

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

Wednesday, September 14, 2022, at 11 a.m. (CT)

Meeting Summary

Participants

Mark Shiroishi, MD (Co-chair)

Lisa Cimino, RT

Nancy Obuchowski, PhD

RSNA

Susan Stanfa

Ona Wu, PhD (Co-Chair)

Zhaoyang Fan, PhD

The following topics were discussed:

- DSC-MRI White paper
 - Progress update with overview of changes made
 - Authors and Acknowledgments
- Memo on Critical Ratio for Determining Abnormal by Dr. Obuchowski

Action items

- Including a cross-sectional Claim in the DSC-MRI Profile for clinical implementation
 - Repeatability precision value would need to be determined
 - 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
 - There is no published literature about the reproducibility of K2 values, even in the Prah paper on which Claims are based
- Critical ratio for determining abnormal
 - Minimum difference of AUC-TN needs to be determined to confidently say it is different than normal tissue
 - Lower bound ratio needs to be provided to address cross-sectional Claims for values that are ratios, i.e., if greater than x value, one can be x% confident it is abnormal
 - Three simulations and calculations will be included in directions for proceeding with a cross-sectional Claim, e.g., x voxels = x confidence interval
- To determine true change, the variability in the values among the voxels from a single scan and a single subject would need to be known
- Dr. Shiroishi to request original spreadsheets from Dr. Schmainda to determine what the minimum volume should be, e.g., x voxel
- Dr. Shiroishi to finish white paper draft, send it to Drs. Erickson and Wu for review, then distribute to the main authors for feedback

Next DSC-MRI BC Meeting: Wednesday, October 12, 2022, at 11 a.m. CT

Zoom link: <https://rsna-org.zoom.us/j/89423374513?pwd=UXJMMmZIRm45UzY5amxNNFNKNUNjZz09>

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

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