

## QIBA fMRI Biomarker Committee (BC) Call

Wednesday, October 6, 2021, at 11 a.m. (CT)

### Call Summary

#### In attendance

*Feroze Mohamed, PhD (Co-chair)*

*Jay Pillai, MD (Co-chair)*

*David Soltysik, PhD (Co-chair)*

Shruti Agarwal, PhD

Cathy Elsinger, PhD

Andrew Kalnin, MD

Anthony Liu, PhD

Nancy Obuchowski, PhD

Judd Storrs, PhD

James Voyvodic, PhD

#### RSNA staff

Joe Koudelik

Julie Lisiecki

RSNA Staff attempt to capture all committee members participating on Zoom calls. However, if attendees join only by phone, or do not use a recognizable name, identification is not possible. 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.

#### Review of Previous Call Summary

- The 09.15.2021 call summary was approved as presented

#### fMRI Language-Mapping Profile v2.0 Profile

- BC members discussed suggested edits to sections 3.6, the Physicist Checklist, and 3.7, the Technologist Checklist
- Technologists typically perform tests using the geometric phantom and alert physicists if there is an issue
- Stability testing is typically performed annually
- There is a built-in QA procedure on the Siemens scanner, though the security key does not allow technologists to perform the QA testing
- Stability is the most common and important issue to check regularly, and annual testing may not be sufficient
- Vendors are more interested in making updates if they see a pattern of change in the tracking data over time
- Establishing action limits for tests is needed to alert users of issues, similar to the [AAPM-100](#) procedure
- The [Weisskoff paper](#) was referenced for assessing MR scanner stability
- It was agreed that the following elements should be added to the checklist as part of the annual site QA procedures; sites should monitor and evaluate the following longitudinally:
  - Ghosting
  - Signal-to-noise ratio (SNR)
  - Stability
  - Geometrical distortion
- Further consideration is needed regarding additional useful phantom testing
- The QIBA DWI-MR ice-water phantom was deemed helpful for susceptibility testing
- Dr. Liu indicated that the uniform phantom would likely be sufficient, though more phantom detail should be added to the checklist
- Dr. Storrs to add explanatory text to the Appendix regarding the details for stability testing requirements

#### Next steps:

- Review of suggested edits to Sections 3.6 Physicist Checklist, 3.7 Technologist Checklist, and 3.8 Image Analyst Checklist to be continued

**Next call:** Wednesday, October 20, 2021, at 11 a.m. CT (1<sup>st</sup> & 3<sup>rd</sup> weeks of each month)