



**PULSE-ECHO QUANTITATIVE ULTRASOUND
BIOMARKER COMMITTEE**

*Agenda for Friday, May 6, 2022
11:00am – 12:00pm*

Attendees: Ivan Miguel Rosado-Mendez (Co-Chair), Anthony Samir (Co-Chair), Michael Wang, (Co-Chair), Cristel Baiu, Jeffrey Bamber, Paul L. Carson, Anil Chauhan, Yuling Chen, Guy Cloutier, Aaron Engel, Todd Erpelding, Raul Esquivel, David Fetzer, J. Brian Fowlkes, Jing Gao, Joel Gay, Zaegyoo Hah, Timothy Hall, Aiguo Han, Viksit Kumar, Roberto Lavarello, Amy M. Lex, Jonathan Mamou, Stephen McAleavey, Gary Ng, Arinc Ozturk, Theodore Pierce, Michelle L. Robbin, Stephen Rosenzweig, Jonathan Rubin, Paul Sidhu, Timothy Stiles, Michael Thornton, Theresa Tuthill, Xiaohong Wang, Keith Wear, James Zagzebski, Nancy Obuchowski, Hayley Whitson, Firouzeh Heidari, Peter Edmonds

AIUM Staff: Kelly Phillips

TOPIC	COMMENTS	ACTION ITEMS
Introduction	Welcome (AS - 3 min)	
Phantom Study	Update on phantom study a. Summary of prototypes @ Wisconsin (IRM – 5 min) b. Summary of prototypes @ MGH (AO – 5 min) c. Update on manual (FH – 5 min) d. Phantom production (TS/DF – 12 min) i. State of production of initial sets ii. Cost and feasibility of production additional sets of phantoms for the study iii. Estimate of total shipping weight for a single set of phantoms (all phantoms + coupling material + pelican case + ?) e. Updated round-robin calendar (MW – 5 min)	-send feedback on instructions and google forms to Firouzeh by 6/2 -review Round Robin study calendar posted in Basecamp

Work Groups	Work Group Progress Reports a. Attenuation (5 min) b. Backscatter (5 min) c. Sound Speed (5 min)	
Discussion	Open discussion/Adjourn (AS – 10 min)	
NEXT CALL	Date: June 3, 2022 Time: 11:00am, EST	

Phantom Study Updates

IRM – summarized prototypes @ Wisconsin

- Manufacturers are able to meet the design specifications
- Challenges
 - o Our lab:
 - Ramp up measurements after limited access due to pandemic
 - Reconditioning of backscatter setup
 - o Test Cylinders (lollipops/hockey pucks)
 - Heterogeneities in samples, check with scanner upon reception
 - Membranes came off, samples desiccated
 - o Variability with coupling medium
 - Will be confirmed in the following week
 - o Speed of sound in CIRS prototype was 10 cm/s above specifications
 - From previous discussions: addition of oil droplets to bring speed of sound down to 1500 m/s. This should not affect the backscatter coefficient as it will be dominated by scattering for large glass beads
- Overall result – good shape to fabricate the phantoms; remaining issue of the membrane (addressed by Tim and David)

AO – Summarized prototypes @ MGH

- Error message with Fibrosan system
 - o Receive another system or send to Echosens in Boston

FH – gave update on the manual and google forms

- Action Items
 - o WG comments and feedback
 - o Adding instructions for depth-independent attenuation measurements
 - Philips
 - Samsung
 - Siemens
 - Canon
 - E-scopics
 - Mindray
 - o Adding instruction to acquire RF data for backscatter coefficient evaluation

TS – Phantom production update

MW – shared updated Round Robin study schedule

- Some dates will likely change

Work Group Progress Reports

VK – Attenuation WG

- Updated to a minimum ROI size of 4cm – waiting on vendor information
- Updated the phantom study protocol
- Updating the google forms

- Action Items
 - o Waiting for vendor feedback on ROI depth

TT – Backscatter WG

- Work for phantom study
 - o Collection additional info from manufacturers
 - Vendors concerned about sharing RF data
 - Agreement would be handled between the vendor and each site individually
 - o Plan for processing RF data (Aiguo, Guy and Roberto)
 - Awaiting sample data sets

SS – Sound Speed WG

- Measurement protocol/spreadsheet
 - o Imaging manual draft posted to Basecamp
 - o ROI depth, height, and width recommendations resolved for all vendors
 - o Discussion on commitment to store images and data
- Data Acquisition sheet on Basecamp (google form)
 - o Needs to be updated with phantom names
 - o Will have separate site registration form (for device information)
- Manuscript Status
 - o Radiology agreed to review, due date is July 1
 - o All sections on Basecamp for review
 - o Figure legends in progress
 - o Plan to submit after next WG meeting