

Figure S1. Kaplan-Meier survival curves of patients in the previous RT group and patients in the concurrent RT group. (A) Overall survival, (B) Progression-free survival, (C) Time to treatment failure. RT, radiotherapy; Previous RT, received pRT within 6 months prior to initiation of immunotherapy; concurrent RT, received pRT during immunotherapy.

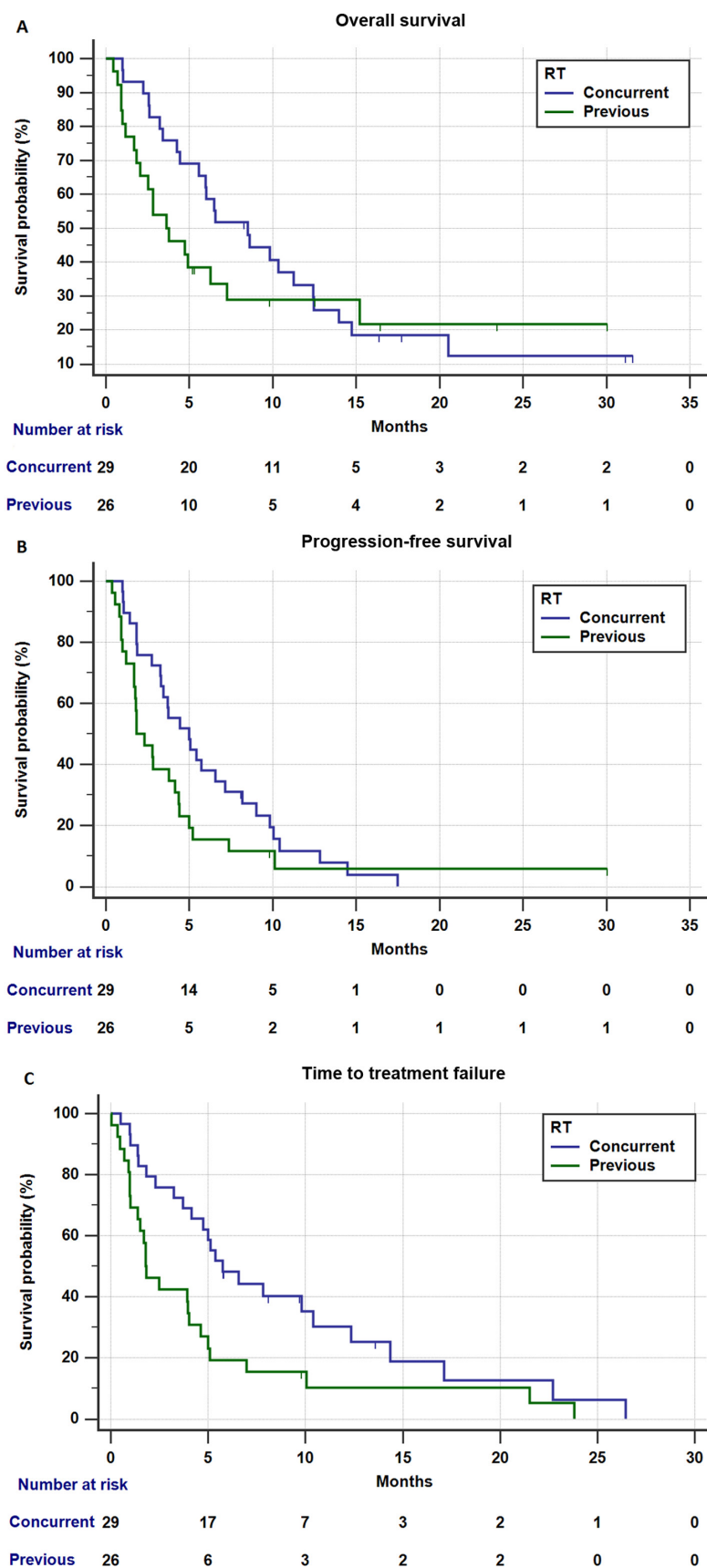


Table SI. Univariate and multivariate analyses of DCR.

Variable	Univariate analysis			Multivariate analysis		
	Disease control/ratio	DCR (95% CI)	P-value	Coefficient	Standard error	P-value
Total	71/149	47.7 (37.2-60.1)	-	-	-	-
Previous pRT	4/22	18.2 (4.9-46.5)				
No RT ^c	67/127	52.8 (40.8-67)	0.0026	12946	0.6537	0.0477 ^a
Concurrent pRT ^c	12/28	42.9 (22.1-74.8)	0.0761	-	-	-
Primary tumor			0.5217			
NSCLC	39/91	42.9 (30.4-58.6)				
Melanoma	17/31	54.8 (31.9-87.8)		0.2635	0.6341	0.6777
Renal cell carcinoma	19/21	90.4 (69.6-98.8)		-0.7521	0.5372	0.1615
Others	3/6	50 (11.8-88.2)		-0.6518	0.9257	0.4813
Sex			0.4809	-	-	-
Female	19/36	52.8 (31.8-82.4)				
Male	52/113	46.0 (34.3-60.3)				
Age, years			0.9684	-	-	-
≥70	33/69	47.8 (32.9-67.2)				
<70	38/80	47.5 (33.6-65.2)				
ECOG PS			0.0015	1.5395	0.5576	0.0058 ^b
0-1	66/123	53.7 (41.5-68.2)				
≥2	5/26	19.2 (6.2-44.8)				
Treatment line			0.0470	0.8233	0.6725	0.2208
First	17/26	65.4 (44.3-82.8)				
Subsequent line treatment	54/123	43.9 (32.9-57.2)				
Baseline CNS metastases			0.3401	-	-	-
Yes	11/19	57.9 (33.5-79.7)				
No	60/130	46.2 (35.2-59.4)				
Baseline bone metastases			0.0014	10232	0.4214	0.0152 ^a
Yes	14/49	28.6 (15.6-47.9)				
No	56/99	56.6 (42.7-73.4)				

^aP<0.05, ^bP<0.01, ^cCompared with Previous pRT. RT, radiotherapy; pRT, palliative RT; DCR, disease control rate; ECOG PS, Eastern Cooperative Oncology Group Performance Status; NSCLC, non-small cell lung cancer; CNS, central nervous system; CI, confidence interval.

Table SII. Univariate and multivariate analyses of progression free survival.

Variable	Univariate analysis, HR (95% CI); P-value	Multivariate analysis, HR (95% CI); P-value
Previous pRT vs. No RT	2.06 (1.31-3.24); P=0.0016	1.58 (0.94-2.65); P=0.0810
Primary tumor, NSCLC vs.		
Melanoma	0.52 (0.31-0.86); P=0.0119	0.71 (0.35-1.40); P=0.3255
Kidney	0.70 (0.41-1.20); P=0.1957	0.71 (0.41-1.22); P=0.2147
Others	1.27 (0.61-2.63); P=0.5172	1.11 (0.52-2.37); P=0.7792
Sex, male vs. female	1.14 (0.76-1.72); P=0.5095	-
Age, ≥70 years old vs. <70 years old	1.55 (1.09-2.21); P=0.0141	1.30 (0.89-1.89); P=0.1678
Treatment line, subsequent line treatment vs. first line treatment	1.95 (1.13-3.35); P=0.0153	1.17 (0.55-2.48); P=0.6744
ECOG PS, ≥2 vs. 0-1	3.42 (2.29-5.12); P<0.0001	3.27 (2.13-5.03); P<0.0001
Baseline CNS metastases, yes vs. no	0.98 (0.58-1.65); P=0.9428	-
Baseline bone metastases, yes vs. no	1.60 (1.11-2.29); P=0.0111	1.60 (1.06-2.42); P=0.0243
RT, radiotherapy; pRT, palliative RT; HR, hazard ratio; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group Performance Status; NSCLC, non-small cell lung cancer; CNS, central nervous system.		

Table SIII. Univariate and multivariate analyses of time to treatment failure.

Variable	Univariate analysis, HR (95% CI); P-value	Multivariate analysis, HR (95% CI); P-value
Previous pRT vs. No RT	1.92 (1.23-2.98); P=0.0035	1.76 (1.12-2.77); P=0.0132
Primary tumor (NSCLC)		
Melanoma	0.38 (0.23-0.62); P=0.0001	0.52 (0.27-1.02); P=0.0597
Kidney	0.46 (0.26-0.81); P=0.0070	0.55 (0.31-0.96); P=0.0387
Others	1.11 (0.53-2.29); P=0.7715	1.09 (0.52-2.27); P=0.8087
Sex, male vs. female	1.19 (0.81-1.77); P=0.3676	-
Age, ≥70 years old vs. <70 years old	1.26 (0.89-1.77); P=0.1781	-
Treatment line, subsequent line treatment vs. first line treatment	2.08 (1.26-3.43); P=0.0041	1.16 (0.57-2.36); P=0.6728
ECOG PS, ≥2 vs 0-1	3.25 (2.18-4.85); P<0.0001	2.83 (1.87-4.27); P<0.0001
Baseline CNS metastases, yes vs. no	1.25 (0.75-2.08); P=0.3883	-
Baseline bone metastases, yes vs. no	1.40 (0.98-1.99); P=0.0597	-

RT, radiotherapy; pRT, palliative RT; HR, hazard ratio; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group Performance Status; NSCLC, non-small cell lung cancer; CNS, central nervous system.

Table SIV. Univariate and multivariate analysis for time to treatment failure.

Variable	Univariate analysis, HR (95% CI); P-value	Multivariate analysis, HR (95% CI); P-value
Previous pRT vs. concurrent pRT	1.99 (1.12-3.53); P=0.0187	2.42 (1.32-4.42); P=0.0040
Primary tumor, NSCLC VS.		
Melanoma	0.77 (0.31-1.88); P=0.5697	-
Kidney	0.79 (0.27-2.26); P=0.6616	-
Others	1.06 (0.43-2.58); P=0.8948	-
Sex, male vs. female	1.19 (0.64-2.22); P=0.5728	-
Age, ≥70 years old vs. <70 years old	1.42 (0.78-2.59); P=0.2464	-
Treatment line, subsequent line treatment vs. first line treatment	1.42 (0.43-4.64); P=0.5542	-
ECOG PS, ≥2 vs 0-1	2.88 (1.50-5.52); P=0.0014	3.56 (1.79-7.07); P=0.0003
Baseline CNS metastases, yes vs. no	1.16 (0.59-2.24); P=0.6602	-
Baseline bone metastases, yes vs. no	1.41 (0.78-2.55); P=0.2525	-

RT, radiotherapy; pRT, palliative RT; HR, hazard ratio; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group Performance Status; NSCLC, non-small cell lung cancer; CNS, central nervous system.