

QIBA fMRI Biomarker Committee (BC) Call

Wednesday, May 2, 2018 at 11 AM CT

Call Summary

In attendance

Feroze Mohamed, PhD (Co-chair)

Jay Pillai, MD (Co-chair)

David Soltysik, PhD (Co-chair)

Shruti Agarwal, PhD

Cathy Elsinger, PhD

Edward Jackson, PhD

Andrew Kalnin, MD

Flavius Raslau, MD

Jim Voyvodic, PhD

Zhiyue Jerry Wang, PhD

RSNA

Joe Koudelik

Susan Stanfa

Review of Previous Call Summary

- The 04.18.18 call summary was approved as presented

Continued Review of QIBA Checklist: “fMRI Center of Mass Estimation for Pre-surgical Assessment (fMRI-CMA)”

- Discussion on items that need consensus
- The Image Analysis Software Checklist, specifically items in Section 3, Analysis Validation, were reviewed
 - The purpose of the validation section needed clarification
 - The “simple analysis validation” procedure was separated from the “analysis validation: test of precision Claim”
 - Discussion regarding the purpose of the test of precision Claim, which is intended for the user to download two DROs as a simple test to determine if users are able to perform the analysis as described in the fMRI Profile Motor-Mapping Profile 1.0
 - Rewording is needed, as this is not intended to be a bias test of the imaging sites, but rather a test of post-processing software
 - Suggestion to retitle section as: “Procedure validation/ability to perform analysis”
 - Repeatability vs. bias discussed; if results are compared across multiple sites, bias in software may be identified, but that is not the purpose of the procedure
 - Caution not to focus the Profile on bias assessment since there is no bias claim
- The following updates to other items were made:
 - Comparison of CMA: Shall calculate the CMA and compare the CMA locations with the expected location (from DROs)
 - Compare CMA repeatability: Shall calculate the within-subject standard deviation of the CMA coordinates from the two DROs
 - Compare CMA site repeatability: Shall calculate the within-subject standard deviation of the CMA coordinates from the subjects
- Item added to Radiologist/Scientist Checklist section 3.5.2: Paradigm Specifications & Design: Real time or near real time assessment of signal activation while at the scanner console
 - Acceptable: Offline processing before the patient leaves the scanner
 - Ideal: Monitoring during performance and the results of the task during the scan
- Dr. Soltysik to update section 4.5.1 and appendix and send to Dr. Mohamed
- After last changes made by fMRI BC core members, the checklist will be distributed to the wider fMRI BC membership

Remaining Topics for Discussion

- Remaining work for Profile 1.0
- Plan for Profile 2.0
- Plan for member engagement efforts
- How to achieve groundwork efforts in the absence of NIBIB funding through QIBA; the fMRI BC may need to move beyond standardization issues and analyze existing data or collect new data

Next calls:

- QIBA fMRI Bias TF call – Tuesday, May 8, 2018 at 1 PM CT
- QIBA fMRI Biomarker Committee call – Wednesday, May 30, 2018 at 11am CT [will not meet on May 16 due to QIBA Annual Meeting]

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