On October 10 and 11, 2019, the Prevent Cancer Foundation hosted the 16th Quantitative Imaging Workshop (QIW) in Alexandria, VA. The Workshop is a high-impact, multi-disciplinary forum for the advancement of quantitative CT imaging biomarkers for early thoracic disease management. The Workshop explored how a revolution in biomedical imaging, which enables radiologists to detect the pathological process earlier than ever before, can be leveraged to improve outcomes in managing early lung cancer. Our goal was to introduce robust approaches to allow quantitative assessment of the growth of pulmonary nodules, as this turns out to be a sensitive and specific way to find early lung cancers.

Included in the opening session is an annual award to an individual who has made a remarkable contribution to all people whose lives have been touched by lung cancer. The 2019 award honored Andrew C. von Eschenbach, M.D. for his leadership in implementing the National Lung Screening Trial which validated the lifesaving value of low dose computer tomography (CT) over standard chest X-ray.
TOOLS & RESOURCES FOR IMPROVED DECISION MAKING

Within the framework of the Quantitative Imaging Workshops, there has been a persistent focus on data standards, including improving data quality and data reproducibility. This has been a shared concern of the Quantitative Imaging Biomarker Alliance (QIBA). Past Workshop efforts have resulted in the development of new image archives, such as the Reference Image Database to Evaluate Therapy Response (RIDER), with the National Cancer Institute, and Give-A-Scan (donation of images), with Lung Cancer Alliance. A variety of approaches to enhance data sharing (Interactive Scientific Publishing environment, ISP) are being explored with the Optical Society of America. This includes a long-term interaction with QIBA, as both share a focus on standardization of optimal imaging processes with a goal of allowing more efficient and economical integration of image biomarkers in routine care as well as clinical trials.

One key issue at the 2019 Workshop was how often CT findings consistent with COPD are found while performing lung cancer screening. Since so many individuals are eligible for lung cancer screening under the USPSTF guidelines, we need to determine the best approach to imaging the thorax for early lung cancer, COPD and possibly coronary calcification with the same LDCT image. This can greatly enhance the cost effectiveness of the screening effort.

Some other topics covered included:

- How nurse navigators were the linchpin of successful lung cancer screening outreach efforts in Delaware
- Aligning Quantitative Thoracic CT Imaging with Artificial Intelligence Research
- How collaboration with thoracic imaging research could be facilitated through co-operative and optimized image collections

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