Supplementary Table1 Demographic data

Baseline variable	P-SOX group (*n* = 28)	SOX group (*n* = 62)
Gender		
male	21 (75%)	44 (72.13%)
female	7 (25%)	17 (27.87%)
Age		
< 60	10 (35.71%)	24 (39.34%)
≥ 60	18 (64.29%)	37 (60.66%)
Median	57.75 ± 14.43	59.89 ± 10.41
BMI		
< 18.5	4 (14.29%)	10 (16.39%)
18.5-23	19 (67.86%)	38 (62.30%)
≥ 23	5 (17.86%)	13 (21.31%)
Tumor location		
Proximal	6 (21.43%)	15 (24.59%)
Distal	10 (35.71%)	34 (55.74%)
Total	12 (42.86%)	12 (19.67%)
cT category		
1	0	0
2	5 (17.86%)	14 (22.95%)
3	4 (14.29%)	5 (8.20%)
4	19 (67.86%)	42 (65.85%)
cN category		
0	3 (10.71%)	12 (19.67%)
1	3 (10.71%)	6 (9.84%)
2	8 (28.57%)	20 (32.79%)
3	14 (50%)	23 (37.70%)
cM category		

0	23 (82.14%)	54 (88.52%)
1	5 (17.86%)	7 (11.48%)
cTNM stage		
I	0	0
II	5 (17.86%)	19 (29.51%)
III	18 (64.29%)	35 (57.38%)
IV	5 (17.86%)	7 (11.48%)
yT category		
0	4 (14.29%)	3 (4.92%)
1	1 (3.57%)	3 (4.92%)
2	6 (21.43%)	8 (13.11%)
3	2 (7.14%)	5 (8.20%)
4	15 (53.57%)	42 (68.86%)
yN category		
0	11 (39.29%)	12 (19.67%)
1	5 (8.20%)	7 (11.48%)
2	5 (8.20%)	15 (24.59%)
3	7 (25%)	27 (44.26%)
yM category		
0	26 (92.86%)	59 (96.72%)
1	2 (7.14%)	2 (3.28%)
yTNM stage		
pCR	4 (14.29%)	3 (4.92%)
I	4 (14.29%)	3 (4.92%)
II	4 (14.29%)	15 (24.60%)
III	14 (50%)	38 (62.30%)
IV	2 (7.14%)	2 (3.28%)
TRG		

0	4 (14.29%)	3 (4.92%)
1	8 (28.57%)	8 (13.11%)
2	13 (46.43%)	30 (49.18%)
3	3 (10.71%)	20 (32.79%)
Neoadjuvant cycle		
≤ 3	20 (71.43%)	45 (73.77%)
> 3	8 (28.57%)	16 (26.23%)
Operation mode		
open surgery	25 (89.29%)	56 (91.80%)
Laparoscopy	3 (10.71%)	5 (8.20%)
Adverse chemotherapy reaction		
Yes	6 (21.43%)	9 (14.75%)
No	22 (78.57%)	52 (85.25%)
Differentiation		
Well and middle	5 (8.20%)	44 (72.13%)
Poor and underdifferentiated	18 (64.29%)	6 (9.84%)
Unknown	5 (8.20%)	11 (18.03%)
AFP* (ng/mL)		
≤ 8.1	20 (71.43%)	43 (70.49%)
> 8.1	2 (7.14%)	8 (13.11%)
Unknown	6 (21.43%)	10 (16.39%)
CEA*(ng/mL)		
≤ 5	16 (57.14%)	35 (57.38%)
> 5	6 (21.43%)	16 (26.23%)
Unknown	6 (21.43%)	10 (16.39%)
CA199*(U/mL)		
≤ 37	16 (57.14%)	36 (59.02%)

> 37	6 (21.43%)	15 (24.59%)
Unknown	6 (21.43%)	10 (16.39%)
CA724*(U/mL)		
≤ 6.9	12 (42.86%)	32 (52.46%)
> 6.9	10 (35.71%)	19 (31.15%)
Unknown	6 (21.43%)	10 (16.39%)
CA125*(U/mL)		
≤ 35	13 (46.43%)	42 (68.85%)
> 35	9 (32.14%)	9 (14.75%)
Unknown	6 (21.43%)	10 (16.39%)
CA50*(U/mL)		
≤ 25	18 (64.29%)	42 (68.85%)
> 25	4 (14.29%)	9 (14.75%)
Unknown	6 (21.43%)	10 (16.39%)
Leukemia*		
≤ 3.5	1 (3.57%)	3 (4.92%)
3.5-9.5	19 (67.86%)	43 (70.49%)
> 9.5	3 (10.71%)	5 (8.20%)
Unknown	5 (8.20%)	10 (16.39%)
HGB*		
≤ 130	18 (64.29%)	36 (59.02%)
130-175	5 (8.20%)	15 (24.59%)
> 175	0	0
Unknown	5 (8.20%)	10 (16.39%)
Platelets*		
≤ 125	2 (7.14%)	2 (3.28%)
125-350	16 (57.14%)	39 (63.93%)
> 350	5 (8.20%)	10 (16.39%)

Unknown	5 (8.20%)	10 (16.39%)
Neutrophils*		
≤ 1.8	1 (3.57%)	4 (6.56%)
1.8-6.3	18 (64.29%)	41 (67.21%)
> 6.3	4 (14.29%)	6 (9.84%)
Unknown	5 (8.20%)	10 (16.39%)
AFP# (ng/mL)		
≤ 8.1	20 (71.43%)	46 (75.41%)
> 8.1	4 (7.14%)	11 (18.03%)
Unknown	4 (21.43%)	4 (6.56%)
CEA#(ng/mL)		
≤ 5	22 (57.14%)	43 (70.49%)
> 5	2 (21.43%)	14 (22.95%)
Unknown	4 (21.43%)	4 (6.56%)
CA199#(U/mL)		
≤ 37	22 (57.14%)	49 (80.33%)
> 37	2 (21.43%)	8 (13.11%)
Unknown	4 (21.43%)	4 (6.56%)
CA724#(U/mL)		
≤ 6.9	18 (42.86%)	32 (52.46%)
> 6.9	6 (35.71%)	23 (37.70%)
Unknown	4 (21.43%)	6 (9.84%)
CA125#(U/mL)		
≤ 35	23 (46.43%)	54 (88.52%)
> 35	1 (32.14%)	3 (4.92%)
Unknown	4 (21.43%)	4 (6.56%)
CA50#(U/mL)		
≤ 25	22 (64.29%)	47 (77.05%)

> 25	2 (14.29%)	8 (13.11%)
Unknown	4 (21.43%)	6 (9.84%)
Leukemia#		
≤ 3.5	7 (25%)	12 (19.67%)
3.5-9.5	16 (57.14%)	43 (70.49%)
> 9.5	3 (10.71%)	4 (6.56%)
Unknown	2 (7.14%)	2 (3.28%)
HGB#		
≤ 130	23 (82.14%)	48 (78.69%)
130-175	3 (10.71%)	11 (18.03%)
> 175	0	0
Unknown	2 (7.14%)	2 (3.28%)
Platelets#		
≤ 125	7 (25%0	21 (34.43%)
125-350	19 (67.86%)	35 (57.38%)
> 350	0	3 (4.92%)
Unknown	2 (7.14%)	2 (3.28%)
Neutrophils#		
≤ 1.8	6 (21.43%)	13 (21.31%)
1.8-6.3	17 (60.71%)	42 (68.85%)
> 6.3	3 (10.71%)	4 (6.56%)
Unknown	2 (7.14%)	2 (3.28%)

Supplementary Table 2 Univariable and multivariable analyses of clinicopathologic variables correlation to TRG

Baseline variable	TRG0-1 (n = 23)	TRG2-3 (n = 66)	P value	RR	95%CI	P* value
Gender			0.970			
Male	16	17				
Female	7	49				
Age			0.901			
< 60	9	25				
≥ 60	14	41				
BMI			0.678			
< 18.5	4	10				
18.5-23	12	45				
> 23	7	11				
Neoadjuvant cycle			0.606			
≤ 3	17	48				
≥ 4	6	16				
PD-1			**0.009***			
No	11	50		Ref		
Yes	12	16		0.421	0.090-0.740	0.012
Borrmann			0.667			
Big III	11	33				
IV	12	33				
Pathological type (adenocarcinoma or not)			**0.097***			

No	4	4		Ref		
Yes	19	62		2.131	0.882-23.121	0.070
Tumor location			0.863			
Upper	5	16				
Middle	13	31				
Lower	5	18				
Differentiation			0.345			
Well and middle	4	7				
Poor and underdifferentiated	19	59				
Vascular tumor thrombus			0.245			
No	12	27				
Yes	11	39				
nerve invasion			**0.096***			
No	12	23		Ref		
Yes	11	43		1.683	0.910-7.684	0.074

* Statistically significant ($P < 0.1$).

Supplementary Table 3 Univariable and multivariable analyses of clinicopathologic variables correlation to ypN0

Baseline Variable	ypN0-1 (n = 23)	ypN2-3 (n = 66)	P value	RR	95%CI	P^* value
Gender			0.912			
male	17	18				
female	6	48				
Age			0.375			
< 60	7	27				
≥ 60	16	39				
BMI			0.223			
< 18.5	6	8				
18.5-23	13	44				
> 23	4	14				
Neoadjuvant cycle			0.132			
≤ 3	14	51				
≥ 4	9	15				
PD-1			**0.054***			
No	12	49		Ref		
Yes	11	17		0.501	0.041-1.193	0.074
Borrmann			0.107			
Big III	8	36				
IV	15	30				
Pathological type (adenocarcinoma or not)			0.435			
No	3	5				

Yes	20	61				
Tumor location			0.602			
Upper	7	1				
Middle	10	35				
Lower	6	17				
Differentiation			0.908			
Well and middle	3	8				
Poor and underdifferentiated	20	58				
Vascular tumor thrombus			**0.019***			
No	15	24		Ref		
Yes	8	42		2.452	0.731-8.460	0.145
Nerve invasion			**0.054***			
No	13	22		Ref		
Yes	10	44		1.560	0.457-5.162	0.487

*Statistically significant ($P < 0.1$).