

Table S1 Comparison of clinicopathological variables between the SLR group and lobectomy group

Variables	SLR (n=62)	Lobectomy (n=14)	P value
Age at pneumonectomy (years), mean ± SD	63.45±9.22	67.14±10.58	0.192
Age at SLT (years), mean ± SD	63.06±9.57	65.86±10.16	0.333
Female sex, n (%)	26 (41.9)	3 (21.4)	0.262
Race, n (%)			0.027
White	61 (98.4)	11 (78.6)	
Black	1 (1.6)	2 (14.3)	
Other	0 (0.0)	1 (7.1)	
Interval time between pneumonectomy and SLT (months), mean ± SD	44.85±37.94	22.24±33.24	0.043
Left-sided pneumonectomy, n (%)	38 (61.3)	10 (71.4)	0.553
Histology of pneumonectomy, n (%)			0.687
Squamous cell carcinoma	38 (61.3)	10 (71.4)	
Adenocarcinoma	24 (38.7)	4 (28.6)	
Grade of pneumonectomy, n (%)			0.307
I, well	2 (3.2)	2 (14.3)	
II, moderately	22 (35.5)	3 (21.4)	
III, poorly	27 (43.5)	8 (57.1)	
IV, undifferentiated	3 (4.8)	0 (0.0)	
Unknown	8 (12.9)	1 (7.1)	
Radiation with pneumonectomy, n (%)	14 (22.6)	2 (14.3)	0.745
CT with pneumonectomy, n (%)	16 (25.8)	4 (28.6)	0.832
TNM staging of pneumonectomy, n (%)			0.154
I	14 (22.6)	2 (14.3)	
II	22 (35.5)	2 (14.3)	
III	24 (38.7)	8 (57.1)	
IV	2 (3.2)	2 (14.3)	
Lymph nodes dissection, n (%)			0.153
Yes	38 (61.3)	12 (85.9)	
No	24 (38.7)	2 (14.3)	
Number of lymph nodes dissection, mean ± SD	11.71±10.27	14.25±8.21	0.440
Number of positive lymph nodes, mean ± SD	1.00±1.71	2.92±3.40	0.083
Histology of SLT, n (%)			0.513
Squamous cell carcinoma	15 (24.2)	9 (64.3)	
Adenocarcinoma	34 (54.8)	3 (21.4)	
Neuroendocrine tumor	5 (8.1)	0 (0.0)	
Adenosquamous carcinoma	2 (3.2)	0 (0.0)	
Other/unknown	6 (9.7)	2 (14.3)	
Grade of SLT, n (%)			0.512
I, well	8 (12.9)	1 (7.1)	
II, moderately	19 (30.6)	5 (35.7)	
III, poorly	25 (40.3)	4 (28.6)	
IV, undifferentiated	2 (3.2)	0 (0.0)	
Unknown	8 (12.9)	4 (28.6)	
Tumor size of SLT, mean ± SD	27.86±13.88	27.81±13.74	0.991
TNM staging of SLT, n (%)			0.037
I	49 (79.0)	6 (42.9)	
II	3 (4.8)	3 (21.4)	
III	7 (11.3)	3 (21.4)	
IV	3 (4.8)	2 (14.3)	
Type of SLT, n (%)			0.371
Metastasis	25 (40.3)	8 (57.1)	
Metachronous	37 (59.7)	6 (42.9)	
Radiation with SLT, n (%)	18 (29.5)	3 (21.4)	0.782
CT with SLT, n (%)	20 (32.3)	4 (28.6)	0.789

SLR, sublobar resection; SD, standard deviation; SLT, second lung tumor; CT, chemotherapy; TNM, tumor-node-metastasis.

Table S2 Univariate Cox regression analysis of patients who underwent surgical resection for SLT after previous pneumonectomy

Variables	N	CSS		OS	
		5-year rate (%)	P value	5-year rate (%)	P value
Age at SLT			0.557		0.210
≤60 years old	27	61.2		55.6	
>60 years old	49	62.0		52.0	
Sex			0.121		0.009
Female	29	75.4		69.0	
Male	47	52.2		43.3	
Race			0.368		0.375
White	72	53.4		62.3	
Black	3	33.3		33.3	
Other	1	100.0		100.0	
Interval time between pneumonectomy and SLT			<0.001		<0.001
≤53 months	55	50.2		41.5	
>53 months	21	90.2		85.2	
Histology of pneumonectomy			0.891		0.098
Squamous cell carcinoma	48	62.7		58.1	
Adenocarcinoma	28	59.5		44.9	
Grade of pneumonectomy			0.185		0.221
I-II	29	48.9		41.4	
III-IV	38	68.2		56.9	
Unknown	9	77.8		77.8	
Radiation with pneumonectomy			0.448		0.980
Yes	16	61.9		55.6	
No	60	61.1		52.7	
CT with pneumonectomy			0.753		0.275
Yes	20	59.9		58.1	
No/unknown	56	67.4		51.5	
TNM staging of pneumonectomy			0.199		0.991
I-II	40	66.1		54.5	
III-IV	36	56.6		51.8	
Laterality of SLT			0.891		0.098
Right	48	62.7		58.1	
Left	28	59.5		44.9	
Tumor size of SLT			0.485		0.166
≤30 mm	61	61.1		51.8	
>30 mm	15	64.2		59.3	
Histology of SLT			0.458		0.859
Squamous cell carcinoma	18	67.8		55.6	
Adenocarcinoma	43	56.8		47.5	
Neuroendocrine tumor	5	40.0		20.0	
Adenosquamous carcinoma	2	100.0		50.0	
Other/unknown	8	62.5		75.0	
Grade of SLT			0.123		0.482
I-II	33	60.6		48.5	
III-IV	31	71.8		63.6	
Unknown	12	41.7		41.7	
TNM staging of SLT			<0.001		0.001
I-II	61	68.0		59.9	
III-IV	15	36.0		26.7	
Lymph nodes dissection			0.751		0.416
Yes	50	62.5		56.0	
No	26	60.5		48.4	
Radiation with SLT			0.016		0.018
Yes	21	56.2		66.3	
No	54	74.7		49.2	
CT with SLT			0.009		0.001
Yes	24	70.4		70.4	
No/unknown	52	57.3		45.3	
Type of SLT			0.019		0.026
Metastasis	33	50.1		41.7	
Metachronous	43	70.3		62.1	
Surgical procedure of SLT			0.030		0.051
SLR	62	65.8		55.5	
Lobectomy	14	42.9		42.9	

SLT, second lung tumor; CSS, cancer-specific survival; OS, overall survival; CT, chemotherapy; TNM, tumor-node-metastasis; SLR, sublobar resection.

Table S3 Multivariate Cox regression analysis of patients who underwent surgical resection for SLT after previous pneumonectomy

Variables	CSS		OS	
	HR (95% CI)	P value	HR (95% CI)	P value
Sex				
Male			Reference	
Female			0.346 (0.172–0.694)	0.003
Interval time between pneumonectomy and SLT				
>53 months	Reference		Reference	
≤53 months	6.157 (1.849–20.504)	0.003	4.617 (1.912–11.148)	0.001
TNM staging of SLT				
III–IV	Reference		Reference	
I–II	0.421 (0.197–0.902)	0.026	0.371 (0.173–0.796)	0.011
Radiation with SLT				
Yes	Reference		Reference	
No	0.832 (0.295–2.347)	0.728	0.848 (0.378–1.905)	0.690
CT with SLT				
Yes	Reference		Reference	
No/unknown	3.912 (1.419–10.785)	0.008	4.384 (1.867–10.293)	0.001
Type of SLT				
Metachronous	Reference		Reference	
Metastasis	1.378 (0.663–2.865)	0.728	1.222 (0.660–2.261)	0.523
Surgical procedure of SLT				
Lobectomy	Reference		Reference	
SLR	0.381 (0.176–0.827)	0.015	0.562 (0.287–1.100)	0.093

SLT, second lung tumor; CSS, cancer-specific survival; OS, overall survival; HR, hazard ratio; CI, confidence interval; CT, chemotherapy; TNM, tumor-node-metastasis; SLR, sublobar resection.