

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

Thursday, November 1, 2018 at 3 PM (CT)

### Call Summary

#### Participants

*Scott Reeder, MD, PhD (Co-chair)*

Gavin Hamilton, PhD

Walter Henderson, BA

Diego Hernando, PhD

Harry Hu, PhD

Dariya Malyarenko, PhD

Michael Middleton, MD

Nancy Obuchowski, PhD

Hans Peeters, PhD

Jonathan Riek, PhD

Suraj Serai, PhD

Samir Sharma, PhD

#### RSNA

Susan Stanfa

Moderator: Scott Reeder, MD, PhD

#### Review of Previous Call Summary

- The 10.04.2018 call summary was approved as presented

#### QIBA PDFF BC Overview (Dr. Reeder)

- For the benefit of those who are new to the PDFF BC, Dr. Reeder provided a summary of the group's activities
- An update was given on technical Claim-writing progress
- Thanks to Dr. Yokoo's groundwork, the group has a good understanding of variability and bias in vivo
- The ongoing multi-vendor Calimetrix Phantom Study will help the group understand the variability of bias across different platforms and vendors

#### Multi-Vendor Calimetrix Phantom Study Update (Dr. Hu)

- Dr. Hu continues to lead this round-robin multi-vendor phantom study to determine bias in image acquisition and reconstruction
- Dr. Hu is collecting all true phantom PDFF values (measurements) and performing ROI measurements; this ground truth data is not to be distributed to participating sites in efforts to avoid introducing possible measurement bias
- Three protocols are being run at each site: vendor-specific, QIBA-recommended and LipoQuant
- Site 1 → University of Wisconsin - Madison: scanning has been successfully completed
- Site 2 → University of Michigan: scans performed on 1.5T and 3T Philips machines went well and Dr. Hu is analyzing image data
- Site 3 → Children's Hospital of Philadelphia (CHOP): encountered an issue with PDFF vendor protocol on 1.5T and 3T Siemens machines
  - Water and fat PDFF maps were swapped, rendering the data unusable so the phantom was sent to another next site (4: Dr. Yokoo at University of Texas, Southwestern Medical Center)
  - Possible remedies for the issue were discussed
  - Dr. Middleton presented CHOP's phantom images for discussion
  - Dr. Hu to examine the LipoQuant data from CHOP

- Site 5 → Nationwide Children's Hospital in Columbus, OH: scanning on 3T Siemens and 3T GE completed
- Site 6 → University of California, San Diego (UCSD): data was just submitted to Hu for analysis
- Overall, data collected across sites and vendors looks promising
- The next sites include Duke, Mayo, Cincinnati Children's Hospital and the phantom will return to University of Wisconsin-Madison
- Scanning at 3-4 sites has been successfully completed prior to the 2019 ISMRM Annual Meeting abstract deadline on November 7<sup>th</sup>

**Next call: Thursday, December 6, 2018 at 3 PM CT**

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