

QIBA fMRI Reproducibility Work Group Call
Tuesday, September 18, 2012 at 11 AM CT
Draft Call Summary

Participants

James Voyvodic, PhD (Chair)

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Paper Presented and Discussed (Dr. Soltysik)

- *Head-repositioning does not reduce the reproducibility of fMRI activation in a block-design motor task*

Citation:

- Soltysik DA, Thomasson D, Rajan S, et al. **Head-repositioning does not reduce the reproducibility of fMRI activation in a block-design motor task.** *Neuroimage*. 2011 June 1; 56(3): 1329–1337. doi:10.1016/j.neuroimage.2011.03.023 (publicly available through NIH)

Summary

- Dr. Soltysik had been tasked with examining the feasibility of fMRI to be used as a biomarker
- Investigation to support this possibility included looking at reproducibility in fMRI head-repositioning
- Nine subjects were evaluated for head-repositioning:
 1. In the first five subjects, head positioning was static between fMRI scans, while finger tapping tasks were performed
 2. In the remaining four subjects, head repositioning within the magnet was done before each scan.
- No significant difference found between the stabilized or repositioned group
- Coefficient of variation was calculated for four metrics
 1. the distance from the anterior commissure to the center of mass of sensorimotor activation
 2. maximum t-statistic
 3. activation volume
 4. average percent signal change
- These values were compared for both stabilization runs and -repositioning runs.
- Head repositioning was not seen to significantly affect the reproducibility of fMRI activation

Next steps

- Final QIBA/NIBIB project reports due RSNA from Drs. DeYoe, Voyvodic, and Pillai
- Group to discuss areas of focus for next year's projects
- Poster for **RSNA 2012** assignments: Drs. DeYoe, Voyvodic, and Pillai; **draft to be presented to Technical Committee on 9/26 call**

Next calls:

QIBA fMRI Technical Committee, [Wednesday, September 26, 2012 at 11 am CT](#)

QIBA fMRI Reproducibility Working Group, [Tuesday, October 2, 2012 at 11 am CT](#)