

# Changes in the Clinicopathological Characteristics of Surgically Resected Lung Cancers During the Past Two Decades (1990-1999 vs 2000-2009)

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**Abstract :** Lung cancer is the most common type of human neoplasm, and it has a high mortality rate and a poor prognosis. Recently, small lung cancers measuring less than 2 cm in size have become detectable by the use of improved diagnostic techniques, such as high resolution computed tomography (HRCT). We investigated the changes in the clinicopathological characteristics of lung cancers surgically resected at Fukuoka University Hospital during the past two decades. This study included 1708 cases of lung tumors resected from January 1990 to December 2009. Compared with tumor cases from the earlier decade (1990 to 1999), the number of adenocarcinomas was increased twofold and the percentage of the whole lung carcinomas increased from 48% to 61% in the second decade (2000 to 2009). Squamous cell carcinoma decreased from 35% to 20%, but there was not much of a decrease in the actual number of cases. In addition, the number of small lung adenocarcinomas that were detected at less than 2 cm in diameter increased; especially adenocarcinomas less than 1 cm, the incidence of which significantly increased from 4% to 12%. A total of 39.6% (38/97) of cases were positive for an epidermal growth factor receptor (EGFR) mutation, and the difference in the M/F ratio between mutation positive and negative cases was significant ( $P < 0.0008$ ). At present, the size of resectable lung carcinomas is becoming smaller, and histological type-specific molecular-targeted therapy has been introduced. More accurate histological diagnoses of smaller carcinomas are now being demanded by patients, and we, as pathologists, must be able to provide such diagnoses to help improve the prognosis for these patients.

**Key words :** Lung cancer, Size, Adenocarcinoma, Small lung cancer