

## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

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### Hematology-Cell Morphology – Case 19

Blasts of large size in the bone marrow and peripheral blood

Monoblasts >80% of non-erythroid bone marrow cells

Fine chromatin network

One or more nucleoli

Abundant basophilic cytoplasm

Cells with projections and pseudopodia formation

Coarse reddish granules

Many promonocytes.

Blastic cells of large size with a large folded or oval nucleus, fine chromatin appearance, multiple nucleoli and abundant light or deep basophilic cytoplasm with pseudopodia formation sometimes containing azurophilic granules, vacuoles and rarely Auer bodies. Sometimes monoblasts may present with phagocytosis of blood cell elements and phagocytosed cysts and rarely there is an hemophagocytosis picture in the bone marrow which must be differentiated from other malignant hemophagocytosis syndromes [absence of t(8;16) often associated with the M5a with concomitant hemophagocytosis]. In the peripheral blood the circulating abnormal cells are more mature than the bone marrow cells (figures 1 to 16).

Non-specific esterase (ANAE) staining: Heavy positive and sensible to NaF inhibition (in 10% of cases is negative). a-naphthyl butyrate esterase (ANBE) staining: Positive (10% of cases is nega-

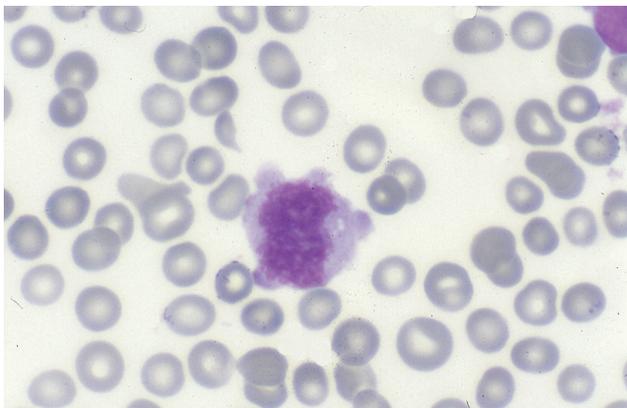


Figure 1

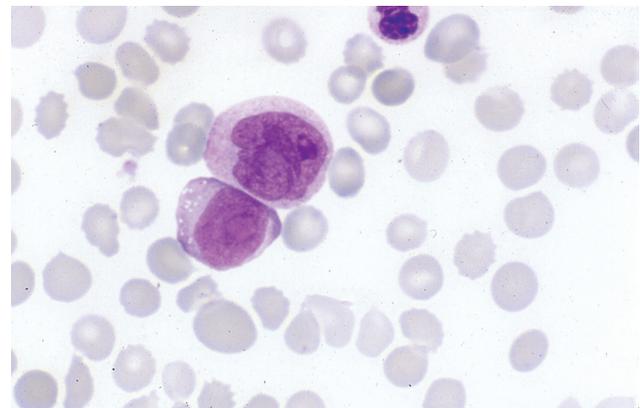


Figure 2

ARCHIVES OF HELLENIC MEDICINE 2023, 40(1):138–140  
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2023, 40(1):138–140

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tive). Peroxidase, specific esterase (NACE), acid phosphatase and PAS staining: Weakly positive or negative. PAS staining: Varying positivity, some blasts are negative and others present a diffuse pattern of staining with fine positive granulation, while the reaction is rarely coarse with diffuse or concourse positivity.

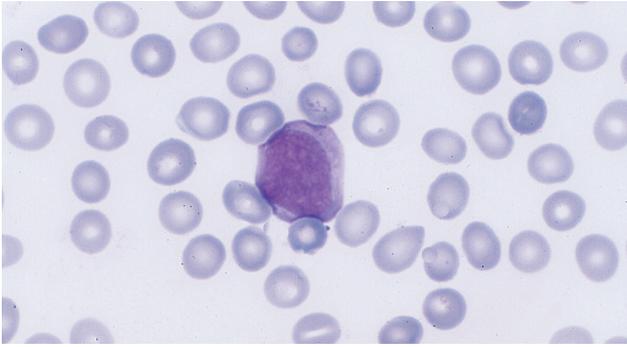


Figure 3

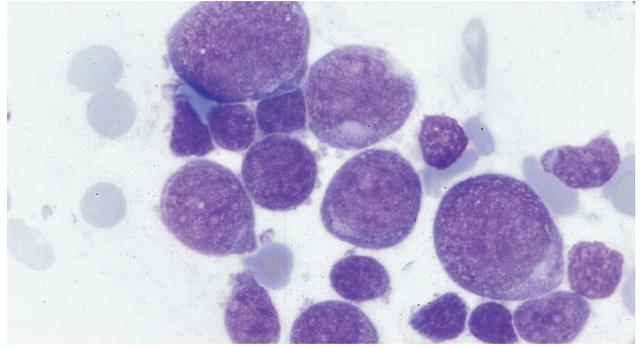


Figure 7

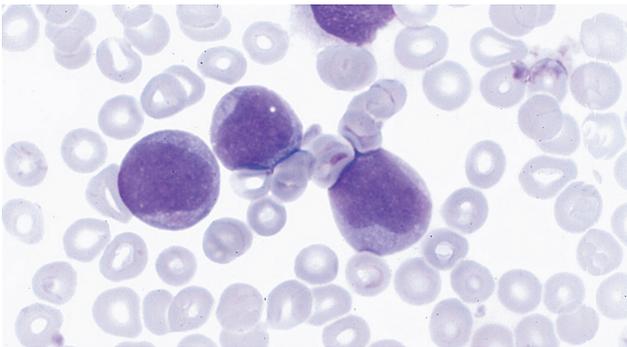


Figure 4

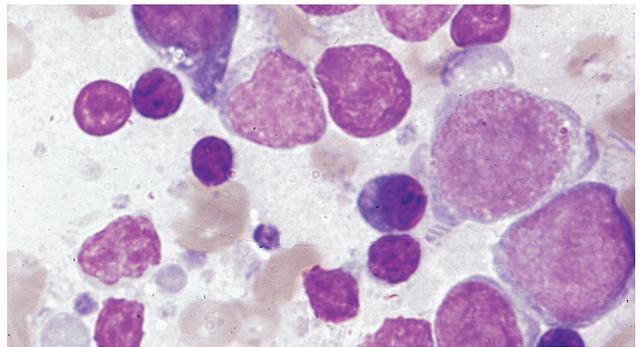


Figure 8

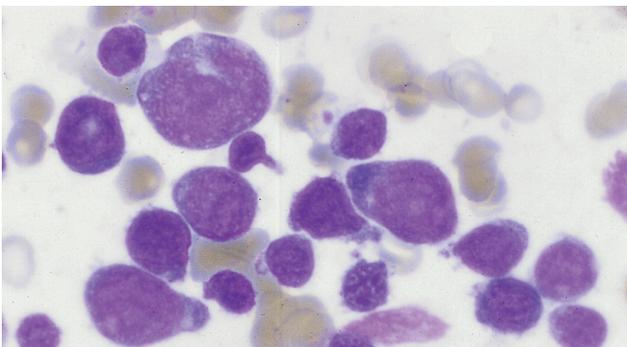


Figure 5

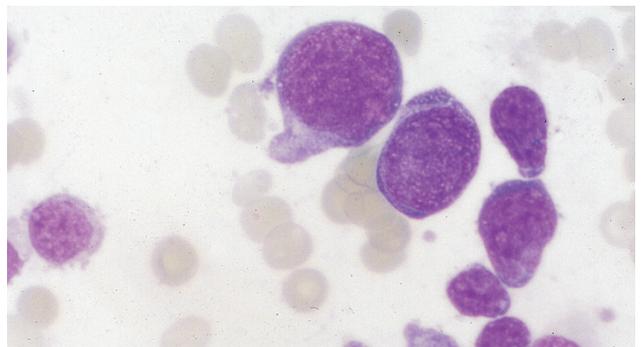


Figure 9

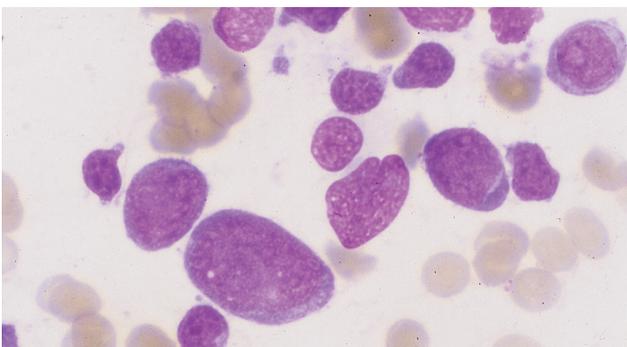


Figure 6

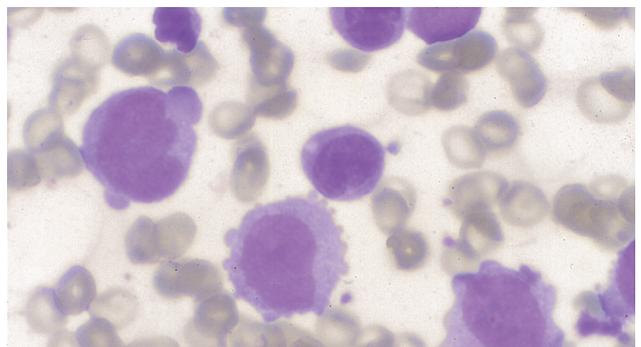


Figure 10

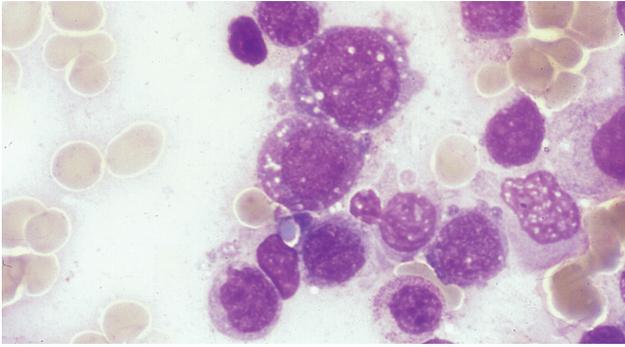


Figure 11

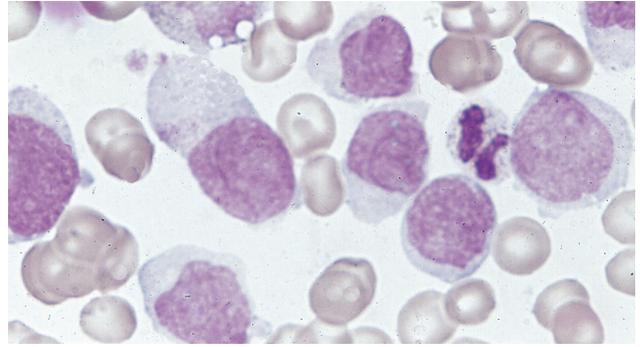


Figure 14

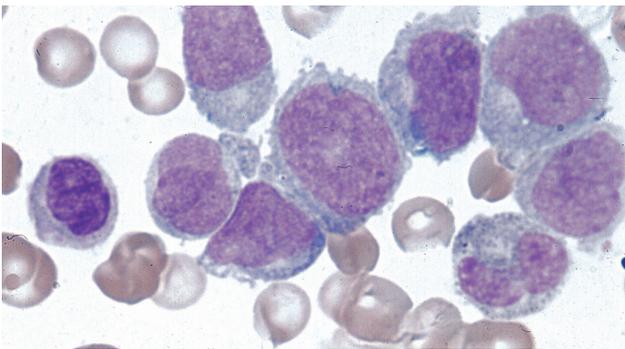


Figure 12

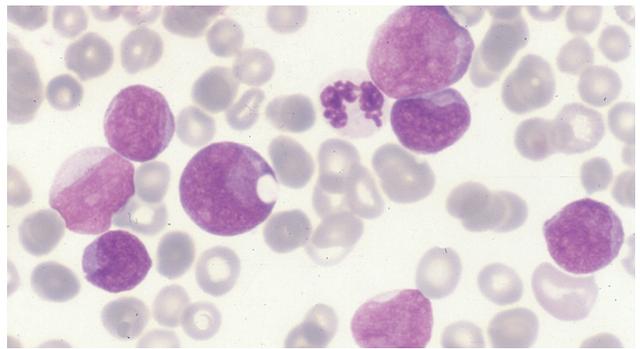


Figure 15

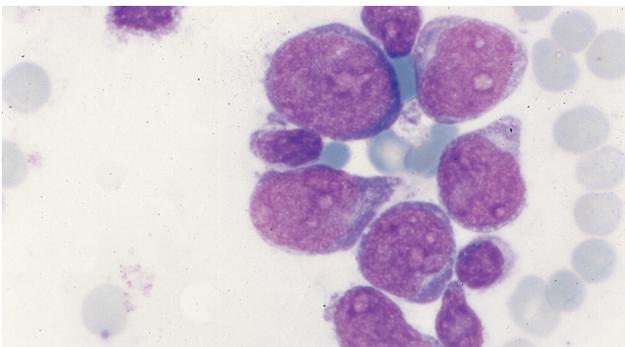


Figure 13

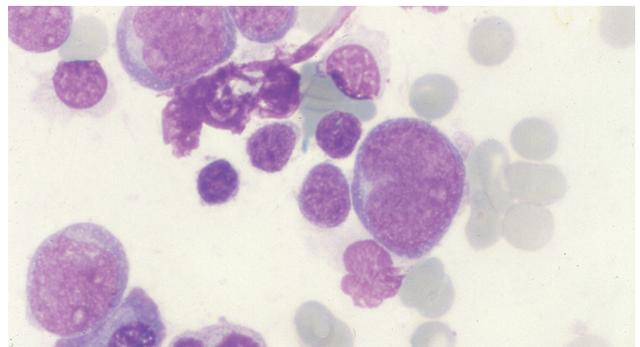


Figure 16

## References

1. MELETIS J. *Atlas of hematology*. 3rd ed. Nireas Publ Inc, Athens, 2009:374–386

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