AMERICAN COLLEGE OF RHEUMATOLOGY POSITION STATEMENT

SUBJECT:	Ultrasound for Rheumatological Conditions
PRESENTED BY:	Committee on Rheumatologic Care
FOR DISTRIBUTION TO:	Members of the American College of Rheumatology Medical Societies Members of Congress Centers for Medicare and Medicaid Services Managed Care Organizations/Third-Party Carriers Insurance Companies and Commissioners

POSITIONS:

- 1. Ultrasound is a useful tool used by rheumatologists in the diagnosis, management, and treatment of rheumatic conditions.
- 2. The use of ultrasound in rheumatology practice requires training and experience.
- 3. The ACR encourages rheumatologists to pursue suitable training and a certification process of their choice for the skills for which rheumatology certification is available.
- 4. Rheumatologists who have obtained training and certification in ultrasound should receive fair, timely, reasonable reimbursement for their ultrasound services.

BACKGROUND:

Ultrasonography is patient-friendly, noninvasive, radiation-free, and relatively inexpensive and fast compared with other imaging modalities. This imaging modality is utilized widely for the diagnosis and treatment of many rheumatic conditions. For example, musculoskeletal ultrasound (MSUS) verifies joint inflammation and damage, detects erosions in all stages of disease, allows for detection of enthesitis and clarifies the physical exam efficiently. This information enhances patient care by assessing responses to treatment, helping with decisions about changing therapy in both adult and pediatric patients with arthritis, and improving joint injection accuracy and outcome (1-5). MSUS guidance improves needle placement, reduces procedural pain during arthrocentesis, and improves clinical outcomes. For example, US guided aspiration, drainage, and injection of hips remains a reliable, lower cost procedure where imaging guidance is necessary (1). MSUS may also be used for nerve imaging and to guide needle placement in the case of carpal tunnel syndrome (6). There is considerable evidence for the importance of ultrasound assessment in rotator cuff and other shoulder diseases (1). Difficult to examine joints, such as the temporomandibular joint, affected commonly in rheumatoid arthritis, can be examined by MSUS rather than MRI (7). MSUS can non-invasively and rapidly make a diagnosis of gout, one of the most common musculoskeletal diseases (8). Addition of MSUS exam to purely clinical criteria increases the accuracy of diagnosis of polymyalgia rheumatica (9).

Utilization of ultrasound by rheumatologists has gone beyond musculoskeletal ultrasound in recent decades. Salivary gland ultrasound in the diagnosis of Sjogren's Syndrome has been found

to be just as reliable as the costlier and more invasive previous gold standard, salivary gland biopsy (10). In diseases with morbidity and mortality due to interstitial lung disease (ILD) like scleroderma and dermatomyositis, transthoracic ultrasound of the lung has been shown to correlate with high resolution CT scans of the chest, however with lower cost and no radiation to the patient (11). Rheumatologists with specialized training in evaluation of blood vessel involved in vasculitis may use diagnostic ultrasound to allow faster and safer diagnosis of temporal arteritis, thereby lowering the risk of blindness, decreasing hospitalization rates and length of stay, and decreasing expense, in comparison with other diagnostic approaches (12). Looking to the future, ultrasound is being actively studied in the diagnosis and monitoring of autoimmune myositis with use of conventional ultrasound and elastography. Once validated protocols are in place, training with these modalities can decrease the number of invasive and expensive muscle biopsies, a procedure which must be done in the operating room under general anesthesia (13). Currently, trained operators are using MSUS to differentiate inclusion body myositis from inflammatory myositis which otherwise would require a muscle biopsy (14). Another area of promise for utilization of ultrasound in rheumatology is use in evaluation and morphology of skin ulcers in systemic sclerosis which will guide therapy (15).

MSUS has been found to reliably detect disease where the clinical assessment remains uncertain and is particularly helpful indistinguishing inflammatory from noninflammatory conditions (16-18). Again, in many cases an experienced user not only confirms the disease process, but also gathers necessary information that contributes to treatment decisions. The extent of disease and damage accrual may be determined at the point of care which avoids delays in appropriate therapy, precludes more expensive testing and procedures, and leads to more affordable, quality patient care (16,19-21). Reasonable use of MSUS by rheumatologists has been systematically reviewed and published(1).

Rheumatologists continue to add value to the treatment of musculoskeletal conditions, and MSUS is just one example of how rheumatologists save money in healthcare. Appropriate substitution of MSUS over other modalities results in substantial cost savings (16,19-21). Moreover, earlier detection and treatment of rheumatic conditions may lead to a decrease in costly procedures, burdensome disease complications, and missed work or disability. Throughout the world, MSUS technology is widely recognized as a point of care procedure that enhances patientcare and rheumatologist with specialized training bring both the efficiency and convenience of point of care testing with specialized knowledge about anatomy, physiology, and patterns of disease (22). Rheumatologists remain the authority in the management and treatment of arthritis conditions, and MSUS remains a meaningful diagnostic and interventional tool in rheumatology practices.

TRAINING:

The ACR recognizes the importance of demonstrating knowledge and competency for performing MSUS. Rheumatologists may obtain ultrasound training as part of their rheumatology training programs. In addition, the ACR and other accredited entities provide courses to educate rheumatologists how to effectively utilize musculoskeletal ultrasound in their practice. The ACR has created rheumatology-specific training and certification options.

CERTIFICATION:

Experienced MSUS users must demonstrate competence in their skills and promote the highest patient care and safety. Benchmarks for MSUS competency are established, and the ACR encourages providers to pursue certification. There are several avenues for certification, and the ACR supports the member's right to choose the program that is best suited to their needs and practice. Like other specialty societies, the ACR offers training and certification programs to its

members. The ACR's Musculoskeletal Ultrasound Certification in Rheumatology program, or RhMSUS, is designed to train and document proficiency. These training and certification exams are a measure of the user's capabilities. Practices may also obtain accreditation for their facility. The ACR asks for a sensible time frame for individual practitioners to obtain certification, and requests that accreditation for practices remain optional.

CODING AND PAYMENT:

Contracted providers who perform musculoskeletal ultrasound should receive fair and timely reimbursement for their services. In accordance with CPT coding guidelines, the exact code for the service must be utilized. The bundled CPT codes for joint injection with musculoskeletal ultrasound guidance are 20604 (e.g., fingers, toes), 20606 (e.g., wrist, ankle, elbow) and 20611 (e.g., shoulder, hip, knee). The specified code for a complete diagnostic evaluation is 76881, limited diagnostic ultrasound is 76882. The CPT code for transthoracic ultrasound of the lung is 76604. Ultrasound of the parotid gland is coded as 76536. Coding for cranial vessels as 93888. Musculoskeletal ultrasound procedures must be adequately documented in the medical record with permanently recorded images.

In the context of a rheumatology practice, MSUS procedures do not replace the clinical evaluation and management of the patient. The evaluation and management of the rheumatology patient involves integrated history, physical exam, disease activity measurement, complex lab, and imaging analysis. Thus, the professional component of the rheumatologists' evaluation and management should be reimbursed appropriately. For rheumatologists, MSUS should not be considered incidental to the E&M, such as isolated points of care in radiology departments.

RESEARCH:

The ACR recognizes the importance of pursuing ultrasound-related research in the rheumatic diseases in order to improve the diagnostic, prognostic, and therapeutic capabilities of our clinicians. Rheumatology sonographers continue to complete scholarly projects and investigate the utility of this procedure. The ACR will continue to support MSUS education, patient care, and research efforts.

References:

- 1. McAlindon, T. et. al. American College of Rheumatology Report on Reasonable Use of Musculoskeletal Ultrasonography in Rheumatology Clinical Practice. Arthritis Care and Research, Vol. 64, No. 11, 1625-1640 2012.
- American College of Rheumatology. Ultrasound in American Rheumatology Practice: Report of the American College of Rheumatology Task Force. Arthritis Care and Research, Vol. 62, No. 9, p 1206-1219, 2010.
- 3. Larche, J et al. Utility and Feasibility of Musculoskeletal ultrasonography (MSK US) in rheumatology practice in Canada: needs assessment. Clinical Rheumatology, Vol 10, p 1277-83, 2011.
- 4. Roth J. Emergence of Musculoskeletal Ultrasound Use in Pediatric Rheumatology. Curr Rheumatol Rep. United States; 2020;22:14.
- 5. Gohar F, Windschall D. The new role of musculoskeletal ultrasound in the treat-totarget management of juvenile idiopathic arthritis. Rheumatology (Oxford). England; 2021;60:2046–53.
- 6. McDonagh, Cara, Michael Alexander, and David Kane. "The role of ultrasound in the diagnosis and management of carpal tunnel syndrome: a new paradigm." Rheumatology 54.1 (2015): 9-19.
- 7. Mupparapu, Mel, et al. "Conventional and functional imaging in the evaluation of

temporomandibular joint rheumatoid arthritis: a systematic review." Quintessence Int 50.9 (2019): 742-753.

- Lee YH, Song GG. Diagnostic accuracy of ultrasound in patients with gout: A metaanalysis. Semin Arthritis Rheum. 2018;47(5):703-709. doi:10.1016/j.semarthrit.2017.09.012
- Kei Kobayashi, Daiki Nakagomi, Yoshiaki Kobayashi, Chisaki Ajima, Shunichiro Hanai, Kensuke Koyama, Kei Ikeda, Ultrasound of shoulder and knee improves the accuracy of the 2012 EULAR/ACR provisional classification criteria for polymyalgia rheumatica, Rheumatology, Volume 61, Issue 3, March 2022, Pages 1185– 1194, <u>https://doi.org/10.1093/rheumatology/keab506</u>
- 10. Zabotti, Alen, et al. "Salivary gland ultrasonography in Sjögren's syndrome: a European multicenter reliability exercise for the HarmonicSS project." Frontiers in medicine (2020): 816.
- 11. Man, M.A.; Dantes, E.; Domokos Hancu, B.; Bondor, C.I.; Ruscovan, A.; Parau, A.; Motoc, N.S.; Marc, M. Correlation between Transthoracic Lung Ultrasound Score and HRCT Features in Patients with Interstitial Lung Diseases. J. Clin. Med. 2019, 8, 1199. <u>https://doi.org/10.3390/jcm8081199</u>
- Monti S, Bartoletti A, Bellis E, Delvino P, Montecucco C. Fast-Track Ultrasound Clinic for the Diagnosis of Giant Cell Arteritis Changes the Prognosis of the Disease but Not the Risk of Future Relapse. Front Med (Lausanne). 2020;7:589794. doi:10.3389/fmed.2020.589794
- 13. Paramalingam, Shereen, et al. "Conventional ultrasound and elastography as imaging outcome tools in autoimmune myositis: A systematic review by the OMERACT ultrasound group." Seminars in Arthritis and Rheumatism. Vol. 51. No. 3. WB Saunders, 2021.
- 14. Leeuwenberg, Kristofoor E., et al. "Ultrasound can differentiate inclusion body myositis from disease mimics." Muscle & nerve 61.6 (2020): 783-788.
- 15. Suliman, Y.A., Kafaja, S., Fitzgerald, J. et al. Ultrasound characterization of cutaneous ulcers in systemic sclerosis. Clin Rheumatol 37, 1555–1561 (2018). <u>https://doi.org/10.1007/s10067-018-3986-5</u>
- 16. Moore, C. et al. Point-of-Care Ultrasonography. The New England Journal of Medicine, Vol. 364, p 749-757 2011.
- 17. Troum, O. et al. Newer Imaging Modalities; Their Use in Rheumatic Diseases. Update toRheumatic Disease Clinics in North America, Vol 4, No 3, 2011.
- 18. Iagnococo, A. et al. Ultrasound imaging for the rheumatologist. XVII. Role of colour Doppler and power Doppler. Clin. Exp Rheumatol 2008;26:759-62.
- 19. Medicare Imaging Payments. Washington DC: Government Accountability Office. (GAO-08-452) 2008.
- 20. Parker, L. et al. Musculoskeletal imaging: medicare use, costs, and potential for costsubstitution. Journal of American College of Radiology, Vol. 5 No. 3, p 182-188,2008.
- 21. Sibbitt W. et al. A randomized controlled trial of the cost-effectiveness of ultrasoundguided intraarticular injection of inflammatory arthritis. J Rheumatol 2011; 38:252-63.
- 22. Dubey J, Shian B. Point-of-Care Ultrasound for Musculoskeletal Injection and Clinical Evaluation. Prim Care. 2022;49(1):163-189. doi:10.1016/j.pop.2021.10.011

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