QIBA fMRI Biomarker Committee (BC) Call

Wednesday, March 4, 2020 at 11 a.m. CT

Call Summary

In attendance			**RSNA staff**
Feroze Mohamed, PhD (Co-chair)	Ichiro Ikuta, MD, MMSc	Nancy Obuchowski, PhD	Joe Koudelik
David Soltysik, PhD (Co-chair)	Andrew Kalnin, MD	Judd Storrs, PhD	Susan Stanfa
Michael Boss, PhD	Anthony Liu, PhD	Jim Voyvodic, PhD	

Review of Previous Call Summary

- The 02.19.2020 call summary was approved as presented

Profile

Neurosynth, a platform for large-scale, automated synthesis of functional magnetic resonance imaging (fMRI) data, can be used for a literature search on language studies

- o The group looked specifically for studies involving sentence completion and word generation
- o This resource also includes ROI maps available for download

- Benjamin, CF, et al. **Presurgical Language fMRI: Mapping of Six Critical Regions.** *Human Brain Mapping*. 2017; 38:4239–4255.
    - o Discussion re: whether language areas outside of Broca's/Wernicke's (B/W) would be considered helpful if B/W's laterality is unclear
    - o A white paper was referenced that recommends sentence completion, silent word generation and verb generation language tasks as they are the three most commonly used language tasks

- Recommendation to omit areas in ROIs that are not believed to be language-related
    - o Assess the probability of co-lateralization of the six areas
    - o Lateralization decisions to be based on B/Ws, if they are there
    - o Large regions will be included if they co-lateralize
    - o It was noted that no single ROI will be able to meet all Claims (multiple needed)
    - o Neurosynth will be referenced to estimate Broca's ROI

- Hsu AL, et al. **Presurgical resting-state functional MRI language mapping with seed selection guided by regional homogeneity**. *Magn Reson Med*. 2019 Dec 2. doi: 10.1002/mrm.28107. [Epub ahead of print]
    - o Staff to distribute the paper following the meeting
    - o Dr. Liu, an author, explained the methodology; he agreed to send to Dr. Voyvodic, the MA mask obtained from Neurosynth on 13 May 2019 using the term "language," resulting from 1101 studies

- fMRI BC Co-chairs were encouraged to update milestones and accomplishments in the QIBA Dashboard prior to the March 5 MR CC call
    - o Dr. Mohamed to confirm with Dr. Elsinger whether all fMRI Motor-Mapping Profile v1.0 public comments were addressed
    - o Pursuing Consensus (Stage 2) for Profile v1.0 not clear; further BC discussion needed
    - o Process advice to be sought from the MR CC re: editing the Dashboard to reflect the shift in efforts from v1.0 to fMRI Language-Mapping Profile v2.0, which has increased engagement and renewed momentum
    - o Dr. Mohamed to complete updates to the BC Dashboard; Drs. Mohamed and Soltysik will update the MR CC during its March 5th call

Next call: Wednesday, March 18, 2020 at 11 a.m. CT (1st & 3rd weeks of each month)