QIBA PET Myocardial Blood Flow (MBF) Biomarker Committee (BC)
Monday, October 11, 2021, at 9 am CT
Call Summary
Additional notes provided by Dr. Moody

In attendance	**RSNA Staff**
Jonathan B. Moody, PhD (Co-Chair)	Julie Lisiecki
Michael Boss, PhD	
Nancy Obuchowski, PhD	

Moderator: Dr. Moody

Discussion
- For rest MBF models, the two same-day levels of the "test.retest" variable (same-day-one-injection, same-day-two-injections) should be combined since no stress agent is involved
- The set of rubidium models ("tracer" fixed to R82 and "stressor.2" fixed to VAS) has the most complete data across "pet.scanner.2" and seemed the most appropriate to report
  - The squared difference between multi-day and same-day-two-injection wCV estimates were similar for rest and stress MBF, which may provide an estimate of the "physiological" component of variability
  - MFR wCV was not associated with "subject.status", "test.retest", or "pet.scanner.2".
- Indicator matrices for each measurand showing which variables may be appropriate for wCV multivariable models were added to the MetaAnalysis document. Red and green blocks indicate which pairwise chi-squared tests failed or succeeded, respectively.
  - Dr Obuchowski noted that even when the chi-squared test succeeds, empty cells in the contingency tables cause ambiguity and indicate a lack of information for multivariable modeling
  - Multivariable models will instead need to be developed for fixed levels of predictors that have sufficient data
  - Mosaic plots of the data were briefly discussed as a possible guide to selecting appropriate variables

Action items for Dr. Obuchowski
- At rest – table 8 – to combine two "test.retest" same-day categories: one estimate and one confidence interval
- At stress – add secondary variables to current rubidium model with primary variables
- MFR – single pooled estimate and confidence interval
  - Can add secondary variables also
- Review the initial mosaic plots to help decide if they will be useful to guide variable selection, or for presentation to justify our variable selection choices

Other details
- Within-subject coefficient of variation (wCV) estimate may be pooled for MFR
- Myocardial Blood Flow (MBF) at rest – based on the current model with primary variables, try adding the secondary variables to the model
- MBF at stress – based on the current model with primary variables, try adding the secondary variables to the model
- MFR – try model adding the secondary variables

Action items:
- Dr. Moody to follow up with co-chairs re: updates
- Dr. Obuchowski to make updates as discussed on the call

- Dr. deKemp to look for methodology papers to support the cross-sectional claim (based on bias and precision)

Next Call: October 25, 2021, at 9 am CT (2nd and 4th Mondays) at 9 am CT

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Process Committee
- 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
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