

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Inclusion and Exclusion Criteria

Inclusion criteria

- 1) Histologically proven gastric carcinoma
- 2) MP, SS, or SE without involvement of other organs, N0–2, excluding bulky N2, and M0 according to the Japanese classification system
- 3) Tumor located in the body and the antrum of the stomach and the indication for distal gastrectomy
- 4) No invasion to the duodenum
- 5) No invasion to the esophagus
- 6) PS (ECOG) 0 or 1
- 7) Body mass index <30 kg/m²
- 8) No history of gastrointestinal surgery
- 9) No history of chemotherapy or radiotherapy
- 10) Sufficient organ functions
- 11) Provided written informed consent
- 12) Aged 20–80 years

Exclusion criteria

- 1) Synchronous or metachronous (within 5 years) malignancies other than carcinoma in situ
 - 2) Pregnant or breastfeeding women
 - 3) Severe psychiatric disorders
 - 4) Continuous systemic steroid therapy
 - 5) History of myocardial infarction or unstable angina pectoris within 6 months
 - 6) Uncontrollable hypertension
 - 7) Uncontrollable diabetes mellitus or administration of insulin
 - 8) Severe respiratory disease requiring continuous oxygen therapy
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eTable 2. Surgical Results, Early Postoperative Course, Mortality

	Full analysis set			Per protocol set		
	ODG (n=254)	LADG (n= 248)	p-value	ODG (n=233)	LADG (n= 227)	p-value
<i>Surgical results</i>						
Procedures			0.931			1
Distal gastrectomy	246 (96.9%)	239 (96.4%)		233 (100%)	227 (100%)	
Total gastrectomy	5 (2%)	5 (2%)		0	0	
Others	3 (1.1%)	4 (1.6%)		0	0	
Lymph node dissection			0.786			1
< D2	6 (2.4%)	7 (2.8%)		0	0	
D2 and more	248 (97.6%)	241 (97.2%)		233 (100%)	227 (100%)	
Number of harvested lymph node [†]	43 (32-54)	43 (33-55)	0.580	43 (33-54)	43 (33-55)	0.821
Reconstruction			0.477			0.375
Billroth I	122 (48%)	132 (53.2%)		120 (51.5%)	128 (56.4%)	
Billroth II	17 (6.7%)	18 (7.3%)		13 (5.6%)	17 (7.5%)	
Roux-enY	111 (43.7%)	91 (36.7%)		98 (42.1%)	79 (34.8%)	
Others	4 (1.6%)	7 (2.8%)		2 (0.9%)	3 (1.3%)	
Omentectomy			<0.001			<0.001
Total/Partial/None	184/64/3	62/182/4		170/63/0	52/175/0	
Combined resection of other organs	10 (3.9%)	9 (3.6%)	1	7 (0.3%)	2 (0.9%)	0.176
Operative time, min [†]	205 (175-240)	291 (236-345)	<0.001	205 (175-237)	291 (243-344)	<0.001
Estimated blood loss, ml [†]	141 (80-270)	30 (10-90)	<0.001	150 (80-270)	30 (10-85)	<0.001
Blood transfusion	9 (3.5%)	2 (0.8%)	0.063	7 (3%)	2 (0.9%)	0.176
Length of wound, cm [†]	18 (16-20)	4 (3-5)	<0.001	18 (16-20)	4 (3-5)	<0.001

	Full analysis set			Per protocol set		
	ODG (n=254)	LADG (n= 248)	p-value	ODG (n=233)	LADG (n= 227)	p-value
Early postoperative course						
Maximum body temperature, °C†			0.557			0.383
Within 3 days after surgery	37.7 (37.3-38)	37.6 (37.3-38.1)		37.7 (37.3-38)	37.6 (37.3-38.1)	
Time to first flatus, day†	3 (2-3)	2 (2-3)	<0.001	3 (2-3)	2 (2-3)	<0.001
Usage of analgesics	138 (54.3%)	95 (38.3%)	<0.001	125 (53.6%)	87 (38.3%)	0.001
Length of postoperative stay, day†	11 (9-14)	10 (9-14)	0.572	10 (9-14)	10 (9-13)	0.263
Reoperation within 30 days	1 (0.4%)	3 (1.2%)	0.368	1 (0.4%)	3 (1.3%)	0.367
Readmission within 30 days	9 (3.6%)	2 (0.8%)	0.063	8 (3.4%)	2 (0.9%)	0.106
Postoperative chemotherapy			0.591			0.513
Presence/Absence	112/142	116/132		105/128	110/117	
Mortality						
Within 30 days	1 (0.4%)	1 (0.4%)	1	1 (0.4%)	1 (0.4%)	1
In-hospital	1 (0.4%)	1 (0.4%)	1	1 (0.4%)	1 (0.4%)	1

Data are n (%) or median (range)* or median (IQR)†.

ODG: open distal gastrectomy, LADG: laparoscopy-assisted distal gastrectomy, ECOG: Eastern Cooperative Oncology Group.

eTable 3. Comparison of Intraoperative and Postoperative Complications According to CTCAE Version 4.0 Between the 2 Groups Per Protocol Set

	All grades			Grade ≥3		
	ODG (n=233)	LADG (n= 227)	p-value	ODG (n=233)	LADG (n= 227)	p-value
Intraoperative complications						
Splenic injury	1 (0.4%)	0	1	1 (0.4%)	0	1
Arterial injury	2 (0.8%)	1 (0.4%)	1	2 (0.8%)	0	0.499
Venous injury	3 (1.2%)	0	0.249	0	0	—
Gastrointestinal injury	1 (0.4%)	1 (0.4%)	1	0	0	—
Thromboembolic event	0	0	—	0	0	—
Total number of complications	6 (2.6%)	2 (0.9%)	0.285	2 (0.9%)	0	0.499
Postoperative complications						
Pancreatic fistula	3 (1.3%)	9 (4.0%)	0.085	1 (0.4%)	2 (0.9%)	0.619
Anastomotic leakage	6 (2.6%)	1 (0.4%)	0.122	6 (2.6%)	1 (0.4%)	0.122
Anastomotic stenosis	1 (0.4%)	2 (0.9%)	0.619	0	0	—

	All grades			Grade ≥3		
	ODG (n=233)	LADG (n= 227)	p-value	ODG (n=233)	LADG (n= 227)	p-value
Intra-abdominal abscess	4 (1.7%)	3 (1.3%)	1	2 (0.9%)	3 (1.3%)	0.682
Bleeding	3 (1.3%)	0	0.249	1 (0.4%)	0	1
Wound infection	1 (0.4%)	1 (0.4%)	1	0	0	—
Wound dehiscence	1 (0.4%)	0	1	1 (0.4%)	0	1
Bowel obstruction	2 (0.9%)	3 (1.3%)	0.682	1 (0.4%)	0	1
Cholecystitis	4 (1.7%)	0	0.124	1 (0.4%)	0	1
Pneumonia	2 (0.9%)	6 (2.6%)	0.171	0	1 (0.4%)	0.494
Pulmonary infarction	0	1 (0.4%)	0.494	0	0	—
Ascites	1 (0.4%)	3 (1.3%)	0.367	0	0	—
Catheter infection	0	1 (0.4%)	0.494	0	0	—
Others	0	2 (0.9%)	0.243	0	1 (0.4%)	0.494
Total number of complications	25 (10.7%)	26 (11.5%)	0.882	11 (4.7%)	8 (3.5%)	0.641

eTable 4. Late Complications in the Per Protocol Set

	All grades			Grade ≥3		
	ODG (n=233)	LADG (n= 227)	p- value	ODG (n=233)	LADG (n= 227)	p- value
Anastomotic stenosis	1 (0.4%)	4 (1.8%)	0.211	1 (0.4%)	2 (0.9%)	0.619
Wound infection	5 (2.1%)	0	0.061	0	0	1
Wound dehiscence	3 (1.3%)	4 (1.8%)	0.721	2 (0.9%)	3 (1.3%)	0.682
Bowel obstruction	8 (3.4%)	5 (2.2%)	0.576	6 (2.6%)	3 (1.3%)	0.504
Cholecystitis	11 (4.7%)	2 (0.9%)	0.021	5 (2.1%)	2 (0.9%)	0.450
Pneumonia	2 (0.9%)	2 (0.9%)	1	1 (0.4%)	1 (0.4%)	1

eAppendix. Institutions That Participated in the Study

Aichi Cancer Center Hospital

Izumiyotsu Municipal Hospital

Ehime University

Osaka City General Hospital

Osaka University

Tokyo Metropolitan Cancer and Infectious Diseases Center Komagome Hospital

Kyushu University

Gifu University

Kobe University

Saitama Medical University International Medical Center

Fukuoka University

Nihon University Hospital

Tokyo Medical and Dental University

Oita University

Fukui-ken Saiseikai Hospital

Nagano Municipal Hospital

Niigata Municipal Hospital

Hyogo Cancer Center

Ishikawa Prefectural Central Hospital

Iwate Medical University

Osaka Medical and Pharmaceutical University

Osaka Metropolitan University

Okayama University

Kitasato University

Kinki University

Keio University

Saga University

Shizuoka Cancer Center

St. Marianna University School of Medicine

Toyamaken Saiseikai Takaoka Hospital

Nagoya University

Hakodate Goryoukaku Hospital

Yokohama City University Medical Center

Saga-ken Medical Center Koseikan

National Cancer Center East Hospital

Cancer Institute Hospital
Saitama Cancer Center