

## QIBA CT Small Lung Nodule (SLN) Biomarker Ctte (BC) Call

14 June 2018 at 2 PM CT

Call Summary

### In attendance:

*Samuel G. Armato, III, PhD (Co-Chair)*

*James L. Mulshine, MD (Co-Chair)*

Edward Jackson, PhD

### RSNA:

Joe Koudelik

*David S. Gierada, MD (Co-Chair)*

Rick Avila, MS

Artit Jirapatnakul, PhD

Susan Stanfa

**Moderator:** Dr. Mulshine

### QIBA Annual Meeting Update

- Proposed revisions to the SLN Profile were discussed at the breakout group sessions during the May 2018 QIBA Annual Meeting
  - Description of how to calculate the Resolution Aspect Ratio was added
  - Furthest location from iso-center that is measured was changed to 175.0
  - Pitch  $\leq 2.0$  requirement was removed, as the six image quality metrics will address any problems introduced by a large pitch
  - Ability to demonstrate conformance using two phantom scans to support scanner modes with small FOV was added
    - in this case, a site would need to provide a second acquisition protocol that would support scanning a large patient, and both protocols would need to demonstrate conformance
  - Slight editorial revisions made to Section 4: Conformance

### Software Conformance Updates:

- Data have been compiled
- Measurements to be sent to Dr. Obuchowski for review
- CTLX1 phantoms with embedded synthetic precision engineered ellipsoids were assembled and have undergone some scanning
- Mr. Avila has the necessary materials to build two more of these phantoms, if necessary
- Suggestion to allow more bias to be present in measurements to accommodate vendors
- Datasets would be of great benefit to software vendors and could be a future sustainability opportunity for QIBA
- More complexity could be added to this phantom (e.g., adding cylinders and arranging them different orientations, etc.)
- Proposal made to create a second version of phantom
- The group will discuss next steps relative to evolution of this approach upon completion of round-robin

### International Association for the Study of Lung Cancer (IASLC) (Dr. Mulshine)

- An overview was provided on this open source quantitative lung volume experiment project
- This cloud-based tool, comprised of hub-and-spoke architecture, would serve as a database resource for cancer imaging data
  - Runs on Amazon cloud
  - Will improve the lesion size toolkit and lung volume algorithms and be available internationally
  - Conformance process for lung cancer screening to be used
  - Aim to show that quality can be maintained.

- Efforts to culminate with live demonstration in Toronto during the September IASLC 19<sup>th</sup> World Conference on Lung Cancer
- Conversation needed between IASLC and RSNA/QIBA to expand efforts and bring QIBA to a larger audience
  - Dr. Obuchowski to be consulted

### **Next Steps**

- The latest draft of the CT Lung Nodule Profile to be posted on CT Small Lung Nodule Cmte page of QIBA Wiki at: [http://qibawiki.rsna.org/index.php/CT\\_Small\\_Lung\\_Nodule\\_Biomarker\\_Ctte](http://qibawiki.rsna.org/index.php/CT_Small_Lung_Nodule_Biomarker_Ctte)
- Checklists can be referenced on the QIBA Wiki at: <http://qibawiki.rsna.org/index.php/Profiles>
- Suggestion to organize checklist items by actor type
- 1. Feedback will be elicited from only a small group of sites
- 2. Checklist to be refined based upon feedback
- 3. Checklist will be send to a broader group of sites

**Next call:** TBD - Calls will be scheduled bimonthly in the near future and will eventually be scheduled monthly