

donor can be located (allo-BMT), while others are randomised to a second consolidation chemotherapy or autologous bone marrow transplantation (ABMT). If there is no clear survival benefit for either of these, other end points like disease free survival, treatment related morbidity and the costs of treatment will be given more importance.

**Methods:** This is a retrospective analysis based on the EORTC AML 8 study, opened in June '93 and closed in June '94, comparing the three treatments mentioned. The case report forms of the clinical trial contained the following variables of relevance for an assessment of resource utilisation: number of days hospitalised, number of days in protected environment, supportive care given (eg transfusions, use of antibiotics), number of infectious episodes, number of days with fever. The cost calculations will be based on the resource utilisation data from the trial and unit prices (charges) from the Belgian health insurance and reimbursement system.

**Results:** 941 patients entered the AML 8 study. 576 entered and remained into complete remission after induction and first intensive consolidation. Out of these, 137 with an HLA identical sibling were allografted, the other patients were randomised between ABMT (N = 117) and second intensive chemotherapy (N = 112). There were no differences between the alternatives with respect to overall survival, while for disease free survival and relapse risk allo-BMT was most favorable, followed by ABMT and chemotherapy in that order. Treatment related morbidity was smallest for chemotherapy. This preliminary analysis contains only a comparison of resource utilisation. For all types of resource utilisation, the consumption was smallest for second intensive consolidation. Regarding the two types of BMT, none is uniformly most demanding: number of hospital days for allo-BMT patients is about 9% higher as the number for ABMT, while the number of transfusions is 40% higher for ABMT.

**Discussion:** No valuation of outcomes has been attempted in this analysis, which is only concerned with some -important- elements of direct costs. As in all retrospective analyses, some important variables have not been included because of lack of data. Notably, for allo-BMT the costs of locating an HLA identical sibling has not been included as main endpoint in the AML 8 trial. Another issue that has not been included is the prevention of/and treatment of graft versus host disease (GVHD); this will be an important item in the planned cost evaluation, since we know that despite prevention for almost all patients eligible for allo-BMT, ± 60% of the allografted patients had GVHD and half of these were actually treated for this.

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#### PP65. Economic evaluation of high dose chemotherapy for breast cancer patients

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**Introduction:** Hard evidence on the effectiveness and cost-effectiveness of high dose chemotherapy (HDC) in combination with peripheral blood progenitor cell transplantation (PBPC) as adjuvant treatment for breast cancer patients is still lacking. To date, no randomised clinical trials have been reported in which the effectiveness of HDC-PBPC was evaluated. Moreover, cost-effectiveness data are scarce, not only for HDC-PBPC, but also for the adjuvant treatment of breast cancer patients in general. Most of these economic evaluations have methodological drawbacks. For instance, no economic evaluation integrated in a clinical trial was performed, only direct medical costs were included, and mostly costs were based on charges. At this moment, a single Dutch national randomised study with an integrated economic evaluation is in progress, in which HDC-PBPC is evaluated. In June 1997, 525 patients were randomised. First results of the study are expected in the year 2000.

**Study design:** In the Dutch randomised study, patients with four or more positive lymph nodes are included. Standard dose chemotherapy consisting of five cycles 5-fluorouracil, epirubicin, and cyclophosphamide is compared with four identical cycles and one cycle with HDC (cyclophosphamide,

thiotepa, carboplatin) followed by PBPC. Apart from clinical endpoints, a quality of life analysis and an economic evaluation are performed. For this study consensus was reached between all university hospitals and the two cancer centres in the Netherlands.

In the economic evaluation, firstly, a cost-effectiveness analysis with disease-free survival as effect parameter will be performed. This analysis will be based on the observed costs and disease-free survival of the patients during the study period. Secondly, a cost-effectiveness analysis with overall survival as effect parameter, and, thirdly, a cost-utility analysis with quality adjusted survival (Qaly's) as effect parameter, will be executed. Those two analyses will be performed from a lifetime perspective. Long-term survival will be estimated on the basis of the observed disease-free and overall survival, lifetime costs on the basis of those survival figures and the observed costs of the patients during the different stages (e.g. treatment, period with relapse, period without relapse, final stage). Costs are assessed from a societal perspective, and, where possible, full resource costs are estimated. The following types of costs are included in the analyses: direct medical costs, direct non-medical costs and indirect non-medical costs.

**Presentation:** In the presentation, firstly, a brief literature review of economic evaluations of the adjuvant treatment of breast cancer patients between 1980-1996 will be given. Secondly, the major drawbacks of those economic evaluations will be addressed. Thirdly, the study design of the Dutch study on HDC-PBPC will be presented, and it will be addressed how some of the drawbacks in the reviewed economic evaluations have been solved in this study.

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#### PP66. Using appropriate comparators in economic evaluations: An exercise for Belgium

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**Background:** Standard effective treatments, but less challenging and rewarding might be overlooked in clinical and economic research, while new but often more expensive treatments with only modest or no improved effectiveness in comparison to them, receive relatively more attention. This may lead to inefficient allocation of health care budgets.

**Purpose:** The consequences of including standard effective treatments in the evaluation of different treatments for early breast cancer in premenopausal women (T0-3, N0-2, M0) and in non-Hodgkin lymphoma, both diseases with a markedly increasing incidence and associated with potentially high costs.

**Material and methods:** The effectiveness of alternative treatment strategies is assessed on the basis of a review of important medical literature. An exercise in the context of the Belgian health care insurance system compares the expected charges to be paid for different treatment strategies.

**Results:** Ovariectomy in Breast Cancer (770 ECU) and conventional chemotherapy "CHOP" (2,740 ECU) in non-Hodgkin lymphoma have proven their effectiveness. According to charges fixed by the Belgian health care insurance system, substantial savings in comparison to respectively treatment with chemotherapy 1,900 ECU in a day care and 2,870 ECU in hospitalisation). Costs of the treatment in non-Hodgkin lymphoma with chemotherapy LNH84 versus CHOP versus autologous bone marrow transplantation are estimated at 2,750 ECU, 7,200 ECU and 19,220 ECU, respectively.

**Discussion:** Health care authorities should order and fund appropriate research in cancer care to independent observers in order to maximise their population's total health within a given limited budget. In cost-effectiveness studies regarding cancer care all relevant available treatment options should be incorporated.

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