1. No.
   2023G004

2. Title
   Clinical Set of Artificial Intelligence for Lung Parenchyma Evaluation on Appropriate Radiation-Dose CT in Smokers

3. Period
   2023-2025

4. Summary
   According to this research project aiming “Clinical Set of Artificial Intelligence for Lung Parenchyma Evaluation on Appropriate Radiation-Dose CT in Smokers”, we had assessed the impact of standard-dose, reduced-dose and ultra-low-dose CT and influence of different reconstruction methods to CT value accuracy in 320-row area-detector CT (ADCT) and 160-row high-definition CT (HDCT) in 2023. Then, we tested the recommended protocols for verifying the accuracy of lung nodule evaluation using artificial intelligence for standard-, reduced- and ultra-low-dose HDCT with different reconstruction methods, and determined that there weas no influence of radiation dose and reconstruction method to lung nodule evaluation accuracy. In the final year, 2025, we developed the "CLEAR Motion" method as a new motion artifact reduction method applied to deep learning, with the aim of further improving the accuracy of quantitative evaluation of lung field lesions by artificial intelligence and evaluated its clinical usefulness.