

Supplemental Figure S1. Flow-diagram of patients included in this study.

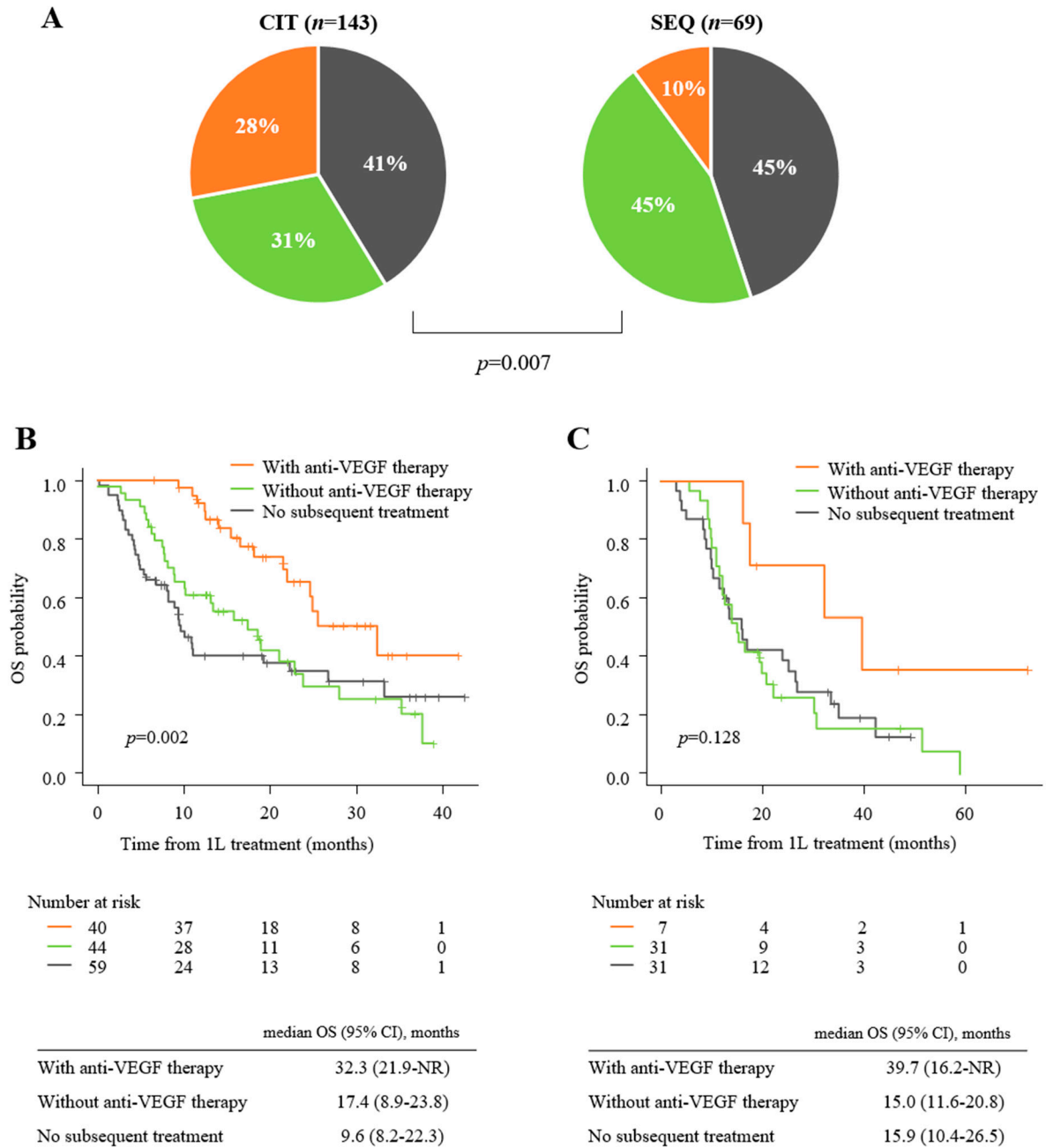
CIT, chemoimmunotherapy; ECOG-PS, Eastern Cooperative Oncology Group performance status; 1L, first-line; NSCLC, non-small cell lung cancer; 2L, second-line; SEQ, sequential treatment with platinum-based chemotherapy followed by immune checkpoint inhibitors; 3L, third-line.

Supplemental Table S1. Characteristics of patients enrolled in the SEQ and CIT groups in the propensity score-matched cohort.

		PSM cohort		
	Group -n. (%)	CIT (n=69)	SEQ (n=69)	p-value
Age -y, median (range)		71 (45, 85)	70 (33, 82)	0.700
Sex -n. (%)	Male	62 (89.9)	63 (91.3)	1.000
	Female	7 (10.1)	6 (8.7)	
Smoking status -n. (%)	Never	3 (4.3)	6 (8.7)	0.493
	Current or former	66 (95.7)	63 (91.3)	
Histology -n. (%)	Sq.	30 (43.5)	30 (43.5)	1.000
	Non-Sq.	39 (56.5)	39 (56.5)	
PD-L1 expression -n. (%)	1-49%	56 (81.2)	55 (79.7)	1.000
	<1%	13 (18.8)	14 (20.3)	

Stage -n. (%)	IIIB or IIIC	7 (10.1)	6 (8.7)	1.000
	Recurrence or IV	62 (89.9)	63 (91.3)	

CIT, chemoimmunotherapy; Sq., squamous cell carcinoma; PD-L1, programmed death-ligand 1; PSM, propensity score-matched; SEQ, sequential treatment with platinum-based chemotherapy followed by immune checkpoint inhibitors.



Supplemental Figure S2. Transition to subsequent chemotherapy after CIT or SEQ and overall survival.

A total of 143 patients in the CIT group and 69 in the SEQ group who terminated immune checkpoint inhibitor (ICI) treatment were selected for analysis. **(A)** Transition rate to subsequent chemotherapy after ICI treatment. Fisher's exact test was used to compare the differences in subsequent treatment options between the CIT and SEQ groups. **(B, C)** OS in patients treated with **(B)** CIT or **(C)** SEQ according to subsequent chemotherapy: chemotherapy with anti-vascular endothelial growth factor (VEGF) therapy vs. chemotherapy without anti-VEGF therapy vs. no treatment. *P* values were calculated using log-rank analysis.

CIT, chemoimmunotherapy; SEQ, sequential treatment with platinum-based chemotherapy followed by immune checkpoint inhibitors; OS, overall survival; 1L, first-line; CI, confidence interval; NR, not reached.

Supplemental Table S2. Adverse events with CTCAE grade 3 or 4

	CIT	SEQ	
	(<i>n</i> =165)	(n=69)	
<i>-n. (%)</i>	1L-CIT	1L-Chemo	2L-ICI
AE, Grade 3 ≤	71 (43)	22 (31.9)	10 (14.5)
Neutropenia	39 (23.6)	14 (20.3)	0 (0)
Anemia	24 (14.5)	1 (1.4)	0 (0)
Thrombocytopenia	11 (6.7)	5 (7.2)	0 (0)
Interstitial lung disease	10 (6.1)	1 (1.4)	5 (7.2)
Hepatobiliary disorders	6 (3.6)	0 (0)	1 (1.4)
Febrile neutropenia	4 (2.4)	1 (1.4)	0 (0)
Malaise	1 (0.6)	1 (1.4)	1 (1.4)
Colitis	2 (1.2)	0 (0)	1 (1.4)
Nausea	1 (0.6)	0 (0)	2 (2.9)
Infusion related reaction	2 (1.2)	0 (0)	0 (0)
Stevens-Johnson syndrome	0 (0)	1 (1.4)	0 (0)
Stroke	0 (0)	1 (1.4)	0 (0)
Gastric ulcer	0 (0)	1 (1.4)	0 (0)
Adrenal insufficiency	1 (0.6)	0 (0)	0 (0)

Rash	1 (0.6)	0 (0)	0 (0)
Pneumothorax	1 (0.6)	0 (0)	0 (0)
Syncope	1 (0.6)	0 (0)	0 (0)
Myalgia	1 (0.6)	0 (0)	0 (0)
Uveitis	1 (0.6)	0 (0)	0 (0)

AE, adverse event; Chemo, chemotherapy; CIT, chemoimmunotherapy; CTCAE, Common Terminology Criteria for Adverse Events; ICI, immune checkpoint inhibitor; SEQ, sequential treatment with platinum-based chemotherapy followed by immune checkpoint inhibitors.