Abstract

Medical sonography covers a broad spectrum of specialty areas including vascular, cardiac, and general (e.g., abdominal, superficial parts, gynecologic and obstetric) sonography. Because medical sonography covers such a broad array of clinical needs without the use of ionizing radiation, it has become essential in the diagnosis of many life-threatening diseases.

Though sonography is an indispensable tool, it is not without its shortcomings. For example, each year more than 80% of clinical sonographers experience musculoskeletal related pain, with up to 20% of these sonographers suffering career-ending injuries. Current research points to the poor ergonomics of ultrasound probes or transducers as a main factor in causing these work-related musculoskeletal disorders. Specifically, work-related musculoskeletal disorders of the hand and wrist have been linked to grip effort and wrist range of motion for those using ultrasound transducers. Accordingly, there is a need for a more ergonomic gripping assembly interface between the sonographer and ultrasound transducer in order to reduce work-related musculoskeletal disorders.

Boise State University has invented an ultrasound transducer with improved handles and exemplary gripping assemblies. The exemplary gripping assemblies have been ergonomically designed so as to reduce the incidence of work-related musculoskeletal disorders often suffered by sonographers in recording ultrasound images. The gripping assemblies are designed to be ergonomically superior to traditional ultrasound transducer handles and gripping assemblies in that the required gripping force to hold onto or otherwise manipulate the ultrasound transducer is dramatically reduced.

Advantages

- The gripping assemblies increase gripping comfort for the user and thereby decrease the risk of work-related musculoskeletal injury.
- The gripping assemblies are specifically designed to be coupled to a wide range of sizes and shapes of commercially-available ultrasound transducers.
- No modification to currently-used ultrasound transducers is required by using Boise State University’s gripping assemblies.

Boise State is looking for a Licensee for this technology.

For More Information Contact:

Katy Ritter
Director, Office of Technology Transfer
(208) 426-5765
KatyRitter@boisestate.edu