



Preoperative N stage	4 (100%)	6 (54.5%)	0.302	3 (75.0%)	1.000	37 (88.1%)	69 (69.7%)	0.036	39 (92.9%)	0.710
N0		6 (54.5%)		3 (75.0%)						
N1	4 (100%)	5 (45.5%)		1 (25.0%)		5 (11.9%)	30 (30.3%)		3 (7.1%)	
N2										
N3										
Combined resection			1.000		1.000			0.793		1.000
No	3 (75.0%)	10 (90.9%)		4 (100%)		41 (97.6%)	94 (94.9%)		40 (95.2%)	
Yes	1 (25.0%)	1 (9.1%)				1 (2.4%)	5 (5.1%)		2 (4.8%)	
Extent of LND			0.454		1.000			0.548		1.000
< D2	4 (100%)	7 (63.6%)		3 (75.0%)		28 (66.7%)	59 (59.6%)		27 (64.3%)	
≥ D2		4 (36.4%)		1 (25.0%)		14 (33.3%)	40 (40.4%)		15 (35.7%)	

(continued)

Variable	2010				2011				
	After PSM		After PSM		After PSM		After PSM		
	RDG (n = 33)	LDG (n = 85)	P	LDG (n = 33)	RDG (n = 26)	LDG (n = 136)	P	LDG (n = 26)	P
Age	53.2 ± 10.8	60.1 ± 12.3	0.006	56.8 ± 14.1	48.0 ± 10.1	59.4 ± 12.8	<0.001	47.7 ± 11.7	0.930
Sex			0.292				0.932		0.771
Male	18 (54.5%)	57 (67.1%)		19 (57.6%)	16 (61.5%)	88 (64.7%)		18 (69.2%)	
Female	15 (45.5%)	28 (32.9%)		14 (42.4%)	10 (38.5%)	48 (35.3%)		8 (30.8%)	
BMI (kg/m <sup>2</sup> )	24.6 ± 3.5	23.5 ± 2.9	0.098	24.6 ± 2.5	22.9 ± 4.1	23.7 ± 3.1	0.394	23.3 ± 2.4	0.706
Previous abdominal surgery			1.000				1.000		1.000
Absent	27 (81.8%)	68 (80.0%)		30 (90.9%)	22 (84.6%)	116 (85.3%)		21 (80.8%)	
Present	6 (18.2%)	17 (20.0%)		3 (9.1%)	4 (15.4%)	20 (14.7%)		5 (19.2%)	
Comorbidity			0.180				0.789		1.000
Absent	18 (54.5%)	33 (38.8%)		17 (51.5%)	13 (50.0%)	61 (44.9%)		14 (53.8%)	
Present	15 (45.5%)	52 (61.2%)		16 (48.5%)	13 (50.0%)	75 (55.1%)		12 (46.2%)	
ASA score			0.005				1.000		1.000
1-2	25 (75.8%)	38 (44.7%)		25 (75.8%)	26 (100%)	135 (99.3%)		26 (100%)	
3-4	8 (24.2%)	47 (55.3%)		8 (24.2%)	1 (0.7%)	1 (0.7%)		1 (0.7%)	
Preoperative T stage			0.928				0.008		0.397
T1	27 (81.9%)	67 (78.8%)		26 (78.8%)	16 (61.5%)	83 (61.0%)		14 (53.8%)	
T2	5 (15.2%)	16 (18.8%)		7 (21.2%)	5 (19.2%)	42 (30.9%)		8 (30.8%)	
T3	1 (3.0%)	2 (2.4%)			2 (7.7%)	11 (8.1%)		4 (15.4%)	
T4					2 (7.7%)				

Preoperative N stage		0.155	0.572	0.497	0.591
N0	21 (63.6%)	63 (74.1%)	21 (63.6%)	106 (77.9%)	22 (94.6%)
N1	11 (33.3%)	19 (22.4%)	11 (33.3%)	26 (19.1%)	3 (11.5%)
N2		3 (3.5%)	1 (3.0%)	4 (2.9%)	1 (3.8%)
N3	1 (3.0%)				
Combined resection			1.000	1.000	1.000
No	30 (90.9%)	75 (88.2%)	29 (87.9%)	132 (97.1%)	26 (100%)
Yes	3 (9.1%)	10 (11.8%)	4 (12.1%)	4 (2.9%)	
Extent of LND		0.747	0.798	0.452	1.000
< D2	20 (60.6%)	56 (65.9%)	22 (66.7%)	39 (28.7%)	4 (15.4%)
≥ D2	13 (39.4%)	29 (34.1%)	11 (33.3%)	97 (71.3%)	22 (84.6%)

(continued)

Variable	2012				2013			
	After PSM		After PSM		After PSM		After PSM	
	RDG (n = 21)	LDG (n = 107)	P	LDG (n = 21)	RDG (n = 22)	LDG (n = 160)	P	LDG (n = 22)
Age	55.4 ± 11.0	58.4 ± 13.5	0.330	55.7 ± 12.9	51.0 ± 11.5	58.2 ± 12.9	0.014	52.9 ± 10.6
Sex			0.603				1.000	
Male	15 (71.4%)	67 (62.6%)		19 (90.5%)	15 (68.2%)	111 (69.4%)		17 (77.3%)
Female	6 (28.6%)	40 (37.4%)		2 (9.5%)	7 (31.8%)	49 (30.6%)		5 (22.7%)
BMI (kg/m <sup>2</sup> )	24.1 ± 2.8	23.7 ± 3.5	0.621	24.0 ± 2.0	22.8 ± 3.2	23.8 ± 3.1	0.175	22.7 ± 2.9
Previous abdominal surgery			0.731				1.000	
Absent	16 (76.2%)	88 (82.2%)		18 (85.7%)	20 (90.9%)	145 (90.6%)		21 (95.5%)
Present	5 (23.8%)	19 (17.8%)		3 (14.3%)	2 (9.1%)	15 (9.4%)		1 (4.5%)
Comorbidity			0.363				0.789	
Absent	15 (71.4%)	62 (57.9%)		15 (71.4%)	16 (72.7%)	84 (52.5%)		15 (68.2%)
Present	6 (28.6%)	45 (42.1%)		6 (28.6%)	6 (27.3%)	76 (47.5%)		7 (31.8%)
ASA score			1.000				1.000	
1–2	21 (100%)	107 (100%)		21 (100%)	22 (100%)	160 (100%)		22 (100%)
3–4								
Preoperative T stage			0.823				0.863	
T1	12 (57.1%)	56 (52.3%)		11 (52.4%)	16 (72.7%)	125 (78.1%)		16 (72.7%)
T2	5 (23.8%)	36 (33.6%)		6 (28.6%)	2 (9.1%)	15 (9.4%)		4 (18.2%)
T3	3 (14.3%)	11 (10.3%)		3 (14.3%)	3 (13.6%)	13 (8.1%)		1 (4.5%)
T4	1 (4.8%)	4 (3.7%)		1 (4.8%)	1 (4.5%)	7 (4.4%)		1 (4.5%)

Preoperative N stage		0.699	0.469	0.451	0.598
N0	14 (66.7%)	79 (73.8%)	16 (76.2%)	18 (81.8%)	140 (87.5%)
N1	6 (28.6%)	24 (22.4%)	4 (19.0%)	4 (18.2%)	14 (8.8%)
N2	1 (4.8%)	1 (2.9%)			4 (2.5%)
N3		2 (1.9%)	1 (4.8%)		2 (1.2%)
Combined resection		0.584	1.000	0.774	1.000
No	21 (100%)	101 (94.4%)	21 (100%)	22 (100%)	154 (96.2%)
Yes		6 (5.6%)			6 (3.8%)
Extent of LND		0.067	1.000	0.143	0.762
< D2	7 (33.3%)	62 (57.9%)	7 (33.3%)	13 (59.1%)	122 (76.2%)
≥ D2	14 (66.7%)	45 (42.1%)	14 (66.7%)	9 (40.9%)	38 (23.8%)

(continued)

Variable	2014				2015				
	After PSM		After PSM		After PSM		After PSM		
	RDG (n=41)	LDG (n=110)	P	LDG (n=41)	RDG (n=43)	LDG (n=101)	P	LDG (n=43)	P
Age	56.0 ± 11.2	62.1 ± 13.7	0.012	55.3 ± 12.8	53.9 ± 11.4	63.6 ± 12.0	<0.001	57.9 ± 12.2	0.118
Sex			0.676				1.000		0.771
Male	29 (70.7%)	72 (65.5%)		26 (63.4%)	25 (58.1%)	59 (58.4%)		24 (55.8%)	
Female	12 (29.3%)	38 (34.5%)		15 (36.6%)	18 (41.9%)	42 (41.6%)		19 (44.2%)	
BMI (kg/m <sup>2</sup> )	24.4 ± 3.7	24.1 ± 2.9	0.515	24.5 ± 2.6	23.6 ± 3.3	23.4 ± 3.6	0.714	24.0 ± 3.9	0.653
Previous abdominal surgery			0.502				0.025		0.810
Absent	39 (95.1%)	99 (90.0%)		37 (90.2%)	30 (69.8%)	88 (87.1%)		32 (74.4%)	
Present	2 (4.9%)	11 (10.0%)		4 (9.8%)	13 (30.2%)	13 (12.9%)		11 (25.6%)	
Comorbidity			0.040				<0.001		0.508
Absent	24 (58.5%)	42 (38.2%)		24 (58.5%)	28 (65.1%)	27 (26.7%)		24 (55.8%)	
Present	17 (41.5%)	68 (61.8%)		17 (41.5%)	15 (34.9%)	74 (73.3%)		19 (44.2%)	
ASA score			1.000				0.3223		1.000
1-2	41 (100%)	109 (99.1%)		41 (100%)	43 (100%)	96 (95.0%)		43 (100%)	
3-4		1 (0.9%)				5 (5.0%)			
Preoperative T stage			0.495				0.151		0.757
T1	27 (65.9%)	71 (64.5%)		31 (75.6%)	30 (69.8%)	57 (56.4%)		31 (2.1%)	
T2	11 (26.8%)	22 (20.0%)		9 (22.0%)	7 (16.3%)	17 (16.8%)		6 (14.0%)	
T3	3 (7.3%)	15 (13.6%)		1 (2.4%)	6 (14.0%)	17 (16.8%)		5 (11.6%)	
T4		2 (1.8%)				10 (9.9%)		1 (2.3%)	

Preoperative N stage		0.501	0.545	0.076	0.437
N0	33 (80.5%)	85 (77.3%)	36 (87.8%)	72 (71.3%)	36 (83.7%)
N1	8 (19.5%)	19 (17.3%)	5 (12.2%)	15 (14.9%)	6 (14.0%)
N2		4 (3.6%)		8 (7.9%)	1 (2.3%)
N3		2 (1.8%)	1 (4.8%)	6 (5.9%)	
Combined resection		1.000	1.000	0.323	1.000
No	41 (100%)	109 (99.1%)	41 (100%)	96 (95.0%)	43 (100%)
Yes		1 (0.9%)		5 (5.0%)	
Extent of LND		0.857	0.649	1.000	0.503
< D2	24 (58.5%)	68 (61.8%)	27 (65.9%)	60 (59.4%)	29 (67.4%)
≥ D2	17 (41.5%)	42 (38.2%)	14 (34.1%)	41 (40.6%)	14 (32.6%)

PSM, propensity score matching; RDG, robotic distal gastrectomy; LDG, laparoscopic distal gastrectomy; BMI, body mass index; ASA, American Society of Anesthesiologists; LND, lymph node dissection.