

## QIBA COPD/Asthma Technical Committee Update

February 22, 2012 at 2 PM CST

### Call Summary

#### In attendance

*Philip F. Judy, PhD (Co-chair)*  
Paul L. Carson, PhD  
Harvey Coxson, PhD  
Barbara Croft, MD

Sean Fain, PhD  
Bernice Hoppel, PhD  
Joshua Levy  
David Lynch, MB

#### RSNA

Joe Koudelik  
Julie Lisiecki

### Agenda

#### 1. NIBIB Contract Projects –

- Develop a better understanding of what is considered normal on QCT for both inspiratory and expiratory scans
- Review projects to identify effort that might need support
- Determine the consequence of CT scanner inconsistencies identified on the COPDGene study concerning the severity of emphysema and the degree of air trapping in order to develop more consistent measurements
- Review in vivo repeatability and establish repeatability claim
- Recommend a volume correction that will enhance in vivo repeatability and assess magnitude of improvement
- Round-robin scans of COPDGene Phantom with NIST foams
- One-page project proposals for tentative year three NIBIB funding are due by mid-March

#### 2. Lung QCT Conference 2013

#### 3. Profile

- Dr. Judy recommended focus on one metric
- Write a general Profile with both clinical and trial application - then write a clinical protocol

#### 4. Abstracts for RSNA

---

#### NIBIB Discussion Summary

- Group to determine where support is needed to move projects forward for possible future funding
- Dr. Judy is looking for suggestions to move quantitative CT imaging of the lung forward
  - Drs. Judy and Lynch to follow-up off-line regarding normative standards for lung density
- Suggestions for further investigation were:
  - Repeatability studies currently in the works should be available for use soon
  - Standardization across platforms and evaluation of lung volume, emphysema index, etc.
  - Consequences of scatter and the importance of its correction across multiple platforms
  - More data on the COPDGene Phantom with NIST foams, along with support to move the phantom around to test sites with a site visit monitor for standardization of protocol
- Funding to develop appropriate interface for Airway Inspector software
  - “Airway Inspector User’s Conference Call”, proposed, possibly led by Dr. Fain
  - Mr. Levy supported this idea, stating that statistics are necessary to determine a “normal range”
    - Controlling the processes used is important to move quantitative imaging forward
    - This type of software could be useful for organization of data to use statistics meaningfully
    - Calibrating scanners for “quantitative results” would be more accurate, resulting in more awareness during the image acquisition phase

#### Lung QCT Conference 2013 Venue Discussed

- QIBA is currently developing a formal process for requesting meeting support/ resources
- Consideration of a meeting in conjunction with AAPM 2013
- American College of Medical Physics (ACMP) has been incorporated by the American Association of Physicists in Medicine (AAPM); however, they still host programs in the winter and summer months on clinical medical physics topics, which might be considered for partnering with the QCT Imaging of the Lung Program
- Dr. Judy will follow up with Dr. McNitt-Gray regarding hosting a meeting at AAPM in 2013

### **Lung QCT Conference 2012 Discussed**

- Current QCT Imaging of the Lung 2012 session has 91 registrants (primarily radiologists with interest in CME)
- Group proposed Doodle to attendees to join an informational 6-10 person meeting of the QIBA COPD/Asthma Technical Committee to discuss some of the issues from recent webex calls
- RSNA to send Doodle poll to selected participants provided by Drs. Judy and Lynch
- Dr. Lynch to follow up with STR to request a meeting room for lunch time or directly after the day's program

### **Possibility of Clinical Trial Involvement**

- Current status – clinical trials have a slow process and drug companies have little interest in the emphysema endpoint
- If reproducibility could be improved, drug companies might be interested in standardizing clinical protocols
- Dr. Stephen Rennard is looking into anti-inflammatory agents to reduce emphysema based on ECLIPSE work.

### **Next week:**

- phantom discussion
- dose reduction
- Dr. Fain – update on scanning progress
- Dr. Hoppel – update on dose reduction schemes

### **Next Steps:**

- More discussion is needed regarding proposed Year 3 NIBIB Projects – one page proposals are due by mid-March
- Dr. Judy will follow up with Dr. Lynch regarding normative standards for lung density
- Dr. Judy will follow up with Dr. McNitt-Gray regarding hosting a meeting at AAPM in 2013

### **Next calls:**

- Next COPD/Asthma LDRCS WG update call: **Wednesday, February 29, 2012 at 2 PM CST**
- Next COPD/Asthma Technical Committee update call: **Wednesday, March 7, 2012 at 2 PM CST**