

QIBA Multi-parametric Metrology Call

15 July 2020 at 10 AM CT

Call Summary

Notes provided by Dr. Delfino

In attendance

Nancy Obuchowski, PhD (Chair)

Andrew Buckler, MS

Jana Delfino, PhD

Alex Guimaraes, MD, PhD

Timothy Hall, PhD

Charles Hatt, PhD

Erich Huang, PhD

Gene Pennello, PhD

David Raunig, PhD

Daniel Sullivan, MD

Ying Tang, PhD

Xiaofeng Wang, PhD

RSNA

Joe Koudelik

Julie Lisiecki

Moderator: Dr. Delfino

Approval of Call Summary

- The notes from June 29, 2020 were approved as presented

Use Case #2, Phenotype classification: (Dr. Delfino)

- QIBA efforts and profile claim activities will continue to remain focused on the technical/analytical validation of the measurement assay
 - Technical/analytical validation is an important component of ensuring the biomarker is clinically useful, but is not alone sufficient to do so
 - Clinical validation that supports the intended use of the biomarker is also needed (and is outside the QIBA's scope)
- The clinically established phenotype will be used as the benchmark against which to compare the performance of the imaging-based phenotype classification task
- Definition of a ground truth
 - While thought should be given to the performance of the clinical phenotype classification task (e.g. # of readers, bias between readers, etc.) such considerations are OUTSIDE the scope of the QIBA Phenotype Classification profile claim (i.e. the established clinical phenotype is accepted as an existing truth)
- Claims of the QIBA Profile claim for phenotype classification will include:
 - Agreement of the imaging-based classification to the established clinical phenotype
 - Reproducibility of the image-based phenotype classification task

Action item:

- For next discussion on phenotype classification, discuss methodology to verify agreement (reference / truth) and reproducibility component

Next call: Dr. Huang to present on Risk prediction (Use case 3) on Monday, July 27th at 2 pm CT

Call Schedule:

Date:	Topic:	Lead:
Monday, July 27 (2 pm CT)	Use case 3: Risk prediction	Dr. Huang
Wednesday, Aug 12 (10 am CT)	Use case 4: Radiomics	Dr. Wang
Monday, August 24 (2 pm CT)	Use case 1: Multi-dimensional descriptor	Dr. Raunig
Wednesday, Sept 9 (10 am CT)	Use case 2: Phenotype classification	Dr. Delfino
Monday, Sept 21 (2 pm CT)	Use case 3: Risk prediction	Dr. Huang
Wednesday, Oct 7 (10 am CT)	Use case 4: Radiomics	Dr. Wang

Use cases:

- **Use case 1:** (Multi-dimensional descriptor) a panel to determine how to care for a patient
- **Use case 2:** (Phenotype classification) rule or decision tool to diagnose phenotype
- **Use case 3:** (Risk prediction) several biomarkers will be evaluated to create a prediction or risk score
- **Use case 4:** (Radiomics) may not have a specific biomarker for reference