QIBA vCT Technical Committee Weekly Update  
Monday, October 5, 2009  
11 am CDT

Call Summary

In attendance
Andrew Buckler, MS (Co-Chair)  
P. David Mozley, MD (Co-Chair)  
Lawrence Schwartz, MD (Co-Chair)  
Maria Athelogou, MD  
Patricia Cole, PhD, MD  
Charles Fenimore, PhD  
Philip F. Judy, PhD  
John Lu, PhD  
Mahadevappa Mahesh, PhD  
Michael McNitt-Gray, PhD  
Kevin O’Donnell  
Michael O’Neal, MD  
Nicholas Petrick, PhD  
Yuanxin Rong, MD, MPH  
Daniel Sullivan, MD  
RSNA staff  
Susan Anderson, MLS  
Joe Koudelik

Agenda (Mr Buckler)

• Group 1A update (Dr Petrick)
• Profile (Mr O’Donnell)
• Posters for RSNA 2009

Group 1 A update (Dr Petrick)

• Dr Kim completed mean performance measurements and variance for readers—just individual readers (not comparative)
  o Will soon complete bias and variance for every measurement and mean and will begin statistical significance analysis and comparison techniques
• Group viewed Dr Petrick’s raw data, not corrected for bias, and discussed interpretation
  o Raw data for all 40 nodules in one set
  o 1D, 2D, 3D comparisons still need to be worked out by Dr Kim
  o Total is mean over 5 different readers
• Plan to identify significant subgroups, e.g. shape, size, slice thickness, for subgroup analysis
  o Small size groups may be reportable but not useful
• Group discussion of accuracy and precision
  o Standard deviation of spiculated nodules appear larger than spherical
  o SD based on measured values around the mean
  o Wider SD related to mean values seen in volume measurements
  o Merck data will be ready in a few weeks
  o Accuracy was less important than precision
• Image analysis at RadPharm in November 2009

Profile (Mr O’Donnell)

• Mr O’Donnell is incorporating feedback from Groups 1A & 1B
  o Group 1C will meet on October 14
• Early stage lung cancer Profile is started on wiki
  o The Late Stage “main” Profile can be used as template and also source of direct wording
• Profiling activities begun in FDG-PET/CT and DCE-MRI Technical Committees
  o FDG-PET/CT copy is on wiki; group is also working on parallel Word documents
• May consider Google Docs for future work
  o IHE is exploring ‘permissions’ aspect of Google Docs
• COPD/Asthma committee developing Claims to begin Profile work
  o COPD/Asthma committee members met together at ACRIN meeting, Sept 30, to discuss
    Profiling activities

Content for Posters for RSNA 2009
• Would be helpful to have anecdotal case(s) from Dr Schwartz plenary session or from Merck
• Want practicing radiologist to see that it is crucial to change image acquisition parameters
  o Messages:
    o You can judge response by volume/quantitative imaging
    o How accurate are your measurements?
    o See our compelling groundwork
    o Check back next year to see results
• Eight statements (2 posters containing 4 quadrants each)
• Why is it important? to include anecdotal cases (Dr Schwartz, ¼ poster)
• Roadmap—how we are approaching the problem (Dr Mozley, ¼ poster)
• Profiling and Protocol detail for VolCT (Mr O’Donnell)
• 1A, ¼ poster (Dr Petrick)
• 1B, ¼ poster (Dr McNitt-Gray)
• 1C, ¼ poster (Dr Fenimore)
• COPD/Asthma, ¼ poster (Dr Judy)
• How clinical radiologists can be involved
  o Need to target what interests the clinical radiologist; why quantitation is important

Detailed content:
• 1A (Dr Petrick)
  o Protocol – details of study design
  o Description of what was done
  o Discussion of using data/results/analysis; consensus was not to include analysis at this time
    (for a later publication)
• 1B (Dr McNitt-Gray)
  o Echo work of 1A but expanding from phantoms to patient datasets
  o Show some examples of MSK Coffee Break images
• 1C (Dr Fenimore)
  o Focus to be on Protocol
  o Emphasize tie-in with Profiling and performance measures/components
  o Goals and how we hope to achieve them
• COPD/Asthma
  o Condensed version with process for disease area

QIBA Kiosk for RSNA 2009
• Three panels
  o What is QIBA / Overview of Profiling process / Listing of Tech Cttes and Co-Chairs
  o 4th side to contain a revolving PowerPoint presentation with a general QIBA overview

Next Steps:
• Target completion of poster content assignments and printing of poster