

**QIBA Vol-CT Weekly Update WebEx
November 10, 2008, 11am CDT
Call Overview**

In attendance:

Andrew Buckler, BSEE, MSCS (Co-Chair)
Rick Avila, MD
Martin Barth, PhD
Charles Fenimore, PhD
David Gustafson, PhD
Bruce J. Hillman, MD
Michael McNitt-Gray, PhD
P. David Mozley, MD (Co-Chair)

James Mulshine, MD
Kevin O'Donnell
Daniel Sullivan, MD
Hiro Yoshida, PhD
Binsheng Zhao, PhD
Fiona Miller (RSNA)
Joe Koudelik (RSNA)
Susan Anderson (RSNA)

Reports from Subgroups

Subgroup 1A, Mr. Avila reporting

- Define steps to evaluate algorithms
- Suggested automating algorithms evaluation

Resources needed:

- data
- scanner and scan characteristics (may be in DICOM headers)
- mark up of location of lesions in phantom as pixel and RAS coordinates.
- XML file to be used
- analysis software--modify software to report?
- validation data for lesion (volume, etc.)
- reporting of algorithm, results

Recommendations:

- FDA utilize updated NIST data
- Subgroups to define XML schema for establishing ground truth \
- defined input and output of algorithm evaluation as well as reporting mechanism to be posted on Wiki
- Mr. Avila to prepare PowerPoint Slides /paragraphs

Profile

- Archiving performance metrics as part of profile
 - identify protocol for phantom measurements
 - groundwork for precursor questions--similar to the IB overview questions
- performance metric: ability to demonstrate perform level or publish performance results

Goals

- Need to communicate how each subgroup's activities add to the overall goals
- Performance-oriented goals as well as quantitative (data-sharing) goals, e.g. decreasing length/accelerating trials
- Decreasing number of patients in trials
- Potential gains

- Need a formal document structure to express relationship w/goals- Wiki
- To drive quantitative endpoints, need to encourage sharing and repurposing of data as the rule rather than the exception
- Consider adding a new goal: support a collaborative research community
- Encourage ownership of images; make open to scrutiny;

Subgroup 1B, Dr. Mulshine reporting

- Discussion of whether work on question 2 “change in volume, change in diameter” should be moved to 1A as part of the phantom study, or kept with 1B
- Consider structuring as a side study
- Dr. Fenimore recommended desirability of using data sets to replace phantom
- Dr. Fenimore recommended against using the false change approach
- Further discussion needed

Suggest formation of new subgroup (1D) to define context, bring clinical viewpoint [James Mulshine, MD, Bruce Hillman, MD, Andrew Buckler, MSCS, Larry Schwarz, MD and Binsheng Zhao, PhD]

- Need to determine what levels of precision would be valuable/acceptable
- Need to have applicability to practice/trials

Action Items:

- Mr. Avila to provide verbiage on methods/definitions (e.g. *input* and *output* of algorithms) on Wiki
- Mr. O’Donnell (?) to add workmap to Wiki/drafting space
- 1C report on next call