

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

08 March 2018 at 1 PM CT

Call Summary

In attendance:

David S. Gierada, MD (Co-Chair)

James L. Mulshine, MD (Co-Chair)

Rick Avila, MS

Andrew Buckler, MS

Edward Jackson, PhD

Artit Jirapatnakul, PhD

Nancy Obuchowski, PhD

Kevin O'Donnell, MASc

Anthony Reeves, PhD

Mario Silva, MD

RSNA:

Joe Koudelik

Julie Lisiecki

Moderator: Dr. Mulshine

Software Conformance Updates:

- Dr. Silva, Assistant Professor at the University of Parma and researcher for the IRCCS National Institute of Tumors Foundation, (the lung cancer screening effort in Milan), has received phantoms and will be scanning them in the near future
- He will send data to Mr. Avila using the link that was provided
 - There is a restriction of 100 MB for uploads; this may be increased to 200 MB if needed
 - Multiple scans cannot be supported for now in efforts to control the amount of data each site submits; multiple large files may slow down site processing
- Software conformance tests are currently being conducted for the following:
 - Clinical zero-change datasets
 - Evaluation of measurement precision in real nodules; the term “accuracy” is to be avoided
 - Source of zero-change data will be Dr. Yankelevitz
 - CTLX1 phantoms with embedded ellipsoid nodules
 - Evaluation of measurement precision, bias, and linearity in synthetic objects
 - Volume measurement prediction performance can also be evaluated but is not needed for software conformance
 - Clinical zero change testing:
 - All datasets will be acquired with a conformant CT acquisition protocol and a medium level of CT image quality characteristics (verified quantitative metric)
 - There are three different size-ranges of nodules as follows:
 - 6 – 8 mm
 - 8 – 10 mm
 - 10 – 12 mm
 - These will be assessed for bias using a method devised by Dr. Obuchowski
- CTLX1 phantoms are now available; additional screening sites are needed and always welcome for this collaborative international effort
- In particular, it would be desirable to have additional representation from the following geographical areas:
 - Europe (e.g. Germany, Spain, The Netherlands, etc.)
 - South Korea
 - South America

Volunteers needed:

- Volunteers are needed for a scanner vendor / site testing which will include DOE scanning and the analysis process
- Volunteers are asked to please contact Mr. [Avila](#) or any of the co-chairs: Drs. [Armato](#), [Gierada](#) and [Mulshine](#)

Next call: Thursday, March 22nd at 1 pm CT

Calls will be scheduled bimonthly in the near future and will eventually be scheduled monthly