

# QIBA fMRI Biomarker Committee (BC) Call

Wednesday, September 6, 2017 at 11 AM CT

Call Summary

## In attendance

*Jay Pillai, MD (Co-chair)*

*James Reuss, PhD (Co-chair)*

Cathy Elsinger, PhD

Nancy Obuchowski, PhD

David Soltysik, PhD

James Voyvodic, PhD

Zhiyue Jerry Wang, PhD

## RSNA

Joe Koudelik

Susan Weinmann

## Review of Previous Call Summary

- The 8.23.2017 call summary was approved as presented.

## Assessment of DRO specifications and creation – update on Round-1 Project (Dr. Voyvodic)

- Ongoing interpretation of site results needed with PIs
- In the process of evaluating results from different sites, Dr. Voyvodic has discovered issues in regard to methods different sites have used to create their data
  - Nine different analyses have been performed on data from eight different sites
  - Each site was sent twenty different DRO tasks
  - Dr. Voyvodic sought to learn the extent of variability in the results of clinical activation when analyzed by different clinical sites
  - While there was similarity in regions of activation across sites, intensity of activation varied
  - Standard activation for different exams are quite different across sites
  - AMPLE normalization greatly reduced variability and makes results appear similar, both across sites and within sites
    - Dr. DeYoe's Wisconsin data was the result of using a different algorithm
    - There is a straightforward, objective way to reduce variability using AMPLE
  - There were differences in the degree to which particular sites performed smoothing, which caused activation to spread into neighboring voxels
  - Clustering can have similar effects on activation as smoothing, but without the spread into adjacent voxels
  - Variability across smoothing and clustering methods to be compared
  - It is possible to control for the fact that different sites use different methods
  - Understanding how results vary in regard to threshold and analysis methods and their relation to normalization can be investigated if truth is known
  - Discussion needed with contributors on the interpretation of results across sites and comparison to ground truth
  - Dr. Voyvodic to recalculate the results by the end of the week
  - Data to be reanalyzed when the best method for determining truth is established
  - Results and findings will be drafted for publication

- Discussion on efforts to assemble contributors to discuss results
  - Dr. Voyvodic has reached out specifically to individuals whose data had gaps and has been awaiting their responses regarding availability for a call
  - Dr. Voyvodic to re-analyze the data and poll contributors when updated results are ready to be presented
  - Drs. Soltysik, Pillai, Welker, DeYoe, Wang, et al. to be included

### **RSNA 2017 Annual Meeting Posters**

- Each Biomarker Committee will have the opportunity to produce one poster
- RSNA staff sent out poster focus, specific guidelines, and options for printing and installation to all QIBA BC Co-Chairs
- To maintain topic uniformity across all posters, content should address each of the following:
  - Organizational structure updates
  - Profile development status
  - Profile impact/implications for clinical trials and patient care (new content for 2017)
  - Conformance procedure update (if applicable)
  - Groundwork project status/results
- After some discussion, a collective decision was made by the group that the fMRI BC would create a poster for RSNA 2017 in accordance with the above-mentioned guidelines, and mention was made of need to incorporate QIBA year 5 project results into the poster.
- Volunteers are needed to provide content for this poster
- Suggestion made to include poster development as agenda item on upcoming calls
- RSNA staff will print, ship, and install posters if a print-ready PowerPoint file is received by October 31, 2017

### **Profile 1.0 Status: Energizing review**

- RSNA Staff sent a public comment announcement reminder to 1,000+ QIBA members, 100+ sister associations with original Sept deadline
- Dr. Pillai reached out to ASFNR Executive members as well as the lead author of the ASFNR white paper for additional feedback
  - Dr. Mohamed to reach out to key contacts at ISMRM and possibly OHBM
  - Suggestion to extend public comment period to mid-October to allow for ASFNR membership feedback (expected during and immediately after the ASFNR annual meeting on October 9-11)
    - Plan for in-person appeal at ASFNR Oct 2017 (especially fMRI study group section)
      - Dr. Reuss to bring attention to the need for Profile review/comment and answer questions
      - Speakers/moderators to be asked to announce that the fMRI Profile 1.0 has been released for public comment
    - After the public comment period ends and all feedback has been addressed, the fMRI BC and MR CC will vote to publish the Profile as Stage 2: Consensus, as specified on the QIBA Wiki at: [http://qibawiki.rsna.org/index.php/QIBA\\_Profile\\_Stages](http://qibawiki.rsna.org/index.php/QIBA_Profile_Stages)
    - Discussion on ways to publicize Profile once in Consensus stage; suggestion to include information on the RSNA Annual Meeting poster (QIBA Kiosk area)

## Profile 2.0 Language Mapping

- Literature search is underway; searches can be annotated and articles posted at:  
<https://drive.google.com/drive/folders/OB6So9x1DSqdaZG1NbG5IbHNCU3c?usp=sharing>
  - To request editing privileges, contact: [qiba.fmri@gmail.com](mailto:qiba.fmri@gmail.com)
  - fMRI BC members were encouraged to add other search strategies to the fMRI Google Drive folder and to visit the fMRI Language Profile to add comments

## Next calls:

- QIBA fMRI Bias TF call – Tuesday, September 12 at 1 PM CT
- QIBA fMRI Biomarker Committee call – Wednesday, October 4 at 11am CT [Sept. 20 reallocated to Q3 MR CC call]

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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](mailto:QIBA@RSNA.org) if their attendance is not reflected on the call summaries.

## SAVE-THE-DATE:



QIBA Working Meeting at RSNA 2017 | Wednesday, November 29, 2:30-6 pm – Lakeside Center

RSVP at: <http://tinyurl.com/2017-QIBA-Working-Meeting!>