CAREGIVERS

INTERNET USE BY PATIENTS WITH LYMPHOMA AND THEIR CAREGIVERS

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Prognostic scores are often constructed to classify patients in prognostic groups thanks to treatment characteristics easily accessible. Once constructed, scores are applied to new patients. Scores are helpful in identifying patients with advanced stage, selecting the appropriate treatment to individual patients, and in stratifying patients in prospective trials.

Modern technology is usually based on adequate to initial sample data. Thus prediction on initial data overestimates prediction on new patients.

This difference between predictions, so-called model optimism, has been taken into account when studying predictive ability of models for new patients. The methodology used to build two prognostic scores is presented. Similar constraints were stated at the beginning (55 variables in the final score, 3-risk-group score). For follicular lymphomas (Solal-Celigny, 2004), 8 variables were significantly associated with the risk of progression. The best model including 5 variables was selected on predictive ability. Optimism was corrected using bootstrap. The largest likelihood identified the best score. External validation confirmed the score predictive ability. For Hodgkin's disease (Maucort-Boulch, 2007), 4 variables were significantly associated with 10-year overall survival. The best 3-group score was selected on predictive ability. Optimism was corrected using bootstrap. A first external validation confirmed the better predictive ability in comparison with known scores.

Different measures of prognostic scores predictive ability were proposed (Harrell D. adapted R², penalized likelihood, Parkes criterion). These measures could be used for model selection. Their respective properties are still under study. Internal and external validations account for models optimism.


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Patients with cancer and their caregivers frequently seek information about disease management, prognosis, and therapeutic alternatives. The context in which they consume this health information has changed dramatically with the diffusion of the Internet and advances in telemedicine. At present few data exist of the use of the Internet to look for medical information on lymphoma in Spanish language. The aim of our study was to analyse the distribution and patterns of Internet use by patients with lymphoma and their caregivers.

Patients and Methods: 1217 subjects (588 patients, 413 relatives, 78 health professionals and 138 others; 476 male and 741 female) have responded a questionnaire about diverse aspects of the use of Internet, in several Haematology Departments of Spanish Hospitals or by “on line” access from the sites www.unel.es, www.linfosamartino.org and www.linfosamartino.com

Results: Seven hundred forty-four (61.1%) subjects use Internet, although only 44% make to obtain data on lymphoma. With respect to the group of patients 65.6% recognize to use Internet, but only the 49.1% do it by question related to their disease. The main reasons for Internet use are to obtain information about treatments (85.5%) or second opinion medical (5.0%). The 75.0% have been using Internet for more than 3 years. The best results have suffered. The best model including 5 variables was selected on predictive ability. Mainly the information search is made in Spanish language and through the Google finder. They consider that Information on lymphoma is acceptable (31.5%) or of little interest (34.0%). Interestingly, 55% of patients between 31-50 years; the 52.0% have university studies and the 55.1% have between 31-50 years. The main reasons for Internet use are to obtain information about treatments (85.5%) or second opinion medical (5.0%). The 75.0% have been using Internet for more than 3 years; the 52.0% have university studies and the 55.1% have between 31-50 years. The main reasons for Internet use are to obtain information about treatments (85.5%) or second opinion medical (5.0%). The 75.0% have been using Internet for more than 3 years; the 52.0% have university studies and the 55.1% have between 31-50 years.

Commentaries: This study contributes data on the use of Internet in Spanish language by patients with lymphoma and their caregivers. Oncologists should be familiar with this important resource to help the access of affected to appropriate information. The use of “online” surveys is useful to value some aspects of these diseases in diverse countries.

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EVALUATION OF BONE MARROW AND SPLEEN INFILTRATION ON THE RISK OF AUTOIMMUNE PHENOMENA GENERATION IN PATIENTS WITH LYMPHOMA

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Background: Autoimmune phenomena have been previously reported in association with non-Hodgkin lymphoma (NHL). These studies suggest that the NHL subtypes associated with autoimmune diseases reflect the development of lymphoma during post antigen exposure stages of lymphocyte differentiation consistent with a role of antigen drive in autoimmunity-related lymphomagenesis. However, these reports cannot explain the possible mechanism by the local effect of the tumour in the central tolerance against the generation of auto reactive clones.

Aim and Methods: The aim of the present study was to analyse the role of the stage at diagnosis of NHL on the presentation of autoimmune phenomena in patients with Hodgkin lymphoma and NHL. Clinical reports of 167 patients consecutively diagnosed with lymphoma at our institution in the last year were retrospectively reviewed.

Autoimmunity was considered positive if the patients had positive autoantibodies (antineuclear, anti-DNA, direct Coombs test, anti-smooth muscle, anti-platelets autoantibodies, anti-cardiolipin, thyroid peroxidase antibodies, anti-APRJ, and anti-HLA-1) or a well established autoimmune disease (SLE, ITP or Autoimmune mediated hypothyroidism).

Results: The prevalence of autoimmunity in our patients was 11.9%, which is similar to previous reports in the literature. Highest percentages of autoimmune phenomena were detected in patients with diffuse large B-cell lymphoma 5/46 (10.9%), SMZL 4/10 (40%), MALT 1/9 (11.1%) and T-cell lymphoma 5/16 (31%). Interestingly great proportions of patients with autoimmunity 12/20 (60%) were stage IV with bone marrow 12/20 (60%) or spleen 5/20 (25%) infiltration. We hypothesized that infiltration of malignant cells impair negative selection of autoreactive B cell clones in

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Background: Increased levels of circulating nucleic acids (DNA and RNA) with a high fractional concentration of tumor DNA have been observed in the plasma of patients with a variety of human cancers of epithelial origin, and correlated to clinical characteristics and prognosis.

Methods: We studied 85 patients with lymphomas [34 pts with Hodgkin lymphoma (HL), 30 pts with diffuse large B cell NHL (DLBCL), 14 pts with follicular, and 6 pts with mantle cell NHL] and 21 healthy individuals. DNA was extracted from plasma collected at diagnosis using the QIAamp DNA Blood MiniKit (Qiagen, UK) and DNA levels were determined using a quantitative PCR for the β-globin gene. Associations with patient characteristics and event-free survival (EFS) were analysed using standard statistics (STATA 10).

Results: DNA plasma levels were significantly higher in patients with lymphoma when compared to controls: 75.8 mg/l (mean, range 4-941) vs. 15.7 (mean, range 3-35) (p < 0.001), with differences among the different lymphoma types: DLBCL, 130 mg/l; mantle cell NHL, 99 mg/l; follicular NHL, 21 mg/l; HL, 45 mg/l. Advanced stage disease (stage III/IV), presence of B symptoms, LDH levels above normal range, and age >60 years were associated with increased levels of plasma DNA (p = 0.016, 0.016, 0.00001 and 0.02, respectively). Increased LDH levels were associated with high DNA levels also in the multivariate analysis. In NHL patients with high risk age-adjusted IPI (2/3) had higher levels of plasma DNA (p = 0.081), while in HL no association with the IPI score was observed. Plasma DNA levels above the normal range (>35 mg/l) were associated with an inferior event-free survival (p = 0.083), both in patients with HL and DLBCL. The multivariate Cox analysis, stratified for lymphoma type and treatment, including risk factors associated to inferior EFS in the univariate analysis (advanced stage, LDH, and age >60 years), showed that plasma DNA level was an independent prognosticator for inferior EFS (hazard ratio 6.3, 95% CI 1.02-39).

Conclusion: Our study suggests that circulating levels of DNA in the plasma may be a new prognostic biomarker in patients with lymphomas.

594 NON-HODGKIN’S LYMPHOMA AND DIABETES MELLITUS: RECIPROCAL INFLUENCE ON TREATMENT, COURSE AND OUTCOME
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Background: With the increasing prevalence of diabetes mellitus, the rising incidence of non-Hodgkin’s lymphoma (NHL) and ageing of the population, the number of patients suffering from both NHL and diabetes is growing. Previous studies have shown that NHL patients with co-morbidity are treated less intensively and have a worse prognosis. Since data for diabetes mellitus as a specific co-morbidity in NHL patients are lacking, we investigated whether diabetes had an influence on treatment and outcome of NHL and vice versa.

Methods: We studied 85 patients with lymphomas [34 pts with Hodgkin lymphoma (HL), 30 pts with diffuse large B cell NHL (DLBCL), 14 pts with follicular, and 6 pts with mantle cell NHL] and 21 healthy individuals. DNA was extracted from plasma collected at diagnosis using the QIAamp DNA Blood MiniKit (Qiagen, UK) and DNA levels were determined using a quantitative PCR for the β-globin gene. Associations with patient characteristics and event-free survival (EFS) were analysed using standard statistics (STATA 10).

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Conclusion: Our study suggests that circulating levels of DNA in the plasma may be a new prognostic biomarker in patients with lymphomas.

595 LEVELS OF CIRCULATING DNA IN THE PLASMA AT DIAGNOSIS IN PATIENTS WITH LYMPHOMAS: ASSOCIATIONS WITH CLINICAL CHARACTERISTICS AND PROGNOSIS
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Methods: We studied 85 patients with lymphomas [34 pts with Hodgkin lymphoma (HL), 30 pts with diffuse large B cell NHL (DLBCL), 14 pts with follicular, and 6 pts with mantle cell NHL] and 21 healthy individuals. DNA was extracted from plasma collected at diagnosis using the QIAamp DNA Blood MiniKit (Qiagen, UK) and DNA levels were determined using a quantitative PCR for the β-globin gene. Associations with patient characteristics and event-free survival (EFS) were analysed using standard statistics (STATA 10).

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