Discussion of Image Analysis Workflow and Software Challenge (Mr. Sieren)

- Mr. Sieren shared the QIBA Density Profile analysis plan
  - 4-5 month timeline
  - Approval status on data (see data breakdown section)
  - Drs. Lynch and Hatt to continue collection of reference dataset for airway analysis

- Analysis Design Phase has been completed; included establishment of segmentation guidelines and measurement outcomes

- Currently in Data Procurement Phase
  - 50 full dose and 50 low dose datasets were requested from COPDGene; approval is pending
  - Application to be submitted for data upload to the QIDW

- Next phase is Analysis (March-May 2017):
  - Vendors to submit data request
  - Segmentation masks to be obtained from each participating vendor
  - Average values regarding heterogeneity of Perc 15 to be calculated and compared
  - Assumption is that there will be 3-4 participating vendors
  - csv output to be submitted directly to Dr. Kirby for analysis

- Statistical Analysis (May – June 2017):
  - Image histogram to be generated and submitted by vendors along with csv files
  - Dr. Kirby to generate Bland-Altman plots with assistance from Dr. Obuchowski

- Conclusions (May – June 2017):
  - Measurement tolerances to be added to the Profile
  - Analysis sections to be finalized

- The group believes that it would be useful to the field to have an established reference dataset
- Institutions with their own software to be contacted
- International institutions (specifically in Korea & Japan) to be considered
- Invited participants to be presented with a firm deadline
- Once anonymized results from the challenge are obtained, Profile can be completed
Profile Work (Drs. Hatt and Kirby, and Mr. Sieren)

- Significant progress was made by Mr. Sieren and Dr. Hatt on Measurement Section
- Other Profile writing assignments include:
  - Calibration/Periodic Quality Assurance – Drs. Chen-Mayer and Humphries
  - Interpretation – Drs. Lynch and Naidich
  - Acquisition – Drs. Hoppel and Fuld (parameter setting needed from all vendors)
  - Reconstruction – Drs. Fain and Judy

- Spiromics repeatability data to be included in Profile
- November 30, 2016 QIBA Working Meeting Breakout Session notes along with latest Profile draft to be distributed by RSNA staff
- Profile draft to be ready for internal review by the full Lung Density BC by April 1
- A review of the near-final version of the Profile prior to Public Comment release will be completed during the Lung Density Breakout Session at the QIBA Annual Meeting, May 17 – 18; using WebEx for those not in attendance

Discussion Regarding the Round-6 Groundwork Project (Dr. Humphries)

- Title of project: “CT lung density biomarker: translating phantom harmonization to clinical practice”
- Dr. Humphries to conduct one more round of scanning, then will distribute phantom to other sites for field testing of harmonization

Next call: Wednesday, March 1, 2017 at 2 pm CT