

Ultrasound Guided Intervention

Ultrasound guided interventions have a proven positive impact on treatment. Precise anatomic placement of minimally invasive small gauge needles can be performed with local anaesthesia and direct sonographic guidance. Clinical applications are both diagnostic and therapeutic. **Aspiration** of joints and fluid collections allows sampling for microscopy, culture and biochemical analysis. Cysts, abscesses and haematomas may all be treated by ultrasound guided percutaneous aspiration. In the shoulder, percutaneous fragmentation and aspiration of calcium apatite deposits is an effective treatment for calcific tendonitis.

Injection of steroid medication and local anaesthetic can be performed with accuracy into joints, bursae and in relation to tendons. Scanning during injection provides immediate confirmation that the medication is reaching the intended anatomic location. Specific applications in the shoulder are injection of the subdeltoid bursa for rotator cuff impingement syndrome, and glenohumeral joint distension therapy for treatment of the frozen shoulder syndrome.

TRG Group is equipped to provide state of the art high resolution MSK ultrasound as a component of multimodality imaging. Radiologists with subspecialty expertise in MSK diagnosis and interventional techniques are available for consultation at the main branches of TRG Group.

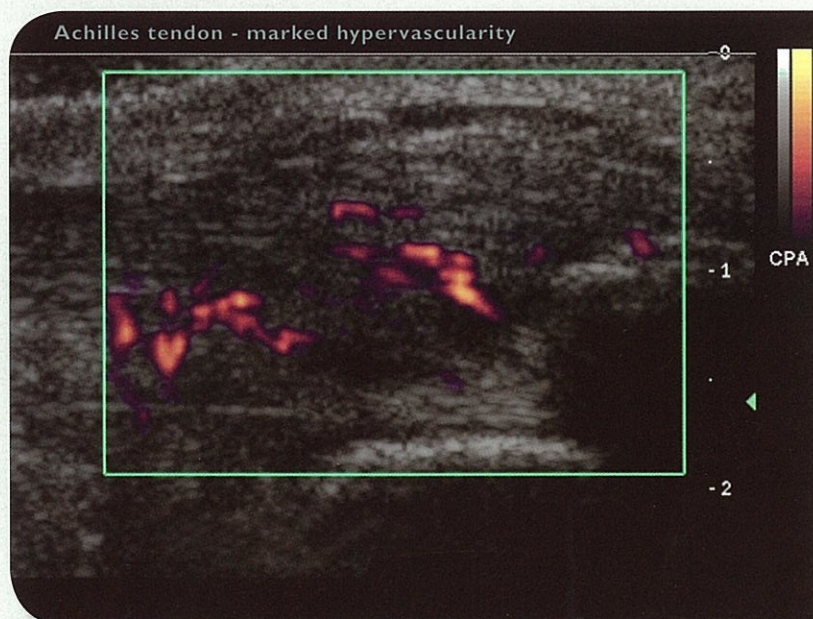
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Musculoskeletal Ultrasound

DIAGNOSIS

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Accurate clinical diagnosis of musculoskeletal (MSK) pathology is crucial for effective treatment decision-making. Diagnostic imaging makes a significant contribution to this process, leading to appropriate management. Recent and ongoing developments in the technology of diagnostic ultrasound have had particular application in both initial assessment and in treatment of MSK disorders. High resolution MSK ultrasound is a cost effective modality, which provides accurate information relevant to abnormal structure and function of soft tissues components. These include muscles, tendons, ligaments, nerves, bursae, synovial sheaths, joints and masses. The diagnostic data derived from ultrasound is usually not available from clinical examination or conventional radiography. The results of MSK ultrasound therefore **complement** rather than replace skilled clinical evaluation and radiography.

Evidence based applications of MSK ultrasound include imaging of traumatic, degenerative, inflammatory, metabolic and neoplastic pathologies. A major strength of MSK ultrasound is dynamic interaction with the patient

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during scanning. Imaging is targeted to include the site of maximum symptoms. The “real time” nature of the technology affords the radiologist an assessment of the interaction of pathologic anatomy with movement and function.

Colour Doppler Imaging (CDI) further enhances the specificity of MSK ultrasound. CDI provides insight into the abnormal vascular perfusion which characterises some MSK pathologies.