

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

Friday, March 25, 2016; 11 AM CT

Call Summary

In attendance

<i>Tim J. Hall, PhD (Co-Chair)</i>	Steven Fick, PhD	Stephen Rosenzweig, PhD
<i>Brian Garra, MD (Co-Chair)</i>	Albert Gee	Anthony Samir, MD
<i>Andy Milkowski, MS (Co-chair)</i>	Gilles Guenette, RDMS, RDCS, RVT	Remi Souchon, PhD
S. Kaisar Alam, PhD	Zaegyoo (Jay) Hah, PhD, MBA	Marijean Trew
Michael André, PhD	Alpana Harisinghani, MD	Theresa Tuthill, PhD
Richard Barr, MD, PhD	Edward F. Jackson, PhD	Nikolay Tzaribachev, MD
Paul Carson, PhD	Julian Lee	Matthew Urban, PhD
Jun Chen, PhD	Kathy Nightingale, PhD	Keith Wear, PhD
Shigao Chen, PhD	Svetoslav Nikolov, PhD	Hua Xie, PhD
Elaine Collins, RDMS	Mark Palmeri, MD, PhD	James Zagzebski, PhD
Manish Dhyani, MD		

RSNA

Fiona Miller
Joe Koudelik
Julie Lisiecki

Moderator: Dr. Hall

Review of February 26th US SWS BC call notes

- Notes were approved as written

Clinical Task Force/ Profile Update

- The group is investigating whether there is a way to calculate the least significant difference to determine what is most important in the detection of change
- Drs. Dhyani, Garra, and Samir are working on a clinical testing protocol to help determine final values for the Profile
- Clinical confounders and technologist behaviors are still being considered
- MRE (at ultrasound-relevant frequency such as 160Hz) will be the gold standard for Profile values
- Cross-scanner standardization methods still need to be addressed in the Profile
- Remaining manufacturer and regulatory issues need to be addressed
- Setting a Profile performance bar for vendor systems is needed

Systems / Phantoms Task Force Update

- Currently, the phantoms are in Europe for their final scans, under the supervision of Remi Souchon
- Based on initial data analysis, the following:
 - MR measurements are in good agreement with US at higher than clinical MRE frequency
 - MRE elasticity results depend on phantom temperature
 - As materials warmed, the materials softened
 - Based on these observations, there is some concern about sources of variation due to temperature in the phantom
 - Phase II phantoms will go to University of Wisconsin for evaluation of temperature dependence of SWS

QIBA f2f Meeting at AIUM

- The QIBA US Volume Blood Flow BC met at AIUM on Saturday, March 19th and worked on their Profile
- Dr. Barr and Mr. Guenette agreed to lead the Contrast Enhanced Ultrasound (CEUS) effort
 - A formal QIBA biomarker proposal is needed for QIBA SC consideration/approval
 - In the meantime, the group may begin work as a task force
 - A project proposal for funding may also be prepared and submitted, pending approval; the project proposal deadline is April 15th
 - Four phantoms are currently under consideration for the effort

Round 6 Request for Proposals

- The primary goal for QIBA is to advance / enhance the Profile documents or conformance per NIBIB objectives
- Dr. Urban has a proposal on “Examining Bias in Visco-Elastic Media” to include the following:
 - translating group and phase velocity
 - evaluation of SWS estimate bias caused by several choices in processing including
 - point measurements
 - time to peak
 - correlation measurements
 - methods for extrapolating US results to MRE results

Action item:

- All to consider potential Round-6 projects – Project proposals that have been approved by the US SWS Co-Chairs are **due to RSNA Staff by April 15th** (giba@rsna.org) with completed forms and budget sheets
- Dr. Hall to follow up with Dr. Jackson regarding what is/not within Round-6 project scope regarding clinical studies (i.e., what is allowed: preparing imaging protocols, analyzing data, etc.)

Meetings: (Fridays, 11 am CT):

April:

- Apr 01: Systems/ Phantom Task Force
- Apr 08: Clinical Task Force
- Apr 15: CEUS Task Force Leadership
- Apr 22: US SWS BC
- Apr 29: No call