Thoracic Surgery

Introduction

The Division of Thoracic Surgery deals surgically with various kinds of neoplasms in the thorax: lung tumors both primary and metastatic, mediastinal, pleural, and chest wall tumors. Surgical treatment of pulmonary carcinoma employing various surgical techniques has been the major challenge mission of the division. The modes of surgical treatment range from limited resection (wedge or segmental resection), simple resection (lobectomy or pneumonectomy) with or without systematic lymph node dissection, to more complex approaches such as bronchoplasty, combined resection with adjacent anatomic structures, perioperative adjuvant treatment and thoracoscopic surgery.

The division has three consultant surgeons. We usually have 4 residents. One of the two years of our senior residency program in general thoracic surgery is dedicated to research work. One to two of the three years of our junior residency course is devoted to the training in pathology, endoscopy, image diagnosis and/or medical oncology, depending on each resident's interest. This rotation system in the related oncologic specialties provides our residents with great learning opportunities.

The number of patients who undergo surgical intervention for primary lung cancer in our division is one of the largest three in Japan, second to the National Cancer Center Hospital Tokyo. We have been one of the most active leaders in this field since our institution was established in 1992.

Routine Activities

All possible candidates for surgical intervention are presented in English at our conference with thoracic oncology physicians and pathologists every Tuesday evening to determine their treatment modalities. Selected patients among those who underwent resection are radiologically and cytopathologically reviewed every Friday morning.

Primary pulmonary carcinomas of non-small cell histology in clinical stages I/II and IIIA without bulky mediastinal nodes and those of small cell histology in clinical stage I are usually indicated surgical resection for cure. In an attempt to improve the poor prognosis of patients with bulky or clinically and histologically proven mediastinal lymph node metastases, with invasive disease to the neighboring vital structures, or with small cell cancer, the optimal treatment modalities are sought for in clinical trial settings.

Resection of metastatic lung tumors has been attempted on Thomfold's criteria with slight modification, upon consultation with the patient. Histologically, metastases from colorectal carcinoma constitute the majority of the cases.

The majority of mediastinal tumors were thymic epithelial tumors, and we did not attempt to apply thoracoscopic approach in these patients.

New Developments in 2003

Our surgical procedures stayed unchanged for the past several years. The postoperative hospital stay is 4 days in the shortest and 7 days on average for primary lung cancer cases. Thirty day operative mortality occurred one patient during the past 1 year.

Dr. Yoshida contributed as the local organizer for a Japan-US cooperative seminar, supported by the Japan Society for the Promotion of Science, National Cancer Institute, and National Institute of Health Office of International Affairs; Screening Detected Lung Cancer, A New Clinical Entity: Diagnostic, Pathologic, and Therapeutic Issues and Approaches to Innovative Research, which was held from October 30 to November 2 in Asakusa, Tokyo.

Ongoing Clinical Trials

1. Induction chemotherapy and irradiation for advanced thymic epithelial tumor [phase II].
2. Limited resection for small peripheral adenocarcinoma. [phase II].
3. Induction chemotherapy for stages IB and II non-small cell lung cancer [randomized phase II].
4. Prospective study of radiologic-pathologic correlation for peripherally located lung cancer for radiologic definition of "early" peripheral lung cancer.

● K. Nagai, J. Yoshida ●

Number of Patients Operated

	1998	1999	2000	2001	2002	2003
Lung carcinoma	180	202	236	270	263	291
Metastatic lung tumor	28	30	25	29	43	31
Mediastinal tumor	20	20	19	26	14	23
Esophageal carcinoma	21	20	19	24	37	29
Others	42	33	31	39	40	58
Total	291	305	330	388	397	432

Operative Method for Primary Lung Carcinoma

	1998	1999	2000	2001	2002	2003
Pneumonectomy	12	5	7	8	15	12
Lobectomy	145	150	179	207	203	217
(Bronchoplasty)	(11)	(10)	(4)	(7)	(5)	(5)
Limited resection	15	36	24	30	12	37
Lung resection	172	191	210	245	230	266

Survival Rates for Resected Primary Lung Carcinoma

p-Stage	3-year survival rate(%)	5-year survival rate(%)
IA	94.4	88.3
IB	84	73.8
IIA	76.8	51
IIB	60.5	48.2
IIIA	55.9	40.8
IIIB	53.8	44.8