

## Laparoscopic Surgery for Early Gastric Cancer

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Recent advancement of endoscopy and its technique lead to early detection of gastric cancer, and enable us to perform an entirely new surgical approach to gastric cancer. Laparoscopic surgery for early gastric cancer is minimally invasive and offers patients the advantages of reduced pain, shorter hospital stay and quicker convalescence, compared with open surgery. In Japan, laparoscopic local (wedge) resection of the stomach (lesion lifting method) and laparoscopic mucosal resection (intra-gastric surgery) were first performed in 1992 and in 1993 respectively, and laparoscopy assisted partial resection of the stomach with lymph node dissection in 1994. Laparoscopic surgery for early gastric cancer has been introduced in our department since 1995. Since then, we have experienced 20 cases with laparoscopic local resection of the stomach and 24 cases with laparoscopy assisted partial gastrectomy. Recently, the opportunity to select laparoscopy assisted partial gastrectomy has been increased. Compared with open surgery, the laparoscopic surgery is associated with less bleeding, rapid recovery of bowel movement, faster initiation of oral intake and shorter hospital stay. Laparoscopic surgery for early gastric cancer is feasible, with favorable short-term outcome. Although procedure of laparoscopy assisted partial gastrectomy is much different in that of laparoscopic local resection, the recovery after laparoscopy assisted partial gastrectomy is as successful as after laparoscopic local resection.

### Intra- and early post-operative outcomes

	Laparoscopic local resection (n=20)	Laparoscopy assisted partial gastrectomy (n=24)	Open surgery (n=124)	P-value
Operative time (min)	191	304*	187*	*<0.05
Blood loss (ml)	55 <sup>†</sup>	186 <sup>†‡</sup>	386 <sup>‡</sup>	††<0.001
Complication rate	0.15	0.13	0.18	NS
	Perforation 1	Bleeding 1	Bleeding 3	
	Wound infection 2	Stomal ulcer 1	Anastomotic leak 6	
		Anastomotic stricture 1	Anastomotic stricture 4	
			Others 8	
First flatus (day)	2.0	2.1 <sup>¶</sup>	4.2 <sup>¶</sup>	¶<0.05
First defecation (day)	2.9	3.6	4.7	NS
Initiation of oral intake (day)	2.8	3.2 <sup>#</sup>	5.4 <sup>#</sup>	<sup>#</sup> <0.05
Hospital stay (day)	12	16 <sup>§</sup>	25 <sup>§</sup>	<sup>§</sup> <0.01

Open surgery : Conventional open distal partial gastrectomy and open pylorus preserving partial gastrectomy for the case with preoperative diagnosis of early gastric cancer in 2000 to 2004.