September 10, 2024

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A 68-year-old woman is seen in consultation regarding recently diagnosed JAK2 V617F mutation- positive essential thrombocythemia.

She is asymptomatic, has no other medical problems, and takes no medications.

On physical examination, vital signs are normal. The spleen is palpable 2 cm below the left costal margin.

Laboratory studies show a hemoglobin level of 13.5 g/dL, leukocyte count of 6000/uL, and platelet count of 685,000/uL.

**Which of the following is the most appropriate treatment?**

1. Aspirin
2. Hydroxyurea plus aspirin
3. Ruxolitinib
4. Stem cell transplantion
5. A 70-year-old man is evaluated hospitalized with a 3-day history of acute abdominal pain and nausea and vomiting. Medical and family histories are noncontributory, and he takes no medications.

On physical examination, vital signs are normal. Palpation elicits mild tenderness in the upper abdomen without hepatosplenomegaly or abdominal mass.

Laboratory studies show a hemoglobin level of 14.5 g/dL, leukocyte count of 5000/uL and platelet count of 250,000/uL.

CT of the abdomen with contrast demonstrates an acute portal vein thrombus.

**Which of the following is the most appropriate additional diagnostic test?**

1. Antithrombin measurement
2. JAK2 tyrosine kinase mutation
3. Protein C measurement
4. Protein S measurement
5. A 51-year-old woman is evaluated before hospital discharge. She was diagnosed with high-risk acute myeloid leukemia and completed induction chemotherapy. Her leukemia is believed to be secondary to breast cancer therapy, which included surgery and chemotherapy following diagnosis 2 years ago.

On physical examination, vital signs and other findings are normal. A peripherally inserted central catheter is located in the left upper extremity.

Complete blood count and bone marrow aspirate and biopsy indicate complete remission.

**Which of the following is the most appropriate management?**

1. Allogeneic hematopoietic stem cell transplantation
2. Consolidation chemotherapy
3. Intrathecal chemotherapy plus whole brain irradiation
4. Maintenance chemotherapy
5. No additional treatment
6. A 29-year-old woman is evaluated in the Emergency department for epistaxis and bleeding gums that began 3 days ago. Medical history is otherwise unremarkable , and she takes no medications.

On physical examination, temperature is 36.7 C (98.0 F), blood pressure is 110/80 mm Hg, pulse rate is 120/min, and respiration rate is 22/min. Dried blood is seen in her nose, and gingival bleeding is noted. No lymphadenopathy or hepatosplenomegaly is present. Petechiae are present on the lower extremities.

**Laboratory studies:**

Hemoglobin 8.9 g/dL

Leukocyte count 14,000/uL

19% neutrophils

3% bands

32% lymphocytes

15% monocytes

31% “atypical” cells

Platelet count 8000/uL

The prothrombin, activated partial thromboplastin time, and INR are elevated; fibrinogen level is low, and fibrin degradation products are elevated.

Peripheral blood smear is shown. (see slide)

**Which of the following is the most likely diagnosis?**

1. Acute lymphoblastic leukemia
2. Acute promyelocytic leukemia
3. Aplastic anemia
4. Primary myelofibrosis
5. A 55-year-old woman is evaluated before starting chemotherapy for multiple myeloma. Anticipated therapy will include bortezomib, lenalidomide, dexamethasone, and daily low-dose aspirin. She has otherwise been well, has no symptoms, and has no previous history of venous thromboembolism or risk factors for VTE. She takes no medications. Today, her hemoglobin level is 9 g/dL.

Inactivated influenza and 13-valent pneumococcal conjugate vaccines will be administered today. The patient received the herpes virus recombinant vaccine at age 50 years.

**Which of the following is the most appropriate additional treatment during chemotherapy?**

1. Epoetin
2. Fluconazole
3. Metronidazole
4. Valacyclovir