Conclusions: This study provides a snap shot of wait times experienced by NSCLC patients undergoing curative-intent surgery and describes how different factors influence timelines based on care interval definitions. In a parallel study we use a subset of these timelines as potential determinants of referral to medical oncology and provision of adjuvant chemotherapy.

6599 POSTER

Comparison of cisplatin–paclitaxel combination versus cisplatin-etoposide as first line chemotherapy in SCLC

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Small cell lung cancer is a sensitive tumor to chemotherapy. The initial high response rate is though followed by relapse in nearly 90% of the patients. Cisplatin and Etoposide combination is the standard primary treatment. Other chemotherapy combinations are not often applied. The objectives of the present trial is to compare between two-phase II trials the response rate, time to tumor progression and mainly the median and overall survival.
Material and Methods: Seventy-seven patients with small cell lung cancer were enrolled and divided in two arms. 3 patients were not considered evaluable. 37 patients in each of the two arms were balanced to have the different combination chemotherapy. Arm A patients had the combination of Cisplatin 80 mg/m^2 on day 1 and VP-16 (etoposide) 120 mg/m^2 daily on days 1−3 repeated every 3 weeks. Arm B had Cisplatin 80 mg/m^2 day 1 and Paclitaxel 175 mg/m^2 day 1 repeated every 3 weeks. The median age of the patients was 65 years (range 46−80). There were 61 male and 13 female. Stage of disease: Arm A: Limited disease 15 patients, advanced 22 patients. Arm B: Limited disease 20 and advanced 17 patients. Patients were planned to have 6 courses. 80% of the patients of each arm had completed their courses. Radiation therapy was given to all the patients of limited disease.
Results: Both arms response rates (CR and PR) and survival was similar. In Arm A (with VP-16) it was 65.71% and in Arm B (with Paclitaxel) it was 64.70%. The median survival of Arm A patients was 13 months with range 1−29 and of Arm B the median was 12 and range $\frac{1}{2}$−60+ months. Toxicity was also without difference in respect of myelotoxicity, nephrotoxicity and alopecia.
Conclusions: Comparison of Cisplatin and Etoposide combination versus Cisplatin and Paclitaxel showed no difference in response rate, survival and toxicity. The Cisplatin and Paclitaxel combination could be applied in small cell lung cancer patients as an alternative treatment to the standard one.

6600 POSTER

Risk factors of radiation pneumonitis: a prospective study

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Background: To study the clinical, dosimetric, and biological risk factors of radiation pneumonitis (RP) for lung cancer patients(pts) receiving thoracic radiotherapy (RT) in Taiwan
Materials and Methods: From Jul 2003 to Jun 2005, fifty pts were enrolled to study the clinical, dosimetric, and biological risk factors of RP for lung cancer pts receiving thoracic RT in our institute prospectively. Three of them were ineligible for analysis due to incomplete RT or missing data. The remaining pts (n = 47) constitute our study group. Clinical factors including age, gender, history of smoking, history of pulmonary disease, histology, stage, primary site, operation, chemotherapy, pretreatment albumin, hemoglobulin level, and pretreatment quality of life (QoL) were recorded. QoL was measured by EORTC C30 questionaire. V20 (percentage of total lung receiving more than 20 Gray) and mean lung dose (MLD) were recorded as dosimetric factors. Pretreatment plasma cytokine levels (transforming growth factor beta, TGF-β and interleukin six, IL-6) were recorded as biological factors. Common toxicity criteria v3.0 was used for grading of RP. Uni-variate analysis by Fisher's exact test was used for analysis of risk factors. This study was registered at www.clinicaltrials.gov (NCT00155909).
Results: Most of these pts were male (n = 39) and aged (median age 63 yrs, range: 36−80) at diagnosis. Most of them had stage III non-small cell lung cancer (NSCLC, n = 15) or limited stage small cell lung cancer (SCLC, n = 14) and received definitive RT (n = 37) and concurrent chemotherapy (n = 29). The median RT dose was 54 Gy [range: 36−66, mostly (n = 3) $\geqslant$50]. The median daily fractional size was 2 Gy [range 1.8−3, mostly (n = 45) $\leqslant$2]. The median (range) V20 and MLD were 27% (2−36) and 15 Gy (2.8−21). The median (range) IL-6 and TGF-β levels (pg/ml) were 4.5 (0−71.7) and 1615 (634–3486, missing=14), respectively. At the time of analysis (Mar 2007), the follow-up status were mostly dead (n = 18), followed by lost after disease progression (n = 12), lost with no evidence of disease (NED, n = 1), and regular follow-up with disease (n = 8) and NED (n = 8). Grade II RP was evident in six (13%) pts. The 1 and 3 year overall survival since start of RT for these pts was 59% and 30%. We found gender (female vs male=3/8 vs 3/39, p = 0.05) was the only significant risk factor associated with grade 2 RP.
Conclusions: In this prospective study, no significant risk factor except gender (female) was associated with grade 2 RP.

6601 POSTER

A pilot study of topotecan in patients with irinotecan-refractory small cell lung cancer

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Background: Although the efficacy of topotecan as second-line chemotherapy for small cell lung cancer (SCLC) has been consistently demonstrated in clinical trials, the choice of irinotecan as first-line therapy prevented use of the evidence-based option. This pilot study was conducted to determine the activity and safety of topotecan in SCLC patients refractory to first-line therapy with irinotecan/platinum combination.
Materials and Methods: Patients with primary refractory (no response, or progression during or $\leqslant$90 days after last chemotherapy) SCLC after treatment with irinotecan/platinum received topotecan 1.5 mg/m^2 as a 30-min infusion daily for 5 days every 3 weeks. Given a threshold response rate of 10%, at least 18 patients were required to be treated with topotecan in the first stage.
Results: Of 18 eligible patients, 11 patients were previously treated with irinotecan/cisplatin and 7 were treated with irinotecan/carboplatin. The median age was 68 years (range, 44−75) and the median interval from the last chemotherapy was 50 days (range, 21−89). A total of 38 chemotherapy cycles were administered (median, 2; range, 1−5). Causes of therapy discontinuation were disease progression in 11 patients, toxicity in 6 patients, and one patient's refusal. Toxic effects were mainly hematologic (grade $\geqslant$3 neutropenia in 67% of patients) and fatigue (grade 3 in 44%). One (6%) patient had a confirmed partial response and 5 patients achieved stable disease. Median progression-free and overall survivals were 1.8 months (95% CI, 1.5−2.1) and 8.3 months (95% CI, 0−18.6), respectively. Palliative radiotherapy and third-line chemotherapy was offered to 4 and 3 patients, respectively, after failure.
Conclusions: The limited antitumor activity of second-line topotecan prompted no further evaluation in patients with irinotecan-refractory SCLC.

6602 POSTER

Induction docetaxel and cisplatin followed by bi-weekly docetaxel with concurrent thoracic radiotherapy for stage III non-small cell lung cancer (NSCLC). A phase II study conducted by the Galician Lung Cancer Group (GLCG)

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Background: The most satisfactory treatment for patients with locally advanced NSCLC is combination chemotherapy-radiotherapy (CT-RT). The optimal treatment modalities remain to be determined.
Methods: 60 patients (pts) with inoperable stage locally advanced NSCLC, stage IIIAN2/IIIB (no pleural T4), were included in a phase II study with induction chemotherapy consisting of three cycles of Docetaxel 75 mg/m^2 on D1 and Cisplatin 40 mg/m^2 D1−2 every 3 weeks and, if no surgery, then received concurrent CT-RT with Docetaxel 30 mg/m^2 every 2 weeks for four courses, during thoracic conformal radiotherapy (60−66 Gys, 180 cGy/day). The primary objective: overall survival; secondary: progression free survival, response rate (RR) and toxicity. Median follow-up: 9.1 mo.
Results: The pts characteristics were: mean age 62.9 yrs (43−74); male/female: 56/4; ECOG 0/1 in 17/43 pts; stage IIIAN2: 17 pts (28.3%) and

stage IIIB 43 pts (71.7%). 56 pts were evaluables for response and 58 pts for toxicity. Induction chemotherapy response: 1 CR and 34 PR (RR 62.5%; CI95%:50−75), 16 SD (28.6%) and 5 PD (8.9%). 6 pts went to surgery: 3 pPR, 1 pEE, 1 pSD and 1 unresectable. 34 pts completed concurrent CT-RT treatment with 6 CR, 21 PR, 4 SD and 3 PD (RR 79.3%; CI95%:66−93). The median time to progression was 13 mo and median overall survival was 14 mo. The progression-free survival and overall survival at 1 year was 52% and 62% respectively. A total of 163 cycles of induction chemotherapy were administered (2.8 per pts), with the main toxicity (NCI-CTC) per pts Grade (g) 1−2/3−4 (%) as follows: neutropenia 20.6/24.1; anemia 44.8/1.7; nausea/vomiting 39.6/1.7; fatigue 34.5/1.7; diarrhea 22.4/0; allergy 5.2/1.7; one possible toxic death were scored. The main toxicities (RTOG) in concurrent CT-RT were: g1−2 neutropenia/anemia 30.7/38.4 5% of pts; g1−2/3 esophagitis in 51.2/2.5% and g1−2/3 pneumonitis in 20.5/2.5% of pts.
Conclusions: Docetaxel and Cisplatin induction chemotherapy followed by bi-weekly docetaxel with concurrent thoracic radiotherapy is a feasible treatment option, showing good clinical activity and tolerability for locally advanced NSCLC.

6603 POSTER

Sequential or concomitant chemotherapy and 3D conformal radiation therapy with dose-volume histogram assessment in limited disease small cell lung cancer

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Background: To assess the outcome of patients with limited disease small cell lung cancer (LDSCLC) treated with combined chemotherapy (CT) and conformal radiation therapy (RT).
Materials and Methods: From 8.1998 to 9.2006, 69 patients with LDSCLC were treated at our institutions. Treatment consisted of CT and 3D conformal irradiation in all patients. Median age was 61 years (37−78). Sequential or concomitant CT/RT was given in 47 and 22 patients, respectively. Chemotherapy consisted of either cisplatin and etoposide (PE) in 74% of the patients, or ifosfamid, cisplatin, and etoposide (ICE) in 26%. Clinical target volume (CTV) included gross tumor volume and involved lymph nodes. In 23% of the patients, positron emission tomography was used for CTV delineation. Dose-volume histograms (DVH) assessing the pulmonary volume receiving 20 Gy (V20) were performed in all patients. Median RT dose was 60 Gy in 6 weeks. Prophylactic cranial RT (24−30 Gy @ 2 Gy/fr) was given in 47 (68%) patients in complete remission (CR).
Results: In a median follow-up period of 36 months (6–107), 16 patients are alive without disease. Median survival time was 24 months, with a 3-yr overall survival (OS) rate of 29%. The 3-yr disease-free survival (DFS) and locoregional control (LRC) rates were 23% and 60%, respectively. There was no significant dose response relationship in terms of LRC or OS. When considering the timing and the type of CT, patients treated with full-dose sequential CT/RT had better outcome than those treated with concomitant treatment (3-yr DFS: 27% vs. 13%; p = 0.04). Moreover, ICE chemotherapy resulted with better outcome (3-yr OS: 41% vs. 25%; p = 0.04). No grade 3 or 4 CTC v3.0 toxicity was observed.
Conclusions: We conclude that patients treated with sequential ICE chemotherapy followed by tailored 60-Gy 3D conformal RT with DVH V20 evaluation and PCI in CR patients have a good outcome without significant morbidity.

6604 POSTER

Age-related prognostic factors and treatment results for advanced non-small cell lung cancer (NSCLC)

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Background: There is much debate whether choice of optimal management of elderly patients with locally advanced, inoperable NSCLC with good performance status (PS) should be made entirely on terms of age. We compared results of chemotherapy (CT), radiotherapy (RT) and chemo-radiotherapy (CT-RT) between elderly and younger patients, and studied predictive factors for survival in these age groups.
Materials and Methods: 231 patients with advanced NSCLC were included in this study, being assigned to subsets by age: >65 years (148p, 64.1%) and <65 years old (83p, 35.9%). All patients were analyzed for sex (M/F 215/16), PS (KI >70%/<70% 133/98), weight loss (>5%/<5% 129/102), mean hemoglobin level (Hb), disease stage (IIIA/IIIB/IV 84/87/60), tumor type (squamous/adenocarcinoma/other 169/51/11), associated morbidities (yes/no 112/119), treatment modality (CT-RT/CT/RT 90/61/80), tumor response (CR/PR/SD/PD 1/47/111/72), and time to progression (TTP). Univariate analysis and Cox regression models were used to assess significance of variables for prediction of survival.
Results: Mean overall survival (OS) for the whole group 11.48 months (median 9.0 months); no significant difference in median OS between elderly and younger patients (11.55 vs. 11.65 months, p = 0.537). Median TTP 6.37 months, 103 patients (44.6%) had PFS <6 months, and 128 (55.4%) >6 months. Univariate analysis revealed significant survival benefits in both age groups as per weight loss <5%, absence of comorbidities, earlier clinical stage, high initial Hb levels, longer TTP and good PS (p = 0.0001). Treatment type had different survival impact between age groups; best median survival in patients >65 years old (14.0 months) was obtained by CT alone, while patients <65 years benefited more (13.35 months) from sequential CT-RT. Logistic regression model identified 5 variables to be significant for survival in all patients: PS, extent of disease, Hb, TTP and age. When applied to the elderly group, only 4 variables had predictive value: extent of disease, Hb, TTP and presence of comorbidities. Treatment toxicity did not differ significantly between age subsets, except for renal toxicity, which was greater in elderly patients.
Conclusions: Age should not be a choice-limiting item for the treatment of advanced NSCLC. An active therapeutic approach, such as chemotherapy, can be feasible, effective and well tolerated in selected elderly NSCLC patients with a good PS and no associated comorbidities.

6605 POSTER

Oral vinorelbine as single-agent first-line treatment in elderly patients (pts) with advanced non-small-cell lung cancer (NSCLC)

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Background: Oral vinorelbine has shown to be effective with an acceptable tolerability profile as first-line treatment in elderly NSCLC pts. The oral formulation avoids the side effects associated with the IV injection, may reduce administration and toxicity-related costs and is easy to administer. Due to these advantages, single-agent oral vinorelbine treatment could be considered as an optimal option for these pts. We retrospectively evaluated efficacy and toxicity of oral vinorelbine administered as single agent first-line NSCLC treatment in elderly pts.
Materials: Oral vinorelbine was administered at a starting dose of 60 mg/m^2/week during the first 3 weeks, escalating to 80 mg/m^2/week if no grade 4 or no more than two grade 3 neutropenia were observed during first cycle. At 80 mg/m^2, if grade 4 or 2 consecutive grade 3 neutropenia ocurred, the dose was reduced to 60 mg/m^2. 1 cycle was equal to a 3-week period. Treatment was administered for 6 cycles, unless progression of the disease was observed earlier.
Results: Data on 46 pts were collected in 11 Spanish centres. Median age was 77 years (range 70−85). Male, 87%; female, 13%. ECOG PS 0, 26.8%; 1, 68.3%; 2, 4.9%. Stage IIIA, 4.3%; IIIB, 30.4%; IV, 65.2%. Histology: squamous, 56.5%; adenocarcinoma, 28.3%. Self-sufficiency in ADL and IADL was 82.5% and 55% of the pts analyzed. 81.9% of the pts had comorbidities. 46 pts are available for toxicity and 27 for response. Median cycles: 3 (1−8). 158 cycles were performed, 13.4% were delayed and 5.4% had dose reduction. Hematological toxicities (%pts): neutropenia grade 3−4, 17.4%. Grade 3 non-hematological toxicities: asthenia, 6.5%; anorexia, 4.3%; respiratory, 4.3%; pain, 4.3%; nausea and vomiting, 2.2%. No grade 4 non-hematological toxicities were reported. In the evaluable pts, 3 PR (11.1%) and 11 SD (40.7%) were reported (disease control 51.8%). With a median follow-up of 3.4 months (mo), median survival for the whole population was 6.37 mo, progression free survival 3 mo.
Conclusions: This trial confirms the results of previous studies of single-agent oral vinorelbine therapy in elderly NSCLC pts. It has been shown that this treatment offers a reasonable control of the disease, with easy administration and a favorable toxicity profile for this specific population.