

Table SI. Univariable Cox proportional hazards regression analysis for OS and DFS in patients with rectal cancer receiving NCRT.

Characteristic	OS HR (95% CI)	P-value	DFS HR (95% CI)	P-value
Age	1.01 (0.99-1.02)	0.412	1.00 (0.98-1.02)	0.765
Sex	1.12 (0.85-1.48)	0.382	1.08 (0.81-1.44)	0.521
CEA	1.02 (1.01-1.03)	<0.001	1.02 (1.01-1.03)	<0.001
CA 19-9	1.00 (0.99-1.01)	0.452	1.01 (0.99-1.02)	0.218
Neutrophils	1.28 (1.14-1.44)	<0.001	1.25 (1.12-1.39)	<0.001
LYM	0.52 (0.38-0.71)	<0.001	0.48 (0.35-0.66)	<0.001
MONO	1.05 (0.88-1.25)	0.590	1.03 (0.85-1.24)	0.763
EOS	1.42 (1.09-2.42)	0.031	1.85 (1.52-3.44)	0.001
ALB	0.98 (0.95-1.02)	0.315	0.99 (0.96-1.03)	0.642
Globulin	1.01 (0.97-1.05)	0.678	1.00 (0.96-1.04)	0.912
Post-NCRT NLR group	3.25 (2.15-4.92)	<0.001	2.78 (1.92-4.03)	<0.001

HR, hazard ratio; CI, confidence interval; NCRT, neoadjuvant chemoradiotherapy; CEA, carcinoembryonic antigen; LYM, lymphocyte count; EOS, eosinophil count; NLR, neutrophil-to-lymphocyte ratio; MONO, monocytes; OS, overall survival; DFS, disease-free survival.

Table SII. Multicollinearity diagnostics for variables included in the multivariable models.

Variable	VIF (OS model)	VIF (DFS model)
CEA	1.12	1.14
Neutrophils	2.76	2.82
LYM	1.15	1.22
EOS	1.08	1.07
Post-NCRT NLR group	2.54	2.61

VIF, variance inflation factor; OS, overall survival; DFS, disease-free survival. CEA, carcinoembryonic antigen; LYM, lymphocyte count; EOS, eosinophil count; NLR, neutrophil-to-lymphocyte ratio.

Table SIII. Sensitivity analysis of multivariable cox regression models for overall survival stratified by treatment period.

Characteristic	Adjusted HR (95% CI) (2017-2019)	P-value	Adjusted HR (95% CI) (2020-2022 )	P-value	P-value for interaction
Pre-NCRT variables					
CEA (per 1 ng/ml increase)	1.01 (1.01-1.02)	<0.001	1.01 (1.00-1.02)	0.011	0.63
Neutrophils (per $1 \times 10^9/l$ increase)	1.19 (1.04-1.35)	0.010	1.13 (1.05-1.31)	0.026	0.51
LYM (per $1 \times 10^9/l$ increase)	0.62 (0.41-0.93)	0.022	0.71 (0.46-0.91)	0.018	0.57
EOS (per $1 \times 10^9/l$ increase)	1.51 (1.02-2.39)	0.046	1.48 (1.03-2.24)	0.047	0.61
Post-NCRT variable					
NLR group (high vs. low)	2.84 (1.67-4.85)	<0.001	2.41 (1.31-4.44)	0.005	0.64

HR, hazard ratio; CI, confidence interval; NCRT, neoadjuvant chemoradiotherapy; CEA, carcinoembryonic antigen; LYM, lymphocyte count; EOS, eosinophil count; NLR, neutrophil-to-lymphocyte ratio.

Table SIV. Sensitivity analysis of multivariable Cox regression models for disease-free survival stratified by treatment period.

Characteristic	Adjusted HR (95% CI) (2017-2019)	P-value	Adjusted HR (95% CI) (2020-2022 )	P-value	P-value for interaction
Pre-NCRT variables					
CEA (per 1 ng/ml increase)	1.01 (1.01-1.02)	0.001	1.01 (1.00-1.02)	0.004	0.710
Neutrophils (per $1 \times 10^9/l$ increase)	1.15 (1.04-1.27)	0.007	1.10 (1.01-1.23)	0.011	0.600
LYM (per $1 \times 10^9/l$ increase)	0.53 (0.38-0.74)	<0.001	0.58 (0.41-0.83)	0.003	0.670
EOS (per $1 \times 10^9/l$ increase)	2.63 (1.13-6.14)	0.025	2.19 (1.09-5.00)	0.022	0.780
Post-NCRT variable					
NLR group (high vs. low)	2.31 (1.45-3.67)	<0.001	2.09 (1.27-3.43)	0.004	0.810

HR, hazard ratio; CI, confidence interval; NCRT, neoadjuvant chemoradiotherapy; CEA, carcinoembryonic antigen; LYM, lymphocyte count; EOS, eosinophil count; NLR, neutrophil-to-lymphocyte ratio.