Algorithm for Immunophenotyping of Low-Grade B Lymphomas

To the Editor:

In September 1994, Harris et al. published their Proposal for a Revised European-American Classification of Lymphoid Neoplasms. We have found their report extremely useful for practical work and consider it a great step forward in the understanding of the biologic behavior of lymphomas for the following reasons. (1) They postulated the presumed normal counterpart of the lymphoma cell and also defined it with the immune markers. (2) They based their classification on the functional compartments of lymphocytes. (3) They stressed the most important immune markers in every group of lymphomas.

Following their concept and recommendations, we have made, for practical reasons, an algorithmic scheme for the most characteristic immunophenotypes in every entity of low-grade B lymphomas (Fig 1).

To improve the cost-benefit effects of our diagnostic procedure, we divided monoclonal antibodies used in flow cytometric analysis into two groups. (1) A basic panel (CD19, CD5, CD23, and CD10)

Fig 1. In our algorithmic scheme we have taken into account all immunophenotype variants reported previously. Solid lines denote the most frequent immunophenotypes, and intermittent lines denote less frequent ones. The arrow-ended lines refer to an immunophenotype of the next higher rank. Immunocytoma (IC) is taken as a common name for several subgroups (lymphoplasmacytoid, lymphoplasmacytic, etc). Perhaps prolymphocytic lymphoma (PLL) is only a proliferative form of another lymphoma rather than an independent entity (with the exception of well-defined prolymphocytic leukemia according to Galton et al.).
was applied to all specimens tested. (2) Following the results obtained from the basic panel, second-step reagents were chosen to further clarify the pathologic entity according to our scheme. Usually no more than one or two additional reagents enabled us to determine the immunophenotype of a lymphoma.

In the first year of practising our immunophenotyping scheme (>80 low-grade B lymphomas examined), we believe that the algorithmic form is very suitable and useful. It renders the classification of low-grade B lymphomas in daily practice much easier.

We have also come to the conclusion that immunophenotyping of low-grade lymphomas may require some additional effort to reclassify present pathologic entities on the basis of their immune reactivity. This may help to further differentiate low-grade lymphomas into subgroups of more predictable biologic behavior and therapeutically response (eg, immunocytoma CD5⁺ and immunocytoma CD5⁻ or follicular lymphoma CD23⁺ and CD23⁻). The corresponding reclassification of our lymphomas and comparison of their response to treatment is under way.

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REFERENCES
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