designed the study for evaluate the role of Nimotuzumab in combination with chemotherapy in the patients with advanced non-small cell lung cancer (NSCLC).
Material and Methods: A retrospective review of the clinical data of Cancer Hospital, Tianjin Medical University identified 37 NSCLC patients who received Nimotuzumab in combination with chemotherapy from January 2009 to October 2010. Of 37 patients, 12 patients were in stage IIIB, 25 patients in stage IV; 24 patients received platinum-based chemotherapy in combination with Nimotuzumab, 13 patients received nonplatinum-based chemotherapy in combination with Nimotuzumab; 10 patients administered Nimotuzumab plus chemotherapy as first-line regimen, 23 patients as second-line regimen, 4 patients as third-line regimen.
Results: Of the 37 advanced NSCLC patients who received Nimotuzumab in combination with chemotherapy, the total number of chemotherapy were 137 cycles (mean 3.7 cycles); complete remission (CR) in one patient, partial remission (PR) in 9 patients, stable disease (SD) in 16 patients, progressive disease (PD) in 11 patients. The response rate (RR) was 27%, clinical benefit rate (CBR) was 70.3%. The main side effects were bone marrow depression and gastrointestinal reactions. Acneiform rash of grade I was found in one patient.
Conclusions: The regimen of Nimotuzumab in combination with chemotherapy could improve response rate and was well tolerated in the patients with advanced non-small cell lung cancer.

9125 POSTER

Role of Chemotherapy in ECOG Performance Status 3 Small Cell Lung Cancer − a Single Centre Study

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Background: The purpose of this study is to evaluate the treatment and its impact on survival of small cell lung cancer (SCLC) patients (pts) with ECOG Performance status (PS) 3 presenting to a single UK Cancer Network. There is no standard treatment policy for the pts with SCLC presenting with ECOG PS 3. These pts may experience symptomatic and survival benefits with chemotherapy (CT) but are at a greater risk of early treatment related death. Management of these patients vary from best supportive care to single agent or combination CT.
Methods: Retrospective analysis of all PS3 pts diagnosed with SCLC presenting from Jan 2005 to Dec 2009 at Merseyside & Cheshire Cancer Network. Data were prospectively recorded using an electronic minimum data set.
Results: A total of 978 pts were diagnosed with SCLC. Out of those 219(22%) pts presented with PS 3. Median age was 71 yrs (38−91 yrs). There were 117(53%) female and 102(47%) male pts. 182(83%) had extensive stage disease and 34(16%) had limited stage disease. Majority of pts (N = 182, 65%) did not receive any CT.
Median overall survival was 3 months (mo). Median survival for those who had CT was 6 mo (95% CI 3.70–8.29) compared to 2 mo (95% CI 1.71–2.28) for those who were not treated (p-value <0.01). 21(27%) pts died within 30 days of receiving chemotherapy. Median survival for pts receiving platinum based combination CT (carboplatin and etoposide, N = 40) was 7 mo (95% C.I 2.6–11.4), for single agent carboplatin (N = 31) was 5 mo (95% C.I 2.7–7.37) and for oral Etoposide (N = 6) was 2 mo (95% C.I 1.4−2.6).
Clinical factors favouring longer survival were female gender, limited stage disease, absent or single site visceral metastases, weight loss of less than 5% of total body weight and minimal co-morbidities.
Conclusion: Overall survival is poor and treatment related early deaths are not uncommon in PS 3 SCLC patients but better selection of patients for CT can improve this. Pts benefited the most were female gender, with limited stage disease and those treated with combination chemotherapy. The optimum CT regimen remains to be defined.

9126 POSTER

Anaemia Risk With Anti-EGFR Agents in Advanced Non Small Cell Lung Cancer − a Meta-analysis of 10 Trials

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Background: Anaemia is a prevalent event in advanced non small cell lung cancer (NSCLC) patients related to the disease and to the myelosuppressive effect of chemotherapy. Are the widely used anti-epidermal growth factor receptor (EGFR) agents, additional potential causes of treatment-related anaemia?
Patients and Methods: Databases from PUBMED until December, 2010 were searched. Eligible studies included prospective randomized controlled trials in which standard anti-neoplastic therapy (or best supportive care) was administered with and without the use of erlotinib, gefitinib or cetuximab, with available data of anemia. Summary incidence rate, relative risk (RR), and 95% confidence interval (CI) were calculated employing fixed- or random-effect models based upon the heterogeneity of the included studies. RevMan v. 5.1 (Cochrane IMS) has been used for statistical analysis.
Results: A total of 5700 patients from 10 studies in advanced NSCLC were included for analysis. Among all patients the incidence of anemia was 18% (95% CI: 16.55–19.6%). In comparison with standard therapy, anti-EGFR agents significantly increased the risk of anemia with an RR of 1.49 (95% CI 1.03–2.16, p = 0.03 according to random effect model). Considering all studies with erlotinib and gefitinib, the risk of anaemia is even higher (RR 2.05; 95% CI 1.24–3.39, p = 0.005 according to random effect model). In trials comparing only erlotinib or gefitinib plus chemotherapy with chemotherapy alone the RR of anaemia was 1.92 (95% CI: 1.16−3.2; p = 0.01 according to random effect model).
Conclusions: Anaemia is a frequent event with anti-EGFR agents in particular with oral agents as gefitinib and erlotinib. This metanalysis shows that they exert an additive effect in NSCLC patients because they almost doubled the risk of development of anaemia compared to chemotherapy alone. Prevention and early treatment, in a setting where anaemia is already a common event, is crucial.

9127 POSTER

Phase II Study of Erlotinib Plus Gemcitabine in First Line Treatment of Poor Prognosis (ECOG PS 2) Advanced Non-small Cell Lung Cancer Patients

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Background: The combination of Erlotinib with chemotherapy has been a touchstone in advanced (IIIB and IV stages) NSCLC patients'treatment. The majority of clinical studies exclude patients with poor prognostic status (ECOG 2) and in this situation there are no clinical evidence for treatment of this patients.
Patients and method: Between August 2008 and April 2010, 20 patients with NSCLC stage IIIB (7pts) and stage IV (12 pts) with ECOG PS 2 have been randomized in the study; one patients wasn't included in final analysis; patients'characteristics were: male(16pts), female (3pts), median age 64 (range 47−75), smoking status: 3 non-smokers, 13 smokers, 3 non-declared, histological type: squamos cell carcinoma (7 pts), adenocarcinoma (9 pts), BAL (1pt), large cell carcinoma (2pts).
Study treatment: Gemcitabine1000 mg/m^2 days 1−8-15 plus Erlotinib 150 mg/day in first line treatment of NSCLC. The treatment was administreated for 6 cycles or until disease progression or unacceptable toxicity. Study objectives: primary objectives − response rate, TTP; secondary objectives − OS, safety and tolerability.
Results: The overall response rate was 15.8%, CBR was 36.84%, median TTP − 15 weeks (95% CI: 7−36), median OS − 39 weeks (95% CI: 27- 51). The grade IV CTC toxicity was represented by diarrhea (1pt), respiratory infection (1pt), thrombocytopenia (1pt) and anaemia (1pt).
The concomitant diseases were recorded in every patient: COPD (3pts), arterial hypertension (9 pts), cardiac ischaemic disease (4 pts), congestive heart failure (3 pts), type II diabetes mellitus (2 pts), cirrhosis (2 pts), chronic renal failure (1pts), artheriopathy (3 pts), asthma (1 pts), prostate cancer (1pts), sarcoidosis (1pt), hyperthiroidy(1pt), dislipidemia (3pts).
Conclusions: Taking into account the publised clinical studies regarding chemotherapy treatment of the same patients population (V. Gebbia et al. 2005) we observed that gemcitabine plus Erlotinib have superior response rate and superior overall survival with acceptable tolerability. This treatment combination represent a treatment option for patients with advanced NSCLC with ECOG PS 2, regardless by the pathological type, gender or smoking status. Maybe a phase III clinical study could bring more clinical evidence.

9128 POSTER

Prospective Multicenter Study of Pemetrexed and Carboplatin Combination Followed by Maintenance Pemetrexed in Chemo-naïve Patients With Non-squamous Non-small Cell Lung Cancer

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Background: Platinum-based chemotherapy is the standard first-line treatment for advanced non-small cell lung cancer (NSCLC); furthermore,

recent phase III study has shown efficacy of pemetrexed (Pem) as a maintenance therapy. This is a prospective multicenter study of Pem combined with carboplatin (Cb) as an induction therapy followed by Pem maintenance. Trial sponsor is Eli Lilly Japan K.K. (ClinicalTrials.gov identifier NCT01020786).
Materials and Methods: Eligible patients (pts) had chemo-naïve, unresectable stage IIIB, IV or postoperative recurrent non-squamous NSCLC, and ECOG Performance Status (PS) of 0−1. Pts received Cb AUC 6 and Pem 500 mg/m^2 on Day 1 of each 21-day cycle for 4 cycles as induction therapy. Pts who achieved CR/PR/SD by the end of induction phase, could continue on Pem as maintenance therapy until PD or unacceptable toxicity. Written informed consent was obtained from all enrolled pts.
Results: Pem and Cb were administered as induction therapy to 109 pts. Patients backgrounds were; median age 63 years (range 38−78), male/female (63%/37%), PS 0/1 (34%/66%), and stage IIIB/IV/recurrent disease (30%/66%/4%). Seventy-five pts (69%) were completed induction therapy, and 60 pts (55%) entered into the maintenance therapy.
In the induction phase, dose reduction was required in 20% of pts, and dose delay in 68%. The relative dose intensities for Pem and Cb were 89% and 90%, respectively. The most frequently reported grade $\geqslant$ 3 toxicity was neutropenia (54%). Other grade $\geqslant$ 3 toxicities were also hematologic, including thrombocytopenia (41%) and anemia (28%). Red blood cells transfusion, platelet transfusion and G-CSF administration were required in 10%, 7% and 9% of the pts. Serious adverse events including thrombocytopenia, anemia, or gastric ulcer were reported in 12 pts (11%). There were no treatment related deaths.
Of 109 pts evaluable for response, 42 pts (38.5%) achieved a partial response (including unconfirmed) in the induction phase.
Conclusions: This prospective multicenter study suggested that Pem plus Cb combination chemotherapy was well tolerated and more than half of pts could be received maintenance therapy. This combination is active as a first-line treatment for advanced non-squamous NSCLC. Overall safety and efficacy results will be presented at the conference.

9129 POSTER

Safety Profile and Efficacy of Erlotinib in a Japanese Post-marketing Surveillance Study of 10,708 Non-small-cell Lung Cancer (NSCLC) Patients (pts) − Interim Analyses From the First 3,488 Pts

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Background: Erlotinib is approved in Japan for the treatment of nonresectable, recurrent and advanced NSCLC, following failure of at least one prior chemotherapy regimen. A large scale surveillance study has been implemented to investigate erlotinib safety and efficacy in Japanese pts, focusing on the incidence of interstitial lung disease (ILD), which had been highlighted in previous studies as an adverse drug reaction (ADR) of particular concern in this population.
Methods: Enrolment: Dec 2007–Oct 2009; observation period: 12 months. ADRs were defined as adverse events (AEs) where causality to erlotinib could not be ruled out and all events resembling ILD were assessed by an independent committee. Overall survival (OS) and progression-free survival (PFS) were also assessed. These interim data are for pts registered prior to 30 Jun 2008.
Results: From a total of 10,708 enrolled pts, 3743 were enrolled by 30 Jun 2008 and data were available for 3488 (255 pts unavailable for CRF or not treated with erlotinib or registered more than once). Baseline characteristics included: male (51%), median age (65 years), any smoking history (52%), adenocarcinoma (83%), ECOG PS 0−1 (74%), patients who received more than three lines of treatment (56%). Previous first-line chemotherapy included platinum-based doublets (73.2%), of which the majority were carboplatin based (52.9%; predominantly carboplatin/paclitaxel, 39%), non-platinum single agents (20.7%), and non-platinum doublets (2.8%). Gefitinib, mainly second line, had been received by 55%. ADRs were reported in 82% of pts and the most common were skin disorders (69%), including rash (63%), and gastrointestinal disorders (32%), including diarrhoea (24%). 189 pts experienced 'ILD-like' events and ILD was confirmed by the independent ILD review committee in 158 pts (4.5% of population), with a mortality rate of 1.6%. Smoking status (hazard ratio [HR]= 3.0), history of ILD (HR = 4.1), history of lung infection (HR = 2.0) and ECOG PS 2−4 (HR = 1.6) were identified as risk factors for ILD by multivariate analysis. No new safety signals were identified. Median OS and PFS were 260 days and 64 days, respectively. Data collection and analysis are continuing.
Conclusions: Interim data from this large surveillance study in Japanese pts with recurrent and advanced NSCLC are favourable towards the risk/benefit balance for the use of erlotinib and provide further information on the risk of ILD and the treatment profile of this population.

9130 POSTER

The Prognostic Role of Myeloid-derived Suppressor Cells Related Markers in Peripheral Blood From Advanced Non-small Cell Lung Cancer Patients

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Background: Myeloid-derived suppressor cells (MDSC) are found in most patients with advanced cancers, and are potent inhibitors of innate and adaptive immunity. Marker genes associated with the presence of MDSC are CD11b, CD18, CD115, GR1, IL-4Rα and IL-13. The aim of this study was to determine the expression level of these genes by qRT-PCR in patients with advanced non-small cell lung cancer (NSCLC) and to correlate them with clinico-pathological and prognostic variables.
Methods: RNA was isolated from peripheral blood collected from NSCLC patients (n = 50) and controls (n = 54). qRT-PCR was performed to analyze the expression of CD11b, CD18, CD115, GR1, IL-4Rα and IL-13. Relative expression was normalized by endogenous genes (GAPDH and β-actin) using the Pfaffl formulae. Statistical analyses were considered significant at $p < 0.05$.
Results: We found significant differences in the expression levels of 3 analyzed genes (CD115, GR1 and IL4a) and in other two differences were borderline (CD11b, $p = 0.061$; and IL13, $p = 0.068$) between patients and controls. Pair-matched samples comparing pre and post-treatment expression levels of CD18, GR1 and IL4Ra showed that they were significantly reduced after chemotherapy. Lower levels of expression of CD11b were related with progressive disease ($p = 0.005$). The prognostic impact of the studied variables was assessed by Cox univariate analysis (see Table) and Kaplan–Meier plots. We found that those patients with baseline CD11b expression below the median had significant worse progression-free ($p = 0.005$) and overall survival ($p = 0.013$).
Conclusion: This study shows that it is possible to detect and quantified MDSC-related markers in peripheral blood samples of advanced NSCLC patients. The expression of the analyzed genes, especially CD11b, could have prognostic value in advanced NSCLC.
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9131 POSTER

Relative Expression of Regulatory T-lymphocyte Associated Markers Inperipheral Blood Samples From Advanced NSCLC − Analysis of the Prognostic Role

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Background: T-cell tolerance is an important mechanism for tumour escape. An imbalance of regulatory T-lymphocytes (Treg) could promote peripheral immune tolerance to tumour cells. Marker genes associated with the presence of Treg are CD127, CD8a, Foxp3, CD4, CD25 and TGF-β1. The aim of this study was to determine the expression level of these marker genes by qPCR in patients with non-small cell lung cancer (NSCLC) in advanced stages and to correlate them with clinic-pathological and prognostic variables.
Methods: 54 control individuals and 50 patients with advanced-NSCLC (IIIB-IV) treated with cisplatin and docetaxel were studied. Blood samples were collected at baseline and after 3 cycles of chemotherapy in PAXgene Blood RNA Tubes and stored at −80ºC until RNA isolation. mRNA was reverse transcribed and RT-PCR was performed to analyze the expression of CD127, CD8a, Foxp3, CD4, CD25 and TGF-β1. Relative expression was normalized by endogenous genes (GAPDH and β-actin) using the Pfaffl formulae. Statistical analyses were considered significant at $p < 0.05$.
Results: The characteristics of the studied patients were: median age: 57.8 years [37.7–75.1], 89% males, 55% adenocarcinomas. We found significant differences in the expression levels of CD4 ($p < 0.0001$), CD8