

QIBA PET Amyloid Teleconference: 13Feb2015

Working notes (Perlman)

List Items by these groupings

- Claim
- Subject Prep / Scan Acquisition
- Site Qualification
- Image Analysis
- General / Other

Subject Prep/Scan Acquisition

- For longitudinal claim with multi-time point acquisition, what is the allowable variance of tracer uptake time (in minutes)?
Will this be tracer specific? – **probably so.**
 - Consider minimum start time
 - Consider +/- mins at fup depending upon baseline
- Identify and list any confounding subject events (Section 3.1.2.2)
- Need text about frame acquisition setup and summation of frames (e.g. for exclusion of motion affected frames) – (Section 3.2.1.2)

Site Qualification

- Scanner Qualification – Phantom(s) – Is Hoffman phantom **alone** sufficient? **Probably so**. Or is there also need for use of uniformity/resolution recovery phantom? **Would add ability to have z-axis uniformity check. Also, consider need for SUVr check. Availability / practical issue – mechanism to address?**
- **Phantom results analysis – possibly automated (e.g. matlab). . . . Consider use of QIDW to ‘house’ submissions for analysis?**
Consider: Since ratio of SUVs is measurand, then perhaps uniformity calibration check is not necessary.
- Method or strategy to quantify or otherwise assess for reconstruction artifact
- Can FDG DRO be used until such time that Amyloid Brain DRO is ready for prime time? **Depends upon the objective of it’s use.**

Image Analysis: Current Pathways

- Ensure that the framework allows for some variation in the order of steps performed for image analysis as long as consistency in a subject for longitudinal claim and consistency across subjects in a given trial.

Example is whether an SUVr image is created prior to measuring values in target regions of interest, or whether target regions and reference region(s) are measured and then one or more SUVr images are created.

- Allow for flexibility in definition of anatomic site for reference (e.g. pons, cerebellum, white tissue, combination) which may be on a tracer specific basis and which may depend upon the application (cross-sectional or longitudinal analysis).

Image Analysis: Informative only

- Include discussion of partial volume correction in context of latest reported findings
- Include discussion of Centiloid and put in context.
- Offer an *optional* framework that allows for full dynamic modeling and recognizes the limitations of SUVr approaches while maintaining SUVr as the primary focus of the guidance for practical reasons.

General /

- Will there be (or need to be) tracer specific claims?
- Create a Source document (or at least listing of items to be included on one) to capture exam specifics (e.g. tracer related items)
- Consider including discussion re: what is burden of proof necessary to demonstrate that SUVr reflection of amyloid burden is validated comparable to relationship with binding potential.