



CAP Lung Cancer Medical Writers' Circle

Lung Cancer Workshop - Progress Toward Translation

Contributed by: Evi Bachrach Makovsky, Merel Grey Mountain, Kim Norris, Christie Pratt, Elda Railey and Deb Violette

A decade ago, treatment decisions for lung cancer were based on tumor histology, whether a patient had non-small cell lung cancer or small cell lung cancer. Through advancements in the fields of proteomics and genomics, we have a better understanding about the complexity of lung cancer and its molecular subtypes. This new understanding has led to an age of personalized and molecularly-targeted treatment approaches. Treatment is no longer a one-size-fits-all approach. Instead, this understanding of genetic make-up of tumors is leading to improved options and outcomes for patients. Researchers have gained a better understanding of how cancer develops, what drives cancer growth and who is more likely to respond to a specific therapy with fewer side effects. Research continues to further classify lung cancer sub-populations and to identify therapeutic options through clinical trials.

SPORE programs and scientists are working hard to answer these questions and bring discoveries from the laboratory to the clinic. Over 100 scientists and patient advocates met at the University of Pittsburgh Hillman Cancer Center on July 16-18, 2012. This meeting was an opportunity for presenters to formally share findings and promote collaborative, interdisciplinary translational cancer research. This meeting emphasized how important innovation and collaboration have been to the progress achieved in the field. Patient advocates were invited to this meeting and played an integral part by providing the patient perspective during the workshop. Presentations included keynote talks about targeted therapies for SCLC (Small Cell Lung Cancer) and molecular portraits or "Clades" to give insight to acquired vulnerabilities of lung cancer. Other sessions presented information on:

- Squamous Cell Lung Cancer
- Tumor Microenvironment and Inflammation
- Collaborative SPORE Initiatives
- Lung Cancer Risk Assessment and Early Detection
- New Targets for Lung Cancer Therapy
- Systems Biology
- Intrinsic and Acquired Resistance to Agents

Of notable significance are the accomplishments that have stemmed from recent SPORE initiated consortiums. The Lung Cancer Mutation Consortium (LCMC) represents the largest national initiative to prospectively examine non-small cell lung cancer tumors, and match patients to the

best possible therapies. Currently, the LCMC includes 14 leading cancer centers across the country. The primary goal is to provide the most up-to-date care for lung cancer patients, while collecting valuable information about the frequency and characteristics of abnormalities found in lung tumors to further improve patient care. The consortium has also built an infrastructure for genomically-based clinical trials available through LCMC member institutions. For more information about the Lung Cancer Mutation Consortium, please visit www.golcmc.com. The Detection of Early Lung Cancer Among Military Personnel (DECAMP) consortium is a multi-disciplinary, translational research program funded by a grant from the U.S. Department of Defense (DOD). It is designed to develop and validate molecular biomarkers for the early detection of lung cancer among active military personnel and veterans. The Strategic Partnering to Evaluate Cancer Signatures (SPECS) Program at NIH/NCI was established to address an urgent need for treatment improvements for squamous cell carcinoma (SCC) of the lung as most of the therapy improvements today have been for non-SCC patients. In order to facilitate biological research and clinical trials for this subgroup of patients, the Squamous Lung Cancer Consortium (SLCC) was developed in early 2012 and includes 8 different academic institutions in North America and Canada.

What is a SPORE?

SPORE (Specialized Center of Research Excellence) grants involve both basic and clinical/applied scientists and support projects that will result in new and diverse approaches to the prevention, early detection, diagnosis and treatment of human cancers. Each SPORE is focused on a specific organ site or on a group of highly related cancers, such as gastrointestinal cancers and sarcomas. SPOREs are designed to enable the rapid and efficient movement of basic scientific findings into clinical settings, as well as to determine the biological basis for observations made in individuals with cancer or in populations at risk for cancer.

Currently there are seven Lung SPOREs:

- Dana-Farber Harvard Cancer Institute
- H. Lee Moffitt Cancer Center and Research Institute
- Johns Hopkins University
- University of Colorado Cancer Center
- University of Pittsburgh
- University of Texas/ Southwestern Medical Center/ MD Anderson Cancer Center
- Vanderbilt University

Currently 18 patient advocates are involved with Lung SPORES and meet regularly via teleconference with the Lung SPORE directors.

For more information about the Lung SPORE program, go to <http://trp.cancer.gov/spores/lung.htm>