

# PathMD™: Board Review Letter

Author: Philip Ferguson, M.D.

Hematopathology - Part 6

Volume 1, Number 48

Case #1 An absolute leukocytosis was identified in a 71-year-old African-American male admitted to the hospital for an elective knee replacement. Based on the flow cytometry findings, what is the best diagnosis?

- A. Reactive lymphocytosis
- B. Monoclonal kappa CLL
- C. Monoclonal lambda CLL
- D. Biclonal CLL
- E. Mantle Cell Lymphoma

Case #2 Several subcutaneous nodules were found in the axillary region of a 59-year-old male. Representative histologic images and special stains are shown. Based on these findings, which of the following is the best diagnosis?

- A. Merkel cell carcinoma
- B. Diffuse large B cell lymphoma, leg type
- C. Subcutaneous panniculitic T-cell lymphoma
- D. Granulocytic sarcoma
- E. Poorly differentiated carcinoma

Case #3 A splenectomy was performed in a three-year-old female. The spleen is approximately twice the normal size when adjusted for age. Based on the histologic findings shown for this case, which of the following is the best diagnosis?

- A. Autoimmune hemolytic anemia
- B. Immune thrombocytopenia purpura
- C. Sickle cell disease
- D. Metabolic storage disease
- E. Felty's syndrome

Case #4 A submandibular mass has been noted for several months in a 40-year-old female patient. A FNA was performed with flow cytometry, which was negative for a monoclonal lymphoid population. A surgical excision of the lesion was performed and submitted in formalin. Representative histologic sections are shown along with immunohistochemistry. Based on the findings and clinical history, which of the following is the best diagnosis?

- A. Follicular lymphoma
- B. Reactive lymphoid hyperplasia
- C. Castleman's disease
- D. Kimura's disease
- E. Marginal zone lymphoma

# PathMD™: Board Review Letter

Author: Philip Ferguson, M.D.

Hematopathology - Part 6

Volume 1, Number 48

**Case #5** An isolated orbital mass present for several months was found in a 55-year-old female. A surgical excision was performed, and flow cytometry showed a CD20 positive, CD5 and CD10 negative, lambda restricted lymphoid cell population. Cytogenetic showed a t(14;18)(q32;q21) translocation. Representative histologic images for this case are shown along with selected immunohistochemistry. Which of the following is the best diagnosis?

- A. Follicular lymphoma
- B. Marginal zone lymphoma
- C. CLL/SLL
- D. Mantle cell lymphoma
- E. Cannot be conclusively determined based on the given information

**Case #6** An osmotic fragility test was performed on the blood specimen from a 45-year-old patient who has a microcytic anemia (MCV = 73, RBC =  $3.8 \times 10^6/\text{mL}$ , Hb = 11.0 g/dL, & Hct. = 33.4%). Based on these laboratory values and the findings on the osmotic fragility test, what is the most likely diagnosis?

- A. Hereditary spherocytosis
- B. Iron deficiency anemia
- C. Alpha thalassemia
- D. Beta thalassemia
- E. All of the above are diagnostic possibilities

**Question #1** Which of the following leukemias is least commonly associated with abnormalities involving chromosome 11q23?

- A. AML secondary to topoisomerase II inhibitors
- B. ALL
- C. AML-M5a
- D. AML-M5b
- E. AML-M2

**Question #2** Examination of a lymph node shows extensive infiltration by macrophages with foamy cytoplasm. Staining with PAS, shows diastase resistant material. AFB stain is negative. Which of the following answers would be the best diagnosis:

- A. MAI
- B. Syphilis
- C. Rosai-Dorfman
- D. Toxoplasmosis
- E. Whipple's disease

**Question #3** B-cell prolymphocytic leukemia is characterized by which of the following?

- A. 1-10% prolymphocytes
- B. 11-55% prolymphocytes
- C. >55% prolymphocytes
- D. > 75% prolymphocytes
- E. None of the above