

QIBA Nuclear Medicine Update Call
FDG-PET/CT, Amyloid, and SPECT BCs combined

26 February 2016 at 9 AM CT

Draft Call Summary

In attendance:

Eric Perlman, MD - Moderator (Co-chair, Amyloid BC)

Anne Smith, PhD (Co-chair, Amyloid BC)

John Sunderland, PhD (Co-chair, FDG-PET BC)

Scott Wollenweber, PhD (Co-chair, FDG-PET BC)

Yuni Dewaraja, PhD (Co-chair, SPECT BC)

Biomarker Committee Members:

Orest Boyko, MD, PhD

Terry Brown

Howard Higley, PhD

Edward Jackson, PhD

Abhinav Kumar Jha, PhD

Paul Kinahan, PhD

Martin Lodge, PhD

Larry Macdonald, PhD

Robert Miyaoka, PhD

Nancy Obuchowski, PhD

Amy Perkins, PhD

Pierre Tervé, MS

Jean-Luc Vanderheyden, PhD

Richard Wahl, MD

John Wolodzko, PhD

RSNA

Joe Koudelik

Julie Lisiecki

Agenda

1. Round 5 project brief process updates (project status / timeline check) – *Project PI's as available*
2. Profile status updates – *BC leadership*
3. Round 6 Project discussion – *all members*
4. QIBA Impact (and tracking deliverables)
5. QIBA Annual meeting preparation(s)

1. Project Updates:

- Update on: *A Procedure to Facilitate Greater Standardization of PET Spatial Resolution* – Dr. Lodge
 - This test may satisfy the QC requirement for The Joint Commission's new uniformity and resolution measurements
 - It may be applicable beyond QIBA – as a test for calibration accuracy and uniformity for Quality Assurance and spatial resolution
 - One more trial is needed on a Philips scanner – Dr. Kinahan volunteered to help with this request
 - Dr. Perlman suggested that this project might be an example of "QIBA impact" on the imaging community, if it can be tied to The Joint Commission's QC requirements in some way
- Update on: *A PET-Metabolic Tumor-Volume-Digital Reference Object (PET-MTV-DRO)* – Dr. Kinahan
 - More information will be available for the March 4th FDG-PET BC call

2. Profile Status Updates:

- The first version of the SPECT Profile is 75% complete – with an estimated completion in the 2nd quarter, 2016
- The PET-Amyloid Profile is undergoing re-draft for final internal BC review, estimated completion by March 15, 2016
 - A public list of reviewers is under development
- The first version of the FDG-PET Profile was completed in December 2013, and the group is now working on the **next** version – to be informed by results from Dr. Turkington's Round-4 feasibility testing / manufacturer review
 - Revision with suggested changes will be made available for internal review by the BC – prior to the 3rd quarter, 2016
 - The group hopes to publish the Profile at that time

3. Round 6 Project Discussion – Request for Proposals

- A change to the application template for Year 6 is as follows:
 - PIs must indicate which NIBIB objective categories the proposal will address / respond to (objectives are listed on the proposal form for reference)
 - PIs must indicate how proposed groundwork will advance their **Profile** and / or **conformance** specification completion and implementation
- Possible topics discussed by BC were as follows:
 - **FDG-PET:**
 - Site-conformance activity
 - Collaboration for test-re-test (understanding that human subjects cannot be funded)
 - A PET-MRI collaboration was also discussed
 - Dr. Perlman suggested inviting an MR volumetry expert as a guest speaker for the April NM BC t-con to discuss the possibility of an Alzheimer's PET/MR collaboration
 - **PET-Amyloid:**
 - Phase II phantom / DRO updates
 - Feasibility Test – Collaboration with ADNI proposed –engage the same imaging sites used suggested
 - Checklist for the Profile, similar to the one developed for FDG-PET

- SPECT:
 - Phantoms / DROs
 - Construction of fillable phantoms
 - Construction of non-fillable solid phantoms (e.g. Tellurium-based from NIST, et al)
 - Develop DRO
 - Gaps in knowledge
 - How many counts are enough?
 - How do you know what x-ray tube current is needed for attenuation correction?

4. QIBA Impact & Tracking Deliverables

- A “dashboard” spreadsheet is being used by Dr. Perlman to track activities and project status for the BCs
- A Google Doc prepared by Dr. Jackson is being used by scientific liaisons to update project statuses and QIBA citations for their respective groups
- QIBA goal should be to demonstrate patient outcomes based on quantitation

5. QIBA Annual Meeting Preparation(s)

- A scheduled call for April 15th (SPECT BC), which falls the day after the QIBA Annual Meeting may be rescheduled for April 22nd, if co-chairs agree
- All who will be attending the QIBA Annual Meeting are asked to consider the impact of QIBA – and showing its value
 - Benefits of quantitative imaging vs. qualitative only
 - Imaging site conformance
 - Short term: publications, phantoms, DROs, software tools, process

Nuclear Medicine Calls (Fridays, 9 am CT):

Biomarker Committees:

- Mar 04: FDG-PET BC
- Mar 11: Amyloid BC
- Mar 18: SPECT BC
- Mar 25: Combined NM BCs (?)

Conferences:

- Mar 2-6: ECR (European Congress)
- Mar 5- 8: AAPM
- Mar 8-10: SPIE

SPECT Task Forces: (Tuesdays at 2 pm CT)

- Mar 08: Quantitative / Image Analysis – *Drs. Miyaoka and Seibyl*
- Mar 15: Phantoms / DRO Group – *Drs. Dickson and Zimmerman*
- Mar 22: Clinical / Literature Review – *Dr. Seibyl*

Daylight Saving Time

- Begins for US & Canada on March 13th
- Begins for Europe on March 27th