

Supplementary Table 1 Clinicopathological characteristics of all gastric cancer patients ($n = 287$)

Variables	$n = 287$	%
Age (years)		
Mean \pm SD	61.5 \pm 12.07	
Min-max	26-87	
Sex		
Female	119	41.5
Male	168	58.5
Charlson-Deyo comorbidity index		
< 5	168	58.5
\geq 5	119	41.5
ASA Classification		
I/II	256	89.2
III/IV	31	10.8
Type of resection		
Subtotal	174	60.6
Total	113	39.4
Tumor location		
Upper	34	11.8
Middle	52	18.1
Lower	191	66.6
Entire	10	3.5
Macroscopic aspect type		
I	28	9.8
II	41	14.3
III	139	48.4
IV	55	19.2
V	24	8.4
Histological differentiation		

Well/moderately differentiated	127	44.3
Poorly differentiated	160	55.7
Láuren´s histological type		
Intestinal	136	47.4
Diffuse	109	38
Mixed	29	10.1
Undetermined	13	4.5
Lymphatic invasion		
Absent	143	49.8
Present	144	50.2
Venous Invasion		
Absent	193	67.2
Present	94	32.8
Perineural invasion		
Absent	149	51.9
Present	138	48.1
Peritumoral inflammatory infiltrate		
Absent/mild	191	66.6
Moderate/intense	96	33.4
Tumor invasion (pT)		
pT1	78	27.2
pT2	37	12.9
pT3	88	30.7
pT4	84	29.3
Lymph node metastasis (pN)		
pN0	125	43.6
pN1	37	12.9
pN2	58	20.2
pN3	67	23.3
pTNM		

I	90	31.4
II	67	23.3
III	125	43.6
IV	5	1.7
Surgical Complications-Clavien-Dindo		
Grade 0-II	245	85.4
Grade III-IV	30	10.5
Grade V	12	4.2
Neoadjuvant therapy		
No	129	44.9
Yes	158	55.1
Adjuvant therapy		
No	95	33.1
Yes	192	66.9

P values in bold are statistically significant. SD: Standard deviation; ASA: American Society of Anesthesiologists.

Supplementary Table 2 Clinicopathological characteristics of gastric cancer patients according to the Asian Cancer Research Group classification

Variables	MSI	MSS/EMT	MSS/p53 aberrant	MSS/P53 normal	P value
	<i>n</i> = 60 (21%)	<i>n</i> = 23 (8%)	<i>n</i> = 94 (32.8%)	<i>n</i> = 110 (38.3%)	
Age (years)					0.004
Mean (\pm SD)	65.8 (12.5)	59.8 (12.8)	62.0 (11.0)	58.9 (12.0)	
Sex					0.310
Male	31 (51.7)	15 (65.2)	61 (64.9)	61 (55.5)	
Female	29 (48.3)	8 (34.8)	33 (35.1)	49 (44.5)	
ASA Classification					0.098
I/II	52 (86.7)	21 (91.3)	79 (84)	104 (94.5)	
III/IV	8 (13.3)	2 (8.7)	15 (16)	6 (5.5)	
Charlson–Deyo comorbidity index					0.002
< 5	24 (40)	16 (69.6)	52 (55.3)	76 (69.1)	
\geq 5	36 (60)	7 (30.4)	42 (44.7)	34 (30.9)	
Tumor site					0.028
Upper	6 (10)	2 (8.7)	12 (12.8)	14 (12.7)	
Middle	9 (15)	4 (17.4)	12 (12.8)	27 (24.5)	
Lower	45 (75)	14 (60.9)	69 (73.4)	63 (57.3)	
Entire	0 (0)	3 (13)	1 (1.1)	6 (5.5)	
Type of resection					0.011
Subtotal	46 (76.7)	11 (47.8)	59 (62.8)	58 (52.7)	
Total	14 (23.3)	12 (52.2)	35 (37.2)	52 (47.3)	
Macroscopic Type					0.333
I /II	20 (35.1)	5 (23.8)	22 (26.2)	22 (21.8)	
III/IV	37 (64.9)	16 (76.2)	62 (73.8)	79 (78.2)	
Tumor size					0.204
Mean (\pm SD)	5.5 (3.2)	5.1 (2.8)	4.4 (2.8)	4.9 (3.5)	
Histologic grade differentiation					< 0.001

Well/moderate	28 (46.7)	3 (13)	61 (64.9)	35 (31.8)	
Poorly	32 (53.3)	20 (87)	33 (35.1)	75 (68.2)	
Lauren type					< 0.001
Intestinal	34 (56.7)	4 (17.4)	64 (68.1)	34 (30.9)	
Diffuse/mixed	23 (38.3)	18 (78.3)	28 (29.8)	69 (62.7)	
Undetermined	3 (5)	1 (4.3)	2 (2.1)	7 (6.4)	
Tumor invasion					0.227
pT1/pT2	29 (48.3)	7 (30.4)	32 (34)	47 (42.7)	
pT3/pT4	31 (51.7)	16 (69.6)	62 (66)	63 (57.3)	
pN status					0.047
pN negative	33 (55)	6 (26.1)	35 (37.2)	51 (46.4)	
pN positive	27 (45)	17 (73.9)	59 (62.8)	59 (53.6)	
Lymphatic invasion					0.009
Absent	23 (38.3)	9 (39.1)	42 (44.7)	68 (61.8)	
Presente	37 (61.7)	14 (60.9)	52 (53.3)	42 (38.2)	
Venous Invasion					0.009
Absent	36 (60)	13 (56.5)	57 (60.6)	87 (79.1)	
Presente	24 (40)	10 (43.5)	37 (39.4)	23 (20.9)	
Perineural invasion					0.217
Absent	36 (60)	8 (34.8)	47 (50)	58 (52.7)	
Presente	24 (40)	15 (65.2)	47 (50)	52 (47.3)	
Peritumoral inflammatory infiltrate					0.342
Absent/weak	36 (60)	18 (78.3)	66 (70.2)	71 (64.5)	
moderate/intense	24 (40)	5 (21.7)	28 (29.8)	39 (35.5)	
pTNM stage					0.038
I/II	41 (68.3)	8 (34.8)	49 (52.1)	60 (54.5)	
III/IV	19 (31.7)	15 (65.2)	45 (47.9)	50 (45.5)	

P values in bold are statistically significant. SD: Standard deviation; ASA: American Society of Anesthesiologists; MSI: Microsatellite instability; MSS: Microsatellite stable; EMT: Epithelial to mesenchymal transition.

Supplementary Table 3 Univariate and multivariate analysis for disease-free survival and overall survival-including Asian Cancer Research Group subgroups

Variables	HR	95% CI	P value	HR	95%CI	P value
Disease-free survival	Univariate			Multivariate		
Male (<i>vs</i> female)	0.93	0.59-1.46	0.745	—	—	—
Age > 65 (<i>vs</i> < 65 years)	1.52	0.95-2.45	0.082	—	—	—
Charlson < 5 (<i>vs</i> ≥ 5)	0.65	0.40-1.05	0.076	—	—	—
Total Gastrectomy (<i>vs</i> subtotal)	2.33	1.49-3.62	< 0.001	1.81	1.15-2.87	0.011
Diffuse/mixed (<i>vs</i> others)	1.80	1.15-2.83	0.011	1.51	0.93-2.44	0.062
pT3/pT4 status (<i>vs</i> pT1/pT2)	10.87	4.72-24.98	< 0.001	5.75	2.40-13.81	< 0.001
pN+ (<i>vs</i> pN0)	7.56	3.77-15.15	< 0.001	3.09	1.48-6.45	0.003
CMT (<i>vs</i> none)	1.28	0.82-1.98	0.280	—	—	—
ACRG						
EMT (E-cadherin)	1					
MSI	0.22	0.10-0.49	< 0.001	0.35	0.15-0.81	0.014
MSS/p53 normal	0.33	0.16-0.64	0.001	0.33	0.17-0.67	0.002
MSS/p53 aberrant	0.47	0.24-0.92	0.027	0.58	0.29-1.16	0.123
Overall survival	Univariate			Multivariate		
Male (<i>vs</i> female)	1.08	0.72-1.63	0.708	—	—	—
Age > 65 (<i>vs</i> < 65 years)	1.16	0.77-1.74	0.483	—	—	—
Charlson < 5 (<i>vs</i> ≥ 5)	1.16	0.84-1.88	0.273	—	—	—
Total Gastrectomy (<i>vs</i> subtotal)	1.90	1.27-2.84	0.002	1.60	1.06-2.43	0.026
Diffuse/mixed (<i>vs</i> others)	1.56	1.04-2.34	0.032	1.40	0.91-2.17	0.128
pT3/pT4 status (<i>vs</i> pT1/pT2)	4.50	2.59-7.82	< 0.001	3.09	1.68-5.67	< 0.001
pN+ (<i>vs</i> pN0)	3.29	2.02-5.35	< 0.001	1.66	0.96-2.85	0.068
CMT (<i>vs</i> none)	0.96	0.64-1.44	0.841	—	—	—
ACRG						
EMT (E-cadherin)	1					
MSI	0.33	0.15-0.71	0.005	0.46	0.21-1.02	0.056

MSS/p53 normal	0.43	0.22-0.85	0.016	0.46	0.23-0.92	0.029
MSS/p53 aberrant	0.61	0.31-1.20	0.153	0.73	0.36-1.46	0.371

P values in bold are statistically significant. CI: Confidence interval; HR: Hazard ratio; CMT: Chemotherapy.