Immunogenomic Profiling NSCLC (ICON)- A Multidisciplinary Approach
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- Lung cancer has a high disease burden and mortality – even in early stage tumors
- Analysis of human lung cancer tumors and corresponding normal tissue specimens has become crucial for the discovery and validation of molecular abnormalities associated with the pathogenesis and progression of lung cancer.
- Seamless integration of routine pathologic and specialized molecular examinations is required to achieve more accurate cancer diagnosis and classification.
- MDACC has developed a multidisciplinary research program to better understand the role of the microenvironment in the pathogenesis and progression of human lung non-small cell lung carcinoma (NSCLC).
- The multidisciplinary team includes basic, translational and clinical investigators that focus on studies to characterize the genomic and immune response in surgically resection NSCLCs and correlate these findings with clinical and pathological data, including outcomes of patients.
- NSCLC patients are screened and consented based on inclusion criteria
- Blood is collected before and after surgery
- Guidelines provided for late collections / overnight storage
- Pathology criteria- harvesting only on tumors greater than 3 cm
- Tumor and normal lung tissue are collected at the time of surgery
- Prioritization of tissue samples is based on total tumor harvested
- Tumor samples are processed for tumor infiltrating lymphocyte (TILs) isolation and expansion
- Tumor samples are processed for patient derived xenographs (PDX)
- Tumor samples are processed for immunohistochemical immune markers and immune-peptidome profiling.
- From August 2016-August 2017- 140 patients have consented, 133 surgical cases blood and tissue samples collected and 235 blood samples collected post-surgery