Point of care ultrasound (POCUS), musculoskeletal ultrasound (MSK-US), and rehabilitation ultrasound imaging (RUSI) are similar procedures that use non-ionizing imaging and are becoming more inexpensive, portable, safe, and able to be used quickly. These modalities are commonly used in various medical disciplines to assess musculoskeletal tissues (bones, muscles, tendons, ligaments, nerves) as well as structures such as the heart, lungs, and bladder just to name a few. MSK-US primarily focuses on the structural integrity or characteristics of the neuromuscular system. This would include viewing soft tissues for assessment of normalcy or abnormality. For example, viewing the supraspinatus for signs of swelling or a rotator cuff tear, or assessing the median nerve to measure swelling or size differences in those with carpal tunnel syndrome are commonly performed using MSK-US. RUSI is similar but includes the evaluation of muscle and soft tissue during exercise or movement dynamically including its use for biofeedback. An example of RUSI include real-time observation of spinal muscle (lumbar multifidus and transverse abdominus) activation patterns during exercise to facilitate improved neuromotor control.

The use of MSK-US in clinical practice has nearly quadrupled since the early 2000’s, mainly due to its use with non-radiologists. Its surge in popularity parallels research suggesting that MSK-US is accurate and cost effective, with patients reporting greater satisfaction with MSK-US compared to magnetic resonance imaging (MRI).

**Introducing Ultrasound Bites**

Ultrasound is becoming more widely recognized in rehabilitation as a valuable tool to objectively assess musculoskeletal structures and guide rehabilitation. The appropriate use of imaging is essential in all healthcare professions for accurate patient diagnosis and management as well as optimizing the use of healthcare resources. It should also be stressed that mistakes made by inadequately trained operators could jeopardize a patient’s wellbeing by delaying treatment for life threatening conditions. Because of this, the *International Journal of Sports Physical Therapy (IJSPT)* Editorial Board thought it important to educate readership with common tips to view various musculoskeletal structures. Starting with the long head of biceps tendon in our last issue, subsequent issues of *IJSPT* will include a section entitled “MSK Ultrasound Bites: Tips and Tricks.” Each month, a new structure that can be assessed with MSK-US will be thoroughly described, including normal and pathological structure findings with clear and concise guidelines describing probe placement and findings. As can be seen in a corresponding study in this issue, many therapists are utilizing MSK-US clinically.
this month provides an overview and introduction to the clinical use of MSK-US for rehabilitation, diagnosis, interventions and research. We believe that its use will continue to evolve as physical therapists become more adept at using this skill to propagate care beyond the traditional examination.\footnote{16}

REFERENCES


4. Nazarian LN. The top 10 reasons musculoskeletal sonography is an important complementary or alternative technique to MRI. Am J Roentgenol. 2008;190(6):1621-1626.


