



## Team Progress Updates

### SU2C–LUNGevity–American Lung Association Lung Cancer Interception Research Team: “Blood-Based Early Interception of Lung Cancer”



The **SU2C–LUNGevity–American Lung Association Lung Cancer Interception Research Team** is working to develop a Lung Cancer Interception Assay (LCIA). This test will examine circulating tumor cells and circulating tumor DNA in blood samples taken from patients, and will be used in conjunction with low-dose CT scans to provide early detection of lung cancer. If successful, the LCIA will be moved forward to larger, prospective clinical trials.

The team reports the following progress:

#### **January 2019**

- The team developed a preliminary model of the Lung Cancer Interception Assay (LCIA) for use in conjunction with low dose CT scans which integrates blood-based assays that examine circulating tumor cells, circulating tumor DNA (ctDNA) and plasma proteomics.
- The ctDNA assay using the tumor informed approach demonstrated fairly good sensitivity at a specificity of 90%

#### **June 2018**

- The team has enrolled 43 individuals undergoing lung resection for suspected or known early-stage lung cancer and 58 individuals undergoing low-dose CT scans. The goal is to collect blood samples from these individuals for analysis.
- The team has started analyzing blood samples from 20 individuals, attempting to detect circulating DNA and tumor cells in order to predict which patients will develop lung cancer. The researchers are also working to improve these detection methods and increase their sensitivity.
- The team added plasma proteomics pilot assays and assessed 34 early-stage lung cancer cases and 33 smoker control subjects. Some of the protein markers found by this method are known to be associated with lung cancer.

