

## QIBA FDG-PET Biomarker Committee (BC) Call

02 June 2017 at 9 AM CT

### Call Summary

#### In attendance:

John Sunderland, PhD, MPH (co-chair)

Scott Wollenweber, PhD (co-chair)

Terry Brown

Howard Higley, PhD

Paul Kinahan, PhD

Jeff Kolthammer, PhD

Adriaan Lammertsma, PhD

Martin Lodge, PhD

Nancy Obuchowski, PhD

Amy Perkins, PhD

Eric Perlman, MD

Anne Smith, PhD

Mitsuaki Tatsumi, MD

Timothy Turkington, PhD

Richard Wahl, MD, FACR

Jeffrey Yap, PhD

#### RSNA

Joe Koudelik

Julie Lisiecki

**Moderator:** Dr. Sunderland

#### Highlights from the QIBA Annual Meeting Breakout Session

- Dr. Turkington reviewed preliminary results for reproducibility on the scanner level using simple phantoms to reveal variability
  - These results may be used to determine QIBA performance criteria
- Dr. Lodge discussed phantom advanced reconstruction techniques and their impact on quantitative measurements
- Progress was made on moving toward an FDG claim-confirmed status
  - A partnership with ECOG-ACRIN has been proposed

#### Round-6 Project Update (Dr. Lodge)

- An interesting finding from Dr. Lodge's studies was that as tumor volume decreased, SUV numbers increased
- This could imply incorrect results for tumor measurements based on  $SUV^{\max}$
- The problem seemed to be alleviated by using  $SUV^{\text{peak}}$ , which showed a huge reduction in bias with  $SUV^{\max}$ 
  - This eliminated the opposite trend with Point Spread Function (PSF)
  - Goal is quantification for an optimally filtered version of the image

#### Moving the FDG-PET/CT Profile to [Claim Confirmed](#)

- The BC hopes to partner with ECOG-ACRIN in order to test performance of the claim with functional validation
  - The Profile is in Stage 3; the Technically Confirmed stage
  - It is possible that Stages 4 and 5 (claim and clinically confirmed) could be combined if conditions allow
  - Looking at patient data with reproducibility and the use of advanced reconstruction techniques may be helpful in trying to secure an improved coefficient of variation
  - Questions regarding whether a cross sectional claim should be considered remain, as well as whether or not the BC should try for a claim confirmed Profile
  - It was noted that the larger the sample size, the tighter the confidence interval would be
- At present, no decision has been made; agreements with ECOG-ACRIN would need to be reviewed and confirmed
- A draft proposal will be prepared prior to the next BC meeting for discussion

#### Action items (ongoing)

- Draft proposal for ECOG-ACRIN
- Dr. Obuchowski to follow up with Dr. Sunderland regarding citations for the clinical trial study
- Dr. Kinahan to follow up with potential authors regarding authorship for the proposed *Radiology* article
- Drs. Sunderland, Subramaniam, and Wollenweber to draft a poll for scanner manufacturers to determine reconstruction capabilities and other pending questions

#### Nuclear Medicine WebEx Schedule:

6/9 NM Coordinating Ctte

6/16 SPECT BC

6/23 NM Leadership (TBD)

7/7 FDG-PET BC

7/14 PET Amyloid BC

7/21 SPECT BC

7/28 NM Leadership (TBD)