

QIBA COPD/Asthma LDRCS WG

February 29, 2012 at 2 PM CST

Call Summary

In attendance

Philip F. Judy, PhD (Co-chair)

John D. Newell, Jr., MD (Co-chair)

Paul L. Carson, PhD

Martin Connell, PhD

Sean Fain, PhD

Michael Flynn, PhD

Junfeng Guo, PhD

Baojun Li, PhD

Daniel C. Sullivan, MD

RSNA

Julie Lisiecki

Agenda

1. Updates:

- a. NIST Reference Material
- b. UW Dose Reduction

2. Year 3 possible NIBIB Projects - Gaps/Opportunities

- a. COPDGene Phantom Image QA Software

3. Round Robin Scans of COPDGene Phantom with NIST Foams

- a. Next up: NIST

4. COPDGene Phantom results from Aquilion One at the Clinical Research Imaging Centre in Edinburgh

Discussion Summary

NIST Reference Material:

- COPDGene with NIST foams will be scanned
 - Dr. Judy working in parallel with Dr. Chen-Mayer on coordinating this project and the scanning protocol

Gantt Chart Review of Projects for NIBIB Update:

- University of Wisconsin Project on Dose Reduction on schedule for July 2012 completion
 - Dr. Fain is working on analysis and measurements to reconstruct raw datasets on "human data"
 - Phantom scanning is complete

Profile

- Suggested focus of Profile on a biomarker/ single quantity within the biomarker
 - Lung density or airway size measurements
- Need to look at literature for both short- and long- term repeatability of the metrics
 - Density metrics are the most mature
 - COPDGene is recording lung density
 - Dr. Newell suggested "mean lung density" as a more reliable measurement for reference
- Another issue is uncertainty regarding how to launch a field test in a different domain than oncology.
 - Group has decided to emphasize NIST foams instead of human trials
- Another project idea under consideration is modification of "Airway Inspector" software
 - Dr. Fain has expressed interest in this idea and in project collaboration
 - Dr. Judy will send the COPDGene phantom to NIST for development of studies using NIST foams

Other topics

- Dr. Martin Connell, with the Clinical Research Imaging Centre in Edinburgh, joined the group and discussed his work with the COPDGene phantom on *Aquilion One* using new software available only in Europe
- Dr. Judy distributed a PowerPoint presentation summarizing Dr. Connell's work

Next Steps:

- More discussion is needed regarding potential Year- 3 NIBIB Projects; to continue on next call, March 7th

Next calls:

- Next COPD/Asthma Technical Committee update call: **Wednesday, March 7, 2012 at 2 PM CST**
- Next COPD/Asthma LDRCS WG update call: **TBD**