

QIBA SPECT Biomarker Committee (BC)

Friday, September 25, 2015, 9 AM (CT)

Call Summary

Amended 10/2/2015

In attendance:

Yuni Dewaraja, PhD (Co-Chair)

P. David Mozley, MD (Co-Chair)

Anna Celler, PhD

John Dickson, PhD

Albert Guvenis, PhD

Hidehiro Iida, DSc, PhD

Edward Jackson, PhD

Paul Kinahan, PhD, FIEEE

Michael Lassmann, PhD

Robert Miyaoka, PhD

Nancy Obuchowski, PhD

Eric Perlman, MD

Anne Smith, PhD

Daniel Sullivan, MD

Brian Zimmerman, PhD

RSNA

Joe Koudelik

Julie Lisiecki

Moderator: Dr. Mozley

Discussion Topics

- Minor edit needed in the previous call summary regarding the work with Technetium in the body ($\frac{1}{2}$ step behind the I-123 effort); Dr. Iida to be added to previous roster for attendance
- SPECT BC to focus on the following topics:
 1. Target to background ratio
 2. Absolute value – “SPECT-UV” as named by Dr. Wahl and colleagues
 3. Absolute fraction of injected dose in a unit volume of the image
- To move forward with Profile development, the SPECT Biomarker Committee would like to form smaller topic-specific Profile Task Force Groups
- The following Task Force categories were suggested:
 1. Literature Review: led by Dr. Seibyl; focus on a cross-sectional claim for I-123
 2. Claim Formulation
 3. Clinical
 4. Quantitative
 5. Phantoms/ DRO
 6. Image Processing
 7. Image Analysis
 8. Conformance (aka compliance)
- Volunteers for each of the Task Forces are sought. Responses may be sent to jlisiecki@rsna.org.
 - It was noted that smaller task forces are better for more cohesive teams
- Dr. Dickson expressed interest in working with striatal phantoms or possibly the TESLA phantom for DaTscan
 - Which phantom would best suit the purpose of the research remains undetermined
 - Drs. Dickson and Klein are collaborating on a bulleted outline for I-123 in the brain to be shared with the group
 - Phantom research will be complicated by the need to keep organs and isotopes separate
- Parallel research leading to separate Profiles to take place as follows:
 - I-123 in the brain (Effort #1)
 - Quantitative Technetium-SPECT Profile (Effort #2, a half-step behind)
 - Radio Therapy (Effort #3, $\frac{3}{4}$ step behind)
 - It is important to aim for products that may be easily applied to general practice at a minimally acceptable level
 - Task forces will be working with phantoms and DROs to determine requirements to achieve Profile claims that are ideal, on target, and the minimum acceptable for meeting conformance standards
 - Dr. Kinahan thinks it may be possible to modify the FDG-PET DRO for SPECT use
 - Dr. Sunderland will be consulted regarding adaptability for a physical phantom
- Dr. Zimmerman gave a brief overview of NIST physical calibration phantoms
 - More time will be allotted for Dr. Zimmerman to present NIST phantom innovations on a future SPECT BC call.

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

- **Oct 2:** FDG-PET Biomarker Ctte
- **Oct 9:** Amyloid Biomarker Ctte
- **Oct 16:** SPECT Biomarker Ctte
- **Oct 23:** **Combined Nuclear Medicine BCs** (*FDG-PET, Amyloid, SPECT*)
- **Oct 30:** Optional call for poster developers, if needed

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