MUSCULOSKELETAL ULTRASOUND

Ultrasound is increasingly being used as a practical and rapid method of obtaining images of the musculoskeletal system. MSK ultrasound offers substantial benefits to the patient and physician, detailed below.

- Ideal for evaluation of superficial soft tissue structures, including tendons, ligaments, muscles, cysts, and bursa.
- Accuracy of greater than 90% in multiple series in evaluating full thickness and partial tendon tears, including rotator cuff[1-2], Achilles[3], peroneals[4], and distal biceps tendon[5].
- Higher resolution than MRI.
- Allows for dynamic imaging with patient feedback.
- Excellent for evaluation of soft tissues adjacent to hardware that would create artifact with MR and CT imaging techniques.
- More comfortable for patients than MRI[6].
- Less expense than other advanced imaging modalities[7].
- Alternative imaging for patients with MR contraindication.
- MR remains standard of care for deep structures, cartilage, and intraosseous abnormalities.

Body part	Common Indications	Soft tissue structures poorly evaluated
Shoulder	Tendon pathology (rotator cuff and biceps); bursitis	Labrum
Elbow	Tendon pathology (biceps, epicondylitis); ligaments; bursitis; joint effusion	
Wrist/hand	Tendon pathology; ganglion cysts; inflammatory arthropathy disease activity	Intrinsic and extrinsic ligaments; triangular fibrocartilage
Hip	Tendon pathology; metal on metal reaction; bursitis; snapping hip	Deep structures
Knee	Tendon pathology (quadriceps, patellar); bursal collections	Menisci; ACL; PCL
Ankle	Tendon pathology; ligaments	
Foot	Tendon pathology; plantar neuroma	
Soft tissues	Lump; foreign body	Deep structures

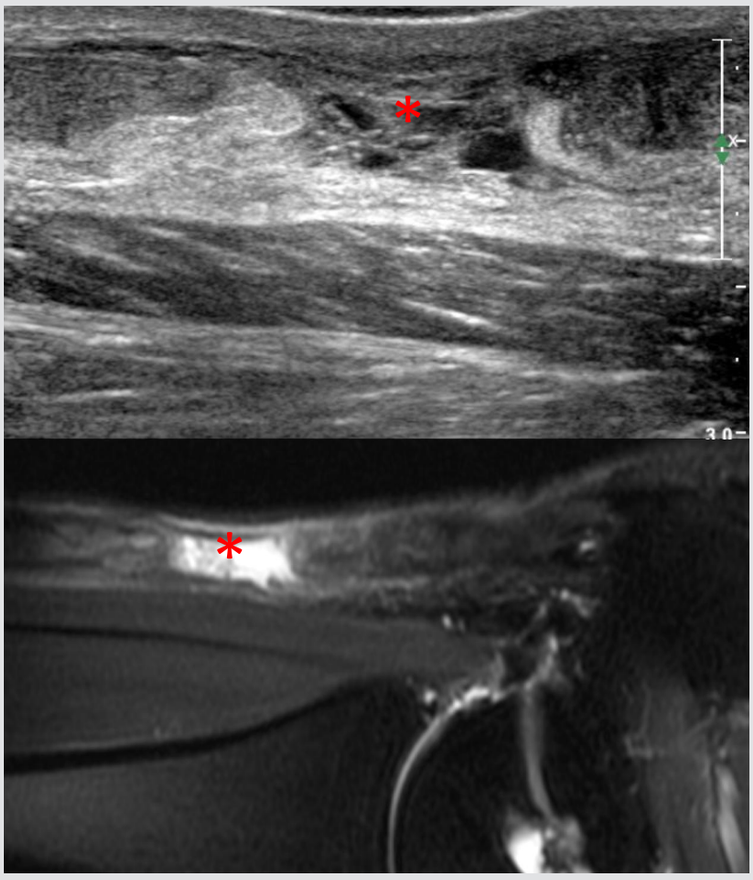

Figure 1. Full thickness Achilles tendon tear (*) on ultrasound in long axis (top image) and in sagittal plane on MRI (rotated to display in same orientation as ultrasound). Fluid and hemorrhage at sight of tear and proximal and distal tendon stumps visible.

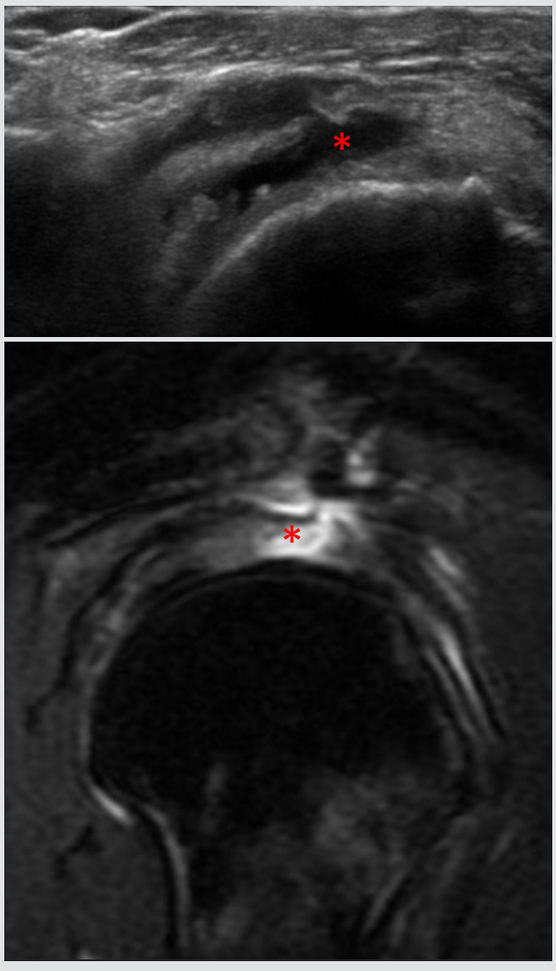

Figure 2. Full thickness supraspinatus tear (*) on ultrasound (top image) in short axis and in sagittal plane on shoulder MR.

Services are available at the Latham location. Any questions can be sent to Mike Cooley, MD at mcooley@communitycare.com. Dr. Cooley specializes in Musculoskeletal Imaging.

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