

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

Wednesday, March 8, 2023; 2 PM CT

Call Summary

In attendance

David Fetzer, MD (Co-Chair)

Stephen McAleavey, PhD (Co-Chair)

Michael André, PhD

Richard Barr, MD, PhD

Peter Chang, PhD, PMP

Todd Erpelding, PhD, MSE

J. Brian Fowlkes, PhD

Nancy Obuchowski, PhD

Arinc Ozturk, MD

Mark Palmeri, MD, PhD

Gabriela Torres, PhD

Michael Wang, PhD, MASc

Keith Wear, PhD

RSNA

Joe Koudelik

Julie Lisiecki

Moderator: Dr. McAleavey

Agenda items:

- Update: Clinically Feasible (Stage 3) Profile feasibility testing
- Definitions
- QIBA US SWS Checklist promotion

Comment Resolutions Spreadsheet

- Feedback to be compiled in the Process Committee's [Feedback Resolution Spreadsheet](#) for wiki posting
- Some comments received re: claims
- Past contributors will be listed in acknowledgements with company affiliation removed if unknown or changed
- Question re: pre-acquisition materials for consideration

Update on Feasibility Testing

- Feedback has been received from two sites and a third is expected
- Feedback is being collected separately from radiologists and sonographers (two separate actors), which is making the process more complicated
- Dr. McAleavey to follow up with Process Committee co-chairs for advice on this issue
- Drs. Barr, Fowlkes, and Ozturk volunteered to invite [Euroson Congress](#) attendees (May 2023) to provide feedback
 - Online Google form of checklist suggested (with QR code) to engage more participation
 - If possible, checklist could be shortened for easier participation
- Dr. Fowlkes working on a high-level QIBA intro slide with QR code to promote QIBA efforts at various meetings
- Considering the offer of 'co-authorship' on a future manuscript as an incentive to participants
- QIBA 'elevator pitch' with rationale may be needed to explain why responding to feasibility testing questionnaires is important
 - Essentially, this questionnaire is a scientifically based quality improvement program
- Clinical trialists might use the QIBA wiki or website as a resource to determine which companies are compliant for 'X'
- Advice to be sought from other QIBA modalities and biomarker committees

SWS Checklist Definitions

- Received feedback for proposed changes to **imaging system** definition but none for **performance site** definition
- Additional wordsmithing suggested to further explain clinical longitudinal follow up, e.g., "If you divert from this, you will be unlikely to meet the claims."
- Dr. Chang approved both definitions and suggested that these definitions may broadly apply to other QIBA BCs
- Official BC opinion is that {scanner + transducer + software + operator} constitutes a system
- Momentum exists to use the Profile for diagnosis of NASH (non-alcoholic steatohepatitis) and fatty liver disease

Potential Presentation Topics for RSNA or other Conferences

- 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)
- Dr. Barr to consider a poster for Euroson 2023 and other conferences advertising the QIBA checklist

Next steps

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

Action items (new):

- [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 Euroson
- [Julie](#) to provide 3/21 Process Committee details to co-chairs if they would like to attend to discuss questions
- [Julie](#) to post updated comment resolution form / Profile

Action items (new and ongoing):

- [Dr. McAleavey](#) to submit a [Public Comment Resolution document](#) for wiki posting and update the appendices
- Site responses can be compiled using the Process Committee's [Feedback Resolution Spreadsheet](#)
- [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 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
 - At Rochester:
 - Feedback from one radiologist (Akshya Gupta) received
 - Pending with Nancy Carson (Advanced Practice Sonographer)
 - [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 links: <http://qibawiki.rsna.org/index.php/Process>

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

Next call – *Wednesday, April 12th at 2 pm CT {2nd Wednesdays of the month}*

[QIBA Dashboard](#) for updates