

## QIBA Volumetric CT Colorado Group Project Update

Tuesday, August 30, 2011 at 11 am CDT

### Call Summary

#### In attendance

*Kavita Garg, MD (Chair)*  
Richard Baumgartner, PhD  
Hubert Beaumont, PhD  
Andrew Buckler, MS  
Charles Fenimore, PhD  
Paul R. Garrett, MD

Hyun Grace Kim, PhD  
Marianne Maffoni  
David Miller, PhD  
Nicholas Petrick, PhD  
Ann Scherzinger, PhD

#### RSNA

Joe Koudelik  
Julie Lisiecki

#### Discussion

- Two main branches for the study to be finalized: 1) Phantom scan variability assessment; 2) Clinical scan variability assessment
- Group continued discussion from last meeting on refining purpose and scope:
  - "The primary aim of this study is to extend characterization of measurement performance from solid to part-solid nodules.
- Study design for this project should flow logically and be complementary to other QIBA studies.

#### Phantom portion of the study:

- Group may be able to share the CRS fabricated nodule molds that were created for the FDA, thereby reducing some of the costs
- Measuring nodules in context of low-dose is as important if not more compared to standard dose. Low-dose measurements variability will be as important if not more relevant clinically. However, we want to ensure that the study does not introduce too many variables.
- Decision on scanning parameters, such as QIBA profile or a low dose protocol follows from the objectives of the study.

#### Hypothesis vs. Null Hypothesis:

- Hypothesis is in the refinement process. It was proposed to demonstrate that a null hypothesis is incorrect and statistically support the hypothesis as correct.
- Focus to be on solid/part-solid nodule comparison
  - Interest in reader performance with part-solid nodules
  - Need to determine degree of difference necessary to prove a null hypothesis
    - Trying to prove the actual hypothesis: need to have enough statistical power
- Suggested focus of revised hypothesis:
  - Testing algorithms for measuring solid vs. part-solid nodules.
  - Testing the users of these algorithms.
    - Try to tie this to the 3A study for continuity of QIBA effort.

#### Next steps:

- Group to meet regularly at 11 am CDT, Tuesdays, until a research plan is established.
- QIBA Vol CT Colorado Group to determine specific main hypothesis.

**Next Call:** VOL CT Colorado Group Update call scheduled for Tuesday, September 6<sup>th</sup>, 2011 at 11 am CDT.