

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

Wednesday, February 17, 2016 at 11 AM (CST)

Call Summary

Participants

Michael Boss, PhD (Co-Chair)

John Kirsch, PhD (Co-Chair)

Rado Andriantsimiavona, MSc

David Bennett, PhD

Ryan Bosca, MS

Mark Brown, PhD

Thomas Chenevert, PhD

Amita Dave, PhD

James Ewing, PhD

Jacob Fluckiger, PhD

Edward Jackson, PhD

Guang Jia, PhD

Daniel Krainak, PhD

Hendrik Laue, PhD

Dariya Malyarenko, PhD

Elizabeth Mirowski, PhD

Nancy Obuchowski, PhD

David Purdy, PhD

Suraj Serai, PhD

Jason Stafford, PhD

Ying Tang, PhD

Brian Taylor, PhD

Lisa Wilmes, PhD

Junqian (Gordon) Xu, PhD

Yuxiang Zhou, PhD

RSNA

Joe Koudelik

Susan Weinmann

Moderator: Dr. Boss

DCE TF Update – MR Vendor Task Force Interaction (Dr. Laue)

- The MR Vendor Task Force was invited to attend the DCE TF call on February 9
 - Forty participants joined this call, including representatives from Siemens, Philips, GE, DCE TF members and PDF-MRI BC members
 - Discussion focused on vendor-specific solutions to clinical B1 mapping variation
 - Vendors had variable approaches for B1 measurement and were at various steps in offering B1 correction
 - John Kirsch volunteered to coordinate on behalf of all vendors that have offered to provide vendor-specific information for inclusion in the appendix of the DCE Profile version 2.0
 - Metadata associated with each imaging method will be critical
 - The following specific data components have been requested:
 - Pulse sequences available: names, parameters (typical scan time, 2D/3D, etc.)
 - B1 mapping techniques – inclusion of pros/cons/literature references
 - DICOM tags to facilitate interpretation (including the unit of the output value) or work towards standardized output
 - 3 Main Categories:
 - Currently available as part of standard commercially available (with the required software platform)
 - Research or purchasable options currently available (with the required software platform)
 - Future works in progress and timelines (if this can be shared) -- this will not be included in the Appendix but will be used to guide ongoing development of the profile
 - The need for a B1 phantom was identified
 - Potential Round-6 groundwork project
 - Features of this B1 phantom included the need for anatomically relevant dimensions and features (e.g. can we model Air/bone interfaces) and the possibility of B1 and T1 measurement in a single phantom
 - The initial step will be to evaluate the potential to modify the existing DCE phantom to meet the needs for B1 measurement

Round 5 Project / DWI-DRO Update (Dr. Malyarenko)

- Project Title: “DWI-DRO development for ADC analysis”
- Project Goal: Provide DWI DRO for relevant range of tissue diffusion values and Rician noise utilizing standard diffusion DICOM attributes for SW testing and acquisition optimization
- DWI-DRO Project Deliverables:
 - Q1:
 - Definition of parameter range specifications suitable for DRO derivation
 - Definition of DICOM-compliant trace-DWI DRO metadata attributes
 - Q1 Aim: adequate sampling of DWI parameter space and standard meta-data definition to generate mono-exponential ADC maps required by conventional ADC analysis algorithms
- The MR Vendor Task Force will be invited to attend an upcoming DWI TF call

Other Business

- Round-6 Projects (Dr. Jackson)
 - Request for new groundwork proposals for 2016-17
 - Timeline for submitting and reviewing new project proposals will be distributed soon; deadline for submission to RSNA is April 15
 - Reminder to focus groundwork proposals to Profile completion and/or conformance procedures
 - Funding has been secured for this second year; total cross-modality funding will be similar to Round-5

Next PDF-MRI Biomarker Committee Call: March 2, 2016 at 11 AM CST