1. No.
   2020T005

2. Title
   Analysis of Gut Microbiota of Mild Cognitive Impairment (MCI) and Effects of Smoking

3. Period
   2020-2024

4. Summary
   In a study conducted up to 2021, questionnaires were administered to 94 people with MCI, including 50 nonsmokers and 44 smokers and former smokers. Feces were collected from both groups, DNA was extracted, and 16S metagenomic analysis was performed. In addition, as a secondary analysis, physical findings and blood tests were performed on smokers, former smokers, and non-smokers, and a comparison was performed. As a result, compared with non-smokers, smokers and former smokers with MCI had more inflammation-causing bacteria such as *Streptococcus*, *Escherichia*, and *Sutterella* in fecal 16S metagenomic analysis, and dysbiosis was observed. In addition, blood tests showed an inflammatory state, suggesting a relationship with dysbiosis.

   Since the above study was a comparison between smoking and non-smoking groups in MCI, and not a comparative study of smoking and non-smoking groups in MCI and non-dementia, in a later study, the number of subjects was increased to 288, and physical findings and blood tests were performed on smokers + former smokers and non-smokers in the MCI + CI group and non-dementia group to compare and examine the gut microbiota. As a result, the smoking rates were similar in the MCI+CI group and the non-dementia group, and analysis of the intestinal microbiota showed no correlation between MCI and smoking, leading to the conclusion that smoking has no effect on MCI.