



Mrs. Sue Walsh Ferro accepting the James L. Mulshine, M.D., National Leadership Award on behalf of her brother, the late John Walsh.

WORKSHOP XIV: LUNG CANCER, COPD AND CARDIOVASCULAR DISEASE

In this multi-disciplinary forum, experts explore how to advance the integration of quantitative imaging for the detection and management of early lung cancer. The Workshop looks at technical imaging as well as health policy issues related to improving early disease management of lung cancer to improve the quantitative imaging process.

Two major developments were presented at QIW XIV that have the potential to greatly improve CT image quality for lung cancer screening.

A new low-cost phantom has been developed and is being disseminated internationally, which greatly simplifies the verification of CT image quality for quantitative measurement of solid lung nodules. There is also new automated and cloud-based software that allows sites to obtain quantitative image quality information within five minutes of data submission. This combined low-cost phantom and automated phantom analysis approach is being developed with the QIBA CT Small Lung Nodule (SLN) Profile Biomarker Committee and provides an efficient and thorough method to verify compliance with the SLN Profile.

Quantitative Imaging Workshop XIV: Lung Cancer, COPD and Cardiovascular Disease

October 2-3, 2017
Hilton McLean Tysons Corner
McLean, Virginia

STEERING COMMITTEE

James L. Mulshine, M.D.
Rush University

Elisha Malanga
COPD Foundation

Ricardo S. Avila, M.S.
Accumetra, LLC

Daniel C. Sullivan, M.D.
Duke University

Raul San Jose Estepar, Ph.D.
Brigham and Women's Hospital

David F. Yankelevitz, M.D., Ph.D.
Mount Sinai Medical Center

Laurie Fenton Ambrose
Lung Cancer Alliance

Carolyn Aldigé
Prevent Cancer Foundation



The second **CT Lung Cancer Screening Protocol Challenge or (CTPC2)** is requesting each clinical site verify and optimize their CT lung cancer screening image quality performance every three months for a period of one year.

- The data that are generated from using these new phantoms at more than 80 international sites will greatly expand knowledge about CT scanner performance and variability and will lead to improved recommendations for lung imaging, including screening for lung cancer, COPD and coronary artery disease.
- Since the QIW XIV meeting, approximately 50 of these CT image quality assessment phantoms have been disseminated throughout the world and numerous institutions have obtained automated CT image quality reports.

BREAKOUT GROUP DISCUSSION

Technical Proposal: Innovative Quality Processes for Population Health Based Management of Pre-symptomatic Tobacco-related Disease

This group worked to ensure that the processes to optimize the quantitative imaging analyzing of three separate tobacco-related diseases do not inadvertently compromise the quantitative imaging evaluation of the other tobacco-related diseases.

Follow-up activities were explicitly defined to ensure this design intent would be realized including:

1. Imaging Scientists from the Food and Drug Administration outlined the evolution of regulatory paths available to address quality issues with quantitative imaging, especially in regard to new approaches to using conformance phantom.
2. Discussions with members of the imaging vendor community explored areas of pre-competitive collaboration to improve the quality of CT image quality data. As a result of discussions held at QIW XIV, several more detailed meetings were held and plans for further collaboration have been established.

Other discussions included:

- Using new cloud-based conformance data aggregated from evaluating multi-institutions.
- Assembling preliminary data and submit a grant on a pivotal trial showing the benefits of applying advanced methods for lung nodule change measurements versus the current standard of care.
- Opportunities for Workshop participants to collaborate with QIBA on CT image quality work.

HEALTH POLICY BREAKOUT GROUP DISCUSSION

Communicating about lung cancer screening promise and evolution: What is the story?

This Workshop breakout group focused on strategies for communication on CT screening for lung cancer. The first major consideration was that the term “lung cancer” in the description for screening is a barrier to getting people screened.

- Lung Cancer Alliance leadership suggested that it would be better to promote an overall “health check,” which includes evaluation of COPD, heart disease, lung cancer and other potential illnesses.
- Others recommended promoting the idea of lifetime benefit where the possibility of finding an important illness now approaches 80 percent.

Other topics included:

- Communicating the potential benefits and availability of screening with new approaches.
- Using social media to break down current silos. The use of other social media metrics and/or actuarial approaches was also discussed.
- Action items for the group, including developing a profile of critical technology advances to pursue that would promote ease and quality.



CONCLUSION

Overall, this was a very successful meeting, as we now have a core group of people that have substantial resources (e.g., multi-disciplinary skills, organizational knowledge, datasets) in their respective organizations and are working to apply these resources toward our common goals. Field tests across the United States and at a range of international sites will be conducted to validate the feasibility and utility of implementing a quality control process to achieve conformance with best quantitative imaging provisions for small pulmonary nodules, as proposed by QIBA. The results of this effort will allow refinement of this approach to ensure full dissemination of these quality measures at all sites involved with lung cancer screening imaging. This way, the cost, safety and effectiveness of this potentially curative lung cancer management approach should be greatly improved.

ASCO Post article, December 10, 2017
by Caroline McNeil

[Managing Low-Dose CT Screening for Lung Cancer: Workshop explores implementation, quality assurance, and integration of COPD and cardiovascular disease findings.](#)

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Richard Frank, M.D., Ph.D. • James L. Mulshine, M.D. • Bruce Pyenson, FSA, MAAA • Daniel Sullivan, M.D.