to 70 Gy concurrent with chemotherapy in a prospective cohort of poor risk unresectable stage III lung cancer patients.

**Method:** From 8/04 to 10/06, 44 unresectable stage III lung cancer patients seen at the Cleveland Clinic were treated with radiotherapy consisting of <50Gy to the primary tumor and regional lymph nodes followed by a boost to gross tumor for a total dose of 70 Gy. Carboplatin (AUC of 2) and paclitaxel (50 mg/m²) were administered concurrently with RT. At the physicians’ discretion, consolidation docetaxel (75 mg/m²) was administered every 3 weeks for no more than 3 courses. Patients received 500 mg amifostine daily, divided into 2 subcutaneous injections, 30 to 60 minutes prior to RT. All received oral antiemetic and antihistamine prophylaxis prior to amifostine.

**Results:** Concerning patient characteristics, median age was 64.5, median KPS was 80, 54.5% of patients were female, 77.3% were white, 93% were former smokers with 14% still smoking. At diagnosis, 24 patients (54.6%) were stage IIB, with median tumor size of 3.5 cm. 64% of patients received >90% of planned amifostine. Median follow-up was 9.8 months. During, at <90 days and at >90 days of RT, there was 2.3%, 2.3% and 4.5% grade 3 esophagitis, and 0%, 2.3% and 0% grade 3 pneumonitis, respectively, but no grade 4 or 5 toxicity. Median survival was 20.8 months and 2-year actuarial survival was 39%. Median time-to-progression was 13.9 months, with 54.5% having no progression at the primary site.

**Conclusions:** Daily subcutaneous amifostine reduces the rates of esophagitis and pneumonitis expected with dose-escalated radiotherapy with concurrent chemotherapy, a regimen that may improve survival.

**P3-201 Radiation dose is significantly associated with overall survival in patients with stage III non-small cell lung cancer treated with combined radiation and chemotherapy**

Wang, Li1 Correa, Candance1 Zhao, Lujun1 Hayman, James1 Kalemkerian, Gregory1 Kong, Feng-Ming1

1 University of Michigan Department of Radiation Oncology, Ann Arbor, MI, USA

**Objective:** Radiation dose is an independent prognostic factor for survival in patients with early stage non-small cell lung cancer (NSCLC). We hypothesized that radiation dose is also a significant independent factor associated with survival in patients with stage III disease treated with combined radiation and chemotherapy.

**Methods:** This is an Institutional Review Board approved retrospective study. Eligible subjects included those with stage III NSCLC registered in the radiation oncology database at University of Michigan Hospital between January 1992 and July 2004. Radiation was given using 3-dimensional conformal technique with doses ranging from 30 to 102.9 Gy, corresponding to a bioequivalent dose (BED) of 39 to 124.5Gy. Median age was 65 years (range, 36-89). There were 80 males and 67 females. Median follow-up was 13.0 months (range, 2.7-145.9).

**Results:** For patients treated with radiation alone (n=40), sequential chemoradiation (n=42), and concurrent chemoradiation (n=65), median survival was 8.6 (95% CI: 5.7-11.5), 12.8 (95% CI: 9.5-16.0) and 15.4 (95% CI: 12.7-18.0) months, respectively (P=0.011). Multivariate Cox-regression analysis showed that BED (HR=0.96, 95% CI: 0.95-0.97, P=0.001) and administration of chemotherapy (HR=0.44, 95% CI: 0.28-0.70, P=0.001) were independent prognostic factors associated with the risk of death. T stage was marginally significant (P=0.065). Age, gender, performance, weight loss and N stage were not independent factors (P>0.05). To further study the BED effect, multivariate analysis was performed separately in patients treated with and without chemotherapy: the hazard ratios of BED for the risk of death were 0.97 (95% CI: 0.95-0.99, P=0.013) and 0.95 (95% CI: 0.93-0.98, P=0.001), respectively. BED also remained a significant independent prognostic factor in patients treated with chemotherapy and radiation in the dose range of 60-66 Gy (HR=0.91, 95% CI: 0.84-0.99, P=0.041).

**Conclusions:** Radiation dose is significantly associated with survival in patients with stage III NSCLC treated with combined radiation and chemotherapy.

**P3-202 Patterns of radiotherapy practice in non-metastatic non-small cell lung cancer: results of web-based patterns of care study in Korea**

Wu, Hong-Gyun1 Eom, Keun Yong1 Oh, Do Hoon1 Kim, Il Han1 Lee, Mi Yeon1 Chie, Eui Kyu1 Park, Charm II1

1 Seoul National University College of Medicine, Seoul, Korea

**Background:** A Patterns of Care Study (PCS) was conducted to determine the patterns of evaluation and treatment for non-metastatic non-small cell lung cancer (NSCLC) in Korea.

**Methods:** A web-based data system for Korean Patterns of Care Study was developed and a national survey was conducted. Patients who received thoracic radiotherapy (RT) for clinical or pathologic stage I-III NSCLC without other malignancy in 1998 and 1999 were eligible and randomly selected by power allocation method.

**Results:** The records of 446 selected patients from 19 institutions were reviewed and 10 patients were excluded because of incomplete clinical information. Accordingly, 436 patients were the subject of this study with median age of 62.2 years (range, 33.1 - 88.0) and male-to-female ratio of 86:14. The histologies were squamous cell carcinoma in 61.2%, adenocarcinoma in 28.4%, large cell carcinoma in 2.3%, and NSCLC NOS in 8.0% of patients, respectively. Bone scan, abdominal USG or CT, brain CT or MRI, and PET was examined in 92.5%, 81.5%, 44.8%, and 26.6% of patients, respectively. The clinical stage was I in 8.9%, II in 12.2%, IIIA in 37.4%, and IIIB in 41.5%, respectively. Regarding treatment modalities, RT was used alone in 38.1%; RT combined with operation (OP) in 22.9%; RT combined with chemotherapy (CT) in 27.1%; trimodalities including RT, OP, and CT in 11.9%. The median total dose was 59.4 Gy with daily median fraction size of 1.8 Gy and the percent delivered dose over 90% was achieved in 87.6%. Most of patients received RT in supine position (99.3%) with beam direction of AP/PA (95.6%) as their first RT plan, and with photon energy of 6 MV (42.0%) followed by 10 MV (41.7%). The CT-based planning was used in 2.3% and 32.6% for their first and second RT plan, respectively. The more or less RT planning was performed in 13.5% of patients. Elective nodal irradiation was employed in 87.8% of patients and the N2 nodal station (48.6%) was most frequently included. The 8% of patients received thoracic RT based on prospective protocol.

**Conclusions:** This study is the first PCS for NSCLC conducted in Korea. We confirmed that various types of RT planning were utilized according to each institution, but beam delivery techniques were not much different in 1998 to 1999. Now another PCS is planned to evaluate changing trends in national practice.