Peripheral T-cell lymphoma unspecified (PTCL/U) is a rare tumor characterized by poor treatment response and a dismal prognosis. We studied CD52 expression in 97 PTCL/U cases by immunohistochemistry on tissue-microarrays. Furthermore, CD52 gene expression was studied in 28 cases for which RNA was available. We found that CD52 is expressed in approximately 40% of PTCLs/U at the same level as in normal T-lymphocytes. Although other factors may play a role in the in vivo response to alemtuzumab, an anti-CD52 monoclonal antibody, the estimation of CD52 expression may provide a rationale for the selection of patients with a higher probability of treatment response.

Peripheral T-cell lymphomas (PTCLs) are a heterogeneous group of tumors that are often characterized by poor treatment response and a dismal prognosis. We studied CD52 expression in 97 PTCL/U cases by immunohistochemistry. The results showed that CD52 expression was observed in approximately 40% of PTCLs/U at the same level as in normal T-lymphocytes. Although other factors may play a role in the in vivo response to alemtuzumab, an anti-CD52 monoclonal antibody, the estimation of CD52 expression may provide a rationale for the selection of patients with a higher probability of treatment response.
sion at both the RNA and protein level. This is not surprising as we found CD2, CD3, CD4, CD5, CD7, and CD8 variably expressed. In other words, defectivity of T-cell associated antigens seems to be a hallmark of neoplastic transformation. It is of note, that our results, referring for the first time to paraffin-embedded cases, are in line with those previously reported on frozen material.Interestingly, our data seem to be in keeping with the clinical results obtained by Enblad et al., who found an overall response rate of 36% in PTCL treated with alemtuzumab.

Based on the above mentioned findings, the estimation of CD52 expression may provide a rationale for the selection of patients with a higher probability of responding to alemtuzumab by avoiding the risk of unwanted toxicity. Certainly, this implies standardization of the techniques adopted for CD52 evaluation. In our opinion, immunohistochemistry seems to represent an optimal approach. It can be applied to routine material in phase of other proteomic techniques, such as flow citometry or western blot. In fact, such techniques require fresh material that is only available in a small minority of lymphoma patients. This deserves further evaluation within prospective clinical trials.

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Addendum: after the acceptance of the present manuscript, similar immunohistochemical findings were reported by Rodig et al., cited in ref. #11.

References