QIBA fMRI Biomarker Committee (BC) Call
Wednesday, December 17, 2019 at 11 a.m. CT
Call Summary

In attendance		**RSNA staff**
Feroze Mohamed, PhD (Co-chair)	Shruti Agarwal, PhD	Joe Koudelik
Jay J. Pillai, MD (Co-chair)	Ho-Ling (Anthony) Liu, PhD	Susan Stanfa
David Soltysik, PhD (Co-chair)	Jim Voyvodic, PhD	

Review of Previous Call Summary
- The 11.20.2019 call summary was approved as presented

Profile
- A decision was made to address laterality index (LI) methodology within the Profile
- It was noted during the Nov. 6 fMRI BC t-con that resting-state-based LI may be prone to errors and is generally not as reliable as task-based
- Determining regions of Interest (ROI) was deemed the most pressing decision; past discussion indicated that fMRI BC members may be more interested in regional ROIs (e.g., Broca's and Wernicke's areas) vs. global
- LI threshold to be established
    - It was noted that there is a debate in the literature re: the absolute value cutoff for dominance determination; 0.2 was cited as a reasonable threshold for language
- Methodology and supporting literature to be defined; data to support a LI Claim are also needed
- Suggestion to base Profile v2.0 on already-published data collected by Drs. Pillai and Voyvodic; re-analysis of data based on a 95% confidence Claim would require additional time and resources and delay progress
- There is tremendous variability across different language paradigms; tasks with consistent or meaningful results to be chosen
    - Sentence and word generation tasks yield very similar results for center-of-mass and laterality
    - More than one language task can be used if they agree; recommendation to begin with only tasks for which the same Claims can be developed
    - Dr. Pillai's 2011 paper based on a study that compared relative effectiveness of six different commonly used language fMRI activation paradigms was referenced
        - Findings indicated that silent word generation yielded good results for lateralization, but rhyming tasks were the best
- It was concluded that word generation and sentence completion tasks for which Pillai and Voyvodic have data will be used in this Profile; the next focus will be on Claim development based on said tasks
- Discussion re: whether to include both whole hemispheric and regional ROIs; whole hemisphere deemed nonreproducible, therefore, a corresponding Claim cannot be developed
- Dr. Voyvodic to revise and resubmit his motion DRO article for publication to another journal; *Neuroimage* reviewers criticized the absence of modeling spin-history artifacts
- Dr. Liu continues his work on the development of Profile v2.0
    - The basic draft has been completed, with text copied and pasted from Motor-Mapping Profile v1.0
    - Dr. Liu to send the Word doc to staff for distribution following the call

Next Steps
- fMRI BC members were encouraged to send studies on laterality that would aid in additional discussion to Dr. Soltysik
- There will not be a call on Jan.1, New Year's Day; the group will reconvene on Jan. 15th

Next call: Wednesday, January 15th, 2020 at 11 a.m. CT (1st & 3rd weeks of each month)

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