

QIBA Perfusion, Diffusion and Flow – MRI Biomarker Committee (BC) Call

Wednesday, January 3, 2018 at 11 AM (CT)

Call Summary

Participants

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| <i>Michael Boss, PhD (Co-Chair)</i> | Dena Flamini, RT (R)(MR)(M) | Nancy Obuchowski, PhD | RSNA Susan Weinmann |
| Peter Bannister, PhD | Jacob Fluckiger, PhD | Mark Rosen, MD, PhD | |
| Orest Boyko, MD, PhD | Xavier Golay, PhD | Yunhong Shu, PhD | |
| Thomas Chenevert, PhD | Daniel Krainak, PhD | Ona Wu, PhD | |
| Caroline Chung, MD | Hendrik Laue, PhD | Robert Young, MD | |
| Amita Dave, PhD | Dariya Malyarenko, PhD | | |

Moderator: Dr. Boss

DCE TF Update (Drs. Laue & Chung)

- Literature review
 - Literature review of brain, head and neck articles were completed
 - This process is tracked in Google Sheets (contact [Dr. Laue](#) or [Chung](#) for the link)
 - Literature reviewers were thanked for their efforts
- The below Claim statements to be updated with new, soon-to-be-published test-retest data
 - Claim 1a: A measured change in K^{trans} of a brain lesion (GBM) of 21.3% or larger indicates that a true change has occurred with 95% confidence
 - Claim 2b: A measured change of K^{trans} of a prostate lesion of 55.7% or larger indicates that a true change has occurred with 95% confidence
 - True change claim (from the DWI TF used as a model)
- Final writing: distributing work
 - Profile writing: PDF-MRI BC members are encouraged to review the DCE Profile Google Doc and add comments by contacting [Dr. Laue](#) or [Chung](#) for the link
 - Subject matter expert volunteers needed to refine Profile sections
 - Responsibility per section:
 - Section 2: Dr. Laue
 - Section 3.1 – 3.4: TBA (probably per subsection)
 - Section 3.5 – 3.8: TBA (probably per subsection)
 - Section 4: TBA
 - Literature search results to be incorporated into the Profile
 - Goal is to complete this Profile draft during 1Q 2018
 - Discussion on FDA announcements and recently-updated text regarding gadolinium agents and safety guidelines
 - Drs. Chung and Wu to compare statements used in the DCE & DSC Profiles for consistency
 - FDA to generate a pamphlet to be distributed to clinical care institutions for patients receiving this contrast agent

- Discussion on how to address breast, prostate and liver biomarkers
 - Intent was to include prostate in Profile, but only two viable sources for citation in DCE Profile were found
 - To address the paucity of test-retest data on brain, a white paper is being written to encourage PIs to submit/publish test-retest data; details of white paper may be included in the DCE Profile
 - Recommendation to move forward with current draft of DCE Profile and expand when additional test-retest information for breast, prostate and liver becomes available; Profiles are living documents that will be updated, e.g., to conform with revised QIBA Profile Templates, new date, etc.

“Importance of Test-Retest Studies in Quantitative Imaging” – White Paper on Reproducibility Study Needs

- This effort, led by Dr. Amita Dave, is motivated by the dearth of published test-retest data and inconsistency in how the data are collected and presented, especially in some sub-modalities like DCE and DWI
- The goal is to standardize how the data are collected, analyzed and reported to be most useful for Claim development across various QIBA Profiles
- This work has been prioritized as a standing item on upcoming PDF-MRI BC call agendas
- The goal is to submit a manuscript for publication in the Journal of Magnetic Resonance Imaging (JMRI) during 1Q 2018; it will be presented to the editors and publication policy/guidelines/requirement information will be requested
- Paper contributors were thanked for their efforts
- Draft to soon be completed and shared with PDF-MRI BC members for review and feedback
- Suggestions/input for whitepaper can be submitted directly to Drs. Boss, Chung or Dave
- Discussion needed offline regarding additional papers for possible publication by JMRI
- While QIBA does not have policy on papers submitted for publication, authors to consult Dr. Jackson to maintain a QIBA consistent message

Upcoming PDF-MRI BC T-cons

- Dr. Boss will not be available to moderate the January 17 t-con; RSNA staff to confirm availability of other PDF-MRI BC Co-Chairs

Next PDF-MRI BC Call: TBD

RSNA Staff attempt to identify and capture all committee members participating on WebEx calls. However, **if multiple callers join simultaneously or call in without logging on to the WebEx, identification is not possible.** Call participants are welcome to contact RSNA staff at QIBA@RSNA.org if their attendance is not reflected on the call summaries.