

Table S1. Patient background of each dataset

Variables	TCGA (n=515)	PROSPECT (n=180)	BATTLE-1 (n=57)	BATTLE-2 (n=103)
Median age (years)	67	63	56	59
Gender				
Male	238	92	30	46
Female	277	88	27	57
Smoking				
Never	ND	24	13	27
Former/Current	ND	156	44	76
p-Stage				
Stage I	278	92	2	ND
Stage II	124	45	2	ND
Stage III	84	41	13	ND
Stage IV	27	2	39	ND
NA	2	0	0	
Former drug treatment				
Yes	ND	29	57	103
No	ND	151	0	0

Table S2. Univariate Cox proportional hazards regression analysis in lung adenocarcinoma samples

Dataset (n)	OS		<i>P</i> value	RFS or PFS		<i>P</i> value
	HR	95% CI		HR	95% CI	
TCGA (515)	1.18	1.00-1.40	0.050	ND	ND	ND
PROSPECT (180)	1.03	0.84-1.27	0.77	1.25	1.01-1.55	0.039
BATTLE-1 (57)	1.17	0.78-1.75	0.44	1.15	0.83-1.59	0.40
BATTLE-2 (103)	1.09	0.86-1.36	0.48	1.05	0.84-1.32	0.65

OS, overall survival; HR, hazard ratio; CI, confidence interval; RFS, recurrence-free survival; PFS, progression-free survival; ND, no data.

Table S3. Univariate and multivariate Cox regression model of PROSPECT patients

Variables		Univariate HR (95% CI)	p	Multivariate (without interactions) HR (95% CI)	p	Multivariate (with interactions) HR (95% CI)	p
Age	Per 1 year increase >Median vs ≤63.79	1.01(0.99-1.03) 1.35 (0.86-2.12)	0.49 0.19	1.75 (1.09-2.81)	0.019	1.73 (1.06-2.83)	0.028
Gender	Male vs Female	1.13 (0.72-1.77)	0.60	-	-	-	-
Smoking	Never vs Current Former vs Current	1.67 (0.86-3.21) 1.23 (0.77-2.07)	0.13 0.35	-	-	-	-
Tumor size	Per 1 cm increase >Median vs ≤3.5	1.20 (1.09-1.32) 1.74 (1.11-2.73)	0.0002 0.015	1.27 (1.13-1.42)	<0.0001	1.28 (1.14-1.44)	<0.0001
pathologic-Stage	II vs I III-IV vs I	1.28 (0.72-2.29) 3.04 (1.80-5.11)	0.40 <0.0001	0.88 (0.47-1.66) 2.43 (1.39-4.23)	0.70 0.0019	* **	
Neoadjuvant	Yes vs No	2.06 (1.19-3.59)	0.010	-	-	***	
Adjuvant	Yes vs No	1.43 (0.91-2.27)	0.12	-	-	-	
OSMR	Per 1 unit change	1.25 (1.01-1.55)	0.039	1.21 (0.98-1.49)	0.080	1.25 (1.01-1.55)****	0.045

HR, hazard ratio; CI, confident interval

* Stage II vs. I without neoadjuvant, HR (95% CI); 1.071 (0.557-2.061) (p=0.84),

Stage II vs. I with neoadjuvant, HR (95% CI); 0.148 (0.026-0.846) (p=0.032)

** Stage III-IV vs. I without neoadjuvant, HR (95% CI); 2.286 (1.206-4.333) (p=0.011)

Stage III-IV vs. I with neoadjuvant, HR (95% CI); 1.073 (0.332-3.468) (p=0.91)

*** Neoadjuvant Yes vs. No for Stage I, HR (95% CI); 4.010 (1.51-10.68) (p=0.0055)

Neoadjuvant Yes vs. No for Stage II, HR (95% CI); 0.554 (0.12-2.51) (p=0.44)

Neoadjuvant Yes vs. No for Stage III-IV, HR (95% CI); 1.881 (0.82-4.31) (p=0.13)

**** HR of recurrence for OSMR in 1-unit change, adjusting for age group, tumor size, neoadjuvant, final stage, and interaction between neo adjuvant and final stage, is 1.25 (95% CI, 1.005-1.546).