

## QIBA CT Volumetry Biomarker Ctte (BC) Call

09 January 2017 at 11 AM CT

Draft Call Summary

In attendance:			RSNA:
Gregory Goldmacher, MD, PhD, MBA (Co-Chair)	Andrea Ferrero, PhD	James Mulshine, MD	Joe Koudelik
Jenifer Siegelman MD, MPH (Co-Chair)	Matthew Fuld, PhD	Nancy Obuchowski, PhD	Julie Lisiecki
Maria Athelougou, PhD	David Gustafson, PhD	Michael O'Connor, PhD	
Hubert Beaumont, PhD	Lubomir Hadjiiski, PhD	Kevin O'Donnell, MASc	
Andrew Buckler, MS	Yongguang Liang, PhD	Marthony Robins, PhD	
Heang-Ping Chan, PhD	Eleni Liapi, MD, ScM	Ying Tang, PhD	
Charles Fenimore, PhD	Ravi Mankala, MS		

### Introductions

- Drs. Liapi and Liang introduced themselves to the group as new members following the RSNA 2016 meeting
- Dr. Liapi is with Johns Hopkins and has an interest in image-guided interventions for the treatment of liver cancer
- Dr. Liang is with Columbia University and works closely with Drs. Schwartz and Zhao. His research interests include:
  - CT dosimetry and clinical protocol optimization, mammography, and quality control assessment in medical imaging

### Profile Checklist / Feasibility Site Test Updates

- Drs. Liang and Robins reported on initial feasibility tests initiated by Columbia and Duke
- Dr. Mulshine to follow up with an update report regarding RUSH Medical Center
- Mr. O'Donnell reviewed the site checklist and made updates and recommendations, noting that an explanation of the conformance procedures could be better summarized and simplified
  - One example would be simply entering the make and model of a scanner for the log
- Participants will report back to the group with their progress on the 1/23 WebEx call
- *Columbia:*
  - Phantom scanning was successful
  - Dr. Liang does not have access to MTF software so analysis is not currently possible
  - In-plane spatial resolution details not available on most CT scanners; will need to revise the Profile based on current AAPM methodology regarding resolution recommendations
- *Duke:*
  - MTF software was developed at Duke and it will be cost and license free once published; however, it is uncertain when AAPM will officially release/license the software
  - Caution was recommended regarding the use of a "unique and unpublished" analysis software as outlined in the current CT Vol Profile
    - Drs. Samei and Robins will make a BETA version available for the feasibility testing model utilizing TG233 methodology
  - Dr. Robins to investigate which reconstruction settings are missing from the Profile

### Additional considerations:

- Lack of clarity regarding breadth of Profile, e.g. whole body vs. organ systems; should sites be allowed to conform organ by organ?
- Can the Profile focus be re-worded to reflect adequately that it is intended for "whole body" (chest, abdomen, pelvis) use?
- 2.5 mm was suggested as the slice thickness for a quantitative imaging volume measurement

- Dr. Mulshine suggested that QIBA consider making available specific translation tools to aid with conformance
- A dataset from Dr. Petrick for the Lungman phantom data is still needed for the QIDW
- Dr. Robins uploaded data to the QIDW in November; however, the site is undergoing migration and a new platform is currently undergoing [final](#) data validation testing
  - Dr. Goldmacher to follow up with Dr. Erickson regarding QIDW migration status

**Action items:**

- Drs. Robins and Samei to work on making a BETA version of the MTF software available for analysis
- Dr. Liang to send DICOM images to Dr. Robins in the meantime for assistance with the analysis
- Drs. Mulshine and Armato to complete testing at Rush
- Drs. Liang and Zhao to complete testing at Columbia
- Dr. Fenimore also volunteered to do the feasibility test but suggested collaboration with other QIBA medical physicists, such as Dr. McNitt-Gray, if available
- Dr. Liapi volunteered to participate in the feasibility testing as well

**Next Call:** Monday, January 16, 2017 at 11 am CT