QIBA Ultrasound Shear Wave Speed (SWS) Technical Committee
Friday, August 15, 2014; 11 AM CT
Call Summary

In attendance
Brian Garra, MD (Co-Chair) David Cosgrove, MD Mark Palmeri, MD, PhD RSNA
Tim J. Hall, PhD (Co-Chair) Steven Fick, PhD Nicolas Rognin, MSc, PhD Fiona Miller
Andy Miklowksi, MS (Co-Chair) Gilles Guennette, RDMS, RDCS, RVT Michael Wang, PhD, MASc Julie Lisiecki
Michael André, PhD Ted Lynch, PhD Keith Wear, PhD Madeleine McCoy
Paul Carson, PhD Mike MacDonald, PhD Hua Xie, PhD
Jun Chen, PhD Yasuo Miyajima, MS Jim Zagzebski, PhD
Shigao Chen, PhD Kathy Nightingale, PhD

Moderators: Dr. Garra

Agenda:
1. Review of previous notes/minutes (ALL)
2. Current Project Status
   a. CIRS phantom testing (Palmeri)
   b. UW Phantoms (Hall Palmeri, Nightingale)
   c. Clinical Study (Samir)
3. Further Discussion on Calls in Increase Vendor Engagement with QIBA (Carson, Garra)
   a. Define purpose?
   b. NDAs and Protection—should one person be the point person for these documents?
   c. Who should be contacted?
      -- Which Companies?
      -- Who in Each Company?
      -- Assignment of person in charge of efforts for each company? Get volunteers?
4. Draft Profile (Garra) --- Gathering materials needed: protocol, condensed results from first phantom trial
5. VA participation in QIBA testing? (Garra)
6. RSNA posters, other upcoming presentations (ALL, RSNA Staff) (Poster deadline will be Friday, October 31st.)
7. Other (ALL)

Protocol for the Phantom Study, Phase II
• A protocol including transducer specifications is needed for the Phantom Study, Phase II; users must be blinded
  o Dr. Hall is working on a generic protocol, adaptable for specific systems
  o A provision must be added to the data collection sheet to note that focal depths may vary
  o A 4 ½ cm depth will be specified across all systems, as this is near the focal zone of liver transducers
     ▪ Goal is to make the measurement process robust, replicable and efficient
• Testing is being done on the latest 9 CIRS phantoms sent to Duke last week
  o 3 different recipes have been created to match phase velocity in efforts to simulate a range of liver disease
  o An issue regarding surface discoloration of the phantoms was discussed.
     ▪ A photo of the existing surface discoloration should be taken when the phantom is received and in one week to compare results over time
  o Possible options discussed to best determine sound speed included: de-ionized water, cow’s milk, and saline
     ▪ Dr. Hall to follow up with a recommendation
     ▪ Dr. MacDonald cautioned against using isopropyl alcohol due to possible damage to probes
• Next steps will include validation of a measurement range
  o Sites with both human and raw data will be consulted
  o Identical algorithms and sequences will be used.
• Shipping schedule, sites and systems to be finalized
  o Dr. Hall to consider how best to handle shipping charges
  o Shipments will be limited to the continental US
Initial tests will be performed at Duke to benchmark the phantoms prior to the round-robin shipping
  - At the end of the circuit, tests will again be conducted at Duke to assess stability
  - **Current sites under consideration include:**
    - Massachusetts General – Drs. Samir and Dhyani
    - Southwoods Imaging Center in Youngstown, Ohio - Dr. Barr
    - University of Rochester (NY) – Dr. McAleavey
    - Mayo Clinic – Drs. Chen, Ehman, and Urban
    - Washington DC VA Medical Center – Dr. Garra
    - UW, Madison – Dr. Hall
  - Manufacturers will need to provide sites with a brief written protocol
    - Goal is to calibrate the transducer, decide on which is best to use, and to provide clarity.

**Update from Dr. Samir on Clinical Subcommittee Progress**

- The clinical study has exceeded its target recruitment
- The UPICT web-based reporting form is set up and available for use via REDCap
- A meeting with manufacturer vendors to clarify platform capabilities is in the works for late September
  - Assistance in locating contacts would be appreciated by Dr. Samir: asamir@mgh.harvard.edu

**Profile**

- Dr. Garra is working on a QIBA Draft Profile for Ultrasound SWS; He will get the UPICT protocol from Dr. Samir’s efforts

**Radiology Publication Under Consideration**

- The group was invited to submit a manuscript to *Radiology* for the Phantom Study: Phase I
  - *Radiology* has very strict guidelines for author involvement, and the group wishes to credit all who volunteered
    - Dr. Hall to follow up with the Deputy Editor of *Radiology*
    - If an alternate acknowledgement procedure is considered, potential authors will need to submit a letter agreeing to be acknowledged.
  - For future publications, the group will consider alternate journals

**Action Items:**

- Dr. Hall to circulate list of tasks and proposed timelines to all participating site investigators.
- Mr. Milkowski to update and distribute Excel spreadsheets to sites
- Dr. Palmeri to take a few photos of phantom discoloration and send them to Dr. Lynch for reference
- Dr. Samir to work toward scheduling a conference call with vendor manufacturers in late September

**Upcoming calls – Friday at 11 am CT:**

- **Friday, August 22, 2014:** Systems/Phantom SC – Dr. Nightingale to moderate in Dr. Palmeri’s absence
- **Friday, August 29, 2014:** No call

**Proposed September Schedule:**

- **Friday, September 5, 2014:** No call
- **Friday, September 12, 2014:** Technical Committee – Mr. Milkowski
- **Friday, September 19, 2014:** Systems/Phantom SC – Dr. Wear
- **Friday, September 26, 2014:** Clinical SC – Dr. Samir

**Conferences for Ultrasound** on QIBA Wiki have been updated (as known) for 2014 – 2015. Updates welcome.

**Conferences in September:**

- **September 3 – 6, 2014:** 2014 IEEE International Ultrasonics Symposium – Chicago, IL
- **September 7-10, 2014:** International Tissue Elasticity Conference (ITEC), Snowbird, UT
- **September 17-19, 2014:** 29th Annual Advances in Contrast Ultrasound – International Contrast Ultrasound Society (ICUS) Bubble Conference, Chicago, IL