QIBA Proton Density Fat Fraction Biomarker Committee (BC) Update Call
Thursday, October 6, 2016 at 3 PM (CDT)
Call Summary

Participants

RSNA

Scott Reeder, MD, PhD (Co-chair)   Harry Hu, PhD   Nancy Obuchowski,   Joe Koudelik

Claude Sirlin, MD (Co-chair)   Sonja Kinner, MD   Suraj Serai, PhD   Susan Weinmann

Mustafa Bashir, MD   Michael Middleton, MD   Takeshi Yokoo, MD

Review of Previous Call Summary

- The 09.08.2016 call summary was approved as presented

PDFF Accuracy & Precision Meta-Analysis (Dr. Yokoo)

- PDFF BC materials are in [Dropbox](#)/QIBA PDFF Task Force; new accounts may be obtained by emailing Dr. Reeder: sreeder@uwhealth.org
- Progress Update:
  - o Phase I – Literature Review (Aug) – complete
  - o Phase II – Data Collection (Sept) – near complete
  - o Phase III – Data Analysis (Oct) - started
  - o Phase IV – Manuscript Preparation (Nov-Dec)

- Data Collection Update
  - o Reference list of articles contains papers by PDFF BC members at: Duke University, Children's Hospital Los Angeles, University of Wisconsin-Madison, University of California-San Diego (UCSD) and other institutions
  - o Paper is excluded if no imaging, not human subject, or not concerning PDFF
  - o Data from each study is being compiled / ownership of data discussed
  - o Benefit of including clinical trials data may be 100+ more patient datasets
  - o A total of 24 articles have been selected with data available from 19 PIs
  - o Still need to obtain study data from five PIs: two University of Wisconsin articles, two University of California (San Diego) articles and one article from an non PDFF BC author

- Data Analysis Update
  - o Random effects model considered a solid starting point
  - o Accuracy: MRS PDFF
  - o Precision: Measurement
    - ▪ Bias: true PDFF, field, vendor, recon
      - • MRI-H has been added to recon
    - ▪ Variance: exam, acquisition, Region of Interest (ROI)

  - o Bias and precision components from the 19 of the 24 articles have been plotted into the data analysis software

PDFF Profile Assignments

- Current author list (not in particular order) 17 authors: Yokoo, Serai, Kukuk, Tang, Sirlin, Obuchowski, Bashir, Pirasteh, Song, Hatterich, Kuhn, Hu, Hernando, Middleton, Hamilton, Loomba, Reeder
- Outline (Yokoo, Serai)
  - Introduction (Kukuk, Loomba, Sirlin)
  - Methods (Yokoo, Obuchowski)
  - Results (Hatterich, Tang, Bashir)
  - Discussion (Kuhn, Reeder)
  - Tables (Pirasteh, Yokoo)
  - Figures (Pirasteh, Yokoo)
  - References (Song)

- Supplemental Materials (Hu, Hernando, Hamilton, Middleton)
  - Definition of PDFF
  - Descriptions of
    - Main confounders
    - M-MRI
    - C-MRI
    - H-MRI

Next call: Thursday, November 3, 2016 at 3 PM CT