

Supplementary Table 1. Univariable and multivariable analysis of potential risk factors for local recurrence

	Univariate		Multivariate	
Variable	Hazard ratio (95% CI)	p-value	Hazard ratio (95% CI)	p-value
Sex				
Male	Reference			
Female	0.76 (0.41-1.42)	0.38		
BMI				
Normal	Reference			
Underweight	1.50 (0.68-3.30)	0.31		
Overweight	0.75 (0.36-1.55)	0.43		
Obese	2.23 (0.85-5.85)	0.10		
Neoadjuvant therapy				
No	Reference			
Yes	0.76 (0.44-1.33)	0.33		
Distance from AV (cm)	0.86 (0.76-0.98)	0.03	0.77 (0.65-0.91)	0.003
Tumor location				
Anterior/circumferential	Reference			
Not anterior	1.22 (0.71-2.08)	0.46		
ypT*				
0-3	Reference		Reference	
4a, 4b	2.98 (1.38-6.41)	0.006	2.34 (1.03-5.34)	0.04

ypStage*				
0-II	Reference		Reference	
III, IV	2.64 (1.54-4.52)	<0.001	2.14 (1.18-)	0.01
CEA	1.00 (1.00-1.01)	0.42		
Adjuvant chemotherapy				
No	Reference			
Yes	1.59 (0.93-2.72)	0.09		
Operative procedure				
Low anterior resection	Reference		Reference	
Intersphincteric resection	1.00 (0.51-1.97)	1.00	0.88 (0.38-2.00)	0.75
Abdominoperineal resection	0.98 (0.45-2.16)	0.97	0.27 (0.09-0.85)	0.03
Hartmann	1.22 (0.26-5.61)	0.80	1.46 (0.37-5.70)	0.58
Other	3.73 (0.46-30.00)	0.21	2.56 (0.30-21.92)	0.38
Purse-string suture				
Single	Reference			
Double or more	1.41 (0.70-2.85)	0.33		
Intraoperative TaTME adverse events				
No	Reference			
Yes	1.63 (0.68-3.87)	0.27		
Purse-string failure				
No	Reference			

Yes	2.41 (0.73-7.93)	0.14		
Visceral injury				
No	Reference			
Yes	2.15 (0.65-7.09)	0.20		
Perineural invasion				
Negative	Reference		Reference	
Positive	3.32 (1.88-5.87)	<0.001	2.61 (1.38-4.95)	0.004
Resection status				
R0	Reference		Reference	
R1	5.05 (2.55-10.00)	<0.001	3.51 (1.57-7.83)	0.003
Number of procedures performed by the surgeon	1.00 (0.99-1.01)	0.78		
Annual hospital volume	1.00 (0.97-1.02)	0.88		

*Tumors were classified according to the American Joint Committee on Cancer TNM system. *AV* anal verge, *BMI* body mass index, *CI* confidence interval, *TaTME* transanal total mesorectal excision