
This study, conducted in Denmark from 1980 to 1991, is the first to provide population-based estimates of the risk of hematologic and other malignancies in relatives of children with myelodysplasia, acute myelogenous leukemia, and chronic myelogenous leukemia. No increased risk of overall cancer was found in relatives of these patients, suggesting that the risk of familial myelodysplasia may be considerably lower than previously estimated.


An International MDS Risk Analysis Workshop combined cytogenetic, morphologic, and clinical data from seven large previously reported risk-based studies to generate a consensus prognostic system. Univariate analysis indicated that the major variables having an impact on disease outcome for evolution to acute myelogenous leukemia were cytogenetics, percentage of bone marrow blasts, and number of cytopenias. Age and gender also were important variables in predicting overall survival. Multivariate analysis combined cytogenetics (good, intermediate, and poor prognostic categories) with percentage of bone marrow blasts and cytopenias to generate a prognostic model. These features provide an improved method to separate patients into distinct subgroups at risk for evolution to acute myelogenous leukemia and to predict median survival.


A new method is described that allows batching or multiplexing of polymerase chain reaction (PCR) samples by using progressively decreasing annealing temperatures and a standardized reaction buffer. This simplified mechanization of PCR will permit the simultaneous detection of several different chromosomal translocations in a single sample run and may allow "screening" for multiple genetic abnormalities in a single patient sample.


Partial tandem duplication of ALL1 is present in most, if not all, cases of AML with +11 as the sole abnormality and can be found in cases of AML with +11 or +11q accompanied by other cytogenetic abnormalities. This duplication is more prevalent in AML than previously recognized and represents the first identification of a specific gene rearrangement associated with recurrent trisomy in human cancer.


The group studied 211 patients (161 de novo and 50 secondary AML) over the age of 55 years to determine whether biologic variables could be identified that account for the lower response to conventional chemotherapy generally described in this population. In multivariate analysis, secondary AML, unfavorable cytogenetics, and MDR1 expression were each significantly and independently associated with a lower complete remission rate. Furthermore, AML in this group of elderly patients was associated with a high frequency of unfavorable cytogenetics and MDR1 expression, suggesting a common biologic mechanism in these patients distinct from that of younger age groups.


Management of patients with myelodysplasia (MDS) is problematic, and the only curative therapy appears to be bone marrow transplantation. Most patients with MDS are elderly and thus not good candidates for transplantation. Therefore, the use of cytokine growth factors is being critically evaluated, both for improvement in cytopenias and for prolongation of survival in patients who have already progressed to acute myelogenous leukemia.


This study describes the toxicity and activity of fludarabine in 703 patients with refractory CLL in a setting that resembles clinical practice in most published trials. A low response rate (32% of assessable patients) was believed to be related to high stage, presence of B symptoms, and extent of prior treatment in this group. Grade IV hematologic toxicity was frequent and was reported in 43% of patients, with a relatively high rate of associated infections.


A total of 623 patients achieved complete remission (CR) after a first course of intensive consolidation chemotherapy combining intermediate-dose cytarabine and ansamycin. Patients with an HLA-identical sibling were assigned to undergo allogeneic bone marrow transplantation; the remaining patients were randomized to undergo autologous bone marrow transplantation or a second course of intensive chemotherapy. During first CR in acute myelogenous leukemia, autologous as well as allogeneic bone marrow transplantation resulted in better disease-free survival than intensive consolidation chemotherapy with high-dose cytarabine and daunorubicin. Transplantation soon after relapse or during second CR may also be appropriate.


A dose-response effect for cytarabine was observed in patients with AML who were younger than 60 years of age. The results with the high-dose schedule in this age group were comparable to those reported in similar patients who have undergone allogeneic bone marrow transplantation during a first CR. The addition of high-dose cytarabine can improve outcome in many patients with AML.

A total of 2,055 recipients of allogeneic bone marrow transplants for chronic myelogenous leukemia, acute myelogenous leukemia, and acute lymphoblastic leukemia between 1985 and 1991 were evaluated from the records of the International Bone Marrow Registry. Transplant-related mortality was significantly higher after alternative donor transplants than after HLA-identical transplants. Outcome was dependent on leukemia state, donor-recipient relationship, and degree of HLA matching. In early leukemia, alternative donor transplants have a greater than twofold increased risk of treatment failure. This difference in risk is lower in advanced leukemia. Donor selection is an important consideration in evaluating the potential outcome for bone marrow transplantation.