

UT Southwestern Department of Radiology

Ultrasound – Extremity Nonvascular/Superficial Soft Tissue Evaluation

PURPOSE:

To evaluate palpable/superficial soft tissue abnormalities

SCOPE:

Applies to all US Abdomen Complete studies performed in Imaging Services / Radiology

INDICATIONS:

- Signs or symptoms associated with superficial soft tissue mass, fluid collection, or foreign body
- Signs of symptoms of localized soft tissue infection
- Abnormal findings on other imaging studies
- Follow up known superficial soft tissue mass

CONTRAINDICATIONS:

- No absolute contraindications

EQUIPMENT:

Linear array transducers with a frequency range of 7-18 MHz. Sector or curvilinear transducers with a frequency range of 1-9 MHz may be required for appropriate penetration and resolution depending on patient's body habitus.

PATIENT PREPARATION:

- None

EXAMINATION:

GENERAL GUIDELINES:

A complete examination includes evaluation of the superficial soft tissue region corresponding to the patient's signs or symptoms. Comparison images of the contralateral side (if applicable) are generally preferred.

EXAM INITIATION:

- Introduce yourself to the patient
- Verify patient identity using patient name and DOB
- Explain test
- Obtain patient history including symptoms. Enter and store data page.
- Place patient in position that affords best imaging of the mass while minimizing patient discomfort.

TECHNICAL CONSIDERATIONS:

- Review any prior imaging, making note of abnormalities requiring further evaluation.
- Document characteristics of mass, collection, or foreign body including echogenicity, shape, margins, vascularity, size, tenderness, and relationship to adjacent structures. Label images clearly in regard to body part and location (proximal/mid/distal, medial/lateral, posterior/anterior, etc). Use body marker annotation guide as needed.

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- Extended field-of-view, dual screen, or panoramic imaging may be used to display large abnormalities.
- Most foreign bodies are associated with acoustic shadow, comet tail artifact, or twinkling artifact on color Doppler.
- Static cine images are useful in showing mobile echogenic debris within fluid collections.
- Compression is also useful to distinguish fluid collections from soft tissue masses.
- If needed, scan contralateral extremity for normal comparison.

DOCUMENTATION:

- Grayscale
 - Longitudinal and transverse images at the site of concern
 - For focal abnormalities, images without and with measurements in 3 orthogonal planes.
- Color Doppler to document peripheral and/or internal vascularity, or the lack thereof.
- Cine sweep images, longitudinal and transverse, in the region of concern.
- Comparison images of contralateral or adjacent normal soft tissue, as needed.

PROCESSING:

- Review examination images and data
- Export all images to PACS
- Document relevant history and any study limitations

REFERENCES:

ACR-AIUM Practice Guideline (Revised 2007)

REVISION HISTORY:

SUBMITTED BY:	David T. Fetzer, MD	Title	Medical Director
APPROVED BY:	David T. Fetzer, MD	Title	Medical Director
APPROVAL DATE:	11-15-2015		
REVIEW DATE(S):	10-25-2018		Kanupriya Vijay, MD
REVISION DATE(S):			