

QIBA Dynamic Susceptibility Contrast (DSC-MRI) Biomarker Committee (BC) Call

Wednesday, September 11, 2019 at 11 a.m. (CT)

Call Summary

Participants

Ona Wu, PhD (Co-Chair)

Michael Boss, PhD

Nancy Obuchowski, PhD

RSNA

Joe Koudelik

Susan Stanfa

Moderator: Dr. Wu

2019 RSNA Annual Meeting

- A broader, high-level perspective regarding the importance of quantitative imaging (QI) is the goal for 2019
- The modality CCs were asked to develop posters with less text and more images (clean space) and highlight specific use cases for QI (both clinical and research)
- Posters should address why QI is important to RSNA meeting attendees and explain how QIBA is already helping
- Staff to re-send poster guidelines to MR BC Co-chairs as requested
- Discussion re: DSC content to be submitted to all MR CC Co-chairs (Drs. Boss, Elsinger, Rosen and Zahlmann)
 - Dr. Wu to provide Dr. Boss with cross-sectional images of the two different types of phantoms being used for site benchmarking: Static and Digital Reference Objects (DROs) for image analysis
 - Drs. Boss and Rosen to work on layout

DSC Profile Update

- A Google Doc version of the [Profile](#) is available to all DSC BC members (Google Chrome browser recommended)
- Regions of interest – advice was sought on how to address issues with lack of inter-reader reproducibility
 - Recommendation to develop a scenario table to demonstrate coefficient of variation (CoV) based on three main Actors (scanner, reader and image analysis software)
 - Resulting CoV to illustrate the importance of keeping Actors constant, and the negative effects seen when any variability is introduced
 - The table would contain the CoV for every possible scenario to determine the minimal detectable difference/change, e.g., all Actors held constant vs. one, two, or three Actors changed
 - Discussion re: what would be considered real change for differences in human-based ROI vs. an automated approach
 - A Claim for true change would be generic (i.e., contain “x” or “y,” rather than specific CoV values); the Profile user would be referred to the table to select the appropriate value and insert it into the Claim
- Discussion re: the use of DROs in conformance testing
 - Simulated data sets for which gold standard values are known, will be created
 - Details needed regarding assessing software conformance to the Claims, and how users would know if the software is performing within the specifications of the Claim
 - Guidance on testing conformance and details on the process can be found on the [Assessment Procedure Guidance](#) QIBA Wiki page, and information will be copied and pasted into the Profile
 - The DSC-MRI BC needs to determine in which activities each Actor should engage
 - Study that user would be expected to conduct needs to be developed; process for how software would meet conformance needs to be expanded (e.g., SNR number, sample size, etc.)
 - Dr. Wu to make further edits; she will also check how many samples were used

- Reminder that work can be done in parallel on the next draft of the Profile during the public comment phase; release should not be delayed due to unresolved issues
- Dr. Wu needs to confer with Dr. Erickson before adding Dr. Quarles' suggestions based primarily on simulation results

Reminder:

- Please [RSVP for the Dec. 4 QIBA Working Meeting](#) during the 2019 RSNA Annual Meeting
- Please [sign up for the RSNA 2019 MTE Sessions](#) at the QIBA Kiosk:
 - Type in your name next to the presentation time slot that works for you (we encourage that each 30-minute time slot is filled by at least one committee member)
 - Simply close out of the document (there is no save button and changes will automatically save)

Next DSC-MR BC Call: Wednesday, October 9, 2019 at 11 a.m. CT

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