received an aprepitant triple-therapy regimen (aprepitant, ondansetron, and dexamethasone) or a control regimen (ondansetron and dexamethasone) administered orally. Primary and key secondary efficacy endpoints were proportions of patients with No Vomiting and Complete Response (no vomiting/no rescue medication use), respectively, during the 120 hours post-chemotherapy. Treatment group comparisons were based on a logistic regression model with terms for treatment, region, and gender. The proportions displayed for the lung cancer subgroups were not included in the model.
Results: Of 832 patients in the modified intent to treat population, 13% (n = 108) had lung cancer (compared to 43% in previous HEC studies). More patients in the aprepitant groups achieved No Vomiting and Complete Response overall (Table). Regardless of the level of emetogenicity, the antiemetic benefit of aprepitant addition was preserved in the subgroup of patients with lung cancer. Adverse events were generally similar in the aprepitant and control groups.
Conclusions: The aprepitant regimen provided superior efficacy over the control regimen for prevention of CINV for patients receiving HEC or MEC. The benefit of aprepitant triple therapy in patients with lung cancer appears to extend to MEC. Aprepitant was generally well tolerated.

Overall Phase (0−120 hr post-chemotherapy)

	MEC		HEC	
	Aprepitant n/m (%)	Control n/m (%)	Aprepitant n/m (%)	Control n/m (%)
No Vomiting				
All Tumors	324/425 (76.2)*	252/406 (62.1)	374/520 (71.9)*	260/523 (49.7)
Lung Ca	43/52 (82.7)	40/56 (71.4)	174/230 (75.7)	121/217 (55.8)
Complete Response				
All Tumors	292/425 (68.7)*	229/407 (56.3)	352/520 (67.7)*	250/523 (47.8)
Lung Ca	39/52 (75.0)	38/56 (67.9)	169/230 (73.5)	114/216 (52.8)

n/m = patients with favorable response/patients included in subgroup; *p-value < 0.05

9049 POSTER

Intron 8 polymorphism G/T of NFkB2 gene: risk factor for non small cell lung carcinoma

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Background: The members of the NFkB family are among the most important transcription factors in cancer. NFkB1 and the classical pathway have become objects of detailed research in the last years, although, little is known relating to the possible role of NFkB2 (alternative pathway of NFkB) in carcinogenesis. The aim of this study was to define the relation of the NFkB2 single nucleotide polymorphism rs7897947 with non small cell lung carcinoma (NSCLC).
Materials and Methods: We used 37 blood specimens and 89 paraffin-embedded tissue specimens from patients with NSCLC. We also used 129 blood specimens from healthy donors. DNA isolation was performed using the Qiagen DNA blood kit (blood specimens) and the QIAamp DNA FFPE Tissue (tissue-specimens). Samples were genotyped using real-time PCR.
Results: Approximately half of the healthy donors (49.6%) were TT homozygotes, 11.6% were GG homozygotes and 38.8% were GT heterozygotes. The corresponding percentages for the patients were 69%, 24.6% and 6.4%. The difference in allele frequencies between healthy controls and patients was statistically significant (p = 0.007). No correlation was found with age, sex, primary site, histological subtype, grade and maximum diameter. However, patients carrying a G allele had a lower frequency of positive lymph nodes.
Conclusions: The presence of the T allele seems to predispose to NSCLC development and might increase the possibility of lymph node metastatic spread. This study is ongoing and more patients and healthy control donors are currently being recruited to confirm these results.

9050 POSTER

NSCLC in never smokers, a different disease - a single institution retrospective evaluation

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Background: Although most lung cancers are a result of smoking, approximately 25% of lung cancer cases worldwide are not attributable to tobacco use, accounting for over 300,000 deaths each year. Striking differences in the epidemiological, clinical and molecular characteristics of lung cancers arising in never smokers versus smokers have been identified, suggesting that they are separate entities.
Material and Methods: We report the data of never smokers NSCLC patients (pts) of a single institution experience enrolled from July 2005 to December 2008. Genomic DNA was isolated from paraffin-embedded tumor specimens, amplified for *EGFR* (exons 18, 19, 20 and 21), *KRAS* (exon 2) by nested polymerase chain reaction and sequenced in both sense and antisense directions. RECIST criteria were used to assess response to treatment.
Results:51 of 250 (20.4%) pts with stage IIIB (12 pts) and IV (39 pts) NSCLC treated at our centre were never smokers. Median age was 61.7 years (range 31−84), F/M: 33/18, ECOG PS 0−1/2: 49/2, adeno/squamous/not otherwise specified NSCLC: 40/2/9. Nine of 34 pts (26.5%) evaluated were mutated at the *EGFR* gene: 5 in exon 19 (delE746-A750), 1 in exon 20 (dupl770 insASV) and 3 in exon 21(missense L858R). None of the *EGFR* mutated pts carried a *KRAS* mutation. 1 pt with *KRAS* mutation (G12V) did not responded to tyrosine kinase inhibitor (TKI) treatment. Brain metastases were diagnosed in 9 of 39 pts (23.1%) having stage IV disease with 6 of them being positive at diagnosis. All patients received first line treatment which has been a platinum-based doublet chemotherapy in 42 pts (82.4%), gemcitabine monochemotherapy in 6 pts (11.7%) and first-line (TKI) in 3 pts (5.9%). Response to first line chemotherapy was as follows: 18 (37.5%) stable disease (SD), 19 (39.5%) partial response (RP) and 11 (22.9%) progressive disease (PD). 39 of 51 pts (76.4%) received a small molecule TKI either as second or third line of treatment and 34 of them were evaluable for response. We observed complete response (RC) in 2 pts (5.8%), RP in 15 (44.1%), SD in 12 (35.2%), and PD in 5 (14.7%) with a disease control exceeding 80%. At a median follow-up of 18.5 months, 33.3% (17/51 pts) of the population died. Median estimated PFS was of 7.7 months (95% CI 4.1−11.3 months).
Conclusions: Our data appear to be in line with those that have previously been reported. Never-smokers in whom NSCLC develops are more likely to be young, female, and almost exclusively of adenocarcinoma histology. Never-smokers might have a better prognosis both in terms of PFS and OS respective to smokers NSCLC pts.

9051 POSTER

Reduction of under-reporting of occupational lung cancer (OLC) by lung tissue optical mineralogic analysis (LTOMA) associated to standardised questionnary(SQ) - about fifty-nine cases

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Rational: in France recognition of OLC is insufficient. LTOMA study for operated lung cancer is easy to realize and may contribute to reduce under-reporting.A level upon 1000 asbestos bodies (AB)/gr dry lung identify workers with a high probability of exposure to asbestos in the workplace. [1] The aim of our study is to evaluate OLC recognition level by LTOMA and SQ analysis in a retrospective series of lung cancers.
Patients and Methods: Between December 2004 and December 2008 among 440 new lung cancers cases, 59 patients (51 smokers or ex smokers, 48 males, 11 females, mean age: 63 years) underwent systematically pulmonary biopsy after resection (54) or during diagnostic biopsy by thoracotomy or thoracoscopy(5) for LTOMA. Specimen were digested (sodium hypochlorite) and collected on cellulose membrane filters (pore size: 0.45 μ), dried and fixed on glass slides by fusion in acetone vapors, transmitted and phase contrast light microscopy study (X200) counted: AB, uncoated fiber (UF) larger than 15 μm, ferruginous bodies on opaque particle (FBOP) and on nude particle (FBNP)/gr of dry lung. A SQ of French Pneumology and Occupational medecine societies was submitted to patients. Complete reply SQ was available only in 19/59 cases (32%). However principal occupational work was identified in 55/59 cases (93%).
Result: 10 cases (17%) presented with more 1000 AB/gr of dried lung, all with asbestos occupational exposure. 7 cases (11%) presented suspected professional asbestos exposure with absence elevated level of AB but for two cases high level UF (4284, 3415/gr of dry lung). 3 silicosis cases (5%) were identified with one non smoker with high level of FBOP (10,280/gr of dried lung) and with silicotic nodule on adenopathy. One (1.6%) non smoker handywoman case with two successive lung cancer and construction worker activities had high level dust and granulomatous lesions on adenopathy and a high level UF (1900/gr dry lung).
Discussion and Conclusion: 21/59 cases (35%) were probable OLC. Dumortier [2] reported in a retrospective study of 1931 cases, 13.3% AB level upon 1000/gr dried lung by LOTMA without data concerning SQ. Legrand Cattan [3] with a SQ identify 26% of 122 patients among 207 lung cancers for claiming a compensation. LOTMA combined with SQ is easy to realize and may contribute to reduce under reporting OLC.

References

[1] Henderson DW Pathology 2004;36:517−50

[2] Dumortier P et al Rev Mal Resp 2009;26:1S92
[3] Legrand Cattan K et al Rev Mal Resp 2000, 17:957−62

9052 POSTER

Single-nucleotide polymorphism K469E G>A in ICAM-1 gene in non-small cell lung cancer

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Background: Non-small cell lung cancer (NSCLC) is the leading cause of cancer death for both men and women. ICAM-1, a cell adhesion molecule that belongs to the Ig-super-family, with a key role in inflammation, has been implicated in cancer. Particularly, the K469E polymorphism (G>A), which affects ICAM-1 mRNA splicing pattern, has been associated with different types of cancer, but not investigated in lung cancer. This polymorphism has also been shown to be related with apoptosis. In addition, we have previously shown that expression of ICAM-1 is transcriptionally regulated by p53. The purpose of this study was to examine the distribution of the K469E polymorphism of ICAM-1 in NSCLC patients and to investigate for potential association(s) with kinetic parameters, such as proliferation index-PI and apoptotic index-AI, and with the p53 status.
Material and Methods: We examined in 188 NSCLC patients, and 127 healthy sex-matched controls, the frequencies of the K469E polymorphism, with PCR-RFLP analysis. Moreover, in 60 of the patients, this polymorphism was examined in relation to tumour kinetic parameters [PI assessed by Ki67 immunohistochemical (IHC) evaluation and AI assessed by Tunel assay], p53 IHC status and clinicopathological data.
Results: The frequency of the GG genotype was significantly higher in NSCLC patients in comparison to the controls ($p = 0.009$). The same genotype was also significantly associated with positive lymph node status ($p = 0.005$). No statistically significant association between the polymorphism and the PI, AI and the p53 status was found.
Conclusions: These findings indicate that individuals carrying the GG genotype may be implicated in NSCLC cancer. Specifically, our results imply that this polymorphism may play a role in the development of metastatic potential of the tumors.

9053 POSTER

Baseline population description of the EPICLIN-Lung epidemiological study in Non-Small Cell Lung Cancer (NSCLC) across Europe

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Background: The lack of well documented local epidemiological and clinical management data, combined with the need of actual data on healthcare consumption, leads to an underestimation of the real burden of NSCLC and its associated unmet medical needs. The aim of this study is to describe the diverse management strategies used across Europe and their impact on clinical outcomes and overall resources burden.
Materials and Methods: The EPICLIN-Lung (NCT00831909) is a multinational, multicentre, non-interventional, prospective cohort study. Patients were recruited from January to March 2009 in Belgium, France, Germany, Greece, Italy, Portugal, Spain and Turkey. Site selection was conducted to obtain a balanced representation of the total number of patients treated in each country. All confirmed NSCLC patients attending the first time the clinical department were included. Data on demographics, diagnosis, clinical management, clinical outcomes and health care resources were collected. Minimum follow-up was 1 year or until death with a maximum of 15 months. Descriptive analysis with common statistics were performed.
Results: A total of 874/3580 patients were recruited as of 24th April 2009. The mean age of patients is 62.4 years old ranging from 59.3 in Turkey and 64.8 in Spain. The overall distribution of sex is 79/21% (male/female) ranging from 89/11% in Turkey and 65/35% in Belgium. The proportion of habitual smokers, ex-smokers and non-smokers is 32.6%, 48.9%, 10.4% respectively. There are some differences in the smoking habits across Europe. The highest proportion of habitual smokers, ex-smokers and non-smokers by country is respectively 41.6% in Turkey, 61.2% in Greece and 24.1% in Portugal. 26.5% of the total patients presented non-advanced disease (stage Ia-IIIa), whereas a 70.2% presented locally advanced/metastatic disease (stage IIIb-IV). In a 3.4% of the patients the stage was unknown. The highest proportion of non-advanced NSCLC patients is in Greece (36.8%), while Portugal presented the highest percentage in stage IIIb-IV disease (91.3%). Histology was adenocarcinoma 36.5%, squamous cell carcinoma 35.4%, large cell carcinoma 7.3%, and another histology 25.4%.
Conclusions: This study will provide a wide description of the management patterns of NSCLC patients across Europe and its impact on resources utilization. Real life NSCLC European basic statistics are presently shown. Updated and more detailed results will be presented at the time of the ECCO-ESMO meeting.

9054 POSTER

Histology classification is not a predictor of clinical outcomes in advanced non-small cell lung cancer (NSCLC) treated with vinorelbine or gemcitabine combinations

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Background: Until recently, histology has not been clearly or consistently described in the literature as a prognostic or predictive variable in advanced NSCLC studies. Recent randomized controlled phase III trials on pemetrexed and TKIs have suggested that these drugs work better in non-squamous subgroups. While a diagnosis of adeno or squamous carcinoma is clear, a significant percentage of patients do not fall into these categories. We compared non-squamous and squamous, and also non-adenocarcinoma and adenocarcinoma histologies in patients with advanced NSCLC, treated with vinorelbine and gemcitabine based first line chemotherapy regimes.
Material and Methods: 503 patients treated at Royal Marsden Hospital with platinum/gemcitabine, platinum/vinorelbine or single agent gemcitabine or vinorelbine as first line chemotherapy for advanced NSCLC between January 2000 and June 2008 were identified. The influence of pathology on progression free survival (PFS) and overall survival (OS) has been invesigated by means of Cox regression analysis. Hazard ratio with 95% CIs has been given for each pathological type after adjusting for the effects of age, gender, stage (III vs IV), PS (0/1 vs 2/3) and treatment type (platinum vs single agent).
Results: Neither univariate nor multivariate analysis suggested that there was a significant difference in the response rates for adenocarcinoma vs non-adenocarcinoma or between squamous and non-squamous pathology. A platinum combination had a better response rate than single agent ($p = 0.007$). There was no difference in PFS between adenocarcinoma and non-adenocarcinoma pathologies ($p = 0.2$), but there was a statistically significant advantage in PFS for squamous vs non-squamous pathologies ($p = 0.009$) and this difference was particularly evident after 6 months. Using multivariate Cox regression analysis to adjust for the effects of age, gender, stage, PS, and tretment type, the path type was not significant. There was no difference in OS in any group.
Conclusions: These results suggest that histology may not be considered as a predictor of clinical outcome using these drugs.

9055 POSTER

Outcome of non-small-cell lung cancer (NSCLC) patients treated for brain metastases (BM) in a single institution

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Introduction: Brain metastases (BM) are a common site of relapse in NSCLC patients (pts), occurring in 25 to 30% of pts. Whole brain radiation therapy (WBRT) is their standard treatment and the respective role of stereotactic radiation surgery (SRS), surgical resection and chemotherapy (CT) remains controversial controversial in the management of BM. Overall survival after development of BM is low with a median survival time less than 6 m in such patients. The aim of this study was to evaluate the long-term outcome of pts with BM treated with at least WBRT, within a multimodal strategy.
Material and Methods: We performed a retrospective analysis of pts treated at Gustave-Roussy Institute, between April 2002 and March 2007. Inclusion criteria were: single or multiple NSCLC BM, WBRT performed in our institution. WBRT planned dose varied according to the PS and the number of BM: 37.5 Gy/15F, 30 Gy/10F or 20 Gy/5F.
Results: We included 96 consecutive NSCLC pts with BM: 64 were male, median age was 57.9 years [31−79]. The histological types were adenocarcinoma in 58 pts (60.4%), squamous cell carcinoma in 18 pts (18.7%), large cell carcinoma in 19 pts (19.7%), neuroendocrine large cell carcinoma in 1 pt. Thirty seven (39%) pts were asymptomatic at the time of diagnosis of BM. The number of BM at diagnosis was as follows: one in 25 pts, 2 in13 pts, 3 in 11 pts and 46 had more than three lesions. Brain was