

QIBA fMRI Biomarker Committee Call Summary
Wednesday, September 23 at 11 AM CT
Call Summary

In attendance

Ted DeYoe, PhD (Co-Chair)

Jeffrey Petrella, MD (Co-Chair)

James Reuss, PhD (Co-Chair)

Thomas Chenevert, PhD

Cathy Elsinger, PhD

Edward Jackson, PhD

Jedidiah (Jed) Mathis,

Feroze Mohamed, PhD

Nancy Obuchowski, PhD

Jay Pillai, MD

David Soltysik, PhD

Zhiyue Jerry Wang, PhD

Kirk Welker, MD

Yuxiang Zhou, PhD, DABR

RSNA

Joe Koudelik

Susan Weinmann

Moderator: Dr. Reuss

Review of Previous Call Summary

- The September 9 call summary was approved as presented

Profile Development (Dr. Mohamed) - MEETING FOCUS

- Drs. DeYoe and Mohamed rewrote some parts of Section 3 to clear-up outstanding issues
- Numbers to be included in tables will be derived from the DRO project and reproducibility study
- Beginning work on Section 4 (conformance) – group feedback needed for items to add
 - Key items to include are “head motion” and “SNR”
 - Center of mass explanation to be included
 - Dr. Obuchowski volunteered to help with the test-retest piece
- References need to be added
- There was discussion on whether software tools should be used to evaluate head motion and SNR-related metrics
 - Once ROI measurement is obtained, center of mass will not be difficult to calculate
 - Making software fully automated would be a challenge
 - There was discussion on how to draw ROI
 - Freehand drawing around activation area
 - Use ROI of activation and expand
 - Software needs to have generic capabilities that will be specified in appendices
 - Let the users use their own software for motion conformance, to achieve acceptable motion parameters specified in the Profile

- Additional discussion on conformance occurred:
 - For conformance procedure, sites will take their own data and make measurements to see if they are compliant
 - Need to duplicate method used to get reproducibility measurements
 - Intermediary conformance measurements needed regarding a center-of-mass identification procedure
 - Conformance measurements would be done on phantom data, not patient data
 - The conformance estimation will be done on Actor data, e.g., sites, technologists, clinicians, software, scanners, etc.
 - Sub-items in the conformance section may be assigned to different actors
 - Add site assessment in regard to having appropriate bold-imaging sequences
 - to be conformant, a site needs to have necessary sequences to do the study

Next Steps:

- Dr. Mohamed will rearrange sections and tables based upon the feedback provided by fMRI BC members
- Focus will be on getting Profile in place, then working on appendices, including technical details
- Key Profile editors will meet offline on Friday, Sept 25th
- Dr. Mohamed to send Profile to RSNA staff for distribution to Drs. Obuchowski and Zhou
- fMRI BC members encouraged to send references to Dr. Mohamed for inclusion in the Profile
- Finalize list of fMRI BC members actively participating in the development of the Profile to be included in the Profile
- Dr. Welker to submit data on temporal SNR stability over time to Dr. Mohamed
- Dr. Chenevert to check fBIRN guidelines
- Goal is to get a complete, rough document with all of the elements in place
- RSNA staff to circulate literary references

Next calls:

- QIBA fMRI Bias TF call - Tuesday, September 29 at 10am CT
- QIBA fMRI Biomarker Committee call - Wednesday, October 7 at 11am CT