

QIBA Multi-parametric Metrology TF Call

17 February 2021 at 10 AM CT

Call Summary

In attendance

Nancy Obuchowski, PhD (Chair)
Huiman Barnhart, PhD
Michael Boss, PhD
Andrew Buckler, MS
Timothy Hall, PhD

Charles Hatt, PhD
Bernice Hoppel, PhD
Erich Huang, PhD
Gene Pennello, PhD

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

RSNA

Joe Koudelik
Julie Lisiecki

Moderator: Dr. Huang

Approval of Call Summary

- The notes from February 1, 2021 were approved as presented.

Review of Use case #3 (Dr. Huang): topics included:

Section 1

- Specifying the value of “s” as it relates to the overfit model
- Some references and the example from Dr. deSouza were added

Section 2

- Prefer wording using “essential claim components”
- Text was shortened in the table as there is detail in subsequent sections
- Dr. Obuchowski is working to incorporate section 2 into the overview paper

Section 3

- Reference to reproducible research may be needed though there is concern about confusing readers with the concept of reproducibility
- Re: “generalization performance metric,” it would be helpful to define the term when it first appears
- Consistent terminology across all 5 papers is needed; Dr. Huang to reword “external validation” accordingly
- Re: “odds ratios vs. AUC,” reference to Margaret Pepe papers will be added
- One metric needs to be selected as the main focus
- Addition of the Cox paper reference suggested
- Re: “imputation procedure,” some data may be missing

Section 4

- May need to clarify “bootstrap validation” and add references

Section 5

- Will discuss assessment of reproducibility of model outputs on the next call for this use case

Action items:

- Use case #4 - Dr. Wang to incorporate edits and send updated paper for review

Next call: Use case #4 (Dr. Wang) on Monday, March 1st at 2 pm CT

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

Date:	Topic:	Lead:
Monday, March 1 (2 pm CT)	Use case 4: Radiomics	Dr. Wang
Wed., March 17 (10 am CT)	Use case 1: Multi-dimensional descriptor	Dr. Raunig
Monday, March 29 (2 pm CT)	Use case 2: Phenotype classification	Dr. Delfino
Wednesday, Apr 7 (10 am CT)	Use case 3: Risk prediction	Dr. Huang

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