

Serum IL-6, IL-8, IL-10 and beta₂-microglobulin in association with international prognostic index in diffuse large B cell lymphoma

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ABSTRACT

Aims and background. Diffuse large B-cell lymphoma displays striking heterogeneity at clinical, genetic and molecular levels. The International Prognostic Index is useful to predict the outcome of diffuse large B-cell lymphoma patients. However, patients with identical International Prognostic Index values in clinical practice exhibit marked variability in survival, suggesting the presence of significant residual heterogeneity within each category. Since cytokines such as interleukin-6, -8 and -10 play important roles in the pathogenesis of lymphomas, and plasma level of beta₂-microglobulin is associated with the outcome of patients with diffuse large B-cell lymphoma, the aim of the present study was to determine whether these parameters combined with the International Prognostic Index would better stratify these patients to predict their prognosis.

Patients and methods. The study included 46 untreated diffuse large B-cell lymphoma patients.

Results. All study parameters (International Prognostic Index, Ann Arbor stage, extranodal involvement, performance status, lactate dehydrogenase, beta₂-microglobulin, interleukin-6 and -10, and response to therapy) except for patient age and serum interleukin-8 level were associated with overall survival. In addition, the International Prognostic Index was strongly correlated with beta₂-microglobulin, interleukin-6, -8 and -10, and when combined these parameters significantly better stratified patients according to survival. On multivariate analysis, therapeutic response to the primary treatment, elevated interleukin-6 and -10 levels, and the International Prognostic Index were significant predictors of overall survival.

Conclusions. Our data imply that interleukins and beta₂-microglobulin evaluation should be used in association with the International Prognostic Index to define prognostic subgroups in diffuse large B-cell lymphoma patients.

Key words: beta₂-microglobulin, diffuse large B-cell lymphoma, interleukins, International Prognostic Index, prognosis.

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