

Quiz Page — Advances in the Treatment of Chronic Myeloid Leukemia

1. Leukemia:

- a. is projected to be the fifth and sixth most common cause of cancer death in males and females, respectively for 2005.
- b. is a malignancy of hematopoietic (blood-forming) cells.
- c. can occur in acute types with a stormy onset and chronic types with a more gradual, insidious onset.
- d. all of the above

2. ALL:

- a. is acute lymphoid leukemia and involves overproduction of lymphoblasts.
- b. is more common in children.
- c. presents with fatigue, bruising, nose bleeds, fever, infections, and bone pain.
- d. all of the above

3. AML:

- a. is acute myeloid leukemia and involves overproduction of myeloblasts.
- b. is the most common type of adult leukemia.
- c. has an overall five-year survival rate of about 20%, with older patients having the poorest prognosis.
- d. all of the above

4. CLL:

- a. is chronic lymphocytic leukemia and involves overproduction of mature-appearing lymphocytes.
- b. occurs mostly in patients > 60 years of age.
- c. can present in an insidious manner with the only indication being an elevated lymphocyte count.
- d. all of the above

5. CML:

- a. is chronic myeloid leukemia.
- b. is most common in the age range of 45 to 55, however there is a trend toward increased case in younger adults.
- c. is associated with the molecular genetic defect known as the Philadelphia chromosome which contains an abnormal hybrid bcr-abl gene.
- d. all of the above

6. Pathological and cytogenetic features of CML include:

- a. abnormal tyrosine kinase activity.
- b. the presence of the Philadelphia chromosome abnormality primarily in stem cells of myeloid cell lineage.
- c. a markedly elevated WBC count with a striking increase in neutrophils.
- d. all of the above

7. The initial clinical presentation of CML:

- a. is characterized by an acute, stormy onset of symptoms.
- b. can be relatively asymptomatic with only a marginal increase in WBC count.
- c. always involves fatigue, weight loss, abdominal pain, and an enlarged spleen.
- d. all of the above.

8. The vast majority of CML patients are initially diagnosed in the chronic phase, which can last for many years and is characterized by a relatively stable and predictable profile of signs and symptoms.

- a. true
- b. false

9. The accelerated phase of CML is often a prelude to blast crisis and involves worsening symptoms and more pronounced elevations in the WBC count and myeloblast fraction in the blood and bone marrow.

- a. true
- b. false

10. Imatinib:

- a. was approved in 2001 and is marketed under the brand name Gleevec.
- b. is primarily indicated for adults with chronic phase, Philadelphia chromosome-positive CML.
- c. inhibits the tyrosine kinase activity coded by the hybrid bcr-abl gene of the Philadelphia chromosome in leukemic cells.
- d. all of the above.

11. A complete hematologic response to treatment is essentially a normalization of cell counts and a major cytogenetic response is either a complete or partial reduction in Philadelphia chromosome-positive leukemic cells.

- a. true
- b. false

12. Compared to interferon and Ara-C, imatinib treatment of chronic phase CML:

- a. increases the time to disease progression.
- b. produces greater complete hematologic response rates.
- c. produces greater major cytogenetic response rates.
- d. all of the above

13. Commonly reported adverse effects of imatinib include:

- a. fluid retention and edema.
- b. nausea, diarrhea, rash, fatigue, and headache.
- c. muscle cramps, musculoskeletal pain, and joint pain.
- d. all of the above

14. In respect to drug interactions with imatinib:

- a. CYP3A4 inhibitors, such as clarithromycin, can raise imatinib plasma levels.
- b. carbamazepine and dexamethasone can raise imatinib plasma levels.
- c. none of the above
- d. all of the above

15. Gleevec:

- a. therapy for adult chronic phase CML is one 400 mg tablet daily with a meal.
- b. therapy can cost thousands of dollars a year and requires prior authorization by pharmacy benefit managers.
- c. availability for patients without pharmacy benefit coverage may be possible by contacting the Gleevec Reimbursement Hotline.
- d. all of the above.