

AIUM Practice Guideline for the Performance of the Musculoskeletal Ultrasound Examination

SHOULDER EXAMINATION

Biceps Tendon

- The forearm in supination and resting on the thigh or with the arm in slight external rotation.
- The tendon is examined in a transverse plane (short axis), where it emerges from under the acromion, to the musculotendinous junction distally.
- Longitudinal views (long axis) should also be obtained. These views should be used to determine if the tendon is properly positioned within the bicipital groove, subluxated, dislocated, or torn.

Subscapularis

- The elbow remains at the side while the arm is placed in external rotation.
- Both transverse (long axis) and sagittal (short axis) views should be obtained.
- Dynamic evaluation as the patient moves from internal to external rotation may be helpful.

Supraspinatus

- The arm can be extended posteriorly, and the palmar aspect of the hand can be placed against the superior aspect of the iliac wing with the elbow flexed and directed toward midline (instruct patient to place the hand in the back pocket).
- To scan the supraspinatus and infraspinatus tendons along their long axis, it is important to orient the transducer approximately 45° between the sagittal and coronal planes to obtain a longitudinal view.
- The transducer then should be moved anteriorly and posteriorly to completely visualize the tendons.
- Transverse views of the tendons should be obtained by rotating the probe 90° to the long axis. The tendons are visualized by sweeping medially to the acromion and laterally to their insertions on the greater tuberosity.

Infraspinatus & Teres Minor

- The more posterior aspect of the infraspinatus and teres minor tendons should be examined by placing the transducer at the level of the glenohumeral joint below the scapular spine while the forearm rests on the thigh with the hand supinated.
- Internal and external rotation of the arm is helpful in identifying the infraspinatus muscle and its tendon and in detecting small joint effusions.
- To visualize the teres minor tendon, the probe should be angled slightly inferiorly.

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- Throughout the examination of the rotator cuff, the cuff should be compressed to detect non-retracted tears. In the evaluation of rotator cuff tears, comparison with the contralateral side may be useful.

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- While examining the rotator cuff, it is also important to evaluate for bursal thickening, effusion, loose bodies, tendon calcification, and muscle and bony abnormalities.
- If symptoms warrant, the acromioclavicular joint, the supraspinatus notch, and the spinoglenoid notch also may be evaluated.
- Dynamic evaluation of the rotator cuff also is useful, for example, to evaluate the rotator cuff for impingement or assess cuff tear extent.
