

QIBA Dynamic Contrast-Enhanced (DCE) MRI Biomarker Committee (BC) Call

Monday, January 6th, 2020 at 11 am (CT)

Call Summary

In attendance

Caroline Chung, MD (Co-Chair)

Hendrik Laue, PhD (Co-Chair)

Michael Boss, PhD

Catherine Coolens, PhD

Harrison Kim, PhD, MBA

Cristina Lavini, PhD

Ho-Ling (Anthony) Liu, PhD

Nancy Obuchowski, PhD

Kyunghyun Sung, PhD

RSNA staff

Joe Koudelik

Susan Stanfa

Moderator: Dr. Laue

Profile Progress

- Prior to the Jan. 6 call, DCE-MRI BC members were reminded to review Section 3 of the latest version of the [Profile](#)
- To prevent making edits to the text itself, feedback was provided using “[Suggested Edit Mode](#)” or comments in the margin
- Over 90% of the accumulated comments/edits have been addressed, but there are specific outstanding discussion points and clarifications needed
- Dr. Lavini to scan the B1 phantom
- Section 2.1: Clinical Interpretation
 - Dr. Laue added missing Claim 2a and 2b examples
 - Protocols and calculations for the 3T study were reviewed; Dr. Obuchowski to review and confirm calculations
 - To avoid having multiple protocol variants on an organ-by-organ basis, recommendation to move imaging requirements for brain and prostate to an appendix
 - Related Brain Claim definition table currently in 3.6.2 to be moved to appendix
 - References for studies from which Claims were derived to be included
- Section 3.3: Pre-delivery
 - Clarification was sought re: intended content for site-qualification vs. pre-delivery and to determine whether to remove this section
 - Dr. Boss suggested that the DCE-MRI BC utilize the text from the DWI Profile in this section
 - Note to be added in discussion section that due to lack of supporting data in the reviewed literature, Open-MRI is not included in the Profile
- Section 3.5: Periodic QA – Phantom and software recommendations still need to be completed
 - Details on accessing the software from the QIBA Data Warehouse (QIDW) are currently included
 - Phantom data should be analyzed in a uniform method using the software developed by QIBA
 - The software can be downloaded from the QIDW at:
<https://qidw.rsna.org/#collection/594810551cac0a4ec8ffe574/folder/5984bc981cac0a4ec8ffe62d>
 - The imaging site should assure that the phantom scan orientation is correct and appropriate image rotations or inversions were performed and documented by the image analysis center
 - A bullet re: phantom imaging for R1 was added, referring the user to Assessment procedure 4.1
 - Example phantoms include the QIBA DCE R1 phantom and the NIST-ISMRM system phantom (or the system phantom lite)
 - Dr. Boss to contact Dr. Stephen Russek at NIST to request status on the NIST phantom-lending service and ask which specific phantom type would be available

- Recommendation that specific phantom information not be included in the Profile until it is confirmed that the lending-program is live
- Dr. Russek to be invited to the Jan. 20 DCE-MRI call
- Ongoing MRI scanner quality control (QC) frequency was revised from “every 3 months” to “after hardware or software changes or annually”
- Additional discussion and updates are needed re: signal stability text; Dr. Laue to reach out to Dr. Lavini
- Section 3.6: Protocol and Reconstruction Design - discussion re: the R1 Mapping sequence subsection
 - To avoid confusion, consistent recommendations needed re: number of recommended flip angles, e.g., between 2 and 7, or “multiple”
 - The table in this section will remain as is, but the discussion text will be updated
- Appendices to be cleaned up prior to the Jan. 20th call
- One or more calls are still needed prior to sending out the Profile for BC and CC votes to release for public comment
- Dr. Chung requested BC members copy and paste comments with references, so they can be looked up and incorporated into the Profile via EndNote

Next call: Wednesday, January 20th, 2020 at 11 a.m. CT (1st & 3rd weeks of each month)

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