

QIBA fMRI Biomarker Committee (BC) Meeting

Wednesday, December 7, 2022, at 11 a.m. (CT)

Meeting Summary

In attendance

Feroze Mohamed, PhD (Co-chair)

Jay Pillai, MD (Co-chair)

David Soltysik, PhD (Co-chair)

Shruti Agarwal, PhD

Andrew Kalnin, MD

Nancy Obuchowski, PhD

Judd Storrs, PhD

James Voyvodic, PhD

RSNA staff

Susan Stanfa

Review of Previous Meeting Summary:

- The 11.16.2022 meeting summary was approved as presented

Topics Discussed:

- 2022 RSNA Annual Meeting Quantitative Imaging Symposium sponsored by QIBA
- Whether fMRI can be used longitudinally

Next Steps / Action Items:

- Modality QIBA breakout session discussion during the 2022 RSNA annual meeting focused on simplifying and streamlining protocols. Other topics included:
 - Focus has been on Profile adoption by CROs rather than use in clinical trials
 - Certification for sites that conform to a Profile
 - DWI BC update and discussion re: whether metrics are cross-sectional or longitudinal
- The fMRI Profile is based on intrasubject repeatability, which is directly related to longitudinal assessments
 - Claim is based on test-retest scans and verifying whether the values are reliable for that individual; a greater than 5% change detected in one of the metrics in a longitudinal study would be true change
 - Metrics in this Profile are locations (language regions of interest) and the significance of a change in a location is unclear
 - The goal would be to expand beyond location as a metric in terms of laterality and looking at relative strengths; in that context, it might be worth considering longitudinal measurements
 - The critical part of the Profile is the application of QA criteria to identify whether a scan meets the Claims; it is not based on performance, but rather on getting BOLD activation (the signal)
 - Regarding the two language tasks used by Dr. Voyvodic in his language-mapping study, his data suggested that in subjects ages 6 – 90, semantic language areas were activated, and scans were reproducible
 - If a scan meets the Profile's QA criteria, one can be 95% confident that the results for lateralization and localization are within the Claim values
- **Work on the Profile will resume during the Dec. 21 meeting**
- **The first Profile draft deadline had been extended to January 1, 2023**
 - **It will then be circulated for BC review and a vote-to-release for Stage 1: Public Comment**
 - **MR CC vote-to-release will follow**

Next meeting: Wednesday, December 21, 2022, at 11 a.m. CT (1st & 3rd weeks of each month)

Join Zoom Meeting: <https://rsna-org.zoom.us/j/87552084926?pwd=eU9MWGV6a3JWRHlkZ0wzdEZsK3JoQT09>

Meeting ID: 875 5208 4926 | Passcode: fMRI

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