1. **No.**

FP01812174

2. Title

Prediction of smoking-related post-operative complicasion using cotinine level

3. **Period**

2017-2019

4. **Summary**

In this study, we examined the relationship between smoking status and postoperative pulmonary complications (PPCS). We enrolled 753 patients who underwent curative surgical resection for thoracic malignancies from three institutions. We classified the patients for three groups according to smoking status. The incidence of PPCs among recent, former and never-smokers was 15%, 8% and 6%, respectively (p=0.01). According to the results, cigarette smoking was associated with PPCs.

We also examined the relationship between smoking status and the preoperative concentration of nicotine and cotinine in saliva. On the basis of the questionnaire, ten patients were current smokers, five patients were formers smokers and six patients were non-smokers. Means of nicotine level in current smoker, former smoker and non-smoker were 142.9ng/ml (0-412), 40.2ng/ml (0-199) and 0.6ng/ml (0-6), respectively ($p < 0.01$). Means of cotinine level in current smoker, former smoker and non-smoker were 187.2ng/ml (0-472), 93.1ng/ml (0-465) and 0.1ng/ml (0-0.7), respectively ($p < 0.01$). According to the saliva nicotine and cotinine test, the concentration level of nicotine and cotinine was increased with the patients who were current smokers. There was no patient who occurred PPCs after thoracic surgery in this cohort. Further examination will be needed to clarify the relationship between nicotine, cotinine level and PPCs.