



**PULSE-ECHO QUANTITATIVE ULTRASOUND
BIOMARKER COMMITTEE**

Agenda for Friday, November 6, 2020

11:00am – 12:00pm

Attendees: Ivan Miguel Rosado-Mendez (Co-Chair), Anthony Samir (Co-Chair), Michael Wang, (Co-Chair), Michelle Alexander, Stephane Audiere, Cristel Baiu, Jeffrey Bamber, Paul L. Carson, Anil Chauhan, Yuling Chen, Guy Cloutier, Chris De Korte, Todd Erpelding, Raul Esquivel, Giovanna Ferraioli, David Fetzer, J. Brian Fowlkes, Jing Gao, Timothy Hall, Aiguo Han, Jean-Pierre Henry, Viksit Kumar, Roberto Lavarello, Tian Liu, Jonathan Mamou, Ravi Manguli, Stephen McAleavey, Kibo Nam, Gary Ng, Soufiane Ouhda, Arinc Ozturk, Theodore Pierce, Beth Rogozinski, Stephen Rosenzweig, Timothy Stiles, Theresa Tuthill, Xiaohong Wang, Keith Wear, James Zagzebski, Nancy Obuchowski

AIUM Staff: Kelly Phillips

AS: Anthony Samir

IRM: Ivan Rosado-Mendez

MW: Michael Wang

TOPIC	COMMENTS	ACTION ITEMS
Introduction	Welcome (MW)	
Work Groups	Work groups progress reports <ul style="list-style-type: none"> • Attenuation WG (VK, AO, RB) • Backscatter WG (AH, RL, TT) • Sound Speed WG (SR, TP) • Phantom WG (TS, DF) 	<ul style="list-style-type: none"> • WG Co-chairs to meet with Phantom group • Sound Speed to discuss range of parameters • Phantom WG to answer NIST survey

Survey Results	Summary of Participation Survey results (IRM)	- Will discuss at each WG meeting this month
Discussion/Comments	Open Discussion	
NEXT CALL	Date: December 4, 2020 Time: 11:00am, EST	

VK: Gave Attenuation WG Summary

- In the process of populating the data from the literature search into a table
- Range of attenuation values 0.5 – 1 dB/cm MHz
- Finalized vendor questions
- Need to coordinate with Backscatter WG
- Need to get in touch with Phantom WG – separate meeting can be set up – up to Phantom group
- IRM suggest that the WG co-chairs attend the Phantom WG call

TT: Gave Backscatter WG Summary

- Discussed if work we're doing merits a publication
- 44 articles in Mendeley
- 1-10 MHz
- Planning to compile assessments into a spreadsheet
 - o TP – created a standardized google form in which data can be exported from; working on a google sheet to track progress of articles
- Would like to interact with Attenuation WG

- IRM: suggests a pair of companion papers – one for technical, one for clinical performance - might be a good strategy – up to the Work Groups

- MW: The main purpose of the literature review is to help us with the first draft of the profile. A publication will be great – being encouraged (QIBA Annual Meeting)

- NO: Mentioned that when doing a literature review, we need to pay attention to test and re-test studies that are seen. Other groups have done meta-analyses to come up with a summary estimate of the repeatability. It is really important to the claims to focus on this.
- PC: wants to request participation from several others – Ivan, Jeff B can reach out

TP: Gave Sound Speed WG Summary

- Finished defining subgroups for literature review
- Developed standardized google form for literature review
- Received additional feedback forms from vendors
- Compiled Mendeley references
- Next Steps:
 - o Come up with tracking sheet
 - o Literature review
 - o Continue adding to Mendeley
- SR – discussed that sound speed is more independent – need to discuss range of the parameters
- TH – Thought about how the sound speed in a medium is changed? Oil and gel dispersion – droplets – could cause a distributed aberration
 - o SR – initial thoughts is a uniform distribution of change of sound speed

TS: Gave Phantom WG Summary

- Converting google sheet and need to share with whole group
- Working to define values for phantoms – how to reduce number of phantoms – work toward more generalized values or range of values
- Discussed 4-5 homogeneous phantoms
- BSC produced by microbeads
- Need a calibrated reference phantom consistent at all sites
- CIRS and Sun Nuclear have offered to produce phantoms
- Scanner manufacturers may be able to provide support for shipping
- Discussed an interlaboratory comparison

- Working Towards:
 - o Work with BM groups to produce specific values for phantoms
 - o Ordering initial set of phantoms for production
 - o Determine plan for shipping phantoms to sites

- MW: Is the plan to have 4-5 phantoms where all biomarkers are varying together?
 - o TS: Yes, to the extent possible – gave a few examples; some concern that varying more than one parameter between a given pair of phantoms could lead to confusion as to what is causing a measure difference – looking at ways to still have the complete range of values but also provide a test within a given pair of phantoms that only had one of the three parameters changing.

- JZ: Pick out 3 or 4 different ranges of steatosis and pick the best acoustical properties from various literature reviews? Can manufacturers make 5?
 - o TS: With 5, could still have 3 phantoms for mild, moderate, severe steatosis and 2 phantoms that vary one parameter at a time

IRM: Deadline of 12/1 – suggest WG discuss percentage of progress towards drafting the profile...leadership will need to apply for extension of deadline