are at risk of late effects of therapy. The major aim of a prospective study was to evaluate health consequences from radiation therapy (RT), including those to thyroid gland.

Methods: Since 1996 130 early stage HD patients in long-term remission were contacted; 39 persons (26 women, 13 men) gave informed consent to participate in the study. All of them were administered 40 Gy RT to the neck lymph nodes using 60 Co source. Median remission duration was 21 (range 16-34) years, median age at evaluation - 45 (range 35-73) years.

Thyroid exploration included 131 iodine scintigraphy; TTG and T4 levels; ultrasound and, if necessary, UG-FNAB; thyroid antibodies; morphology.

Results: After complex examination thyroid enlargement was found in 9 (23%) cases, chronical autoimmune thyreoiditis - in 16 (41%), nodular lesions - in 29 (74%), follicular adenomas - in 8 (20%), papillary thyroid cancer -in 1(2.3%). Complaints at referral were presented by two pts with minor swallowing disturbances. Only 4 (10%) pts were found free from any thyroid pathology. Due to combination of different pathologies its total number was higher than overall proportion (90%) of patients with thyroid disorders.

Conclusion: High total rate (90%) of thyroid pathology and 23% rate of neoplasias were revealed in HD patients randomly examined in 20 years and more after RT to the neck area. These findings attract attention to necessity of more systematic follow-up of otherwise cured HD patients.

342 POSTER

The combination of Gemcitabine plus vinorelbine as salvage treatment in non-Hodgkin's Lymphoma. A Hellenic Cooperative Oncology Group study

C. Nicolaides¹, T. Economopoulos², M.A. Demopoulos³, E. Samantas⁴, D. Skarlos⁵, N. Paylidis¹. ¹ Ioannina University Hospital, Medical Oncology, Ioannina, Greece; ² Evangelismos General Hospital, Medical Oncology, Athens, Greece; ³ Alexandra University Hospital, Medical Oncology, Athens, Greece; ⁴ Agii Anargiri Cancer Hospital, Medical Oncology, Athens, Greece; ⁵ Medical Centre Hospital, Medical Oncology, Athens, Greece

Purpose: To evaluate the response rate, toxicity and time to progression of the combination of Gemcitabine + Vinorelbine as salvage treatment in pri-mary refractory or relapsed lymphoma.

Methods: Twenty-five patients with primary refractory disease (five patients), in first relapse (14 patients) and 6 in subsequent relapses were treated with the combination of gemcitabine 1000 mg/m2 and vinorelbine 30 mg/m2

D1+D8 in cycles of three weeks with the support of GCSF 5 μ g/kg D2-D6 and D10-D16. Two patients had small cell lymphocytic lymphoma, 2 patients mantle cell lymphoma and 21 patients high grade lymphoma.

Results: Two patients were not evaluable for response, one because refused further treatment after the first cycle and one because of neurotoxicity gr 4 after the first cycle. They were evaluable for toxicity.

Of twenty three evaluable patients, 4 patients (17%), (95% CI;12-32%) achieved CR, seven patients (30%) (95% CI;11-49% achieved PR, six patients (26%) had strabilization of their disease and six patients (26%) progressed, for an overall response rate of 47% (95% CI; 27-68%). The median time to progression was 5 months. Toxicities grade three, four were leucopenia in 6 (27%), neutropenia in 7 (30%), anemia in (17%) thrombocytopenia in 3 (13%) and neurotoxicity in1 (4%) patients.

Conclusions: The combination of gemoitabine + vinorelbine is active in the treatment of refractory or relapsed lymphomas with an overall response rate of 47% and acceptable toxicities

343 POSTER

Prevalence of Anemia in Intermediate Grade Non-Hodgkin's Lymphoma (IGNHL)

S. Gupta¹, R. Tannous¹, M. Fridman². ¹Amgen, Inc., Professional Services Pharmacoeconomics, Thousand Oaks, USA; ²AMF Consulting, Los Angeles, USA

Purpose: To evaluate the prevalence of anemia at baseline (pre-chemotherapy) in IGNHL patients and its association with other clinical characteristics.

Methods: A retrospective sample of 591 patients diagnosed between 1993 and 1999 and subsequently treated with CHOP chemotherapy was used. Data were collected from twelve different oncology practice sites. Anemia was defined as a hemoglobin (Hb) value < 12 g/dL at baseline.

Results: Anemia was present in 193/546 (35.3%) of the patients. Baseline Hb values were not available for 45 patients. Of the 193 anemic patients, 131 (67.9%) patients had Hb values between 10-11.99 (NCI Grade 1; mild), 53 (27.5%) had Hb values between 8-9.99 (NCI Grade 2; moderate), and 9

(4.7%) had Hb values <8 g/dl (NCI Grade 3 & 4; severe to life-threatening). Anemia was significantly associated with age over 60 (38.8% vs. 29.9%, p=.035), extranodal sites > 2 (43.5% vs. 31.5%, p=.035), Ann Arbor stage III or IV (41.8% vs. 28.7%, p=.003), elevated LDH (51.5% vs. 23.3%, p<.001) and B-symptoms (51.3% vs. 31.3%, p<.001). Histology data were available for 473 patients, and anemia was most frequently observed in large cell-immunoblastic (56%) and large cleaved or non-cleaved cell (38.9%). Bone marrow involvement data were only partially available and are not reported here.

Conclusion: The results support previous finding of a high prevalence of anemia prior to cytotoxic therapy in chemo-naive lymphoma patients. Whether the implementation of early anemia management, especially in poor prognostic patients, improves clinical outcomes will need further evaluation.

344 POSTER

Study of the role of hepatitis c virus in overt b-cell non-Hodgkin's lymphoma

M. El Bordini⁵, A. El Ghandour¹, M. El Hasafi¹, S. Abd ElSalam², S. Helal³, A. Abd ElAziz⁴. ¹ Faculty Of Medicine, Internal Medicine -Hematology Unit, Alexandria, Egypt; ² Faculty Of Medicine, Microbiology, Alexandria, Egypt; ³ Faculty of Medicine, Clinical Oncology, Alexandria, Egypt; ⁵ Faculty of Medicine, Clinical Oncology, Alexandria, Egypt; ⁵ Faculty of Medicine, Clinical Pathology, Alexandria, Egypt

Several studies from different parts of the world have indicated a potential association between Hepatitis C virus (HCV) and a variety of lymphoproliferative disorders. In the present study we examined whether HCV RNA sequences can be found in paraffin sections from patients with B-cell NHL using the most sensitive technique RT-PCR for detecting 5 untranslated sequences of HCV. Forty patients with B-NHL were investigated for serum HCV-antibodies (ELISA-Ver.4), HCV-RNA sequences in formalin fixed paraffin embedded tumor tissues by using RT-PCR. In addition 10 cases with Hodgkin's disease (HD), and 10 cases with metastatic lymphadenopathy from non-lymphoproliferative malignancies were taken as a control. HCV-RNA was detected in 6/40 patients (15%) with NHL studied from paraffin-embedded lymphoma tissue, negative strands were detected in five of them indicating viral replication within lymphoid tissues. All cases of the HD & control groups were found to be negative for HCV-RNA. To rule out the most common other viral cause of NHL & HD, these cases were also investigated for EBV-DNA in tumor tissues by PCR. Ninety percent of these cases were positive for EBV & all were polyclonal & type 2, which had no role in lymphoma in Egypt. From our study we concluded that the HCV may play a role in the pathogenesis of B-NHL, & it needs careful studying. Paraffin-embedded tissue can be tested for HCV RNA and this technique allows retrospective and prospective analysis of tissue of HCV.

345 POSTER

Value of hepatic biopsy in the Non-Hodgkin Lymphomas (NHL)

C. Coutinho, A. Raimndo, H. Marques, R. Henrique, L. Viterbo, M. Mariz, M. Marques, F. Viseu. *IPO-Porto, Medical Oncology, Porto, Portugal*

Introduction: Hepatic biopsy in patients (pts) with NHL is indicated when laboratory measurements are elevated or hepatic enlargement is found. This result can change the therapeutic approach. The purpose of this study is to determinate the contribute of this biopsy in the staging of NHL.

Patients and Methods: Descriptive study about 52 patients included in a staging, that were submitted to hepatic biopsy at the diagnosis of NHL.

Results: Thirty were male and 22 were female. Thirteen patients had extranodal NHL. The histology subtypes found were diffuse large cell (DLC)(25 pts), follicular centre cell (FC)(11 pts), mantle cell(MCL) (4pts), marginal zone(MZL) (3 pts) and others (9 pts). Eight patients had clinical hepatomegaly or liver enlargement in CT scan, and 6 pts had analytic hepatic abnormalities. Thirteen patients (25%) had positive hepatic biopsy and 2 of these are extranodal NHL. From these, 6 patients had liver enlargement, 2 analytic hepatic abnormalities and 7 no clinical or analytic liver alterations Liver is the only extranodal involvement in 5 patients (9,6%). Eight also had organic involvement at others sites and/or positive bone marrow biopsy. Three patients had liver enlargement with negative liver biopsy. Thirteen patients had bone marrow invasion and this is the only extranodal involvemegnt in 6 of them. One patient had a hepatic hematoma and another an self-limited hemoperitoneu, both tequiring hospitalisation The patients with positive hepatic biopsy had the DLC (4 pts), MCL (3 pts), CF (1 pts), MZL (1 pts) other histology's (5 pts).