

QIBA fMRI Biomarker Committee Call Summary
Wednesday, September 9 at 11 AM CT
Call Summary

In attendance

Ted DeYoe, PhD (Co-Chair)

James Reuss, PhD (Co-Chair)

Cathy Elsinger, PhD

Edward Jackson, PhD

Andrew Kalnin, MD

Dariya Malyarenko, PhD

Feroze Mohamed, PhD

Nancy Obuchowski, PhD

Jay Pillai, MD

David Soltysik, PhD

James Voyvodic, PhD

Zhiyue Jerry Wang, PhD

Kirk Welker, MD

Yuxiang Zhou, PhD, DABR

RSNA

Fiona Miller

Susan Weinmann

Moderator: Dr. Reuss

Review of Previous Call Summary

- The August 26 call summary was approved as presented

Round 4 Project Status Update (Drs. DeYoe, Voyvodic and Pillai)

- Dr. DeYoe and Pillai submitted their progress reports
 - RSNA staff will distribute the combined progress report to all members of the fMRI BC
- Dr. DeYoe's project examined the effects of motion on the Profile claim regarding center of mass
 - Only a single type of motion correction was studied, so there is more to be done on this topic in the future
 - DRO data containing realistic task signal and noise variability (including motion, performance, and NVU sources of variance) will to be uploaded to the QIDW
 - It was suggested that the group reopen the conversation on what should be uploaded to the QIDW
 - The deliverable of finalizing the comparison of fMRI analysis methods with specification of optimized methods for the fMRI Profile was completed with modification
 - All deliverables were completed, except for the comparison of fMRI analysis methods for coping with NVU
 - Dr. Jackson stated that when BC chairs approve and sign off on reports there are sometimes changes in deliverables, and that "best efforts" component factors in
 - There was discussion regarding original goals for the DRO project
 - DROs were generated to examine the following:
 - How motion with DROs compare to motion with a human subject
 - Determine parameter space for head motion to be explored
 - Quantifying variance

- Acceptable standards as determined with use of DROs
- The group will return to this discussion after they have had a chance to read the progress report that will be distributed by RSNA staff

Profile Development (Dr. Mohamed)

- Dr. DeYoe explained that acceptable values determined in the DRO project can be entered into the Profile
- SNR numbers will come from additional analyses that will be provided by Dr. DeYoe
- Dr. Mohamed will look through fBIRN guidelines in order to find relevant statements regarding the acceptable amount of noise
- ACR and fBIRN guidelines will be referenced
 - <http://www.birncommunity.org/resources/supplements/fbirn-recommendations-for-multi-center-fmri-studies/supplement-iv-fbirn-quality-assurance-program/>
 - <http://www.birncommunity.org/resources/supplements/fbirn-recommendations-for-multi-center-fmri-studies/supplement-iii-fbirn-scan-parameters/>
 - <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3349791/pdf/nihms342930.pdf>
- Dr. Welker has data on temporal SNR scanner stability over a one year timeframe

RSNA 2015 Poster

- The fMRI BC will move forward with its poster relating progress in using DROs to provide direction for Profile development
- The poster will show how DRO results are informing values referenced in the Profile
- The poster needs to be submitted to RSNA by Friday, October 30 if it is to be included in RSNA print order

Next calls:

- QIBA fMRI Bias TF call - Tuesday, September 15 at 10am CT
- QIBA fMRI Biomarker Committee call - Wednesday, September 23 at 11am CT