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Frequency of Antigens Expression and Epstein-Barr Virus on Diffuse Large B-Cell Lymphoma

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Diffuse large B-cell lymphoma (DLBCL) is the most common type of malignant non-Hodgkin's lymphoma. It can be further divided into two subgroups: germinal centre B-cells (GCB) derived DLBCL and non-GCB derived DLBCL based on cDNA microarray and immunohistochemical markers studies. However, DNA microarray profiling is not within reach of most diagnostic laboratories for the benefits of patients, in view of the high capital and running costs, and the requirement of highly trained operating personnel. The aim of this study is to evaluate the use of immunohistochemical markers to subdivide DLBCLs into prognostic subgroups among Malaysian patients. A total of 110 DLBCL cases between 1983 and 2006 were studied for expression of BCL-2, BCL-6, CD10, CD138 and MUM-1 by immunohistochemistry. Epstein-Barr virus (EBV)-encoded small RNA (EBER) *in situ* hybridization was employed to determine the presence of EBV. We found that ethnic Malays accounted for the largest number of patients (49/110, 44.5%), followed by Chinese (47/110, 42.7%), Indians (13/110, 11.8%) and minority ethnic (1/110, 0.9%). Of these cases, 41 (37.3%) were shown to be GCB subgroup and the others 69 (62.7%) non-GCB subgroup. The GCB: non-GCB ratio is approximately 1: 1.7. Only six cases (5.6%) were found to be EBER positive. These findings suggests that BCL-6, CD10 and MUM-1 are suitable immunohistochemical markers to distinguish the DLBCL subgroups and easy to apply. The technique of immunohistochemical stain maybe able to provide prognostic information as performed by cDNA microarray.