

QIBA SPECT Task Force
Friday, March 20, 2014, 9 AM (CT)
Call Summary

In attendance:

Richard Wahl, MD (Moderator)
Marojeet Bhattacharya, PhD
Yuni Dewaraja, PhD
John Dickson, PhD
Eric Frey, PhD
Paul Kinahan, PhD, FIEEE
Michael King, PhD, DABR

Richard Laforest, PhD
Michael Lassman, PhD
Michael Ljungberg, PhD
Robert Miyaoka, PhD
P. David Mozley, MD
Aaron Nelson, MD
Dennis Nelson, PhD

Nancy Obuchowski, PhD
Eric Perlman, MD
John Seibyl, MD
Anne M. Smith, PhD
Daniel Sullivan, MD
Zsolt Szabo, MD, PhD
Brian Zimmerman, PhD

RSNA

Joe Koudelik
Julie Lisiecki

Moderator: Dr. Richard Wahl

Discussion Topics

- Dr. Seibyl summarized the current state-of-the-art in quantitative SPECT dopamine imaging citing two major multicenter initiatives involving standardization procedures for quantitative Ioflupane SPECT: the EANM normal database project and the PPMI study (Parkinson's Progression Marker Initiative). Both involve use of anthropomorphic striatal calibration phantoms for technical standardization across cameras, central processing of raw projection data, and rigorous VOI sampling strategy to determine specific binding ratios. This tissue ratio has been vetted to some extent with pk modeled outcomes and reproducibility. There is more data for beta CiT than Ioflupane regarding quantitative validity.
- What unmet needs exist, and what groundwork to pursue for a quantitative Profile
- What data there are regarding test/re-test quantitative SPECT analyses
 - Numbers needed to help provide a sense of repeatability of the method and help to draft a Profile and claim
 - Whether or not there is something viable to pursue for a claim
- Reviewed cross-sectional vs. longitudinal claim language challenges with DaTscan
- Absolute, or relative, claim, with normalization to the other side, or to a reference brain region were reviewed, although extensive literature exists, to some extent validated regarding the value of specific binding ratios (SUVr – 1) as outcome measure offering certain advantages for regional striatal assessment of DAT density.
- Use of an I-123 phantom was also considered as well as the special issues of 123-I with its roughly 2% high energy emissions.
- Discussion to continue on next call regarding quantitative steps needed for dosimetry
- On next call, Dr. Dewaraja will review the data on organ dosimetry with Tc99m, in part based on her work on the MIRD committee.
- On a future call, the criteria for categorizing the Quantitative SPECT domain as a “biomarker” per QIBA definitions will be reviewed, in anticipation of securing that designation.

Upcoming Nuclear Medicine Calls (Fridays, 9 am CT):

- **March 27** – PET Amyloid Biomarker Ctte
- **April 3** -- FDG-PET Biomarker Ctte

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