

PathMD™: Board Review Letter

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Hematopathology - Part 3

Volume 1, Number 40

Case #1 A 50 y/o of female presents with numerous immature and erythroid cells comprising 90% of the marrow cells. Myeloperoxidase stain is negative, and the cells express glycoprotein A by flow cytometry. Based on the histologic and flow cytometry findings, what is the best diagnosis?

- A. AML-M0
- B. AML-M1
- C. AML-M6a
- D. AML-M6b
- E. AML-M7

Case #2 A 65 y/o female has persistent anemia with no known cause. A bone marrow biopsy was performed and representative images of the aspirate, biopsy, and iron stain are shown. No significant findings were present in the granulocytic or megakaryocytic lineages. Based on the findings, what is the best diagnosis?

- A. 5q- syndrome
- B. Refractory anemia
- C. Refractory anemia with ringed sideroblasts
- D. Refractory anemia with multilineage dysplasia
- E. Sideroblastic anemia

Case #3 A 6 y/o male presents with a pleural mass. A biopsy was performed and representative images and special stains are shown. Based on the findings, the best diagnosis is:

- A. T-Cell Lymphoma, NOS
- B. Burkitt Lymphoma
- C. Thymoma
- D. T-Cell ALL
- E. Mantle Cell Lymphoma

Case #4 A 45 y/o female presents with increased blasts in the peripheral blood (WBC = 50K) some which have an apple core morphology. A myeloperoxidase stain performed on the peripheral blood shows the blasts to have a high level of positivity in virtually all of the cells. Images for this case show the flow cytometry for this case. Based on these findings, the best diagnosis is:

- A. AML-M1
- B. AML-M3
- C. AML-M4
- D. AML-M5
- E. T-Cell ALL

Case #5 A 45 y/o male presents with a skull based lesion. A biopsy is performed, and representative images with special stains are shown. Based on the findings, the best diagnosis is:

- A. Rosai-Dorfman disease
- B. Langerhan Cell Histiocytosis
- C. Inflammatory pseudotumor
- D. Histiocytic Sarcoma
- E. Gaucher disease

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Case #6 A patient presents with 70% blasts in the bone marrow aspirate. Cytochemical stains are performed and shown. Based on the findings, what is the proper FAB classification of this process?

- A. AML-M0
- B. AML-M2
- C. AML-M3
- D. AML-M4
- E. AML-M5

Question #1 AML-M2 is characterized by all of the following EXCEPT:

- A. Most commonly associated with t(8;21)
- B. $\geq 3\%$ of the blasts are positive for myeloperoxidase
- C. Positive for CD13, CD33, and HLA-DR
- D. Often associated with *AML1/ETO* translocation
- E. May have $> 50\%$ erythroid precursors

Question #2 What is the minimum percentage of blasts is required in the peripheral blood to meet the criteria for a diagnosis of acute leukemia?

- A. 5%
- B. 10%
- C. 20%
- D. 30%
- E. 50%

Question #3 What is the minimum percentage of blasts is required in the bone marrow to meet the criteria for a diagnosis of acute leukemia?

- F. 5%
- G. 10%
- H. 20%
- I. 30%
- J. 50%

Question #4 AML-M2 with basophilia is more often associated with which of the following translocations?

- A. t(6;9)
- B. t(8;21)
- C. t(12p)
- D. Both A and C are correct
- E. All of the above are correct

Notes for question set:¹

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