Objective: To evaluate the effects of postoperative anticancer chemotherapy for small cell lung cancer on LCNEC.

Methods: Twenty-four patients who had undergone resection of LCNEC in our hospital between 1986 and 2004 were classified, according to the presence or absence of postoperative adjuvant chemotherapy and to its regimen, into group A which received two or more courses of a platinum-based regimen with VP-16 or CPT-11 for small cell lung cancer, group B which received other regimens, and group C which received no postoperative adjuvant chemotherapy, and evaluated in terms of 5-year recurrence-free survival and 5-year survival rates.

Results: The subjects consisted of 24 men and 2 women, with a mean age of 68 years, and all were smokers. Six patients had stage I cancer, 4 stage II cancer, 13 stage III cancer, and 1 stage IV cancer. Six patients (25%) belonged to group A, 4 (1 received MVP 2 courses, 1 CAV 1 courses, and 2 UFT courses) to group B, and 14 to group C. The 5-year recurrence-free survival and 5-year survival rates in group A were 50% each, whereas all patients in group B died within 2 years, and the 5-year recurrence-free survival and 5-year survival rates in group C were 25% and 34%, respectively.

Discussion: No significant intergroup differences were observed, because of the small number of patients studied. However, the prognosis in group A was slightly better than that in groups B and C. Since the present study evaluated a small number of patients in all stages of cancer, the current issue remained unresolved. Therefore, further studies are needed in more patients.

P2-199 **NSCLC: Combined Modality Therapy Posters, Tue, Sept 4**

Phase II study of cisplatin and weekly docetaxel combined with concurrent radiotherapy in patients with advanced non-small cell lung cancer

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Background: We have reported an efficacy of the combination of cisplatin on day 1 and docetaxel on days 1, 8 and 15 every 4 weeks for the treatment of previously untreated patients with non-small cell lung cancer (NSCLC). Concurrent radiation applied to cisplatin-based chemotherapy with new anticancer agents is expected for locally advanced NSCLC. We evaluated the efficacy and safety of cisplatin and weekly docetaxel combined with thoracic radiotherapy for patients with Stage III advanced NSCLC.

Methods: We identified 34 eligible patients with locally advanced NSCLC and good performance status (PS) (ECOG; 0 or 1) who had not received prior treatment and who were under 75 years old. Their median age was 63 years (range, 45-74 years), 32 patients were male (94.1%), two (5.9%) were female, 30 (88.2%) had PS 0, 4 (11.8%) had PS 1, 3 had Stage IIIA (8.9%), and 31 had Stage IIIB (91.1%). Tumor histology included adenocarcinoma (55.9 %) and epidermoid (41.2 %). The patients received intravenous infusions of docetaxel (20 mg/m^2, days 1, 8, 15) and cisplatin (80mg/m^2, day 1) with standard thoracic concurrent radiation (60Gy, 2Gy/day).

Result: Grade 3/4 neutropenia was recorded in four patients (12 %), but there were no episodes of neutropenic fever. Nonhematologic toxicities were also mild, consisting mainly in grade II anorexia. Esophagitis and pulmonary toxicities over Grade 3 were observed in 18 % and 12 %, respectively. One complete response and 19 partial responses were observed and the objective response rate was 59.6 %. The median survival time was 26.4 months, and the 1-year survival rate was 76.0 %.

Conclusion: Cisplatin with weekly administration of docetaxel combined with concurrent radiotherapy is a feasible and effective regimen against advanced NSCLC.

P2-200 **NSCLC: Combined Modality Therapy Posters, Tue, Sept 4**

Concurrent biweekly gemcitabine plus cisplatin chemotherapy and radiotherapy

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Background: In locally advanced non-small cell lung cancer(NSCLC), concurrent chemoradiotherapy(CCRT) becomes the leading therapeutic modality. But there are still many controversies in the chemotherapeutic regimens and in the radiation methods.

Materials and Methods: 27 NSCLC patients of clinical stage IIIB, 2 patients with stage IIIA were enrolled since December 2002. The performance status of ECOG grade 0 or 1 was in 22 patients(75.9%) and the others were grade 2. Squamous cell cancer was the most common (62%), followed by adenocarcinoma (31%). Cisplatin(30mg/m^2) and gemcitabine(500mg/m^2) were administered every two weeks while 50.4 Gy(28 fractions) was irradiated on the tumor site. Booster irradiation of 18 Gy (10 fractions) was administered unless the disease progressed. Two or three cycles of consolidation chemotherapy were done with gemcitabine(1200mg/m^2 1st and 8thday) and cisplatin(60mg/m^2) every three weeks.

Results: During CCRT, severe esophagitis(>grade III) was serious complication(51.6%), followed by granulocytopenia(72.2%) and pneumonitis(20.7%). But they were mostly grade 2 and well managed by medical treatments and no patients withheld the treatment. After the consolidation chemotherapy, 3 patients(10.3%) had complete remission, 21 patients (72.4%) showed partial remission, and in 4 patients, the disease was stable, and in 1 patients it progressed.

Median survival time was 16 months(95% CI;2.4-39.2 months), The survival rates in one, two, and three years are 62.7%, 43.9%, 20%, respectively.

Conclusion: The response rate and survival time of biweekly gemcitabine plus cisplatin chemotherapy with concurrent radiotherapy was encouraging in patients with locally advanced NSCLC. However, treatment related toxicities were significant, thus further modification of therapy seems to be warranted.

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Correlation of gefitinib efficacy and detection of new EGFR mutation variants in pre-treated patients (pts) with advanced non-small cell lung cancer (NSCLC)

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Background: The efficacy of Tyrosine Kinake inhibitors (TKIs) of EGFR is associated with well characterized mutations on the exons 18, 19 and 21 of EGFR gene. Less common mutations could be detected in these exons but their relationship with the clinical efficacy of TKIs has not been established yet.

Methods: Genomic DNA was extracted from microdissected formalin-fixed paraffin-embeded tumor tissue from 86 pts enrolled in a gefitinib expanded access program. Exons 18, 19 and 21 were amplified and subjected to direct sequencing.

Results: Classical EGFR mutations (CM) were detected in 9 (10.4%) pts and other mutations variants (MV) in 19 (22%) pts. Eight (42.1%) MV were observed in exon 18, 3 (15.8%) in exon 19 and 8 (42.1%) in exon 21. Tumor Growth Control (TGC) was achieved in 88.9% (3PR and 5SD) pts with CM, 63% (2PR and 10SD) pts with MV and in 45.9% (3PR and 25SD) pts with wild type EGFR gene (WT). There was no clear association between the presence of EGFR MV and the sex, histology or smoking history. The median TTP was 64 weeks (range:4-80+), 20 weeks (range:6-140) and 16 weeks (range:4-176+) in pts with CM, MV and WT, respectively. Nine (47.3%) pts with EGFR MV had a TTP >24 weeks. The median survival was 78 weeks (range:5-94+), 70 weeks (range:10-142) and 36 weeks (range:4-176+) in pts with CM, MV and WT, respectively. Three patients bearing mutations in exons 18, 19, and 21 progressed despite gefitinib treatment suggesting that these mutations could be related to resistance to gefitinib.

Conclusions: EGFR mutation variants could be associated with response or resistance to TKIs but their low incidence requires their evaluation in a largest cohort of patients.

P2-202 **NSCLC: Combined Modality Therapy Posters, Tue, Sept 4**

Postoperative adjuvant therapy for stage IIIA non small cell lung cancer

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Background: Surgery improved the results of treatment for stage IIIA non small cell lung cancer (NSCLC). However, a significant fraction of patients after surgical resection die due to local or systemic relapses. Nonetheless, the best adjuvant therapy to improve survival and decrease relapse rate remains as an ever controversial issue. Therefore, we conducted a randomized trial to determine whether or which postoperative adjuvant therapy is beneficial in prolonging survival and decreasing recurrence in patients with completely resected stage IIIA NSCLC.

Methods: This trial was initiated by the Lung Cancer Research Team at Korea Cancer Center Hospital March 1989, and enrollment was stopped December 1998. It was designed as a randomized, prospective three-armed study with surgery only (control group, 55 patients) versus surgery plus adjuvant radiotherapy (study group I, 56 patients) and surgery plus adjuvant MVP (mitomycin C, vinblastin and cisplatin) chemotherapy (study group II, 53 patients).

Results: Data for all the patients were complete after long-term follow-up. Thirty-eight patients in the control group, thirty patients in the study group I and twenty-nine patients in the study group II experienced tumor recurrence during follow-up. The median times of disease-free were 16.3 months (control group), 35.3 months (study group I), and 36.6 months (study group II). The 5-year disease-free survival rates were 28.9%, 41.1% and 49.4%, respectively (p=0.10, log-rank test). Even though there was no significant difference statistically, log-rank test for trend of disease-free survival was significant (p=0.039). Only twelve patients (control group), nine patients (study group I), and sixteen patients (study group II) were survived until the end of follow-up. The median survival times were 31.8 months (control group), 27.0 months (study group I), and 55.7 months (study group II). The 5-year overall survival rates were 29.8 %, 37.5% and 48.1 %, respectively (p=0.22, log-rank test).

Conclusions: Our results suggest that the addition of adjuvant radiotherapy or adjuvant MVP chemotherapy may not reduce the incidence of recurrence and prolong the disease-free or overall survival rates of the patients with stage IIIA NSCLC after surgery.

P2-203 **NSCLC: Combined Modality Therapy Posters, Tue, Sept 4**

Cisplatin/Gemcitabine followed by Cisplatin/Etoposide and concurrent thoracic radiotherapy in patients with irresectable or medically inoperable non-small-cell lung cancer

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Aim: Retrospective analysis of treatment with cisplatin/gemcitabine followed by cisplatin/etoposide and concurrent thoracic radiotherapy (TRT) for patients with irresectable or medically inoperable non-small-cell lung cancer (NSCLC).

Methods: Stage III NSCLC patients received one course of cisplatin (80mg/m^2, day 1) and gemcitabine (1250mg/m^2, day 1 and 8) followed by cisplatin (80mg/m^2, day 21 and 42) and etoposide (100mg/m^2, days 21-23 and 42-44). Concurrent TRT commenced on day 22, 5 days/week for 5 weeks. National Cancer Institute of Canada grading system v3.0 was used for evaluation of toxicity. Radiological response was evaluated using RECIST criteria. Patients with potentially resectable stage III NSCLC and good performance status underwent mediastinal restaging after 46-50 Gy followed by surgery if no N2-disease or distant metastatic disease was found. All others received radiotherapy to a total dose of 50-60 Gy.

Results: A total of 57 patients were treated between October 2003 and December 2006. Of those, 5 had medically inoperable stage IIA (1) and IIB (4), 24 stage IIIA, 25 stage IIIB and 3 patients with stage IV NSCLC. Prior treatments for NSCLC in 14 patients included pneumonectomy (3), (bi)lobectomy (9), stereotactic radiotherapy (1) and chemotherapy (6). During 178 evaluable courses of chemotherapy (total 179 courses), grade III/IV anemia was reported in 6 courses (3.4%), grade III/IV thrombocytopenia in 22 courses (12.4%) and grade III/IV leucocytopenia in 65 courses (36.5%). One patient died of grade V febrile neutropenia and one patient died as a result of lung bleeding after 6 Gy. Transfusions for anemia were necessary after 12 courses and hospitalisation for neutropenic fever in 7 cases. Carboplatin replaced