

## QIBA CT Volumetry Biomarker Committee (BC) Update Call

3 November 2014 at 11 AM CT

### Call Summary

#### In attendance:

Samuel G. Armato, III, PhD (Co-Chair)  
Gregory V. Goldmacher, MD, PhD, (Co-Chair)  
Lawrence Schwartz, MD (Co-Chair)  
Maria Athelougou, PhD  
Kirsten Boedeker, PhD  
Andrew Buckler, MS  
Matthew Fuld, PhD  
Kavita Garg, MD  
Lubomir Hadjiiski, PhD

Bernice Hoppel, PhD  
Rudresh Jarecha, MBBS  
Leon Lenchik, MD  
Qin Li, PhD  
John Lu, PhD  
James Mulshine, MD  
Nancy Obuchowski, PhD  
Kevin O'Donnell, MASC

Eric S. Perlman, MD  
Adele Peskin, PhD  
Nicholas Petrick, PhD  
Ehsan Samei, PhD  
Jenifer Siegelman, MD, MPH  
Dan Sullivan, MD  
Ying Tang, PhD  
Binsheng Zhao, DSC

#### RSNA:

Fiona Miller  
Joe Koudelik  
Julie Lisiecki

**Agenda:** Presentation by Drs. Zhao and Petrick on: --- CT Tumor Volume Change: Lung Phantom and *in vivo* Lung Tumor > Liver Phantom

#### Discussion:

- Development and proposed analysis of the liver phantom discussed:
  - Challenges in the measurement of liver lesions: low contrast and hyper, hypo, and heterogeneous
  - Unknown effects of imaging and measurement techniques on the volumetry of liver lesions
  - Phantom design and imaging protocols
  - Lesion volume measurement using two non-commercial sizing tools
    - CU algorithm: based on a marker-controlled watershed transformation
    - FDA algorithm: matched-filter based volume estimator
  - Plans to expand beyond GE and Siemens to engage additional scanner vendors
  - Preliminary statistical analysis (similar to the work of QIBA 3A)
  - Timeline for completion – an end date of April 2015 is estimated for completion of the project, including statistical analysis and potential RSNA abstract(s)

#### Action items:

- Committee is asked to consider future directions for the group, to be discussed at the f2f meeting at RSNA 2014
- Remaining tasks related to the Profile:
  - Review performance requirements in Section 3, particularly for measurement software
  - Assessment procedures:
    - An ad-hoc call is being planned with Mr. Buckler and Drs. Kim and Obuchowski.
    - Volunteers who want to discuss the proposed bias and precision numbers from Table 1 in Section 2 of the Profile the Image QA activity on a separate call to email RSNA staff: [jlisiecki@rsna.org](mailto:jlisiecki@rsna.org)

**Next Call:** November 17<sup>th</sup> – Full TC: Drs. Samei/Sahiner presentation

#### NOVEMBER

- November 10<sup>th</sup> – Veteran's Day is officially on Tuesday, November 11<sup>th</sup>
- November 24<sup>th</sup> - (week of Thanksgiving/ RSNA Annual Meeting will begin on November 30<sup>th</sup>)

#### QIBA Biomarker Committees - Working Meeting at RSNA 2014

- Wednesday, December 3<sup>rd</sup> | 2:30pm – 5:00pm | Chicago, McCormick Place | Room: E253AB
- Please respond to the following poll: <http://doodle.com/mk7qecxint6vbwf5>.

#### QIBA Poster Meet-the-Expert (MTE) Sessions at RSNA 2014

- **Location:** McCormick Place, Chicago - Learning Center (Hall D) – QIBA Kiosk
- Please provide your availability to volunteer for the QIBA Poster Meet-the-Expert (MTE) sessions.
- **Doodle Poll URL:** CT Volumetry Biomarker Committee: <http://doodle.com/pea8m494yi7chiqr>