

**QIBA Ultrasound Shear Wave Speed (SWS)
Phantom-System Measurement Testing**

Monday, February 11, 2013; 1 PM CT

Call Summary (approved 3/11/2013) –

Updated with notation by Dr. Nightingale, 3/11/2013

In attendance

Brian Garra, MD (Co-Chair)
Michael Andre, PhD
Jeremy Bercoff, PhD
Paul Carson, PhD
Shigao Chen, PhD
David Cosgrove, MD
Steven E. Fick, PhD

Jérémie Fromageau, PhD
Ted Lynch, PhD
Stephen McAleavey, PhD
Andy Milkowski, MS
Thomas Nelson, PhD
Kathy Nightingale, PhD
Mark Palmeri, MD, PhD

Nicolas Rognin, MSc, PhD
Laurent Sandrin, PhD
Vijay Shamdasani, PhD
Keith Wear, PhD
Hua Xie, PhD
Zheng Zhang, PhD

RSNA

Fiona Miller
Joe Koudelik
Julie Lisiecki

Update on Phantom Project – Phase I:

- Dr. Nightingale reported findings from initial measurements performed on phantoms at Duke University
- Characterization of phantom uniformity and elimination of variability across sites are the main goals of the study
- Differing results at various focal depths were due to:
 - *Between phantom variability was within 2-3% for the majority of the phantoms, with the softer MRE phantom being an outlier*
 - *Differences in absolute speeds were observed at the different focal depths, and the Duke team is investigating whether this is algorithmic or phantom based.*
- Overall, increased variability was apparent at greater focal depths for the “soft” phantom
- Results showed that the phantoms were quite uniform and very close in all measurements, with only 2 outliers, one of which was the MRE phantom
- It was recommended that the phantoms be weighed and also that measurements be acquired at the center of the phantoms
- One site volunteer is needed to send their soft phantom to Mayo for an additional time point
- Drs. Bamber and Fromageau may be participating as well, though details need to be finalized regarding whose phantoms will be sent to them
- For sites testing multiple machines and using multiple appraisers, it was recommended that appraisers make measurements as a group
 - Mr. Milkowski will generate customized randomization spreadsheets for sites using multiple appraisers/machines; however, sites must provide number of appraisers/machines in advance
 - Completed spreadsheets to be e-mailed to the three co-chairs:
 - Dr. Garra (Brian.Garra@fda.hhs.gov) or (bgarra@gmail.com)
 - Dr. Hall (tjhall@wisc.edu)
 - Mr. Milkowski (andy.milkowski@siemens.com)
- It was also requested that all phantom study participants send details about machines to be tested to the three co-chairs and RSNA staff
- Consideration is being given to individual sites returning phantoms to Duke (at shipper’s expense) for follow-up inter-phantom measurements
- Up to \$2000 funding for shipping phantoms from Duke to test sites has been approved by the QIBA Steering Committee.

Next Steps:

- All phantom study participants to send details about machines to be tested to the three co-chairs and RSNA staff:
 - Dr. Garra (Brian.Garra@fda.hhs.gov) or (bgarra@gmail.com)
 - Dr. Hall (tjhall@wisc.edu)
 - Mr. Milkowski (andy.milkowski@siemens.com)
 - Julie Lisiecki (jlisiecki@rsna.org)

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