

QIBA Lung Density Biomarker Committee (BC)

Wednesday, May 25, 2022, 2 PM CT

Call Summary

In attendance

Charles Hatt, PhD (Co-Chair)

Miranda Kirby, PhD (Co-Chair)

Rick Avila, MS

Keshav Datta, PhD

Raúl San José Estépar, PhD

Qingrong Huang, PhD (?)

Stephen Humphries, PhD

Philip F. Judy, PhD

Mathis Konrad, MSc

Hatem Mehrez, PhD

Amin Motahari, PhD

James L. Mulshine, MD

Peter B. Noël, PhD

John D. Newell, Jr., MD

Nancy Obuchowski, PhD

Juerg Tschirren, PhD

RSNA

Joe Koudelik

Julie Lisiecki

Moderator: Dr. Hatt

The following topics were discussed:

- Presentation by [Dr. Peter Noël](#) on [3-D printed lungs](#)
- Update re: the [Air-trapping Profile](#)
- Proposed reproducibility study
- Requirements for [Technical Confirmation \(Stage 3\)](#) for the Lung Density Profile

Action items:

- [Drs. Kirby, Hatt](#), and [Vegas Sánchez-Ferrero](#) to provide detailed plan of what specific additional resources will be needed for the proposed ~50 COPD Gene subject software comparison study
 - [Proposal needs approval by](#) QIBA CT CC and the QIBA Steering Committee
- [Dr. Hatt](#) to look into existing studies (e.g., spiromics, etc.) that might be compatible with the Lung Density Profile to aid with reaching Technical Confirmation and validating the algorithms used
 - Plan to replicate software comparison study with gas-trapping Profile
- [Dr. Hatt](#) to contact [Drs. Zahlmann, Boss](#), and [Mr. O'Donnell](#) for advice regarding Technical Confirmation and Profile conformance re: the original emphysema Profile
- [Mr. Avila](#) to follow up with [Dr. Noël](#) offline to discuss reproducibility and replication of 3-D printed phantoms
- [Drs. Hatt, Mulshine](#), and [Mr. Avila](#) to discuss a proposed combined Claim Confirmed (Stage 4) study with lung density and small lung nodule

Previous action items (please strike if complete):

- [Dr. Fain](#) to follow up with a colleague, [Alejandro C.](#), regarding COPD Gene papers, including FRC, Phase II, etc.
- [Dr. Hatt](#) to add some notes about the 3/23 discussion to the gas-trapping Google Profile document
- [Dr. Hatt](#) to ask [Dr. Newell](#) re: spiromics data ancillary studies once paper has been published
- [Dr. Hatt](#) to connect with [Dr. Abadi](#) re: virtual imaging
- Volunteers may be needed to assist [Dr. Vegas-Sánchez-Ferrero](#) with segmentation work
- [RSNA staff](#) suggest contacting [Dr. Hoppel](#) re: the multi-site Lung Density “road trip” experiment data
- Standardized naming of actors across QIBA Profiles (medical physicist or image analysis core, TBD)
- Exploration of cross-sectional claim instead of longitudinal for gas-trapping Profile

Next meetings: 6/22, 7/27, 8/24

References: [Profile Stages page](#) | [Technical Confirmation Process](#) | streamlined Profile [conformance checklist](#)

- [Notes](#) posted to the [Lung Density BC QIBA wiki page](#) can be referenced for detailed descriptions of biomarkers