American Academy of Physical Medicine and Rehabilitation
Position Statement
Diagnostic Musculoskeletal Ultrasound or Musculoskeletal Ultrasound-Guided Procedures

American Academy of Physical Medicine and Rehabilitation (AAPM&R) Position:
Physiatrists specialize in the evaluation, diagnosis and treatment of patients of all ages with functional impairments, painful conditions and/or cognitive impairments related to the central and peripheral nervous system, cardiopulmonary and peripheral vascular systems and musculoskeletal systems. Patients diagnosed and treated by physiatrists may have orthopedic, neurologic, rheumatologic, oncologic, vascular, industrial/occupational, cardiovascular, pulmonary or sports-related conditions. With a focus on restoring optimal function and enhancing quality of life, our member physicians’ musculoskeletal expertise is complemented by utilizing diagnostic and interventional musculoskeletal (MSK) ultrasound (US) to improve patient care. Thus, it is AAPM&R’s position that diagnostic and interventional MSK US is cost effective and integral to the diagnosis and treatment of physiatric patients with certain MSK conditions.

With recent increased scrutiny regarding the value of this procedure, AAPM&R has developed the following key principles to guide policy development and appropriate use:

1. Diagnostic MSK US is highly sensitive and specific for the diagnosis of many musculoskeletal conditions.1
2. The dynamic nature of MSK US enables physicians to diagnose conditions that cannot be resolved by static imaging.2
3. Diagnostic MSK US is significantly less expensive than other soft tissue imaging modalities (e.g., magnetic resonance imaging (MRI)). Therefore, appropriate utilization of diagnostic MSK US will save healthcare dollars.3
4. US-guided procedures enable many conditions that previously required surgery to be treated with minimally invasive interventions that are less expensive, have fewer potential complications, and facilitate earlier recovery than surgery. For example, ultrasound guided needle lavage for calcific rotator cuff tendinopathy is a successful office-based procedure that obviates the need for surgical debridement.4
5. US-guided procedures are more accurate than palpation-guided procedures.5-45
There is evidence that US-guided arthrocentesis is superior to palpitation guided intra-articular (IA) injections in several respects. US-guided arthrocentesis reduces procedural pain, improves arthrocentesis success rates, leads to greater synovial fluid yield with more complete joint decompression and improves clinical outcomes and costs per patient responder per year.\(^6, ^{31}, ^{46-51}\)

Diagnostic MSK US has no known contra-indications and does not expose the patient or physician to harmful radiation.\(^2\)

The diagnostic utility and cost-effectiveness of MSK US are enhanced when performed by the same physician who clinically evaluated the patient.

Interventional neuromuscular US services should include both MSK procedures (e.g., joints, tendons, bursa injections) and peripheral nerve blocks (e.g., carpal tunnel injections).

Diagnostic and interventional MSK US requires extensive training to develop competence. Training may be acquired through a structured residency or fellowship with a MSK US didactic curriculum, or via other means such as conferences, courses, books, on-line learning, and mentoring programs. Regardless of how the training was acquired, criteria must be established to demonstrate competence.

Diagnostic MSK US is preferred by patients over MRI due to ease of access, reduced cost and quicker diagnostic interpretation of their problems.\(^{52}\)

AAPM&R believes that diagnostic and interventional MSK ultrasound is a fundamental component of physiatric practice and an essential tool in the treatment of people with certain musculoskeletal conditions.

References


About AAPM&R
The AAPM&R is the national medical society representing more than 9,000 physiatrists, physicians who are specialists in the field of physical medicine and rehabilitation. Physiatrists treat adults and children with acute and chronic pain, persons who have experienced catastrophic events resulting in paraplegia, quadriplegia, traumatic brain injury, spinal cord injury, limb amputations, rheumatologic conditions, musculoskeletal injuries, and individuals with neurologic disorders or any other disease process that results in impairment and/or disability. With appropriate rehabilitation, many patients can regain significant function, live independently, and live fulfilling lives.

Disclaimer
This AAPM&R Position Statement is intended to provide general information to physiatrists and is designed to complement advocacy efforts on diagnostic or guided ultrasound procedures in discussions with payers and policymakers at the federal, state and regional levels. The statement should never be relied on as a substitute for proper assessment with respect to the specific circumstances of each case a physiatrist encounters and the needs of each patient. This AAPM&R statement has been prepared with regard to the information available at the time of its publication. Each physiatrist must have access to timely relevant information, research or other material which may have been published or become available subsequently.

Approved by AAPM&R Board of Governors
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