

QIBA PET Myocardial Blood Flow (MBF) Biomarker Committee (BC)

Monday, September 25, 2023, at 10 am CT

Call Summary

Notes derived in part from Dr. Moody's slides

In attendance

Jonathan B. Moody, PhD (Co-Chair)

Ian S. Armstrong, MPhys, MSc, PhD

Charles Hayden, BS, MSEE

RSNA Staff

Nancy Obuchowski, PhD

John O. Prior, MD, PhD

Julie Lisiecki

Moderator: Dr. Moody

Discussion

- Reviewed updates to sections 3.6, 3.7, and 3.8
- Started discussion for section 3.9

Profile updates

- Reviewed subject handling, radiopharmaceutical requirements, and vasodilator administration
 - Special multi-port catheter and needle are used that do not impede flow of either substance
 - Preferred location is antecubital and IV site should be contralateral to any pacemaker
 - Bracco's newer system has flush capability
- Section 3.9 – Image Data Acquisition requirements
 - Rubidium injection is administered with a built-in 20 second delay before the scan begins for synchronized flow
 - Prefer iterative reconstruction to deal with noise of short timeframe images
 - Motion correction frame-by-frame for shorter frames
 - Using shorter frames will reduce variability
 - Consider field of view for attenuation correction and potential patient movement
- Reconstruction
 - Temporal sampling of the frames is an aspect of reconstruction

Continue discussion on next call

- Section 3.9 (Image Data Acquisition and Reconstruction)
 - Image filtering
 - PSF modeling
- O¹⁵ water radiopharmaceutical recommendations needed from Dr. Harms
- Minimum requirements to meet the claim and best practices

Paper

- BC members plan to draft a paper primarily on meta-analysis of test-retest data
- Dr. Obuchowski will be asked to review statistical aspects

New / ongoing action items: (please strike if complete)

- BC members welcome to comment re: transition plans to the [Future Direction of QIBA Activities Form](#)
- All – consider other papers that may have supportive data
- Dr. Moody to draft publication based on Dr. Obuchowski's meta-analysis on MBF repeatability
- Dr. deKemp to craft a bias table and review the linearity plot, looking at K¹ vs. flow values
- Dr. deKemp to approach [ASNC](#) regarding future administrative support
- Dr. Moody to work on a DRO model; will look at QIBA work with DCE-MRI
- Dynamic phantom scan protocol in Section 4 Assessment Procedures to be fine-tuned by Dr. Moody

Next call: Oct. 9, 2023, at 10 am CT (2nd & 4th Mondays) | **Future calls:** 10/23, 11/13, 11/20, 12/11, 12/18

QIBA Process Committee Resources

- **Process Committee Leaders:** [Kevin O'Donnell, MASC](#) (Chair) | [Michael Boss, PhD](#) (Co-Chair)
- **Wiki Resources:** [Dashboard](#) | [Profiles](#) | [QIBA Profile template](#) | [How to Write a QIBA Profile](#) | [Claim Guidance](#)
[Vetting requirements](#)
- **Other:** [QIBA Webpage](#) | [QIBA Wiki](#) | [QIBA Biomarker Committees](#) | [QIBA Organization Chart](#) | [Dropbox](#)
- **EndNote:** To obtain access to the RSNA EndNote citations, please email: sstanfa@rsna.org.