QIBA FDG-PET/CT Technical Committee June Update

June 25, 2009
11 AM – 12:30PM CDT
Call Summary

In attendance:

Richard Frank, MD, PhD (Co-Moderator)
Andrew Buckler, MS (Co-Moderator)
David Clunie, MBBS
Patricia Cole, PhD, MD
Todd Deckard, MSEE
Paul Kinahan, PhD
Steve Kohlmyer
Eric Perlman, MD
Andrea Perrone, MD
Yuanxin Rong, MD, MPH
Ling Shao, PhD
Barry Siegel, MD
Daniel Sullivan, MD
John Wolodzko, PhD
Jeffrey Yap, PhD

RSNA
Susan Anderson
Joe Koudelik

General Discussion

NIBIB Contract Proposal Update

- Updated progress from each subcommittee since RSNA 2008 report-out needed by Dr Frank for the NIBIB contract proposal
- A holistic statement needed - integration of where the group started and where it's going – Dr Frank to provide the unifying components
- Work Plan and Budget
    - Need justification in the research plan for type of projects and funding needed; project specifics not required
    - Section D5 Work Plan - A "One QIBA Approach" Overview
        - Breaks out tasks with budgetary estimates
        - Variation is expected between modalities
- PET team input needed to make section D2.3 and D2.4 more robust (i.e. develop a stronger case)
    - Section D2.3 and D2.4 may require immediate input from the PET team; mark-up needed by 6/26/09
    - One paragraph for each bullet would be helpful (e.g. groundwork for each subcommittee)
- Appendix system will be used to list project specifics/descriptions including length and cost of projects (D3.1)
    - If funded, QIBA Steering Committee will review projects and allocate funding across all three technical committees; Tech Ctte may be flexible with funding allocations
- Grid for three modalities proposed (FDG-PET/CT, DCE-MRI, Volumetric CT)
    - To describe activities completed, in planning or beyond scope
    - Will be helpful in leveraging activities done by other groups
    - Each subgroup to submit ½ - 1 page of potential projects to pursue

Purpose of profiles: A compendium of conclusions

- Help community advance from “can be done sporadically”, to “can happen broadly” under QIBA instruction
- Improving sources of error/variability
    - Machines not flexible
    - Sources of variance somewhat understood; need means to control/correct this variance
        - e.g. patient reproducibility studies perhaps, patient test-retest possibility (need to be drafted by DCE-MRI and FDG-PET/CT groups)
    - Need work-arounds to obtain needed information
    - Improve sources of error in prospective patient trials (e.g. ACRIN could do this)
    - Need a better grasp of how tools function
        - Need to quantitatively show impact
        - Demonstrating across multiple centers would be helpful
        - Need to determine overall impact first (not done)

Next Steps

For NIBIB proposal, Technical Subcommittee Chairs to:

- Add a paragraph for bullets relevant to their subcommittees in Section D.2.3
- Add Version Control Software to list in D.2.3
- Complete Appendices to NIBIB proposal to describe potential projects; ½- to one-page in length describing length of project, proposed budget and scope of project. Assignments:
  Appendices
    - Test-re-test study with focus on technical aspects (Dr Kinahan)
    - DRO and SUV calculation (Dr Kinahan)
    - Contribution from Dr Turkington / back-up by Dr Kinahan re: ROI
    - Contribution from Dr Shao re:software version tracking
    - Contribution from Dr Yap re: covariate rationale and quality control metrics
    - Contribution from Dr Clunie re: quantitative computation

General Proposal Details:

- Dr Sullivan and Mr Buckler will reference the Appendices in the document and estimate costs if needed
- Possible addition to proposal includes a grid for the three modalities describing activities completed, in planning or beyond scope