1. No.
   2018G016

2. Title
   The Analysis of Effects Upon Gastric Mucosa and Gastric Cancer Caused by Smoking, Based on Comprehensive Gene Expression Analysis

3. Period
   2018-2022

4. Summary
   This study aimed to investigate the genetic markers and pathways that are specific to habitual smoking and their association with gastric cancer. Tumor and non-tumor mucosal tissue samples were collected from 45 patients with gastric cancer, including 11 current smokers and 34 former or never smokers. Gene expression profiling was performed, and differential expression analysis was conducted to identify genes that were differentially expressed between current smokers and former or never smokers. The study found that genes involved in transcriptional regulation under hypoxic conditions were among those that were differentially expressed in current smokers. Using these probes, TCGA gastric cancer data sets were classified into two distinct groups, with the group exhibiting high expression of the identified probes displaying significantly worse prognosis compared to the low-expression group. The study results demonstrate that gene expression analysis of gastric specimens can identify genes that are associated with current smokers and their potential impact on the prognosis of gastric cancer. These findings may contribute to the development of new therapeutic strategies for the disease.