ASCT as upfront treatment for WM should be still considered only within the context of clinical trials, in younger patients with adverse prognostic factors. Moreover ASCT as salvage regimen should be considered for all fit patients with advanced disease where conventional treatment options have failed. The possibility of stem cell collection in patients pretreated with nucleoside analogues makes the option of SC harvest and storage early in the course of the disease reasonable for certain patients. Moreover, the use of novel agents like rituximab and bortezomib, with confirmed activity against WM, who spare patients' stem cell pool warrants the planning of further studies with HDT based on those treatment options.

## References

1. Desikan R, Dhodapkar M, Siegel D et al. High-dose therapy with autologous hemopoietic stem cell support for Waldenstrom's macroglobulinaemia. *Br J Haematol* 1999;105: 993-996.
2. Dreger P, Glass B, Kuse R et al. Myeloablative radiochemotherapy followed by reinfusion of purged autologous stem cells for Waldenstrom's macroglobulinaemia. *Br J Haematol* 1999;106: 115-118.
3. Moustafa MPJ, Treleaven J, Horton C, Sirohi B. Total therapy with VAMP/CVAMP + high dose melphalan and autograft for IgM lymphoplasmacytoid disease. *Blood* 1998, 92(Suppl 1)(Abstr.4212).
4. Mazza P, Palazzo G, Amurri B et al. Analysis of feasibility of myeloablative therapy and autologous peripheral stem cell (PBSC) transplantation in the elderly: an interim report. *Bone Marrow Transplant* 1999;23: 1273- 1278.
5. Yang L, Wen B, Li H et al. Autologous peripheral blood stem cell transplantation for Waldenstrom's macroglobulinemia. *Bone Marrow Transplant* 1999;24: 929-930.
6. Anagnostopoulos A, Dimopoulos MA, Aleman A et al. High-dose chemotherapy followed by stem cell transplantation in patients with resistant Waldenstrom's macroglobulinemia. *Bone Marrow Transplant* 2001;27: 1027-1029.
7. Anagnostopoulos A, Hari PN, Perez WS et al. Autologous or allogeneic stem cell transplantation in patients with Waldenstrom's macroglobulinemia. *Biol Blood Marrow Transplant* 2006;12: 845-854.
8. Tournilhac O, Leblond V, Tabrizi R et al. Transplantation in Waldenstrom's macroglobulinemia--the French experience. *Semin Oncol* 2003;30: 291-296.
9. Dhedin N, Tabrizi R, Bulabois PE et al. Hematopoietic stem cell transplantation (HSCT) in Waldenstrom macroglobulinemia (Wm), update of the French experience in 54 cases. *Haematologica* 2007, Suppl Abstract 1229.
10. Kyriakou C, Canals C, Taghipour G et al. Autologous stem cell transplantation (ASCT) for patients with waldenstrom's macroglobulinaemia. An analysis of 201 cases from the european bone marrow transplant registry (EBMT). *Haematologica* 2007, Suppl. Abstract 1228.
11. Tournilhac O, Cazin B, Lepretre S et al. Impact of frontline fludarabine and cyclophosphamide combined treatment on peripheral blood stem cell mobilization in B-cell chronic lymphocytic leukemia. *Blood* 2004, 103: 363-365.