

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Hematology-Cell Morphology – Case 7

(A)

Its size is 10–16 μm . The nucleus has a sausage-like nucleus or a nucleus with few segments connected with broad chromatin bands and cytoplasmic granulation and an appearance like the neutrophil (figures 1 to 6). Promyelocytes, myelocytes, metamyelocytes and band cells represent approximately 5–20% of the myeloid cells.



Figure 1

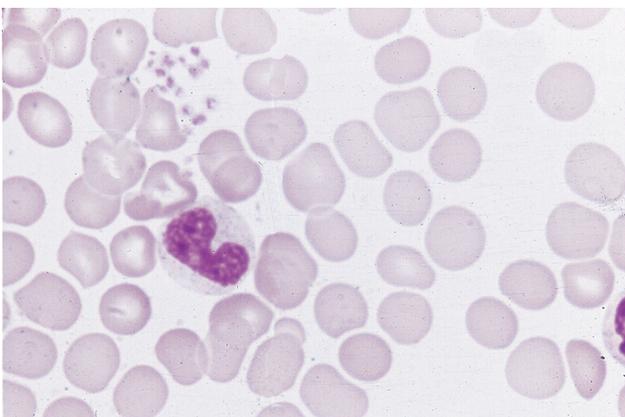


Figure 2

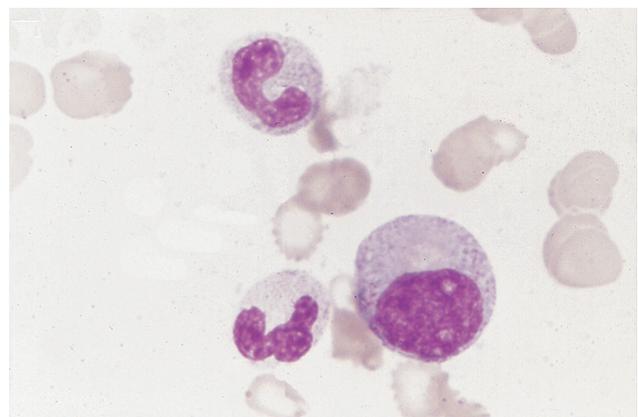


Figure 3

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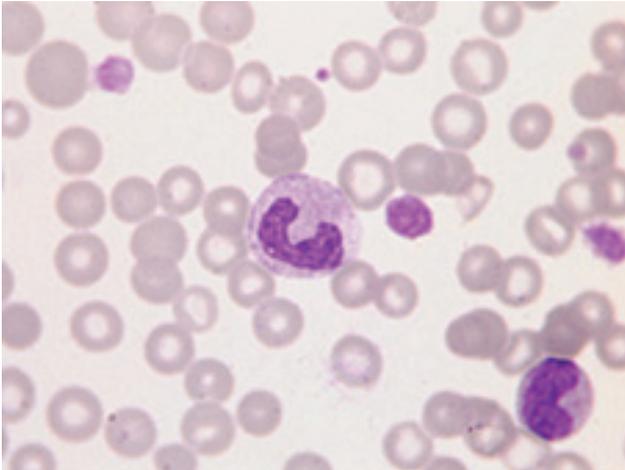


Figure 4

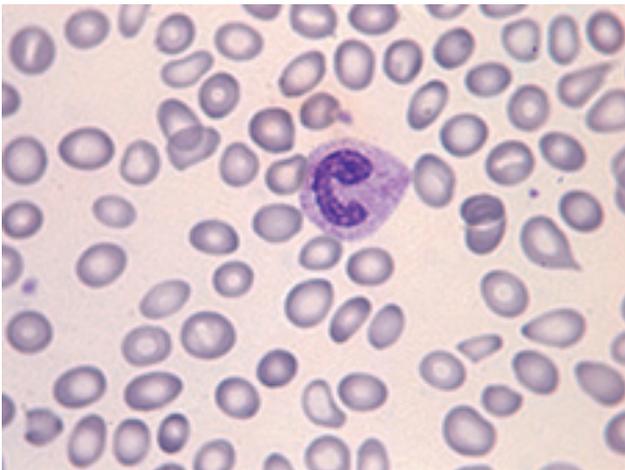


Figure 5

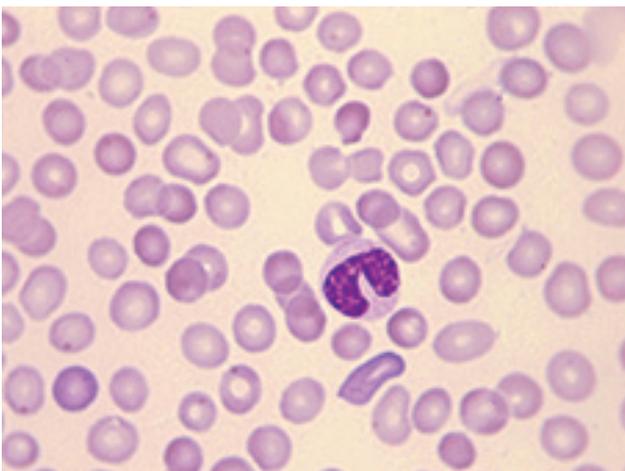


Figure 6

(B)

Its size is 10–14 μm , with a nucleus containing 2–3 lobes connected by fine threads of chromatin (normally: 2 lobes in approximately 10–30% of cells, 3 lobes in 40–50%, 4 lobes in 10–20%, 5 lobes in 0–5%, no more than 5 lobes normally, band cells 0–5%). Chromatin stains purple and is coarsely arranged in clumps. The abundant cytoplasm is acidophilic, pink, containing many small neutrophilic granules and a small number of primary granules. In the peripheral blood it numbers $2.5\text{--}7.5 \times 10^9/\text{L}$ (figures 7 to 12). The neutrophil life span is 6–12 hours in the peripheral blood, and after migration through capillary cells, it lives for approximately 2–4 days more. The production and differentiation of the granulocytic series requires approximately 6–10 days. A very high number of mature cells (10–15 \times of blood neutrophils

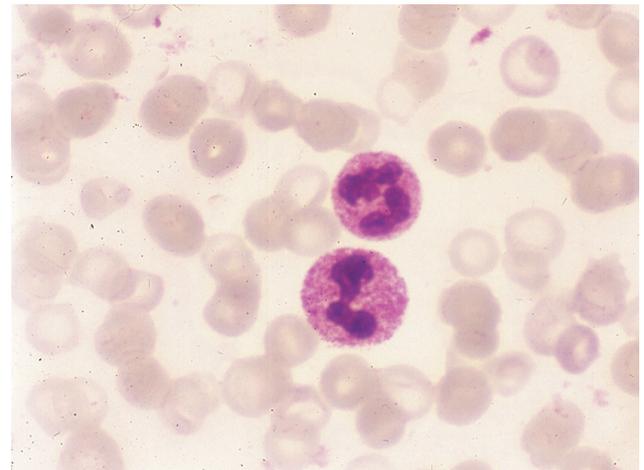


Figure 7

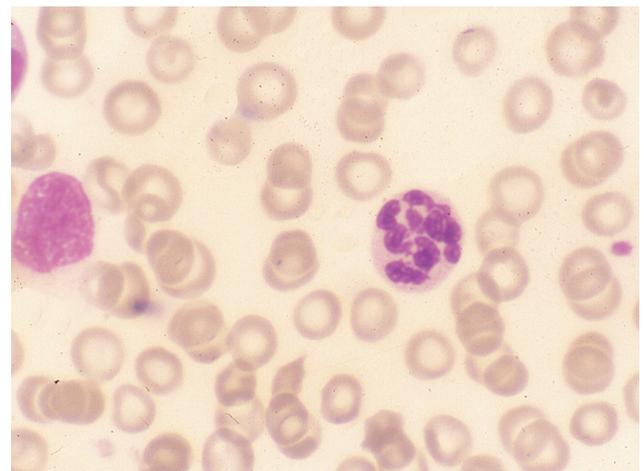


Figure 8

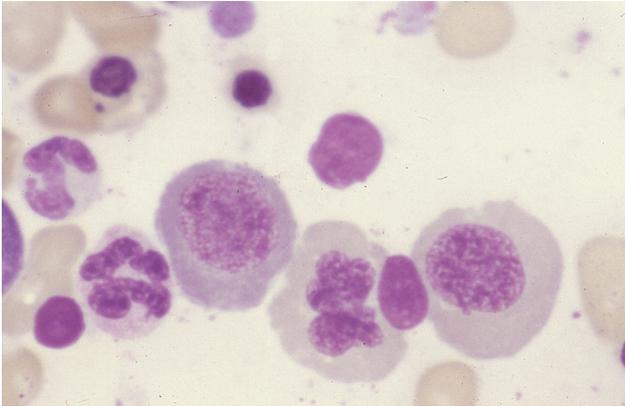


Figure 9

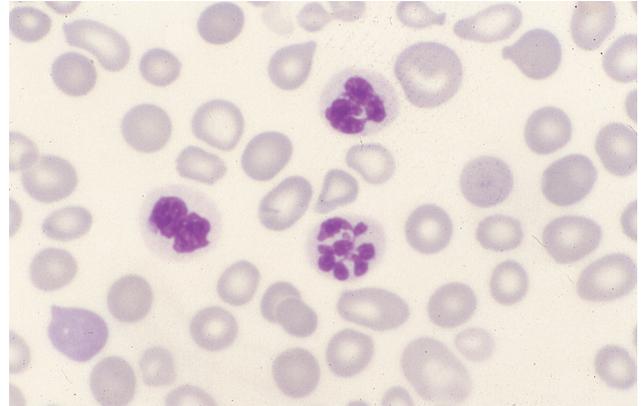


Figure 11

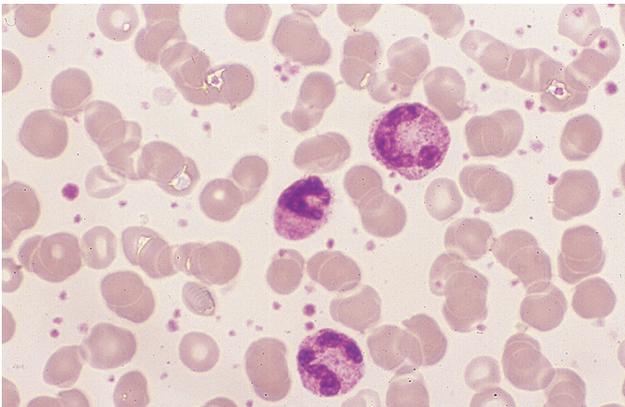


Figure 10

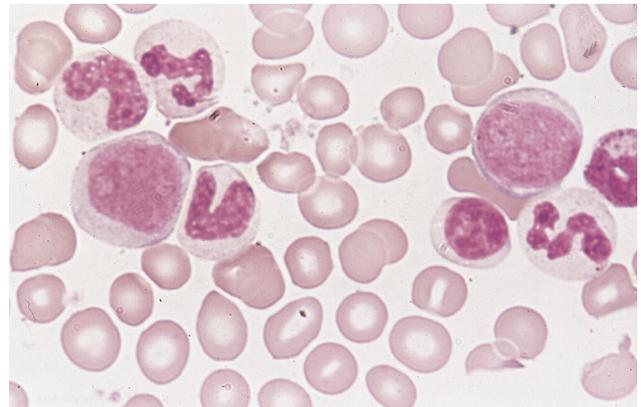


Figure 12

number) remains in bone marrow reserves (reserve pool) and represents approximately 10–30% of bone marrow cells and is 10–15 times the number in the peripheral blood.

References

1. MELETIS J. *Atlas of hematology*. 3rd ed. Nireas Publ Inc, Athens, 2009:23–34

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Cell type: (A) Band cell; (B) neutrophil