QIBA Contrast Enhanced Ultrasound (CEUS) Biomarker Committee (BC) Call

Friday, January 12, 2018; 11 AM CT

Call Summary

In attendance			**RSNA**
Mike Averkiou, PhD (Co-Chair)	Madison Gallagher	Zaiyang Long, PhD	Joe Koudelik
Todd Erpelding, PhD, MSE (Co-Chair)	Christian Greis, PhD	Mary (Beth) McCarville, MD	Julie Lisiecki
Paul Carson, PhD	Gerard (Ged) Harrison, BS	Lihong Pan, PhD	
J. Brian Fowlkes, PhD	Kenneth Hoyt, PhD, MBA	Theresa Tuthill, PhD	
Peter Frinking, PhD	Hui Jiang, PhD		

Moderator: Dr. Averkiou

Announcement:

- Dr. Todd Erpelding with Canon Medical Systems (formerly Toshiba Medical) has agreed to serve as a third co-chair for the CEUS BC, leveraging his industry knowledge to aid the group's development

Discussion included:

- Dr. Carson encouraged all CEUS BC members to review the QIBA US SWS Profile – soon to be distributed for public comment
- Dr. Averkiou provided an update on the group's work regarding a standardized protocol for the phantom measurements
- Figure 4 from the RSNA 2017 poster, which demonstrates the time-intensity curve (TIC) analysis from different manufacturers, was reviewed
    - It was determined that the measurements are neither better nor worse when compared amongst scanners
    - The main goal is to develop a standardized protocol
        - The team is working to set the specs of the phantom so that other testers can recreate the same results without evaluating different software, simply to understand the levels of agreement or difference amongst software packages
    - Another question to bear in mind is whether or not observed variations are due to inherent system differences or the *analysis procedures* of those systems
        - A review of the variability of platforms was suggested as well as a review of the times for curve fitting models and how they might perform
        - The issue of phantom recirculation will become important when fitting curves to clinical data but is not critical for phantom data
- The CEUS Profile will focus on the following:
    - Bolus technique using wash-in and wash-out values
    - Clinical emphasis on liver lesions

- Dr. Averkiou mentioned Dr. Lassau's recent *Ultrasound in Medicine and Biology* (UMB) article titled, "Toward a Standardization of US Scanners for DCE-US: Methodology and Phantoms," and noted that her research team is trying to find commonalities amongst scanners, similarly to what the CEUS BC is trying to accomplish

Action Items:

- Dr. Carson asked all CEUS BC members to be prepared to review the QIBA US SWS Profile – to be distributed for public comment in the relatively near future

Ultrasound CEUS BC QIBA wiki page: http://qibawiki.rsna.org/index.php/Ultrasound_CEUS_BC

WebEx Calls:

- **Feb 2:** SWS BC, **Feb 9:** CEUS BC, **Feb 16**: Ultrasound Coordinating Committee

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RSNA Staff attempt to identify and capture all committee members participating on WebEx calls. However, if multiple callers join simultaneously or call in without logging on to the WebEx, identification is not possible Call participants are welcome to contact RSNA staff at QIBA@RSNA.org if their attendance is not reflected on the call summaries.