

Table S1 Detailed Information on the NGS detection results of *HER2* amplification-positive gastric cancer samples and their FISH Results.

Patient ID	<i>HER2</i> copies (NGS)	<i>HER2</i> status (FISH)
T001	34.5	Positive
T002	15	Positive
T003	12.5	Positive
T004	12.5	Positive
T005	10	Positive
T006	9.5	Positive
T007	6	Positive
T008	6	Positive
T009	5.5	Positive
T010	5.5	Positive
T011	5	Positive
T012	4	Positive
T013	4	Positive
T014	3.5	Positive
T015	3.5	Positive
T016	3.5	Positive
T017	3.5	Positive
T018	3.5	Positive
T019	3.5	Positive
T020	3.5	Positive
T021	3.5	Positive
T022	3.5	Positive
T023	3.5	Positive
T024	3.5	Positive
T025	3.5	Positive
T026	3.5	Positive
T027	3.5	Positive
T028	3.5	Positive
T029	3	Positive
T030	2.5	Positive
T031	2.5	Positive
T032	2.5	Positive

Table S2. The gene list of AllNGS-Panel 639™

Gene name														
ABCA6	ABCB1	ABCC11	ABCC2	ABCC4	ABCF1	ABCG2	ABL1	ABL2	ACTR3B	ACVR1B	ADAMTS10	ADNP	AGAP9	AHNAK
AKAP7	AKRIC2	AKT1	AKT2	AKT3	ALK	AMER1	ANK2	ANKRD36	ANO10	APC	AR	ARAF	ARFRP1	ARHGAP5
ARID1A	ARID1B	ARID2	ART5	ASPM	ASXL1	ATM	ATR	ATRX	AURKA	AURKB	AXIN1	AXL	BAP1	BARD1
BAX	BCL2	BCL2L1	BCL2L11	BCL2L2	BCL6	BCL6B	BCOR	BCORL1	BCR	BEND5	BLM	BMPR2	BRAF	BRCA1
BRCA2	BRD3	BRD4	BRIP1	BTG1	BTK	C11orf30	C1orf144	C21orf58	C22orf31	C8orf34	CARD11	CASP5	CBFB	CBL
CBR3	CBWD6	CCDC144NL	CCKBR	CCND1	CCND2	CCND3	CCNE1	CCR5	CD274	CD3G	CD79A	CD79B	CDA	CDC27
CDC42EP1	CDC7	CDC73	CDCP2	CDH1	CDH5	CDK12	CDK4	CDK6	CDK8	CDKN1A	CDKN1B	CDKN2A	CDKN2B	CDKN2C
CEBPA	CENPH	CEP162	CEP164	CHD2	CHD4	CHEK1	CHEK2	CIC	CLASP1	CLDN16	CLIP1	CLOCK	CNDP1	COBLL1
COL5A3	CREBBP	CRKL	CRLF2	CROCC	CSF1R	CSMD3	CTCF	CTNNA1	CTNNB1	CUL3	CUZD1	CYB5R4	CYLD	CYP19A1
CYP1B1	CYP21A2	CYP2C19	CYP2C8	CYP2D6	CYP3A4	CYP3A5	CYP4B1	DAXX	DCP1B	DDHD1	DDR2	DDX11	DDX23	DEFB126
DHFR	DHX8	DICER1	DIEXF	DLEC1	DNMT3A	DOT1L	DPYD	DYNC2H1	EBPL	EGFR	EHBP1	ELFN1	EP300	EPCAM
EPHA3	EPHA5	EPHA7	EPHB1	ERBB2	ERBB3	ERBB4	ERCC1	ERCC2	ERG	ERRFI1	ESR1	ESR2	ESRRA	EZH2
F2RL2	FAM174B	FAM186A	FAM46C	FAM71E2	FANCA	FANCC	FANCD2	FANCE	FANCF	FANCG	FANCL	FAS	FAT1	FBXW7
FCAMR	FCGBP	FCGR3A	FCRLA	FGF10	FGF14	FGF19	FGF23	FGF3	FGF4	FGF6	FGFR1	FGFR2	FGFR3	FGFR4
FH	FKBP9	FLCN	FLT1	FLT3	FLT4	FMN2	FOPNL	FOXL2	FOXP1	FRS2	FUBP1	GABRA6	GATA1	GATA2
GATA3	GATA4	GATA6	GCNT2	GGH	GGT1	GID4	GLI1	GLTSCR1	GNA11	GNA13	GNAQ	GNAS	GNLY	GOLGA6L4
GOLGA6L6	GOT1L1	GPR124	GRIK2	GRIN2A	GRM3	GSK3B	GSTM5	GSTO1	GSTP1	H3F3A	HAVCR1	HGF	HIF1A	HIST1H3B
HLA	HMGXB4	HNF1A	HNRNPL	HRAS	HSD3B1	HSP90AA1	HSPA8	HTR1E	IDH1	IDH2	IFI27	IFITM3	IGF1R	IGF2
IKBKE	IKZF1	IL7R	INHBA	INPP4B	IRF2	IRF4	IRS2	ISX	ITPA	JAK1	JAK2	JAK3	JPH4	JUN
KANK3	KAT6A	KAT6B	KCNB2	KCNJ5	KDM5A	KDM5C	KDM6A	KDR	KEAP1	KEL	KIAA0355	KIAA1024	KIAA1211	KIF25
KIF6	KIT	KLF4	KLHL6	KMT2A	KMT2C	KMT2D	KPNA2	KRAS	KRT15	KRT4	KRTAP10	KRTAP4	KRTAP5	LCE1F
LCE4A	LGALS9B	LIG1	LIMCH1	LMAN1	LMO1	LOC105374608	LOC107986229	LOR	LRP1B	LRP2	LTA	LURAP1L	LYN	LZTR1
M6PR	MAGI2	MAN1B1	MAP2K1	MAP2K2	MAP2K4	MAP3K1	MCCC2	MCHR2	MCL1	MCMDC2	MDM2	MDM4	MED12	MED13
MEF2B	MEN1	MET	MITF	MLH1	MLLT3	MPL	MRE11A	MSH2	MSH3	MSH6	MTHFR	MTOR	MUC2	MUC4
MUC6	MUTYH	MVK	MYB	MYC	MYCL	MYCN	MYD88	MYL1	MYOM1	NBEA	NBN	NCOA3	NCOA6	NCOR2
NEFH	NF1	NF2	NFE2L2	NFKB1A	NFXL1	NIPBL	NKX2-1	NOTCH1	NOTCH2	NOTCH3	NPM1	NQO1	NR1H2	NRAS
NRP2	NSD1	NTRK1	NTRK2	NTRK3	NUP155	NUP93	OPRK1	OR11H4	OR2B11	OR52D1	OR5K4	OR6C76	OR8I2	ORAI1
PAK3	PALB2	PARK2	PAX5	PBRM1	PCDH12	PDCD1LG2	PDE11A	PDE7A	PDGFRA	PDGFRB	PDK1	PHGR1	PIK3C2B	PIK3C3
PIK3CA	PIK3CB	PIK3CG	PIK3R1	PIK3R2	PIP4K2A	PKDIL2	PLCG2	PMS2	POLD1	POLE	POLI	POTEC	PPP2R1A	PPP6C
PRDM1	PREX2	PRKAR1A	PRKCH	PRKCI	PRKDC	PRKRA	PROSER3	PRPF19	PRSS8	PRX	PTCH1	PTEN	PTGS2	PTPN11
QKI	RAC1	RAD50	RAD51	RAF1	RALY	RANBP2	RARA	RB1	RBM10	RBM27	RBM5	RET	RETNLB	RFX3
RGPD3	RGS12	RHPN2	RIC8A	RICTOR	RIN3	RNF145	RNF213	RNF43	ROCK1	ROS1	RP1L1	RPL8	RPS12	RPS9
RPTN	RPTOR	RRM1	RSBN1L	RUNX1	RUNX1T1	SCA1	SCYL2	SDHA	SDHB	SDHC	SDHD	SEC31A	SELE	SELPLG
SEMA3C	SEMA5B	SEPP1	SERPINA10	SETBP1	SETD2	SF3B1	SH3GL1	SI	SIK2	SKIDA1	SLAMF1	SLC11A2	SLC19A1	SLC22A2
SLC28A3	SLC29A1	SLC2A5	SLC35F5	SLC35G2	SLC36A2	SLC3A2	SLC6A18	SLCO1B3	SLIT2	SLK	SLX4	SMAD2	SMAD3	SMAD4
SMARCA4	SMARCB1	SMO	SNCAIP	SNX13	SOCS1	SOD2	SOX10	SOX11	SOX2	SOX9	SPATA3	SPEN	SPOP	SPTA1
SRBD1	SRC	SRD5A2	SRGAP3	SRPR	SRSF2	SSTR4	ST18	STAG2	STAT3	STAT4	STK11	STMN1	SUFU	SULT1A1
SVIL	SYK	TAF1	TAF1B	TBC1D23	TBK1	TBX3	TCERG1	TEAD2	TERC	TERT	TET2	TFAM	TGFBR2	THAP2
THAP3	THAP5	TMBIM4	TMEM106B	TMEM37	TMEM60	TMEM97	TNFAIP3	TNFAIP6	TNFRSF14	TOMM70	TOP1	TOP2A	TP53	TPMT
TRIM48	TRIM51	TRMT10C	TRRAP	TSC1	TSC2	TSHR	TTK	TTLL10	TVP23A	TXNDC2	TYMS	U2AF1	UBA7	UBE3C
UBE4A	UBR5	UGT1A1	UHRF1	ULK4	UMPS	UPF3A	USP35	USP36	VEGFA	VEZT	VHL	VIT	WDR37	WDR66
WDTC1	WISP3	WT1	XPC	XPO1	XRCC1	XRCC2	XYLT2	ZBTB2	ZFP37	ZFR2	ZNF217	ZNF365	ZNF429	ZNF462
ZNF479	ZNF516	ZNF527	ZNF605	ZNF703	ZNF717	ZNF776	ZNF814	ZNF844						

Table S3. Summary of targeted sequencing data for 390 FFPE samples from gastric cancer patients (Reference Genome: Hg19).

Sample ID	Total number of sequenced read	Total number of uniquely mapped nonduplicate reads^{a, b}	Total number of covered targeted base	Median coverage (and range) per targeted base	Percentage of targeted bases with coverage ≥ 250
P001	56231966	5771533	46084406	66.632 (13.245-96.5941)	36.0454
P002	33642550	8702361	27480785	70.25545 (25.6954-97.4834)	43.1599
P003	35006058	8481287	29009707	72.12865 (27.3794-97.5591)	45.5818
P004	36549908	9840706	30411009	74.1722 (29.404-98.0889)	47.3794
P005	47677848	8317564	37896025	69.26205 (25.8846-96.8969)	43.5194
P006	50115574	11003046	36508927	74.9101 (25.8846-98.5052)	46.8117
P007	29718690	8930634	24154718	67.7956 (25.7332-96.878)	42.5733
P008	47361650	5056906	36431045	63.3775 (7.43614-96.2914)	25.9224
P009	40178430	5819782	31966227	67.5686 (16.632-97.0293)	36.4428
P010	39861252	8315614	31540855	71.0028 (25.3548-97.7483)	43.5194
P011	40702230	7274486	31741100	68.6566 (20.8325-97.9565)	38.7133
P012	42719086	8147564	34493549	72.63955 (26.6225-97.7105)	46.036
P013	45326756	7555859	35270356	67.89025 (18.0889-97.3321)	36.0076
P014	52121714	9250321	41170268	70.23655 (24.9007-96.8023)	43.614
P015	32662864	4515110	25112668	63.62345 (8.07947-98.5241)	23.9167
P016	44861102	8875587	35399671	70.21755 (25.2034-96.8401)	44.4844
P017	35364520	12627948	28475220	79.2242 (38.562-98.5809)	57.8619
P018	35244078	7543654	28179829	70.965 (24.2763-97.4267)	42.9518

P019	54646346	15396578	43267601	80.5298 (43.7465-98.1835)	61.5516
P020	51113328	15071223	41285876	79.3472 (42.7058-97.9186)	60.3217
P021	43008582	14366862	33980300	82.7909 (47.8146-98.4295)	64.9196
P022	38696650	13186082	31000869	81.17315 (42.5733-98.4106)	61.2867
P023	28241262	8277533	22526032	70.7285 (26.4901-97.0672)	44.8817
P024	35711462	9395927	28368431	74.46545 (30.6717-97.3888)	49.9716
P025	28950340	10234218	23134728	74.11545 (31.4664-97.597)	50.4447
P026	35603642	10865260	28327740	74.20055 (33.9262-97.5213)	52.4503
P027	45542950	12374630	36528093	79.527 (40.9272-98.0132)	59.6216
P028	34100916	12059057	27130880	78.0227 (38.2403-97.9754)	57.1239
P029	39223042	9370653	30658807	71.39075 (28.4011-96.7833)	46.6225
P030	36150606	10649647	28861025	71.9584 (34.1722-96.1968)	52.2611
P031	35815454	7525822	28010045	71.93 (24.7871-97.0293)	44.8817
P032	23168078	6199483	18371431	69.16745 (20.5676-96.8023)	39.6973
P033	37954150	12931277	30735951	79.36615 (38.0322-98.2025)	57.2753
P034	29092276	6419190	23152553	69.4607 (21.2488-97.2942)	40.5676
P035	34644628	8192662	27732666	73.50995 (28.4201-97.9943)	48.3254
P036	33536292	11990200	27135151	77.105 (36.1779-97.9565)	54.8344
P037	37136652	8753079	29619713	72.053 (28.3822-97.2375)	47.2658
P038	40767692	12200874	32307749	76.98205 (36.7266-97.824)	55.9508
P039	14274658	5684132	11352263	58.86475 (16.7833-95.6102)	29.9338
P040	32217960	5183073	24822602	65.2129 (12.5071-96.632)	31.5799

P041	33642672	9906137	26342326	70.61495 (27.701-97.3699)	45.2791
P042	35936818	6923521	28296422	73.67075 (21.7408-97.843)	44.5979
P043	39852554	10773683	32037176	77.8335 (34.7588-98.07)	54.9669
P044	37080188	10702991	29244828	73.0842 (31.9016-97.7105)	50.2744
P045	39033036	9927509	31208582	75.21285 (31.3529-97.824)	50.2176
P046	42680752	12848719	34107116	78.80795 (39.5648-97.9376)	58.7701
P047	49391326	12575026	39769434	80.7001 (43.6518-98.2403)	62.1949
P048	37777668	7602985	29348857	69.40395 (24.7871-96.5184)	43.6329
P049	35164714	11286623	27889473	71.30555 (31.1258-96.5374)	48.685
P050	33364802	11122106	26978658	75.2034 (32.5639-97.6916)	50.8609
P051	31342858	11422781	25293464	76.1968 (33.0747-97.8619)	51.088
P052	35179868	12138762	28799992	79.754 (37.9943-98.4674)	57.1996
P053	41888260	10186882	33353645	75.84675 (32.8477-97.8808)	51.8448
P054	40123746	13840161	32006891	74.333 (35.9886-97.5024)	53.3396
P055	42041166	15686264	32715767	78.2119 (37.9565-98.4674)	56.2346
P056	40433768	7544376	31427089	74.3898 (23.86-98.0889)	44.0492
P057	32318570	10710006	25722403	72.85715 (30.0284-98.0889)	47.0766
P058	35577602	10179454	27559939	71.3245 (29.7446-97.1807)	46.8685
P059	27002038	9858064	21102066	68.23085 (25.0899-97.0482)	40.473
P060	22544734	9459646	17978487	66.9631 (22.5166-97.4078)	37.6916
P061	34365870	14046225	27450150	78.3917 (35.1561-98.2971)	53.6235
P062	39056508	12166353	31031304	75.8751 (31.2772-98.1457)	49.65

P063	44191436	11058040	34118884	73.3302 (29.2337-97.9376)	47.0956
P064	48958276	11037003	38962696	81.0691 (38.7323-98.4863)	59.4513
P065	42387006	5468975	32710367	74.1438 (10.2365-98.9215)	33.0937
P066	46514216	7957872	35344174	69.3945 (21.2677-97.6348)	39.7919
P067	32077896	6837578	25372562	78.2687 (22.4409-98.9782)	46.6414
P068	52561212	21487122	42648881	82.63955 (53.3396-98.7323)	65.9413
P069	42434858	18562695	34640266	83.3491 (46.5468-98.789)	63.614
P070	36821044	16502028	29788510	80.5582 (43.4248-98.4863)	60.6812
P071	38649166	12895034	31374244	78.0511 (36.7833-98.4863)	55.7805
P072	36273542	19311219	29908343	83.4437 (46.6225-99.0539)	63.6518
P073	41530542	19477533	33405507	81.3718 (47.0766-98.789)	62.9518
P074	20550062	12882929	16645106	77.28475 (33.7559-98.5998)	51.9962
P075	45680822	18813653	37231189	85.26965 (47.9092-99.1107)	65.2034
P076	37264330	16156430	30168348	80.59605 (42.3273-98.4295)	60.0568
P077	41566470	16365838	33261326	79.158 (41.3245-98.3349)	59.4702
P078	36273560	15938302	29726179	80.60545 (41.2867-98.6377)	58.9026
P079	32483002	16652366	26089037	82.1949 (42.6301-99.0161)	60.719
P080	38926838	13576338	30858416	73.8789 (37.2564-97.3132)	54.2668
P081	34777000	18729149	28102910	81.6367 (45.3169-98.7133)	62.157
P082	33323744	12086850	27258041	81.11635 (32.3179-99.1864)	52.2233
P083	24715764	11506671	19031578	73.86 (27.228-98.6187)	44.5033
P084	29158150	12191027	21988291	75.4399 (28.5525-99.0539)	46.5847

P085	28734450	12880227	21383394	74.9669 (27.7767-98.9972)	45.5818
P086	50757846	17737574	38973129	85.24125 (43.3869-99.3756)	63.4626
P087	33572872	16202049	26647714	82.0814 (37.6348-99.0728)	57.1996
P088	37637254	14531192	29367925	78.73225 (35.8373-98.7323)	54.4182
P089	33774382	13406308	26337234	78.65655 (34.3803-98.7323)	53.245
P090	38884324	17244419	31016623	81.0596 (41.457-98.789)	59.4134
P091	51171182	17795917	40299870	84.3046 (43.2545-99.3377)	62.3084
P092	43541968	17708100	34799883	82.7436 (40.4541-99.1485)	59.6594
P093	41332156	13984562	31851659	76.4711 (35.5345-98.1835)	53.8694
P094	41728170	16235960	32885040	79.87705 (39.8108-98.6566)	57.9186
P095	37124144	15814020	29176159	77.81455 (37.2942-98.543)	55.6291
P096	36500714	15790611	29009842	81.7502 (36.7833-99.1296)	56.2535
P097	34112030	14449381	26122344	78.5525 (34.1911-98.5809)	52.8288
P098	32397670	4132116	21848773	54.0492 (4.01135-98.7133)	13.0369
P099	42552064	18020215	33756240	84.9101 (44.7114-99.3377)	64.1627
P100	46175540	17542638	36191287	82.7058 (40.8515-99.1485)	59.6783
P101	29270470	10311187	22799812	75.5345 (25.5629-99.0918)	43.9546
P102	42688772	20402638	31299347	82.18545 (40.0946-99.0728)	58.8458
P103	44430600	16338047	34923084	83.1031 (40.4163-99.0728)	59.9622
P104	43518130	10186852	32845436	78.2403 (29.3661-98.8647)	50.2933
P105	30056660	13627580	23915374	78.2403 (30.5582-99.2431)	48.9877
P106	46864644	18750554	37816226	81.68405 (42.7058-98.9404)	60.8325

P107	32638342	9349676	25326368	77.0388 (24.2384-99.2999)	43.7654
P108	38438576	13660995	29842670	78.37275 (32.9044-98.7701)	51.7881
P109	37315770	18268486	29876547	82.1003 (40.0568-99.1107)	58.9026
P110	37354238	17117465	30677241	84.0303 (43.7843-99.2053)	62.1949
P111	35890340	17217937	29297373	85.0142 (43.7465-99.1296)	63.0842
P112	41039612	18966150	33494769	85.175 (47.1334-99.1485)	65.2412
P113	33177440	17029804	26833909	83.47205 (41.5326-99.2242)	60.3595
P114	35878754	19156714	29322213	84.01135 (44.2006-99.1107)	62.4409
P115	34284326	18345640	27925642	85.2034 (44.0492-99.2431)	62.9896
P116	36688296	18179860	30443976	86.90635 (46.3576-99.4134)	65.7143
P117	35853116	10961817	28730490	76.859 (31.7692-98.7323)	51.6556
P118	30927028	14841368	24917470	79.7162 (39.1864-98.6755)	57.5213
P119	39118724	19187648	32596007	84.10595 (45.4683-98.9972)	63.6897
P120	37164832	18394525	30632761	85.0615 (45.8467-99.2999)	64.3709
P121	36171146	15919690	29632793	84.13435 (43.8411-99.3377)	62.6301
P122	36011276	16944696	29861500	86.1589 (44.6547-99.2621)	63.8411
P123	42162066	21089777	34959461	87.72945 (51.3529-99.3756)	68.9877
P124	40273348	20136813	33269263	87.05775 (49.4607-99.3377)	67.7389
P125	38668730	12778100	30196191	84.52225 (40.1892-99.281)	61.0974
P126	47380538	20793438	36229315	84.1722 (47.3037-99.0728)	64.7304
P127	37211150	16472069	29795478	83.3775 (44.4655-98.9593)	62.7815
P128	38908460	17985107	31968803	83.26395 (44.7493-99.0161)	62.7625

P129	41295990	5269151	31656101	69.77295 (10.4636-98.9026)	28.9877
P130	38571420	15322423	31177642	82.3179 (40.7569-99.2053)	59.9432
P131	31537598	12885146	24884980	78.0038 (34.21-98.7133)	53.3207
P132	31232412	13596865	25068004	79.77295 (38.07-98.7133)	56.4238
P133	46722500	21255962	36267674	86.19675 (48.5336-99.2621)	66.982
P134	39420740	19029434	32218042	85.98865 (46.7171-99.3188)	65.0331
P135	39831574	13229639	32443402	81.04065 (40.0568-98.789)	58.8269
P136	45004398	20232183	36712150	86.4333 (48.0227-99.2242)	66.263
P137	38360696	12394344	29837601	75.72375 (34.7209-98.1457)	53.018
P138	45854938	16057116	36765903	85.7332 (48.0984-99.1864)	66.4522
P139	38168406	17587009	30876640	83.4626 (45.1277-98.9972)	63.2356
P140	38586446	16614438	30808984	80.44465 (44.5222-98.6566)	60.8515
P141	39655570	16484645	31420001	81.19205 (44.579-98.6944)	61.4759
P142	35410046	13992763	27848868	75.5629 (39.2431-97.6916)	55.7805
P143	44481996	22294564	36038208	85.894 (53.018-98.9972)	68.685
P144	41753824	16936829	32837839	79.79185 (47.4929-98.2403)	62.6868
P145	41443314	23124649	33539072	86.3387 (56.9726-98.9782)	71.315
P146	35972620	19856090	29445764	81.05015 (51.9773-98.2403)	65.0899
P147	42896090	6327957	33572783	71.31505 (22.6868-97.0861)	44.9007
P148	26970422	14595236	21684182	79.34725 (42.3463-98.3917)	60
P149	36518106	18871829	30127079	80.8231 (52.1097-98.5052)	65.5818
P150	52501630	20740286	43389846	87.351 (58.6187-98.9593)	72.4125

P151	41495894	23101816	33579068	84.6736 (56.0076-98.8269)	69.5553
P152	27374998	14190779	22500218	79.98105 (44.106-98.3349)	61.2299
P153	37361242	13746351	28848479	77.15235 (42.5733-97.9376)	58.562
P154	36775652	12890888	28160079	78.30655 (41.2677-98.2403)	58.6377
P155	30075736	19369886	24742054	83.92625 (50.5393-98.6566)	66.3576
P156	35900870	20728890	29380215	84.75875 (53.8884-98.8647)	68.3065
P157	47785070	22651795	38698434	82.9612 (56.9347-98.543)	68.8553
P158	29910450	17793549	24427165	82.6017 (50.1608-98.6187)	65.052
P159	40265356	20509568	32825907	85.19395 (54.6263-98.9026)	68.9877
P160	44332792	20824134	36083555	83.7843 (55.6481-98.5052)	68.7985
P161	35752772	19309573	29286462	82.37465 (51.2772-98.4106)	65.8846
P162	36747182	18499487	30188527	83.01795 (51.0312-98.5241)	65.9603
P163	38816136	15594305	31089361	82.60175 (46.4333-99.0539)	63.5194
P164	34189674	11794139	27493329	81.06905 (41.4002-99.0161)	60.3974
P165	31361674	17678534	25859516	82.90445 (47.6632-98.8079)	64.3709
P166	38922266	20201264	31927485	80.3122 (52.0151-98.1835)	64.8817
P167	43694390	22380649	35953253	87.6537 (57.597-98.9782)	72.3557
P168	32232244	19250062	26680238	82.772 (49.8959-98.6566)	65.4872
P169	35413822	19882261	29586712	87.43615 (55.894-99.0918)	70.7663
P170	36941554	15301426	30519374	83.29235 (52.2233-98.4106)	67.0577
P171	37270548	13226190	30869741	84.10595 (51.5043-98.7512)	67.4361
P172	37346044	17561435	31135666	84.51275 (54.7966-98.7133)	68.9877

P173	37282092	17136847	30937549	86.386 (54.0587-99.0728)	69.4986
P174	39891446	21069599	33221461	88.10245 (57.9286-99.2818)	72.973
P175	34140060	19673941	28199152	85.8439 (54.0541-99.0739)	69.4009
P176	41674994	20682393	34570561	84.3508 (53.695-98.7148)	68.248
P177	43424672	18519085	35603469	78.10435 (48.5541-97.7698)	62.011
P178	38667310	18745517	31777682	83.5003 (51.805-98.7337)	66.6037
P179	28767272	15167194	23578145	79.0777 (43.7724-97.9966)	60.7447
P180	46554284	12318617	37996449	81.71425 (49.0644-98.3746)	65.035
P181	40331178	22370954	32672539	84.4264 (54.64-99.0361)	68.3992
P182	42279880	21915674	34486703	81.8749 (54.2242-98.4124)	66.3958
P183	46032986	12767551	37388062	78.7942 (43.3566-98.1478)	60.4612
P184	40764796	22675474	33812254	83.54755 (54.0541-98.866)	67.7755
P185	42296244	23461728	35130006	84.98395 (55.0747-98.8282)	69.0418
P186	24894986	15003173	20321688	77.8303 (41.3343-98.0155)	58.4956
P187	27682608	16718306	22734114	79.78645 (44.8119-98.1478)	61.3495
P188	27429172	16545845	22514600	80.4763 (44.4339-98.299)	61.2928
P189	40475330	22252244	33680994	86.26915 (56.3032-99.0928)	70.6483
P190	30796058	17689634	25594766	84.9367 (49.9905-98.9605)	67.1518
P191	38453336	15848089	31441695	86.81725 (50.6521-99.1873)	68.5693
P192	31398238	17635419	26195128	79.67305 (48.2139-98.2612)	62.7292
P193	31565618	19583918	26151289	84.62485 (52.2208-98.8282)	67.5865
P194	33695120	19248021	27964492	84.20905 (52.1641-98.7904)	67.1329

P195	35303244	18489053	29127633	84.94615 (50.86-99.055)	66.9439
P196	32574124	20295183	27185958	87.3937 (56.7379-99.1495)	71.3665
P197	27712610	17556631	19168662	74.1826 (34.7949-98.6203)	51.6349
P198	32797672	20030702	24271722	82.045 (45.1143-99.1306)	62.2756
P199	33625744	19292515	26185886	80.9488 (46.116-98.6392)	62.4079
P200	34944634	20009069	28816571	83.7649 (51.616-98.9038)	66.5848
P201	37022892	21197087	30475468	84.73825 (51.3514-99.0361)	67.2841
P202	42984444	2395466	34297743	49.6976 (0.3402-98.2612)	66.1501
P203	37945572	19184103	31267678	86.6188 (54.6778-99.2629)	69.8923
P204	47056470	23856208	39105856	86.9968 (59.7241-98.9794)	73.0297
P205	44773668	22638372	37014782	88.63165 (59.1193-99.2251)	73.0486
P206	35866070	19913097	29537473	85.7683 (53.9596-98.9416)	69.4009
P207	43985234	14540039	35208831	79.57855 (46.3617-98.1478)	62.2567
P208	36064324	21075927	29935341	86.76055 (54.5077-99.2629)	70.2325
P209	31211358	18685942	25913213	83.4058 (50.2552-98.8093)	65.7721
P210	36190936	17517313	28819196	86.4865 (45.9648-99.5086)	65.0728
P211	41610862	23056594	34368335	86.32585 (56.1709-98.9605)	70.4404
P212	36708914	18756270	29081593	81.60085 (48.1383-98.5258)	63.8065
P213	39415782	20343056	32352612	83.75545 (52.5799-98.6581)	67.3975
P214	38966680	22260119	32321272	86.36365 (55.7551-98.9416)	70.4593
P215	39216816	21187091	31940385	81.14725 (49.4991-98.4124)	63.8443
P216	44154898	23248494	36387162	86.6188 (56.2843-99.0361)	70.6483

P217	45152676	23931993	37240305	85.1257 (55.5094-98.9983)	69.1552
P218	35126440	8709770	28212238	75.32605 (32.13-97.8832)	52.4854
P219	36740924	16158823	30187409	83.49085 (48.7998-98.9038)	65.5642
P220	36460512	19238914	29683491	86.581 (51.1246-99.3574)	68.626
P221	28043720	15885988	23204035	80.5141 (41.9202-98.5258)	60.1021
P222	34964976	20134366	29156348	83.01835 (49.1022-98.8471)	65.0917
P223	38427856	22320385	31593222	86.94955 (52.5988-99.1684)	69.5332
P224	48666102	17873641	39392658	84.502 (49.9527-98.9038)	66.8872
P225	36342072	20629083	29731304	83.6704 (49.0833-98.9416)	65.7721
P226	38830114	21578142	32197550	85.636 (53.9029-98.9038)	69.0418
P227	56685900	11937031	35272242	69.99625 (17.9739-99.1117)	36.5337
P228	27748818	17480916	22510317	80.2873 (42.9975-98.4691)	60.5935
P229	37114666	21264067	30700468	83.33965 (51.7105-98.8471)	66.7171
P230	34193622	20853315	28137444	82.7443 (49.8393-98.677)	65.1862
P231	44684548	24252646	36263279	82.6309 (52.8634-98.7148)	66.6226
P232	32561300	18964691	26665507	78.9832 (42.2793-98.0911)	59.365
P233	43495454	8730894	29025492	64.34515 (13.5891-97.4863)	30.2967
P234	35584310	20171200	29284858	80.4007 (45.2655-98.6014)	62.0299
P235	33314422	19486423	27285308	79.21 (44.8686-97.9777)	61.5952
P236	45533006	23799249	37422899	83.52865 (51.3136-98.866)	66.3013
P237	38399960	20163288	31341731	81.33625 (44.8686-98.6581)	62.1433
P238	34258958	18621558	26974074	78.1894 (41.2776-98.0533)	58.4956

P239	53232924	6690073	40430844	74.22985 (10.3572-99.055)	32.2623
P240	41778888	6755968	31979146	73.58725 (16.6131-98.5636)	38.7072
P241	34252108	20293638	27473066	81.77095 (44.226-98.8093)	61.8598
P242	42677036	20183549	35207393	78.55795 (47.4768-97.7131)	61.7842
P243	30900846	18554678	25274623	80.1928 (42.525-98.5258)	60.0454
P244	36518546	20737968	29954342	81.5158 (46.3617-98.677)	62.9749
P245	41053224	22577538	33937493	85.02175 (50.5009-98.7715)	67.303
P246	37596262	21888965	29974801	81.289 (44.0937-98.7904)	61.1416
P247	46857658	21882181	38562907	82.0639 (48.951-98.5069)	64.3168
P248	43969842	21418795	36233537	85.24855 (51.5026-98.9416)	67.9078
P249	43497556	24356201	35678555	82.3096 (51.616-98.3935)	65.9989
P250	36842338	20214434	30025985	81.88435 (44.604-98.7337)	61.9354
P251	38146868	20339478	31559711	83.20735 (47.1177-98.9227)	63.9199
P252	41755500	21460345	33926205	82.8766 (47.2122-98.7526)	63.7876
P253	34380804	19503515	28314498	82.2529 (46.0593-98.5825)	63.4096
P254	36750016	20523357	29670586	81.7426 (45.0387-98.4502)	62.578
P255	35472836	20461238	28573515	80.05105 (43.4322-98.4313)	60.5557
P256	38355730	21247467	30377462	78.7753 (43.1109-98.3179)	59.7619
P257	44038028	20496101	35863875	80.18335 (48.3651-98.3368)	63.334
P258	36171268	19492485	29987658	82.5175 (44.8119-98.7337)	62.5591
P259	37169352	6058044	29824317	76.70575 (17.2368-98.5825)	44.3205
P260	39776116	22294088	32675718	84.8422 (49.1778-98.9227)	66.2446

P261	40202452	21108200	32906028	80.27785 (45.8892-98.4502)	61.8787
P262	32076638	19427116	26228989	81.7426 (43.9425-98.8471)	61.4818
P263	30595668	18647629	25170363	80.24005 (43.0353-98.5069)	60.4234
P264	33914180	19606642	27952341	81.60085 (44.8686-98.677)	62.0677
P265	27625538	16644060	22535163	79.3423 (39.312-98.3935)	57.6829
P266	36875342	13491837	29847147	79.44625 (41.5422-98.4313)	59.2138
P267	27958792	17580137	22595142	80.3629 (40.7106-98.4313)	58.4389
P268	27493886	17165587	22548347	80.25895 (41.0319-98.4124)	59.2516
P269	39023550	17891191	31812025	77.2255 (45.1143-97.6375)	60.3667
P270	35341306	21156499	28750178	82.7254 (46.7397-98.7715)	64.0711
P271	29853862	16929608	24513376	84.09565 (41.8068-99.244)	60.6691
P272	36757758	20034280	29879603	82.88605 (46.2861-98.2045)	63.9199
P273	34680432	19699184	28069283	83.8216 (46.494-98.8093)	63.8821
P274	40578258	19135127	33264181	84.7855 (48.8376-99.0739)	66.1123
P275	40511940	21839518	33073555	80.97715 (47.8737-98.4124)	63.3718
P276	38317566	15863800	31605848	79.84315 (47.3256-97.9966)	62.7103
P277	35635550	19766379	29006409	81.478 (45.0576-98.5636)	61.8409
P278	37282776	19935726	30690976	80.88265 (45.927-98.4313)	62.3701
P279	33360410	19048224	27528812	81.0244 (44.3961-98.6014)	61.4629
P280	45415780	22606274	37286281	85.0123 (52.5988-98.7715)	67.3786
P281	42190604	23194645	34865204	84.81385 (50.8033-99.0172)	67.0006
P282	32235000	17791234	26001127	77.80195 (39.5199-98.299)	57.1348

P283	42225604	21009987	35002577	86.09905 (51.3703-98.9605)	67.9645
P284	39912372	20194622	32179744	81.7615 (47.7414-98.3368)	64.1656
P285	33327548	19376380	27294415	82.1962 (44.1882-98.866)	62.0299
P286	38067938	20215807	31174723	82.1206 (48.1761-98.7148)	64.2223
P287	38704776	21849644	32054957	85.5604 (49.3101-98.9605)	66.6982
P288	29047692	19118334	23740868	83.6704 (45.9081-98.8282)	63.7309
P289	35411870	21130469	29414407	82.801 (47.6091-98.0155)	64.3924
P290	33402588	14132136	26665953	81.9316 (41.8257-97.9399)	60.7825
P291	30210066	17553258	24660582	82.56475 (42.3171-98.8849)	60.1021
P292	40483984	19084048	33216186	81.0244 (46.0593-98.5069)	62.8048
P293	41354394	21021711	33689787	81.1378 (47.3445-98.4313)	63.2584
P294	40365788	21060103	33140048	81.856 (47.4768-98.5636)	63.145
P295	34610736	19900984	28392750	81.69535 (45.2277-98.5069)	62.6347
P296	38177802	13946269	31104908	73.19035 (37.7055-97.1839)	54.451
P297	38978604	16489839	31722344	80.9677 (42.9786-98.7904)	60.6124
P298	37986458	20053519	30935638	78.08545 (43.9047-98.0722)	59.3461
P299	40362936	16765801	33153007	80.4763 (43.5834-98.6959)	60.4612
P300	38666842	19484052	31378075	79.88095 (43.4511-98.2045)	60.0265
P301	37798544	19132293	30644139	80.5519 (43.9992-98.7148)	61.0849
P302	44023102	21189393	35730526	81.5347 (46.2294-98.2423)	62.7481
P303	42513068	15888972	35029176	80.63695 (47.4768-98.4502)	63.3907
P304	34738422	18090786	28451342	76.8853 (41.1453-97.8832)	57.5506

P305	41821142	17207528	33781509	80.722 (44.3205-98.2612)	61.1416
P306	38931610	21557058	31737474	82.7065 (48.7809-98.4691)	64.9405
P307	43347018	18671489	35366568	78.4918 (47.4768-97.7509)	61.5952
P308	41193090	21068580	33577556	81.82765 (47.2311-98.4124)	63.8254
P309	48791800	20287277	40594571	85.04065 (50.9167-98.8471)	66.9439
P310	34685346	19310047	28303467	79.9471 (42.0714-98.5258)	59.4595
P311	41675362	22543348	34103060	84.20905 (48.1383-98.9605)	65.0161
P312	40730210	22274233	33218984	83.56645 (48.8376-98.6581)	65.4508
P313	40139694	20664231	32862922	83.5381 (47.0799-98.866)	64.2601
P314	39685270	21044222	32775932	83.60425 (47.5524-98.866)	64.7326
P315	37744094	19027269	30774938	82.84825 (44.9631-98.7904)	63.0883
P316	37631990	18465098	30458515	78.1705 (44.0559-97.9021)	60.1021
P317	36144206	17661017	29114960	79.21945 (39.9546-98.6014)	57.7585
P318	39960018	16518585	32254603	78.46345 (40.6917-98.1667)	58.3255
P319	37217648	17783482	30095728	82.58365 (41.6556-99.0361)	60.2722
P320	39770194	18435190	31928705	81.289 (42.0525-98.9227)	60.1777
P321	41371356	16734939	34103007	74.6929 (38.2158-97.1272)	54.8101
P322	34381342	21670201	20242821	83.0278 (37.6488-99.6409)	58.8358
P323	37570716	19746273	30579390	81.7615 (44.415-98.7337)	61.7842
P324	41850206	17228290	34147028	85.58875 (45.4734-99.3196)	64.0333
P325	42583000	21313568	34800109	84.03895 (48.4218-98.8471)	65.5642
P326	42020046	20394492	34068457	83.3491 (47.0043-98.8849)	64.2601

P327	35474316	18218932	29037156	80.3818 (42.6195-98.488)	60.31
P328	38210452	19998560	31446367	80.63695 (43.7913-98.3935)	61.2928
P329	36478162	20408149	30569054	82.37575 (42.336-98.9983)	60.3478
P330	37563914	18964663	30554280	80.2117 (40.7673-98.7715)	58.4578
P331	36530726	17559569	30269746	75.19375 (37.4031-98.0344)	53.9974
P332	31122080	17039727	25970180	76.9987 (38.2536-97.8076)	55.774
P333	28270744	15691807	23476476	77.8681 (37.2141-98.1478)	55.1314
P334	33427152	17990608	27699617	78.53905 (38.5182-98.4691)	56.0386
P335	27492534	12552696	22695205	74.47555 (32.9805-98.3179)	50.2363
P336	38191114	20199107	31527701	81.86545 (43.7157-98.5636)	61.2739
P337	42929222	17999206	35250377	79.6447 (43.0353-98.5069)	59.9131
P338	46824746	18598860	39021555	79.3423 (44.6985-98.1667)	60.8581
P339	38979926	19500303	32438719	80.0416 (42.3927-98.4691)	59.743
P340	36866186	15185859	30452208	75.83635 (36.7227-97.9777)	54.3376
P341	40937294	19939781	34280180	81.8182 (44.8308-98.8471)	62.1622
P342	23515014	10160079	19506254	67.4164 (27.3861-96.5413)	43.0731
P343	38994456	14970022	32162447	77.29165 (38.3859-98.1289)	56.1142
P344	36853662	16537853	30878682	74.66455 (39.2931-97.3351)	55.4905
P345	44568320	22268673	36999012	78.3973 (47.8548-97.2595)	62.2378
P346	39850500	20796312	32950059	80.6842 (43.3755-98.4502)	60.6124
P347	37394292	19356334	31246555	80.6086 (42.5817-98.3368)	60.121
P348	35991676	20260898	29900846	81.7237 (43.1676-98.6581)	60.7636

P349	34967120	10475318	28743505	77.6602 (32.4513-98.3935)	51.5404
P350	38467258	20217574	32285593	81.1756 (44.9064-98.6959)	61.822
P351	41677910	7078882	33949693	74.7496 (22.5855-98.5636)	44.3205
P352	28281536	15850471	23270950	76.40335 (35.9667-98.1289)	53.2792
P353	36970812	19880271	30543446	80.0794 (42.525-98.3557)	60.0076
P354	41767044	21268917	34696791	79.8904 (43.9425-98.299)	60.688
P355	37519670	21493432	31086954	83.16955 (45.3411-98.7337)	63.0883
P356	39926132	22528068	33290423	82.79155 (46.7775-98.7148)	63.8821
P357	50371214	24410422	42415407	84.2563 (51.1246-98.7715)	66.7927
P358	38371912	20901209	31561571	80.533 (44.1315-98.1856)	61.1983
P359	41562712	21013010	34699665	80.37235 (45.3033-98.2612)	61.7464
P360	37143842	19370665	31056249	81.1 (43.4511-98.677)	60.7447
P361	33150458	19154920	27769385	81.67645 (42.9786-98.6581)	61.1038
P362	40080254	20590109	33215168	79.78645 (42.1281-98.2801)	59.5162
P363	36875766	15822613	29957966	78.33115 (35.5698-98.5258)	53.9596
P364	32338378	18977245	26740623	78.65245 (38.1591-98.5447)	55.6039
P365	36134418	20350488	30035241	81.50635 (43.281-98.3746)	61.1038
P366	45357990	18934993	37759276	80.7409 (45.5679-98.6014)	62.5591
P367	45788864	15361947	38015243	76.78135 (42.8652-97.4485)	58.7224
P368	37821866	19111483	31461178	81.24175 (42.1092-98.6581)	60.7069
P369	36335162	19147746	30253465	79.55965 (42.3927-98.1478)	59.5162
P370	40103736	22067821	33545448	81.4402 (47.817-98.3746)	63.901

P371	40517384	20686143	33306687	80.0227 (47.7036-98.0155)	63.1072
P372	35398014	4528217	25872094	48.9416 (4.4037-96.409)	14.5719
P373	38183388	21479975	31505174	80.63695 (45.1143-98.3368)	61.9543
P374	39370174	22430657	32267084	82.65925 (48.0438-98.5825)	64.7704
P375	39079448	22048463	32145981	82.5364 (47.2122-98.6581)	64.1089
P376	41813004	24000305	34295206	82.0072 (49.6314-98.2612)	64.6759
P377	42436448	21765921	35398192	80.88265 (47.7981-97.921)	63.8443
P378	33820496	19381150	28052255	84.1429 (43.9614-98.9983)	62.3134
P379	39059168	22125643	31978682	81.0433 (44.982-98.3179)	61.7275
P380	43107596	23928884	35656436	81.289 (48.7053-98.4124)	63.9388
P381	44151626	23804505	36613959	82.3096 (49.6881-98.4502)	65.1106
P382	42638702	22463305	35403744	81.856 (48.8754-98.2612)	64.4491
P383	43155840	23185697	35983312	82.0828 (47.4579-98.6959)	64.1656
P384	42466676	21532167	35070754	80.63695 (48.5541-97.8832)	63.3907
P385	40321956	3890126	30993567	51.40805 (2.1357-98.6392)	10.7163
P386	42911970	23313484	35607783	81.37405 (48.8754-98.2234)	64.0711
P387	46092306	24427850	37834248	80.71255 (49.1589-98.299)	63.8065
P388	42014516	21883724	34895757	84.49255 (48.7053-98.7148)	65.7343
P389	43408312	9402485	35048640	78.1894 (29.6919-98.7148)	49.9527
P390	39035616	22611266	32363035	81.2701 (46.2294-98.2234)	62.5591

Table S4. Detailed clinical and genomic feature information for each enrolled gastric cancer patient.

Patient ID	PD-L1 expression score (CPS)	TMB score (mut/Mb)	MSI score	Gender	Age	<i>HER2</i> (copies)
P001	~ 65	13.2	50	Female	76	2
P002	~ 25	9.6	13.64	Female	78	5.5
P003	~ 30	3.7	36.36	Female	63	2
P004	~ 20	2.9	4.54	Male	60	2
P005	~ 30	4.4	18.18	Female	75	3.5
P006	~ 100	14.7	18.18	Male	57	2
P007	~ 25	0.7	4.54	Male	64	2
P008	~ 45	2.9	0	Male	70	2
P009	~ 40	0.7	0	Female	55	2
P010	~ 35	2.2	31.82	Male	60	2
P011	~ 55	2.2	9.09	Male	54	2
P012	~ 95	1.5	0	Male	55	2
P013	~ 55	2.9	4.54	Female	48	2
P014	~ 20	34.6	72.73	Male	75	2
P015	~ 70	27.2	40.91	Female	61	2
P016	~ 85	33.8	63.64	Female	73	2
P017	~ 20	4.4	0	Female	54	2
P018	~ 35	5.9	0	Male	67	2
P019	~ 35	2.2	0	Male	64	2
P020	~ 35	29.4	54.54	Female	76	2
P021	~ 97	5.1	0	Male	69	2
P022	~ 80	22.8	50	Male	69	2
P023	~ 95	3.7	0	Male	54	2
P024	~ 60	2.9	0	Male	59	2
P025	~ 25	6.6	0	Female	49	2
P026	~ 45	7.4	0	Male	62	2
P027	~ 35	2.9	4.54	Male	53	2
P028	~ 30	19.1	41	Female	77	2
P029	~ 65	1.5	4.54	Male	72	2
P030	~ 30	8.1	0	Female	54	2
P031	~ 40	7.4	0	Female	70	2
P032	~ 60	2.9	0	Male	72	2
P033	~ 85	2.9	8.33	Female	63	2
P034	~ 60	4.4	0	Female	53	2
P035	~ 20	4.4	12.5	Female	62	2
P036	~ 45	2.2	4.17	Female	54	2
P037	~ 90	2.2	0	Male	58	2

P038	~ 20	6.6	4.17	Male	55	2
P039	~ 65	5.9	0	Male	51	2
P040	~ 25	5.9	0	Male	68	2
P041	~ 15	4.4	31.82	Male	76	2
P042	< 1	2.2	13.64	Male	56	4
P043	~ 1-2	3.7	18.18	Male	66	2
P044	< 1	2.2	18.18	Male	30	34.5
P045	~ 10	2.9	36.36	Male	78	2
P046	< 1	9.6	31.82	Male	61	2
P047	< 1	0.7	22.73	Male	62	2
P048	< 1	5.9	31.82	Female	55	2
P049	< 1	5.1	13.64	Female	41	2
P050	~ 1-2	2.9	27.27	Male	60	2
P051	~ 3-5	2.2	22.73	Male	75	2
P052	~ 1-2	4.4	22.73	Male	83	2
P053	< 1	3.7	18.18	Male	75	2
P054	~ 2	3.7	13.64	Male	60	2.5
P055	< 1	1.5	13.64	Male	54	6
P056	~ 5	5.1	18.18	Male	71	34.5
P057	~ 3	1.5	27.27	Male	68	2
P058	< 1	7.4	22.73	Male	67	2
P059	< 1	1.5	27.27	Male	69	2
P060	< 1	3.7	22.73	Female	56	2
P061	< 1	0.7	13.64	Male	64	2
P062	< 1	25.7	72.73	Female	55	2
P063	< 1	3.7	22.73	Female	39	2
P064	< 1	19.9	27.27	Male	72	5.5
P065	< 1	0.7	36.36	Male	68	2
P066	< 1	2.9	36.36	Female	70	2
P067	< 1	2.2	12.5	Male	51	2
P068	< 1	5.9	27.27	Male	51	2
P069	< 1	2.2	22.73	Female	31	2
P070	< 1	1.5	22.73	Female	40	2
P071	< 1	4.4	13.64	Female	52	2
P072	~ 10	1.5	18.18	Male	28	2
P073	< 1	2.9	13.64	Male	67	4
P074	< 1	4.4	22.73	Male	28	5
P075	< 1	5.9	27.27	Male	49	2
P076	~ 2	2.2	18.18	Male	61	2
P077	< 1	2.9	13.64	Male	56	2

P078	< 1	2.9	18.18	Male	65	2
P079	< 1	4.4	11.77	Male	66	2
P080	~ 8	2.9	13.64	Male	34	2
P081	~ 2	9.6	9.09	Male	83	2
P082	~ 10	6.6	9.09	Male	81	2
P083	< 1	2.9	18.18	Female	62	2
P084	< 1	5.1	18.18	Female	67	2
P085	< 1	0.7	22.73	Female	36	2
P086	< 1	1.5	5.88	Female	79	2
P087	~ 3	1.5	13.64	Male	74	2
P088	< 1	2.2	18.18	Male	67	2
P089	< 1	1.5	27.27	Male	55	2
P090	< 1	6.6	13.64	Female	66	2
P091	< 1	8.1	22.73	Female	67	2
P092	< 1	20.6	11.11	Male	71	2
P093	~ 3	1.5	4.54	Male	72	2
P094	< 1	3.7	27.27	Male	62	2
P095	< 1	13.2	35.29	Female	73	2
P096	~ 2	0.7	18.18	Male	66	2
P097	~ 3	2.2	11.77	Female	67	23
P098	< 1	6.6	13.64	Male	66	2
P099	< 1	8.8	9.09	Male	56	12.5
P100	< 1	4.4	13.64	Male	70	2
P101	~ 8	1.5	33.33	Female	70	2
P102	< 1	1.5	13.64	Female	51	2
P103	< 1	9.6	4.54	Male	55	6
P104	< 1	2.9	5.88	Male	74	2
P105	< 1	32.4	63.64	Male	74	2
P106	< 1	4.4	9.09	Female	78	2
P107	~ 3	15.4	47.62	Male	67	2
P108	< 1	8.1	4.54	Male	62	2
P109	< 1	2.2	0	Male	58	2
P110	< 1	5.1	9.09	Male	62	3.5
P111	< 1	3.7	4.54	Male	75	12.5
P112	< 1	8.1	4.76	Female	62	2
P113	~ 5	1.5	0	Male	72	2
P114	~ 2	2.2	0	Male	53	2
P115	< 1	8.8	4.54	Male	60	2
P116	~ 1-2	2.2	4.54	Female	37	2
P117	< 1	1.5	0	Male	69	3.5

P118	~ 1-2	1.5	21.05	Male	74	2
P119	< 1	2.2	13.64	Male	39	2
P120	< 1	2.2	11.77	Male	65	3.5
P121	< 1	3.7	4.54	Male	88	2
P122	~ 15	1.5	4.54	Male	66	2.5
P123	< 1	3.7	0	Male	62	2
P124	< 1	4.4	9.09	Female	49	2
P125	< 1	2.2	4.54	Male	63	2
P126	~ 5	36	50	Female	71	2
P127	< 1	2.9	0	Male	55	2
P128	< 1	0.7	4.54	Female	67	2
P129	~ 5	1.5	4.54	Male	53	16
P130	< 1	2.9	9.09	Male	67	2
P131	~ 10	25.7	59.09	Male	67	2
P132	< 1	0.7	0	Male	56	2
P133	< 1	4.4	9.09	Male	73	2
P134	~ 1-2	6.6	22.73	Male	67	2
P135	< 1	0.7	0	Male	58	2
P136	< 1	1.5	4.54	Male	52	2
P137	~ 1-2	2.9	13.64	Male	55	2
P138	~ 3	5.9	9.09	Male	69	2
P139	< 1	34.6	54.54	Female	71	2
P140	< 1	6.6	9.09	Male	68	2
P141	< 1	4.4	0	Male	41	2
P142	< 1	5.1	9.09	Male	62	2
P143	< 1	5.9	18.18	Male	52	2
P144	~ 5	28.7	50	Male	79	2
P145	< 1	1.5	0	Male	39	2
P146	< 1	2.9	4.54	Male	55	2
P147	~ 5	5.9	0	Male	69	2
P148	< 1	3.7	15	Male	55	2
P149	< 1	1.5	4.54	Male	57	2
P150	< 1	0.7	9.09	Male	55	3.5
P151	~ 2	2.9	13.64	Female	68	2
P152	< 1	5.9	22.73	Female	52	2
P153	~ 10	2.9	9.09	Female	69	2
P154	< 1	3.7	18.18	Female	67	2
P155	~ 1-2	2.9	9.09	Male	69	2
P156	< 1	2.9	18.18	Male	66	3.5
P157	~ 5	2.9	13.64	Male	60	2

P158	< 1	27.9	77.27	Male	77	2
P159	~ 8	2.9	13.64	Male	69	2
P160	~ 2	33.1	63.64	Female	70	2
P161	< 1	9.6	9.09	Male	66	2
P162	~ 10	1.5	0	Female	63	4.5
P163	~ 6	40.4	77.27	Male	61	2
P164	~ 5	4.4	4.54	Male	66	2
P165	< 1	3.7	9.09	Male	68	2
P166	< 1	2.9	4.54	Male	65	2
P167	~ 2	2.9	4.54	Male	52	10
P168	~ 15	2.2	0	Male	73	2
P169	< 1	2.9	4.54	Female	64	2
P170	~ 8	1.5	4.76	Male	55	2
P171	~ 6	2.2	27.27	Female	57	2
P172	< 1	6.6	0	Male	59	2
P173	~ 5	1.5	9.09	Male	70	3.5
P174	~ 1-2	0.7	0	Female	74	2
P175	~ 3	2.9	0	Female	69	2
P176	< 1	2.2	0	Male	56	2
P177	~ 15	1.5	4.54	Male	66	2
P178	~ 1-2	0.7	0	Male	55	2
P179	< 1	2.9	4.54	Male	72	2
P180	< 1	1.5	0	Male	69	2
P181	~ 6	1.5	4.54	Male	57	2
P182	< 1	0.7	0	Male	78	2
P183	< 1	2.2	0	Male	65	3.5
P184	~ 8	4.4	4.54	Male	75	2
P185	< 1	2.2	0	Male	57	2
P186	~ 10	1.5	0	Male	71	2
P187	~ 8	5.9	0	Female	64	2
P188	< 1	5.1	9.09	Female	73	2
P189	< 1	3.7	0	Female	62	2
P190	< 1	0.7	13.64	Female	58	2
P191	~ 8	2.9	9.09	Male	48	2
P192	~ 10	13.2	4.54	Male	65	2
P193	< 1	2.9	9.09	Male	76	2
P194	< 1	2.2	4.54	Male	48	2
P195	~ 10	2.9	4.54	Male	66	2
P196	~ 10	2.2	0	Male	66	2
P197	~ 2	5.1	0	Female	69	2

P198	< 1	5.1	13.64	Male	49	2
P199	~ 5	6.6	0	Male	77	2
P200	~ 2	7.4	0	Male	69	3.5
P201	~ 12	40.4	72.73	Female	68	2
P202	~ 12	2.9	0	Male	69	2
P203	~ 3	2.2	0	Male	47	2
P204	~ 5	3.7	0	Male	61	2
P205	< 1	5.1	0	Male	70	2
P206	< 1	15.4	9.09	Female	41	2
P207	< 1	2.2	0	Female	64	2
P208	~ 3	2.9	4.54	Male	57	2
P209	< 1	3.7	9.09	Male	72	2
P210	< 1	1.5	9.09	Female	71	2
P211	< 1	5.9	9.09	Male	67	2
P212	< 1	4.4	4.54	Female	64	2
P213	< 1	5.1	0	Male	74	2
P214	< 1	3.7	0	Female	46	2
P215	< 1	1.5	9.09	Male	64	2
P216	~ 5	5.9	4.54	Male	68	2
P217	< 1	30.9	81.82	Female	67	2
P218	< 1	5.1	4.54	Male	55	2
P219	~ 8	3.7	0	Male	66	2
P220	< 1	12.5	0	Male	72	2
P221	< 1	8.1	0	Male	58	2
P222	< 1	2.2	4.54	Male	56	2
P223	~ 12	4.4	0	Female	54	2
P224	< 1	2.9	4.54	Male	69	2
P225	< 1	0.7	0	Female	54	2
P226	< 1	0.7	0	Female	48	4.5
P227	< 1	1.5	4.54	Male	71	2
P228	< 1	2.2	0	Male	69	2
P229	< 1	3.7	0	Male	74	3.5
P230	~ 5	0.7	4.54	Male	48	2
P231	~ 3	3.7	0	Male	53	2
P232	< 1	3.7	0	Female	51	2
P233	< 1	2.9	0	Male	36	2
P234	< 1	0.7	0	Male	61	2
P235	~ 5	2.2	0	Female	59	2
P236	~ 2	4.4	0	Male	65	4
P237	< 1	2.2	13.64	Male	78	2

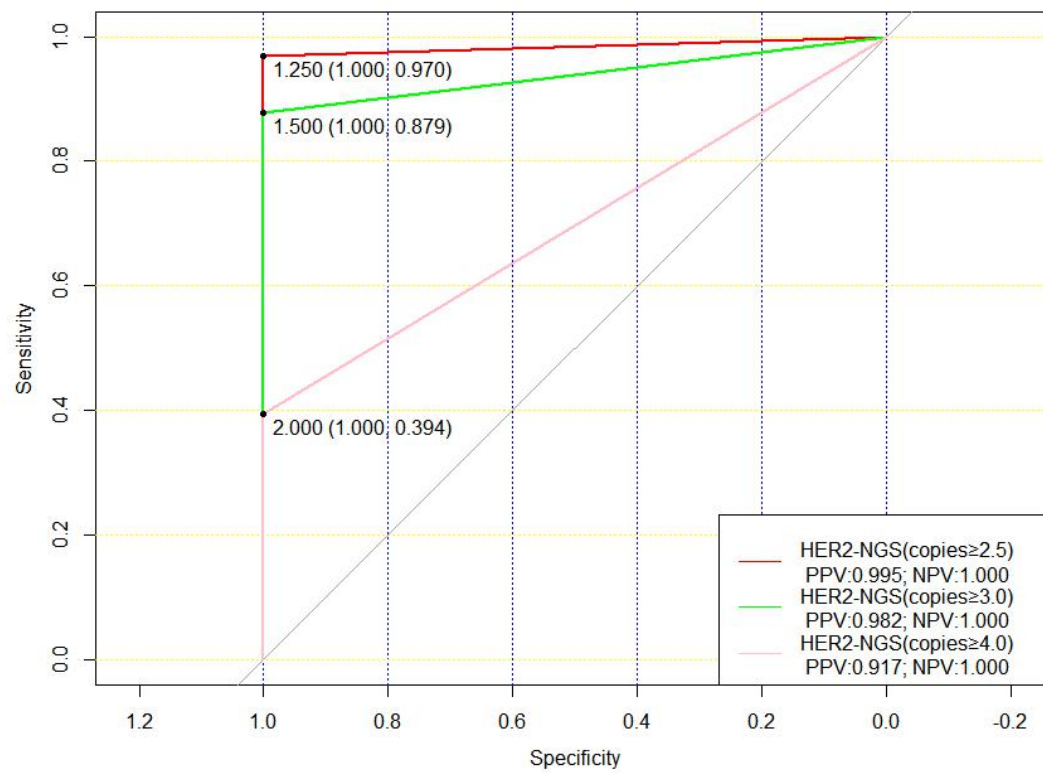
P238	~ 15	0.7	4.54	Male	58	2
P239	< 1	2.9	4.54	Male	61	2
P240	< 1	3.7	4.54	Male	60	2
P241	~ 5	1.5	0	Male	72	2
P242	< 1	6.6	0	Male	69	3.5
P243	< 1	4.4	0	Female	76	2
P244	~ 2	2.9	0	Female	71	2
P245	~ 5	3.7	0	Female	69	2
P246	~ 5	1.5	0	Male	61	2
P247	~ 5	0.7	0	Male	69	2
P248	< 1	0.7	4.54	Male	76	2
P249	< 1	6.6	0	Female	40	2
P250	< 1	10.3	4.54	Male	56	2
P251	~ 8	1.5	0	Male	77	2
P252	< 1	4.4	0	Female	60	2
P253	< 1	3.7	4.54	Male	55	2
P254	~ 5	8.1	0	Female	61	2
P255	~ 5	4.9	4.54	Male	72	2
P256	~ 8	2.2	0	Male	77	2
P257	~ 7	4.4	0	Male	71	2
P258	~ 8	2.2	4.54	Male	70	2
P259	~ 8	5.1	4.54	Female	73	2
P260	~ 8	5.9	4.54	Male	71	2
P261	< 1	2.9	0	Male	62	2
P262	< 1	5.1	0	Male	72	2
P263	< 1	2.2	0	Male	68	2
P264	~ 3	2.9	0	Male	80	2
P265	< 1	4.4	4.54	Male	67	2
P266	~ 15	5.1	0	Female	64	2
P267	~ 3	8.1	0	Male	74	2
P268	~ 8	0.7	0	Male	66	3.5
P269	~ 5	4.4	9.09	Male	64	2
P270	~ 3	6.6	0	Male	70	2
P271	< 1	8.1	0	Male	71	3.5
P272	~ 3	4.4	4.54	Female	56	3.5
P273	~ 5	2.9	4.54	Female	60	2
P274	~ 2	2.2	0	Male	60	2
P275	~ 8	6.6	0	Male	72	2
P276	~ 2	4.4	4.54	Male	42	2
P277	~ 3	3.7	0	Male	69	3.5

P278	< 1	6.6	0	Male	68	5.5
P279	~ 12	2.2	0	Male	63	2
P280	~ 5	12.5	41.67	Male	77	2
P281	< 1	10.3	54.17	Male	56	2
P282	~ 8	13.2	46.15	Female	46	2
P283	~ 3	5.9	9.09	Female	80	2
P284	~ 15	2.2	0	Male	74	2
P285	~ 7	2.2	0	Male	68	2
P286	< 1	4.4	0	Male	54	2
P287	~ 5	4.4	0	Male	78	2
P288	< 1	5.1	0	Male	49	2
P289	~ 3	3.7	0	Male	69	2
P290	~ 7	5.1	4.54	Male	69	2
P291	< 1	6.6	0	Male	64	3
P292	~ 2	1.5	0	Male	43	2
P293	~ 8	1.5	0	Female	52	2
P294	< 1	2.9	4.54	Male	62	2
P295	< 1	5.1	0	Female	67	3.5
P296	~ 2	4.4	0	Male	58	2
P297	< 1	1.5	0	Female	49	2
P298	~ 2	4.4	0	Male	47	2
P299	~ 10	5.1	4.54	Male	59	2
P300	~ 3	7.4	4.54	Male	60	2
P301	< 1	3.7	0	Male	53	2
P302	< 1	2.2	0	Male	67	2
P303	< 1	3.7	9.09	Male	76	2
P304	< 1	4.4	0	Male	74	2
P305	< 1	2.9	4.54	Male	68	2
P306	< 1	5.1	0	Male	59	5.5
P307	~ 2	3.7	9.09	Male	55	2
P308	< 1	0.7	4.54	Male	53	2
P309	~ 2	14	54.54	Male	58	2
P310	< 1	24.3	68.18	Female	72	2
P311	< 1	7.4	0	Male	65	2
P312	~ 5	6.6	0	Male	83	2
P313	< 1	5.1	4.54	Male	54	2
P314	< 1	39	54.54	Female	69	2
P315	< 1	8.8	40.91	Female	60	2
P316	~ 5	2.9	0	Male	57	2
P317	< 1	4.4	0	Male	64	2

P318	< 1	2.2	4.54	Male	60	2
P319	~ 2	36	77.27	Male	60	2
P320	~ 2	3.7	4.54	Female	73	2
P321	~ 5	4.4	0	Female	46	2
P322	< 1	4.4	0	Male	61	2
P323	< 1	2.9	4.54	Female	44	2
P324	~ 2	1.5	0	Female	47	2
P325	~ 5	5.1	4.17	Male	74	2
P326	< 1	1.5	4.17	Male	53	2
P327	< 1	1.5	0	Male	85	2
P328	< 1	3.7	8.33	Male	77	2
P329	< 1	2.2	4.17	Male	64	2
P330	~ 2	5.9	20.83	Female	57	2
P331	~ 7	3.7	4.17	Male	80	2
P332	< 1	3.7	4.17	Male	57	2
P333	~ 5	8.1	12.5	Male	71	5
P334	~ 2	7.4	0	Female	74	2
P335	~ 1-2	4.4	8.33	Male	52	3.5
P336	< 1	2.2	4.17	Male	66	2
P337	< 1	0.7	0	Male	49	2
P338	< 1	3.7	4.17	Female	70	2
P339	< 1	5.9	0	Male	71	2
P340	< 1	2.9	4.17	Male	75	2
P341	< 1	4.4	4.17	Male	68	2
P342	< 1	1.5	4.17	Male	59	2
P343	~ 2	4.4	8.33	Male	57	2
P344	~ 15	4.4	0	Male	79	2
P345	< 1	4.4	8.33	Female	47	2
P346	< 1	2.9	4.17	Female	49	2
P347	~ 10	30.1	79.17	Male	70	2
P348	< 1	3.7	4.17	Female	55	2
P349	~ 3	2.2	0	Male	80	2
P350	< 1	2.2	0	Male	62	2
P351	~ 5	0.7	4.17	Female	71	2
P352	~ 3	4.4	8.33	Male	49	2
P353	< 1	0.7	4.17	Male	48	2
P354	< 1	4.4	0	Male	59	26
P355	~ 5	2.9	4.17	Male	71	2
P356	~ 3	8.8	4.17	Female	72	2
P357	~ 5	3.7	0	Male	54	2

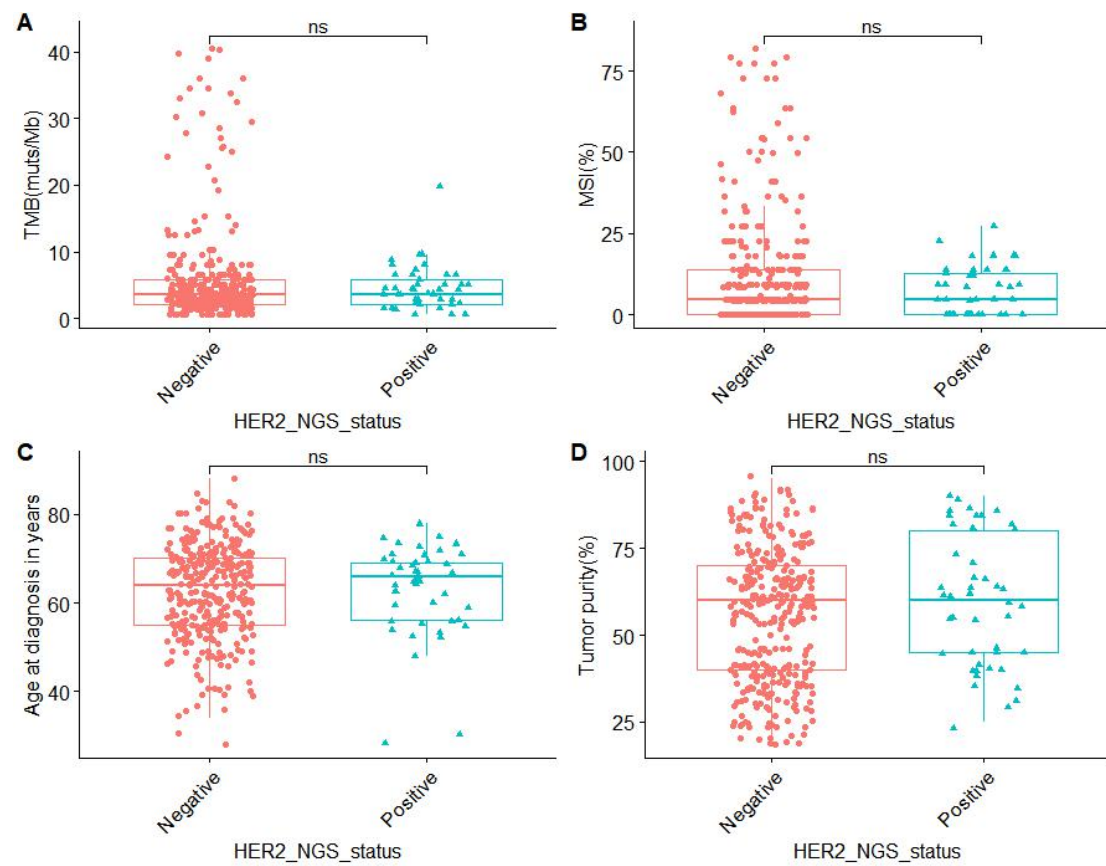
P358	~ 5	6.6	0	Male	57	2
P359	< 1	5.9	0	Male	60	2
P360	< 1	5.9	12.5	Male	73	2.5
P361	~ 7	5.1	4.17	Male	68	2
P362	< 1	6.6	8.33	Male	73	4
P363	~ 5	39.7	62.5	Male	70	2
P364	~ 2	3.7	0	Male	68	9.5
P365	< 1	5.9	12.5	Male	60	2
P366	< 1	2.2	4.17	Male	69	2
P367	~ 3	1.5	4.17	Female	47	2
P368	< 1	5.1	4.17	Female	82	2
P369	< 1	9.6	4.17	Female	52	2
P370	< 1	0.7	4.17	Female	70	2
P371	< 1	0.7	0	Male	54	2
P372	< 1	5.1	4.17	Female	71	2
P373	~ 5	2.2	4.17	Male	46	2
P374	< 1	3.7	4.17	Male	57	2
P375	< 1	5.9	12.5	Male	52	2
P376	< 1	6.6	20.83	Female	69	2
P377	< 1	4.4	0	Male	61	2
P378	~ 2	5.9	8.33	Female	62	2
P379	< 1	0.7	8.33	Male	54	2
P380	< 1	8.1	4.17	Male	74	2
P381	~ 8	8.1	4.17	Male	66	2
P382	~ 3	5.1	4.17	Male	60	2
P383	< 1	25	79.17	Male	66	2
P384	~ 3	2.9	4.17	Male	64	15
P385	~ 10	2.9	8.33	Female	79	2
P386	< 1	3.7	8.33	Male	52	2
P387	< 1	5.9	8.33	Male	61	2
P388	< 1	4.4	8.33	Female	66	2
P389	~ 2	12.5	8.33	Male	70	2
P390	< 1	3.7	0	Male	60	2

Figure S1 ROC curves for the performance of NGS in detecting HER2 amplification at positive thresholds of 2.5, 3.0, and 4.0



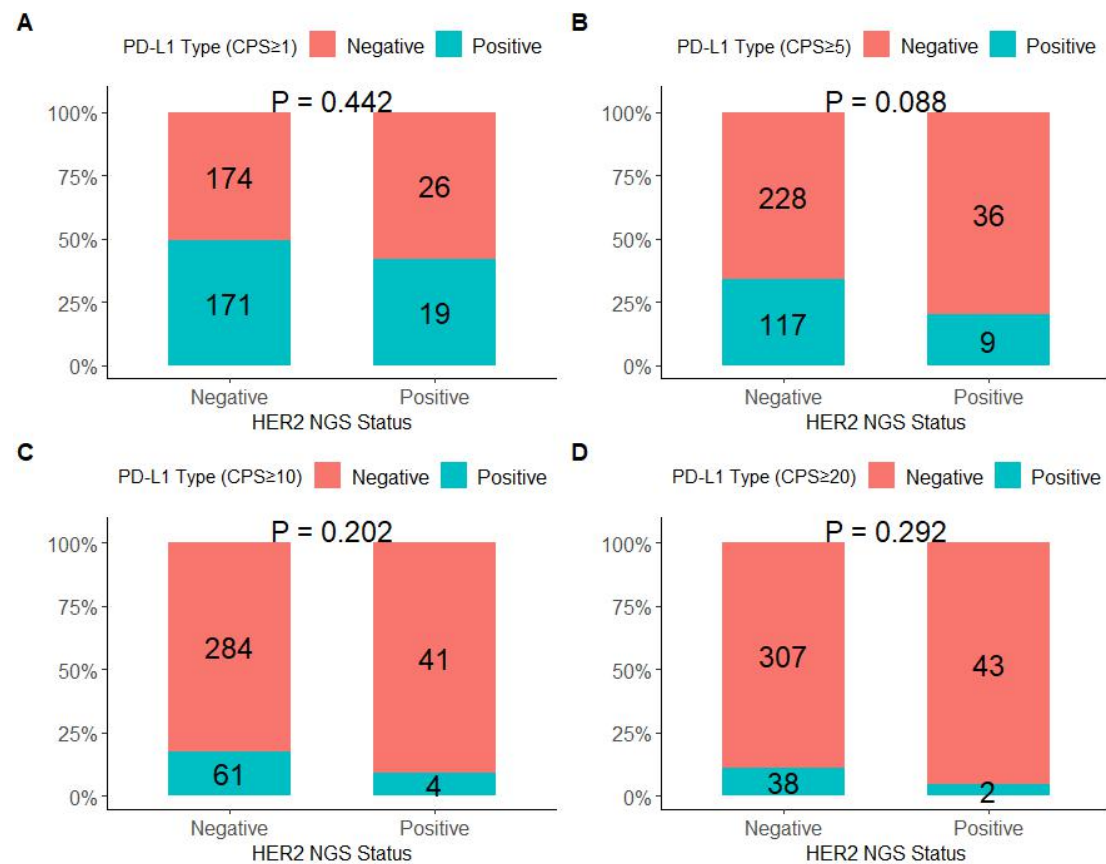
Note: PPV: positive predictive value; NPV: negative predictive value

Figure S2. Differential analysis of TMB (A), MSI value (B), age (C), and tumor purity (D) in between *HER2* amplification positive and negative groups.



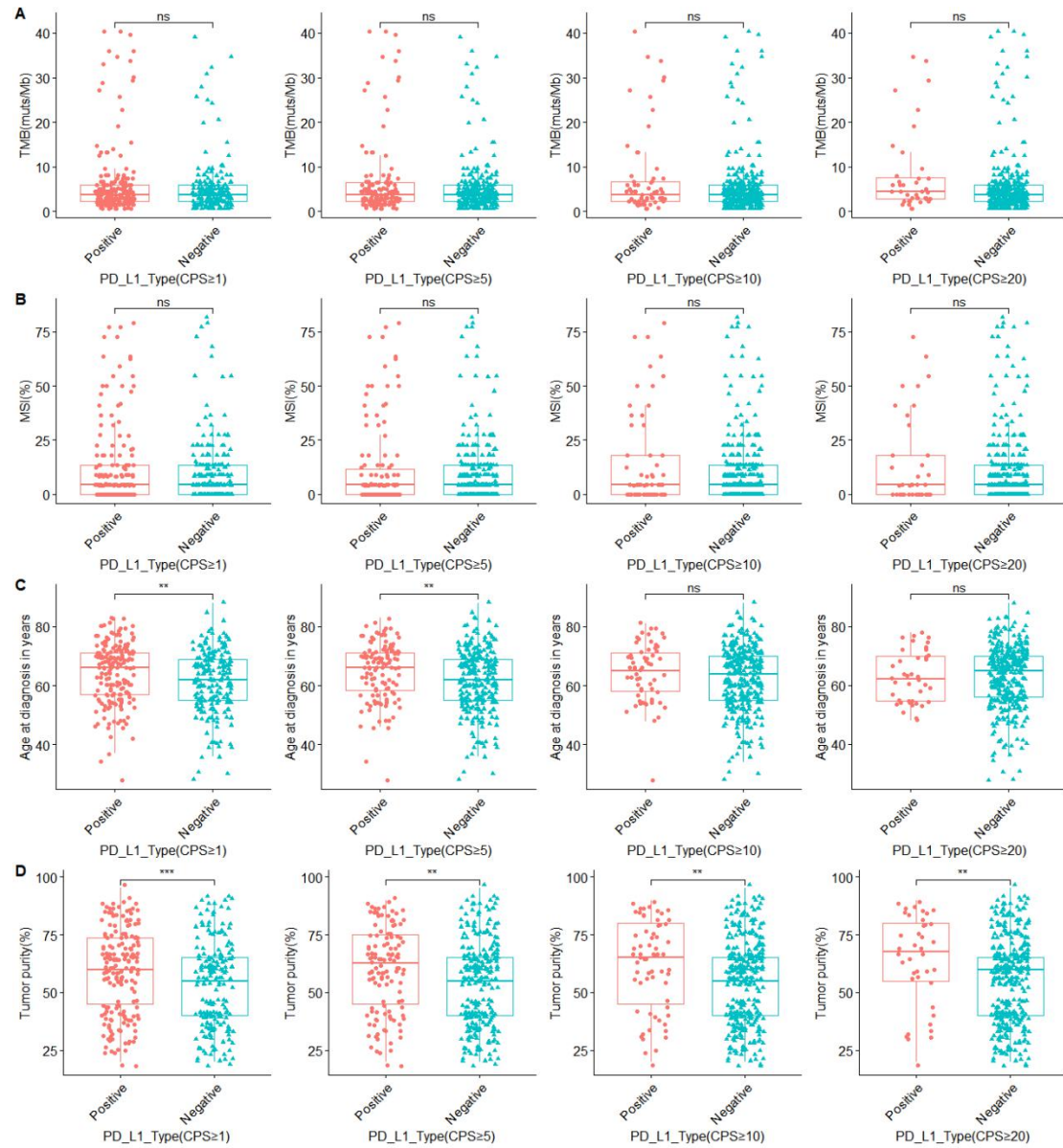
Note: “ns” indicates $P > 0.05$, Wilcoxon test

Figure S3 Analysis of the relationship between PD-L1 expression and *HER2* amplification at CPS score thresholds of 1 (A), 5 (B), 10 (C), and 20 (D)



Note: P values are tested by the chi-square test

Figure S4. The difference analysis of TMB (A), MSI (B), age (C), and tumor purity (D) in different PD-L1 expression groups with CPS score thresholds of 1, 5, 10, and 20



Note: “ns”, “*” and “***” indicate $P > 0.05$, $P < 0.01$ and $P < 0.001$, Wilcoxon test