QIBA PET Myocardial Blood Flow (MBF) Biomarker Committee (BC)
Monday, March 22, 2021 at 9 am CT
Call Summary

In attendance		RSNA Staff
Robert deKemp, PhD (Co-Chair)	Timothy J. Hall, PhD	Joe Koudelik
Marcelo Di Carli, MD (Co-Chair)	Nancy Obuchowski, PhD	Julie Lisiecki
Jonathan B. Moody, PhD (Co-Chair)	Richard Wahl, MD, FACR	

Moderator: Dr. deKemp

Discussion

- Calculation method for Within Subject Coefficient of Variation (WCV) metrics
  - This involves measuring each patient and calculating the variance and then dividing by the mean
  - Want to know if variance is increasing with the mean
  - Repeatability coefficient divided by 2.77 (includes 1.96 and the square root of 2)
    - This equation should give the estimate of the coefficient of variation for a single measurement
    - Initial focus would be on day-to-day variability
- Other measurement related discussion:
  - There is agreement at rest but not stress
  - Flow reserve measurement is dependent on stress measurement, and maximum flow under stress is an important parameter
  - Variability in peak stress flow as well as the stress flow / rest flow ratio
  - Some biases cancel one another out; perhaps reproducibility between centers would be better
- Some of the papers in the literature search have only reported standard deviation numbers as absolute values, though these data could be used to provide rough estimates
  - If there are patients with a range of values, this would not be a good approach
  - Variance will increase as the mean increases
- Different-day data are probably the most relevant, though if not enough data are available, will need to use what is available
- Two sets of "coffee-break" style scans using pharmaceutical stress tests were discussed as potentially helpful
- Dr. Obuchowski stressed the importance of using a single measurement convention, such as WCV or WSD
- The WCV will be used to craft a longitudinal claim with different-day data (most relevant) though it is OK to include additional data (same-day)
  - Stress and reserve data are also important, as are the variability effects of statin use
  - Various variables change the blood flow at rest and at stress, which creates potential confounders

Action items:
- Dr. Moody to separate out the "same-day scan" papers with dual stress
- Dr. deKemp to follow up with Dr. Obuchowski re: stress and reserve data

Next Call: April 12, 2021 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
- All Profile Editors are encouraged to join the QIBA Process Committee to learn about QIBA writing tips and processes and network with other Profile Editors to exchange best practices

Contact information for QIBA Process Committee Leaders:

- Kevin O'Donnell, MASc (Chair) | Michael Boss, PhD (Co-Chair)

QIBA Wiki Resources:
- Dashboard updates | Profiles | QIBA Profile template | How to Write a QIBA Profile | Claim Guidance

Inventory of QIBA tools:
- QIBA LinkedIn page (please join / follow) | QIBA News | QIBA Community (discussion board)

Other: QIBA Webpage | QIBA Wiki | QIBA Biomarker Committees | QIBA Organization Chart | Dropbox

EndNote: To obtain access to the RSNA EndNote citations, please send an email request to: sstanfa@rsna.org.