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CME: Free CME is being offered as a member benefit to active members of the Southern Orthopaedic Association (SOA), Eastern Orthopaedic Association (EOA), Western Orthopaedic Association (WOA), the Society of Military Orthopaedic Surgeons (SOMOS), Maryland Orthopaedic Association (MOA), and Irish-American Orthopaedic Society (IAOS). Through the joint sponsorship of ProScan Imaging Education Foundation (PIEF) and SOA, Volume 24 participants will receive a maximum of 6 *AMA PRA Category-1 credits*[™] per issue for each correctly completed CME Answer Form. (See CME Questionnaire for more details.)

Indices: In an effort to make more pages available for journal articles, the indices (appearing in issue number 4) have been made available online on the JSOA website beginning with Volume 21.

2015

The **Southeastern Hand Club's** 2015 Annual Meeting is scheduled for April 23–26, 2015 at The Cloister in Sea Island, Georgia. For more information, visit www.sehandclub.com.

The **Virginia Orthopaedic Society's** 68th Annual Meeting will take place on April 24–26, 2015 at The Homestead in Hot Springs, Virginia. Go to www.vos.org for more information.

The **Florida Orthopaedic Society** will hold its 2015 Annual Scientific Meeting on June 4–7, 2015 in St. Petersburg, Florida. For more information, go to www.floridaorthopediccommunity.com.

The **Eastern Orthopaedic Association's** 46th Annual Meeting is tentatively scheduled for June 17–20, 2015 at the Grand Wailea in Maui, Hawaii. To learn more, go to www.eoa-assn.org.

The **Michigan Orthopaedic Society** will hold its 2015 Annual Scientific Meeting on June 18–21, 2015 on Mackinac Island in Michigan. For more information, visit www.mosonline.org.

The **Southern Orthopaedic Association's** 32nd Annual Meeting will be held on July 15–18, 2015 at the Grove Park Inn in Asheville, North Carolina. For more information, visit www.soaassn.org.

The **Western Orthopaedic Association** will hold its 79th Annual Meeting in Coeur d'Alene, Idaho on July 29–August 1, 2015. Go to www.woa-assn.org for more information.

The **Clinical Orthopaedic Society** will hold its 103rd Annual Meeting on September 24–26, 2015 at The Westin Times Square in New York, New York. www.cosociety.org.

The **Tennessee Orthopaedic Society** will hold its 2015 Annual Conference on September 25–26, 2015 at the Omni Nashville Hotel in Nashville, Tennessee. www.tosweb.org

The **Society of Military Orthopaedic Surgeons** will hold its 57th Annual Meeting on December 7–11, 2015 at The Vinoy Renaissance in St. Petersburg, Florida. For information, please visit www.somos.org.



The *Journal of Surgical Orthopaedic Advances* CME program was designed for physicians in the specialty of orthopaedic and trauma surgery. *This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of ProScan Imaging Education Foundation (PIEF) and the Southern Orthopaedic Association. PIEF is accredited by the ACCME to provide continuing medical education for physicians.*

PIEF designates this educational activity for a maximum of 16 AMA PRA Category 1 Credit(s)[™]. Physicians should only claim credit commensurate with the extent of their participation in the activity. To obtain category-1 credit, follow the instructions on the answer sheet.

Objectives: After completing each issue of the *Journal of Surgical Orthopaedic Advances* Continuing Medical Education (CME) instructional media program, the learner should be better able to: identify new techniques and procedures in orthopaedics; cite ongoing activities of interest to orthopaedists; and describe the medical knowledge, clinical procedures, and experiences of physicians.

The *Journal of Surgical Orthopaedic Advances* CME program is intended to be a 24-credit-per-year program. Each issue will have questions of Board Examination quality in a four-part (A–D), multiple-choice format. Participants of Volume 24, Number 1 will receive a maximum of 6 category-1 credits for a correctly completed CME Answer Form submitted to Data Trace Publishing Company for scoring. There is a per issue charge for scoring and processing, payable at the time the answer sheet is submitted.

In order to qualify for CME credit, a score of 70% or more must be achieved on the written examination material. Any participant who does not pass the first time may take the exam one additional time. A new test must be submitted to Data Trace Publishing with a fee of \$25. Data Trace Publishing Company will score the tests and notify participants of their scores within 30 days. You will be responsible for notifying your state of the number of credits you have received.

INSTRUCTIONS: The following questions are based on the material presented in the journal issue. Please select the best answer and mark the appropriate box on the CME Answer Form which follows. *The Answer Form, accompanied by your payment, should be returned for scoring to Director of Continuing Education, Data Trace Publishing Company, P.O. Box 1239, Brooklandville, MD 21022-9978 or faxed to 410-823-6898.*

CME QUESTIONS

- Which of the following is *not* a possible benefit of using quartiles to define low- and high-volume surgeons?
 - Using quartiles may provide a more consistent way to define what is meant by a low- or high-volume surgeon.
 - Using quartiles eliminates the need for using a specific number of annual procedures to define a low- or high-volume surgeon.
 - Using quartiles may make it easier to conduct future studies to determine whether any correlation exists between quartile ranking and outcome.
 - Using quartiles could eventually help determine the quality and competence level of individual surgeons.
- In proton therapy, an advanced form of external beam radiation therapy, heavy protons are accelerated to almost the speed of light in a synchrotron (particle accelerator) down a magnetic beam the length of a football field to radiate cancers, including prostate cancer. Which of the following statements is true about proton therapy?
 - It can deliver higher therapeutic doses of radiation to tumors with more accurate targeting and a lower radiation exposure to normal tissue, has stopping power to avoid damage to other surrounding organs, and deposits energy only in the tumor, abruptly stopping at the tumor limit and never exiting from there (the Bragg Peak).
 - It has been proven superior in randomized studies.
 - It is associated with avascular necrosis and pathologic fractures of the femoral head and neck.
 - Proton therapy for prostate cancer can be used with metal in a hip.
- Which of the following statements is true about androgen deprivation (hormone therapy)?
 - It improves erectile dysfunction.
 - It inhibits cell proliferation in malignant prostate tissue; has side effects of hot flashes, impotence, and gynecomastia; and may palliate the bone pain of prostate cancer metastases.
 - It does not increase the risk of fractures.
 - It does not induce apoptosis.
- Which of the following is a common complication of allogenic bone marrow transplantation that requires high-dose corticosteroids for management?
 - Deep vein thrombosis
 - Graft versus host disease
 - Adrenal insufficiency
 - Osteopenia
- Allogenic bone marrow transplantation patients are at risk for which of the following musculoskeletal complications?
 - Fragility fracture
 - Trochanteric bursitis
 - Avascular necrosis of the femoral head
 - Psoas bursitis
- What is the correct placement of the biotenesis screw when performing an open subpectoral biceps tenodesis?

- A. Within the midpoint of the bicipital groove
 - B. Just distal to the termination of the bicipital groove
 - C. 1.5 cm distal to the termination of the bicipital groove
 - D. At the most proximal point of the bicipital groove
7. Subpectoral biceps tenodesis has been investigated as a salvage procedure for which of the following pathologies?
 - A. Failed type II superior labrum anterior to posterior (SLAP) tear
 - B. Failed anterior labral tear
 - C. Failed rotator cuff tear
 - D. Recurrent shoulder dislocation
 8. What is the correlation between articular congruity of an osteochondral allograft and functional outcome?
 - A. Strong
 - B. Weak
 - C. Indeterminate
 - D. None
 9. Which of the following is *not* a positive aspect of computed tomography arthrograms?
 - A. Clear evaluation of articular surface
 - B. Evaluation of bony edema
 - C. Evaluation of osseous integration
 - D. No limitation on timing
 10. What is the mechanism of action of the drug clopidogrel?
 - A. Inhibits synthesis of vitamin K-dependent clotting factors
 - B. Inhibits platelet aggregation by irreversibly binding to the P2Y₁₂ receptor
 - C. Inhibits factor Xa
 - D. Disrupts bacterial cell walls
 11. How long should clopidogrel be withheld before hip or knee arthroplasty to decrease the likelihood of bleeding-related events?
 - A. 1 day
 - B. 3 days
 - C. 5 days
 - D. 7 days
 12. Which of the follow statements is true regarding Army orthopaedic surgery residency selection?
 - A. Program directors consider USMLE/COMLEX Steps 1 and 2 equally.
 - B. No discrimination is made between allopathic and osteopathic candidates.
 - C. Letters of recommendation and personal statements are given particularly high weight during the selection process.
 - D. Volunteerism is one of the top factors in selection.
 13. The investigation by Gholson et al. suggests that both patient-reported weakness and pain significantly affect patient safety and vehicle maneuverability. The results included which of the following?
 - A. Narcotics and sling use positively correlate with patients' return to driving.
 - B. Drivers reporting weakness were more than twice as likely to feel unsafe driving and those with pain were almost three times more likely to feel unsafe.
 - C. Length of time since surgery clearly correlated with pain, weakness, sling use, and narcotic use.
 - D. Patients chose to wait until they felt safe before they returned to driving.
 14. In the study by Charpentier et al., which of the following failure models were only observed in the 12-hole dynamic compression plate (DCP) groups?
 - A. Plastic deformation of plate
 - B. Small screw pullout distance
 - C. Plate fracture
 - D. Screw fracture
 15. Which of the following statements is correct concerning patient outcomes for revision total knee arthroplasty requiring long diaphyseal stems with a cementless implant?
 - A. Fewer patients will complain of pain below the knee compared with above.
 - B. A significant number of patients with thigh pain can be expected.
 - C. Anterior knee pain over the patella will be of major concern in these cases.
 - D. Pain below the knee near the end of the stem may be expected in some patients.
 16. Which of the following statements is correct concerning the incidence of pain below the knee after a primary cementless total knee arthroplasty (TKA) with a metaphyseal stem compared with the incidence after a cementless revision TKA with a diaphyseal?
 - A. No difference between the incidence of the two implants can be expected.
 - B. The number of patients with pain below the knee will be higher in the primary TKA group.
 - C. The number of patients with pain below the knee will be lower in the cementless revision TKA group.
 - D. The number of patients who complain of pain around the tip of their cementless stem will be higher in the cementless revision TKA group.
 17. Scapholunate dissociation requires injury to which of the following ligaments?
 - A. Scapholunate ligament and radioscaphocapitate ligament
 - B. Scapholunate ligament
 - C. Radioscapholunate ligament
 - D. Radioscapholunate ligament and scapholunate ligament
 18. Which of the following is true?
 - A. Normal scapholunate angle is over 70°.
 - B. Dorsal intercalated segmental instability is pathognomonic for scapholunate advanced collapse wrist.
 - C. Capitulate angle less than 30° is abnormal.
 - D. Normal scapholunate angle is 30° to 60°.
 19. Which of the following is the most common recipient site complication after core decompression with free vascularized fibular grafting for treatment of osteonecrosis of the femoral head?
 - A. Great-toe flexion contractures
 - B. Trochanteric bursitis
 - C. Deep or superficial hip surgical site infection
 - D. Migration of the Kirschner wire used to secure the graft
 20. What fluoroscopic views are used to guide placement of the iliosacral screw once the correct starting point has been identified?
 - A. Inlet and outlet views
 - B. Inlet and lateral views
 - C. Outlet and lateral views
 - D. Lateral view only



Expiration: Your completed form and payment for the set of questions in Volume 24, Number 1 must be received by **March 1, 2016**.

Choose one:

- ☐ Active SOA Member (Take exams free)
☐ Active EOA Member (Take exams free)
☐ Active WOA Member (Take exams free)
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INSTRUCTIONS: Please return the answer form with payment to Data Trace Publishing Company for grading. You will be notified of the results within 30 days by return mail. Any questions or inquiries regarding the *Journal of Surgical Orthopaedic Advances* Continuing Education Program should be directed to:

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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 11. ☐ A ☐ B ☐ C ☐ D 12. ☐ A ☐ B ☐ C ☐ D
13. ☐ A ☐ B ☐ C ☐ D 14. ☐ A ☐ B ☐ C ☐ D 15. ☐ A ☐ B ☐ C ☐ D 16. ☐ A ☐ B ☐ C ☐ D 17. ☐ A ☐ B ☐ C ☐ D 18. ☐ A ☐ B ☐ C ☐ D
19. ☐ A ☐ B ☐ C ☐ D 20. ☐ A ☐ B ☐ C ☐ D

Overall Evaluation

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Presented objective, balanced, and scientifically rigorous content	5	4	3	2	1
Written in an easily understandable manner	5	4	3	2	1
Achieved stated objectives and satisfied my educational need	5	4	3	2	1
Will enhance performance of my duties and improve my practice/professional outcome	5	4	3	2	1
Presented free of commercial bias	5	4	3	2	1

What change(s) (if any) do you plan to make in your practice as a result of reading this issue:

 Needs Assessment
 Clinical topic/experience that most needs to be addressed
 in future JSOA articles is _____
