

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

Wednesday, September 28, 2016 at 11:00 AM (CDT)

Call Summary

Participants

Michael Boss, PhD (Co-Chair)

Joseph Borrello

Mark Brown, PhD

Martin Büchert, PhD

John Carrino, MD, MPH

Thomas Chenevert, PhD

Amita Dave, PhD

Timothy Dondlinger

Jacob Fluckiger, PhD

Daniel Gembris, PhD

Hendrik Laue, PhD

Chen Lin, PhD

Dariya Malyarenko, PhD

Elizabeth Mirowski, PhD

Nancy Obuchowski, PhD

James Provenzale, MD

Walter Schneider, PhD

Ying Tang, PhD

Brian Taylor, PhD

Elisabeth Wilde, PhD

Ona Wu, PhD

Junqian (Gordon) Xu, PhD

Robert Young MD

Gudrun Zahlmann, PhD

Yuxiang Zhou, PhD

RSNA

Fiona Miller

Julie Lisiecki

Susan Weinmann

Moderator: Dr. Boss

DTI TF Update (Drs. Provenzale & Schneider)

- The DTI TF met by t-con on September 26
- A regular call schedule of the 3rd Monday of the month at 1 PM / 2 PM ET has been established
- DTI+ TF Potential Sponsor – Brain Imaging Quantitative Assessment Program (BIQAP)
 - BIQAP is a national voluntary program to assess and improve the quality of MRI brain imaging in research and clinical studies nationwide, provided and supported by the VA Office of Research Development, Department of Defense Medical Health, and NIST
 - The goal is to quantitatively assess the quality of brain imaging at a national scale in leading universities, VA centers and TriCare MRI imaging research centers
 - Sites that wish to enroll will be requested to perform QC by scanning of a diffusion phantom using a two hour imaging protocol once per quarter
 - The program covers the cost of providing the phantom and the necessary analysis of phantom data
 - Ten phantoms will be assigned on a regional basis in order to assess high end 3T systems in the region
 - All phantoms will be cross-calibrated at two sites and material components of the phantoms will be re-characterized by NIST annually
 - Data from participating imaging sites will be de-identified, and aggregate data will be used to determine the quality of the national infrastructure of DTI sites; results will be published
 - Individual sites will receive comprehensive detailed reports for internal Quality Assurance (QA) use
 - PIs of the project are:
 - Walter Schneider (University of Pittsburgh)
 - James Provenzale (Duke University)
 - Michael Boss (NIST)
 - Elisabeth Wilde (Houston VA & Baylor University)
 - In support of DOD reporting requirements and request for continued funding, a request for a letter of support from QIBA has been requested
 - The phantom scan plan was presented to PDF-MRI BC members by Dr. Schneider
 - The phantom is bell-jar shaped with a series of modular discs and test zones
 - Isotropic metrics & confidence intervals and DTI metrics & confidence intervals were discussed

- Scanner instruments, sites, and configurations reviewed
- Planned deployment
 - Phantom cell network shipping
 - November 2016: 5 phantoms; 25 magnets
 - March 2017: 10 phantoms; 50 magnets
 - The goal is to do a quarterly US and Europe scanner QC report to assess the state of the field and drive adoption of better methods
- Profile development
 - Writing on Executive Summary & planned timeline and Context and Claims has begun
 - Numbers to go into Profile when phantom study has been completed
 - A literature review is underway

RSNA 2016 Annual Meeting PDF-MRI Poster

- Poster contributions are currently being sent to Dr. Boss by TF leaders
- Round-5 & 6 Project PIs to provide figures & accompanying text to Dr. Boss
- The goal is for this year's poster to contain more figures than text
- Draft for review at the next PDF-MRI BC call on October 12
- Poster due to RSNA staff by October 31 for printing

Upcoming PDF Task Force Updates:

- October 26 – DWI
- November 9 – DSC
- November 23 – DCE
- December 7 - DTI

Next PDF-MRI Biomarker Committee Call: October 26, 2016 at 11 AM CDT (DWI TF update is scheduled)