Title: Lung cancer in patients with idiopathic pulmonary fibrosis: Clinical characteristics and impact on survival

Body: Background: Idiopathic pulmonary fibrosis (IPF) is reported to be associated with an increased risk of lung cancer. However, few studies have explored whether IPF affects the long-term survival of lung cancer patients. The primary goal of this study was to evaluate the impact of IPF on lung cancer survival. Additionally, the clinical characteristics of lung cancer in IPF patients were investigated. Methods: Seventy patients who had both IPF and histologically proven lung cancer were identified through a search of the Seoul National University Bundang Hospital database from 2003 to 2012. Of these, 33 surgically treated patients were matched with 66 patients who had lung cancer without IPF. Matched variables included age, sex, histologic type, and lung cancer stage. Results: Of the 70 subjects, 94% were male, and the mean age was 70 years (range, 46–90). In total, 81% of the cancers were located in the lung periphery whereas 56% were in the lower lobe. The majority of cancers (70%) were found in the fibrotic area on chest computed tomography scans. The most frequent histologic type was squamous cell carcinoma (40%). Among surgically treated patients (33 cases and 66 controls), the 5-year survival rates were 38% for lung cancer patients with IPF and 73% for lung cancer patients without IPF (p = 0.001). Conclusions: Squamous cell carcinoma was the most common type of lung cancer in patients with IPF. IPF reduced the survival of surgically treated lung cancer patients regardless of age, sex, histologic type, and/or lung cancer stage.