

**Comparison of the expression and prognostic
significance of differentiation markers
between diffuse large B-cell lymphoma of
central nervous system origin and peripheral
nodal origin**

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摘要

Abstract

PURPOSE: Whether diffuse large B-cell lymphoma (DLBCL) of primary central nervous system origin (PCNSL) is biologically different from DLBCL of peripheral nodal origin (NL) remains unclear. The purpose of this study was to compare the expression frequencies and prognostic significance of a panel of cell differentiation markers between these two disease entities. **EXPERIMENTAL DESIGN:** This study included HIV-unrelated patients with PCNSL (n = 51) and NL (n = 72) treated at four hospitals in Taiwan for whom archival tumor tissue was available. Immunohistochemistry for CD10, BCL-6, MUM-1, vs38c, CD138, and BCL-2 was done. CD10, BCL-6, and MUM-1 expression results were used to classify all cases into the germinal center B-cell (GCB) or the non-GCB subgroup. The prognostic significances of clinical and immunophenotypic markers were evaluated. **RESULTS:** Nuclear MUM-1 expression was significantly higher in PCNSL than in NL ($P < 0.001$; 84% versus 53%). PCNSL tumors were more frequently classified into the non-GCB subgroup than NL tumors ($P = 0.020$; 78% versus 62%). For patients with PCNSL, univariate analysis showed that patients with BCL-6 expression had a trend towards longer survival ($P = 0.073$; median survival, 25.3 versus 7.3 months), and multivariate analysis showed BCL-6 was an independent prognostic factor ($P = 0.026$). For patients with NL, both of univariate ($P = 0.003$) and multivariate analyses ($P = 0.002$) showed that GCB was significantly associated with favorable survival. **CONCLUSION:** The higher frequency of non-GCB subclassification, which was mainly contributed by

nuclear MUM-1 expression in PCNSL implies that it has a more differentiated cellular origin than NL. BCL-6 expression in patients with PCNSL and GCB subgroup in patients with NL were favorable prognostic factors.