

# Lung Age Predictor of Postoperative Complications

Lung age is an accurate predictor of postoperative cardiovascular complications for patients who have combined pulmonary fibrosis and emphysema (CPFE) and lung cancer. Lung age is a measurement of lung function based on the 1-second forced expiratory volume ( $FEV_{1.0}$ ), while taking into account both height and gender. At an Oral Abstract Session on Monday morning, Masahito Naito, MD, Kitasato University School of Medicine, Minato, Japan, presented results of a study on 36 patients who had resected lung cancer and comorbid CPFE. Dr. Naito and his colleagues measured the difference between patients' so-called real age and their lung age (RA-LA) and created three groups: group A, RA-LA >0; group B,  $-15 \leq$  RA-LA  $\leq$  0; and group C, RA-LA < -15. There were 10, 13, and 13 patients in group A, B, and C, respectively.

The researchers then evaluated the relationship between lung age and postoperative complications.

The study population was an average of 70 years old and 89% were men; there were no significant baseline differences between the groups in terms of age, sex, history of smoking, or hospital length of stay. The average length of stay was 16 days. Postoperative complications were common and were evenly distributed throughout the three groups. The most commonly occurring complication was pneumonia (five patients), followed by arrhythmia and hypertension (four patients

**Table. Univariate Analysis of Cardiovascular and Respiratory Complications**

	Group A+B	Group C	P value
Cardiovascular	1	6	<0.01
Respiratory	8	5	0.825

each), and air leakage and hypoxemia (three patients each). When researchers evaluated complications across all three groups, the differences in postoperative complications were not significant; however, when cardiovascular complications were considered, the rate of complications was significantly

higher in group C than in the other two groups combined (Table). This finding indicates that for patients with a lung age of 15 years or more higher than real age, lung age accurately predicted postoperative cardiovascular complications in patients with lung cancer and CPFE. ●

