120-150-word statement of translational relevance (required)

APC promoter hypermethyation has been reported as a promising diagnosis biomarker for non-small cell lung cancer (NSCLC) over the last two decades, however, bench to clinical transformation of APC methylation test in the NSCLC diagnosis was slowly progressed, which might because its accuary diagnosis performance was uncleared till now. In additional, equivalent, even better diagnosis efficency were found for APC methylation test in serum group than that in tissue group which suggests

Hypermethylation of the tumor supressor genes (TSG) is an early and frequent event in most neoplasias, including NSCLC. Evidences have showed that hypermethylation of TSG can be deteced in precursor lesions of the lung cancer, even in sputum of cancer-free individuals at high risk of lung cancer. Our result shows APC promoter hypermethylation would be an promising dignosis biomaker in remote non-invasive media. In addition, APC methylation test have better diagnosis ability in adenocarcinoma (AD) than squamous cell carcinoma(SQ), which might be reason for the low diagnosis performace in the traditonal biomarker discovery reseach which never distingue AD and SQ from the specimens.