CORRESPONDENCE

MORE MONOCLONAL ANTIBODIES REACTIVE WITH LEUKOCYTES IN FORMALIN-FIXED PARAFFIN-EMBEDDED TISSUES

To the Editor:

We refer to the paper of Feller et al concerning the use of leukocyte monoclonal antibodies on formalin-fixed paraffin-embedded tissues. In addition to Ki-B3, LN1, and LN2, many other monoclonal antibodies reactive with leukocytes in paraffin sections are now available. These include antibodies largely reactive with B-cells (MB1, MB2, 4 KB5, and L26), T-cells (UCHL1, MT1, MT2, MT3, L60, and T2/48), macrophages (Mac411), and non-lineage restricted antibodies (LN3 [anti-HLA-DR], MB3 [anti-HLA-DR], TAL-1B5 [anti-HLA-DR], LeuM1 [CD15], and Ber-H2 [CD30]). Many of these antibodies are not leukocyte-specific, and none is entirely lineage-specific, particularly in the setting of leukemia malignancies. In our recent studies employing the antibodies MB1, MB2, LN1, LN2, MT1, and MT2 on paraffin sections, we concluded that the B-cell lineage of a lymphoid malignancy can be reliably predicted only when at least two (preferably three) B-cell markers are positive. Since Ki-B3 stains 76% to 80% of B-cell lymphomas, it should be useful when employed with a panel of other paraffin markers. The staining of T-lymphoblastic lymphoma and myelomonocytic leukemia with Ki-B3 renders it unsuitable for use as a single marker in the study of lymphoproliferative diseases.

These paraffin markers certainly appear attractive because of their applicability to formalin-fixed paraffin-embedded tissues in which cytomorphologic preservation is excellent. However, they do not work consistently in all cases (probably due to antigen masking or denaturation by fixative), and cross-reactions may occur. Frozen fresh tissue should always be retained whenever possible for detailed immunophenotypic analysis of lymphoproliferative disorders.

The statement made by Feller et al that LN1 and LN2 do not react with formalin-fixed tissues is incorrect. LN1 and LN2 have been shown to work on formalin-fixed tissues, though the positivity rate and intensity of staining are lower than those of B5-fixed materials.

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REFERENCES


RESPONSE

To the Editor:

We agree with the statement of Ng et al that a number of monoclonal antibodies which stain lymphoid cells in B5 or formalin-fixed material are available. However, two major problems must be considered.

First, some of the antibodies mentioned by Ng et al show different staining results for snap-frozen material and for formalin-fixed tissue. LN1 stains both germinal center cells and follicle mantle lymphocytes (FMC) in frozen sections, whereas FMC do not stain in paraffin after formalin fixation at the same dilution. Furthermore,
More monoclonal antibodies reactive with leukocytes in formalin-fixed paraffin-embedded tissues [letter]

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