poster session I
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epidemiology

146 BURKITT'S LYMPHOMA: COMPARISON OF 2 NATIONWIDE POPULATION-BASED LYMPHOMA REGISTRIES

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Introduction: Burkitt's lymphoma (BL) is a rare and clinically very aggressive B cell lymphoma accounting for 1-2% of all adult lymphomas. A number of different chemotherapy regimens, often modelled on pediatric schedules, have been proposed as treatment for BL. However, a comparison of treatment regimens in BL is not available in adults. An analysis of the Swedish (S) and the Danish (DK) population based lymphoma registries was performed in order to investigate whether differences in chemotherapy approaches (BFM, CODOX-M/IVAC and CHOP-like regimens) may have an impact on outcome.

Material & Methods: 58 S and 36 DK patients (age range 18-65 years) diagnosed with BL in the years 2000-2005 were identified through the 2 nationwide lymphoma registries. (Incidence 1.60/mio vs. 1.64/mio). Patients with leukemic disease and/or known HIV-infection were excluded.

Results: Most patient characteristics were evenly distributed between the BL cohorts from the two registries. However, high IPI was significant (sign.) more frequent in the DK patients with 61% of them presenting with IPI ≥3 compared to 35% in the S cohort. In line with this finding, a sign. higher proportion of the DK patients had an elevated pre-therapeutic s-LDH. Not surprisingly, a sign. higher mortality (50% vs 28%) and shorter 2-year overall survival (76% vs 53%) was found. When the analysis was restricted to patients with elevated pre-therapeutic LDH, (n=72) no difference in treatment outcome was observed between the two groups. Interestingly, if patients were stratified according to treatment regimen, sign. differences were observed. No difference in outcome was seen between patients diagnosed in the first as compared to the second half of the 6-years observation period.

Conclusions: This retrospective study show sign. difference in IPI/LDH at diagnosis between the two countries. In patients with elevated LDH, the choice of treatment regimen is related to treatment outcome. Detailed treatment results will be presented.

147 HAEMACARE: EUROPEAN PROJECT TO INCREASE THE STANDARDISATION AND COMPARABILITY OF INCIDENCE, SURVIVAL AND PREVALENCE OF HAEMATOLOGICAL MALIGNANCIES

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Leukaemias/ non-Hodgkin's lymphomas (NHL) are the commonest haematological malignancies (HMs), accounting for 6% of all cancer deaths in EU. In 1995 Age-standardised incidence (ASI) in EU: $8/10^5$ for NHL; 2 for Hodgkin lymphoma (HL), 2 for multiple myeloma, 6 for leukaemias. The evolving classification for NHL complicates comparisons of incidence and survival over time and across regions. In order to increase the comparability of incidence, survival and prevalence produced by Cancer Registries (CR), the EU funded in 2005 the HAEMACARE project.

Aims: Revision of HM coding procedures used by CR, ensuring strict adherence to ICD-0 morphology codes, and making them consistent with nosologic clinical categories. Improve public health use of clinical data. Indicators for HMs by country will be provided, through integration of data from population CR and clinical networks on HMs.

Methods: HAEMACARE proposed a grouping based in WHO classification for NHL and HL into morphological subgroups to be used in analyzed incidence and survival.

Results: Most common: NHL/Leukaemia, best prognosis: HL. Men had higher HMs incidence and mortality than women for all HMs. Age-adjusted 5-years survival improved in 2000-2002, especially for lymphomas. The most frequent in Western: NHL (ASI: men $11/10^5$; mortality $5/10^5$). HL incidence was similar across the European regions, (ASI: men $2/10^5$), the mortality age-standardised rate (Western: $0.4/10^5$/Eastern: $1.2/10^5$). The mean age-standardised 5-year relative survival in Europe was the highest from all HMs: 80%. Increased incidence and mortality is estimated in EU for all HMs, except HL and more accentuated in the West, North compared to the East.

Conclusions: Lack of standardisation of diagnostic criteria and evolving classifications make difficult inter-country and over time comparisons of epidemiological indicators. The HAEMACARE project is expected to increase the comparability of population based indicators for HM.

148 FAMILY HISTORY OF CANCER AND RISK OF LYMPHOMA: INFLUENCE OF IL8RB, MTHFR AND IL10 POLYMORPHISMS

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Family history of cancer in lymphoma patients has been reported, although possible genetic polymorphisms related to this entity have not yet been identified. The purpose of this study was to evaluate the role of genetic variants of several polymorphisms in the risk lymphoma in subjects with family history of cancer.

Material and Methods: Newly diagnosed lymphoma cases were recruited between 1998-2002 in 4 centers in Spain. Controls were patients matched to the cases by age, gender and study center. DNA of 503 cases and 569 controls were genotyped using the TaqmanTM platform. Odds Ratios (OR) and 95% confidence intervals (CI) for the association of the genotypic variants with the risk of lymphoma were calculated using unconditional logistic regression analysis.

Results: Family history of cancer was reported by 421 subjects (196 controls and 225 cases, association X^2 p=0.001) and 41 were of hematological origin. When analising subjects with family history of cancer, an additional *IL8RB* +1235C>T variant allele in the genotype increased the risk of lymphoma (OR=1.68, 95%CI=1.25-2.27, p= 0.0005). As well, the probability of developing a lymphoma was 1.59-fold risk for every extra allele of *IL8RB* -1010A>G variant (OR=1.59, 95%CI=1.17-2.17, p= 0.003). Restricting the analysis to those subjects with a familial cancer of hematological origin, under a log-additive inheritance model a statistical increase in risk was found for every extra variant allele *MTHFR* +429A>C in the genotype (OR=21.52, 95%CI=2.42-191.08, p=0.0002), whereas presenting at least one variant allele of *IL10* -1082 A>G decreased the risk of lymphoma (OR=0.05, 95%CI=0.01-0.38, p=0.0005).

Conclusions: These preliminary results suggest a potential role of *IL8RB*, *MTHFR* and *IL10* polymorphisms in the risk of lymphoid neoplasms among those subjects with family history of cancer.

149 TWENTY-FIVE YEARS OF POPULATION-BASED NON-HODGKIN LYMPHOMA (NHL) REGISTRATION IN DENMARK: OVERALL AND SUBGROUP SPECIFIC INCIDENCE PATTERNS

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Background: NHL incidence increased till the late 1990s, where it seemed to stabilize. The Danish lymphoma registry was activated in 1983. Its registration efficiency is high (90%). The aim of this analysis was to assess standardized incidence rates (sIR) over a 23-year period for NHL overall and for specific subcohorts.

Patients and Methods: The period 1983-2005 was analyzed. In this period, 9198 new cases were registered. Histopathology was validated by a pathology panel. During the years, the Kiel, REAL, and WHO classifications were adopted. Data Incidence rates were standardized according to the European standard population.

Results: The mean sIR for NHL (overall) was $12.4/10^5$/yr. NHL incidence was 1.3-fold higher in men than in women, corresponding to a sIR of $14.4/10^5$/yr and $10.7/10^5$/yr,

respectively. In contrast, primary thyroid and salivary gland NHL had a marked female prevalence (F/M ratio: 4.1 and 1.6, respectively). With an estimated annual percent change of 6.1% for the period 1983-1999, diffuse large B-cell lymphoma (DLBCL) was the subtype mostly responsible for the overall incidence rise. However, from 2000 a levelling off of the incidence curves was observed. Follicular lymphoma (FL) had a yearly sIR increase significantly lower than DLBCL, but in FL the rise seemed to persist throughout the entire observation period. This increase in FL was mainly due to the age group ≥50 yrs. Data from additional NHL subtypes will be presented.

Conclusion: The incidence for NHL, and DBLCL, showed a rise until 1999/2000 and then levelled off. FL had a lower but constant increase throughout the observation period mainly based on elderly age groups.

150 PRIMARY REFRACTORY DISEASE IN NON-HODGKIN LYMPHOMA (NHL)

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Background: Data on primary refractory disease (PRD) in NHL are lacking. The aim of this study was to describe PRD in the patient population from the Danish lymphoma registry, LYFO.

Patients and Methods: PRD was defined as NC or PD after 1.line therapy. The period 1983-2004 was analyzed. Rates of occurrence were standardized according to the European standard population.

Results: Out of 8147 NHL pts, 940 (12%) had PRD (42% NC and 58% PD). The M/F ratio was 1.2. The median age was 68 yrs, similar to that of the overall NHL population. From 1983 to 2001, a significant annual decrease of PRD was seen for NHL 'in toto' and for diffuse large B-cell lymphoma (DLBCL), with annual percent changes of -5.1% and -4.5%, respectively. Histologically, 41% of PRD pts were DLBCL, 10% follicular, 8% mantle cell and lymphoplasmacytic, respectively, 5% peripheral T-cell, 4% anaplastic large cell, and 3% lymphoblastic lymphomas, incl. Burkitt; the rest had other or unspecified histologies. In FL, the occurrence of PRD was stable. Although 75% of PRD pts had advanced disease and 53% elevated s-LDH at diagnosis, the majority also presented with a good performance score (WHO 0-1). Median overall survival (OS) for all PRD pts was 0.9 yrs. The same applied to primary refractory DLBCL. Surprisingly, a similar value was also found for DLBCL achieving PR. In comparison, DLBCL pts in 1.CR had a median OS of 7.5 yrs.

Conclusion: In a large population-based NHL cohort, PRD occurred in 12% of the pts. Efforts to further characterize PRD should be encouraged in order to improve prognostic tools and treatment strategies in this patient subset.