

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

Wednesday, March 15, 2017 at 11 AM (CT)

Call Summary

Participants

Michael Boss, PhD (Co-Chair)
Mark Brown, PhD
Thomas Chenevert, PhD
Caroline Chung, MD
Cathy Elsinger, PhD
Bradley Erickson, MD, PhD
Jacob Fluckiger, PhD
Xavier Golay, PhD

Wei Huang, PhD
Edward, Jackson, PhD
Daniel Krainak, PhD
Chen Lin, PhD
Dariya Malyarenko, PhD
Nancy Obuchowski, PhD
Chad Quarles, PhD

Walter Schneider, PhD
Samir Sharma, PhD
Ying Tang, PhD
Brian Taylor, PhD
Elisabeth Wilde, PhD
Ona Wu, PhD
Junqian (Gordon) Xu, PhD

RSNA

Joe Koudelik
Susan Weinmann

Moderator: Dr. Boss

DWI Profile Status Update (Dr. Boss)

- Eligible voting members of the PDF-BC are reviewing the Profile and will vote by e-ballot to approve release for public comment by the March 24 deadline
- Next Step: MR Coordinating Committee [voting members](#) to cast e-ballot to approve the DWI Profile for public comment

DSC TF Update (Drs. Erickson and Wu)

- Round-5 and -6 Groundwork Projects to generate data to address some gaps in the literature
 - QIBA DSC Phantom (Round-5): Progress as of March 2017 (Dr. Wu)
 - The following DSC TF members were instrumental:
 - Dr. Kirsch for providing Siemens protocol
 - Dr. Erickson for providing GE protocol
 - Dr. Keenan at NIST for prototype phantom development
 - Ongoing issues with stability of nanoparticles persist
 - Long-term stability tests with difference contract-mimicking solutions continue; MnCl₂ deemed the most promising so far
 - Stability to be monitored for one month after concentrations are revised; goal is a 1+ year stability
 - Phantom to be distributed to additional scanning sites when stable solution is identified
 - Multi-gradient echo to be added to the acquisition protocol for a final scan step
 - Web-based tool for creating DSC Digital Reference Objects (Dr. Erickson)
 - Dr. Wu's MATLAB code to be converted to Python (language used at Mayo)
 - Web-based interface/software to select input image parameters being developed
 - Dr. Quarles' to generate patches for software
 - DROs to mimic DSC acquisition simulations to be created
 - Link to DRO will be emailed to user

- DSC Profile
 - Discussion on effects of the EMA's recommendation to pull linear Gadolinium-based contrast agents from the market
 - FDA evaluating the risk of brain deposits with repeated use of Gadolinium-based contrast agents for magnetic resonance imaging (MRI): [ACR Manual on Contrast Media Addresses FDA Gadolinium Safety Concerns](#)
 - Institutions are switching from linear to cyclic contrast agents; caveat to be added to Profile
 - Because a particular contrast agent is not specified in DSC Profile, impact on Profile may be minimal
 - Qualifier to be added to Profile to note that referenced literature was based on the use of linear contrast agents; DCE and DSC TFs to coordinate efforts with drafting this language.
 - Latest DSC Profile version has been shared with DSC TF members
 - DSC TF to collaborate with the DCE TF to explore areas of commonality regarding safety, etc.
 - Currently, a small Profile-writing sub-group has been holding ad hoc calls off line
 - Volunteers who are interested in assisting with preliminary DSC Profile writing were encouraged to contact Drs. [Erickson](#) & [Wu](#)
 - Next Steps:
 - Once language and Claims are established, regular calls of the DSC TF will begin
 - DSC TF members will be solicited for feedback on the Profile
 - The DSC phantom will be circulated to scanning sites

Upcoming PDF Task Force Updates:

- March 29 – DCE Task Force
- April 12 – DTI Task Force
- April 26 – DWI Task Force
- May 10 – DSC Task Force

Next PDF-MRI Biomarker Committee Call: Wednesday, March 29, 2017 at 11 AM CT