

QIBA fMRI Biomarker Committee (BC) Call

Wednesday, January 15, 2020 at 11 a.m. CT

Call Summary

In attendance

Feroze Mohamed, PhD (Co-chair)

Jay J. Pillai, MD (Co-chair)

David Soltysik, PhD (Co-chair)

Shruti Agarwal, PhD

Mai-Lan Ho, MD

Ping Hou, PhD

Andrew Kalnin, MD

Ho-Ling (Anthony) Liu, PhD

Jim Voyvodic, PhD

Yuxiang Zhou, PhD, DABR

RSNA staff

Joe Koudelik

Susan Stanfa

Review of Previous Call Summary

- The 12.18.2019 call summary was approved as presented

Discussion re: Dr. Voyvodic's Motion DRO Article

- Dr. Voyvodic to revise and resubmit his motion DRO article for publication; *Neuroimage* reviewers criticized the absence of modeling spin-history artifacts
- Feedback and advice were sought re: block equations, spin-history and image intensity related to T1 relaxation times at $\frac{1}{2}$ TR
- A few thousand example DRO simulations including spin-history will be run
- Dr. Soltysik to email papers on this topic to Dr. Voyvodic, including: Muresan L, et al. [Automated Correction of Spin-History Related Motion Artefacts in fMRI: Simulated and Phantom Data](#). 2005; 52(8):1450-60.

Language-Mapping Profile Literature Review

- Dr. Pillai brought the following paper for discussion: Unadkat, et al. [Functional MRI Task Comparison for Language Mapping in Neurosurgical Patients](#). 2019; 29(3):348-356.
 - Task comparison paper – does not include reproducibility or ground truth data/details
- The following paper is based on a study that compared relative effectiveness of six different commonly used language fMRI activation paradigms: Pillai and Zaca. [Relative utility for hemispheric lateralization of different clinical fMRI activation tasks within a comprehensive language paradigm battery in brain tumor patients as assessed by both threshold-dependent and threshold-independent analysis methods](#). 2011; 54(Suppl 1):S136-45
- Consensus was that word generation and sentence completion tasks for which Drs. Pillai and Voyvodic both have data will be used in this Profile

Next Steps

- Discussions on literature and Wada testing (intracarotid sodium amobarbital procedure (IAP)) to resume during the next call
- Profile v2.0 writing to continue

Next call: Wednesday, February 5th, 2020 at 11 a.m. CT (1st & 3rd weeks of each month)

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