

Figure S1. (A) miR-625-3p and (B) *AXL* mRNA expression in parental PC9 and gefitinib-resistant PC9GR cell lines. *AXL*, *AXL* receptor tyrosine kinase.

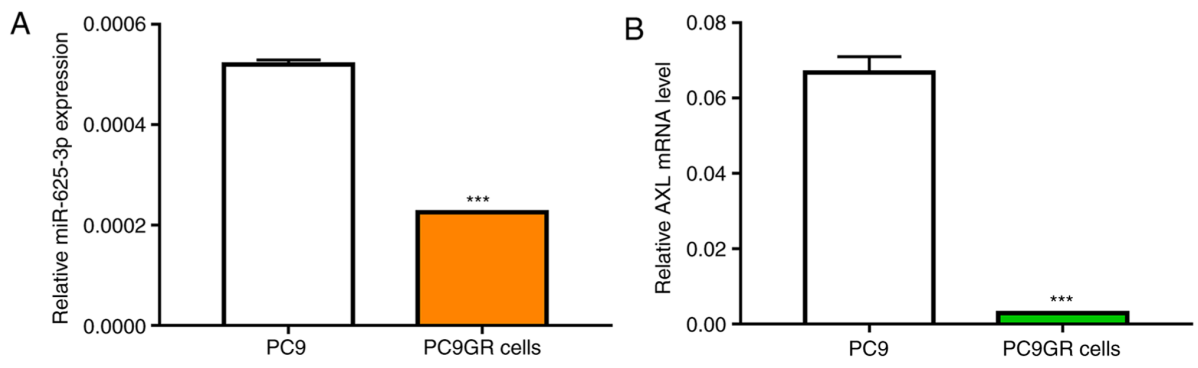


Figure S2. Luciferase activity in HCC827 and gefitinib-resistant HCC827GR cells after co-transfection of the construct containing the wild-type or mutant *AXL* 3'-UTR reporter gene and the miR-625-3p mimics or miR-NC. *AXL*, AXL receptor tyrosine kinase; UTR, untranslated region; NC, negative control.

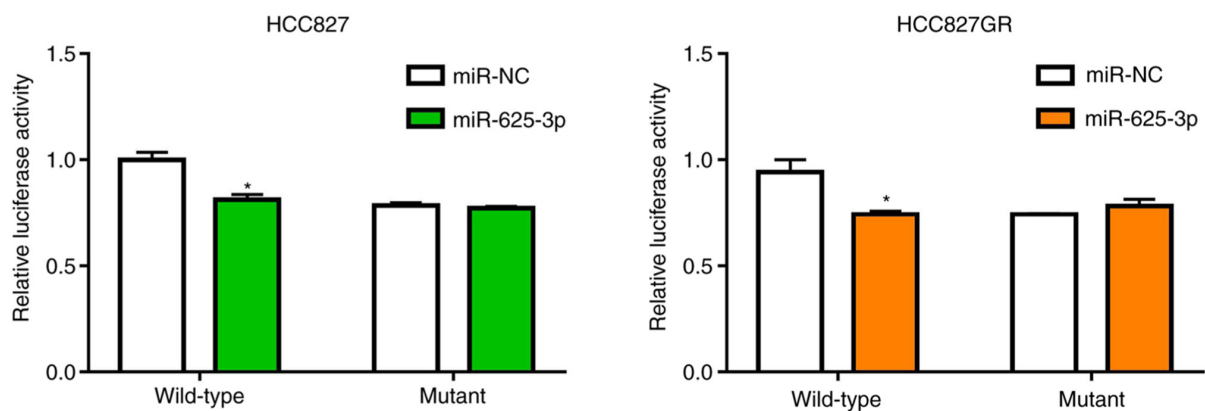


Table SI. List of 357 cancer detection genes.

ABCB1	CDK12	ERCC3 <sup>GR</sup>	IGF2	MYC <sup>GR</sup>	PRKACA	SMARCB1
ABCC2	CDK4	ERCC4	IKBKE	MYCL	PRKAR1A	SMO
ADH1B	CDK6	ERCC5	IKZF1	MYCN <sup>GR</sup>	PRKCI	SOX2
AIP	CDK8	ESR1	IKZF3	MYD88	PRSS1	SPOP
AKT1	CDKN1A	ETV1	IL7R	NAT1	PTCH1	SPRY4
AKT2	CDKN1B	ETV4	INPP4B	NBN	PTEN	SRC
AKT3	CDKN1C	EWSR1	INPP5D	NF1	PTK2	SRY
ALDH2	CDKN2A	EXT1	IRF2	NF2	PTPN11	STAG2
ALK	CDKN2B	EXT2	JAK1	NFKBIA	PTPRD	STAT3
AMER1	CDKN2C	EZH2	JAK2	NKX2-1	QKI	STK11 <sup>GR</sup>
APC <sup>GR</sup>	CEBPA	FANCA <sup>GR</sup>	JAK3	NOTCH1	RAC1	STMN1
AR	CEP57	FANCC <sup>GR</sup>	JUN	NOTCH2	RAD50 <sup>GR</sup>	STT3A
ARAF	CHD4	FANCD2	KDM5A	NPM1	RAD51	SUFU
ARID1A	CHEK1 <sup>GR</sup>	FANCE	KDM6A	NQO1	RAD51C <sup>GR</sup>	TEK
ARID2	CHEK2 <sup>GR</sup>	FANCF	KDR	NRAS	RAD51D <sup>GR</sup>	TEKT4
ARID5B	CREBBP	FANCG	KIF5B	NSD1	RAF1	TERC
ASXL1	CRKL	FANCL	KIT	NTRK1	RARA	TERT
ATM <sup>GR</sup>	CSF1R	FAT1	KITLG	PAK3	RB1 <sup>GR</sup>	TET2
ATR <sup>GR</sup>	CTCF	FBXW7	KLLN	PALB2 <sup>GR</sup>	RECQL4	TGFBR2 <sup>GR</sup>
ATRX	CTLA4	FGF19	KMT2A	PALLD	RET	THADA
AURKA	CTNNB1	FGFR1	KMT2B	PARK2	RHOA	TMEM127
AURKB	CXCR4	FGFR2	KRAS	PARP1	RICTOR	TMPRSS2
AXIN2	CYLD	FGFR3	LHCGR	PARP2	RNF146	TNFAIP3
AXL	CYP19A1	FGFR4	LMO1	PAX5	RNF43	TNFRSF11A
BAK1	CYP2A6	FH	LYN	PBRM1	ROSI	TNFRSF14
BAP1	CYP2B6	FLCN	LZTR1	PCDH11Y	RPTOR	TNFRSF19
BARD1	CYP2C19	FLT1	MAP2K1	PDCD1	RRM1	TNFSF11
BCL2	CYP2C9	FLT3	MAP2K2	PDCD1LG2	RTEL1	TOP1
BCL2L11	CYP2D6	FLT4	MAP2K4	PDE11A	RUNX1	TOP2A
BIRC3	CYP3A4	GATA1	MAP3K1	PDGFRA	SBDS	TP53
BLM <sup>GR</sup>	CYP3A5	GATA2	MAP4K3	PDGFRB	SDC4	TPMT
BMPR1A	DAXX	GATA3	MAX	PDK1	SDHA	TSC1
BRAF	DDR2	GATA4	MCL1	PGR	SDHAF2	TSC2
BRCA1	DENND1A	GATA6	MDM2	PHOX2B	SDHB <sup>GR</sup>	TSHR
BRCA2	DHFR	GNA11	MDM4	PIK3C3	SDHC	TTF1
BRD4	DICER1 <sup>GR</sup>	GNAQ	MED12	PIK3CA	SDHD <sup>GR</sup>	TUBB3
BRIP1 <sup>GR</sup>	DNMT3A	GNAS	MEF2B	PIK3R1	SERP2	TYMS
BTG2	DPYD	GRIN2A	MEN1	PIK3R2	SETBP1	UGT1A1
BTK	DUSP2	GRM3	MET	PKD1	SETD2	VEGFA
BUB1B	EGFR	GSTM1	MGMT	PKD2	SF3B1	VHL <sup>GR</sup>
c11orf30	EML4	GSTP1	MITF	PKHD1	SGK1	WAS
CBL	EP300	GSTT1	MLH1 <sup>GR</sup>	PLK1	SH2D1A	WISP3
CBLB	EPAS1	HDAC2	MLH3 <sup>GR</sup>	PMS1 <sup>GR</sup>	SHOX	WRN
CCND1	EPCAM	HGF	MPL	PMS2 <sup>GR</sup>	SLC34A2	WT1
CCNE1	EPHA2	HNF1A	MRE11A	POLD1	SLC7A8	XPA
CD274	EPHA3	HNF1B	MSH2 <sup>GR</sup>	POLE	SLX4	XPC
CD74	ERBB2	HRAS	MSH3 <sup>GR</sup>	POLH	SMAD2	XRCC1
CDA	ERBB3	HSD3B1	MSH6 <sup>GR</sup>	POT1	SMAD3	YAP1
CDC73	ERBB4	IDH1	MTHFR	PPP2R1A	SMAD4 <sup>GR</sup>	ZNF2
CDH1 <sup>GR</sup>	ERCC1	IDH2	MTOR	PRDM1	SMAD7	ZNF217
CDK10	ERCC2	IGF1R	MUTYH <sup>GR</sup>	PRF1	SMARCA4	ZNF703

Key genes of chemotherapy are highlighted in red. Key genes of targeted treatment are shown in blue. <sup>GR</sup>Genetic risk genes are indicated in green. The remaining genes in purple font are important driver genes.

Table SII. Hiseq-4000 second generation gene high-throughput sequencing.

Cell line	EGFR CNV	EGFR (19-del)	EGFR (20-T790M)
PC9	5.79	Yes	No
PC9GR	3.40	Yes	Yes
HCC827	21.70	Yes	No
HCC827GR	8.10	Yes	No

HCC827GR, gefitinib-resistant HCC827 cells; PC9GR, gefitinib-resistant PC9 cells; EGFR, epidermal growth factor receptor; CNV, copy number variation.