

**Conclusions:** Since homology with chromosome 9p21 region fell within the p16 gene locus, already known to be involved in the MALT lymphoma progression, Alu-PCR technique appears as an useful tool to compare tumour and normal DNA from MALT-lymphoma patients and may provide insights into the genetic events leading to tumorigenesis.

1330

ORAL

# **Anaplastic large cell lymphoma: Clinical features and prognosis in a retrospective series of 72 patients treated in a single institution**

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**Purpose:** ALCL represent a heterogeneous group of lymphomas differing in their histology, phenotype, clinical course and even cytogenetics. This entity is unfrequent and information about its clinical behaviour and prognosis is limited. We reviewed clinical, histologic and immunologic features of 72 cases of primary ALCL retrospectively diagnosed and treated in our institution.

**Methods:** There was a majority of male and median age was 43. B symptoms were present for 29 patients (40%). There was a predominance of localized stages (60%).

**Results:** Thirty-seven patients had extra-nodal localizations (52%). Skin involvement was the most frequent extra-nodal site (18%). Among histologic types, common type was the most frequent (65%). Tumour cell phenotype was B, T, and Null in respectively 28%, 28% and 29% of cases. Complete remission rate was 73%. Five and ten years overall survival were 55% and 45% respectively. Nineteen patients relapsed (26%). Five and ten years relapse-free survival were 62% and 58% respectively. Complete remission rate was 74% after salvage treatment. Five years overall survival after relapse was 38%. For overall survival, in multivariate analysis, favourable independent prognostic factors were respectively: negative immunostaining for CD45 ( $p = 0.0032$ ), localized stage ( $p = 0.0064$ ), good performance status ( $p = 0.031$ ) and hemoglobin level (Hb superior or equal to 12 g/dl) ( $p = 0.036$ ). For relapse-free survival, in multivariate analysis, only negative immunostaining for CD45 was a favorable independent prognostic factor ( $p = 0.012$ ).

**Conclusion:** In this series, prognosis of ALCL appears sensibly better than diffuse large B-cell NHL may be due to young and response to chemotherapy. Besides other factors, immunostaining for CD45 appears an independent prognostic factor in ALCL and should be confirmed in further studies.

1331

ORAL

# **Anemia associated with non-platinum chemotherapy (CT) for Hodgkin's lymphoma (HL) or non-Hodgkin's lymphoma (NHL)**

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**Purpose:** Anemia is a common but treatable condition in cancer patients (pts). Treatment options have included blood transfusions (TFs) and, more recently, epoetin alfa. This agent increases hemoglobin (Hb) levels while decreasing the need for TFs, which have been associated with a number of serious side effects. To identify pts who might benefit most from epoetin alfa, the prevalence of anemia, Hb levels, TF requirements, and predictive factors for anemia and TFs were determined in pts with HL or NHL who had undergone cyclic non-platinum CT.

**Methods:** Hematologic and TF data obtained retrospectively from the hospital records of 93 HL and 220 NHL pts were analyzed. The pts were a diagnostic subset of a previously described group of pts with selected cancers treated at 24 centers in France between Jan 1, 1994 and Dec 31, 1995.

**Results:** At baseline, mean Hb levels for all HL and NHL pts receiving CT were 12.2 (range, 7.9–15.4) g/dL and 12.3 (range, 6.2–18.5) g/dL, respectively. At this time, 45% of HL pts and 42% of NHL pts were anemic (Hb, 12 g/dL or less). The prevalence of anemia tended to increase with succeeding CT cycles, reaching 76.5% for HL pts and 65.8% for NHL pts by cycle 6; mean Hb levels for all pts receiving CT at cycle 6 were 10.6 g/dL and 11.7 g/dL, respectively. TF requirements were 20.4% for HL pts and 33.2% for NHL pts from cycle 1 onward (vs 0% and 5.9% at baseline). More pts with Hb levels less than 10.5 g/dL received TFs than did those with Hb levels of 10.5 g/dL or greater (HL: 35.7% vs 15.3% and NHL: 76.1% vs 22.6%). Anemia and TFs were associated with baseline Hb level and duration of CT.

**Conclusion:** Baseline Hb levels and duration of CT were associated with anemia development and TFs, and thus may help identify pts likely to benefit from epoetin alfa. Because anemia can have detrimental effects on the pt's physical and emotional well-being, as well as therapeutic intervention and outcome, epoetin alfa therapy has the potential for providing substantial benefits.

1332

ORAL

# **Allogeneic, autologous bone marrow transplantation and chemotherapy in first remission of adult acute lymphoblastic leukemia. Prospective study LALA87. Long term results**

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In this prospective study patients 15–60 years with de novo ALL, except L3 FAB subtype have been included between November 1986 and July 1991. Two randomized arms for induction Daunorubicin or Zorubicin associated with Vincristine Cyclophosphamide and Prednisone were followed if complete remission (CR) was not achieved at day 28 by a common salvage regimen with Amsacrine and Aracytine. In CR a stratification took place.

– patients over 50 y: chemotherapy arm with 3 courses of consolidation, cranial irradiation and maintenance

– patients 15–40 with an identical sibling were included in allogeneic bone marrow transplantation (BMT) arm performed after one course of CVP (Cyclophosphamide, Vincristine, Prednisone) as soon as possible. Other patients were randomized during the second consolidation course in chemotherapy arm or auto BMT arm.

**Analysis of Results:** Allo BMT was compared to a control group of patients 15–40 y, in CR with at least one sibling and HLA typed but without any identical donor. Auto BMT arm was compared with randomized chemotherapy arm. In each arm, patients were stratified in high and standard risk group according Hoelzer's criteria. Analysis was performed on an intention to treat basis.

572 out of 634 included patients were evaluable, 562 with an initial immuno phenotyping, and, 274 an initial cytogenetic analysis.

**Results:** 76% (436 patients) achieved CR. There were 9% of death during induction and 15% of failure. No statistical difference between the DNR and ZRB arms in term of remission rate or survival.

At ten years, the overall disease free survival (DFS) and survival (S) are 30% and 27% and survival for patients over 50 y is 23%.

– in allo BMT study, overall survival of allo arm (116) and control group (141) is 46% versus 31% ( $p = 0.04$ ). In high risk, survival is 44% in allo arm versus 11% in control group ( $p = 0.009$ ), in standard risk, survival is 49% versus 43% ( $p = 0.6$ ). For auto BMT arm survival is 34% in auto versus 29% in chemo arm ( $p = 0.65$ ) There is not difference for standard or high risk group.

1333

ORAL

# **FDG-PET following treatment is a valid predictor for disease-free survival in Hodgkin's disease**

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**Purpose:** The value of FDG-PET to predict outcome after chemotherapy or combined radio/chemotherapy is compared to conventional morphological staging and erythrocyte sedimentation rate (ESR).

**Methods:** 50 whole-body FDG-PET were performed in 37 patients with Hodgkin's disease undergoing either CT or MRI at the same time. ESR was evaluated 32 times after treatment was completed. Median follow-up after PET was 25.6 months. Patients presented at primary diagnosis at stage I (4), stage II (17), stage III (11) and stage IV (5) according routine morphological methods.

**Results:** 39 residual masses were observed with radiological methods resulting in 8 relapses. 3 recurrences occurred in 11 patients with radiological complete remission. FDG-PET was positive in 22 examinations with 10 recurrent lymphoma. In the group of 28 patients without FDG-uptake 1 patient relapsed 4 years after PET. For predicting recurrence overall accuracy for PET was 74%, sensitivity 91% and specificity 69%. Overall accuracy for CT/MRI was 34%, sensitivity 72% and specificity 23%, while accuracy for ESR was 66%, sensitivity 50% and specificity 71%. In addition only PET was able to predict disease-free survival statistically significant ( $p < 0.001$ ).

**Conclusion:** FDG-PET is the best method to predict relapse respectively disease-free survival in Hodgkin's lymphoma. FDG-PET was the only statistically significant examination.