

Musculoskeletal (MSK) Ultrasound

Diagnostic Medical Sonography (DMS) has multiple areas of practice, including MSK ultrasound. While MSK is within the broad scope of practice of sonographers it is **not** often within the individual scope of practice of an individual sonographer. When a sonographer is reflecting on whether they are competent to practice in this area there are several things they must consider. Prior to independent performance of MSK exams, sonographers must ensure they have the proper education and clinical skills, have access to regular scanning opportunities to maintain competencies, and are aware of the sensitivity of the exam outcome with respect to operator-dependent findings.

In examining entry level skills of sonographers, it is evident that MSK scanning is **not** included in entry to practice competencies. In the latest version of Sonography Canada's National Competency Profile, approved by NSCMIRTP, MSK is not present. This means that MSK does not have to be taught academically or clinically in any accredited programs in Canada. Specifically in the Nova Scotia program, unless a student takes part in a MSK Specialty Practice they do not receive MSK education. For those that do take part in a MSK Specialty Practice it consists of a 12-week clinical block of half days of MSK imaging (equating to 6 weeks of clinical time). This Specialty Practice course also contains a large academic component because it is recognized that MSK is considered not to be "entry-level".

Reviewing common practice standards related to MSK imaging, it is the norm for only select sonographers in a DI department to perform MSK exams as each would require regular performance to maintain competence. If all sonographers were to perform MSK there would be inadequate opportunity each year to maintain this skill. Further, prior to independent scanning, sonographers typically are mentored/precepted by radiologists or a sonographer with longstanding expertise in MSK for an extensive period where the preceptor demonstrates and guides the sonographer in developing competence in this area of practice. It is recognized that for MSK imaging there is a significant potential for operator-based discrepancy between artifact and pathology identification. Sonography is the most operator-dependent imaging modality with MSK imaging being the most sensitive to this form of error. This means the risk that an error in findings can occur is much higher. Without proper education and skills this increases the risk of harm for patients.

Sonographers wishing to expand their practice to include MSK imaging should note that it is their own responsibility to ensure that the necessary knowledge, skills, and judgement are present to perform these exams competently. If an employer requests that a sonographer attain this skill, it is the responsibility of the imaging professional to work with the employer to develop a plan on how to successfully attain this competency. The first step would be to attain the academic knowledge which could be done by taking an MSK course or other developed learning plan. After gaining the requisite academic knowledge, a period of clinical preceptorship would be recommended. Best practice would be to document and track this learning plan.