

## Accuracy and relative value of bone marrow aspiration in the detection of lymphoid infiltration in non-Hodgkin lymphoma

Antonino Musolino<sup>1</sup>, Annamaria Guazzi<sup>1</sup>, Rita Nizzoli<sup>1</sup>, Michele Panebianco<sup>1</sup>, Cristina Mancini<sup>2</sup> and Andrea Ardizzoni<sup>1</sup>

<sup>1</sup>Medical Oncology Unit, and <sup>2</sup>Department of Pathology, University Hospital of Parma, Parma, Italy

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### ABSTRACT

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**Aims and background.** In hematologic malignancies, bone marrow aspiration is considered complementary to bone marrow biopsy for the detection of tumor infiltration. The present study evaluated the accuracy of bone marrow aspiration and the relative contributions of bone marrow aspiration and bone marrow biopsy in detecting bone marrow involvement by non-Hodgkin lymphomas.

**Methods and study design.** We compared 51 simultaneous marrow aspirates and core biopsies from non-Hodgkin lymphoma patients for sensitivity, specificity, concordance, quality and clinical relevance.

**Results.** The agreement level of bone marrow biopsy and bone marrow aspiration was 80%, and the overall sensitivity and specificity for bone marrow aspiration were 69% and 86%, respectively. When considering only the indolent non-Hodgkin lymphoma samples, the sensitivity of bone marrow aspiration was 82% and the specificity was 85%, whereas the sensitivity and specificity were 40% and 86%, respectively, in the aggressive non-Hodgkin lymphoma specimens. Five cases (10%) were reported in which bone marrow biopsy did not detect lymphoid infiltration even though the bone marrow aspiration was positive. In one of these, lymphoid infiltration was documented by a second bone marrow biopsy performed thereafter.

**Conclusions.** The data from the current study show that bone marrow aspiration is a useful procedure with which to detect bone marrow infiltration by lymphoma. Although it cannot be a substitute for examination of the marrow by core biopsy, the utility of adding an aspirate to bone marrow biopsy is supported by its earlier and easier availability for bone marrow examination, the larger amounts of marrow that can be examined with both procedures, and the percentage, although small, of potentially true-positive bone marrow aspirates with negative biopsies. **Free full text available at [www.tumorionline.it](http://www.tumorionline.it)**

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**Key words:** bone marrow aspirate, core biopsy, non-Hodgkin lymphomas, relative value.

Correspondence to: Antonino Musolino, MD, Medical Oncology Unit, University Hospital of Parma, via Gramsci 14, 43100 Parma, Italy.  
Tel +39-0521-702660;  
fax +39-0521-995448;  
e-mail  
[antoninomusolino@hotmail.com](mailto:antoninomusolino@hotmail.com)

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