

Table S1 Patients and tumor characteristics

Characteristic	All patients (n=349)	Group LL (n=292)	Group LH (n=11)	Group HL (n=26)	Group HH (n=20)	P
Pre CEA (ng/mL)	2.20 (1.40–3.50)	1.80 (1.40–2.70)	3.70 (3.43–3.95)	8.60 (6.53–17.78)	8.75 (6.38–13.63)	<0.001
Post CEA (ng/mL)	1.80 (1.30–2.70)	1.60 (1.29–2.30)	5.70 (5.18–6.02)	2.75 (2.53–3.48)	5.90 (5.45–20.83)	<0.001
Age (years)	58.19±10.64	57.08±10.76	63.91±10.38	64.31±7.54	63.35±7.16	<0.001
Pre CEA of smokers (ng/mL)	2.70 (1.60–3.60)	2.20 (1.42–2.79)	3.20 (3.20–3.20)	5.40 (5.30–6.20)	8.70 (6.35–48.30)	<0.001
Post CEA of smokers (ng/mL)	1.90 (1.50–2.70)	1.75 (1.50–2.00)	12.10 (12.10–12.10)	2.50 (2.30–2.60)	5.90 (5.75–27.65)	<0.001
Tumor size (cm)	1.30 (0.80–2.20)	1.20 (0.80–2.00)	2.30 (1.30–3.10)	2.60 (1.50–3.88)	2.20 (0.95–3.00)	<0.001
Gender						0.14
Male	159	127	5	13	14	
Female	190	165	6	13	6	
Smoking status						0.048
Never smoked	262	224	8	20	10	
Ex-smoker	37	30	2	2	3	
Current smoker	50	38	1	4	7	
Tumor location						0.76
Right	218	183	6	15	14	
Left	131	109	5	11	6	
Histological type						0.35
Squamous cancer	52	40	2	8	2	
Adenocarcinoma	289	245	9	18	17	
Other	8	7	0	0	1	
Histological subtypes						0.01
Grade 1	88	81	3	1	3	
Grade 2	154	130	6	9	9	
Grade 3	41	30	1	6	4	
Surgical procedure						0.61
Lobectomy	218	177	8	19	14	
Segmentectomy	79	71	1	3	4	
Wedge resection	44	38	2	2	2	
Pneumonectomy	8	6	0	2	0	
pN stage						<0.001
pN0	301	263	8	16	14	
pN1	27	16	2	5	4	
pN2	19	11	1	5	2	
pN3	2	2	0	0	0	
TNM stage						<0.001
I stage	294	259	7	15	13	
II stage	24	14	2	4	4	
III stage	31	19	2	7	3	
Location recurrence						0.32
Local	39	30	3	3	3	
Bone	8	4	0	2	2	
Brain	6	4	0	1	1	
Multiple-sites	14	5	5	3	1	
Other	10	6	1	2	1	
OS (months)	60.00 (58.00–63.00)	61.00 (58.00–63.00)	57.00 (31.00–60.00)	61.00 (58.00–62.75)	60.00 (52.50–62.00)	0.02
RFS (months)	60.00 (57.00–63.00)	60.00 (57.00–63.00)	24.00 (18.50–51.00)	60.00 (36.50–61.75)	57.00 (23.75–60.00)	<0.001

Data are presented as median (interquartile range), n or mean ± SD. Stage of primary cancer according to the 8th edition of TNM. Group LL, normal preoperatively and postoperatively; Group LH, normal preoperatively and elevated postoperatively; Group HH, elevated preoperatively and postoperatively; Group HL, elevated preoperatively and normal postoperatively. CEA, carcinoembryonic antigen; TNM, tumor node metastasis; OS, overall survival; RFS, recurrence-free survival; SD, standard deviation.