Is Laparoscopic Surgery for Pathological T4 Colorectal Cancer Safe?

Kawasaki Saiwai Hospital

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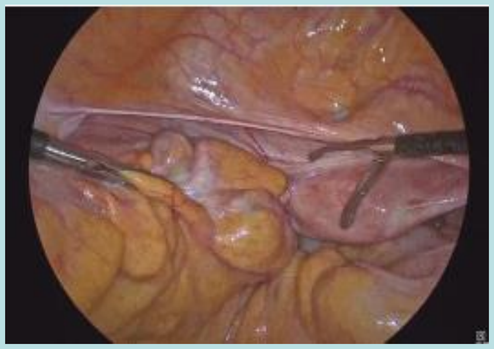
Background

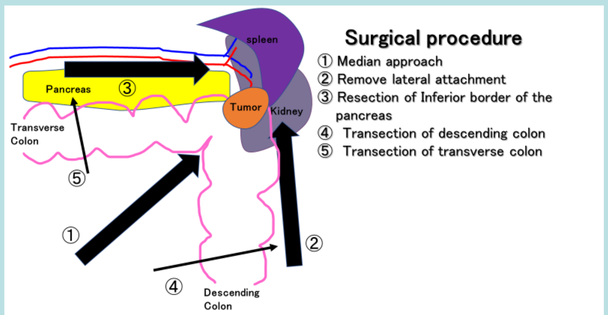
Locally advanced colorectal cancer accounts for 11% of all colorectal cancers.
However, it has been reported that good long-term results can be obtained by performing combined resection of other organs. In this study, we examined cases of locally advanced colorectal cancer operated on at our hospital and present the results and surgical techniques.

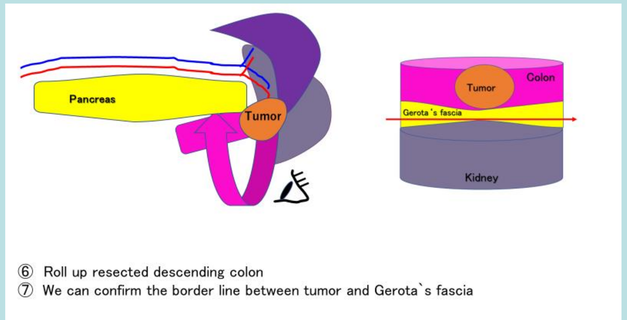
Methods

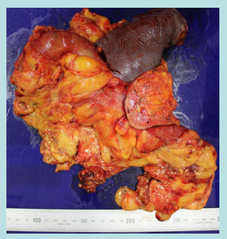
From April 2012 to August 2022, 205 patients with T4 pathologic depth were treated at our hospital. Excluded cases were emergency surgery cases and stage 4 cases. Patient backgrounds, surgical outcomes, and long-term outcomes were investigated in 71 patients in the laparoscopic surgery group and 59 patients in the open surgery group.

Surgical findings









Ishiyama Y(2022) Laparoscopic left hemicolectomy and en bloc splenectomy for locally advanced descending colon cancer-A video vignette. Colorectal Dis 24(12):1638-1638.

For locally advanced adherent colon and rectal tumors, an en bloc resection is recommended.
We suggest an open approach if a laparoscopic en bloc resection cannot be performed adequately.

Zerey M; Members of the SAGES Guidelines Committee. SAGES evidence-based guidelines for the laparoscopic resection of curable colon and rectal cancer. Surg Endosc. 2013 Jan;27(1):1-10.

Results

Patients characteristic

	Laparoscopic (n=71)	Open(n=59)	P<0.05
Age	72.5 (40-93)	71 (48-91)	n.s
Gender			n.s
Male	36 (56%)	41 (69%)	
Female	27 (43%)	18 (30%)	
BMI	21.9 (13.3-33.9)	21.5 (13.1-33.9)	n.s
ASA			0.029
1	19 (23.8%)	9 (15.3%)	
2	40 (58.7%)	25 (42.4%)	
3	12 (17.5%)	25 (42.4%)	
PS			0.0401
0	52 (74.6%)	30 (50.8%)	
1	14 (20.6%)	23 (38.9%)	
2	5 (4.76%)	6 (10.1%)	
Tumor location			n.s
colon	53 (74.6%)	41 (69.5%)	
rectal	18 (25.3%)	18 (30.5%)	

Surgical outcomes

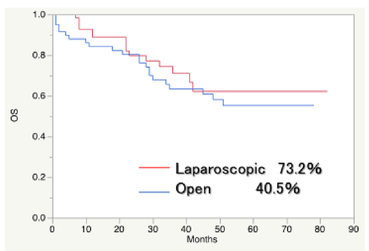
	Laparoscopic (n=71)	Open (n=59)	P<0.05
Operative time	213 (70-415)	174 (101-560)	n.s
Bleeding	5 (0-740)	170 (5-3050)	P<0.001
Postoperative stay	9 (7-42)	19 (3-74)	P<0.001
Postoperative complications			
Anastomosis lekage	3 (4.23%)	4 (6.78%)	n.s
Absece	1 (1.41%)	2 (3.39%)	n.s
SSI	4 (4.23%)	3 (5.08%)	n.s
ileus	8 (8.45%)	7 (11.86%)	n.s
Conversion to laparotomy	4 (6.39%)	0	n.s

Pathological finding

		Laparoscopic (n=63)	Open (n=59)	P<0.05
Tumor size (mm)		55 (13-100)	55 (2-150)	n.s
Number of lymph node		19 (2-52)	11 (2-60)	0.0091
T				n.s
	4a	54 (74.6%)	40 (67.8%)	
	4b	17 (25.3%)	19 (32.3%)	
N				0.0372
-		24 (36.5%)	29 (49.1%)	
+		50 (68.3%)	30 (50.8%)	
stage				n.s
	2	24 (36.5%)	29 (49.1%)	
	3	47 (68.3%)	30 (50.8%)	
ly				n.s
-		27 (38.1%)	11 (18.6%)	
+		44 (61.9%)	48 (81.3%)	
v				n.s
-		13 (19%)	7 (11.8%)	
+		58 (80.9%)	52 (88.1%)	

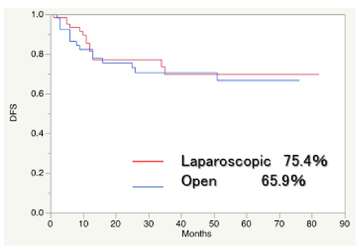
Long term outcomes

Overall survival



HR 0.740 95%CI (0.37-1.44), P=0.386

Disease free survival



HR 0.859 95%CI (0.408-1.796) P=0.685

Follow up 30 months

Recurrence pattern

	Laparoscopic (n=63)	Open(n=59)	P<0.05
Recurrence	n=15	n=14	
Disseimination	5 (7.93%)	2 (3.38%)	n.s
Liver	3 (4.76%)	4 (6.77%)	n.s
Lung	4 (6.34%)	3 (5.08%)	n.s
Lymph	2 (3.17%)	0 (0%)	n.s
Local	1 (1.58%)	5 (8.47%)	n.s

Conclusion

The results and surgical techniques for T4 colorectal cancer are presented.

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