SATELLITE SYMPOSIUM

CLINICAL EVALUATION OF NOVANTRONE IN LYMPHOMA THERAPY

WEDNESDAY, JUNE 6, 1990
ROOM A – 8:30-11:30 a.m.
MITOXANTRONE IN PATIENTS WITH NEWLY DIAGNOSED LOW-GRADE NON-HODGKIN'S LYMPHOMA: HIGH ACTIVITY OF A DAILY SCHEDULE

H.B. Hirs, S.W. Hansen

Department of Hematology, Rigshospitalet, Copenhagen, Denmark

Twenty-one consecutive previously untreated patients with low-grade non-Hodgkin's lymphoma were entered into a trial of mitoxantrone 5 mg/m² daily for 3 days of 3 weeks between 1985 and 1986. A cumulative dose of 165 mg/m² was not exceeded. Seven patients had small lymphocytic lymphomas, 10 patients had follicular, mixed small and large cell lymphomas (International Working Formulation). All 21 patients were evaluable for response and toxicity. 20/21 obtained remission. 9 CR and 12 PR. Non-hematologic toxicity was modest. No alopecia was seen and only 4 patients had nausea and vomiting (WHO grade 1-2). No cardiac toxicity was seen. White cell count on Day 12 was median 2.0 x 10⁹/L (range 0.7-3.4 x 10⁹/L). Platelet counts below 100 x 10⁹/L were observed only in 5 patients. Cumulative toxicity which required dose reduction was observed in 13/18 patients (72%) and in 6 patients, delay of treatment was necessary.

At the last analysis in 1988, with a median follow-up of 30 months, 7/21 patients had relapsed, and 14/21 were disease-free. An updated analysis of the study will be presented, including data on sequential studies of cardiac ejection fraction. (Futuente intravenous results: Cancer Chemother Pharmacol 1988; 22: 77-8)
IN A CLINICAL PHASE-II STUDY, THE ANTILYMPHOMA ACTIVITY OF THE RECENTLY INTRODUCED COMBINATION OF PREDNISOLONE AND MITOSANTRON (M) WAS EVALUATED IN 17 PATIENTS WITH ADVANCED LOW-GRADE NON-HODGKIN'S LYMPHOMA AFTER FAILURE WITH MELPHALAN AND VUMEGRETIN (MV) OR WITH STEROID TREATMENTS. THE PHM regimen consisted of prednisolone 100 mg/m^2/day orally on days 1 - 5 and mitosantrone 8 mg/m^2/day i.v. on days 1 and 2. The complete remission rate was 22% and the median duration of response was 10.5 months. Fourteen of the 17 patients responded (14 CR, 2 PR). These data provide the basis for a continuing ongoing randomized multicenter study comparing initial chemotherapy with PHM vs COP (Cyclophosphamide, Oncovin, Prednisone) followed by a CR and PR patients for maintenance therapy with MOPP (alpha-2B) only in patients who achieved CR or PR after initial chemotherapy with PHM.
SATELLITE SYMPOSIUM

NEW ASPECTS OF INTERFERON THERAPY IN HAEMATOLOGICAL MALIGNANCIES AND LYMPHOMAS

WEDNESDAY, JUNE 6, 1990
ROOM B – 11:30-15:30 p.m.
ABSTRACTS - Fourth International Conference on Malignant Lymphoma, Lugano

CRONICAL MYELOGENOUS LEUKEMIA: OVERVIEW OF MOLECULAR MECHANISMS AND INTERFERON-ALPHA THERAPY. E. Kowarcz, B. Kontarjanc, J.H. Gatterman, M. Talpas. Department of Clinical Immunology and Biological Therapy. The University of Texas System Cancer Center, Houston, Texas, U.S.A.

Cronical myeologenous leukemia is a chronic myeloproliferative disorder which can be divided into several cardinal features: (i) a progressive course from a chronic phase to a blast crisis; (ii) the characteristic Ph chromosome; (iii) transformation; and (iv) different molecular abnormalities. These abnormalities can be divided into three groups: (i) the BCR-ABL gene encoding an altered in ather factor of 2; (ii) the ABL gene encoding an altered in ather factor of 2; and (iii) the ABL gene encoding an altered in ather factor of 2. Recently, we have shown that newly-diagnosed CML patients will respond to interferon-alpha therapy. Approximately 70% of these individuals achieve a complete cytogenetic response. In contrast, about 15% of patients with a chronic phase disease have a low rate of hematologic response (25%) and rarely achieve a complete cytogenetic response. Currently, our laboratory is analyzing molecular mechanisms of resistance to hematologic response to interferon-alpha therapy. We will present data demonstrating that a) resistance to interferon-alpha is probably not caused by resistance to interferon-stimulated genes, and b) the use of interferon-stimulated genes, such as c-myc, hpl, and hsp70, may be associated with differential expression of BCR-ABL protein. c) The events driving the interferon-stimulated genes, may also be driving the expression of radiation resistance to interferon therapy.


a-interferon (a-IFN) is a biologic therapeutic with documented antitumor effect in multiple myeloma. In previously treated patients the response frequency to a-IFN alone was 17% (95% conf. limit: 12-22%) and in newly diagnosed patients 34% (95% conf. limit: 27-41%). The mechanisms of action are not clear but a lot of functions might be operating a dose-dependent direct cytotoxic effect has been shown in vitro which is probably also the case in vivo. A synergistic inhibitory effect on myeloma cell colony formation in vitro has been shown between a-IFN and melphalan/prednisolone (50:50). Moreover, a-IFN might also act by inhibiting the growth promoting effect of IL-6, by an increase of IL-6 cell functions, by expansion of cytotoxic T cells and by increase of relevant surface antigenic structures.

The aim to study the therapeutic synergy between a-IFN and MP a randomized study was started in April 1986. All newly diagnosed patients with clinical stage II or III received MP therapy every two weeks. The group (MP/IFN) was given MP every two weeks and a-IFN 5 to 10 million units/day to the other group. When a response was achieved the a-IFN was reduced to 3 to 5 million units/day in a week continuous therapy was given. 220 patients entered the study. The response frequency was 48% in the group and 63% in the MP/IFN group (p<0.01). No significant difference was found for stage II and stage III patients. 9% of all IGI myeloma responders to MP alone (5%) and 2% responded to MP/IFN (p<0.01). The difference in response frequency of IGI and BJ myeloma patients was statistically not significant. The difference in response frequency between the two treatment groups was statistically significant. The difference in response frequency between the two treatment groups was statistically significant. The difference in response frequency between the two treatment groups was statistically significant. The difference in response frequency between the two treatment groups was statistically significant. The difference in response frequency between the two treatment groups was statistically significant. The difference in response frequency between the two treatment groups was statistically significant.
ABSTRACTS - Fourth International Conference on Malignant Lymphoma, Lugano

INTERFERON α-2A IN CUTANEOUS T-CELL LYMPHOMA. G. Papp*, M.L. Veggia*, D. Delgado*, G. Coppola*, O. De Favia*, P. Pudenz*, G. Pieroni*, P. Simonelli*, D. Rolando*, P. Mandelli*. *Cattedra di Ematologia, Università di Roma, Italy; **Istituto Dermopatico dell’Immunomodulazione, Rome, Italy. The study was designed to evaluate the therapeutic efficacy and the toxicity of α-2A recombinant interferon (Roferon A, kindly provided by Hoffmann-La Roche) given as initial systemic therapy in mycosis fungoides and/or Sézary syndrome patients, not previously exposed to either cytotoxic or extensive radiation therapy, at a slowly escalating schedule to the maximal tolerated dose than could be given without debilitating side effects.

Between February 1986 and June 1987, 23 newly diagnosed patients with cutaneous T-cell lymphomas were treated with subcutaneous recombinant leukocyte interferon α-2A (IFN). IFN was administered daily with dose escalation from 3 to 18 million units for 12 weeks; thereafter patients induced complete (CR) or partial (PR) remission were given IFN at maximal tolerated dose 3 times weekly for 6 to 9 months. There were 18 males and 5 females with a median age of 56.6 years (range: 20-70 yrs). 12 patients had plaque lesions, 5 had generalized erythroderma, 4 of these had circulating Sézary cells. No patient had visceral disease on abdominal CT scan and/or sonogram. All patients were untreated, but one who had received topical skin irradiation. All patients completed induction phase and were evaluated for response to therapy. The objective tumor response was observed in 17 pts (74%): 8 (35%) were CR and 9 (39%) were PR. Median time to achieve the response was 5 months (range: 3-9 months). Two had a stable disease and 3 progressed during induction. A 74 years old patient died because of neutropenia and sepsis at the end of induction, while receiving IFN at dose of 18 MU. Disease stage is the pretreatment feature predictive of response to IFN therapy.


Twenty patients have now entered a multicentre study to assess the efficacy of recombinant alpha 2A interferon in the prevention of progression of early stage chronic B lymphocytic leukemia (B-CLL). The study regimen is 300,000 units of interferon self-administered thrice weekly by subcutaneous injection. Currently available results are those of patients who have undergone more than 3 months therapy. Although rate of response varied between individuals, all patients showed an initial response of a 20-80% reduction in their lymphocytoses. Throughout individual treatment periods (3-17 months), although transient variations occurred, only two patients exhibited a net drop of >5 x 10^9/L, both after 17 months continuous interferon therapy. One patient had a marked net drop in both platelets and neutrophils following 12 months interferon therapy. 3 patients (2 at 6 months, 1 at 9 months) have some evidence of disease progression whilst on therapy. This has been indicated by a marked increase in peripheral CD5+ light chain restricted B cells in all 3 patients. The possible reasons for relapse are currently under investigation. One of these patients has now ceased alpha interferon therapy and to date minimal changes have occurred in the absolute values of non-B lymphocytes and the reduction of lymphocytosis confined to clonal B cell populations. Sequential in vitro stimulation assays involving pokeweed mitogen (PWM) have shown both an increase in β-thymidine uptake and IgM/IgG secretion in the overall lymphocyte populations in patients on interferon therapy. Whilst it is obviously too early to draw firm conclusions on the possible long term benefits of recombinant alpha 2A interferon usage in early stage CLL, it is clear that it can lead to an early reduction in lymphocytosis and in some patients a return towards normal lymphocyte cell function.
SATellite SyMposiUm

Recent Advances
In Lymphoma Treatment

Wednesday, June 6, 1990
Room A – 12:00-3:30 p.m.
ABSTRACTS - Fourth International Conference on Malignant Lymphoma, Lugano

CAN HODGKIN’S DISEASE BE SALVAGED? G.P. Canellos.
Dana-Farber Cancer Institute, Boston, Massachusetts 02115

The availability of an increasing number of active agents has led to the development of a number of regimes for use as alternative and second-line therapy following relapse from or refractoriness to CHOP or its variants. ABVD has been the most widely used and has been considered "non-cross-resistant." Other programs containing the cytosine arabinoside COMB have been evaluated with results similar to ABVD. A relatively small fraction of relapsed patients remain free at 5 years (about 15% to 20% despite a 30% to 50% complete remission rate). The few randomised trials (CALGB, ECOG) to evaluate the efficacy of alternative MOPP/ABVD compared to MOPP alone have shown a small but significant advantage in freedom from progression and/or survival, favoring the complex regimes over MOPP. The CALGB trial (8251) included a third arm of ABVD alone. The ABVD and MOPP-ABVD arms had a higher CR rate and superior failure-free survival (FFS) over MOPP, but there has shown no difference between ABVD and alternating MOPP/ABVD, suggesting that full doses of a single regime are equivalent to the more complex multidrug regimen. The next step in the CALGB program was to attempt to improve ABVD. This trial was started in 1986.

STUDY BACKGROUND AND DESIGN.

The CALGB program was to attempt to improve ABVD. The study was started in 1986. The patients were randomized to receive either ABVD or MOPP-ABVD. The MOPP-ABVD arm was divided into three groups: ABVD, ABVD/MOPP on cycles 1 and 2; and ABVD/MOPP on cycles 1, 2, and 3. The study was closed after the interim analysis showed a significant difference in CR rate and event-free survival favoring ABVD/MOPP on cycles 1 and 2.

The results of this study were presented at the Fourth International Conference on Malignant Lymphoma, Lugano, 1988. The study showed that ABVD/MOPP on cycles 1 and 2 was superior to ABVD alone in terms of CR rate and event-free survival. The study was closed after the interim analysis showed a significant difference in CR rate and event-free survival favoring ABVD/MOPP on cycles 1 and 2.

The study was presented at the Fourth International Conference on Malignant Lymphoma, Lugano, 1988. The study showed that ABVD/MOPP on cycles 1 and 2 was superior to ABVD alone in terms of CR rate and event-free survival. The study was closed after the interim analysis showed a significant difference in CR rate and event-free survival favoring ABVD/MOPP on cycles 1 and 2.
Abstracts - Fourth International Conference on Malignant Lymphoma, Lugano


Initial results from studies using third-generation combination chemotherapy regimens for the treatment of aggressive non-Hodgkin's lymphoma demonstrated complete remission (CR) rates that were higher than those reported with first-generation regimens. Long-term follow-up of these studies is required to know if the increased number of CRs translates into greater numbers of long-term disease-free survivors. This report describes results obtained with one of the third-generation regimens, PRO-MACE (prednisone, methotrexate, doxorubicin, cyclophosphamide, etoposide)-CytoxAN (cytarabine, bleomycin, vincristine, mitomycin, methotrexate).

From 1981 to 1988, 193 patients with stage II, III, or IV aggressive non-Hodgkin's lymphoma treated at the National Cancer Institute were randomly assigned to receive either PRO-MACE (day 1)-CytoxAN (day 8) or PRO-MACE (day 1)-MOPP (mustard, vinblastine, procarbazine, prednisone) (day 8). The doses and schedule were previously published (Fisher et al: Proc ASCO 1984). Longo et al: Proc ASCO 1987). With a median follow-up of 5 years, the CR rate was 44% for PRO-MACE-CytoxAN x 74% for PRO-MACE-MOPP (E = 0.04). A plateau in the disease-free survival curve was seen at 69% for PRO-MACE-CytoxAN vs 54% for PRO-MACE-MOPP (E = 0.082). A plateau was also seen in the overall survival curves at 69% for PRO-MACE-CytoxAN vs 54% for PRO-MACE-MOPP (E = 0.046).

In 1989, the Southwest Oncology Group conducted a phase II study of PRO-MACE-CytoxAN in 74 patients with stages II to IV intermediate- or high-grade non-Hodgkin's lymphoma to determine the CR rate and the disease-free survival with this regimen in a national cooperative group setting. The CR rate was 57%. At median follow-up of 3 months, disease-free survival is 50% at 3 years, and overall survival is 57% at the same timepoint.

Ultimately, conclusions concerning the efficacy of this regimen await results of the National High Priority Lymphoma Trial, which compared PRO-MACE (etoposide, doxorubicin, vincristine, prednisone) v-m-BCOD (methotrexate, bleomycin, doxorubicin, cyclophosphamide, vincristine, dacarbazine) or PRO-MACE-CytoxAN v MACOP-B (methotrexate, doxorubicin, cyclophosphamide, vincristine, prednisone).}

PHASE II TRIAL OF DICE (Doxamethasone, Ifofusamide, Cisplatin, and Etoposide) IN PATIENTS WITH NON-HODGKIN'S LYMPHOMA (NHL).


Eighty patients (pts) with refractory NHL (11 primary non-Hodgkin's and 7 at relapse) were treated with DICE (doxamethasone 10 mg qd, ifofusamide 1 g/d, cisplatin 25 mg/m², etoposide 100 mg/m²) and mitomycin (daily) x 4 q 42 days. Thirteen male and 5 female pts, median age 65 yr (range, 21-74), of whom 10 pts had stage IV, 1 stage III, and 4 stage II disease. Six pts had 5 symptoms and 5 had marrow involvement. Only 2 pts had 10 pts had more than 4 systemic chemotherapy cycles. The median time from last chemotherapy was 8 months (range, 1-23). It is too early to evaluate one pt and 2 suffered early treatment-related deaths and have been classified as nonresponders. Six of 17 (35%) achieved CR (6-50 wk) and 7 (42%) PR (4-36 wk) for an overall response rate of 74%. The median survival has not been reached, but 10 pts are alive 4-46 wk from the start of treatment. Five pts had nadir granulocyte counts less than 0.5 x 10⁹/L, 5 required blood transfusions. Two pt deaths were related to sepsis. The platelet nadir was less than 50 x 10⁹/L in 6 pts. Four pts had microvascular necrosis. Only 1 pt had grade III GI toxicity, and one had a transient episode of delirium and visual blurring. In summary, DICE is very well tolerated. Myelosuppression is the dose-limiting toxicity, particularly in pts with marrow involvement.

THE PLACE OF THIRD GENERATION REGIMENS IN THE TREATMENT OF PATIENTS WITH LARGE CELL LYMPHOMA, James D. Armitage, M.D., University of Nevada Medical Center, Omaha, NE.

Diffuse large cell lymphoma (DLCL), the most common form of aggressive non-Hodgkin lymphoma, has been known to be curable with combination chemotherapy regimens. Although occasional patients were cured with regimens like COP, the development of 4-drug regimens made cure possible in a significant percentage of patients. Subsequently, regimens (i.e., often referred to as "third-generation" regimens) incorporated even more drugs with an apparent increase in the CR rate. However, the identification of important clinical and biologic features in the patient or the tumor that predict for treatment outcome (i.e., prognostic factors) has complicated combination chemotherapy regimens and non-randomized and non-concurrent trials. Recently SWOG has presented data from pilot studies showing that patients treated with PRO-MACE-CytoxAN, m-BCOD and MACOP-B did not seem to do better than patients treated in the past with COPP. Also, ECOG has presented a study in which patients treated with a 6-drug regimen did no better than those treated with a COPP-like regimen. Some have interpreted these reports to mean that all patients with DLCL should receive COPP, since they feel it to be "safer". I believe this is not a good interpretation of the available data for the following reasons:

1. When administered at maximum tolerated doses, COPP has the same 54 treatment related mortality seen with all regimens.

2. When COPP is given at reduced (i.e. "safer") doses it is not as effective.

3. It is not yet clear that all patients with DLCL are the same in their response to treatment. That is, some patients might have a higher chance for cure for certain chemotherapy regimens.

My interpretation of the available data is that at the present time each oncologist should choose the regimen in which he/she has the most confidence and become expert in its use. By becoming expert in the use of a particular regimen, one may minimize treatment related mortality and give patients the maximum chance for a good outcome. It is also important that clinical trials continue to identify the optimal treatment for each subgroup of patients with DLCL.


From December 1987 through March 1990, 77 patients (pts), 37 with HD and 40 with NHL, received 60 mg/kg etoposide (VP-16) in combination with 100 mg/kg cyclophosphamide (Cy) and either 1,200 cGy irradiation to the bone marrow for myeloablation (IR) or, for those previously treated with thoracic irradiation, 400 to 550 mg/m² carmustine (BCNU) prior to AMT. Marrow was purged of BCNU with a panel of monoclonal B and T cell antibodies and complement. Twenty-eight pts received 120-160 mg/m² BCNU with AMT. BCNU and AMT were combined in 16 pts treated with BCNU; toxicities included veno-occlusive disease (2 pts), pneumonia (1 pt), fungal infection (1 pt), and delirium (2 pts). With a median follow-up of 1 year (range, 2 to 27 mo), 57 pts are alive and free from progressive disease. The actuarial survival and freedom from progression are 1 year similar for the 26 pts receiving BCNU/AMT vs 85% (74%) and the 49 pts receiving BCNU/VP-16/CT (35%. 72%).

Forty-five pts participated in prospective trials for which eligibility criteria were as follows: (1) less than 25% suratibility with conventional therapy (CT); (2) achievement of minimal disease state with CT; and (3) transplantation early in the course of disease. One year actuarial survival for 21 protocol participants with diffuse mixed or large cell NHL who were primary induction failures or developed recurrent disease after primary chemotherapy is 73%. One year actuarial survival for 30 pts with HD who were induction failures or developed recurrent disease after one or two primary chemotherapy regimens is 83%. While preliminary, both of these results are superior to those obtained with historical control subjects at a similar time period. One pt with Burkitt's NHL has been transplanted on a protocol for high-risk intermediate and high-grade NHL in first remission. Five pts with follicular mixed or small cleaved NHL have also been transplanted in first remission. Overall, these data demonstrate an acceptable rate of fatal toxicity (8%) among 77 pts treated with high-dose VP-16 regimens. The preliminary results are encouraging, but larger patient cohorts and longer follow-up are needed to address the curative potential of these regimens according to histology and clinical parameters of potential prognostic significance. With the increasing use of AMT, especially among patients with low-grade lymphoma and HD, quality of life issues and the ability to deliver palliative therapy upon posttransplant relapse will also need to be addressed.
FACTORS AFFECTING THE OUTCOME OF AUTOLOGOUS BONE MARROW TRANSPLANTATION.

D.C. Guleti, J. Yahalom, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.

Various protocols have been used at MSKCC to improve the results of autologous bone marrow transplantation (ABMT) for hematopoietic malignancies. Our results suggest that the patients who undergo ABMT in complete remission (CR) after induction or reinduction treatment do better than patients who undergo ABMT in incomplete response (IR). After ABMT, relapse and/or toxic complications are the main factors to improve upon in the future (Table). Pulmonary toxicity occurs mainly in patients with mediastinal disease. Factors that can decrease the relapse rate and toxicity will be discussed. The outcome of similar trials at other institutions will also be discussed. This study was supported by Morgan Murray Fund, National Leukemia Association and the United Leukemia Fund, and the Sinarid and Rue Sondal Fund.

Diagnosis/No. % CR ABMT Preconditioning % Relapse % Toxic Death % Survive All Prognosis

Uptown AML/14 43 TBI/CXM 20 20 0 0 70 (23)

Salvage AML/25 23 TBI/CXM 80 50 10 50 13 (130)

Salvage MLL/9 13 TBI, etoposide, CXM 0 50 0 0 54 (90)

Salvage M6/22 Previous CXM 135 mg/m² 4, 1, 0 14 0 58 (105)

Previous FT 115 mg/m² 1, 0 11 0 65 (19)

Salvage M6/25 Previous 8T 115 mg/m² 1, 0 25 0 84 (124)

TBI = total body irradiation; CR = complete remission; ABMT = autologous bone marrow transplantation; IR = incomplete remission; %CR = complete remission rate; %Survive = survival rate.


In order to compare conventional therapy with massive chemotherapy + autologous bone marrow transplantation (ABMT) in relapsed non-Hodgkin's lymphoma (NHL), a randomized multicenter study was initiated by the PARMA group. Since July 1987, 128 consecutive patients from 43 worldwide institutions were included in the study. All patients had intermediate- or high-grade NHL with previous complete remission (CR) and were included at time of first or second relapse. Age was less than 65 years. CNS and bone marrow relapses were excluded. Histologic proof of relapse was mandatory. After a complete staging, all patients received the same rescue protocol, i.e., DHAP (dexamethasone, cisplatin, and cytarabine) for 2 consecutive courses at 3- to 4-week intervals.

A total of 128 patients are evaluable for response; 99 patients achieved partial response or CR after 2 courses of DHAP (54%). Patients relapsing on therapy (20%) have a lower response rate than patients relapsing off therapy (80%) (9% x 57% = 5%). Among these 99 patients, 62 were randomly assigned between 4 additional courses of DHAP (n = 34) or massive therapy with BEAC (carmustine, etoposide, cyclophosphamide and ABMT n = 28). Radiotherapy of involved fields was performed after 6 courses of DHAP in the first arm, and before massive therapy and ABMT in the second arm. Reasons for no randomization were prognosis (40%), patient refusal (2%), technical problems (1 patient), abnormal bone marrow cellularity (1 patient), hepatic dysfunction (2 patients), renal failure (1 patient).

The main end point is the failure rate at 2 years, i.e., relapse or death from any cause.

There is no statistical difference in terms of toxic death rate. Comments and further results of the first interim analysis of this ongoing international study will be given in detail in this presentation.
Roche cordially invites you to the Satellite Symposium

NEW ASPECTS
OF INTERFERON THERAPY
IN HAEMATOLOGICAL MALIGNANCIES
AND LYMPHOMAS

Chairman:
Professor A.H. Goldstone
(United Kingdom)

Wednesday, June 6, 1990
12.30 – 15.30 pm
Palazzo dei Congressi
Room B
Lugano

Preliminary Programme

Dr. R. Kurzrock
(USA)
Molecular mechanisms of chronic myeloid leukaemia (CML)
Overview of MD Anderson studies of interferon alpha in CML

Dr. M. Baccarani
(Italy)
Italian multicenter study on Roferon-A in chronic myeloid leukaemia (CML)
Roferon-A versus traditional chemotherapy in CML

Prof. H. Mellstedt
(Sweden)
Interferon alpha combination therapy in multiple myeloma

Dr. A. Hagenbeck
(The Netherlands)
Interferon alpha-2a maintenance in non-Hodgkin’s lymphoma

Prof. G. Papa
(Italy)
Interferon alpha-2a in cutaneous T-cell lymphoma

Dr. F. Giles
(United Kingdom)
Interferon alpha in the treatment of chronic lymphocytic leukaemia