

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

Wednesday, June 8, 2022, at 11 a.m. (CT)

Meeting Summary

Participants

Mark Shiroishi, MD (Co-chair)

Ona Wu, PhD (Co-Chair)

Michael Boss, PhD

Kiran Dhakal, PhD

Sina Nazemi, MD

Yuxiang Zhou, PhD, DABR

RSNA

Susan Stanfa

The following topics were discussed:

- Latest version of the DSC-MRI White paper in [Google Drive](#)
 - Progress update with overview of changes made

Action items

Text to be added to “Limitations” section

- Dearth of literature on DSC (Claim based on a single study: Prah *AJNR* 2015)
- Factors that could limit the reproducibility Claims of this Profile
 - Variability due to differences in institutions, MRI scanners and patients
 - Lack of availability of open source semi- or fully-automated software

“Future Directions” section to be edited

- There is a great need for more test-retest data using lower flip angles (FAs) since the current Profile is based on high FAs of 80° or 90°
 - Logistical and ethical concerns to be addressed, e.g., follow-up scanning on different days with repeat IV placement, the need for repeat GBCA administration and theoretical concerns related to gadolinium deposition
 - With current Claims focusing on reproducibility of DSC-MRI, Dr. Shiroishi to ask Dr. Obuchowski how to address when using a cross-sectional claim in Profile v2.0
- Since achieving Consensus (Stage 2), there have been major advances in this field including the use of low flip angle, and more reproducibility studies have become available
- Dr. Shiroishi to check with Dr. Quarles re: his dynamic bioreactor phantom
- Other initiatives that are focusing on improving reproducibility, e.g., OSIPI, to be mentioned in the paper
- Dr. Boss volunteered to participate in white paper writing efforts
- Though QIBA Leadership is currently discussing renaming stage 3 (the next step for the DSC-MRI BC), referring to it as Technical Confirmation (TC) was advised and an outline of the plan for achieving this will be included
- It was emphasized that the TC Profile is a complete product, i.e., thoroughly vetted and ready for adoption in clinical trials; a strong, consistent message indicating this should be spread across and beyond QIBA
- DSC-MRI BC roster to be referenced for vendor and CRO committee members from whom to solicit perspectives

Next DSC-MRI BC Meeting: Wednesday, July 13, 2022, at 11 a.m. CT

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.