TEST QUESTIONS

Circles must be filled in, or test will not be graded. Shade circles like this: ● Not like this: Ⓧ

1. **The preferred biomarker for diagnosis and rule out of acute myocardial infarction (AMI) is**
   - a. CK total
   - b. CK-MB
   - c. BNP
   - d. Cardiac Troponin (cTn)

2. **High-sensitivity troponin T (cTnT) and troponin I (cTnI) have been approved for many years in the U.S.**
   - a. True
   - b. False

3. **FDA approval was granted to hs-cTnI assays for two analyzers in**
   - a. 1980 and 1981
   - b. 1996 and 1998
   - c. 2005 and 2006
   - d. 2018 and 2019

4. **Implementing hs-cTn assays will require the clinical laboratory to make decisions regarding**
   - a. units of measure
   - b. reference ranges
   - c. frequency of blood collection for chest pain patients
   - d. all of the above

5. **Cutoff concentrations of troponin in early years of testing only determined**
   - a. patients with chest pain who ruled out for AMI
   - b. patients with chest pains who ruled in for AMI
   - c. a cutoff of healthy patients
   - d. all of the above

6. The higher sensitivity produced in newer generations of troponin assays have decreased the specificity for diagnosis of AMI.
   - a. True
   - b. False

7. **In order for a troponin assay to be defined as high sensitivity it must display**
   - a. 20 percent imprecision
   - b. 10 percent imprecision
   - c. more than 50 percent of healthy patients above the assay's limit of detection
   - d. a. and c.

8. **The FDA requires manufacturers to list specific cutoffs in reference to**
   - a. age
   - b. sex
   - c. diagnosis
   - d. all of the above

9. **Hs-cTnI assays are _____ than early generation troponin levels.**
   - a. ten-fold higher
   - b. ten-fold lower
   - c. one hundred-fold higher
   - d. one hundred-fold lower

10. **In order to interpret older generations versus high-sensitive troponin results, units for high-sensitive results should be reported in**
    - a. ng/L
    - b. ng/mL
    - c. ng/dL
    - d. ug/L

11. **Quality control (QC) materials that are used for early generations of troponin are suitable to use for hs-cTn**
    - a. True
    - b. False

12. **Older assays of troponin testing recommended blood testing at**
    - a. zero hours only
    - b. zero and six hours
    - c. zero, six and 12 hours
    - d. none of the above

13. **Which blood testing frequency strategy are emergency departments using with hs-cTn assays?**
    - a. zero hours only
    - b. zero and six hours
    - c. zero and two hours
    - d. zero, six and 12 hours

14. **Testing frequency that involves zero and one hour, and zero and two-hour blood collection has been shown to safely discharge**
    - a. 10 percent of patients
    - b. 20 percent of patients
    - c. 50 percent of patients
    - d. 80 percent of patients

15. **Studies that examined single troponin and dual troponin testing to rule out AMI have concluded that the number of patients that could be ruled out is comparable between the two strategies when cutoff levels on the single sample were lowered.**
    - a. True
    - b. False

16. **AMI rule out at the time of presentation isn't currently practiced in the U.S. because hs-cTn values cannot be reported down to the limit of detection, as ruled by the**
    - a. AAAC
    - b. FDA
    - c. CAP
    - d. JCAHO

17. **Etiologies for increased troponin levels include all but**
    - a. heart failure
    - b. venous thrombosis
    - c. lupus
    - d. sepsis

18. **Physicians must be educated on hs-cTn assays which can cause**
    - a. increased patients to have an abnormal higher level
    - b. decreased patients to have an abnormal higher level
    - c. increased patients to have an abnormal lower level
    - d. increased patients to have an abnormal lower level

19. **Unchanging values in serial measurements of hs-cTn typically indicates**
    - a. chronic cardiac injury
    - b. active cardiac injury
    - c. thrombosis
    - d. congestive heart failure

20. **The next step in improving cardiac diagnosis in the emergency department involves the development and approval of a point-of-care testing (POCT) assay for troponin.**
    - a. True
    - b. False

Tests can be taken online or by mail. Easy registration and payment options are available through NIU by following the links found at www.mlo-online.com/ce.

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