

QIBA Volumetric CT Group 1C Update
Wednesday, January 12, 2011; 3:30 PM CST
Call Summary

In attendance

Charles Fenimore, PhD, (Chair)

Andrew Buckler, MS

Heather Chen-Mayer, PhD

Marios Gavrielides, PhD

Hyun Grace Kim, PhD

Michael McNitt-Gray, PhD

Ganesh Saiprasad, PhD

Daniel C. Sullivan, MD

Ying Tang, PhD

RSNA

Julie Lisiecki

Madeleine McCoy

I. Imaging Protocol

- The group reviewed proposed revisions to the imaging protocol tables. The revisions include device-specific fields and terminology, with appropriate values for these fields. The tables provide all values to be entered on each of the device consoles.
- Consensus from the group on most recent proposed Imaging Protocol.
- The image protocol table was circulated to the entire 1C group for review and comment.
- A schematic for placement of the nodules was also sent out to the group.
- Goal of the Imaging Protocol is to meet the needs of all the sites; eliminate degree of potential ambiguity
- Addressed: slice thickness ambiguity, collimation, rotation time, mA/mAs /effective mAs, and detector configuration.

II. Scheduling Protocol

- Suggestions for schedule on last page Image Protocol document as circulated.
 - Travel and phantom transport needs to be taken into consideration
 - At some sites, limited scanner availability may require imaging in off-hours or on Saturdays
 - Work around SPIE conference (consider holidays – President’s Day, etc)
 - Hope to start in late January or early February with completion by February 28.

III. Selection and configuration of the phantom nodules

- Group 1A study sheds light on 1C choices: shape had greater effect than density on nodule sizing
- 1A study used 10 mm & 20 mm nodules. Lobulated and spiculated at 10 mm; elliptical at 20 mm
 - Elliptical nodules will not be used in 1C – difficulty in positioning gives badly controlled variation.
 - Include spiculated nodules in 1C –may have orientation effect but are clinically important.
 - Determined that -10 HU was the more relevant density for clinical relevance of size
- Attached vs. non-attached nodules
 - Positioning the nodules in foam “boats” makes them non-attached, which should lessen measurement uncertainty from selection of cut points in the reader study.
 - Agreed to have 6 attached and 6 non-attached nodules with a density of -10 HU
 - spheres and spiculated nodules
 - 3 sizes – 5 mm, 10 mm and 20 mm
 - read only the unattached nodules

Next steps:

1. Before next call, Group 1C will receive comments via email on revised table and phantom layout schematic.
2. Group to determine which parameters are necessary for QIBA compliance
3. Dr. Fenimore: Phone calls/ contact clinics to schedule appointments and plan travel.
4. Determine whether Drs. McNitt-Gray or Samei can be present for imaging at different sites.
5. Dr. Fenimore to send information to Dr. Kim for reader study design. Next call: Reader Protocol.

Next call: Wednesday, **January 19, 2011**, 3:30 pm CST, 4:30 pm EST.