



The Journal of the American Osteopathic Association

The purpose of this quiz is to provide a convenient means for osteopathic physicians to assess their understanding of the scientific content in the January 2016 issue of *The Journal of the American Osteopathic Association (JAOA)*.

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For each of the questions below, place a checkmark in the box provided next to your answer so that you can easily verify your answers against the correct answers, which will be published in the February 2016 issue of the JAOA.

Hepatitis C Virus Infection Screening Within Community Health Centers

Nicole Cook, PhD; Erica P. Turse, DO, MPH;
Angela S. Garcia, PharmD, MPH, CPh; Patrick
Hardigan, PhD; and Saint Anthony Amofah, MD

1. What is the current US Preventive Services Task Force recommendation for screening for hepatitis C virus (HCV) infection?

- (a) Screen patients at high risk for HCV infection (ie, intravenous drug users, patients with history of incarceration, blood transfusion recipients before 1992).
- (b) Provide 1-time screening for HCV infection to adults born between 1945 and 1965.
- (c) Screen for HCV infection in patients at high risk for infection and offer 1-time screening to adults born between 1945 and 1965.
- (d) No agreed-upon screening recommendation for HCV infection exists at this time.

2. What laboratory value should be used to screen adults for HCV?

- (a) HCV load
- (b) hepatitis C surface antigen
- (c) anti-HCV antibody
- (d) HCV polymerase chain reaction

Primo Vascular System: A Unique Biological System Shifting a Medical Paradigm

Bruno Chikly, MD, DO (France);

Paul Roberts, DOMP; and

Jörgen Quaghebeur, DO

(Belgium), PhD

3. Which of the following statements is true about the primo vascular system:

- (a) It carries mainly red blood cells.
- (b) It can be a path for cancer metastasis.
- (c) It carries mainly lymphocytes.
- (d) It carries mainly carbon dioxide.
- (e) It is surrounded by myelin sheath.

4. The primo vessels were _____.

- (a) first described in ancient Greece
- (b) first described in ancient China
- (c) part of the ancient Indian Ayurvedic system
- (d) first described in the 18th century
- (e) first described in the 20th century

5. Which of the following is *not* a known function of the primo vascular system:

- (a) fluid circulation
- (b) immune cells circulation
- (c) endocrine function
- (d) dynamic structural integrity
- (e) immune cells production

Gamification and Multimedia for Medical Education: A Landscape Review

Lise McCoy, EdD; Joy H. Lewis, DO, PhD;
and David Dalton, DO

6. A medical educator designs an educational game to involve collaborative learning. Which of the following statements provides the best rationale for emphasizing the benefits of teamwork during an educational game or virtual patient simulation?

- (a) Collaborative skills are necessary for modern day clinical practice.
- (b) Collaborative games never involve competition.
- (c) Deliberate practice and trial and error build competence.
- (d) Peer discussion obliges students to read.
- (e) Practice in a group discussion enhances spatial and temporal visual systems.

7. A faculty member implemented an educational game last week. The game session resulted in learner analytics, which is defined as _____.

- (a) a log of student instant messaging and discussion wikis posted during the game
- (b) a report that tracks learner scores and performance during the game

- (c) feedback from students regarding technology glitches
 - (d) the gamification elements, such as leaderboards and buzzers
 - (e) transcribed learner discussions, recorded from the learning session
8. Which of the following is one of the main advantages of electronic games, mobile applications, and virtual patient simulations for distance training?
- (a) They engage teams in synchronous reporting.
 - (b) They involve movable pieces such as game boards, score tablets, and buzzers.
 - (c) They increase interaction time with faculty.
 - (d) They may be integrated with the learning management system.
 - (e) They may be projected from the podium.

Linking Community Hospital Initiatives With Osteopathic Medical Students' Quality Improvement Training: A Pilot Program

Grace D. Brannan, PhD; Ronald Russ, DO; Terry R. Winemiller, BSN, RN, CPHQ; and Eric Mast, DO

9. Which of the following landmark studies documented the occurrence of preventable medical errors that resulted in many deaths:
- (a) *To Err Is Human*
 - (b) *Crossing the Quality Chasm*
 - (c) *Patient Safety Curriculum Guide for Medical Schools*

10. Which of the following organizations provides students, residents, and faculty free access to quality improvement training modules:

- (a) American College of Physicians' High Value Care
- (b) Institute for Healthcare Improvement
- (c) World Health Organization

Management of Acute Isolated Soleal Vein Thrombosis in a Pregnant Patient With an Osteopathic Approach to Evaluation

Daniel Martingano, DO; Justin Eisenberg, DO; and George C. Agliatoro, DO

11. How many times more likely is it for a venous thromboembolism to develop in a pregnant patient than in a nonpregnant patient?
- (a) 3 times more likely
 - (b) 15 times more likely
 - (c) 5 times more likely
 - (d) 20 times more likely

12. In pregnant patients, venous thromboembolisms are most often found on what side of the body?

- (a) left
- (b) right
- (c) both

Answers to the December 2015 JAOA CME Quiz

Discussion answers to JAOA continuing medical education quizzes appear only when authors have included discussions with the quiz questions and answers they must provide to meet the requirement for submission to and publication in the JAOA.

A National Study of Primary Care Provided by Osteopathic Physicians

John C. Licciardone, DO, MS, MBA

1. (a) The most distinctive aspect of primary care provided by osteopathic physicians was seen in their management of low back pain.

Femoral Nerve Block vs Periarticular Bupivacaine Liposome Injection After Primary Total Knee Arthroplasty: Effect on Patient Outcomes

Brandon J. Horn, DO; Adam Cien, DO, MS; N. Peter Reeves, PhD; Pramod Pathak, PhD; and Charles J. Taunt Jr, DO

2. (d) The weight-bearing status of a patient immediately after receiving total knee arthroplasty is full weight bearing. Patients are encouraged to maintain full weight bearing to promote proprioception and ambulation and to achieve physical therapy milestones in the postoperative period.

(continued on the next page)

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Utility of Colonoscopy to Exclude Underlying Malignant Polyps After Resolution of Uncomplicated Diverticulitis

Molly Disbrow, MD; Amy Foxx-Orenstein, DO; and Neera Agrwal, MD

3. (b) A 64-year-old woman presents with sharp, constant abdominal pain of 24 hours' duration focused over the left lower quadrant. Her pain does not radiate and is not associated with eating, bowel movements, or urination. Her medications are metoprolol, aspirin, and ibandronate. On examination, her temperature is 38.1°C. Her abdomen is soft and tender to palpation in the left lower quadrant without guarding or rebound. Bowel sounds are decreased, and no masses are palpated. Laboratory results are normal except for an elevated white blood cell count at 13,000/ μ L with a left shift. Computed tomography of the abdomen and pelvis shows thickening of the sigmoid colon with stranding of the pericolonic fat. She recovers with supportive care and antibiotics. Currently, available data do not support routine colonoscopy after an imaging-proven diagnosis of acute uncomplicated diverticulitis. Colorectal cancer outcomes are improved with early diagnosis, and physicians should focus on targeting available resources to patients who are at greatest risk of having colorectal cancer.

Posterolateral Corner Knee Injuries: Review of Anatomy and Clinical Evaluation

Eric W. Schweller, DO, and Peter J. Ward, PhD

4. (e) A 24-year-old man presents to the emergency department after an injury sustained during a touch football game. During a tackle his proximal right tibia was pushed posteriorly

and laterally by the shoulder of another player. As part of the examination of the knee, the dial test is performed. The patient is asked to lay prone with his knees bent to 90° flexion so that the soles of his feet face the ceiling. His heels are placed together and his legs externally rotated. The same procedure is repeated with the knees flexed at 30°. In both positions, his right foot shows approximately 20° greater external rotation than his left foot. This finding demonstrates injury to the posterolateral corner structures and posterior cruciate ligament.

This test result is considered positive if disparity of 10° or greater is demonstrated in external rotation of one leg compared with the other. If the test result is positive with the knee flexed at both 90° and 30°, then the posterior cruciate ligament and posterolateral corner have been injured. A negative result with the knee flexed at 90° but a positive result at 30° is indicative of an isolated posterolateral corner injury.

5. (b) A 34-year-old woman is transported to the emergency department after a head-on motor vehicle collision. She was in the front passenger seat and was restrained by her seatbelt. However, her left knee had been resting on the car's dashboard, and the collision pushed the dashboard toward her. During examination of the injured knee, anterior drawer and posterior drawer test results are negative; however, valgus test is positive at 30° of flexion but not at 0° of flexion. After anesthesia is administered, the patient's toes are lifted from the table while she is lying supine and the leg falls into hyperextension and external rotation.

Negative anterior and posterior drawer signs indicate that the anterior and posterior cruciate ligaments are intact. Similarly, the negative valgus test shows that the tibial (medial) collateral ligament is also intact. A positive varus test at 30° indicates that the fibular (lateral) collateral ligament is ruptured but a negative varus test at 0° is a further indication that the anterior and posterior cruciate ligaments are intact. The positive external rotation recurvatum examination indicates that the structures of the posterolateral corner have been damaged.

Implementation of a Resident-Led Osteopathic Manipulative Treatment Clinic in an Allopathic Residency

CPT Blake Busey, DO; CPT Jelaun Newsome, DO; CPT Tyler Raymond, DO, MPH; and MAJ Heather O'Mara, DO

6. (d) The implementation of an osteopathic manipulative treatment (OMT) clinic within the allopathic residency led residents to feel that they were more able to maintain their OMT skills and that faculty were more supportive of their education.
7. (c) Osteopathic residents did not believe that the OMT clinic increased OMT use between the preclinic survey to the postclinic survey.

Progressively Worsening Cyclic Rash: Diagnosis and Approach to Care

Angela DeRosa, DO, MBA, CPE; Shellee Adams, FNP; and Erin Kathleen Fee, OMS IV

8. (c) The standard method of diagnosis of autoimmune progesterone dermatitis is the progesterone sensitivity injection test.