partial remission (PR). 12 pts received additional radiation therapy and 3 pts high dose chemotherapy with peripheral stem cell rescue in first complete remission. 1 HIV+ pt relapsed at 6 months and died. 4 pts (2 HIV+) progressed at 3, 4, 6 and 9 months and died. Probability of survival in remission is 88% (95% CI 56–97%) at 18 months: (excluding the 3 HIV patients). VEMP is well tolerated and is highly active in most HD. VEMP can be combined with radiation therapy. VEMP can also be used as an induction regimen in selected cases proceeding immediately to high dose chemotherapy. VEMP is devoid of pulmonary toxicity. Despite a short follow-up, VEMP should not be as leukemogenic as the alkylating agent containing regimen and should neither sterilize men nor advance menopause in women.

806 PUBLICATION

PRIMING FOR KILLING: CAN THE ASSOCIATION GM-CSF-CYTARABINE HAVE ANY ROLE IN THE TREATMENT OF CHRONIC MYELOGENOUS LEUKEMIA (CML)?

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Except for bone marrow (BM) transplant, current therapies fail to cure CML because Ph'clone cannot be eradicated. *In vitro*, exposing blast-crisis CML blasts to CM-CSF results in a three fold increment of cells in S phase and cell killing is 34% higher when GM-CSF+cytabarine are added simultaneously.

This *in vitro* experience deals with the likelihood of priming CML BM cultures with GM-CSF followed by exposure to Cytarabine to evaluate Ph'clone depletion. The BMs of 12 CML pts (3 newly diagnosed, 6 chronic phase, 3 hematological/cytogenetic complete remission) were cultured during the 24 hrs as follows: 1. controls; 2: GM-CSF (Leukomax, Schering Plough) 0.2 μg/ml; 3. Cytarabine (Ara-C, Rontag) 0.1 μg/ml 6 hrs before harvesting; 4. GM-CSF + cytarabine (as in 2 and 3). Colchicine 0.1 μg/ml was added 1 hr before harvesting. Mitotic index (MI) was expressed as X ± SE for all cultures (Table 1).

Table 1: Mitotic index mean values according to cultures:

Culture	MI (X ± SE)	
1.Controls	4.50 ± 120*	*$P < 0.05$
2.GM-CSF	6.75 ± 1.80*$^{\approx}$	
3.Cytarabine	3.00 ± 0.78	
4. GM-CSF + Cytabarine	3.50 ± 0.77	*$P < 0.01$

According to these data, MI in CML BMs exposed to GM-CSF. Is higher than MI of controls (*$P < 0.05$), and is lower in BMs exposed to GM-CSF and treated with Cytarabine 6 hrs before harvesting compared to BMs only exposed to GM-CSF ($P < 0.01$). *In vitro*, more Ph' + CML cells can be killed with cyterabine in BMs previously exposed to GM-CSF. Could this experience be useful to develop new therapeutic strategies for Ph' + CML pts?

807 PUBLICATION

COMBINATION THERAPY WITH CYTOSTATIC DRUGS AND A POLYENZYME PREPARATION DECREASES CONCENTRATION OF SOLUBLE TUMOR NECROSIS FACTOR RECEPTORS P55 AND P75 IN SERUM OF PATIENTS WITH MULTIPLE MYELOMA

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Conventional chemotherapy with drug combinations is still the preferred treatment for multiple myeloma. Immuno-chemotherapy with Wobe-Mugos (a polyenzyme preparation) and MOCCA/VMPC of MM patients results in a prolongation of clinical remission and a significant prolongation of survival time in comparison to MM patients who received chemotherapy only (Sakalova and Stauder *et al.* in prep.).

In the present study we measured the serum levels of β2microglobulin (β2M) and of soluble tumor necrosis factor receptors (sTNF-R: p55 and p75) in serum of 169 patients to determine their value as a monitor of diseases status in untreated, chemotherapy treated and immuno-chemotherapy treated MM patients. Serum levels of p55 and p75 as well as β2M were elevated in parallel with the clinical stage in untreated patients. sTNF-R and β2 M correlate (β2m/p55: 0.7162 $P < 0.0001$; β2M/p75: 0.7221 $P < 0.0001$—Spearman correlation coefficients). The mean levels of p55 receptors (control:2339 pg/ml) were increased to 4866 ± 2067 pg/ml ($P < 0.0001$ v normal) in stage II and to 8196 ± 4185 ($P < 0.0001$ v normal) in stage III. The mean levels (control: 3542 pg/ml) of p75 were increased to 6248 ± 2278 ($P < 0.0001$ v normal) in stage II and to 13873 ± 6229 ($P < 0.0001$ v control) in stage III.

Immuno-chemotherapy significantly reduced serum levels of p55, p75 and β2M in stages I and II in comparison to chemotherapy alone (p55: 2970 ± 1095 $P < 0.01$ v. chemotherapy p75: ± 4345 ± 1497 $P < 0.05$ v. chemotherapy—stage II).

In stage III the serum concentrations of p55 and p75 were reduced by chemotherapy (p55: $P < 0.05$; p75: $P < 0.02$ v. untreated stage III) but to a higher degree by Immuno-chemotherapy (p55:$P < 0.001$; p75:$P < 0.0001$ v. untreated stage III).

Our results suggest that p55 and p75 concentrations in serum of MM patients correlate well with β2M and may be potential markers for both disease progression and response to therapy.

808 PUBLICATION

ABVD OR EBVD AS FIRST LINE CHEMOTHERAPY IN HODGKIN'S DISEASE (HD)

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Forty consecutive patients with HD were treated with ABVD or EBVD (doxorubicin 25 mg/m^2 or 4-epi-doxorubicin 37.5 mg/m^2, bleomycin 10 mg/m^2, vinblastine 6 mg/m^2 and dacarbazine 375 mg/m^2 day 1 and 14 every 28 days). Patients (pts) obtaining a complete remisión (CR) after 4 cycles received up to 8 cycles, and pts obtaining a partial remission (PR) received up to 10 cycles. Two pts did not respond after 4 cycles and received a second line regimen.

Twenty-two pts were male and 18 female. Median age was 36 years (13–77). 56% had nodular sclerosis, 19% mixed cellularity, 14% lymphocyte depletion and 11% lymphocyte predominance. Staging showed IE-A to III-A: 20 pts, III-B to IV-A, B: 20 pts. 12 received ABVD or EBVD after radiotherapy (RT) failure.

With 4 cycles of CT 75% of pts achieved a CR (67% ABVD, 82% EBVD), this rate was increased to 95% (89% ABVD, 100% EBVD) after 8 or 10 cycles. With a median follow-up of 81 m (21–141) the freedom for progression (FFP) survival at 12 years is 86%.

ABVD (or EBVD) is as or perhaps more effective and less toxic than MOPP as first line therapy in HD. In our series previous RT did not influence the results.

809 PUBLICATION

PRIMARY ORBITAL AND ADNEXAL NON-HODGKIN LYMPHOMA (POAL): A SINGLE CENTRE STUDY OF 20 CASES

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The clinical behaviour, the prognosis and the treatment of the POAL are subject to some controversies. We define POAL as a localised lymphoma in the orbital and adnexal structures (I E), lasting at least one month after a diagnosis and complete staging procedure used in NHL. We studied 20 patients (pts) with lymphoproliferative lesions, from 1974 to 1994, finding 14 with POAL (orbit 6; lachrymal gland 4; conjunctive 2; eyelids 2), 1 patient had bilateral lesions. For the recent pts we studied the immunophenotype the beta2 microglobulin, LDH, abdominal ecography or CT, orbital CT or MRI. We applied the up-dated Kiel Classification (1 high grade and 13 low grade, most of them lymphoplasmocytic or diffuse centrocytic type cells). They was 2.5% of our NHL. The median age was 68 years (range 16–87) and there were a female predominance (M/F 1:2.5). No patients had monoclonal gammopathy or immune disorder. The initial presentation was ocular tumour or proptosis in all pts.

Treatment was: (1) surgery 2 (1 relapsed, 1 maintained CR); (2) radiotherapy (RT): 9 (7 of them with doses of 30–40 Gy, with the following late complications of RT (EORTC): G0 = 6, G1 = 3, G2 = 1; all pts but one attained CR; (3) RT plus chemotherapy (CH):3.

Four of the 6 orbital lesions had elapsed (66.6%); 4 of them were treated only with RT. The 2 pts with conjunctive lesions have been treated with RT; 1 is in CR 24 months (m.) after treatment.

Three of the 4 pts with lachrymal lymphoma had a disease free survival (DFS) of 5, 12 and 32 m; one of them was treated only with surgery; in this group was the only pt with high grade lymphoma treated with