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POSITION STATEMENT: Ultrasound guidance for joint, nerve and soft tissue injections

Ultrasound is a patient friendly, noninvasive, radiation free and relatively inexpensive imaging tool when compared with other imaging modalities. It is directly applicable at the time of a patient’s visit, is capable of showing the relationships of structures during movement, can examine multiple anatomical areas in a single visit, and is readily repeatable. At the point of care, the clinician can gain an understanding of the patient’s unique structural pathology, describe the problem, outline possible solutions and provide targeted treatment.

The evolution of injections into joints, nerves, soft tissues, and the spine has been one of the most important aspects of interventional pain medicine. Specifically, injections in the past were performed under "blind conditions", meaning that imaging was not employed. Fluoroscopic X-ray imaging of the spine and joints has afforded specificity, accuracy and has ensured that medications are appropriately placed in the correct anatomic structures. The same can be said about injections into joints, nerves and soft tissues. Soft tissue structures like tendons and nerves can ONLY be seen with U/S. Utilizing x-ray imaging (fluoroscopy) is often cumbersome, costly, and exposes both the physician and patient to radiation. The use of contrast material also poses some risk and increases costs.

The ultrasound guidance data referenced in the Bibliography clearly shows improvement in accuracy placement in comparison to landmark-based techniques. In addition, studies have demonstrated improvement in short-term clinical outcomes for specific joints with ultrasound guidance in comparison to landmark-based techniques. Sibbett et al. demonstrates that ultrasound guidance improves accuracy which improves clinical outcomes therefore cost-effectiveness.

Ultrasound guidance has recently been perfected to afford accuracy, precision, cost-effectiveness and an alternative to radiologic imaging. Performing injections with this type of specificity allows the physician to reduce the frequency of injections and to improve the diagnosis. This technology will be essential to the future of tissue repair and cell regeneration and ultimately avoid or postpone costly major surgery.

Sanford M. Silverman, MD
President, FSIPP
FSIPP, Board of Directors and Membership
BIBLIOGRAPHY


