

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

Friday, September 15, 2017; 11 AM CT

Call Summary

In attendance

Brian Garra, MD (Co-Chair)

Tim Hall, PhD (Co-Chair)

S. Kaisar Alam, PhD

Michael André, PhD

Paul Carson, PhD

Jun Chen, PhD

Manish Dhyani, MD

Todd Erpelding, PhD, MSE

Al Gee

Rik Hansen, PhD

Mike MacDonald, PhD

Stephen McAleavey, PhD

Kathy Nightingale, PhD

Svetoslav Nikolov, PhD

Nancy Obuchowski, PhD

Arinc Ozturk, MD

Mark Palmeri, MD, PhD

Nicolas Rognin, PhD

Stephen Rosenzweig, PhD

Theresa Tuthill, PhD

Marijean Trew

Michael Wang, PhD, MASC

Keith Wear, PhD

RSNA

Julie Lisiecki

Moderator: Dr. Garra

Review prior call summary: August 4th summary approved as submitted

Profile update:

- There are only a few outstanding items remaining before the Profile can be distributed for internal BC review
 - Dr. Obuchowski needs to incorporate the group's new claims; she plans to meet offline with Dr. Garra
 - Dr. Garra is working on checklists for ease of Profile use with step-by-step instructions, as this is needed for clinical use
- Dr. Garra is hoping a two-week turnaround window will be sufficient to address these remaining issues
- The goal is to have the Profile out for public comment by the RSNA annual meeting

Technical confirmation study updates:

- Four scanners are being tested at MGH:
 - Toshiba
 - GE
 - Siemens
 - Fibroscan
- Scans with these machines are being completed using 3 acquisitions
- Some deliberate errors were introduced to test the effect on the data
 - This is important clinically to be prepared for the most common errors
 - Errors included the following:
 - Patient movement / breathing
 - Transducer movement
 - Fewer than 10 acquisitions
- At the VA the following scanners are being tested:
 - GE
 - Siemens
 - Philips
- Complications include the following:
 - The Philips scanner has a very old version of Epic software
 - There is no imaging function – only “point” quantification
 - Pre- and post-imaging scans will be needed to aid in determining patient movement
 - Specific procedures will be needed for imaging sites to follow

Proposal on specifying CIRS phantoms (Dr. Palmeri):

- Topics discussed included the following:
 - Metrics – what metric should be used?
 - Phantoms – how to manufacture and make available for purchase?
 - Phantom dispersion curves for the QIBA CIRS phantom
- Visco-elastic phantoms are the easiest for most sites to obtain; however, a conversion value is needed
 - A conversion value is extremely important if scanner numbers cannot be matched as precisely as desired so that ultrasound as a modality is not skipped over in favor of MR for diagnostic imaging
 - Dr. Garra indicated that the next Profile must provide a correct and well documented conversion of US SWE results to Fibroscan and MRE results to avoid serious disincentive to use US SWE.
- Suggested clinical paradigm is as follows:
 - Fibroscan in the hepatology clinic
 - US SWEI in cases where Fibroscan results are inconsistent with each other or with clinical assessment
 - MRE for cases where both Fibroscan and US SWEI provide inconsistent results
- More data is needed; a 1:1 comparison in the same subjects completed using both MRE and US SWEI would be ideal

Plan for the RSNA 2017 Poster:

- Dr. Ozturk at MGH volunteered to produce the poster for the SWS BC with input from other BC members
- Any status updates for the PowerPoint layout should be sent to Dr. Ozturk: AOZTURK@mgh.harvard.edu
- A cohesive poster format is desired across the US biomarker committees with increased focus on graphics for ease of readability
- **Oct 31st:** Deadline for print-ready PowerPoint posters to RSNA Staff for RSNA 2017

Next QIBA WebEx calls are as follows:

- **Sept 22:** CEUS BC
- **Sept 29:** US Coordinating Committee
- **Oct 06:** Next SWS BC
- **Oct 13:** Next CEUS BC

SAVE-THE-DATE:



QIBA Working Meeting at RSNA 2017 | Wednesday, November 29, 2:30-6 pm – Lakeside Center