

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

Monday, August 22, 2022, at 9 am CT

Call Summary

In attendance

Rob deKemp, PhD (Co-Chair)
Jonathan B. Moody, PhD (Co-Chair)
Martin Lodge, PhD
Nancy Obuchowski, PhD

RSNA Staff

Julie Lisiecki

Moderator: Dr. Moody

The following topics were discussed:

- Image analysis software product validation plan
- Examination of software repeatability
- Proposed Digital Reference Object (DRO) for testing

Decisions / Action items:

- Software minimum baseline requirements would include:
 - Mean flow
 - Mean values
 - Minimum values
 - QC metrics
- Would need to test the quantitative capabilities of kinetic modeling
- Sampling of dynamic series of images
- Motion correction capabilities
- [Dr. deKemp](#) to contact colleagues, Drs. Prior and Sergey Nesterov
- [Dr. Moody](#) to work on a DRO model; will look at QIBA work with DCE-MRI
- DROs test absolute quantification – not repeatability
- A DRO that is fully automated, reliable, and reproducible is needed
- Three versions of a proposed DRO would include a different defect in one of the vascular areas
 - There are 6 FDA- approved cardiac quantification software programs available; four use compartment models and two use retention models, indicating a lack of uniformity among software programs
 - [Syngo Via MBF – Siemens](#)
 - [CVIT – ImagenQ](#)
 - [HeartSee™](#), CardiacPET -Bracco
 - [Emory Cardiac Toolbox™](#) (ECTb™)
 - [INVIA 4DM](#)
 - [Cedars-Sinai](#) Quantitative Diagnostic Software Group (QUAD) - QPET
- [Dr. Moody](#) to try to generate a dynamic DICOM series that can load into a commercial product

Ongoing action items:

- [Dr. deKemp](#) and [Dr. Lodge](#) to review reference materials provided by [Dr. Moody](#) regarding [GitHub](#) and [Manubot](#)
- Review and consensus needed for Sections 3.3 Product Validation, 3.4 Periodic QA, and 3.7 Pharmaceutical Administration
- Dynamic phantom scan protocol in Section 4 Assessment Procedures to be fine-tuned by [Dr. Moody](#)

Next Call: [September 12, 2022](#), at 9 am CT (2nd and 4th Mondays) at 9 am CT

Parties interested in joining the [QIBA LinkedIn](#) page for QIBA updates should visit: <https://www.linkedin.com/company/rsna-qiba>

Process Committee

- **QIBA Process Committee Leaders:** [Kevin O'Donnell, MASC](#) (Chair) | [Michael Boss, PhD](#) (Co-Chair) <mailto:mbooss@acr.org>
- **Wiki Resources:** [Dashboard](#) | [Profiles](#) | [QIBA Profile template](#) | http://qibawiki.rsna.org/index.php/QIBA_Profile_Template [How to Write a QIBA Profile](#) | http://qibawiki.rsna.org/index.php/How_to_Write_a_Profile [Claim Guidance](#)
- **Inventory of QIBA tools:** [QIBA LinkedIn page](#) (please join / follow) | [QIBA News](#) | [QIBA Community](#)
- **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.