was significantly increased in patients who were VNTR a-allele carriers, compared to VNTR b/b patients (P = 0.015). In multivariate Cox proportional hazard analysis, the VNTR polymorphism was an independent prognostic factor for survival. Homozygous b/b patients were at higher risk for death (HR, 2.22; P = 0.013) compared with a-allele carriers.
Conclusions: The results support the role of the VNTR polymorphism in intron 4 as a marker for survival in patients with advanced-stage NSCLC who were fit for standard chemotherapy. Updated data will be reported.

9029 POSTER

Prognostic value of immunohistochemical stain pattern for carcinoembryonic antigen in patients with completely resected pathological stage I non-small cell lung cancer

H. Suzuki[1], H. Matsuguma[1], S. Igarashi[2], R. Nakahara[1], N. Ohata[1], T. Kasai[3], Y. Kmiyama[3], M. Mori[3], T. Kodama[3], K. Yokoi[4]. *[1]Tochigi Cancer Center, Thoracic Surgery, Utsunomiya, Japan; [2]Tochigi Cancer Center, Pathology, Utsunomiya, Japan; [3]Tochigi Cancer Center, Thoracic Disease, Utsunomiya, Japan; [4]Nagoya University Graduate School of Medicine, Thoracic Surgery, Nagoya, Japan*

Background: Surgery alone remains the standard therapy for patients with stage I NSCLC based on the recent results of randomized control trials. There is, however, a subgroup of patients with stage I disease who have a poor prognosis, for whom adjuvant chemotherapy can be as effective as that for patients with more advanced disease. Preoperative serum carcinoembryonic antigen (CEA) levels have been reported to be an independent prognostic factor for stage I NSCLC. Nevertheless, adjuvant therapy is not performed based on the serum CEA levels, because serum CEA levels can be influenced by smoking or other lung conditions. Therefore, a more definitive indicator is considered necessary. We hypothesized that immunohistochemical (IHC) CEA expression would be a more reliable and effective prognostic marker than serum CEA levels.
Material and Methods: Between 1986 and 2000, 333 patients who underwent complete resection at our hospital were diagnosed as having stage I lung cancer. Immunohistochemical staining with the antibody for CEA was carried out on paraffin embedded sections of those tumors using the avidin-biotin-peroxidase complex method. Staining patterns were classified into three patterns: Type1: CEA immunoreactivity was negative or demonstrated only the cell surface; Type2: CEA immunoreactivity was distributed in the cytoplasm; Type3: CEA immunoreactivity was demonstrated both at the cell surface and in the cytoplasm. Preoperative serum CEA levels and other clinicopathological factors were also investigated by univariate and multivariate analysis.
Results: The below table shows the number of patients, 5-year survival rates, and serum CEA levels according to the CEA IHC pattern. The CEA IHC pattern was significantly associated with serum CEA levels (P < 0.0001). Univariate analysis revealed age, sex, smoking history, tumor size, histology, lymphatic invasion, vascular invasion, pleural invasion, serum CEA levels, and CEA IHC pattern was significant prognostic factors. With regard to histology, univariate analysis revealed that the CEA IHC pattern was a significant prognostic factor only in patients with adenocarcinoma, however, not in non-adenocarcinoma. Multivariate analysis conducted only in patients with adenocarcinoma disclosed that CEA IHC type 3, vascular invasion, and older age were independent adverse prognostic factors.

CEA IHC pattern	All patients	5yOS	Ad	5yOS	Non-Ad	5yOS	High serum CEA level
type1	140	82.9	102	90.2	38	63.2	31(22.1%)
type2	169	65.1	107	72.9	62	51.6	69(40.8%)
type3	24	41.7	13	38.5	11	45.5	17(70.8%)
p value		<0.0001		<0.0001		0.8903	

Conclusions: The CEA IHC pattern was a more effective prognostic marker than serum CEA levels for patients with pathological stage I lung adenocarcinoma.

9030 POSTER

Human Mena (hMena) and isoforms hMena+11a and hMenadeltaV6, estrogen receptor-beta (ER-B), epidermal growth factor receptor −1 and −2 (EGFR/HER-2) expression as prognostic factors in node-negative Non-Small-Cell Lung Cancer (NSCLC)

E. Bria[1], M. Mottolese[2], I. Sperduti[3], P. Visca[2], B. Antoniani[2], F. Facciolo[4], F. Di Modugno[5], F. Cognetti[1], P. Nisticò[5], M. Milella[1]. *[1]Regina Elena National Cancer Institute, Medical Oncology, Rome, Italy; [2]Regina Elena National Cancer Institute, Pathology, Rome, Italy; [3]Regina Elena National Cancer Institute, Biostatistics-Scient. Dir., Rome, Italy; [4]Regina Elena National Cancer Institute, Thoracic Surgery, Rome, Italy; [5]Regina Elena National Cancer Institute, Immunology Lab, Rome, Italy*

Background: hMena is a cytoskeleton regulatory protein involved in adhesion and cell motility, particularly in response to EGFR activation. In addition, a possible correlation between ER-B and EGFR expression has been recently suggested in NSCLC. We therefore investigated the potential relationship and prognostic value of hMena, hMena^{+11a} and hMena^{deltaV6}, ER-B, EGFR and HER-2 expression in node-negative NSCLC patients (pts) who underwent surgery at our institution.
Methods: hMena (plus isoforms), ER-B (isoforms 1, 2), EGFR and HER-2 expression, analyzed on 2 Tissue Micro Array (TMA) copies, were correlated to disease-free, cancer-specific, and overall survival (DFS/CSS/OS) using a Cox model including sex, stage, age, grading, histology, number of resected nodes (RN). Logistic and generalized linear models were used to evaluate predictors of significant Cox-model variables. Receiver Operative Curve (ROC) analysis identified optimal cut-off values. Internal cross-validation (100 simulations with 80% of the dataset) was accomplished.
Results: 248 pts were gathered (median follow-up 36 months, range 1−96; male/female 71/29%; adeno/other 43/57%; grading G1−2/G3 45/55%; Stage I/II 82/8%; RN ⩽10/>10 34/66%). No significant difference between the 2 TMA copies was found for each factor. Multivariate analysis, is shown in the table:

	DFS		CSS		OS	
	HR (95% CI)	p	HR (95% CI)	P	HR (95% CI)	p
RN	1.84 (1.16, 2.94)	0.01	–	n.s.	1.83 (1.10, 3.05)	0.02
Stage	1.76 (1.00, 3.09)	0.05	2.56 (1.24, 5.28)	0.01	1.98 (1.10, 3.58)	0.02
hMena	1.67 (1.00, 2.81)	0.05	2.34 (1.22, 4.51)	0.01	–	n.s.
hMena^{+11a}	1.85 (1.10, 3.12)	0.02	1.88 (0.93, 3.82)	0.08	1.68 (0.97, 2.91)	0.06
hMena^{deltaV6}	1.58 (0.91, 2.73)	0.10	–	n.s.	1.78 (1.00, 3.20)	0.05
ER-B	–	n.s.	1.01 (1.00, 1.02)	0.07	–	n.s.

Pts with hMena^{+11a} overexpression (cut-off >50 according to ROC analysis) have a significantly better 3-yrs DFS and CSS (69.5% versus 58.9%, log-rank p = 0.03) and a better OS (68% vs 75.4%, p = 0.06). EGFR strongly predicted both hMena isoforms overexpression (p = 0.005, p = 0.03); indeed, when hMena was removed from the multivariate model, EGFR was independent predictor of CSS (p = 0.07). Cross-validation analysis confirmed the prognostic role of hMena and isoforms with a replication rate of 51/72% for DFS/CSS.
Conclusions: hMena, hMena^{+11a} and hMena^{deltaV6} expression is prognostic in early NSCLC undergoing curative surgery. EGFR strongly correlate with hMena status and their prognostic role deserves further investigation.

9031 POSTER

Lung cancer in women: the Spanish female-specific database WORLD 07

M. Majem[1], M. Domine[2], P. Lianes[3], F.J. Dorta[4], S. Catot[5], C. Guillen[6], R. De las Peñas[7], C. Vadell[8], M.L. Amador[9], R. Rosell[10]. *[1]Hospital de Sant Pau Barcelona, Medical Oncology, Barcelona, Spain; [2]Fundación Jimenez Diaz, Medical Oncology, Madrid, Spain; [3]C.S. del Maresme, Medical Oncology, Mataró, Spain; [4]Hospital Universitario Nuestra Señora de la Candelaria, Medical Oncology, Sta Cruz de Tenerife, Spain; [5]Fundació Althaia, Medical Oncology, Manresa, Spain; [6]Hospital general Universitario de Elche, Medical Oncology, Elche, Spain; [7]Hospital provincial de Castellón, Medical Oncology, Castellón, Spain; [8]Hospital de Manacor, Medical Oncology, Manacor, Spain; [9]Roche, Medical Oncology, Madrid, Spain; [10]ICO-Hospital Germans Trias i Pujol, Medical Oncology, Badalona, Spain*

Background: Lung cancer is the leading cause of cancer mortality among women in many countries. Gender differences have been reported, most of them based on retrospective analysis.
Materials and Methods: WORLD07 is a prospective, multicenter, epidemiologic female-specific lung cancer database developed by the Spanish Lung Cancer Group. Data on demographics, previous cancer