

QIBA Proton Density Fat Fraction Biomarker Committee (PDFF BC) Update Call

Thursday, February 7, 2019 at 3 PM (CT)

Call Summary

Participants

Takeshi Yokoo, MD, PhD
Gavin Hamilton, PhD
Walter Henderson, BA
Harry Hu, PhD
Edward Jackson, PhD

Michael Middleton, MD
Nancy Obuchowski, PhD
Hans Peeters, PhD
Jonathan Riek, PhD

Suraj Serai, PhD
Samir Sharma, PhD
Jean Tkach, PhD
Andrew Trout, MD

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Joe Koudelik
Susan Stanfa

Moderator: Takeshi Yokoo, MD, PhD

Review of Previous Call Summary

- The 11.01.2018 call summary was approved as presented

Multi-Vendor Calimetric Phantom Study Update (Dr. Hu)

- Dr. Hu is leading this round-robin multi-vendor study to determine bias in image acquisition and reconstruction; he is collecting all true phantom PDFF values (measurements) and performing ROI measurements
- An abstract based on this study was accepted for the 2019 ISMRM meeting (May 11 - May 17: Montreal, QC, Canada); to be presented by Dr. Hu
- Thirteen sites are participating in this study; only two more locations need to perform scans: Mayo Clinic in Rochester, MN (Dr. Shu) and Children's Hospital of Philadelphia (CHOP) (Dr. Serai)
- Once it has been to all of the sites, the phantom will be returned to the University of Wisconsin in Madison (Dr. Reeder) for a re-scan
- The only "issue" reported occurred with PDFF vendor protocols for 1.5T and 3T Siemens machines at CHOP (Dr. Serai), Duke University (Dr. Bashir) and Nationwide Children's Hospital in Columbus, OH (NCH)(Dr. Hu)
 - Water and fat PDFF maps were swapped, rendering the data unusable
 - Siemens assisted with addressing issue through a retrospective reconstruction patch for use at time of scanning
 - The reconstruction data from the 3T machine/protocols look acceptable, but not from the 1.5T
 - Drs. Hu and Bashir continue to work through this issue offline; a final solution is needed to complete this round-robin phantom study
 - Dr. Hu to contact imaging site reps (PIs) to discuss data "issues"
- Three protocols are being run at each site: vendor-specific, QIBA-recommended and LipoQuant
 - Dr. Hu reported that LipoQuant numbers look fairly good across the board, though examination at a granular level is needed; discrepancies still need investigation
 - No major outliers that could throw off numbers were identified
- Overall, data collected across sites and vendors look promising
- Phantom to be shipped out to the next site on Monday, February 11
- Once the study is complete and the data analyzed, the PDFF Profile-writing process will be revisited

Next call: Thursday, April 4, 2019 at 3 PM CT

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