

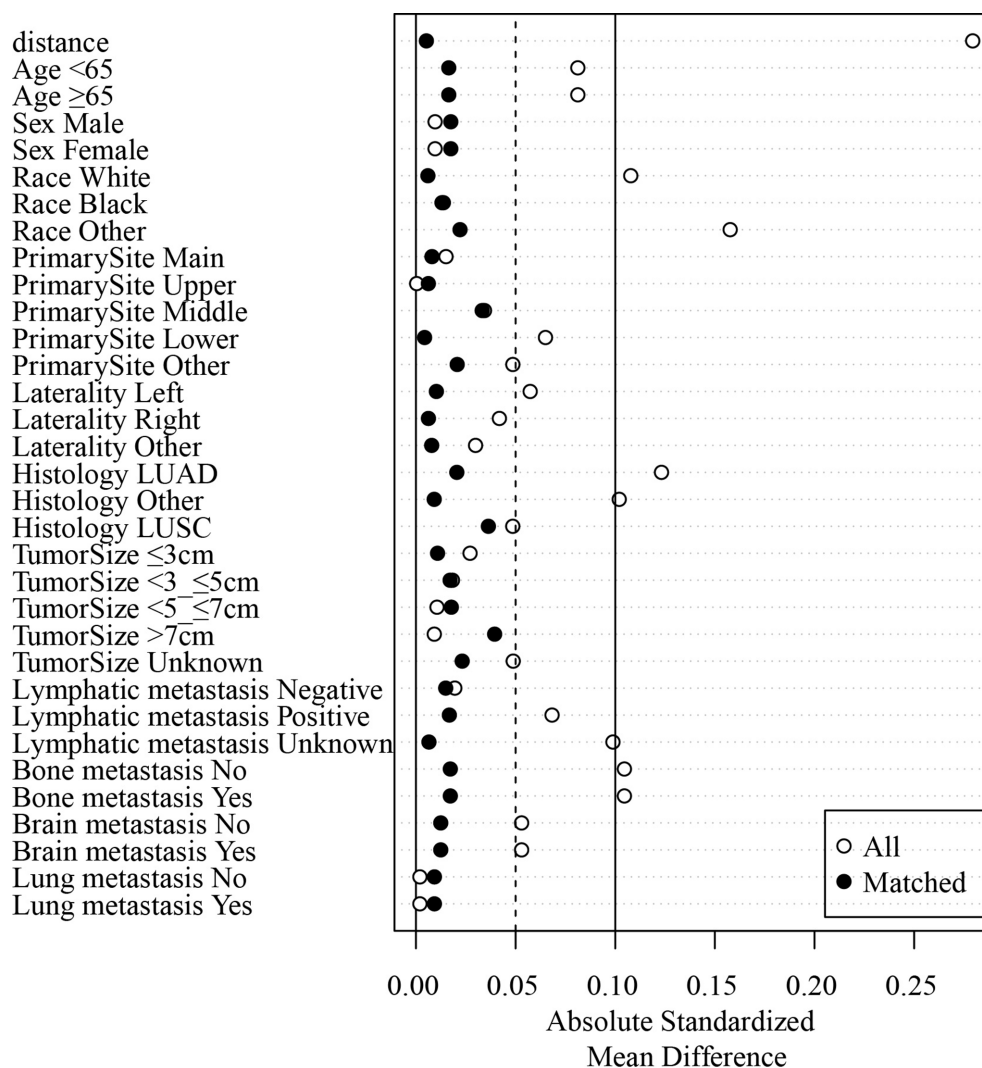


Figure S1 The effect of PSM (SEER data, RT + IOC group *vs.* CRT group). PSM, propensity score matching; SEER, Surveillance, Epidemiology, and End Results Program; RT, radiotherapy; IOC, immunochemotherapy; CRT, chemotherapy + radiotherapy; LUAD, lung adenocarcinoma; LUSC, lung squamous cell carcinoma.

Table S1 Univariable and multivariable Cox analyses for risk factors associated with OS and CSS (SEER data, RT + IOC group <i>vs.</i> IOC group)								
Variables	OS				CSS			
	Univariable		Multivariable		Univariable		Multivariable	
	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value
Age (years)								
<65	Reference	–	Reference	–	Reference	–	Reference	–
≥65	1.13(1.05–1.22)	0.002	1.09(1.01–1.18)	0.03	1.11(1.03–1.20)	0.01	1.07(0.99–1.16)	0.09
Sex								
Male	Reference	–	Reference	–	Reference	–	Reference	–
Female	0.83(0.76–0.89)	<0.001	0.87(0.80–0.94)	0.001	0.83(0.77–0.90)	<0.001	0.88(0.81–0.96)	0.002
Race								
White	Reference	–	Reference	–	Reference	–	Reference	–
Black	1.17(1.04–1.32)	0.008	1.15(1.02–1.29)	0.02	1.19(1.05–1.34)	0.006	1.16(1.03–1.31)	0.02
Other	0.66(0.59–0.74)	<0.001	0.70(0.62–0.78)	<0.001	0.66(0.59–0.74)	<0.001	0.70(0.62–0.79)	<0.001
Primary site								
Main	Reference	–	Reference	–	Reference	–		–
Upper	1.09(0.91–1.30)	0.37	1.17(0.98–1.40)	0.09	1.06(0.88–1.28)	0.52		
Middle	0.99(0.77–1.28)	0.94	1.07(0.83–1.38)	0.61	0.97(0.75–1.26)	0.84		
Lower	0.99(0.82–1.20)	0.94	1.08(0.90–1.31)	0.41	0.96(0.79–1.16)	0.67		
Other	1.23(1.01–1.49)	0.04	1.23(1.00–1.52)	0.06	1.17(0.96–1.43)	0.12		
Laterality								
Left	Reference	–	Reference		Reference	–	Reference	
Right	0.98(0.90–1.06)	0.60	0.97(0.89–1.05)	0.44	0.99(0.91–1.07)	0.74	0.97(0.90–1.06)	0.52
Other	1.24(1.06–1.46)	0.009	1.12(0.92–1.36)	0.25	1.20(1.02–1.42)	0.03	1.16(0.97–1.39)	0.10
Histology								
LUAD	Reference	–	Reference	–	Reference	–	Reference	–
LUSC	1.54(1.39–1.70)	<0.001	1.41(1.26–1.57)	<0.001	1.55(1.39–1.72)	<0.001	1.42(1.27–1.58)	<0.001
Other	1.45(1.31–1.60)	<0.001	1.35(1.22–1.50)	<0.001	1.46(1.32–1.62)	<0.001	1.37(1.24–1.53)	<0.001
Tumor size								
≤3 cm	Reference	–	Reference	–	Reference	–	Reference	–
<3 to ≤5 cm	1.02(0.91–1.14)	0.73	1.02(0.91–1.14)	0.80	1.05(0.93–1.17)	0.46	1.03(0.92–1.16)	0.58
<5 to ≤7 cm	1.06(0.94–1.20)	0.37	1.03(0.91–1.17)	0.65	1.07(0.94–1.21)	0.32	1.03(0.90–1.17)	0.65
>7 cm	1.29(1.13–1.46)	<0.001	1.19(1.05–1.36)	0.007	1.30(1.14–1.48)	<0.001	1.20(1.05–1.37)	0.007
Unknown	1.21(1.07–1.36)	0.002	1.15(1.01–1.30)	0.04	1.19(1.06–1.35)	0.005	1.16(1.02–1.31)	0.03
Lymphatic metastasis								
Negative	Reference	–			Reference	–		
Positive	1.05(0.94–1.17)	0.37			1.07(0.96–1.20)	0.23		
Unknown	1.16(0.97–1.39)	0.10			1.15(0.95–1.38)	0.15		
Bone metastasis								
No	Reference	–			Reference	–		
Yes	0.99(0.92–1.08)	0.89			1.01(0.93–1.09)	0.89		
Brain metastasis								
No	Reference	–			Reference	–		
Yes	0.93(0.81–1.07)	0.10			0.95(0.83–1.08)	0.12		
Lung metastasis								
No	Reference	–			Reference	–		
Yes	0.98(0.90–1.07)	0.64			0.98(0.90–1.07)	0.71		
Group								
IOC	Reference	–	Reference	–	Reference	–	Reference	–
RT + IOC	0.78(0.72–0.84)	<0.001	0.77(0.71–0.84)	<0.001	0.81(0.75–0.88)	<0.001	0.80(0.73–0.87)	<0.001
SEER, Surveillance, Epidemiology, and End Results Program; PSM, propensity score matching; OS, overall survival; CSS, cancer-specific survival; HR, hazard ratio; CI, confidence interval; LUAD, lung adenocarcinoma; LUSC, lung squamous cell carcinoma; RT, radiotherapy; IOC, immunochemotherapy.								

Table S2 Univariable and Multivariable Cox analyses for risk factors associated with PFS and OS (Xinqiao Hospital data, RT + IOC group *vs.* IOC group)

Variables	PFS Univariable		PFS Multivariable		OS Univariable	
	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value
Age (years)						
<65	Reference	–			Reference	–
≥65	1.33 (0.86–2.06)	0.20			0.95 (0.59–1.52)	0.83
Histology						
LUSC	Reference	–	Reference	–	Reference	–
Non-LUSC	0.62 (0.40–0.96)	0.03	0.70 (0.45–1.08)	0.11	0.76 (0.48–1.20)	0.24
Sex						
Male	Reference	–	Reference	–	Reference	–
Female	1.53 (0.28–1.00)	0.05	0.73 (0.31–1.76)	0.49	0.84 (0.44–1.60)	0.60
Smoking status						
Never	Reference	–	Reference	–	Reference	–
Current or former	2.20 (1.32–3.67)	0.002	1.75 (0.88–3.46)	0.11	1.46 (0.88–2.41)	0.15
Tumor size						
≤3 cm	Reference	–			Reference	–
<3 to ≤5 cm	1.74 (0.96–3.16)	0.07			1.62 (0.86–3.05)	0.14
<5 to ≤7 cm	1.49 (0.80–2.78)	0.21			1.31 (0.68–2.53)	0.43
>7 cm	1.75 (0.96–3.18)	0.07			1.33 (0.71–2.50)	0.37
Unknown	1.13 (0.34–3.80)	0.84			0.74 (0.17–3.17)	0.69
Lymphatic metastasis						
Negative	Reference	–			Reference	–
Positive	1.00 (0.59–1.70)	0.99			1.10 (0.62–1.95)	0.74
Bone metastasis						
No	Reference	–			Reference	–
Yes	0.83 (0.54–1.28)	0.39			0.97 (0.62–1.53)	0.91
Brain metastasis						
No	Reference	–			Reference	–
Yes	0.65 (0.37–1.14)	0.14			0.66 (0.36–1.20)	0.17
Lung metastasis						
No	Reference	–			Reference	–
Yes	0.86 (0.55–1.32)	0.48			0.78 (0.49–1.23)	0.29
Group						
IOC	Reference	–	Reference		Reference	–
RT + IOC	0.58 (0.34 – 0.97)	0.04	0.54 (0.31–0.94)	0.03	0.51 (0.29 – 0.90)	0.02

PFS, median progression-free survival; OS, overall survival; HR, hazard ratio; CI, confidence interval; LUSC, lung squamous cell carcinoma; RT, radiotherapy; IOC, immunochemotherapy.

Table S3 Baseline characteristics (Xinqiao Hospital data, RT + IOC group *vs.* CRT group)

Variables	Overall, N=57 (%)	RT + IOC, N=23 (%)	CRT, N=34 (%)	P
Age (years)				0.53
<65	41 (71.9)	15 (65.2)	26 (76.5)	
≥65	16 (28.1)	8 (34.8)	8 (23.5)	
Sex (%)				0.16
Male	40 (70.2)	19 (82.6)	21 (61.8)	
Female	17 (29.8)	4 (17.4)	13 (38.2)	
Histology				0.16
LUSC	11 (19.3)	7 (30.4)	4 (11.8)	
Non-LUSC	46 (80.7)	16 (69.6)	30 (88.2)	
Smoking				0.99
Never	25 (43.9)	10 (43.5)	15 (44.1)	
Current or former	32 (56.1)	13 (56.5)	19 (55.9)	
Tumor size				0.17
≤3 cm	16 (28.1)	8 (34.8)	8 (23.5)	
<3 to ≤5 cm	22 (38.6)	6 (26.1)	16 (47.1)	
<5 to ≤7 cm	10 (17.5)	3 (13.0)	7 (20.6)	
>7 cm	7 (12.3)	4 (17.4)	3 (8.8)	
Unknown	2 (3.5)	2 (8.7)	0 (0.0)	
Lymphatic metastasis				0.03
Negative	9 (15.8)	7 (30.4)	2 (5.9)	
Positive	48 (84.2)	16 (69.6)	32 (94.1)	
Bone metastasis				0.99
No	15 (26.3)	6 (26.1)	9 (26.5)	
Yes	42 (73.7)	17 (73.9)	25 (73.5)	
Brain metastasis				0.13
No	34 (59.6)	17 (73.9)	17 (50.0)	
Yes	23 (40.4)	6 (26.1)	17 (50.0)	
Lung metastasis				0.52
No	29 (50.9)	10 (43.5)	19 (55.9)	
Yes	28 (49.1)	13 (56.5)	15 (44.1)	

RT, radiotherapy; IOC, immunochemotherapy; CRT, chemotherapy + radiotherapy; LUSC, lung squamous cell carcinoma.

Table S4 Univariable Cox analyses for risk factors associated with PFS and OS (Xinqiao Hospital data, RT + IOC group *vs.* CRT group)

Variables	PFS Univariable		OS Univariable	
	HR (95% CI)	P value	HR (95% CI)	P value
Age (years)				
<65	Reference	–	Reference	–
≥65	1.28 (0.70–2.32)	0.43	1.34 (0.71–2.52)	0.36
Histology				
LUSC	Reference	–	Reference	–
Non-LUSC	1.17 (0.60–2.28)	0.65	1.04 (0.51–2.10)	0.92
Sex				
Male	Reference	–	Reference	–
Female	1.46 (0.79–2.68)	0.23	1.31 (0.72–2.39)	0.38
Smoking status				
Never	Reference	–	Reference	–
Current or former	1.31 (0.76–2.27)	0.33	1.29 (0.73–2.28)	0.38
Tumor size				
≤3 cm	Reference	–	Reference	–
<3 to ≤5 cm	1.31 (0.67–2.59)	0.43	1.58 (0.77–3.26)	0.21
<5 to ≤7 cm	1.62 (0.71–3.69)	0.25	2.21 (0.95–5.17)	0.07
>7 cm	0.96 (0.38–2.41)	0.93	1.12 (0.41–3.03)	0.83
Unknown	0.80 (0.18–3.55)	0.77	0.60 (0.08–4.64)	0.62
Lymphatic metastasis				
Negative	Reference	–	Reference	–
Positive	1.44 (0.67–3.07)	0.35	1.86 (0.79–4.40)	0.16
Bone metastasis				
No	Reference	–	Reference	–
Yes	0.74 (0.41–1.36)	0.34	0.80 (0.44–1.49)	0.49
Brain metastasis				
No	Reference	–	Reference	–
Yes	1.10 (0.64–1.89)	0.74	1.00 (0.57–1.77)	0.99
Lung metastasis				
No	Reference	–	Reference	–
Yes	0.79 (0.46–1.37)	0.40	0.74 (0.42–1.30)	0.29
Group				
CRT	Reference	–	Reference	–
RT + IOC	0.38 (0.21–0.69)	0.002	0.49 (0.27–0.89)	0.02

PFS, progression-free survival; OS, overall survival; HR, hazard ratio; CI, confidence interval; LUSC, lung squamous cell carcinoma; CRT, chemotherapy + radiotherapy; RT, radiotherapy; IOC, immunochemotherapy.