

## QIBA Perfusion, Diffusion and Flow – MRI Biomarker Committee (BC) Update Call

Wednesday, January 6, 2016 at 11 AM (CST)

### Call Summary

#### Participants

Michael Boss, PhD (Co-Chair)

Harsh Agarwal, PhD

David Bennett, PhD

Ishtiaq Bercha, MSc

Orest Boyko, MD

Joseph Borrello

Mark Brown, PhD

Caroline Chung, MD

Amita Dave, PhD

Timothy Dondlinger

Bradly Erickson, MD, PhD

Daniel Gembris, PhD

Wei Huang, PhD

Edward Jackson, PhD

Daniel Krainak, PhD

Hendrik Laue, PhD

Timothy Dondlinger

Dariya Malyarenko, PhD

Elizabeth Mirowski, PhD

Nancy Obuchowski, PhD

David Purdy, PhD

Walter Schneider, PhD

Ying Tang, PhD

Ona Wu, PhD

Junqian (Gordon) Xu, PhD

Xiangzhi Zhou, PhD

Yuxiang Zhou, PhD

#### RSNA

Joe Koudelik

Susan Weinmann

*Moderator: Dr. Boss*

#### DSC Update (Drs. Erickson & Wu)

- Funding for phantom is now available
- Work with NIST has begun – two phone conferences have occurred
- Developing prototype of phantom and estimating reproducibility across sites
- Phantom design will be close to the 13-vial gadolinium model used by Dr. Boss in his work with the DWI TF, but solution may be gel-based and a standard room temperature protocol will be used as opposed to using ice water protocol to better accommodate site implementation
- Will approach Drs. Chenevert and Malyarenko regarding modification to developed DWI analysis software
- Collection of data will take place about six months into the project
- Drs. Schneider, Erickson and Wu to have additional discussions offline

#### DCE Update (Drs. Chung & Laue)

- The previous DCE TF t-con was on December 15 following a very fruitful in-person discussion at the QIBA Working Meeting during the RSNA Annual Meeting
- The MR Vendor Subcommittee will participate in the regularly-scheduled DCE TF call on February 9
  - Discussion to focus on clinical B1 mapping solution availability from vendors
  - Future vendor calls to address DICOM header issues regarding B1 mapping
- The DWI TF has similar concerns and would also benefit from a discussion with the MR Vendor Subcommittee
- The DCE TF aims to complete its literature search by end of February 2016

#### Claim Guidance Document (Dr. Obuchowski)

- Currently in drafting stage
- Dr. Obuchowski explained the document to the PDF-MRI BC
  - Types of claims: cross-sectional and longitudinal
  - Steps for choosing a precision value for the claim statements:
    - Select the metric
    - Determine characteristics which degrade precision
    - Identify plausible range
    - Consider clinical requirements

- Consider sample size for conformance test
- Choose performance value
- Contains flow chart to aid Profile writers in decision-making regarding Profile claim
- Provides specific examples of claims
- Dr. Obuchowski stated that the document provides guidance to QIBA groups while also allowing for different specifics to be included

**Other**

- New member, Dr. Bercha introduced himself and volunteered his help and support, specifically with the DWI TF
- Dr. Boss will follow up with Dr. Bercha to provide more information on PDF-MRI QIBA groups

**Next PDF-MRI Biomarker Committee Call:** January 20, 2016 at 11 AM CST [Dr. Rosen to moderate]