



Figure S1 Boxplots of concordance (C) indices for the pathologic model, molecular model, and molecular-immune model. Higher C-index values indicate better model concordance with observed outcomes.

**Table S1** Quantitative statistical methods for TLS scores at different locations

Location	Score	Criteria
Within tumor (T Score)	0	No TLSs present (TLS-negative case)
	1	1–2 mature TLSs present in the T zone
	2	≥3 TLSs present in the T zone but not enough to meet the criteria for a score of 3
	3	Numerous mature TLSs clustering within the T zone
Outside tumor (P score)	0	No typical TLSs present
	1	TLS area occupies <50% of the region
	2	TLS area occupies >50% of the region
	3	Numerous TLSs clustering outside the tumor

TLS, tertiary lymphoid structure.

**Table S2** Mouse Randomization List

Number	Mouse ID	Group
1	1	Control
2	10	FOLFOX
3	11	FOLFOX
4	12	FOLFOX
5	13	FOLFOX
6	14	FOLFOX
7	15	Control
8	16	Control
9	17	Control
10	18	Control
11	19	Control
12	2	FOLFOX
13	20	FOLFOX
14	3	Control
15	4	Control
16	5	FOLFOX
17	6	Control
18	7	FOLFOX
19	8	FOLFOX
20	9	Control

**Table S3** Analysis of factors influencing patient survival using three Cox regression models: pathologic, molecular, and molecular-immune models

Characteristics	Pathologic model				Molecular model				Molecular-immune model			
	HR	95% CI		P	HR	95% CI		P	HR	95% CI		P
		Lower bounds	Upper bounds			Lower bounds	Upper bounds			Lower bounds	Upper bounds	
Broad types	(Reference)	Flaring type										
Infiltrating ulcer type	1.193	0.712	1.998	0.50	1.216	0.723	2.043	0.46	1.225	0.726	2.066	0.45
Infiltrating type	2.154	1.242	3.734	0.006	1.900	1.064	3.395	0.03	1.970	1.118	3.472	0.02
Ulcerative type	2.012	0.778	5.201	0.15	1.574	0.552	4.487	0.40	1.597	0.566	4.507	0.38
Neurological invasion	(Reference)	No										
Yes	1.645	1.019	2.655	0.04	1.699	1.044	2.765	0.03	1.987	1.221	3.233	0.006
Carcinoembryonic antigen	0.998	0.987	1.009	0.71	1.000	0.990	1.010	0.96	1.002	.991	1.013	0.75
Carbohydrate antigen 199	1.002	0.999	1.005	0.19	1.001	0.997	1.004	0.78	1.002	.998	1.006	0.34
TNM	(Reference)	II										
III	2.242	1.407	3.572	0.001	2.322	1.438	3.747	0.001	1.968	1.211	3.198	0.006
IV	11.196	5.945	21.084	<0.001	11.493	5.980	22.088	<0.001	7.789	4.044	15.003	<0.001
MMR	(Reference)	pMMR										
dMMR					0.679	0.438	1.054	0.09	0.759	0.491	1.174	0.22
TLS	(Reference)	No										
Yes								0.242	0.144	0.408	<0.001	

HR, hazard ratio; CI confidence interval; MMR, mismatch repair; dMMR, deficient mismatch repair; TLS, tertiary lymphoid structure.