

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

Wednesday, June 14, 2023; 2 PM CT

Call Summary

### In attendance

David Fetzer, MD (Co-Chair)

Stephen McAleavey, PhD (Co-Chair)

Jun Chen, PhD

Arinc Ozturk, MD

Mark Palmeri, MD, PhD

Keith Wear, PhD

### RSNA

Julie Lisiecki

**Moderator:** Dr. McAleavey

### Agenda items:

- Update: Clinically Feasible (Stage 3) Profile feasibility testing
- Definitions
- QIBA Steering Committee/Annual Meeting Update
- QIBA US SWS Checklist promotion

### Comment Resolutions Spreadsheet

- [Feedback](#) working toward the Clinically Feasible stage has been compiled and posted to the wiki

### Update on Feasibility Testing

- Dr. McAleavey has received feedback from 9 participants, mainly from technologists
- Additional feedback is needed from all checklist subject matter experts (Actors), e.g., radiologists, physicists, QA managers, etc.
- Dr. Fetzer plans to test the checklist at his site (noted that he has 35 sonographers on his team)
- Dr. Fetzer conferred with QIBA Leadership who indicated that actual clinical implementation is required to move to the next Profile Stage (Stage 3, Clinically Feasible)
  - Asking sites to implement the Checklist will be a significant change to clinical practice or workflow
  - Dr. Wear suggested an incentive – inviting checklist respondents to be co-authors on a future paper
- Previously suggested online Google form of checklist (with QR code) to engage more participation at conferences

### SWS Checklist Definitions

- Proposed changes to **imaging system** definition and **performance site** definition were approved

### QIBA Steering Committee / QIBA Annual Meeting

- [Dr. Fowlkes presented at the QIBA Steering Committee meeting in May](#) on behalf of the SWS BC Co-chairs
- Dr. Fetzer shared slides from this presentation and highlighted a few key issues:
  - There are benefits and tradeoffs re: conformance to the Profile
  - Help is needed to determine what the statement for manufacturers to ‘attest’ to the Profile should be regarding that their system, software, transducer/coil, etc., are compliant with the QIBA Profile
    - SWS Leadership suggested that an over-arching statement should come from QIBA Leadership, as manufacturer self-attestation may apply across modalities
- Dr. Ozturk to circulate proposed manufacturer self-attestation text

### Parallel efforts

- Drs. Fetzer and Ozturk are working with the [Society of Abdominal Radiology \(SAR\)](#) to increase the use of ultrasound in multimodality chronic liver disease assessment
- Currently, “Hepatic Iron” and “Liver Fibrosis” are being combined into one Chronic Liver Disease (DFP)
- Drs. Ozturk and Fetzer are representing the US community in liver fat and fibrosis for the DFP study
- SAR annual meeting included a hands-on workshop for liver fat, iron, and fibrosis quantification by MRI and US
  - Components of the training course align with the QIBA Profile and concur with the SRU consensus statement
  - Dr. Ozturk is working on an SAR member survey on US SWE practices to radiologists, including 2023 Euroson attendees and other organizations This survey may be an opportunity to spread the word regarding the QIBA SWS Profile and solicit feedback regarding the checklist

- Dr. Ozturk is interested in obtaining data from smaller, rural clinics that are less familiar with guidelines

### Collaboration with International Sites

- Dr. Ozturk suggested collaborating with EuroSon re: getting sites to implement Profile
- Email already constructed

### Action items requiring follow up (provided by Dr. Fetzter)

- **Annual QIBA US Coordinating Committee Report to Steering Committee**
  - **ACTION: discuss with CC leadership; ask if there was any concrete feedback or action items from Steering Committee applicable to SWS challenges and requests.**
- **QIBA Conformance Letter for Manufacturers**
  - From Arinc Ozturk (letter sent to US CC)
  - How to distribute, implement and enforce?
  - **ACTION: Send to CC for review/approval. Steering Committee approval needed?**
- **Updates from [Society of Abdominal Radiology \(SAR\)](#) Disease-Focused Panels (DFPs)**
  - Dr. Ozturk – developing member questionnaire on US SWE practices
  - Information may be helpful to SWS BC for planning future outreach and education
    - **ACTION: FYI for CC leadership. Arinc can share, if desired (not yet finalized)**
- **Collaboration with International Sites**
  - Dr. Ozturk suggested collaborating with [Euroson](#) re: getting sites to implement Profile
  - **Email already constructed**
  - Are there any concerns/restrictions with inter-societal or international collaborations?
  - **ACTION: discuss with CC leadership**

### Potential Presentation Topics for RSNA or other Conferences (ongoing work)

- Confounding factors that can lead to measurement errors
- Incorporate checklist into presentation and request audience participation
- Target education sessions for active stenographers
- Possibly create tie-in to hands-on sessions for RSNA 2024 (2023 programming already in place)
- Create QR code for Google Checklist form (if developed)
- Consider a poster for the QIBA Kiosk at RSNA 2023 and future (if fits in with QIBA Leadership focus)
- QIBA ‘elevator pitch’ with rationale needed to explain why responding to feasibility questionnaires is important

### Next steps

- Translation of the elastic phantom to the viscoelastic phantom is being considered

### Action items (ongoing):

- [Dr. McAleavey](#) to consider converting the Excel Checklist into a Google form for ease of use / reference
- [Dr. Ozturk](#) agreed to share Checklist form via QR code at presentations (if this becomes available)
- [Dr. Barr](#) to look into poster opportunities at conferences to advertise the QIBA SWS checklist
- [Dr. Robbin](#) to talk with UAB Physics team re: Philips scanner performance or image acquisition protocols or checklist requirements
- Need help with recruiting additional sites; to include some non-academic medical centers
- Revisit wording in the checklist re: phantom QC
- BC to clarify what is meant by pre-delivery, delivery, and install, as it relates to an ultrasound system, hardware/software upgrades, and/or even new transducers
- Manuscript on the SWS Profile to be submitted to the *Journal of Ultrasound in Medicine (JUM)* in progress

### Action items (feasibility testing):

- Recruitment to obtain at least 3 volunteer sites to implement Profile and provide feedback regarding feasibility of performing requirements on a routine basis
  - [Dr. Ozturk](#) to reach out to network colleagues in Boston
- Discrepancies between Profile requirements and checklist need to be identified
- Reminder that this is not clinical confirmation; it is a practicality assessment

- Consensus was that 1 representative device from each manufacturer that a performance site may have that is performing elastography
- Cross reference with other modality BCs at the same stage may be helpful

**QIBA Process Committee feasibility notes:**

- 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 Committee co-chairs:** [Kevin O'Donnell, MAsc](#) and [Michael Boss, PhD](#)

- Process links: <http://qibawiki.rsna.org/index.php/Process>

**Next call** – *Wednesday, July 12<sup>th</sup> at 2 pm CT {2<sup>nd</sup> Wednesdays of the month}*

[QIBA Dashboard](#) for updates