

Supplementary Material

Title: Predicting neoadjuvant chemoradiotherapy response in locally advanced rectal cancer using tumor-infiltrating lymphocytes density

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Supplementary Methods

Inclusion criteria:

Those patients diagnosed as who meet all of the following inclusion criteria were enrolled into this study:

- (a) Patients who diagnosed as locally advanced rectal cancer (LARC, cT3–4b or any T, N+, M0) by imaging or pathological examination;
- (b) Rectal cancer within 12cm from the anal verge;
- (c) Underwent a tumor biopsy before neoadjuvant chemoradiotherapy (nCRT) and subsequent rectal resection;
- (d) No other treatment before nCRT;
- (e) Radical surgery was performed after nCRT.

Exclusion criteria:

- (a) Patients with distant metastases at the time of diagnosis or with Lynch syndrome, ulcerative colitis or familial adenomatous polyposis;
- (b) Patients with missing or ambiguous data that could not be evaluated for the stromal region of the tumor;
- (c) Patients who died within 30 days of nCRT and surgery;

(d) Patients who did not complete nCRT.

Supplementary Table S1 Correlation analysis of TILs density with other potential factors

	Total	High TILs density	Low TILs density	P
	N = 210	N = 105	N = 105	
Differentiation grade				0.471
Well or moderate	202 (96.2%)	102 (97.1%)	100 (95.2%)	
Poor	8 (3.8%)	3 (2.9%)	5 (4.8%)	
cT status				0.768
cT2	8 (3.8%)	3 (2.9%)	5 (4.8%)	
cT3	150 (71.4%)	76 (72.4%)	74 (70.5%)	
cT4	52 (24.8%)	26 (24.7%)	26 (24.7%)	
cN status				0.139
cN0	35 (16.7%)	19 (18.1%)	16 (15.2%)	
cN1	82 (39.0%)	34 (32.4%)	48 (45.7%)	
cN2	93 (44.3%)	52 (49.5%)	41 (39.1%)	
CEA level				0.212
Normal	117 (55.7%)	63 (60%)	54 (51.4%)	
Abnormal	93 (44.3%)	42 (40%)	51 (48.6%)	
CA19–9 level				0.001*
Normal	162 (77.1%)	91 (86.7%)	71 (67.6%)	
Abnormal	48 (22.9%)	14 (13.3%)	34 (32.4%)	

Note: *P<0.05. The threshold value for CEA was 5ng/ml, and 0–5ng/ml was regard as normal.

The threshold value for CA19-9 was 27 U/ml, and 0–27 U/ml was regard as normal.

Abbreviations: TILs, tumor-infiltrating lymphocytes; CEA, carcinoembryonic antigen; CA19–9: carbohydrate antigen 19–9.