patients with advanced NSCLC. Patients with EGFRm NSCLC (N=470) with evidence of disease progression during or after first- or second-generation EGFR-TKI therapy will be eligible for enrollment in the study. Patients who received prior treatment with osimertinib or another T790M-directed therapy will be excluded. In this two-part study, Part 1 (diagnostic analytic validity) will include testing all enrolled patients for T790M using plasma (cobas/Guardant360), urine (Trovera), and tumor biopsy (cobas) tests. Patients with T790M-positive NSCLC detected by the cobas tissue and/or cobas plasma test may choose to receive osimertinib (recommended dose, 80 mg once daily) and continue to Part 2, while patients with T790M-negative NSCLC will be ineligible to continue in the study. In Part 2 (clinical outcomes), patients with T790M-positive NSCLC receiving osimertinib will be followed for 18 months or until disease progression or death and evaluated for tumor response rate, duration of response, and progression-free survival (investigator-assessed RECIST v1.1), as well as safety. The study is currently enrolling patients. **Result:** Section not applicable **Conclusion:** Section not applicable **Keywords:** osimertinib, liquid biopsy, non-small cell lung cancer

P3.01-33
EGFR Mutation in Patients with NSCLC and Its Relationship Between Survival and Clinicopathological Features: An Update Analysis

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Background: There have been important developments in NSCLC since the understanding of molecular pathways. The aim of the study is to find the EGFR mutation frequency and its correlation to survival and clinicopathological features. We reported our data in this subject three years ago. We aim to resubmit our updated data. **Method:** In this multicenter study, 1352 NSCLC (adenocarcinoma) patients were included retrospectively to find out the EGFR mutation status with age, sex, performance status, histopathological diagnosis, smoking status and stage. Survival correlates were determined. The aim of the study was to find out the EGFR mutation status with all of the features in the database. **Result:** The median age was 59 (24-87) years. Median follow-up time was 14 (2-117) months. 26,2 % were female. 85,2% were stage IIIB-IV and 86 % was adenocarcinoma. EGFR mutation frequency was 22,3 % including exon 19 (63,0%). There was no correlation between mutational status and age, performance status, and stage at diagnosis (p>0,05). However, there was a correlation between gender and, smoking.. (p= 0.000 and 0,000. respectively). The frequency of mutation in female patients was more pronounced in non-smokers/ex-smokers. In the group that can perform survival analysis (827 pts), median progression-free survival was 9 months and overall survival was 20 months. The overall survival was 27 (SE:5; 95% CI 17-36) months in EGFR positive cases whereas 19 (SE:1; 95% CI 16-21) months in EGFR negative cases (p=0,008). The multivariate analysis showed good performance status, early stage disease and presence of EGFR mutation as a prognostic factor (p<0,05). **Conclusion:** Our investigation shows that the EGFR mutation rate in our patient population with adenocarcinoma of the lung was higher than in Western countries population and was lower than the East Asian population. The determination of EGFR mutation will lead the pathway for a better treatment outcome and individualized therapy. **Keywords:** EGFR mutation, NSCLC, treatment

P3.01-34
Short Hydration Regimen with a Modified Dose of Magnesium Supplementation for Lung Cancer Patients Receiving Cisplatin-Based Chemotherapy

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Background: Intravenous administration of magnesium is recommended for patients receiving high-dose cisplatin with a short hydration regimen in terms of protection against cisplatin-induced nephrotoxicity. However, the optimal dose of the magnesium supplementation has not been clarified. The aim of this trial was to investigate the safety and efficacy of short hydration regimen with 20mEq of magnesium supplementation for lung cancer patients receiving cisplatin-based chemotherapy. **Method:** The key eligibility criteria included cytologically or histologically proven lung cancer, candidates for cisplatin (≥60 mg/m2) based chemotherapy or chemoradiotherapy, no prior chemotherapy, age ranged 20 and 75 years old and adequate renal function. Cisplatin was administered with pre-hydration containing 20 mEq of magnesium sulfate. Mannitol was administered just before the cisplatin infusion as an enforced diuresis. The primary endpoint was the proportion of patients without a Grade 2 or higher elevation in creatinine. The study was registered at UMIN-CTR as UMIN000011687. **Result:** Forty patients with a median age of 66 years (range, 35-74) were enrolled in the study. Of these, 16 had adenocarcinoma, 12 had squamous cell carcinoma, 5 had small cell carcinoma, 2 had large cell carcinoma and 5 had other histology. The median baseline creatinine value was 0.71 mg/dl. The median dose of cisplatin at the first cycle was 80 mg/m2. Twenty-nine patients received cisplatin and vinorelbine as their most frequent regimen and 24 patients received 4 cycles of chemotherapy. In the first cycle, no patients developed Grade 2 creatinine toxicity. During the whole treatment period, one patient developed Grade 2 creatinine elevation, and thus, the proportion of patients without a Grade 2 or higher elevation in creatinine was 97.5% (95%CI 86.8-99.9). Grade 1 hypermagnesemia was observed in 3 patients. **Conclusion:** This study indicates short hydration regimen with 20mEq of magnesium supplementation was safe and feasible for lung cancer patients receiving cisplatin-based chemotherapy without risk of severe nephrotoxicity. **Keywords:** lung cancer, Cisplatin, hydration