

QIBA Ultrasound Shear Wave Speed (SWS) Biomarker Committee (BC)

Wednesday, June 8, 2022; 2 PM CT

Call Summary

In attendance

David Fetzer, MD (Co-Chair)

Stephen McAleavey, PhD (Co-Chair)

Stephen Rosenzweig, PhD (Co-Chair)

Jeff Bamber, PhD

Richard Barr, MD, PhD

Paul Carson, PhD

Peter Chang, PhD, PMP

Jun Chen, PhD

Todd Erpelding, PhD, MSE

J. Brian Fowlkes, PhD

Reinhard Kubale, MD

Arinc Ozturk, MD

Michelle L. Robbin, MD

Gabriela Torres, PhD

Keith Wear, PhD

James Wiskin, PhD

RSNA

Joe Koudelik

Susan Stanfa

Moderator: Dr. Fetzer

Agenda items:

- Experience with clinical US Samsung system and their metric Tissue Scattered Imaging (TSI)
- Technical Confirmation planning, aka Profile feasibility testing
- Review of manuscript on the SWS Profile

Action items (general/ongoing):

- Co-chairs to submit a [Public Comment Resolution document](#) for wiki posting
- A manuscript outline on the SWS Profile and rationale to be submitted to the *Journal of Ultrasound in Medicine (JUM)* was reviewed; this paper will address why the Profile is needed, what it aims to accomplish, what challenges it intends to address, what physics and clinical standpoints it is based on, and what is the expected benefit
 - Suggestion to cite Dr. Carson's and Wear's paper about conditional increased output for shear wave elasticity in which benefits of exceeding the FDA acoustic output limits in exchange for getting high-quality data are argued
 - Cite one or more of Dr. Nightingale's papers showing the diagnostic benefits of increased output
 - Suggestion to use questions as subject headers to spur reader engagement
 - Volunteers were requested to draft sections

Action items (feasibility testing):

- Recruitment beyond local or affiliated sites needed to obtain at least three volunteer sites to implement Profile and provide feedback regarding feasibility of performing requirements on a routine basis
 - Medical physicist at UT Southwestern Medical Center have agreed to participate
 - Unofficial buy-in at University of Rochester (NY)
 - Dr. Ozturk to reach out to network colleagues in Boston
- Discrepancies between Profile requirements and checklist may need to be identified
- Reminder that this is not clinical confirmation; it is a practicality assessment
- Updated quote for CRS homogeneous phantom (estimated between \$3k – \$5k) is being obtained
- Consensus was that 1 representative device from each manufacturer that a performance site may have that is performing elastography

Next Steps per QIBA Process Committee

- All Profile procedures and requirements have been performed/checked on at least two vendor platforms and at three or more sites and found to be clear and not burdensome/impractical
 - Group consensus was that one sonographer per site could provide checklist feedback
 - One-two vendor platforms tested per site would be a useful representation of the entire site
- "External" sites should be recruited to bring "fresh eyes" to better assess the clarity of the Profile and bring different assumptions about routine practice for this biomarker
- At least one of each Profile actor have demonstrated conformance (met all requirements)
- Process links: <http://qibawiki.rsna.org/index.php/Process>

Next call – *Wednesday, July 13th at 2 pm CT {2nd Wednesdays of the month}*