QIW XX

Technical Breakout Recommendations

November 3, 2023

1 : Publish New Guideline

- **We Recommend To Publish a New Guideline Outlining an Optimal Imaging Protocol For:**
  - Low Dose CT Lung Screen
  - Emphysema/Wall Thickness
  - Coronary Calcium

- **Leverage existing LC Screen and emphysema guideline writing group**

- **Guideline Development Stages**
  - Bring in Cardiac Experts
  - Review Guidelines/Literature and Available Data
  - Reach Consensus
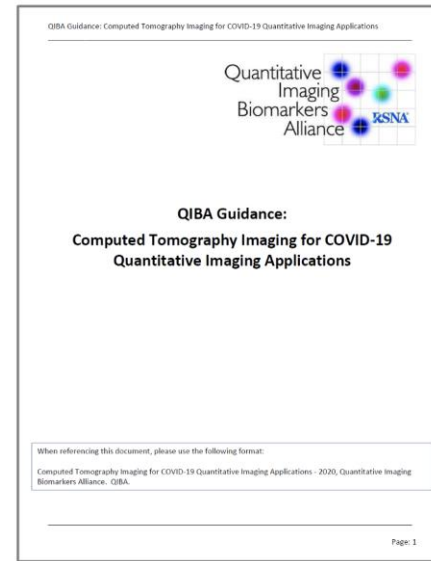 - Publish Manuscript

2021 COVID-19 CT Imaging Guideline

QIBA Guidance: Computed Tomography Imaging for COVID-19 Quantitative Imaging Applications

Quantitative Imaging Biomarkers Alliance RSNA

**QIBA Guidance:
Computed Tomography Imaging for COVID-19 Quantitative Imaging Applications**

When referencing this document, please use the following format:

Computed Tomography Imaging for COVID-19 Quantitative Imaging Applications - 2020, Quantitative Imaging Biomarkers Alliance. QIBA.

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Table 1: Recommended reconstruction kernels for quantitative CT COVID-19 applications.

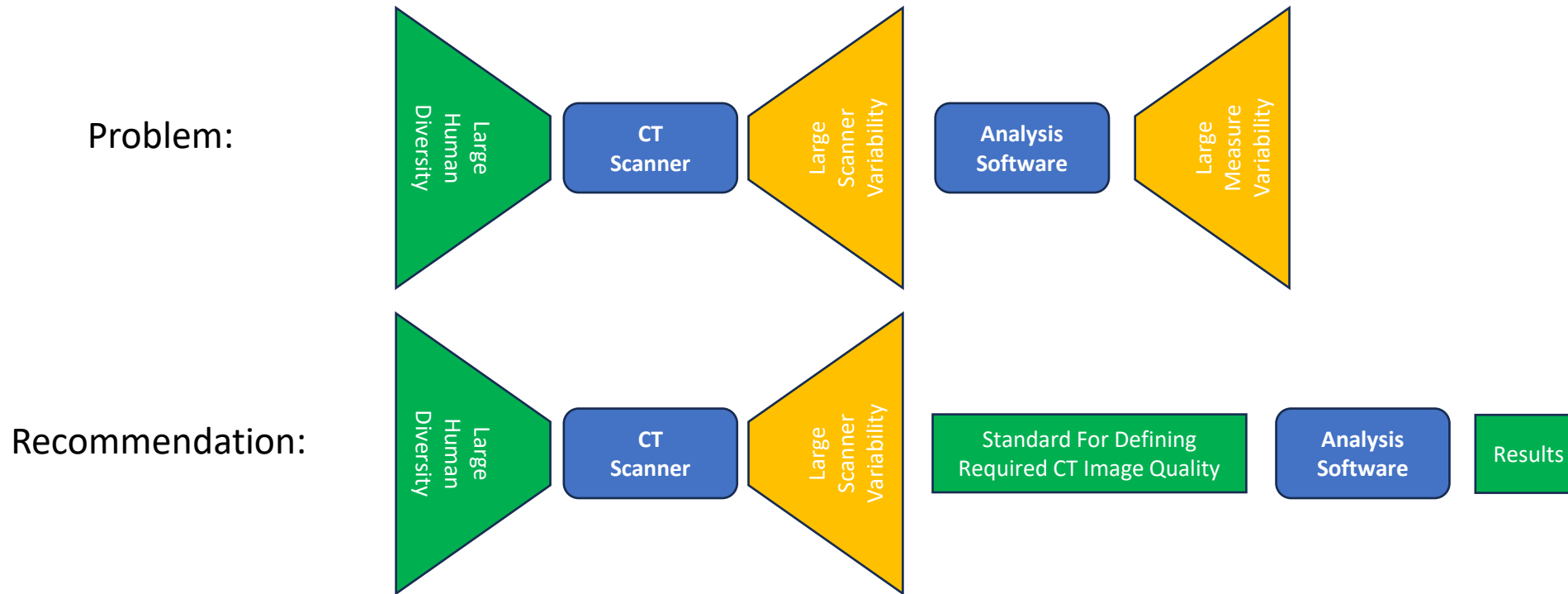| CT Scanner Manufacturer	Models	Recommended Reconstruction Kernels
Canon/Toshiba	All	FC05
General Electric	All	STANDARD
Philips	All	F, L
Siemens	Force	Br40
	All Others	B40, I40

We Also Plan To Prepare Similar Guidance
For Combined CT Lung Screening and COPD Imaging

**Imaging Guideline Well Under Way For Combined
CT Lung Cancer Screen And Emphysema/Wall Thickness**

2 : Form CT DL AI Recon Working Group

- We Recognize That The Addition of Deep Learning AI To CT Image Reconstruction Has The Potential To:
  - Greatly Improve Thoracic Imaging
  - May Also Have Many Problems/Issues For Quantitative Measurements

- We Recommend Forming An Additional Study/Data/Collaboration on DL AI Reconstruction
  - Need a multi-axis development and validation approach
  - Data Sources: Clinical, Phantoms, Simulation, Augmented/Hybrid Data

#3 : Analysis Software Requirements

Problem:

Large Human Diversity → **CT Scanner** → Large Scanner Variability → **Analysis Software** → Large Measure Variability

Recommendation:

Large Human Diversity → **CT Scanner** → Large Scanner Variability → Standard For Defining Required CT Image Quality → **Analysis Software** → Results

- We Recommend To Meet To Discuss/Develop Guidelines For Minimum CT Image Quality Requirements For Analysis Software
  - Could Inform An International Regulatory Standard
  - Invite International Regulatory And Standard Setting Bodies

Thank You