

MULTIPLE CHOICE

MSK SHOULDER - PRACTICE SET

PROPOSED FOR REVIEW - questions are the author's verbatim Q&A; distractors are auto-selected from other answers in the same bank and must be checked by a subject-matter reviewer (a distractor could coincidentally be correct). Not authoritative assessment content.

1. A full-thickness rotator cuff tear classically produces which sonographic finding?

- A. Focal hypoechoic change confined within the tendon substance
- B. Hyperechoic foci within the tendon with posterior shadowing
- C. A defect extending from the bursal to the articular surface of the tendon
- D. Increased tendon thickness with preserved fibrillar pattern

2. In acute calcific tendinitis with severe pain and limited motion, ultrasound-guided treatment most commonly involves:

- A. Surgical rotator cuff repair
- B. Aspiration of the glenohumeral joint
- C. Open arthrotomy with debridement
- D. Barbotage (needle lavage and aspiration of the calcium deposit)

3. The subscapularis tendon is best evaluated sonographically with the arm in which position?

- A. Internal rotation with the hand on the contralateral shoulder
- B. External rotation with the elbow flexed and tucked to the side
- C. Neutral rotation with the arm fully abducted
- D. Behind the back in the modified Crass position

4. Which structure normally lies superficial to the supraspinatus tendon and is therefore evaluated on routine shoulder ultrasound?

- A. Glenoid labrum
- B. Subacromial-subdeltoid bursa
- C. Coracoacromial ligament
- D. Inferior glenohumeral ligament

5. A focal anechoic to hypoechoic defect that extends from the bursal surface partway through the supraspinatus tendon is best described as a:

- A. Partial-thickness bursal-side tear
- B. Full-thickness tear
- C. Intrastance tear
- D. Partial-thickness articular-side tear

6. Hyperemia within a thickened, hypoechoic supraspinatus tendon on color or power Doppler is most consistent with:

- A. Calcific tendinitis in the formative phase
- B. Active tendinopathy (tendinosis)
- C. A chronic full-thickness tear
- D. A normal tendon

7. Which feature best distinguishes anisotropy from a partial-thickness rotator cuff tear?

- A. The hypoechoic area disappears and the tendon becomes hyperechoic and fibrillar when the probe is angled to be perpendicular to the fibers
- B. The hypoechoic area shows internal color Doppler flow
- C. The hypoechoic area shadows posteriorly
- D. The hypoechoic area is associated with overlying bursal fluid

8. On a transverse image at the level of the bicipital groove, the structure traveling longitudinally between the greater and lesser tuberosities is the:

- A. Coracobrachialis tendon
- B. Subscapularis tendon
- C. Short head of the biceps tendon
- D. Long head of the biceps tendon

9. During long-axis scanning of the supraspinatus, a focal hypoechoic defect is seen only at the deep surface of the tendon adjacent to the greater tuberosity, without extending to the bursal surface. This is best described as:

- A. Partial-thickness articular-side tear
- B. Full-thickness tear
- C. Intrastance tear
- D. Partial-thickness bursal-side tear

10. Anechoic fluid distending the long head biceps tendon sheath is most often a sign of:

- A. Acromioclavicular joint cyst
- B. Isolated biceps tendon tear
- C. Subscapularis tendon tear with retraction
- D. Glenohumeral joint effusion communicating with the sheath

11. Anisotropy in rotator cuff imaging refers to:

- A. True hypoechoic change due to tendon degeneration
- B. Artifactual hypoechogenicity of a tendon when the beam is not perpendicular to its fibers
- C. Posterior acoustic enhancement deep to a fluid-filled bursa
- D. Reverberation artifact arising from the bony cortex

12. The transverse humeral ligament is most important sonographically because it:

- A. Helps retain the long head of the biceps tendon within the bicipital groove
- B. Connects the coracoid to the acromion above the cuff
- C. Suspends the supraspinatus tendon under the acromion
- D. Forms the inferior border of the acromioclavicular joint

13. On a transverse image of the anterior shoulder, the long head of the biceps tendon is normally seen as a hyperechoic oval structure located in which groove?

- A. Between the coracoid process and the lesser tuberosity
- B. Bicipital (intertubercular) groove between the greater and lesser tuberosities
- C. Between the acromion and the greater tuberosity
- D. Within the acromioclavicular joint space

14. The teres minor tendon is best evaluated in continuity with which other rotator cuff tendon on a posterior shoulder long-axis view?

- A. Subscapularis
- B. Supraspinatus
- C. Infraspinatus
- D. Long head of the biceps

15. To distinguish a focal hypoechoic articular-side partial tear from anisotropy in the supraspinatus, the best maneuver is to:

- A. Increase overall gain
- B. Toe (heel-toe) the transducer to make the beam perpendicular to the tendon fibers
- C. Switch to power Doppler
- D. Decrease the focal zone depth

16. On a coronal view of the acromioclavicular joint, which finding is most consistent with AC joint osteoarthritis?

- A. Joint space narrowing with osteophytes and capsular bulging
- B. Anechoic distension of the bicipital groove
- C. An empty bicipital groove
- D. Thinning of the supraspinatus tendon insertion

17. A small anechoic fluid collection at the AC joint with a hypoechoic mass extending superiorly above the joint, in the setting of a massive rotator cuff tear, is most consistent with:

- A. Isolated AC joint osteoarthritis
- B. Subacromial bursitis without tear
- C. Acute AC joint sprain
- D. Geyser sign with an AC joint cyst

18. Which rotator cuff tendon is best evaluated with the patient's hand placed on the opposite shoulder to internally rotate the humerus?

- A. Infraspinatus
- B. Long head of the biceps
- C. Supraspinatus
- D. Subscapularis

19. Which rotator cuff tendon is most commonly torn?

- A. Teres minor
- B. Supraspinatus
- C. Infraspinatus
- D. Subscapularis

20. The infraspinatus tendon is best evaluated by placing the transducer in which orientation and location?

- A. Coronal over the superior acromion
- B. Transverse over the anterior shoulder along the bicipital groove
- C. Oblique long axis over the posterior shoulder, with the arm in internal rotation and the hand on the opposite shoulder
- D. Sagittal over the lateral deltoid

21. On transverse imaging of the bicipital groove, an empty groove with no visible biceps tendon most likely indicates:

- A. Calcific tendinitis of the biceps tendon
- B. Rupture or medial dislocation of the long head of the biceps tendon
- C. Normal anatomic variant
- D. Reactive thickening of the transverse humeral ligament

22. Which statement best characterizes the relationship of the subacromial-subdeltoid bursa to the rotator cuff and deltoid?

- A. It is located within the glenohumeral joint capsule
- B. It lies superficial (bursal side) to the rotator cuff and deep to the deltoid muscle
- C. It lies within the rotator cuff tendon substance
- D. It lies deep to the rotator cuff, between the cuff and the humeral head

23. Which finding on shoulder ultrasound is LEAST suggestive of a rotator cuff tear?

- A. Focal hypoechoic defect extending from articular to bursal surface
- B. Concave-outward depression of the deltoid contour
- C. Joint fluid communicating with bursal fluid
- D. Mild diffuse tendon thickening with preserved fibrillar pattern

24. During dynamic scanning of the shoulder, bunching or impingement of the subacromial-subdeltoid bursa against the acromion during arm abduction is most suggestive of:

- A. Subacromial impingement
- B. Adhesive capsulitis
- C. Acromioclavicular joint arthropathy
- D. Glenohumeral instability

25. Which structure forms the medial border of the bicipital groove on a transverse anterior shoulder view?

- A. Lesser tuberosity
- B. Acromion
- C. Greater tuberosity
- D. Coracoid process