

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

Wednesday, 19-February-2014 at 11 AM CST

### Call Summary

#### Participants

Edward F. Jackson, PhD (Co-Chair)

Gudrun Zahlmann, PhD (Co-Chair)

Michael Boss, PhD

Thomas L. Chenevert, PhD

Amita Shukla Dave, PhD

Daniel Gembris, PhD

James Gimpel, RT (R) (MR)

Dennis Hedderich, MD

John Kirsch, PhD

Daniel M. Krainak, PhD

Hendrik Laue, PhD

David E. Purdy, PhD

Mark Rosen, MD, PHD

Brian Soher, PhD

Daniel Sullivan, MD

Ying Tang, PhD

Brian Taylor, PhD

Jihong Wang, PhD

Zhiyue Jerry Wang, PhD

Dewen Yang, MD, PhD

Yuxiang Zhou, PhD

#### RSNA

Fiona Miller

Joe Koudelik

Julie Lisiecki

#### Cross-Scanner Methodologies

- Drs. Kirsch and Chenevert have been working on clarification of nomenclature, acronyms, protocol parameters, etc., for better understanding of cross-vendor 1.5T and 3.0T methodology
- Double-echo and single-echo scan choices varied across manufacturers; this may prove to be the primary difference between vendor systems
  - E.g., Siemens software versions D (newer) and B (older) vary in their approach to echo time
  - Dr. Ivancevic to confirm whether Philips systems default to single-echo
- It will also be of interest to the group to see if there is any quantitative difference between single and double-diffusion weighting with the phantoms
- Drs. Jackson and Dave to compare various GE system protocols and use Dr. Chenevert's technical parameters template as a guide
  - Goal to match acquisition settings as much as possible

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

- Dr. Boss has received numerous requests for the DWI Phantom and is investigating out-sourcing production to a firm in Boulder, CO.
  - Design improvements continue to the ice-water phantom.
  - Bottleneck with NIBIB funding is preventing phantom production from moving forward
- European collaborators have suggested that the phantom is too small; the current model was designed for use in a head coil and is deemed small at 19 cm dia
- Clinically relevant numbers needed from the ADC phantom measurements for the next TC call, with accompanying graphics.

#### DWI Profile Status (Dr. Boss)

- Scanner imaging details from Drs. Kirsch and Chenevert have been incorporated.

#### Action items:

- Drs. Jackson and Dave to compare various GE system protocols and use Dr. Chenevert's technical parameters template as a guide

**Next t-con: Wednesday, March 5<sup>th</sup> at 11AM (CDT)**