

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

Friday, 9 November 2012; 11 AM CT

Call Summary

In attendance

Anthony Samir, MD, (Co-Chair)
Michael Andre, PhD
Paul Carson, PhD

Brian Garra, MD
Tim J. Hall, PhD
Andy Milkowski, MS

Mark Palmeri, MD, PhD
Nicolas Rognin, MSc, PhD
Daniel C. Sullivan, MD

RSNA

Joe Koudelik
Julie Lisiecki

Moderator: Anthony Samir, MD

Discussion

- Common phantom for Phantom Study mentioned –the Clinical Subcommittee may also design an aberrating phantom.
 - Phantom to determine whether system is clinically acceptable for liver fibrosis staging, with obstructing structures included to simulate a clinical environment.
 - “Side-by-side” phantoms suggested for ease of comparison.
- Development of project simulator should be in terms of constraints
 - Publish protocol with factors (e.g., blood pressure, fasting, etc.), that would minimize impact
 - From a clinical perspective, consider what would impact biomarker development the most
- Clinically relevant constraints to be incorporated into the tier 2 lossy phantom
 - Want to standardize outputs to determine endpoints /outcome
 - Considerable variability exists for liver fibrosis
 - Want to avoid a large set of incomparable reference studies –
 - Need reference standard for metanalysis/ homogeneity of system performance
 - Will need defined outputs and expectations
 - Phantom could demonstrate system equivalence
 - Gold standard in humans needs to be established
 - Enormous variability currently occurs when trying to compare human data
 - A standardized pathologist case report form is needed to mitigate possible variability in reporting.
 - QIBA can play a role as facilitator in report form consensus development
 - Dr. Samir volunteered to lead the effort and create a draft standardized case report form
- Hepatology community has not yet resolved the zone of distinction between mild and moderate fibrosis
 - Need to make the results/ systems comparable for larger metanalysis
 - Need references if the effort is to move toward adoption of a biomarker
- Group to consider what the most significant variables are that contribute to differences among systems
 - Clinical protocol work could be done by building on the work of the Phantom Subcommittee
- Additional funding opportunities discussed, such as splitting costs, applying for joint grants, combining studies, etc.
- Ideally, a central read site could gather data from several acquisition sites

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.

Next QIBA US SWS subcommittee calls:

- **December 7** – US SWS Technical Committee, **11 am CT, Friday**
- **December 10** – Phantom System Testing and Measurement Subcommittee, **1 pm CT, Monday**
- **December 17** – Clinical Applications and Biological Targets Subcommittee, **1 pm CT, Monday**
- **December 21**–System Dependencies Subcommittee, **11 am CT, Friday** - (*Dr. Wear to moderate*)

Doodle Poll REMINDER – All committee members are requested to respond to RSNA doodle polls to aid staff in meeting preparations:

- Poster Meet-the-Expert Sessions (<http://doodle.com/qi8fbbm6m3wtzsvv>)

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