

were in stage III according to Salmon/Durie, two had stage B. Five patients were pretreated, 2 with chemotherapy and 3 with radiation.

Four pts having received at least 2 cycles of CLAD are evaluable for response. Every patient reached a partial response ( $>50\%$  reduction in m-protein). Median fall in M-protein after two cycles was  $41\%$  (range  $30-49\%$ ). For safety 14 cycles were evaluated. Overall, treatment was well tolerated. In 1 cycle neutropenia grade III occurred and there was one episode of tachyarrhythmia in combination with cardiac failure three weeks after chemotherapy cycle.

In summary, our data show that CLAD is a very promising therapy for patients with multiple myeloma.

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PUBLICATION

### Clinical significance of p53 protein expression in Non-Hodgkin's lymphoma among Malaysian patients

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In Malaysia as in most developing countries, the majority of non-Hodgkins lymphoma (NHL) are of the aggressive type. Our treatment results with CHOP chemotherapy in aggressive NHL are considerably lower ( $<40\%$ ) than the rates reported from studies conducted in the West.

In this study we have investigated the frequency of p53 protein expression among newly diagnosed Malaysian patients with aggressive NHL and have correlated it with several clinical characteristics including treatment response and survival. Immunohistochemical staining with the p53 monoclonal antibody DO-7 was performed on specimens from 45 patients who were subsequently treated with conventional CHOP chemotherapy.

20 of the 45 lymphomas (45%) had  $>10\%$  of the cells staining positively for p53. p53 staining correlated with increased LDH and a high IPI score. In addition p53 expression predicted for treatment failure with only 30% of patients with p53 positive tumours achieving a CR versus 55% of patients with p53 negative tumours. p53 expression was also significantly associated with a shorter overall survival.

Our results have shown a high frequency of p53 positive NHL among Malaysian patients and this may in part explain the relatively poor results obtained with CHOP chemotherapy.

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### Long term follow-up of treatment of adult acute lymphoblastic leukemia with two protocols, LALA87 and YUALL. Single center experience

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**Objective:** 157 adult patients (pts) with acute lymphoblastic leukemia (ALL) of median age 38.1 yrs (range 15–65 yrs) underwent chemotherapy according to protocols LALA87 (112 pts, Group I) and YUALL (EORTC 6861) (45 pts, Group II) between 1989 to 1995. Both protocols include same induction, maintenance and CNS prophylaxis, and only difference is in consolidation with standard doses of drugs in LALA87 (DNR, AraC and L-Asp) and high doses in YUALL (L-Asp, CP and HD-AraC, 1000 mg/m<sup>2</sup>/12h 6 days, followed by VCR).

**Results:** Complete remission (CR) was achieved in Group I in 76 pts (76% evaluated, 68.2% of all) and in Group II in 31 pt (79.5% evaluated, 67.9% of all pts in the group). The Overall CR rate was 76.9% of all evaluated patients (11.5% died during induction), which comprises 68.2% of all treated patients. The predictive factor for achieving remission was age and FAB subtype. Median duration of CR in Group I was 14 mths and in Group II 11 mths. Median survival of patients achieving CR in Group I was 18 mths and in Group II 13.5 mths. There were no difference in CR rate, DFS and survival between two groups, except significantly better survival in the group of patients with T-ALL, especially Foon II group, but without difference in DFS.

**Conclusion:** These results are showing that in our two groups of patients there were no difference in overall survival depending on the modalities of consolidation chemotherapy. The long term results of treatment of adult patients with ALL are not satisfactory and need further improvement.

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### ICE protocol as conditioning regimen in autologous bone marrow transplantation in high-grade non-Hodgkin's lymphoma

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**Purpose:** We report here the results of high dose chemotherapy with ICE (Ifosfamide 3000 mg/m<sup>2</sup> -6 -5 -4 -3, Carboplatin 500 mg/m<sup>2</sup> -6 -5 -4, Etoposide 300 mg/m<sup>2</sup> -6 -5 -4) in a group of high-grade NHL patients (pts).

**Methods:** We have treated 31 pts from 1993 to 1997. Clinical characteristics were: female 15, male 16; stage III–IV 18; systemic symptoms 11; 14 pts had mediastinic bulky disease; 16 were in first complete remission (CR), 5 were in second or third CR, 7 were partial responders and 3 refractory to chemotherapy.

**Results:** No treatment-related mortality was observed. Nonhematologic toxicity was minimal with 10% of severe mucositis (grade 3 WHO), 2 pts had hepatic toxicity (grade 2 WHO). No other clinically significant toxicities were observed. After a median follow-up of 24 months (range 1–53) overall survival (OS) was 88%. Stage was the only one statistically significant characteristic for OS. After a median follow-up of 21 months (range 1–51) 23 pts were freedom from disease, and disease-free survival (DFS) was 65%. The following characteristics were significantly associated with DFS: presence of bulky disease (93% vs 59% p 0.02), stage I–II (100% vs 55% p 0.004), CR at ABMT (81% vs 60% p 0.007).

**Conclusion:** We confirm the efficacy of this conditioning regimen and its feasibility in a heterogeneous group of patients.

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PUBLICATION

### Treatment of refractory or early relapsed lymphoma with MINE regimen

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**Introduction:** We report on the activity and tolerance of MINE regimen in patients with refractory or early relapsed intermediate or high grade NHL.

**Methods:** Seventeen patients, 12 men and 5 women, with refractory or early relapsed intermediate or high grade NHL were entered. The median age was 56 (32 to 75) years. Sixteen (94%) patients were in advanced stage III or IV and 12 (71%) were classified as high grade NHL (WF). According to the IPI, 10 (59%) patients with scores 3–5 were classified as high risk. All patients had been previously treated with either CEOP or CNOP (Novantrone instead of Epirubicin) and for various reasons, were not considered for megatherapy. After this first line treatment, the disease was proven to be resistant in 10 (59%) patients, while in seven patients the disease relapsed in 2–10 months after induced complete remission. The MINE regimen consisted of Mesna 1.33 g/m<sup>2</sup>, Ifosfamide 1.33 g/m<sup>2</sup>, Etoposide 65 mg/m<sup>2</sup> days 1–3, and Mitoxantrone 8 mg/m<sup>2</sup> day 1.

**Results:** The median number of cycles administered was 5 (2 to 7). Ten (59%) patients responded including 5 (30%) with CR. Four (40%) responders were observed among 10 patients with refractory disease and 6 (85%) among 7 with early relapse. Median survival was 18 months. Toxicity: Grade III neutropenia was observed in 10 (59%) patients. All patients exhibited alopecia grade III.

**Conclusions:** The MINE regimen with an acceptable toxicity is an alternative in the treatment of patients with early relapsed or refractory NHL. Its use may be important in the treatment of patients not eligible for more intensive regimens.

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PUBLICATION

### Survival and prognostic factors in patients with Hodgkin's disease

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**Purpose:** The aim of this study is to determine the overall and progression free survival and to evaluate the prognostic factors in patients with HD.

**Methods:** 125 patients with histologically confirmed HD; treated and followed in our clinic between 1991–98 were evaluated retrospectively