



ASCLS Continuing Education

Clinical Lab Investigations: Case Studies for the Lab Professional Case set #24 – Chemistry

Final Quiz

Select the single best answer for each of the following multiple-choice questions and record on the answer sheet.

1. Patients with pheochromocytoma have hypertension due to their increased levels of:
 - a. Renin
 - b. Chromogranin
 - c. Catecholamines
 - d. Chromaffin cells
2. The adrenal medulla contains chromaffin cells which produce hormones that:
 - a. Activate the release of renin
 - b. Increase in response to stressful situations
 - c. React with angiotensinogen to produce angiotensin I
 - d. Lead to vasodilation, decreased heart rate and low blood pressure
3. The enzyme renin catalyzes conversion of angiotensinogen to angiotensin I. Next angiotensin I is converted in the presence of ACE to angiotensin II, which:
 - a. Acts as a diuretic
 - b. Maintains osmolality
 - c. Increases vasoconstriction
 - d. Dilates blood vessels and increases urinary output
4. Which of the following would be a pre-analytical error(s) related to collection of a 24-hour urine for catecholamines?
 - a. Medication
 - b. Timing errors
 - c. Food or beverages
 - d. All of the above
5. Where is renin produced?
 - a. Heart
 - b. Kidneys
 - c. Pituitary
 - d. Adrenal glands
6. When a patient is suspected of having pheochromocytoma it is better to have a test that is more:
 - a. Specific
 - b. Sensitive

7. The endocrinologist ordered a repeat of the 24-hour catecholamines and a chromogranin A on the patient because:
 - a. Chromogranin A is a more specific test
 - b. The patient is too young to have pheochromocytoma
 - c. The normal scan essentially ruled out pheochromocytoma
 - d. The patient's symptoms were not consistent with pheochromocytoma

8. Angiotensin II triggers the release of:
 - a. Renin
 - b. Aldosterone
 - c. Catecholamines
 - d. Angiotensin-converting enzyme

9. Which of the following is a protein secreted by neuroendocrine cells?
 - a. Renin
 - b. Aldosterone
 - c. Catecholamines
 - d. Chromogranin A

10. What is the most common cause of secondary hypertension?
 - a. Renovascular disease
 - b. Cardiovascular blockage
 - c. Obesity with diabetes mellitus
 - d. Complications from pheochromocytoma

Record all answers on the answer sheet. (1) Complete the form below. (2) record your answers. (3) Detach and **mail** your answer sheet with check or money order (**\$15 for ASCLS members, \$25 for non-members**) to:

American Society for Clinical Laboratory Science
1861 International Dr., Suite 200, McLean, VA 22102
Fax: 571-354-7570

ASCLS Continuing Education Answer Sheet

Clinical Lab Investigations: Case set #24 – Chemistry
carries **1.0 hours** of continuing education. This form must be received by
April 30, 2019 to receive credit



Multiple Choice Questions

Circle the single best answer for each question

1. A B C D
2. A B C D
3. A B C D
4. A B C D
5. A B C D
6. A B C D
7. A B C D
8. A B C D
9. A B C D
10. A B C D

Use this section to evaluate the above titled session. Circle the number (**1-low, 5-high**) to indicate your ratings of this program, objectives, and speaker; use one response per line. Please complete this form to fulfill the session requirements.

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1 2 3 4 5

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