THE VALUE OF THE CHROMOGENIC ACTIVITY ASSAY IN DIAGNOSIS AND THERAPEUTIC MONITORING OF HEMOPHILIA

February 2017

CONTINUING EDUCATION TEST

Please print clearly

Name: ____________________________

Mailing Address: ____________________________

City __________________ State ______ Zip: ______

Institution/Facility: ____________________________

Phone: ____________________________

E-mail Address: ____________________________

Send your $20 check payable to Northern Illinois University with this form to: University Outreach Services, Northern Illinois University, DeKalb, IL 60115-2860 Phone: 815-753-0031

FEE NOT REFUNDABLE OR TRANSFERABLE

This test was prepared by Amanda Voelker, MPH, MT(ASCP), MLS, Clinical Education Coordinator, School of Health Studies, Northern Illinois University, DeKalb, IL.

CE Licensure Information for FL and CA:

CA: Accrediting Agency: 0001

(required for CE credit)

CA: Licensure number: ____________

(required for CE credit)

FL: Licensure number: ____________

(required for CE credit)

Home Office: ______ Work Office: ______

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.

1. Hemophilia A and B are X-linked disorders characterized by decreased levels of these two function factors:
   a. I and III
   b. I and VIII
   c. VIII and X
   d. VIII and IX

2. Spontaneous bleeding will occur in hemophilia patients when factor activity levels fall below:
   a. one percent
   b. three percent
   c. five percent
   d. ten percent

3. The measurement of factor activity levels can aid in which type of assessment of a patient with hemophilia?
   a. diagnosis
   b. classification
   c. therapeutic monitoring
   d. all of the above

4. What is currently the most commonly used assay to determine functional activity levels of FVIII and FIX?
   a. immunoassay
   b. chromogenic assay (CSA)
   c. one-stage assay (OSA)
   d. none of the above

5. A problematic issue with OSA is that it may underestimate or overestimate the true factor activity and produce clinically significant differences in post-infusion recovery:
   a. True
   b. False

6. Variations in an OSA are typically caused by:
   a. PT reagent
   b. APTT reagent
   c. prothrombin reagent
   d. thrombin reagent

7. Discrepant results found in either the OSA or the CSA and CSA together have been described in patients with:
   a. non-severe hemophilia
   b. discordant hemophilia
   c. hemophilia carriers
   d. all of the above

8. What has been described as the interfering factor in OSA in patients with hemophilia A?
   a. mutations
   b. proteins
   c. fats
   d. iron

9. What specific procedure used in the CSA may help to overcome the interfering substance that occurs in OSAs?
   a. use of more reagents
   b. long incubation times
   c. a wash step
   d. all of the above

10. Leaders in the field of hemophilia suggest using only the CSA test methodology to determine classification of the disease.
    a. True
    b. False

11. In patients receiving recombinant FVIII, variation of post-recovery results can be up to __________ percent greater or lower than the true value.
    a. 10
    b. 25
    c. 50
    d. 75

12. The main factor(s) that causes inaccurate results in the OSA test is/are:
    a. the APTT reagent
    b. the type of factor replacement product
    c. both a and b
    d. none of the above

13. An overestimation of post-infusion plasma factor activity may lead to:
    a. a bleeding risk
    b. a thrombosis risk
    c. both a and b
    d. neither a nor b

14. An underestimation of post-infusion plasma factor activity may lead to:
    a. a bleeding risk
    b. a thrombosis risk
    c. both a and b
    d. neither a nor b

15. Discrepant recovery of factor activity assays has been found to be more significant in rFVIII products and assays compared to rFIX products and assays.
    a. True
    b. False

16. What must coagulation laboratories be informed about before resulting patients’ post-infusion factor activity results?
    a. the age of the patient
    b. date and time of receiving factor infusion
    c. which type of factor replacement product was given to the patient
    d. all of the above

17. According to package inserts of factor assay manufacturing companies, what is a recommended procedure to use to address variation of results in factor assays?
    a. determining different calibration curves using recombinant product-specific calibrators
    b. applying a correction factor to an OSA that is specific for the recombinant factor being measured
    c. using different APTT reagents to determine the most accurate result
    d. none of the above

18. To date, the implementation of using CSAs in the clinical laboratory has played an important role in overcoming the erroneous results that can lead to a misdiagnosis of hemophilia.
    a. True
    b. False

P = Poor; E = Excellent

1. To what extent did the article focus or clarify the objectives?
   P O O O O E

2. To what extent was the article well-organized and readable?
   P O O O O E

3. How will you use the CE units?
   a. recertification
   b. state license
   c. employment
   d. other

CE Licensure Information for FL and CA:

CA: Accrediting Agency: 0001

(required for CE credit)

CA: Licensure number: ____________

(required for CE credit)

FL: Licensure number: ____________

(required for CE credit)