QIBA Volumetric CT Group 3A Update
Thursday, 24 July 2014 at 11:30 AM CT
Call Summary

In attendance

Maria Athelogou, PhD (Chair)   Lubomir Hadjiiski, PhD   Adele Peskin, PhD
Hubert Beaumont, PhD   Rudresh Jarecha, MBBS   Nicholas Petrick, PhD
Andrew Buckler, MS   Hyun Grace Kim, PhD   Daniel Sullivan, MD
Heang-Ping Chan, PhD   Nancy Obuchowski, PhD   Ying Tang, PhD
Marios Gavrielides, PhD   Eric Perlman, MD

RSNA

Julie Lisiecki
Madeleine McCoy

Update: Paper for the Clinical Challenge
- Dr. Gavrielides has begun the process for FDA review.
- All co-authors have been asked to respond to Dr. Gavrielides (marios.gavrielides@fda.hhs.gov) with the following statement after reviewing the paper, if they approve:
  - *I concur with the content and agree to be a co-author of the manuscript "Inter-method Performance Study of Tumor Volumetry Assessment on Computed Tomography Test-retest Data".*
- Dr. Peskin will begin the process for NIST review once FDA review is complete.
- Group 3A participants have been asked to provide feedback on the paper.
  - Comments welcome to Mr. Buckler: andrew.buckler@elucidbio.com.

Discussion: Suggestions for future work of Group 3A
- Follow up challenge may focus primarily on synthetic nodule data.
- Dr. Peskin reviewed highlights from two of her papers:
  - *Synthetic Lung Tumor Datasets for Comparison of Volumetric Algorithms*
  - *Modeling Clinical Tumors*
- Dr. Kim suggested a study on reader and software variation between semi-automatic algorithms and automatic algorithms
- Further consideration of the following needed before developing a study with synthetic data:
  - The amount of time that may be needed for a model of simulated data
  - Requirements for a power study
  - Dataset formulation
- Mr. Buckler suggested the following:
  - Using QIBA Group 1C data
  - Using one algorithm to ease out other effects
  - Raw data is available on QI-Bench for immediate use
- Dr. Obuchowski proposed a three-factorial test-retest design to estimate bias and precision. (*The proposal is attached as a separate document*.)

- The group is still considering options and is open to ideas.
- Suggestions welcome to Dr. Athelogou: Mathelogou@definiens.com.

Action items:
- Sometime after September 2014, Dr. Athelogou will invite a MICCAI representative to give a presentation about comparison of challenge methodologies for statistical evaluation of algorithm results.
- Practical suggestions for the future work of Group 3A to be sent to Dr. Athelogou: Mathelogou@definiens.com.

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Next call: Thursday, **August 7, 2014** at 11:30 AM CT.