

**QIBA Ultrasound Shear Wave Speed (SWS)
Clinical Applications and Biological Targets Subcommittee Call**

Monday, 17 December 2012; 1 PM CT

Call Summary

In attendance

Claude Cohen-Bacrie, MS (Co-Chair)
Anthony Samir, MD, (Co-Chair)
Michael Andre, PhD
Paul Carson, PhD

Gilles Guenette, RDMS, RDCS, RVT
Tim J. Hall, PhD
Ted Lynch, PhD

Sebastian Mueller, MD
Nicolas Rognin, MSc, PhD
Laurent Sandrin, PhD

RSNA

Joe Koudelik
Julie Lisiecki

Moderator: Mr. Claude Cohen-Bacrie, MS

Proposed Agenda Clinical Subcommittee, 12/17

- Action points from 11.09.2012 summary
- Debrief of last meeting of QIBA at RSNA (specific discussion on pilot study).
- The literature review (paper to be written)
- Exercise: How to prioritize/organize confounding factors

Discussion

- Pragmatic approach suggested when incorporating a review of confounding factors for clinical pilot study protocol
- Suggested categorization and prioritization of confounding factors

Recap of breakout session for Ultrasound at QIBA Working Meeting, RSNA 2012

1. Phantom Study – Phase 1 logistics
 - All volunteers to perform given protocol; logistics and procedures
 - Phantoms are on track to be completed by 12/21 and shipped a few weeks later
 - Initial shipment will be to Dr. Palmeri at Duke University, where inter-phantom variation testing will be performed prior to inter-laboratory testing
 - MRE phantoms will be shipped to Mayo Clinic during the first week of January
 - Larger MRE phantom will not be tested at Duke, but sent directly to Mayo
 - Dr. Andre volunteered to take measurements on the MRE phantom at UCSD, after Mayo
2. Pilot study – clinical

Literature Review to include prioritization of confounding factors

- Proposal to identify existing confounding factors and create subgroups in *Mendeley*
 - Dr. Palmeri or Ms. Hallam to send Mendeley details to Dr. Sebastian Mueller
- Discussion of how to best utilize the confounding factor list, i.e., for defining acquisition parameters on patients, or assessing the clinical condition of a patient, etc.
 - Determination of where these factors will fit into a protocol document and their impact on measurements will also be necessary
 - Parameters for clinical conditions may introduce a bias in the measurement
- **Goal:** Defining how indicative liver stiffness is to liver fibrosis using the SWS measurement
- **Problem:** Side effects of clinical conditions, e.g., inflammation, fatty content of the liver, etc.
 - Selection of patients with a very pronounced confounding factor will be helpful
- Consideration of most significant variables that contribute to differences among systems by the subcommittee
 - Clinical protocol work could be done by building on the work of the Phantom Subcommittee
- Question as to whether it would be necessary to address the confounding factors, if standardization across machines is possible.

Next Steps:

1. Dr. Samir to draft a standardized case report form for group review
2. All members to contribute to the list of Dependencies (Confounders), especially to practical recommendations
3. Dr. Nelson to update the group on progress with DICOM when available.
4. Dr. Palmeri or Ms. Hallam to send Mendeley details to Dr. Sebastian Mueller for inclusion

Next QIBA US SWS subcommittee calls (2013):

- **January 7** – US SWS Technical Committee, **1 pm CT, Monday**
- **January 14**– Phantom System Testing and Measurement Subcommittee, **1 pm CT, Monday**
- **January 18** – System Dependencies Subcommittee, **11 am CT, Friday**
- **January 21**– Clinical Applications and Biological Targets Subcommittee, **1 pm CT, Monday**

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