QIBA COPD/Asthma Technical Committee Update
February 22, 2012 at 2 PM CST
Call Summary

In attendance
Philip F. Judy, PhD (Co-chair)  Sean Fain, PhD  Joe Koudelik
Paul L. Carson, PhD  Bernice Hoppel, PhD  Julie Lisiecki
Harvey Coxson, PhD  Joshua Levy
Barbara Croft, MD  David Lynch, MB

RSNA

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