



PULSE-ECHO QUANTITATIVE ULTRASOUND

BIOMARKER COMMITTEE

Agenda for Friday, January 8, 2021

11:00am – 12:00pm

Attendees: Anthony Samir (Co-Chair), Michael Wang, (Co-Chair), Michelle Alexander, Stephane Audiere, Cristel Baiu, Jeffrey Bamber, Tim Bigelow, Paul L. Carson, Anil Chauhan, Shigao Chen, Yuling Chen, Chris De Korte, Aaron Engel, Todd Erpelding, Raul Esquivel, Giovanna Ferraioli, David Fetzer, J. Brian Fowlkes, Jing Gao, Aiguo Han, Jean-Pierre Henry, Viksit Kumar, Roberto Lavarello, Tian Liu, Ted Lynch, Jonathan Mamou, Ravi Managuli, Lori Mankowski-Gettle, Stephen McAleavey, Andy Milkowski, Kibo Nam, Gary Ng, Juvenal Ormachea, Arinc Ozturk, Michelle L. Robbin, Stephen Rosenzweig, Jonathan Rubin, Paul Sidhu, Timothy Stiles, Kai Thomenius, 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) New deadline for profile drafts: March 1, 2021	
Summary of Participation	Summary of PEQUS participation in UITC and AAPM meetings (MW/AS)	

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) 	
Discussion/Comments	Open Discussion/Wrap up	
NEXT CALL	Date: February 5, 2021 Time: 11:00am, EST	

MW: Chairs propose a new deadline for profile drafts is March 1, 2021

RE: Readdress at end of the call

MW: - Upcoming conferences where we could showcase the work of this committee

- UITC Symposium – emphasis on ultrasonic tissue characterization
- AAPM Annual Meeting – organizers on this committee

AS: Both conferences have specific sessions applicable to us – about one hour of time to present at the conferences – need to engage with organizers – overall presentation, then something from each working group

TL: AAPM Director – in charge of imaging – Virtual or hybrid – ultrasound track is 6 hrs - one hour for imaging research, one hour for research education

DF: SRU planning society meeting last night for fall meeting – advocated to talk about liver fat; possibility to talk about this group

Work Group Summaries

Attenuation:

VK: Shared draft document

- Frequency range less than 5MHz was recommended
- MW – consider any other type of confounding factors? Frequency dependence?

- VK – had this discussion, not included in this draft
- AS: consider body wall thickness and how to account for that
- AC: consider perinephric fat presence; liver/size volume
- AS: Suggest comparative measures

Backscatter:

TT: Phantoms

- Round-robin phantoms accompanied by reference phantom
- Circulating backscatter value range document
- Still debating on RF data preprocessing
- Drafting technical aspect of profile
- Organizing literature
 - Put together a google doc for summary
 - Continued discussion on potential publication

KW: reference phantom method is dominant method – manufacturers?

MW: Any contact with Samsung? They may have a method for measuring backscatter on their system

MA (Samsung)– confirmed backscatter method; trying to make a technical connection with Backscatter group

AS: consider interacting directly with the vendors; prepare a survey for the vendors

Sound Speed

SR: Literature review status

- Updated reference spreadsheet to include methodology
- Review forms ongoing
- Reviewed example of draft claims
- Agreement to work on publication in parallel to round-robin study
- Next Steps
 - Complete literature review
 - Review performance of each method
 - Decide on methodologies we will include in claim generation

- Specify goals for starting the round-robin study
 - MW: Spoken to Hologic? They have a method for sound speed.
 - SR: will reach out to them; we have reviewed their method

Phantom

TS: Had special meeting with manufacturers –

- both are producing a set of phantoms to be shared among the sites
- cylinder shape with the same scanning window
- shipping in a pelican style case
- using phantoms as NIST traceable ultrasound phantoms
- ongoing work with BSC: much larger range of possible values than other parameters, frequency dependence issue

- Questions to the backscatter group need to be answered by January 19– posted to Basecamp

- TS: both phantoms would have the same specifications but each manufacturer would be using their own materials; some sites will have both phantoms, not every site (DF) - for cross checking capabilities

PC: Japanese phantom company (Kyoto Kagaku) – prominent in QIBA Japan

MW: Deadline of March could be too soon for some of the work groups

- Consider documenting progress and what we've been discussing
- Groups could use framework of Attenuation group's document to get started

**Asynchronous discussion continued on Basecamp