Background: Second-line chemotherapy offers advanced non-small cell lung cancer (NSCLC) patients a small but significant survival improvement. Docetaxel is usually administered as a 3-week schedule. But it has a high toxicity burden. Therefore, weekly schedule has been explored in several trials. In this retrospective study, we compared the efficacy and safety of weekly schedule and 3-week schedule docetaxel monotherapy as a second-line setting.

Methods: Docetaxel was administered with 75 mg/m² on day 1 every 3 week or 37.5 mg/m² on day 1, every 3 week until disease progression or severe toxicity developed.

Results: From October 2003 to March 2006, a total 38 patients received docetaxel monotherapy and 37 patients can be evaluated. A total 141 cycles were administered and evaluated. The median overall survival was 13.3 months (95% Confidence interval; 6.3 ~ 20.3) in the weekly schedule and 10.7 months (95% Confidence interval; 8.3 ~ 13.0) in the 3-week schedule (p=0.41). The median time to progression was 3.0 months (95% Confidence interval; 1.9 ~ 4.0) and 2.8 months (95% Confidence interval; 1.0 ~ 4.6), respectively (p=0.41). Response rate was 16.7% in weekly schedule and 21.1% in the 3-week schedule. Major hematologic toxicity was grade 3-4 neutropenia (3-week: 39.2%, weekly: 39.7%), Non-hematologic toxicities were similar between the two schedules. There were no treatment-related deaths.

Conclusions: Docetaxel weekly schedule is very well tolerable and comparable activity with 3-week schedule. Considering efficacy and tolerability, it can be alternative schedule of standard treatment as a second-line setting.

P2-271 NSCLC: Cytotoxic Chemotherapy Posters, Tue, Sept 4
Phase II trial of biweekly Gemcitabine and Paclitaxel as second-line chemotherapy for patients with non-small cell lung cancer previously treated with platinum-based chemotherapy
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Background: We have previously shown the optimal dose of biweekly Gemcitabine and Paclitaxel (GEM/PAC) for the treatment of refractory and/or resistant patients with non-small cell lung cancer (NSCLC).

We conducted a phase II study of this combination chemotherapy to evaluate the efficacy and safety of biweekly GEM/PAC in patients with NSCLC as a second line chemotherapy after platinum-based chemotherapy.

Methods: Patients with measurable tumor who had received one previous chemotherapy or chemotherapy/radiation regimen were eligible. PAC (150mg/m²) was administered first over one hour followed by GEM (1000mg/m²) over 30minutes and repeated biweekly at least 4 cycles.

Results: Thirty-one patients were enrolled, median age of 64 yr (range 39 to 75). Nine were female and twenty-two were male. Stage 3b was eleven and Stage 4 was twenty. Thirty patients had a performance status 0, sixteen were 1, and two were 2. Twenty-six patients (84%) were received with platinum compound plus Docetaxel regimen. Bi-weekly GEM/PAC was performed with the median cycles of 5.2 (1-20 cycles). Partial response observed in seven cases (23%), and stable disease was seen in eighteen (58%). Median survival time after GEM/PAC was seven months. Over grade 3 or 4 hematological toxicity (3%) and neurotoxicity (3%) were observed in one patient, respectively. One patient who received only one cycle of this chemotherapy developed pulmonary toxicities, resulted in fatal respiratory failure.

Conclusions: The biweekly GEM/PAC combination chemotherapy was active and well tolerated as a second-line therapy in patients with NSCLC. Paclitaxel might be a promising and alternative agent in patient with previously treated with Docetaxel as first line.

P2-272 NSCLC: Cytotoxic Chemotherapy Posters, Tue, Sept 4
Gemcitabine plus cisplatine therapy in local advanced NSCLC
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In our study, patients who were diagnosed as local advanced NSCLC and treated with gemcitabine plus cisplatin (GP) regimen, were evaluated retrospectively. 77 patients (72 male and 5 women) who were taken more then two cycles of GP chemotherapy and reevaluated after chemotherapy is admitted to the study. Patients median age was 65. Patients were evaluated with their stages, response to the chemotherapy after 2 and 4 th cycle with WHO response criteria, time to progression, toxicity profiles and EQRLC quality of life assessment of 24 patients. Median chemotherapy cycle is 3 and 5% complete response, 39% partial response, 30% stable disease, 26% progressive disease were re-staged after 2 course of chemotherapy. Median survival is 12,5 month and time to progression is 5 month. Neutropenia and anemia are the most common hematological toxicities whilst emezis and alopecia are the most common nonhematological toxicities.

P2-273 NSCLC: Cytotoxic Chemotherapy Posters, Tue, Sept 4
Treatment of elderly 75 years + with lung cancer. A three-year material in clinical practice from Karolinska University Hospital - Sweden
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Introduction: Sixty percent of all neoplasms and two-thirds of all deaths due to cancer occur in persons older than 65 years. More than 50% of patients with lung cancer are older than 65 years and 30% older than 70 years. With more persons surviving to older age treatment of the elderly with lung cancer has become an important issue.

Material and Method: All patients 75 years or older with lung cancer seen at the Department of Respiratory Medicine and Allergy, Karolinska Hospital from 2003 to 2005 were retrospective reviewed. In all, 334 patients were analyzed.

Results: The mean age was 80.5 years, 94 (58.1%) were men. 94% of the males and 79% of the females were smokers or former smokers. 246 (73.6%) had PS 0-2. 9.2% had SCLC, 19.9% adenocarcinoma, and 6.7% squamous cell carcinoma. 23.9% had clinical lung cancer and the others bronchoalveolar cell carcinoma or low differentiated
carcinoma. 8.7% underwent radical surgery, 23.7% received chemotherapy only, 21.6% radiotherapy against the tumour (thereof stereotactic 5.1%), and 1.5% concomitant chemo-radiotherapy. 6.3% received radiotherapy against metastases, and 38% had no therapy. Only 6.3% were given second-line chemotherapy. Survival was 219 and 190 days for patients 75-80 years and >80 years, respectively. Patients with PS=0 survived 533 days, those with PS=1 only 20 days. Survival among smoker or former smokers and never smokers were 212 and 132 days, respectively. Survival among those who received chemotherapy was 573 days, while for the others it was 181 days.

**Conclusions:** Significant survival among patients given second line chemotherapy (p<0.036). Significant survival among patients between 75-80 versus > 80 years old (P<0.032). Treatment of elderly patients with lung cancer is feasible if they have a good PS and seems to result in prolonged survival.

**P2-274 NSCLC: Cytotoxic Chemotherapy Posters, Tue, Sept 4**

**Clinical benefits of pemetrexed 500 mg/m² and 1000 mg/m² in a randomized phase II study for pretreated patients with locally advanced or metastatic non-small cell lung cancer (NSCLC)**

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**Background:** Pemetrexed is a standard treatment for patients with locally advanced or metastatic NSCLC who had prior chemotherapy. In an international phase III study comparing pemetrexed with docetaxel in pretreated patients with NSCLC, pemetrexed showed clinically similar efficacy to docetaxel with median survival time (MST) of 8.3 months. In our Japanese randomized phase II study, the treatment with either pemetrexed 500 mg/m² (Pem 500) and 1000 mg/m² (Pem 1000) showed favorable response rates of 18.5% and 14.8%, respectively. We report survival and quality of life (QOL) results of the Japanese phase II study.

**Methods:** Patients with PS 0-2, measurable, stage III/IV NSCLC, who had previously received 1 or 2 chemotherapy regimens, were randomized to receive either Pem 500 or Pem 1000 on day 1 of a 21-day schedule. The primary endpoint was response rate, which has already been reported. The secondary endpoints included overall survival and QOL. Overall survival was calculated with a Kaplan-Meier method.

The QOL scores of LCS questionnaire were measured at baseline, before the 2nd and 3rd cycle, and also at 3 months after the registration to the first cycle. Changes from the baseline were calculated.

**Results:** From October 2004 to October 2005, 244 pts were enrolled at 28 centers, 226 patients were randomized and treated, and 216 patients were evaluated for efficacy. Baseline patient characteristics (Pem 500/Pem 1000: 108/108 pts) were well balanced between the two arms: Males 63%/64%; median age 62/62 years (range: 37-74/26-74); PS 0-1 94%/94%; stage IV 81%/78%. The median number of treatment cycles completed on both arms was 3 (range 1-20+ for Pem 500 and 1-14+ for Pem 1000). One year survival rates were 59.2% for Pem 500, and 53.7% for Pem 1000 with MST of 15.7 and 12.6 months, respectively.

The QOL scores of LCS questionnaire were obtained from 107/107 patients (Pem 500/Pem 1000) at baseline, 101/98 patients before the 2nd cycle, 84/72 patients before the 3rd cycle, and 59/61 patients at the last time point (Pem 500/Pem 1000). In both arms, the total LCS scores were well sustained from the baseline without aggravation among the patients who completed the questionnaire at the last time point. Detailed QOL results will be reported at the presentation.

**Conclusions:** Pemetrexed is an active agent for pretreated patients with NSCLC. Pem 500 showed numerically better response rate and survival than Pem 1000. Based on this study, the use of Pem 500 is recommended for pts with NSCLC in a 2nd or 3rd line setting.

**P2-275 NSCLC: Cytotoxic Chemotherapy Posters, Tue, Sept 4**

**Phase ii study of weekly docetaxel (Doc) and gemcitabine (Gem) in relapsed patients (Pts) with advanced, platinum-exposed non-small cell lung cancer (NSCLC)**

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**Background:** Doc has clear-cut therapeutic superiority compared to best supportive care or ifosfamide/vinorelbine and, as a result, is the standard of comparison in the second line setting. In the pre-pemetrexed era, Gem, in phase II studies, also demonstrated activity in the salvage setting with favorable response and survival rates. We therefore mounted a phase II trial pairing these two agents in pts with progressive disease after prior platinum-based therapy.

**Materials and Methods:** Pts with advanced NSCLC and ECOG PS 0-1 progressing either during or after prior platinum-based therapy received Doc 40 mg/m² days 1 and 8, in combination with Gem 800 mg/m² days 1 and 8. In the absence of dose limiting myelosuppression or other gr ≥3 toxicities, Gem dose was escalated on an intra-patient basis to 1000 mg/m² days 1 and 8. Pts continued treatment until disease progression or unacceptable toxicity.

**Results:** 35 pts were enrolled: 20 (57%) were male; 69 % were ECOG PS 0-1; 57% had received prior XRT. Median age was 61 (range 30-79). Median time from initial diagnosis to enrollment was 12.4 mos. 170 cycles total were administered (median 4, range 1-16). 35% received ≥ 6 cycles. Overall response rate was 24% (95% CI 12-39%). Median event free survival (EFS) was 5.7 mos; median overall survival 12.5 mos. 1 year survival rate was 51%, and 2 year survival rate 20%. Those enrolled within 12 mos of initial diagnosis had poorer EFS compared to those after 12 mos (log rank p=0.04). There were no treatment-related deaths. Typical grade ≥ 3 toxicities included neutropenia (58%), diarrhea (6%), pneumonitis (9%), and dermatitis (9%), including nail changes.

**Conclusion:** Combination docetaxel and gemcitabine administered on a weekly basis, days 1 and 8 every 3 weeks in good performance NSCLC patients with PD after/during platinum-based therapy appears encouraging, and presents a viable option in this population. Proof of benefit requires phase III testing.