

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

Friday, January 10, 2020; 11 AM CT

Call Summary

In attendance

Mike Averkiou, PhD (Co-Chair)

Todd Erpelding, PhD (Co-Chair)

Paul Carson, PhD

Brian Garra, MD

Christian Greis, PhD

Luna Hilaire, PhD

Reinhard Kubale, MD

Zaiyang Long, PhD

Nancy Obuchowski, PhD

Nicolas Rognin, MSc, PhD

Douglas Stone, PhD

RSNA

Joe Koudelik

Susan Stanfa

Moderator: Dr. Averkiou

Approval of 12.13.2019 call summary

- The summary was approved as presented

Draft Variability Manuscript Update (Dr. Averkiou)

- Dr. Averkiou provided a brief overview of the group's first manuscript focusing on a variability study. Linearization and curve fitting combinations per scanner used were shown in fig. 2
- Time intensity curve (TIC) data were analyzed three different ways
- Data from four vendor systems were included in tables (2-3) and figures (6-9)
- Four perfusion-related parameters were tested and standardized across multiple software packages
- Measurement variability due in clinical studies needs to be included in the discussion; Drs. Averkiou and Greis to follow up offline regarding "patient variability"
- Dr. Hilaire offered to review and provide feedback within 10 days
- Internal BC review and feedback is encouraged
- Dr. Averkiou to request industry (Bracco) review and approval before submitting manuscript
- Plans to submit soon to *Investigative Radiology* due to the basic science nature of the study, (i.e., study was deemed not clinical enough for a journal such as *Radiology*)
- A future study to examine the variability due to contrast agents (using the same scanner and software package)
- Dr. Averkiou noted that funding (e.g., NIH) was needed to move beyond a volunteer effort and push the field forward

QIBA CEUS Profile Update

- Profile to focus on four areas: protocol, image acquisition, curve fitting and four standard measurement parameters
- Amplitude normalization across systems will be a future focus for the Profile, but funding will be needed
 - If funding not available, amplitude normalization/standardization may need to wait for Profile v2.0
- Drs. Carson and Garra offered to assist Dr. Averkiou offline with the QIBA Profile Template and overall Profile creation process
- QIBA Profile Template available on the QIBA Wiki at: http://qibawiki.rsna.org/index.php/QIBA_Profile_Template

Next steps:

- Dr. Carson to locate Dr. Averkiou's 2019 Bubble Conference presentation for reference
- Drafting the CEUS Profile will begin with assistance from Drs. Carson and Garra

The next scheduled QIBA ultrasound calls will be as follows at 11 am CT:

02/07	SWS BC
02/14	CEUS BC
02/28	US Coordinating Committee, Q1, 11 am CT

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.