

QIBA PET-Amyloid Biomarker Committee

Friday, June 12, 2020 at 9 AM CT

Call Summary

In attendance:

Dawn Matthews, MS (Co-chair)

Clara Ferreira

Nancy Obuchowski, PhD

RSNA

Joe Koudelik

Satoshi Minoshima, MD, PhD (Co-chair)

Adriaan Lammertsma, PhD

Richard Wahl, MD

Julie Lisiecki

Anne Smith, PhD (Co-chair)

Moderator: Ms. Matthews

DRO Update

- Much progress has been made for the DRO with collaborative help from Dr. Pierce and Mr. Byrd at the University of Washington
- The DRO was analyzed with a mixture of commercial and academic research software
 - Compatibility with the Profile description was evaluated, and potential updates were explored
 - There is flexibility to tailor the DRO as needed; white vs. gray matter ratios can be increased or adjusted to make the DRO results appear more like a typical scan would be seen in the real-world
 - The BC is very close to having a workable, very representative DRO and complete Profile
 - Simulated DRO data with the original patient MRI scans would be helpful for reference
- A main goal of the DRO model is to establish SUVR linearity and have a realistic noise level
- As long as the SUV can be set each for region including cerebellar WM and GM, it is possible to estimate change and mimic values that would be generated in the cerebellum
- If cerebellar WM and GM SUVs are fixed like the WM cerebral regions are, this would allow manufacturers to use both cerebellar and pure WM regions as the reference regions – what is mostly done today
- With recent Tau advances and given the flexibility of the DRO generation, it could be easily modified for Tau testing

Profile Updates

- Some Profile updates (e.g. the graphs in Appendix F) will be updated/added for 3 reference regions:
 - Pure cerebral WM
 - Whole cerebellum (GM and WM)
 - Pure cerebral GM
- The SUVRs generated from the 6 different DRO volumes by forming the ratio of the target region to one of the above reference regions will have different slopes (SUVR measured vs. SUVR “truth”), since the reference regions above will have different SUV values
 - This also assumes that the “true” target region value will be the simulated cerebral GM value for the given DRO volume
- No changes will be required to the conformance steps

Action items

- Dr. Smith or Ms. Matthews to add a note in the Profile indicating that the data are simulated to ensure that no questions are raised pertaining to HIPAA regulations
- Ms. Matthews will send updated SUV values to Dr. Pierce and Mr. Byrd

Next Steps (ongoing)

- Ms. Matthews to get in touch with Drs. Minoshima and Wahl regarding site testing
 - Actor-specific checklists to be distributed to participating sites
 - Ms. Matthews may also contact Drs. Sunderland and Subramaniam

QIBA Nuclear Medicine Schedule:

07/10	PET Amyloid BC @ 9 am CT	08/14	PET Amyloid BC @ 9 am CT
07/17	FDG-PET BC @ 1 pm CT	08/21	FDG-PET BC @ 1 pm CT
07/24	NM Leadership @ 9 am CT – TBD	08/28	NM Leadership @ 9 am CT – TBD
		Aug	NM Coordinating Ctte – TBD