Plasma lactate dehydrogenase (LDH) is an important enzyme which catalyses lactate formation from pyruvate in anaerobic metabolism. It is called to be a non-specific indicator of dying tumor cells by reflecting their rapid turnover. In our study, we aimed to show that plasma LDH levels are found to be high in lung cancer and LDH can reflect the stage and prognosis of tumor.

We detected 40 patients with new diagnosis of non small cell lung cancer. We chose a control group of 40 patients with chronic obstructive pulmonary disease (COPD). In lung cancer group, we chose the patients without history of COPD; also COPD patients elected for control group didn’t have diagnosis of lung cancer. The history of smoking wasn’t thought to affect the results of our study as it was an intersection of both groups. Gender and age were found to be statistically similar for each group. We accepted the normal plasma level of LDH between 240-480 U / l.

The mean level of LDH was 606.5 U / l in lung cancer group when it found as 387.3 U / l in control group which was statistically significant (p=0.002). In control group, we found 7 patients having a high value of LDH (15 %); it seemed to be high in 20 patients of lung cancer group (%50).

Afterwards, NSCLC group was examined if LDH levels differed according to stage and tumoral type. By using TNM staging, 26 of 40 patients were found to be in stage IV, 7 in stage IIIb and 7 in stage IIIa. Plasma level of LDH was high in 14 of 26 stage IV patients, 3 in 7 stage IIIb and 3 in 7 stage IIIa. We examined mean LDH levels according to stages of tumors: 435.8 in stage IIIa, 508.3 in stage IIIb, and 684.2 in stage IV, which shows that LDH is high in advanced NSCLC. However, LDH levels weren’t found statistically significant according to stages. We think that the heterogen distribution of tumor stages can be the reason of it.

There were 15 squamous cell, 15 adenocarcinoma and 10 uncertain histopathological type of NSCLC in lung cancer group. LDH was high in 6 of 15 squamous cell, in 8 of 15 adenocarcinoma and in 6 of other 10 NSCLC. The mean LDH level was 504.1 in squamous cell, 642.5 in adenocarcinoma and 673 in other NSCLC; we can see that LDL levels are higher in adenocarcinoma. This data achieved according to tumor types wasn’t found statistically significant; the limited number of the universe can explain this result.

The results of our study supports that plasma LDH levels are higher in patients with lung cancer. Although LDL levels were found to be high in advanced NSCLC and in adenocarcinoma, but statistically not significant, more advanced studies with a high number and homogen distribution of patients should have done to confirm these results.

Methods: On age, histology, PS, CT schedule, XRCC3 (DNA repair capacity gene) single nucleotide polymorphisms (SNPs) assessment in DNA from peripheral blood lymphocytes, CT outcomes, survival and disease free-survival were obtained.

Results: 1125 p included in 4 SLCG trials from 2001 to 2005 treated with CT based on CDP/GEM, CDP/DG or DOC/GEM were analysed. 167 p (14.9%) were W. W were significantly younger than men (M) (median, 57 yrs vs 61 yrs, P<0.0001). Adenocarcinoma subtype was more predominant in W than in men (76% vs 47%, P<0.0001). There were not significant differences by sex considering PS (0/1) (P=0.85), stage (IIIB/IV) (P=0.18) or overall response rate (P=0.45). Median time to progression (TTP) was 6.8 months (m) vs 5.3 (P<0.009) in favour of W. Median overall survival (OS) was 11.4 m for W vs 9.1 m for M (P<0.001). No differences were found in the subgroup of patients receiving DOC/GEM probably due to the small number of patients. XRCC3 SNPs were distributed similarly between sexes. SNPs genotype of both XRCC3 241Met/Met and Thr/Met correlates with better survival in W vs M (P<0.05 and P<0.008). In a multivariate analysis, sex was an independent predictive marker for both OS (HR 1.5, 95% CI 1.2-1.9, P<0.0001) and TTP (HR 1.4, 95% CI 1.1-1.7, P<0.001), others independent variables found were PS, age, type of CT, but not XRCC3 241 genotype.

Conclusions: In this retrospective analysis of four SLCG trials, women with NSCLC were found to have better prognosis than men.
from this study should emphasize the need for the inclusion of stratification by gender in future clinical trials.

P2-107  
Value of Thyroid Transcription Factor-1 in Identification of the Prognosis of Bronchioalveolar Carcinoma  
Wang, Changli; Yue, Dongsheng  
TianJin Medical University, TianJin, China  

Objective: To evaluate the expression and clinical significance of cyto-keratin subtypes (CK7,CK20) and thyroid transcription factor-1 (TTF-1) in bronchioalveolar carcinoma (BAC), furthermore, investigate the value of these factors in identification of the prognosis of BAC.

Methods: 81 cases of surgically resected BAC specimens (including 68 nonmucinous types and 13 mucinous types) were collected from The Cancer Hospital of Tianjin Medical University during the period from 1990 to 2000. Expression of CK7, CK20 and TTF-1 of them was studied by immunohistochemistry. The value of the three factors in identification of the prognosis of BAC was examined by survival analysis.

Results: No significant correlation was found between CK7 positive rate and age-groups, clinical stages and pathological subtypes of BAC (P>0.05). The positive rate of CK20 was higher in stage I-II and mucinous types than that in stage III and nonmucinous types. The positive rate of TTF-1 was significantly higher in stage III and nonmucinous types than that in stage I-II and mucinous types (P<0.05). There was a statistically significant positive correlation between expression of CK7 and TTF-1 (r=0.257, P=0.021). The main prognostic factors were TTF-1 expression, clinical stage, tumor diameter and N stage (P<0.05). Strata analysis suggested that the survival time of BAC with TTF-1 positive was superior to that with TTF-1 negative in nonmucinous types (P=0.009); the survival time of BAC with TTF-1 positive was superior to that with TTF-1 negative in stage III (P=0.022). Cox Regression suggested that TTF-1 (P=0.035), TNM stage (P=0.000), tumor diameter (P=0.034), N stage (P=0.000) were independent factors affecting the prognosis.

Conclusions: There is a statistically significant positive correlation between expression of CK7 and TTF-1. TTF-1 and CK20 provide a new evidence for the molecular staging of BAC. TTF-1, TNM stage, tumor diameter and N stage are all independent factors affecting the prognosis of BAC.

P2-108  
Prognostic significance of DAPK hypermethylation in patients with resected non-small cell lung cancer  
Zemanitis, Marius1; Rieger, Norman1; Dienemann, Hendrik1; Manegold, Christian1; Fischer, Jurgen1; Sakalauskas, Raimundas1; Lahm, Harald1  
1 Clinic of Pulmonology and Immunology, Kaunas University of Medicine, Kaunas, Lithuania 2 Immunology-Molecular Biology Laboratory, Thoraxklinik Heidelberg gGmbH, Heidelberg, Germany 3 Dept. of Surgery, Thoraxklinik Heidelberg gGmbH, Heidelberg, Germany 4 Dept. of Medical Oncology, Thoraxklinik Heidelberg gGmbH, Heidelberg, Germany 5 Klinik Lowenstein gGmbH, Germany, Lowenstein, Germany  

Background: Surgical resection is the most effective treatment for early stage non-small cell lung cancer. However, even after curative resection, many patients develop recurrences. Although the adjuvant chemotherapy has recently become the standard of therapy for radically resected early stage NSCLC, the benefit is modest. Developing of new molecular markers could more accurately predict the treatment outcome.

Purpose: We examined whether hypermethylation of tumor suppressor genes DAPK, p16INK4a, APC1A, p14ARF, E-cadherin, MGMT and RASSF1A could predict the clinical outcome of 31 patients with primary NSCLC after radical surgical resection.

Materials and Methods: The methylation status of candidate genes was analyzed by methylation-specific PCR. Genomic DNA was purified from tumor tissue and was subsequently treated with sodium bisulfitie to convert unmethylated cytosine bases to uracil. To increase the sensitivity we have developed a nested PCR approach. A first PCR amplifies a larger fragment using primers, which do not discriminate between the methylated or wild-type genotype. The second PCR uses nested primers, which specifically amplify either methylated or unmethylated sequences. Results were visualized by gel electrophoresis.

Results: Methylation was detected at a frequency of 74.2% for DAPK, 77.4% for p16INK4a, 74.2% for APC1A, 71.0% for p14ARF, 80.0% for E-cadherin, 32.3% for MGMT and 61.3% for RASSF1A. The univariate Cox regression model showed that methylation status of DAPK, p16INK4a, APC1A, p14ARF, regional lymph node status and gender were significant risk factors for recurrence of NSCLC (hazards ratios, DAPK methylated, 55.26 [95% CI, 1.03 to 2967.62; p=0.048], p16INK4a methylated, 4.68 [95% CI, 1.03 to 21.34; p=0.048]; APC1A methylated, 0.293 [95% CI, 0.10 to 0.83; p=0.021]; p14ARF methylated, 0.312 [95% CI, 0.12 to 0.83; p=0.020]; N2, 3.59 [95% CI, 1.24 to 10.35; p=0.018]; and male, 4.25 [95% CI, 1.22 to 14.87; p=0.023]. The stepwise multivariate Cox regression model identified DAPK methylation status as the only independent risk factor for recurrence.

Conclusion: Our preliminary results suggest that hypermethylation of DAPK could be an important factor in predicting NSCLC recurrence but further investigations are needed.

P2-109  
Predictive Significance of Bone Sialoprotein and Osteopontin for Bone Metastases in Respectable Non-Small-Cell Lung Cancer: A Retrospective Study  
Zhang, Li1; Hou, Xue1; Huang, He1; Rao, Huilian2; Hou, Jinghui2; Luo, Rongzhen2; Huang, Peiyu1; Xin1  
1 Department of Medical Oncology, Cancer Center of Sun Yat-Sen, Guangzhou, China 2 Department of Pathology, Cancer Center of Sun Yat-Sen, Guangzhou, China 3 Department of Nasopharyngeal Carcinoma, Cancer Center of Sun Yat-Sen, Guangzhou, China 4 Department of Thoracic Oncology, Cancer Center of Sun Yat-Sen, Guangzhou, China  

Background: Bone sialoprotein(BSP) and osteopontin(OPN) have been demonstrated predictive of bone metastasis in breast and prostate carcinoma, consistent with the proposed role of BSP as a stimulator of bone mineralization and OPN in differentiation and activation of osteoclasts. Bone metastasis(BM) is often developed in non-small-cell lung cancer(NSCLC), but no predictive biomarkers was identified for high risk of metastatic bone dissemination.

Methods: 180 completely resected NSCLC patients(of 38 patients subsequently developed BM) were included in the investigation. Parafin embedded primary tissue of these 180 patients were supplied to produced a tissue microarray, and investigated by immunohistochemistry for BSP and OPN. Different expressions of these two biomarkers...