Estimation of Bone Marrow Cellularity

To the Editor:

The report by Gruppo et al.1 claiming inconsistencies in the estimation of bone marrow cellularity by the “aspirate” is misleading. Although the data presented are correct and valid, the procedure they used (coverslip preparation) should not have been synonymous with “aspirate,” as it merely represents a smear preparation. For the reasons explained by the authors (admixture with peripheral blood) and indicated as early as 1957 by Agress,2 a smear preparation is totally inadequate to estimate bone marrow cellularity. However, use of the aspirate is not limited to the preparation of smears: the particles can be gathered with a pipette (or by some other method),3-5 allowed to clot, fixed in formalin, and processed for embedding in paraffin.6,7 Sections through the aggregate provide excellent preparations in which at least 7-8 bone marrow units with preserved bone marrow cell-fat architecture are clearly delineated from the surrounding red blood cell clot.8,9 This technique has been used by numerous investigators10-11 and provides a rapid, accurate, and reproducible method for the estimation of bone marrow cellularity on bone marrow aspirates.

BENJAMIN DREWINKO, M.D., Ph.D.
Chief, Section of Hematology
Department of Laboratory Medicine
The University of Texas System
Cancer Center
Houston, Texas

REFERENCES

Estimation of bone marrow cellularity [letter]

B Drewinko