

QIBA Multi-parametric Metrology TF Call

21 December 2020 at 2 PM CT

Call Summary

In attendance

Nancy Obuchowski, PhD (Chair)
Andrew Buckler, MS
Jana Delfino, PhD

Nandita deSouza, MD
Alexander Guimaraes, MD, PhD
Erich Huang, PhD

David Raunig, PhD
Ying Tang, PhD
Xiaofeng Wang, PhD

RSNA

Julie Lisiecki

Moderator: Dr. Huang

Approval of Call Summary

- The notes from December 9, 2020 were approved as presented

Updates (Dr. Huang)

- Dr. Huang presented some preliminary simulation study results
- Recommendations included:
 - Make sure that technical performance of individual QIBs is as strong as possible
 - Assess the range of QIBs
 - Implement assessment for the coefficient of variance
 - Review slope and proportional bias

Review of Use case #3: topics included:

- How to assess reproducibility of the outputs (further discussion needed with Drs. Kondratovich and Barnhart)
- Pathological complete response or non-response
- Clinical intended use: identify who will / will not benefit from an intervention
- Getting to the data without confounding for risk prediction
- Need to look at the patient population for standard of care, definition of the estimand, variable, population, and what will be done
- Decide what to do with study design violators and type of analysis needed to validate the risk model
- Progression as a measurand by re-biopsy, e.g., in prostate cases (Dr. deSouza to share literature)

Action items:

- Request for all to review Sections 3 and 4 of the manuscript, and send comments to Dr. Huang: erich.huang@nih.gov
- Dr. deSouza to share any available literature regarding progression with the group

Next call: Use case #4 (Dr. Wang) on Monday, January 4th at 2 pm CT (confirmed on 12/21)

Call Schedule: **Presenters: please review.**

Date:	Topic:	Lead:
Monday, Jan 4 (2 pm CT)	Use case 4: Radiomics	Dr. Wang
Wednesday, Jan 20 (10 am CT)	Use case 1: Multi-dimensional descriptor	Dr. Raunig

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