

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

Friday, July 15, 2022; 11 AM CT

Call Summary

In attendance

Mike Averkiou, PhD (Co-Chair)

Richard Barr, MD, PhD (Co-Chair)

Todd Erpelding, PhD (Co-Chair)

Paul Carson, PhD

Paul Freiburger, PhD

Zaiyang Long, PhD

Nicolas Rognin, MSc, PhD

Stephanie Wilson, MD

RSNA

Joe Koudelik

Susan Stanfa

Moderator: Dr. Averkiou

Discussion topics

- Review and approval of call summary from June 10, 2022
- CEUS protocol technical note updates

Action items

Technical note publication

- “Recommendations for the Parameters and Imaging Settings for Contrast Enhanced Ultrasound (CEUS) Time-Intensity Analysis: A QIBA Technical Manuscript” was formatted as a special report / letter to the editor and will be submitted to *Radiology*
 - Word count limit is 3,000 words with 300 words dedicated for the abstract – currently at 2,200
 - Online addenda can be used to incorporate more detail, as these do not count against the word limit
 - *Radiology* special reports allow up to 30 authors to be listed (10-12 actual contributors estimated)
- CEUS BC members provided comments
 - Minimum quality curve fitting threshold details to be added to the abstract
 - The introduction needs to be expanded to include more technical justification, feedback welcome
 - Brief summary of how CEUS is performed subjectively today suggested
 - Need to clearly call out the benefits of quantitation, i.e., the clinical value added
 - Suggestion made to reference past CEUS studies performed, but note the lack of reproducibility due to the variability associated with the current techniques used
 - Dr. Rognin confirmed that the minus sign was missing within the curve fitting formula
 - R² numbers needed, based on mathematical support, feedback requested
 - Dr. Averkiou to contact Dr. Nancy Obuchowski, PhD (Cleveland Clinic Foundation) regarding statistical recommendations for R² best fit
 - Examples of good R² curves to be added to the technical note
 - Possible *RadioGraphics* article to be pursued based on quantitative CEUS to demonstrate the differences between good and poor curve fitting procedures
- Dr. Averkiou will directly circulate the technical note to co-authors sequentially, giving each 2-3 days to reply; order to follow:
 - (1) Dr Barr, (2) Dr Wilson, (3) Dr Erpelding, (4) Dr Carson, (5) Dr Long, (6) Dr Rognin, (7) Dr Freiburger
 - Once done, Dr. Averkiou will circulate the update technical note to all CEUS BC members for final feedback
- The focus of the next call will not be on this document and will instead address the return to Profile writing

Action items (ongoing)

- New QIBA Profile Template to be used: focus on Checklist, streamlined introduction, and executive summary
- Suggestions for additional schematics may be sent to Connor Krolak: krolak@uw.edu
- **Endnote:** For reference details in Endnote and Excel formats, please email Connor Krolak at: krolak@uw.edu
- Drs. Barr and Wilson to draft a press release to advocate for the use of US contrast in light of CT contrast shortages and emphasize that CEUS can be used effectively for many of the same applications
- Dr. Fowlkes to work on an announcement advocating for CEUS via AIUM channels
- RSNA staff to link to / share these press releases once available via QIBA LinkedIn and the wiki

Next scheduled calls will be as follows at 11 am CT, unless otherwise noted: [8/12](#); [9/9](#); [10/14](#)

RSNA Staff attempt to capture all committee members participating on Zoom meetings. However, **if attendees join only by phone, or do not use a recognizable name, identification is not possible.** Participants are welcome to contact RSNA staff at qiba@rsna.org if their attendance is not reflected in meeting summaries.

Helpful Resources (QIBA wiki):

- [Profiles](#) | [QIBA Profile template](#) | [How to Write a QIBA Profile](#) | [Claim Guidance](#) | [US Shear Wave Speed Profile](#)

QIBA Process Committee:

Kevin O'Donnell, MSc (Chair): KODonnell@MRU.MEDICAL.CANON | Michael Boss, PhD (Chair): mboss@acr.org

Task Forces for Technical Note Review

Table 1, contrast agents	Imaging settings (Industry experts)	Perfusion Quantification software
Christian Greis, PhD	Todd Erpelding, PhD	Paul Carson, PhD
Connor Krolak	Ged Harrison, BS	Todd Erpelding, PhD
Zaiyang Long, PhD	Hugo Robert, MSc	Hugo Robert, MSc
	Heng Zhao, MS, PhD	Bino Varghese, PhD
		Stephanie Wilson, MD