## Abstract

To reduce cost of swine production, a slaughter check system has been developed in countries with advanced swine industry. An evaluation of lung lesions in carcasses is a critical part of the slaughter check system. This study was performed as a pilot study for establishing image-based diagnostic system of swine lung. Lung tissues and their gross images were collected from slaughterhouses in Gyeonggi-do, South Korea. Scoring of the gross lung lesions was performed on the images of the lung. Histopathologic examination was conducted to classify the pulmonary lesions as bronchopneumonia and interstitial pneumonia. The lung lesion score was significantly higher in the bronchopneumonia group then in the interstitial pneumonia group (*p* < 0.001). A 90% confidence interval of the gloss lung lesion score was set for bronchopneumonia group, and it showed a sensitivity of 100% and specificity of 77.3%***.*** The gloss lung lesion scoring test was subjected to the evaluation of diagnostic distinction by receiver operating characteristic curve, and appraised to have good discrimination for bronchopneumonia. An establishment of the gross lung lesion scoring test for the diagnosis of bronchopneumonia could be valuable for a screening test of macroscopic bronchopneumonia in the swine slaughter check system.