

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

Monday, November 20, 2023, at 10 am CT

Call Summary

*Notes derived in part from Dr. Moody's slides*

### In attendance

Rob deKemp, PhD (Co-Chair)

Jonathan B. Moody, PhD (Co-Chair)

Ian S. Armstrong, MPhys, MSc, PhD

Hendrik Johannes (Hans) Harms, MSc, PhD

Nancy Obuchowski, PhD

Jennifer Renaud, MSc, BEng

### RSNA Staff

Julie Lisiecki

**Moderator:** Dr. Moody

### Profile updates

- Profile section 3 draft completed – reviewed with the group
- Appendix D – PET/CT model specific recommendations
  - PET data acquisition protocols
  - Image reconstruction protocols
- Section 4 – Assessment Procedures
  - Dynamic PET accuracy and sensitivity for rubidium-82
  - Turku 2023 on GE DMI (JNC)

### Next steps

- Make certain rationale is covered for all three tracers: rubidium ( $^{82}\text{RB}$ ),  $^{13}\text{N}$  ammonia, and  $^{15}\text{O}$ -water
- Dr. Moody to incorporate model-specific recommendations for image acquisition and reconstruction to Appendix D
- Clarify motion correction in Table 3.8.2
- Ms. Renaud to work on the rubidium assessment procedure and edit the phantom protocol
- Dr. Moody to work on the checklist

### Paper

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

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

- Proposed inclusion of summary table of known standards values for reference to save time for users
- All – consider other papers that may have supportive data
- Dr. deKemp to draft a checklist for multi-center trial in Canada to see if sites can conform to the Profile
- 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  $K^1$  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:** Dec. 11, 2023, at 10 am CT (2<sup>nd</sup> & 4<sup>th</sup> Mondays) | **Future call:** 12/18 (ad hoc, TBD)

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### QI Sessions and Activities at RSNA 2023 (McCormick Place, Chicago)

- *Building a Quantitative Imaging Research Study*, Tues., Nov. 28, 2023, from 11 am to 12pm CT. [Room S405](#). ([T4-RCP19](#))
- *2023 QI Symposium: Sponsored by QIBA: Quantitative Imaging in the Era of Artificial Intelligence: Opportunities and Needs*, Wed., Nov. 29, 2023, from 2 to 4 pm CT. [Room E253AB](#).

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### QIBA Process Committee Resources

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

Zoom chat notes, 11/20/2023:

10:24:43 From Jennifer Renaud To Everyone:

- Gould's imaging protocol: <https://www.sciencedirect.com/science/article/pii/S1936878X11005110?via%3Dihub>
  - 7 min: 2 min arterial input data, 5 min tissue data
- All of his latest articles seem to refer back to this one for the protocol.

10:37:08 From Jennifer Renaud To Everyone:

- Turku O-15-water dynamic range paper:
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9345842/>