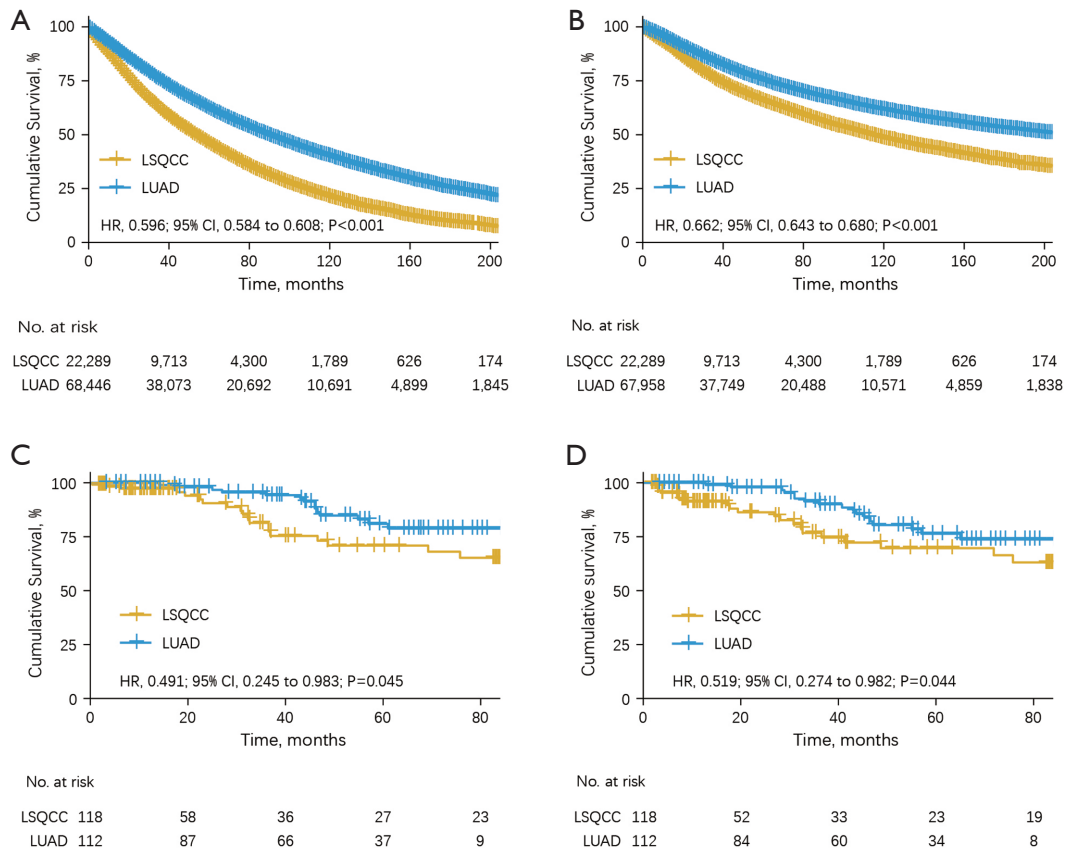
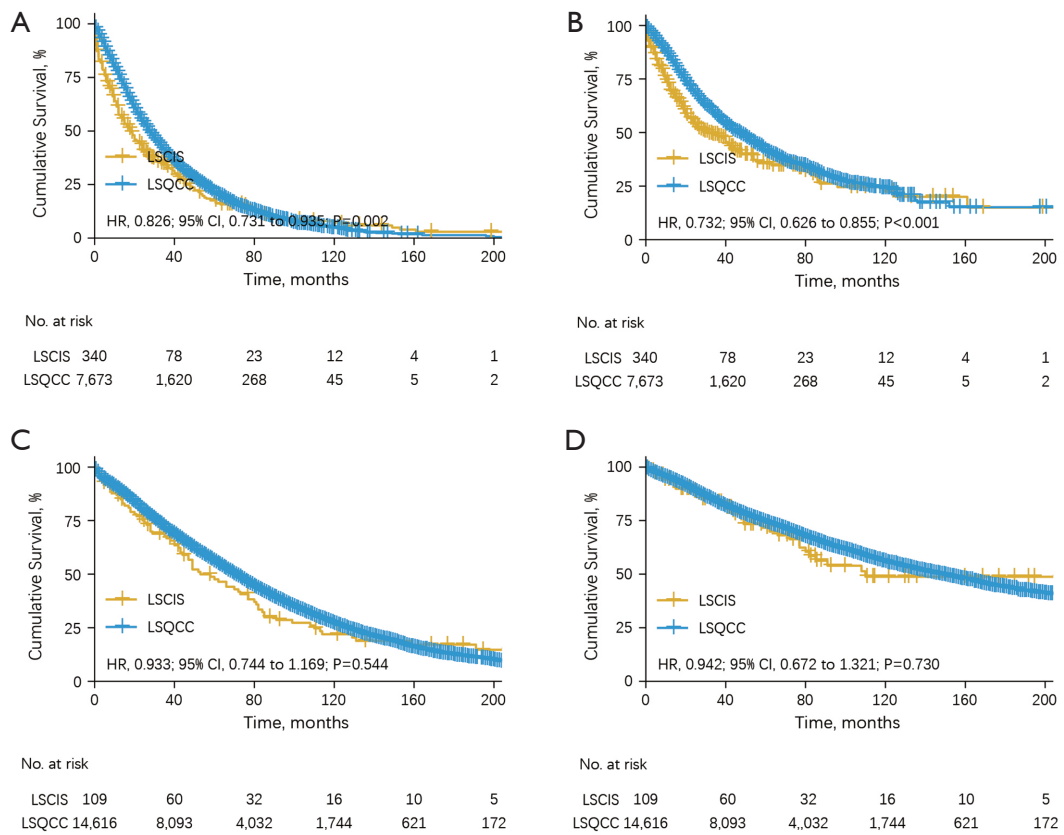


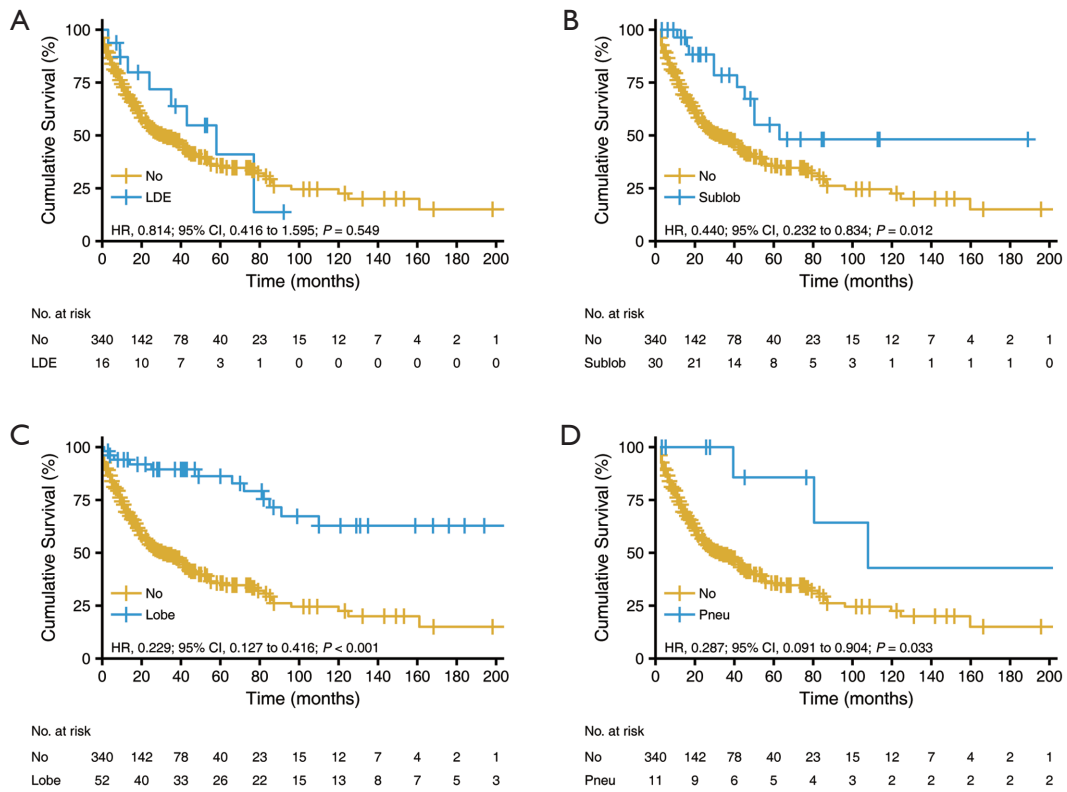
**Figure S1** Kaplan-Meier curves of the patients with LSCIS and LAIS in the SEER cohort. (A,B) OS and LCSS of the patients with LSCIS and LAIS in the non-surgery group; (C,D) OS and LCSS of the patients with LSCIS, and LAIS in the surgery group. LSCIS, lung squamous cell carcinoma in situ; LAIS, lung adenocarcinoma in situ; OS, overall survival; LCSS, lung cancer-specific survival; HR, hazard ratio; CI, confidence interval; SEER, Surveillance Epidemiology and End Results.



**Figure S2** Kaplan-Meier curves of the patients with LUAD and LSQCC. (A,B) OS and LCSS of the patients with LUAD and LSQCC in the SEER cohort; (C,D) OS and PFS of the patients with LUAD and LSQCC in the Shanghai Pulmonary Hospital cohort. LUAD, lung adenocarcinoma; LSQCC, lung squamous cell cancer; OS, overall survival; LCSS, lung cancer-specific survival; SEER, Surveillance Epidemiology and End Results; PFS, progression-free survival; HR, hazard ratio; CI, confidence interval.



**Figure S3** Kaplan-Meier curves of the patients with LSCIS and LSQCC in the SEER cohort. (A,B) OS and LCSS of the patients with LSCIS and LSQCC in the non-surgery group; (C,D) OS and LCSS of the patients with LSCIS, and LSQCC in the surgery group. LSCIS, lung squamous cell carcinoma in situ; LSQCC, lung squamous cell cancer; OS, overall survival; LCSS, lung cancer-specific survival; HR, hazard ratio; CI, confidence interval; SEER, Surveillance Epidemiology and End Results.



**Figure S4** Kaplan-Meier curves of the patients with LSCIS in the SEER cohort according to the surgical procedures. (A-D). LCSS of the patients with LSCIS in the non-surgery, LDE, sublobectomy, lobectomy, and pneumonectomy groups. LSCIS, lung squamous cell cancer in situ; LCSS, lung cancer-specific survival; No, non-surgery; LDE, local destructed or excised; Sublob, sublobectomy; Lobe, lobectomy; Pneu, pneumonectomy; HR, hazard ratio; CI, confidence interval.

**Table S1** Demographics and clinicopathologic characteristics of the patients with LSCIS in the SEER cohort

Characteristics	Non-surgery, N (%)	Surgery, N (%)	P
Total	340 (100.0)	109 (100.0)	
Age (years)			0.013
≤60	70 (20.6)	27 (24.8)	
>60 to 70	107 (31.5)	47 (43.1)	
>70	163 (47.9)	35 (32.1)	
Gender			0.472
Male	237 (69.7)	80 (70.6)	
Female	103 (30.3)	29 (26.6)	
Race			0.101
White	274 (80.6)	97 (89.0)	
Black	48 (14.1)	7 (6.4)	
Asian/other	18 (5.3)	5 (4.6)	
Primary site			0.335
Main bronchus	36 (10.6)	10 (9.2)	
Upper lobe	174 (51.2)	63 (57.8)	
Middle lobe	15 (4.4)	8 (7.3)	
Lower lobe	95 (27.9)	25 (22.9)	
Unspecific	20 (5.9)	3 (2.8)	
Chemotherapy			<0.001
No	266 (78.2)	106 (97.2)	
Yes	74 (21.8)	3 (2.8)	
Radiotherapy			<0.001
No	241 (70.9)	102 (93.6)	
Yes	99 (29.1)	7 (6.4)	
Reason of non-surgery			
Not recommended	295 (86.8)		
Recommended but not performed	45 (13.2)		

LSCIS, lung squamous cell cancer in situ.

**Table S2** Outcomes of the patients with LSCIS after surgery in the Shanghai Pulmonary Hospital cohort

Characteristics	LSCIS	Progression/Recurrence			Death		
	Number	Number	OR (95% CI)	P	Number	OR (95% CI)	P
LDE							
No	23	-					
Yes	11	11					
Surgery			0.969 (0.910–1.031)	0.941		7.000 (0.362–135.517)	0.276
Lobectomy	32	1			4		
Pneumonectomy	2	0			1		

LSCIS, lung squamous cell cancer in situ; OR, odds ratio; CI, confidence interval; LDE, local destructed or excised.