Table 1. Patient background, tumor factors, surgical outcomes, and status at 1-year follow-up.

Patient				Surgery		
Age, years				Institutional experience, cases		
	Mean ± SD	68.8 ± 10.6			Median (IQR)	23 (10-52)
Sex				Lymph node dissection		
	Male / Female	387 / 122			D0, D1 / D1+ / 2 / Unk	70 / 425 / 3 / 11
BMI, kg/m^2				Operation time, min		
	Mean ± SD	23.0 ± 3.3			Median (IQR)	301 (250-374)
PNI				Blood loss, mL		
	Mean ± SD	50.6 ± 6.0			Median (IQR)	250 (110-400)
				Preservation of celiac branch nerve		
Tumor					Preserved / Not preserved / Unk	226 / 235 / 48
Disease				Preservation of hepatic branch nerve		
	GC / EGJ cancer	473 / 36			Preserved / Not preserved / Unk	353 / 93 / 63
Pathological T factor (pT)				Approach		
	1 / 2 / 3 / 4 / Unk	388 / 66 / 34 / 13 / 8			Open / Lap	315 / 194
Pathological N factor (pN)				Location of anastomosis		
	0 / 1 / 2 / 3 / Unk	443 / 34 / 18 / 6 / 8			Intra-abdomen / Mediastinum, Intra-thorax	471 / 38
Histology				Postoperative complications (CD grade)		
	Dif / Undif / Unk	375 / 122 / 12			None / I / II / III / IV / V	448 / 14 / 33 / 12 / 0 / 2
				Anastomosis-related complications		
At 1-year follow-up					Absence / Presence	472 / 37
BMI change, %				Postoperative length of hospital stay, days		
	Mean ± SD	88.6 ± 7.7			Median (IQR)	15 (13-21)
PNI change, %						
	Mean ± SD	98.1 ± 12.1				
PPI, H2 blocker						
	Used / Unused / Unk	99 / 307 / 103				
Reflux esophagitis (LA grade)						
	None / A / B / C / D / Unk	388 / 21 / 19 / 5 / 2 / 74				

SD, standard deviation; BMI, body mass index; PNI, prognostic nutritional index; GC, gastric cancer; EGJ, esophagogastric junction; Unk, unknown; Dif, differentiated; Undif, undifferentiated; IQR, interquartile range; CD, Clavien-Dindo classification; PPI, proton pump inhibitor; LA, Los Angeles classification.

Table 2. Univariate and multivariate analyses of prognostic factors.

		Univariate	Multivariate		
		p value	*p* value	HR	95% CI
Patient	Age (≥80 years)	<0.001	0.542		
	Sex (Male)	0.696			
	BMI (<22)	0.271			
Tumor	PNI (<45)	<0.001	<0.001	3.59	1.93-6.67
	pT (≥2)	<0.001	0.010	2.29	1.22-4.30
	pN (≥1)	<0.001	0.001	3.27	1.66-6.46
	Histology (Dif)	0.059			
	Institutional experience (<6 cases)	0.213			
Surgery	Lymph node dissection (D0, D1)	0.004	0.222		
	Operation time (≥300 min)	0.573			
	Blood loss (≥200 mL)	0.290			
	Celiac blanch nerve (Not preserved)	0.095			
	Hepatic blanch nerve (Not preserved)	0.178			
	Approach (Open)	0.069			
	Anastomosis location (Mediastinum, Intra-thorax)	0.394			
	Postoperative complications (CD grade ≥III)	0.081			
	Anastomosis-related complications (Presence)	0.189			
	Postoperative hospital stay (≥14 days)	0.695			
At 1-year follow-up	PPI, H2 blocker (Used)	0.218			
	Reflux esophagitis (LA grade ≥B)	0.780			

BMI, body mass index; PNI, prognostic nutritional index; Dif, differentiated; CD, Clavien-Dindo classification; PPI, proton pump inhibitor; LA, Los Angeles classification; HR, hazard ratio; CI, confidence interval.

Table 3. Univariate and multivariate analyses of prognostic factors in patients with preoperative PNI <45.

		Univariate	Multivariate		
		p value	*p* value	HR	95% CI
Patient	Age (≥80 years)	0.119			
	Sex (Male)	0.606			
	BMI (<22)	0.037	0.714		
Tumor	pT (≥2)	<0.001	0.068		
	pN (≥1)	<0.001	0.085		
	Histology (Dif)	0.066			
	Institutional experience (<6 cases)	0.296			
	Lymph node dissection (D0, D1)	0.352			
	Operation time (≥300 min)	0.302			
	Blood loss (≥200 mL)	0.088			
Surgery	Celiac blanch nerve (Not preserved)	0.426			
	Hepatic blanch nerve (Not preserved)	0.880			
	Approach (Open)	0.052			
	Anastomosis location (Mediastinum, Intra-thorax)	0.033	0.458		
	Postoperative complications (CD grade ≥III)	<0.001	0.182		
	Anastomosis-related complications (Presence)	0.220			
	Postoperative hospital stay (≥14 days)	0.503			
	BW change (<90%)	0.265			
At 1-year follow-up	PNI change (<100%)	0.013	0.633		
	PPI, H2 blocker (Used)	0.765			
	Reflux esophagitis (LA grade ≥B)	0.778			

BMI, body mass index; Dif, differentiated; CD, Clavien-Dindo classification; BW, body weight; PNI, prognostic nutritional index; PPI, proton pump inhibitor;

LA, Los Angeles classification; HR, hazard ratio; CI, confidence interval.

Table 4. Univariate and multivariate analyses of prognostic factors in patients with preoperative PNI ≥45.

		Univariate	Multivariate		
		p value	*p* value	HR	95% CI
Patient	Age (≥80 years)	0.118			
	Sex (Male)	0.846			
	BMI (<22)	0.759			
Tumor	pT (≥2)	0.003	0.451		
	pN (≥1)	<0.001	0.132		
	Histology (Dif)	0.870			
Surgery	Institutional experience (<6 cases)	0.395			
	Lymph node dissection (D0, D1)	0.300			
	Operation time (≥300 min)	0.333			
	Blood loss (≥200 mL)	0.828			
	Celiac blanch nerve (Not preserved)	0.202			
	Hepatic blanch nerve (Not preserved)	0.766			
	Approach (Open)	0.827			
	Anastomosis location (Mediastinum, Intra-thorax)	0.952			
	Postoperative complications (CD grade ≥III)	0.936			
	Anastomosis-related complications (Presence)	0.460			
	Postoperative hospital stay (≥14 days)	0.082			
At 1-year follow-up	BW change (<90%)	0.117			
	PNI change (<90%)	0.004	0.019	2.54	1.16-5.54
	PPI, H2 blocker (Used)	0.303			
	Reflux esophagitis (LA grade ≥B)	0.584			

BMI, body mass index; Dif, differentiated; CD, Clavien-Dindo classification; BW, body weight; PNI, prognostic nutritional index; PPI, proton pump inhibitor;

LA, Los Angeles classification; HR, hazard ratio; CI, confidence interval.

Table 5. Univariate and multivariate analyses of risk factors for decrease in PNI ≥10% in patients with preoperative PNI ≥45.

		Univariate	Multivariate		
		p value	*p* value	OR	95% CI
Patient	Age (≥80 years)	0.634			
	Sex (Male)	0.749			
	BMI (<22)	0.577			
Tumor	pT (≥2)	0.122			
	pN (≥1)	0.040	0.038	2.50	1.05-5.96
	Histology (Dif)	0.745			
	Institutional experience (<6 cases)	0.695			
	Lymph node dissection (D0, D1)	0.663			
Surgery	Operation time (≥300 min)	0.018	0.044	1.77	1.02-3.08
	Blood loss (≥200 mL)	0.037	0.029	1.85	1.06-3.27
	Celiac blanch nerve (Not preserved)	0.773			
	Hepatic blanch nerve (Not preserved)	0.840			
	Approach (Open)	0.297			
	Anastomosis location (Mediastinum, Intra-thorax)	1.000			
	Postoperative complications (CD grade ≥III)	0.690			
	Anastomosis-related complications (Presence)	0.639			
At 1-year follow-up	Postoperative hospital stay (≥14 days)	0.887			
	BW change (<90%)	0.386			
	PPI, H2 blocker (Used)	0.500			
	Reflux esophagitis (LA grade ≥B)	1.000			

BMI, body mass index; Dif, differentiated; CD, Clavien-Dindo classification; BW, body weight; LA, Los Angeles classification; OR, odds ratio; CI, confidence interval.