

QIBA CT Volumetry Biomarker Ctte (BC) Call

20 March 2017 at 11 AM CT

Draft Call Summary

In attendance:			RSNA:
Gregory Goldmacher, MD, PhD, MBA (Co-Chair)	Lubomir Hadjiiski, PhD	Nancy Obuchowski, PhD	Joe Koudelik
Maria Athelougou, PhD	Edward Jackson, PhD	Kevin O'Donnell, MASc	Julie Lisiecki
Hubert Beaumont, PhD	Rudresh Jarecha, MBBS	Nicholas Petrick, PhD	
Andrew Buckler, MS	Claudia Kirsch, MD	Marthony Robins, PhD	
Heang-Ping Chan, PhD	Yongguang Liang, PhD, DABR	Na Sun, PhD	
Charles Fenimore, PhD	Eleni Liapi, MD, ScM	Ying Tang, PhD	
Matthew Fuld, PhD	James Mulshine, MD		

Review prior call summary: March 13th summary approved as submitted

Discussion included the following:

QIDW:

- All FDA LungMan Phantom and DRO data have been uploaded to the QIDW
- Mr. O'Donnell to add some descriptive text and a link to the data in the Profile

Modulation Transfer Function (MTF) language:

- Drs. Supanich, Robins, and Samei to develop some Modulation Transfer Function (MTF) and Z-axis resolution language in the Profile Checklist to aid technologists
- This will be added to the 2018 or next version of the Profile
- The current 2017 version of the Profile is now considered at Stage #3 "technically confirmed"

Site Feasibility Test Results (Section 4.4):

- Dr. Fenimore is acquiring additional imagery to complete Beta testing the Duke CT 233 software to check for reasonable levels of agreement
- He is comparing the original method of determining contrast resolution subjectively via a line pairs per cm measurement (measurements referenced in the Profile) to currently used MTF measurements that are determined by algorithm
- His goal is to determine whether or not the MTF thresholds are conformant
- It is necessary to see whether or not the Profile has based answers on a previously used method which may not have practical application now
- He is working offline with Drs. Samei and Robins to clarify technical changes
- Changes in measurements utilizing MTF will need to be tested during claim confirmation

Checklist Update

- Dr. Gill provided an updated checklist to the BC Co-chairs and Drs. Kirsch and Tang for review, to include some clarifying language for technologists
- Suggestions included:
 - Adding information regarding the need for a user name and password for the QIDW
 - Need for an attached Excel spreadsheet when responding to the conformance questions
 - Mr. Tervé is working on creating an expanded spreadsheet that allows users to enter their data for automatic tabulation and response regarding conformance
 - Spreadsheet to be downloaded with each dataset
 - Time to download all 31 cases and review them

- Length of time for full case review is still needed
- Clarification needed regarding differences between site qualification and tasks geared only toward patients
 - Separating the checklist out into tabs by actor might be helpful to users

Conformance Checklist Feedback Table

- Mr. O'Donnell is collating all conformance/field testing feedback into a single spreadsheet for group review, similar to the public comment review process
- Comments have been received from Duke, Rush/U Chicago, Columbia, and Brigham & Women's
- Items that no site was able to meet should be given priority for resolution
- Questions were raised as to whether "challenging" checklist requirements should be relaxed and if this would weaken the claim, i.e. lower the performance bar too much
- Mr. O'Donnell plans to revise the checklist format to improve future cut and paste functions

Second Round of Conformance/Field Testing

- Because none of the testers have tried using the LungMan Phantom data or DRO yet, a full scale Profile run-through was not attempted
- Proposed was an additional round of field testing, where 1-2 volunteer sites could now assess the completed Profile; however, it may be difficult to find these volunteers
- Dr. Liang volunteered to try this additional testing once he has access the LungMan Phantom and DRO data

For discussion on next call:

- After resolution of comments: Should two or more sites be asked to complete the entire Profile or should feedback resolution be accepted based on the current, incomplete testing

Action items:

- Dr. Fenimore to provide results of CT 233 testing on next call
- Additional spreadsheets for a regression module as well as for the coordinates for the RIDER tumors are being compiled by Mr. Tervé
- Drs. Samei, Robins, and Supanich to collaborate on Z-axis resolution and Modulation Transfer Function (MTF) language for the Profile
- Those interested in a Texture/ Morphology TF are asked to email the co-chairs or RSNA Staff: jlisiecki@rsna.org

Next Call: Monday, March 27, 2017 at 11 am CT – (Biomarker Committee)