

# HOSPITAL PHYSICIAN®

## HEMATOLOGY BOARD REVIEW MANUAL

### STATEMENT OF EDITORIAL PURPOSE

The *Hospital Physician Hematology Board Review Manual* is a study guide for fellows and practicing physicians preparing for board examinations in hematology. Each manual reviews a topic essential to the current practice of hematology.

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## Benign Hematology: Review Questions

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# Benign Hematology: Review Questions

Anaadrina Zakarija, MD

## QUESTIONS

Choose the single best answer for each question.

- A 28-year-old man presents for follow-up and further evaluation of a recent thrombotic event. Three months ago, the patient presented to the emergency department (ED) with mild shortness of breath occurring at rest that developed a few hours prior to presentation and a 2-day history of dyspnea with exertion. He denied fever and cough, and there was no lower extremity edema. Past medical history was significant for cholecystectomy that occurred 2 weeks before the ED presentation. The patient was not taking any medications. Physical examination conducted in the ED was notable for a heart rate of 102 bpm. On auscultation, crackles were appreciated at the right base of the lungs. Computed tomography scan of the chest demonstrated a thrombus in the right lower lobe segmental pulmonary artery. The patient was admitted to the hospital. Thrombophilia evaluation was subsequently performed, which revealed a positive lupus anticoagulant, anticardiolipin IgM level of 35 MPL (normal, < 12 MPL), and anticardiolipin IgG level of 6 GPL (normal, < 10 GPL) antibodies. The patient was treated with dalteparin, and warfarin was started. His hospital course was uncomplicated, and he was discharged on hospital day 4 with instructions to continue taking dalteparin and warfarin until warfarin reached a therapeutic level with an international normalized ratio (INR) between 2 and 3. At 3-month follow-up, the patient has not experienced any bleeding complications related to warfarin therapy. Repeat thrombophilia evaluation reveals positive lupus anticoagulant, anticardiolipin IgM of 6 MPL, and anticardiolipin IgG of 8 GPL. Which is the best anticoagulation option for this patient at this time?

  - Indefinite warfarin with target INR of 2 to 3
  - Indefinite warfarin with target INR of 2.5 to 3.5
  - Warfarin with target INR of 2 to 3 for 3 to 6 months
  - Warfarin with target INR of 2.5 to 3.5 for 3 to 6 months
- A 32-year-old woman is referred for consultation in regards to anticoagulation prophylaxis during pregnancy. Five years ago, the patient experienced a deep vein thrombosis (DVT) of the right popliteal vein 11 days after laparoscopic surgery of the right knee. At that time, the patient was treated initially with enoxaparin and transitioned to warfarin (target INR, 2–3) for 6 months. Thrombophilia evaluation (which included evaluation for lupus anticoagulant; anticardiolipin and  $\beta_2$ -glycoprotein I antibodies; factor V Leiden [FVL] and prothrombin G20210A gene mutations; and protein C, protein S, and antithrombin activity) performed at the time of diagnosis was negative. The patient has never taken any hormonal contraceptives. Which of the following is the most appropriate recommendation for this patient during her pregnancy?

  - Aspirin 81 mg/day
  - Prophylactic dose of a low-molecular-weight heparin (LMWH) plus aspirin
  - Prophylactic dose of a LMWH starting at 8 weeks of gestation
  - No treatment antepartum
- A 64-year-old man is referred by his primary care physician for evaluation of anemia and leukopenia. The patient reports that he has experienced mild fatigue and decreased exercise tolerance for the last 6 months. Both review of systems and physical examination are unremarkable. Past medical history is significant for hypertension, psoriasis, and benign prostatic hypertrophy. The patient's medications include amlodipine, atenolol, tamsulosin hydrochloride, zinc, a multivitamin, and vitamin E supplement. Laboratory studies are ordered, and notable results are listed in [Table 1](#). Bone marrow biopsy is performed, which reveals a normocellular marrow with adequate megakaryocytes, erythroid, and myeloid precursors. Representative myeloid and erythroid precursors are seen in [Figure 1](#) (see page 4). Cytogenetic analysis reveals normal male