

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

Wednesday, August 10, 2022, at 11 a.m. (CT)

Meeting Summary

Participants

Mark Shiroishi, MD (Co-chair)

Lisa Cimino, RT

Sina Nazemi, MD

RSNA

Susan Stanfa

Ona Wu, PhD (Co-Chair)

Zhaoyang Fan, PhD

Nancy Obuchowski, PhD

The following topics were discussed:

- DSC-MRI White paper
 - Progress update with overview of changes made
 - Profile Activities subsection: Image Analysis
 - Future Directions section

Action items

- Reference to be added to Image Analysis Subsection to support the statement: “The claims are valid for brain tumors with longest in-plane diameter between 1.0 cm and 10.0 cm”
- Dr. Wu to reach out to Process Cmte leaders regarding the procedure for making minor Profile amendments
- Errors in the AUC-TN and K2 Maps Calculation Subsection formula were caused by a formatting issue and will be fixed
- [Reference to be added](#) re: truly dynamic phantoms, e.g., bioreactor phantoms under development by Dr. Quarles
- Suggestion to mention combined DCE/DSC-MRI in Future Directions section, though this may be beyond the focus of the current DSC-MRI Profile
- There is no published literature about the reproducibility of K2 values, even in the Prah paper on which Claims are based
- Dr. Shiroishi to ask Dr. Erickson for references related to the text he had written
- Discussion on including a cross-sectional Claim in the DSC-MRI Profile for clinical implementation
 - Test-retest repeatability and bias would need to be determined, using phantoms to obtain ground truth
 - Because DSC-MRI requires the injection of a GBCA, true test-retest repeatability studies cannot be performed on human subjects since the second injection of a contrast agent within a brief period of time will inherently be acquired under altered imaging conditions
 - Dr. Obuchowski to derive a test and run simulations and will present a memo to Dr. Wu by Aug. 31
 - Directions on proceeding with a cross-sectional Claim will be added to the white paper
- The Future Directions section will include text explaining that new work has been published since the original literature search and updates will be made to the Profile every ~5 years
- Dr. Shiroishi to have a cleaner version of the white paper for review during the Sept. 14 meeting
- Dr. Shiroishi to send Word version to Dr. Wu who will make final edits and export the references to Endnote

Next DSC-MRI BC Meeting: Wednesday, September 14, 2022, at 11 a.m. CT

Zoom link: <https://rsna-org.zoom.us/j/89423374513?pwd=UXJMMmZlRm45UzY5amxNNFNKNUNjZz09>

Meeting ID: **894 2337 4513** | Passcode: **DSC**

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