QIBA Process Committee Call

Tuesday, July 7, 2020 at 2 pm (CT)

Call Summary

Attendees:		**RSNA Staff:**
Kevin O'Donnell, MASc (Chair)	Timothy Hall, PhD	Fiona Miller
Michael Boss, PhD (Vice Chair)	Nancy Obuchowski, PhD	Joe Koudelik
Alexander Guimaraes, MD, PhD	Daniel Sullivan, MD	Susan Stanfa

Public Comment Resolutions

- Official Profiles (i.e., versions approved by BC and CC voting members) are published on the Profiles page of the QIBA Wiki
- As a prerequisite for entering Stage 2: Consensus, each BC is formally required to submit their public comment resolutions document to staff to post on the Public Comment Resolutions page of the QIBA Wiki
- Staff have solicited groups for missing documents
- When the Profile public comment period expires, staff to update Profiles wiki page to note that the public comment period has closed
    - "Resolving Feedback," status to appear after a public comment period is closed (until the resolutions document has been submitted to staff for posting)
    - Extra placeholder row to be added on the Comment Resolutions table/page for the Profile and the Consensus Profile to be linked
- This tasks related to this topic have been completed and will be removed from the "Current Work" list on the Process Cmte page on the QIBA Wiki

Profile Stages 4: Claim Confirmed and 5: Clinically Confirmed

- The Claim Confirmation Process page on the QIBA Wiki was reviewed
- Dr. Obuchowski provided an overview re: studies that have been conducted
- Additional details need to be added re: testing the wCV at 2-3 sites, pooling the data, obtaining the confidence interval around the wCV, and comparing results back to the Profile
- Dr. Boss stressed the need for test/retest data at Stage 4 to produce the wCV
- Dr. Obuchowski agreed to assist with providing more structure (e.g., sites, vendors, subject sample size) required
    - Caution will be needed, as there may be variation across different biomarkers resulting in different test/retest criteria
    - Rather than explicitly providing specific numbers (sites, subjects, etc.), suggestion to indicate that BCs approaching Stage 4 should consult with a statistician on study design, including guidelines to assess site performance (in terms of metrics in Profile Claims, e.g., within-subject coefficient of variation (wCV))
- As currently outlined, the main difference between Stages 4 and 5 is the power, or rigor of study
- The original intention was that this is sufficiently powered data collection measuring the performance of sites (if one follows the requirements in the Profile, the performance will be as stated)
- Stage 4: Claim Confirmed involves feasibility testing at 2 – 3 sites, on a couple of different platforms to determine whether wCV in the Profile can be duplicated
- Stage 5: Clinically Confirmed was originally considered to be outside the scope of QIBA; the amount of work and funding required to achieve it as currently written is not feasible and a redefinition was requested
- Test-retest data would be ideal, but obtaining it may be unlikely due to exposure of patients to risk and cost

- Predicting outcomes may be more valuable than wCV in Stage 5; outcomes assessment based on following the Profile may be another way to prove clinically confirmed
- The initial usage of stage 5 was phrased as clinically confirmed; the way it was modeled was to confirm a claim in routine clinical practice as opposed to stage 4, which involves setting up an experiment at one or two sites
- Dr. Obuchowski noted that Stage 4 criteria are analogous to a typical FDA trial; if that level of study rigor is reasonable for FDA approval, then perhaps this could be sufficient for QIBA
- The CT Advanced Disease (AD) Claim Confirmed studies consisted of multicenter studies of repeatability and reproducibility
    - This group conducted a technical quantification of their biomarker and would now like to apply their Stage 4: Technically Confirmed Profile in clinical practice (i.e., assess its performance in a real-world setting)

Stage 5: Clinically-confirmed "Prime"

- As currently defined, Stage 5 was intended to be done outside of QIBA; if redefined, this stage could be achieved within QIBA
- Recently, there has been much discussion re: putting multiple QIBs in a model that predicts a specific outcome
- wCVs based on test/retest data are proving impractical to obtain; a clinical focus (outcomes) may be more appropriate and stakeholders have been requesting this
- Suggestion to expand the stage 5 definition to include outcome (i.e., the concept would be clinical utility); the distinction between measurements vs. outcomes would need to be defined
- In practice, a stage 4 Profile would be used for measuring performance and determining repeatability by collecting wCVs of each of the underlying measurements; stage 5 "prime" (outcome confirmed) would follow
- One multiparametric example would be to take the five+ QIBs in the CT AD Profile, insert them into a model for risk prediction; assessing the performance of that model would make it possible to achieve stage 5 prime

Process Cmte CC agenda items for Q3 August CC calls

- To be discussed during the July 21 call

Action Items

- Mr. O'Donnell to draft a definition of "Stage 5 Prime" for review during the July 21 meeting
- Redefinition to be finalized in the Process Cmte before submitting the text for SC review and discussion
- Dr. Obuchowski to assist Mr. O'Donnell with updates to stage 4 and 5 criteria on the QIBA Wiki

Next Process Cmte Call: Tuesday, July 21, 2020 at 2 pm CT (1st & 3rd weeks of each month)