

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

Wednesday, 8 July 2015 at 11 AM (CT)

### Call Summary

#### Participants

Michael Boss, PhD (Co-Chair)

Thomas Chenevert, PhD

Nancy Obuchowski, PhD

#### RSNA

Joe Koudelik

John Kirsch, PhD (Co-Chair)

Caroline Chung, MD

Walter Schneider, PhD

Susan Weinmann

Mark Rosen, MD, PhD (Co-Chair)

Jacob Fluckiger, PhD

Suraj Serai, PhD

Harsh Agarwal, PhD

John Garber, MBA

Ying Tang, PhD

Daniel Barboriak, MD

Edward Jackson, PhD

Brian Taylor, PhD

David Bennett, PhD

Daniel Krainak, PhD

Ona Wu, PhD

Joseph Borrello

Hendrik Laue, PhD

Junqian (Gordon) Xu, PhD

Mark Brown, PhD

Elizabeth Mirowski, PhD

Yuxiang Zhou, PhD

Moderator: Dr. Boss

#### Round 4 Updates (Drs. Jackson & Barboriak)

- Dr. Jackson Project
  - Provided an overview of process, correlations, DCE results and current status
  - Software Analysis for DCE was a Round-1 groundwork project
    - QUATTRO, open source environment was used
    - MATLAB driven
    - Analysis tool
    - Will be made publicly available
    - Common tools for analysis across QIBA groups are important
    - Tool catches deviations from protocol – assisting with conformance
  - Due to be completed by end of August
  - Highlighted issues to be addressed
  - MATLAB scripts are being converted
  - Data will be made available
- Dr. Barboriak Project
  - Purpose is to expand the previously-initiated QIBA DCE-MRI Digital Reference Object (DRO) project
    - Lack of standardized and robust image analysis methods is a barrier to the clinical translation of many quantitative imaging techniques
    - Seeks to provide a database of images obtained using known parameters to evaluate and compare analysis implementation in the context of a multi-center clinical trial
  - Deliverables
    - Extension of simulations to generate more realistic synthetic dynamic datasets
      - Compatible Siemens' Tissue4D analysis software
      - Simulate images obtained when patient has a lower cardiac output
      - Simulate B1 correction images
    - Intensive in-house evaluations of DCE-MRI software packages
    - Comparison of aggregated and disaggregated approaches to software evaluation
  - Plan to write a paper on underlying datasets
  - Top 20% manufacturers will be given the option of unblinding

## **Round-5 Project Update**

- The QIBA Steering Committee will be reviewing the project ranking results on the July 16, 2015 t-con meeting

## **DWI Update (Dr. Boss)**

- Prostate approach to claim statements
  - PDF-MRI BC members were asked for input on numbers used for claims
  - Articles including test-retest will be sought
  - Repeatability value – 35%
  - In the future, a more formal meta-analysis will be done to synthesize data
  - The immediate goal is to finish the Profile and begin the publishing process

## **New Business**

- Further discussion to take place offline about inclusion of articles in the Profile
- Will discuss the following agenda item offline:
  - Phantom scan updates
    - Positioning
    - Trace DWI
    - Latest results – numbers much tighter due to use of higher B values

**Next PDF-MRI Biomarker Committee Call: July 22 at 11 AM CT**