

**Supplementary Table S1.** The effects of gene-gene interactions in homozygous model on the survival of gastric cancer patients receiving platinum-based chemotherapy

combined genotypes	patient	death	MST	P	HR (95%CI) <sup>a</sup>
<b><i>FAS 1377 G&gt; A and FAS 670 A&gt; G</i></b>					
<i>FAS 1377 GG + FAS 670 AA</i>	208	96		0.790	1
<i>FAS 1377 GG + FAS 670 GG</i>	2	1			1.398(0.195-10.036)
<i>FAS 1377AA + FAS 670 AA</i>	1	0			0
<i>FAS 1377AA + FAS 670 GG</i>	51	24			1.112(0.711-1.741)
<b><i>FAS 1377 G&gt; A and FASL 844 C&gt; T</i></b>					
<i>FAS 1377 GG + FASL 844CC</i>	30	11		0.074	1
<i>FAS 1377 GG + FASL 844TT</i>	16	6			0.691(0.252-1.900)
<i>FAS 1377AA + FASL 844CC</i>	9	6			2.508(0.922-6.823)
<i>FAS 1377AA + FASL 844TT</i>	2	0			0
<b><i>FAS 1377 G&gt; A and CASP8 6526 ins &gt; del</i></b>					
<i>FAS 1377 GG + CASP8 6526 II</i>	73	26	68 <sup>b</sup>	0.434	1
<i>FAS 1377 GG + CASP8 6526 DD</i>	6	1	87 <sup>b</sup>		0.378(0.051-2.788)
<i>FAS 1377AA + CASP8 6526 II</i>	12	6	30		1.691(0.693-4.127)
<i>FAS 1377AA + CASP8 6526 DD</i>	2	1	18		1.470(0.199-10.863)
<b><i>FAS 670 A&gt; G and FASL 844 C&gt; T</i></b>					
<i>FAS 670AA + FASL 844CC</i>	23	9	55 <sup>b</sup>	0.218	1
<i>FAS 670AA + FASL 844TT</i>	13	4	62 <sup>b</sup>		0.526(0.160-1.730)
<i>FAS 670GG + FASL 844CC</i>	13	8	19		1.737(0.668-4.520)
<i>FAS 670GG + FASL 844TT</i>	3	1	36		0.688(0.087-5.456)
<b><i>FAS 670 A&gt; G and CASP8 6526 ins &gt; del</i></b>					
<i>FAS 670AA + CASP8 6526 II</i>	65	23	68 <sup>b</sup>	0.622	1
<i>FAS 670AA + CASP8 6526 DD</i>	5	1	87 <sup>b</sup>		0.430(0.058-3.192)
<i>FAS 670GG + CASP8 6526 II</i>	19	9	55		1.384(0.640-2.993)
<i>FAS 670GG + CASP8 6526 DD</i>	2	1	18		1.553(0.209-11.549)
<b><i>FASL 844 C&gt; T and CASP8 6526 ins &gt; del</i></b>					
<i>FASL 844CC + CASP8 6526 II</i>	40	19		0.477	1

<i>FASL</i> 844CC + <i>CASP8</i> 6526 DD	4	2			1.025(0.238-4.410)
<i>FASL</i> 844TT + <i>CASP8</i> 6526 II	19	8			0.635(0.276-1.460)
<i>FASL</i> 844TT + <i>CASP8</i> 6526 DD	2	0			0

<sup>a</sup>Adjusted for age and sex.

<sup>b</sup>Mean survival time was provided when MST could not be calculated.

**Supplementary table S2.** The effects of gene-gene interactions in heterozygous model on the survival of gastric cancer patients receiving platinum-based chemotherapy

combined genotypes	patient	death	MST	P	HR (95%CI) <sup>a</sup>
<b><i>FAS 1377 G&gt; A and FAS 670 A&gt; G</i></b>					
<i>FAS 1377 GG + FAS 670 AA</i>	93	33	69 <sup>b</sup>	<0.001	1
<i>FAS 1377 GG + FAS 670 GA</i>	19	7	50 <sup>b</sup>		1.128(0.499-2.552)
<i>FAS 1377GA + FAS 670 AA</i>	1	1	5		40.84(4.925-338.6)
<i>FAS 1377GA + FAS 670 GA</i>	96	51	43		1.830(1.179-2.840)
<b><i>AS 1377 G&gt; A and FASL 844 C&gt; T</i></b>					
<i>FAS 1377 GG + FASL 844CC</i>	30	11	57 <sup>b</sup>	0.049	1
<i>FAS 1377 GG + FASL 844TC</i>	63	22	70 <sup>b</sup>		0.762(0.368-1.579)
<i>FAS 1377 GA + FASL 844CC</i>	31	14	36 <sup>b</sup>		1.357(0.616-2.990)
<i>FAS 1377 GA + FASL 844TC</i>	68	40	35		1.533(0.786-2.993)
<b><i>FAS 1377 G&gt; A and CASP8 6526 ins &gt; del</i></b>					
<i>FAS 1377 GG + CASP8 6526 II</i>	73	26	68 <sup>b</sup>	0.037	1
<i>FAS 1377 GG + CASP8 6526 DI</i>	32	12	56 <sup>b</sup>		1.036(0.523-2.053)
<i>FAS 1377 GA + CASP8 6526 II</i>	66	38	43		1.918(1.164-3.162)
<i>FAS 1377 GA + CASP8 6526 DI</i>	39	19	33		1.627(0.899-2.945)
<b><i>FAS 670 A&gt; G and FASL 844 C&gt; T</i></b>					
<i>FAS 670AA + FASL 844CC</i>	23	9	55 <sup>b</sup>	0.185	1
<i>FAS 670AA + FASL 844TC</i>	56	21	68 <sup>b</sup>		0.778(0.355-1.705)
<i>FAS 670GA + FASL 844CC</i>	34	14	32 <sup>b</sup>		1.156(0.500-2.673)
<i>FAS 670GA+ FASL 844TC</i>	69	39	35		1.384(0.670-2.860)
<b><i>FAS 670 A&gt; G and CASP8 6526 ins &gt; del</i></b>					
<i>FAS 670AA + CASP8 6526 II</i>	65	23	68 <sup>b</sup>	0.075	1
<i>FAS 670AA + CASP8 6526 DI</i>	22	9	54 <sup>b</sup>		1.148(0.531-2.481)
<i>FAS 670GA+ CASP8 6526 II</i>	68	38	43		1.904(1.133-3.198)
<i>FAS 670GA + CASP8 6526 DI</i>	42	20	51 <sup>b</sup>		1.593(0.873-2.907)
<b><i>FASL 844 C&gt; T and CASP8 6526 ins &gt; del</i></b>					
<i>FASL 844CC + CASP8 6526 II</i>	40	19	49 <sup>b</sup>	0.803	1

<i>FASL</i> 844CC + <i>CASP8</i> 6526 DI	25	9	33 <sup>b</sup>		0.733(0.331-1.621)
<i>FASL</i> 844TC + <i>CASP8</i> 6526 II	89	43	52		0.842(0.490-1.448)
<i>FASL</i> 844TC + <i>CASP8</i> 6526 DI	44	24	30		0.984(0.538-1.799)

<sup>a</sup>Adjusted for age and sex.

<sup>b</sup>Mean survival time was provided when MST could not be calculated.

**Supplementary Table S3.** The effects of gene-gene interactions in dominant model on the survival of gastric cancer patients receiving platinum-based chemotherapy

combined genotypes	patient	death	MST	P	HR (95%CI) <sup>a</sup>
<b>FAS 1377 G&gt; A and FAS 670 A&gt; G</b>					
FAS 1377 GG + FAS 670 AA	93	33	69 <sup>b</sup>	<0.001	1
FAS 1377 GG + FAS 670 GA+GG	19	7	50 <sup>b</sup>		1.132(0.501-2.559)
FAS 1377 GA+AA + FAS 670 AA	1	1	5		39.245(4.86-316.6)
FAS 1377 GA+AA + FAS 670 GA+GG	135	71	43		1.808(1.195-2.737)
<b>AS 1377 G&gt; A and FASL 844 C&gt; T</b>					
FAS 1377 GG + FASL 844CC	30	11	57 <sup>b</sup>	0.012	1
FAS 1377 GG + FASL 844TC+TT	79	28	70		0.734(0.364-1.480)
FAS 1377 GA+AA + FASL 844CC	40	20	23		1.568(0.751-3.274)
FAS 1377 GA+AA + FASL 844 TC+TT	94	53	36		1.449(0.765-2.777)
<b>FAS 1377 G&gt; A and CASP8 6526 ins &gt; del</b>					
FAS 1377 GG + CASP8 6526 II	73	26	68 <sup>b</sup>	0.012	1
FAS 1377 GG + CASP8 6526 DD+DI	38	13	71 <sup>b</sup>		0.912(0.469-1.775)
FAS 1377 GA+AA + CASP8 6526 II	78	44	43		1.889(1.162-3.070)
FAS 1377 GA+AA + CASP8 6526 DD+DI	57	29	33		1.757(1.033-2.990)
<b>FAS 670 A&gt; G and FASL 844 C&gt; T</b>					
FAS 670AA + FASL 844CC	23	9	55 <sup>b</sup>	0.068	1
FAS 670 AA + FASL 844TC+TT	69	25	70 <sup>b</sup>		0.704(0.328-1.513)
FAS 670 GA+GG + FASL 844CC	47	22	35 <sup>b</sup>		1.322(0.608-2.873)
FAS 670 GA+GG + FASL 844 TC+TT	105	57	39		1.263(0.625-2.554)
<b>FAS 670 A&gt; G and CASP8 6526 ins &gt; del</b>					
FAS 670AA + CASP8 6526 II	65	23	68 <sup>b</sup>	0.059	1
FAS 670AA + CASP8 6526 DD+DI	27	10	70 <sup>b</sup>		0.984(0.468-2.068)
FAS 670 GA+GG + CASP8 6526 II	87	47	43		1.790(1.086-2.950)
FAS 670 GA+GG + CASP8 6526 DD+DI	65	31	37		1.630(0.948-2.801)
<b>FASL 844 C&gt; T and CASP8 6526 ins &gt; del</b>					
FASL 844CC + CASP8 6526 II	40	19	49 <sup>b</sup>	0.833	1

<i>FASL 844CC + CASP8 6526 DD+DI</i>	29	11	32 <sup>b</sup>		0.782(0.372-1.644)
<i>FASL 844 TC+TT + CASP8 6526 II</i>	108	51	52		0.785(0.463-1.333)
<i>FASL 844 TC+TT + CASP8 6526 DD+DI</i>	61	30	51		0.824(0.463-1.466)

<sup>a</sup>Adjusted for age and sex.

<sup>b</sup>Mean survival time was provided when MST could not be calculated.

**Supplementary Table S4.** Primers for the genotyping assays of Fas, FasL, CASP8

Genotypes	Forward primer	Reverse primer	Extension primer
FAS rs2234767 1377 G > A	TTTGTGTCTATTAGATG CTCAGAGTGTGTG	gactgttagtgccatgaggAAGACC	TTTTTTTTCCATGAGGA AGACCCTGGG
FAS rs1800682 670 A > G	TTGTGGCTGCAACATGAG AGG	TGGCGAACATCTGTACTTT TTCA	TTTTTTTTTTTTTCAT GAGAGGCTCACRGACG TT
FASL rs763110 C > T	taaataaaCTGGGCAAACAAT GAAAATG	AAACCAGTGGAACCCACAG AGC	TTTTTTTTTTTTTTTT TTTTTTTTGCAAACAA TGAAAATGAAAACATTG
CASP8 -652 6N ins > del	ccgaggaaggcactgagacg	GCTTAWAAAGCCATAGTaattc ttgctctgc	