



Total Versus Subtotal Gastrectomy for Distal Gastric Poorly Cohesive Carcinoma

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ABSTRACT

Background. Gastric poorly cohesive carcinoma (PCC) in advanced stages has a poor prognosis. Total gastrectomy (TG) remains the common treatment for distal gastric PCC, but subtotal gastrectomy (SG) may improve quality of life without compromising outcomes. Currently, no clear recommendation on the best surgical strategy for distal PCC is available. This study aimed to compare overall survival (OS) and disease-free survival (DFS) at 5 years for patients with antropyloric PCC treated by total versus subtotal gastrectomy.

Methods. A large retrospective European multicenter cohort study analyzed 2131 patients treated for gastric cancer between 2007 and 2017 by members of the French Association of Surgery (AFC). The study compared a group of patients who underwent TG with a group who underwent SG for antropyloric PCC. The primary outcomes were 5 year OS and DFS.

Results. The study enrolled 269 patients: 140 (52.0%) in the TG group and 129 (48.0%) in the SG group. The baseline characteristics and pTNM stage were similar between the two groups. According to Dindo-Claven classification, the patients treated with TG had more postoperative complications than the patients treated with SG ($p < 0.001$): grades I to IIIa (77.1% vs 59.5%) and grades IIIb to IVb (14.4% vs 9.0%). No difference in 5-year OS was observed between TG (53.8%; 95 % confidence interval [CI], 43.2–63.3%) and SG (53.0%; 95% CI, 41.4–63.3%) (hazard ratio [HR], 0.94; 95% CI, 0.68–1.29). The same was observed for 5-year DFS: TG (46.0%; 95% CI, 35.9–55.5%) versus SG (45.3%; 95% CI, 34.3–55.6%) (HR, 0.97; 95% CI, 0.70–1.34).

Conclusions. At 5 years, SG was not associated with worse OS and DFS than TG for distal PCC. Surgical morbidity was higher after TG. Subtotal gastrectomy is a valuable option for distal PCC gastric cancer.

Keywords Gastric poorly cohesive carcinoma (PCC) · Signet ring cells (SRC) · Total gastrectomy · Subtotal gastrectomy

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Despite an important decrease of gastric cancer incidence worldwide for three decades, it remains the fourth most common cancer and the fourth cause of cancer-related death worldwide according to the Global Cancer Statistics in 2022.^{1–3} Adenocarcinoma represents 95% of gastric

cancer and is divided into three main histologic subtypes according to Lauren Classification⁴ as follows: intestinal type well-differentiated, poorly cohesive carcinoma (PCC) or “diffuse” type, and mixed type including both. The PCC histologic type represents 20–54% of adenocarcinomas, with an increasing incidence worldwide, particularly in Western countries.⁵

According to the World Health Organization (WHO) classification, PCC is defined by more than 50% of signet ring cells (SRCs), which appear more aggressive and poorly cohesive, with arrangements or aggregates including intracytoplasmic mucin. Mixed type or minor PCC is defined by less than 50% of SRCs. However, new studies have shown that the gastric PCC prognosis does not depend on the SRC concentration and that minor PCC (<50% SRC) has the same tumor aggressiveness as major PCC (>50% SRC).^{6,7}

Poorly cohesive carcinoma is associated with a greater depth of gastric infiltration, and an early lymph node and peritoneal evolution has an infiltrative and invasive nature leading to a worse prognosis than intestinal types for locally advanced stage (stage II or III).^{8,9}

Due to a low sensitivity of chemotherapy,¹⁰ the preferred curative treatment for locally advanced gastric cancer (T2-T4) is a total gastrectomy (TG) together with a D2 lymphadenectomy.¹¹ No consensus exists regarding the optimal type of gastrectomy for antro-pyloric PCC, and TG remains the predominant surgical option in Europe despite varying expert opinions on the matter.¹²

Total gastrectomy is responsible for increased mortality, morbidity with an altered quality of life and nutritional status, and even worse for patients often already malnourished with an altered general condition.^{13,14} New recommendations by the European Society for Medical Oncology (ESMO) in 2016 favoring an 8-cm surgical margin for gastric PCC suggest that subtotal gastrectomy (SG) could be as efficient as TG for oncologic outcome.¹² However, follow-up studies comparing both procedures are still lacking.

Our study aimed to compare overall survival (OS) and disease-free survival (DFS) at 5 years after SG for distal gastric PCC versus TG using a multicenter retrospective cohort.

MATERIAL AND METHODS

Study Design

The French association of surgery (AFC) database, a European multicenter retrospective cohort of 2131 patients in 32 centers from 2007 to 2017, was designed to identify and study patients treated for gastric cancer. The AFC members were asked to include all patients with gastric cancer consecutively. The objectives of the AFC database

were to highlight the state of actual practices and strategies in Europe and French-speaking countries for gastric cancer. We used this database to perform our study by selecting gastric PCC patients who underwent gastrectomy. The study was accepted by the regional institutional review board on 30 January 2023 under the number CER-VD 2022-02262.

The inclusion criteria specified adults older than 18 years who underwent gastrectomy (SG or TG) for distal (antro-pyloric) gastric PCC. The exclusion criteria ruled out metastatic disease, non resectable tumor, and R2 resection.

The recommended standard lymphadenectomy with curative intent was D2 according to the Japanese Gastric Cancer Association.¹⁵ We used World Health Organization (WHO) status⁵ to determine the general preoperative state of patients and the Dindo-Clavien classification¹⁶ to classify postoperative complications at 90 days.

Poorly cohesive carcinoma was defined based on definitive pathology with the presence of SRC and divided into three subtypes: minor PCC (<50% SRC), major PCC (>50% SRC), and unspecified PCC.

The primary outcome was OS at 5 years, defined as the time from surgery to death from any cause. The secondary outcome was the DFS at 5 years, defined as the time from surgery to recurrence or death from any cause. For this analysis, we excluded patients who died within 90 days and those with incomplete data about death, surgical margin status, or recurrence.

Statistical Analysis

Statistical analyses were performed using Stata software (version 15; StataCorp, College Station, TX, USA). All tests were two-sided, with an alpha level set at 5%. Categorical data are presented as the number of patients and associated

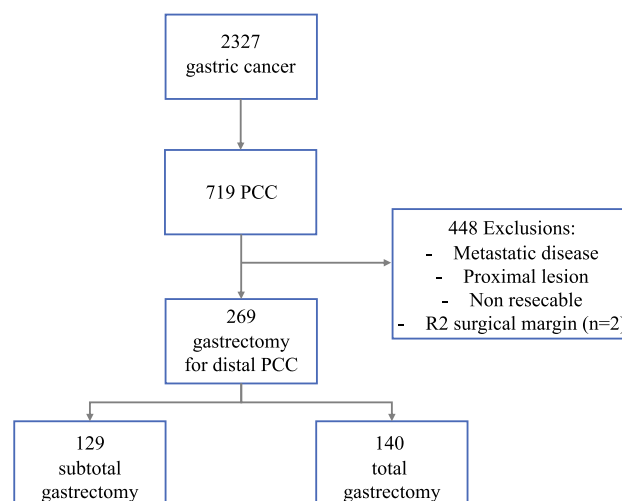


FIG. 1 Flowchart of the study. PCC, poorly cohesive carcinoma

TABLE 1 Demographic and medical characteristics of patients with distal gastric poorly cohesive carcinoma who underwent subtotal gastrectomy or total gastrectomy

	Subtotal gastrectomy (<i>n</i> = 129) <i>n</i> (%)	Total gastrectomy (<i>n</i> = 140) <i>n</i> (%)	<i>p</i> Value ^a
Male sex	71 (55.0)	82 (58.6)	0.56
Mean age (years)	65.9 ± 14.2	60.8 ± 14.0	0.003
Alcohol consumption	13/85 (15.3)	18/112 (16.1)	0.88
Active smoking	40/88 (45.5)	55/121 (45.5)	1.00
<i>WHO performance status</i>			0.02
0	34/94 (36.2)	69/132 (52.3)	
1	42/94 (44.7)	53/132 (40.2)	
2	15/94 (15.9)	9/132 (6.8)	
3	3/94 (3.2)	1/132 (0.8)	
<i>Invasion depth (cT)</i>			0.002
cT0	0 (0.0)	3 (2.1)	
cT1	13 (10.1)	18 (12.9)	
cT2	27 (20.9)	18 (12.9)	
cT3	39 (30.2)	70 (50.0)	
cT4	6 (4.7)	5 (3.6)	
cTX	44 (34.1)	26 (18.6)	
<i>Lymphatic metastasis (cN)</i>			0.55
cN0	64 (49.6)	63 (45.0)	
cN ≥ 1	46 (35.7)	59 (42.1)	
cNX	19 (14.7)	18 (12.9)	
Neoadjuvant treatment	47 (36.4)	70 (50.0)	0.03
Median stay: days (25th; 72th %tiles)	11 (8; 16)	13 (10; 18)	0.002
Adjuvant treatment	62/121 (51.2)	97/134 (72.4)	0.001

WHO: world health organization

^aStatistical significance (*p* < 0.05) is highlighted in bold.

percentages, and continuous data as mean ± standard deviation or median (25th; 75th percentiles) depending on the statistical distribution. Comparisons between independent groups (patients with SG vs patients with TG) were made by the chi-square test or Fisher's exact test for categorical variables, and by Student's *t* test or the Mann-Whitney test for continuous variables. Censored data (OS and DFS) were estimated using the Kaplan-Meier method, and the groups were compared by Cox model, considering the center as a random effect. Factors associated with OS and DFS at 5 years also were studied with the Cox model. The proportional-hazard hypothesis was verified using Schoenfeld's test and plotting residuals. The results are expressed as hazard ratios (HRs) and 95% confidence intervals (CIs). Survival rates at 5 years were presented with a 95% CI. An exploratory subgroup analysis of patients with major PCC was performed as described previously.

RESULTS

Our study followed 2327 patients with a diagnosis of gastric cancer, 719 of whom had PCC. From 719 patients, 450 with PCC were excluded due to metastatic disease,

proximal localization, non-resectable tumor, or R2 surgical resection. Consequently, 269 patients who underwent gastrectomy for distal PCC were eligible for the analysis as described in the flowchart (Fig. 1).

All PCC Patients

Of the 269 patients included in the study, 129 (48%) underwent SG and 140 (52%) underwent TG. The patients who underwent SG were older (65.9 ± 14.2 vs 60.8 ± 14.0 years; *p* = 0.003) and had a worse WHO status than the patients who had TG. The patients who had SG were less likely to receive neoadjuvant (36.4% vs 50.0%; *p* = 0.03) and adjuvant (51.2% vs 72.4%; *p* = 0.001) treatment, as shown in Table 1.

Most of the patients (96.3%) underwent surgery by laparotomy, with 94.5% undergoing SG and 97.9% undergoing TG. The median hospital stay for the patients who had SG was 11 days (range, 8–16 days) versus 13 days (range, 10–18 days) for the patients who had TG (*p* = 0.002).

According to Clavien-Dindo classification, the patients who had TG experienced more postoperative complications than the patients who had SG (*p* < 0.001) (77.1 % of

TABLE 2 Surgical and histopathologic characteristics of patients with distal gastric poorly cohesive carcinoma who underwent subtotal gastrectomy or total gastrectomy

	Subtotal gastrectomy (n = 129) n (%)	Total gastrectomy (n = 140) n (%)	p Value ^a
<i>Complications (Dindo-Clavien)</i>			<0.001
I/II/IIIa	66/111 (59.5)	91/118 (77.1)	
IIIb/IVa/IVb	10/111 (9.0)	17/118 (14.4)	
V	6/111 (5.4)	3/118 (2.5)	
Not complicated	29/111 (26.1)	7/118 (5.9)	
Surgical revision	13/122 (10.7)	13/120 (10.8)	0.96
R1 resection	26/128 (20.3)	16 (11.4)	0.046
Surgical complication	21 (16.3)	31 (22.1)	0.22
Medical complication	25 (19.4)	31 (22.1)	0.58
<i>Invasion depth (pT)</i>			0.20
pT0/pTis/pT1	20/128 (15.6)	30 (21.4)	
pT2	19/128 (14.8)	24 (17.1)	
pT3	62/128 (48.4)	50 (35.7)	
pT4	27/128 (21.1)	36 (25.7)	
<i>Lymphatic metastasis (pN)</i>			0.86
pN0	48/127 (37.8)	53 (37.9)	
pN1	27/127 (21.3)	27 (19.3)	
pN2	18/127 (14.2)	25 (17.9)	
pN3	34/127 (26.8)	35 (25.0)	
Lymph nodes removed ≥ 15	99/126 (78.6)	119/137 (86.9)	0.08
Positive proximal margin	9/125 (7.2)	3/129 (2.3)	0.07
Positive distal margin	14/127 (11.0)	11/129 (8.5)	0.50
Vascular embolism	28/85 (32.9)	44/118 (37.3)	0.52
Lymph node embolism	30/80 (37.5)	44/123 (35.8)	0.80
Nervous engagement	32/90 (35.6)	57/126 (45.2)	0.15
SRC amount (%)			0.02
<50	47 (36.4)	38 (27.1)	
>50	49 (38.0)	77 (55.0)	
Unspecified	33 (25.6)	25 (17.9)	

SRC, signet ring cells

^aStatistical significance ($p < 0.05$) is highlighted in bold

grades I–IIIa vs 59.5% and 14.4% of grades IIIb–IVb vs 9.0 %, respectively). Regarding histopathology, 20.3% of the patients who had SG underwent an R1 resection versus 11.4% of the patients who had TG ($p = 0.046$). No difference was highlighted regarding pTNM stage or number of removed lymph nodes. Postoperative complications and histopathologic characteristics are described in Table 2.

No significant difference in OS (HR, 0.94; 95% CI, 0.68–1.29; $p = 0.68$) or DFS (HR, 0.97; 95% CI, 0.70–1.34; $p = 0.84$) was observed at 5 years between the two groups (Fig. 2a and b). The 5-year OS was 53.0% (95% CI, 41.4–63.3%) for the patients who had SG and 53.8% (95% CI, 43.2–63.3%) for the patients who had TG, and the 5-year DFS was 45.3% (95% CI, 34.3–55.6%) for the patients who had SG and 46.0% (95% CI, 35.9–55.5%) for the patients who had TG.

Age, stage 2 WHO status, postoperative complication, pT3 or pT4 stage, and pN2 or pN3 stage were associated with worse OS at 5 years, whereas R1 resection and major PCC were not significantly associated with worse OS at 5 years. The factors associated with OS and DFS at 5 years are described in Table 3.

Major PCC patients (SRC Rate >0 %)

Among the 126 major PCC patients, 49 (38.9%) underwent SG and 77 (61.1%) underwent TG. A difference between the two groups was observed for neoadjuvant treatment (61.0% for TG vs 40.8% for SG; $p = 0.03$) and adjuvant treatment (77.3% for TG vs 55.3% for SG; $p = 0.01$) (Online Appendix 1). Concerning surgical and histopathologic characteristics, only surgical complications

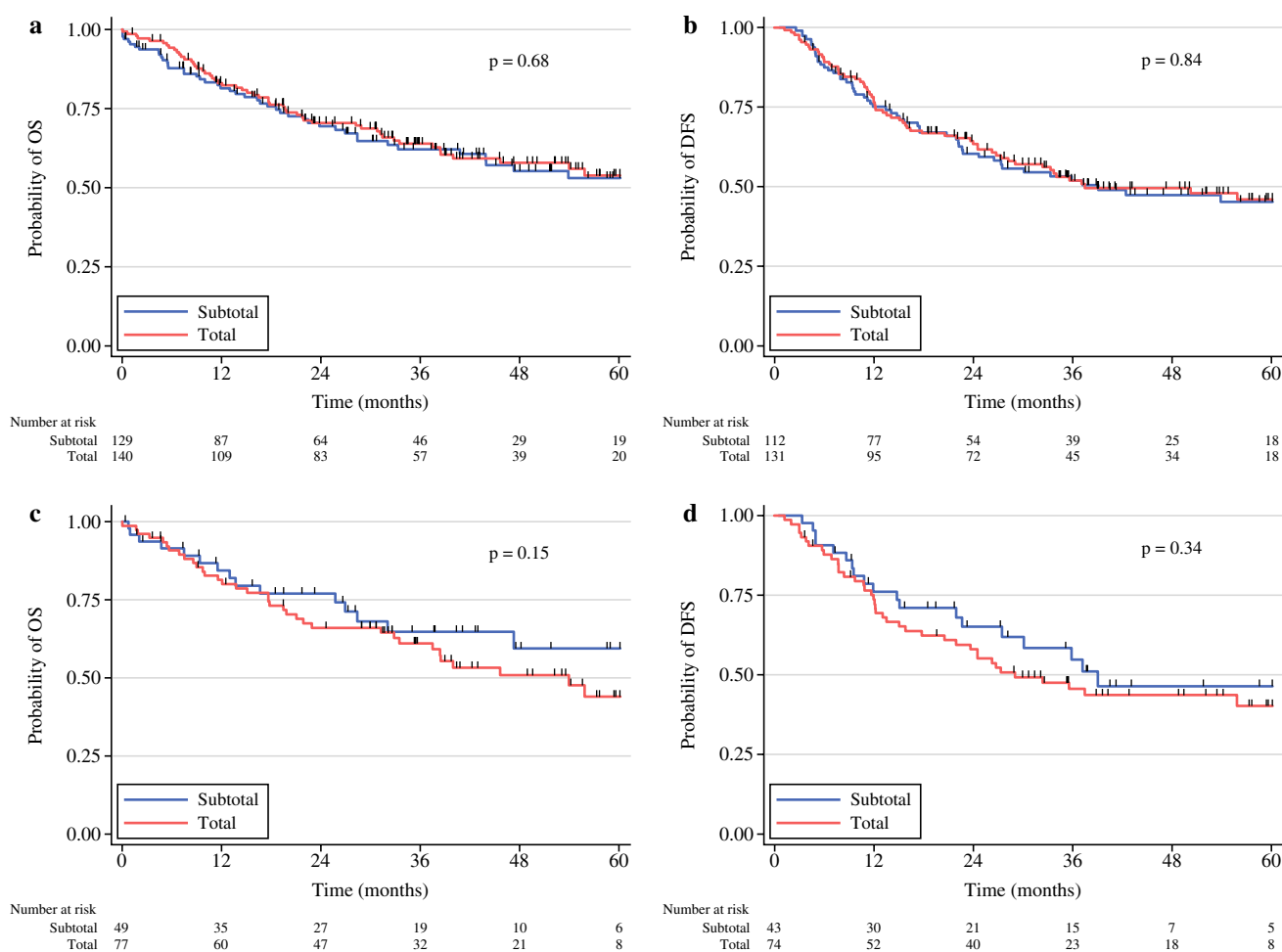


FIG. 2 Kaplan–Meier survival curves for overall survival (**a** all patients; **c** major poorly cohesive carcinoma patients) and disease-free survival (**b** all patients; **d** major poorly cohesive carcinoma patients) at 5 years. DFS, disease-free survival; OS, overall survival

differed significantly ($p < 0.001$), as illustrated by Dindo-Clavien classification in favor of SG (Online Appendix 2).

At 5 years, no significant difference was observed regarding OS (59.4% [95% CI, 40.2–74.3%] for SG vs 44.0% [95% CI, 29.8–57.4%] for TG; $p = 0.15$) or DFS (46.5% [95% CI, 28.4–62.7%] for SG vs 40.2% [95% CI, 27.6–52.6%] for TG; $p = 0.34$) (Fig. 2c and d). Online Appendix 4 highlights the potential factors associated with OS and DFS at 5 years.

DISCUSSION

In a comparison of TG with SG, the study found no difference regarding OS and DFS at 5 years between the patients with distal gastric PCC, including those with more than 50% SRC histology. These results challenge the current maximalist approach to treatment of distal gastric PCC, which advocates TG as the preferred treatment.¹²

In our cohort, no significant differences in tumor or lymph node stages were highlighted between the two groups. This is an important consideration for prevention of potential oncologic bias.

The patients with SG were older and worse in general condition than the patients with TG. Moreover, the patients with SG had received less perioperative chemotherapy. Indeed, to avoid the morbidity and mortality of TG, some surgeons decided to perform SG on fragile and old patients who already could not endure chemotherapy. As expected, surgical morbidity was more severe in the TG group, as highlighted by Dindo-Clavien classification and hospital length of stay. These results were expected, and studies demonstrating the superior morbidity and mortality of TG compared with SG are not lacking.^{13, 14, 17–21} In a recent Spanish meta-analysis¹⁷ including 15 studies with 6303 patients (2662 TG and 3641 SG patients) who underwent gastrectomy for distal gastric cancer, SG was associated with lower morbidity and mortality rates and a longer

TABLE 3 Factors associated with overall survival and disease-free survival at 5 years

	5-Year OS			5-Year DFS		
	<i>n</i>	HR (95 % CI)	<i>p</i> Value ^a	<i>n</i>	HR (95 % CI)	<i>p</i> Value ^a
<i>Type of gastrectomy</i>						
Subtotal	129	1.00		112	1.00	
Total	140	0.94 (0.68–1.29)	0.68	131	0.97 (0.70–1.34)	0.84
<i>Sex</i>						
Female	116	1.00		106	1.00	
Male	153	1.08 (0.65–1.79)	0.76	137	1.00 (0.65–1.54)	0.99
Age	269	1.02 (1.01–1.04)	0.009	243	1.00 (0.99–1.01)	0.97
<i>Alcohol consumption</i>						
No	166	1.00		156	1.00	
Yes	31	1.33 (0.58–3.07)	0.50	28	1.14 (0.63–2.05)	0.66
<i>Active smoking</i>						
No	114	1.00		109	1.00	
Yes	95	0.94 (0.52–1.70)	0.83	87	0.79 (0.53–1.16)	0.22
<i>WHO performance status</i>						
0	103	1.00		97	1.00	
1	95	1.09 (0.67–1.76)	0.73	89	1.01 (0.72–1.42)	0.95
2	24	2.24 (1.30–3.87)	0.004	20	1.60 (0.92–2.79)	0.10
3	4	5.65 (0.97–33.0)	0.054	3	3.02 (0.32–28.7)	0.34
<i>Neoadjuvant treatment</i>						
No	152	1.00		130	1.00	
Yes	117	1.01 (0.72–1.41)	0.97	113	1.16 (0.87–1.54)	0.32
<i>Surgical approach</i>						
Laparotomy	257	1.00		232	1.00	
Laparoscopy	10	0.47 (0.19–1.14)	0.10	9	1.09 (0.61–1.96)	0.77
<i>Complications (Dindo-Clavien)</i>						
I/II/IIIa	157	1.00		150	1.00	
IIIb/Iva/Ivb/V	36	1.63 (0.86–3.09)	0.14	25	0.87 (0.39–1.96)	0.74
Not complicated	36	1.03 (0.71–1.49)	0.90	30	1.15 (0.88–1.48)	0.31
<i>Surgical revision</i>						
No	216	1.00		195	1.00	
Yes	26	1.14 (0.61–2.16)	0.68	21	0.84 (0.41–1.70)	0.63
<i>Resection margin</i>						
R0	226	1.00		205	1.00	
R1	42	1.73 (0.94–3.19)	0.08	38	1.79 (1.13–2.84)	0.01
<i>Surgical complication</i>						
No	217	1.00		198	1.00	
Yes	52	1.46 (0.99–2.16)	0.06	45	1.32 (0.82–2.10)	0.25
<i>Medical complication</i>						
No	213	1.00		199	1.00	
Yes	56	1.77 (1.22–2.57)	0.003	44	0.83 (0.63–1.10)	0.20
<i>Invasion depth (pT)</i>						
pT0/pTis/pT1	50	1.00		44	1.00	
pT2	43	3.28 (0.81–13.3)	0.10	40	3.16 (0.74–13.4)	0.12
pT3	112	5.33 (1.82–15.6)	0.002	98	7.50 (2.42–23.3)	< 0.001
pT4	63	7.62 (2.19–26.5)	0.001	60	11.6 (3.01–44.5)	< 0.001
<i>Lymphatic metastasis (pN)</i>						
pN0	101	1.00		88	1.00	
pN1	54	1.01 (0.52–1.96)	0.97	50	1.21 (0.70–2.08)	0.49
pN2	43	2.60 (1.16–5.80)	0.02	39	3.53 (1.85–6.73)	< 0.001

Table 3 (continued)

	5-Year OS			5-Year DFS		
	<i>n</i>	HR (95 % CI)	<i>p</i> Value ^a	<i>n</i>	HR (95 % CI)	<i>p</i> Value ^a
pN3	69	2.94 (1.57–5.48)	0.001	64	4.47 (2.57–7.78)	<0.001
<i>Lymph nodes removed</i>						
<15	45	1.00		38	1.00	
≥15	218	0.97 (0.51–1.83)	0.93	200	1.23 (0.78–1.94)	0.38
<i>Positive proximal margin</i>						
No	242	1.00		217	1.00	
Yes	12	1.37 (0.59–3.20)	0.46	11	1.47 (0.72–2.97)	0.29
<i>Positive distal margin</i>						
No	231	1.00		209	1.00	
Yes	25	2.35 (0.97–5.67)	0.06	21	2.45 (1.15–5.22)	0.02
<i>Vascular embolism</i>						
No	131	1.00		120	1.00	
Yes	72	1.55 (0.93–2.58)	0.09	67	1.74 (1.01–3.00)	0.045
<i>Lymph node embolism</i>						
No	129	1.00		119	1.00	
Yes	74	1.48 (0.88–2.49)	0.14	69	1.41 (0.93–2.13)	0.10
<i>Nervous engagement</i>						
No	127	1.00		118	1.00	
Yes	89	1.67 (1.11–2.52)	0.01	82	1.67 (1.15–2.41)	0.007
<i>Adjuvant treatment</i>						
No	96	1.00		79	1.00	
Yes	159	0.82 (0.53–1.27)	0.37	156	1.19 (0.79–1.80)	0.40
<i>SRC amount (%)</i>						
<50	85	1.00		77	1.00	
>50	126	1.31 (0.78–2.23)	0.31	117	1.31 (0.84–2.02)	0.21
Unspecified	58	1.44 (0.67–3.09)	0.35	49	1.28 (0.66–2.47)	0.47

OS, overall survival; DFS, disease-free survival; HR, hazard ratio; CI, confidence interval; WHO, World Health Organization; SRC, signet ring cells

^aStatistical significance ($p < 0.05$) is highlighted in bold.

5-year survival rate than TG. It must be noted that patient-related factors such as age, WHO performance status, and medical complications had a significantly negative impact on overall survival, but not disease-free survival, and were more frequently represented among patients undergoing subtotal gastrectomy. Patient selection appears to play a crucial role because younger, healthier patients with similar tumor-node-metastasis (TNM) stages may achieve an even better outcome with subtotal gastrectomy.

The SG group had more patients with a positive (R1) surgical margin, which could explain the higher rate of local recurrence in this group. Moreover, at 5 years, an R1 surgical margin was associated with a worse DFS but not a worse OS. However, analysis of the proximal and distal margins did not show any significant difference between the two groups.

These same findings were observed in another recent American retrospective study. Resection did not alter the natural course of local advanced stage disease (stage

II or III). This study also had interesting OS results for patients who underwent SG versus TG for PCC gastric adenocarcinoma, with a better OS in the multivariable analysis for SG ($p < 0.001$) and no significant difference in TG in the propensity score analysis.²² However, this higher R1 resection rate remains problematic and may be a limitation to the choice of a subtotal gastric resection.

Our data support the importance of achieving a negative margin and highlight the increased risk of having a positive distal margin. Others have shown that signet ring cell gastric adenocarcinoma involving the distal stomach can be treated with a distal gastrectomy provided the intraoperative resection margins are negative.²³

Neoadjuvant and adjuvant chemotherapy did not seem to improve patients' survival according to our results. The chemotherapy protocol used was classically four courses of perioperative fluorouracil, leucovorin, oxaliplatin, and docetaxel (FLOT) according to the FLOT4 trial.²⁴ Existing studies already had reported poor chemosensitivity for

PCC gastric adenocarcinoma, so we were not surprised by these results. Piessen et al.⁸ already had brought to light the poor chemosensitivity of PCC gastric adenocarcinoma, showing no significant difference in survival between SG and TG at 5 years ($p = 0.29$). Despite older age, poorer general condition, and less chemotherapy, the patients who underwent SG did not have worse survival than those who underwent TG. These elements support our results.

Our study had several limitations. First, its observational retrospective nature led to missing data. Whereas our study defined gastric PCC as any amount of SRC present in pathology regardless of the percentage ($> 0\%$), the WHO classification requires a minimum SRC of 50% for the diagnosis of PCC. We also should acknowledge the lack of a standardized pathologic review specifically designed for SRC. Although an independent review of all our patients might have helped correct this bias, the logistical complexity stemming from the multicenter nature of our research made this endeavor quite challenging.

In 2017, the European International Gastric Cancer Association (IGCA)²⁵ consensus proposed an alternative categorization, with three types of gastric PCC based also on SRC amount: poorly cohesive not otherwise specified type (SRC $< 10\%$), poorly cohesive with an SRC component type (SRC 10–90%), and SRC type (SRC $> 90\%$). This new classification was proposed to compare the three types with each other and observe potential differences in prognosis and survival inversely proportional to the SRC amount,²⁶ although the presence of a low SRC rate remains a negative prognostic factor.

A multicenter European study has shown that the aggressiveness of tumors is inversely correlated with the quantity of SRC.⁷ Furthermore, our analysis showed that although the TG group had more instances of major PCC than the SG group, the presence of major PCC did not necessarily lead to worse survival outcomes for the patients with PCC, unlike the overall PCC patient population.

The aforementioned results support the conclusion that survival for patients with gastric PCC seems not proportional to SRC amount. Our results highlight a growing consensus that the prognostic significance of signet ring histopathology diminishes when considered in the context of TNM stage. Although the total gastrectomy group had a higher proportion of tumors with more than 50% SRC, this did not have a significant impact on OS or DFS. When adjusted for stage, SRC quantity did not remain a prognostic factor for OS, suggesting that the importance of signet ring histopathology is closely linked to TNM staging.²⁷

CONCLUSION

In conclusion, our research did not identify any significant disparities in the 5-year OS and DFS rates between the patients with distal gastric poorly cohesive cell adenocarcinoma who underwent SG and those who underwent TG. Moreover, the percentage of SRC present in the tumors analyzed did not seem to affect the survival outcomes in either group. These findings suggest the possibility of adopting a novel approach to patient care that takes into account postoperative morbidity and quality of life without compromising oncologic outcomes and overall survival.

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