

Figure 1.

PAM 50 subtype

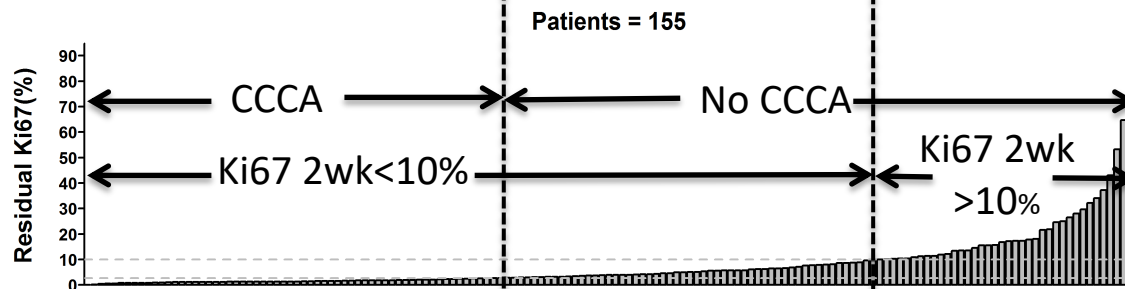
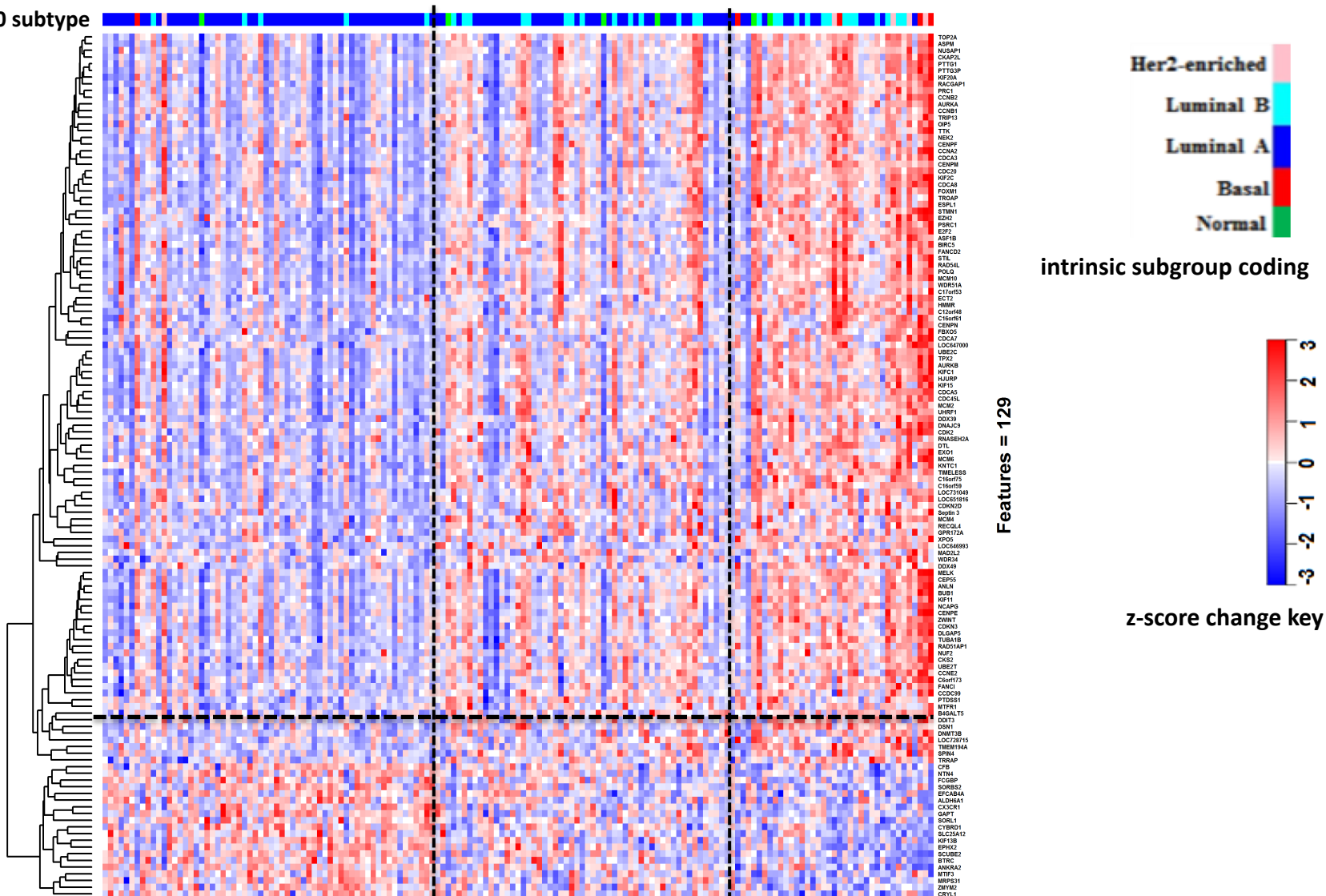


Figure 2.

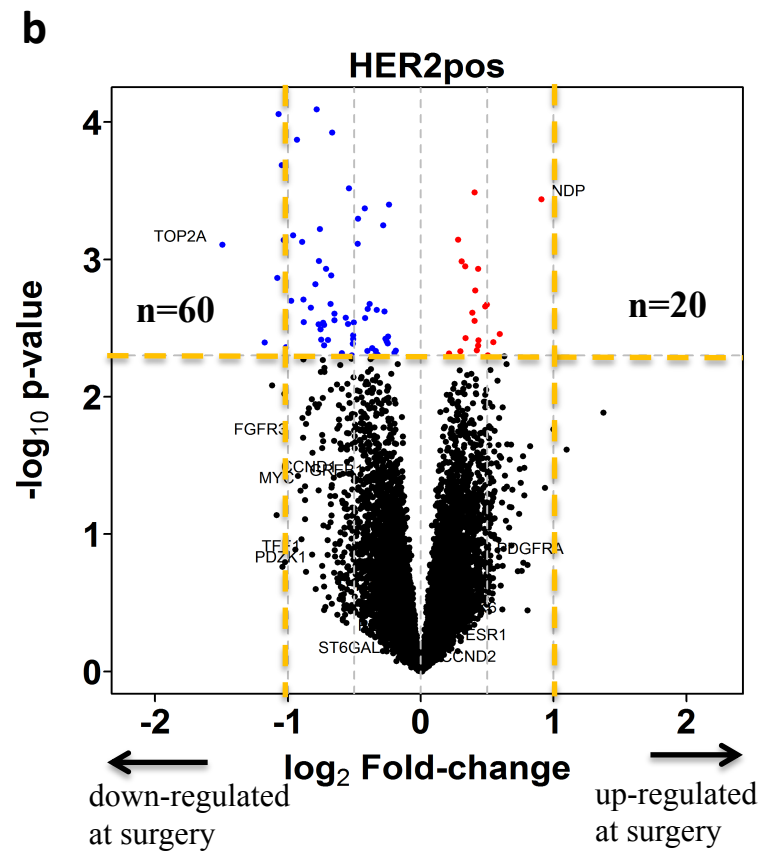
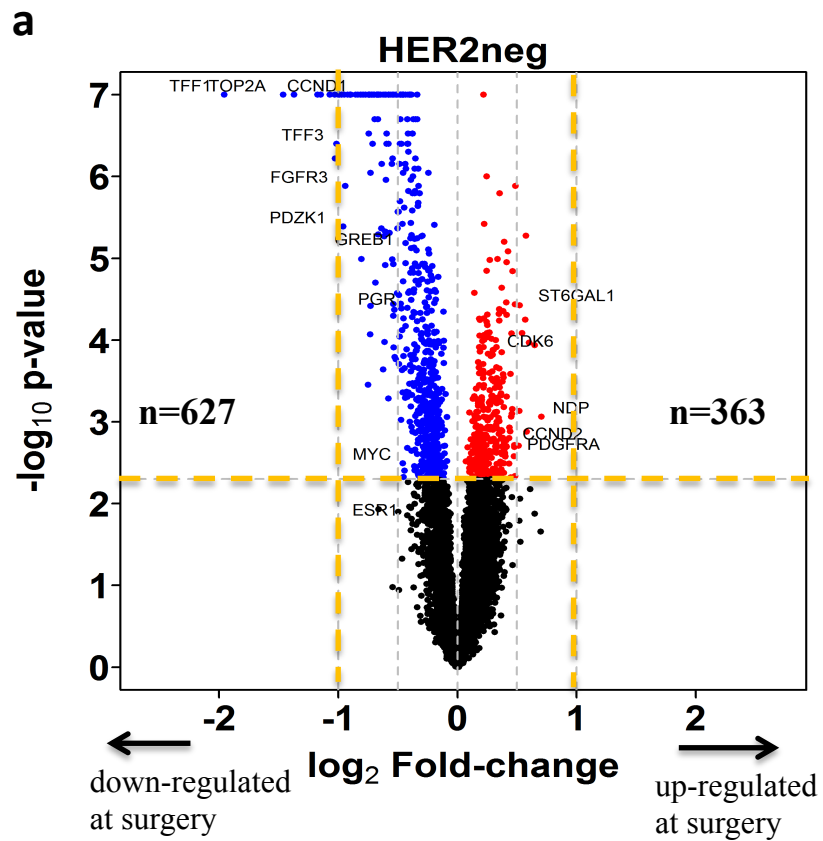
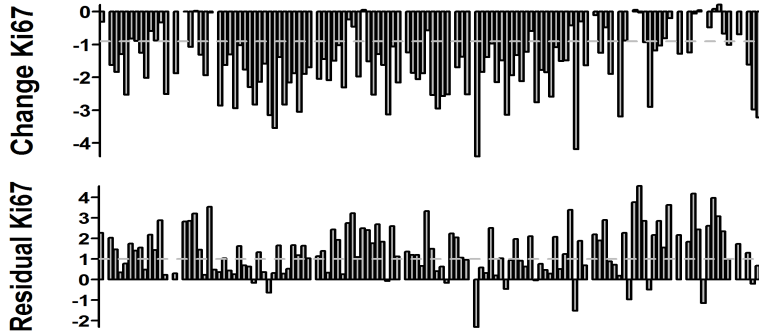
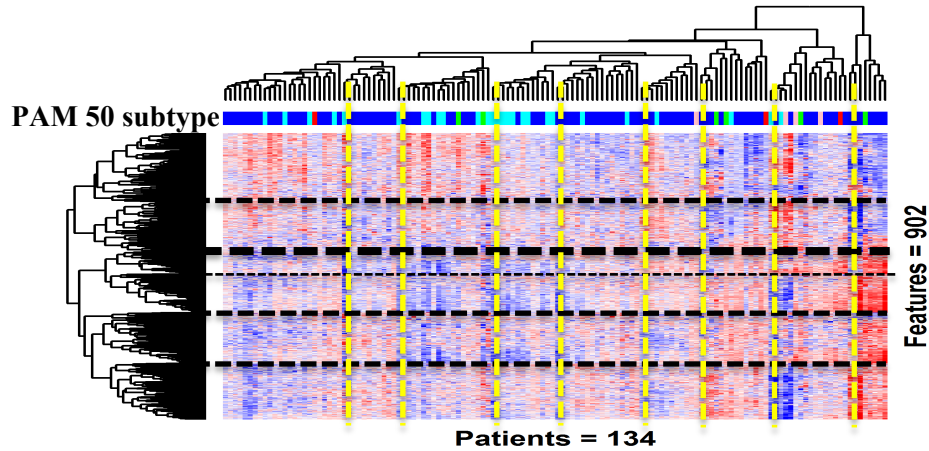
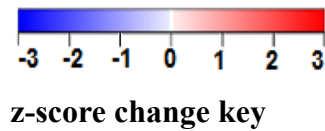


Figure 3.

a

Her2-enriched
Luminal B
Luminal A
Basal
Normal



intrinsic subgroup coding

b

positive z-score □ z-score = 0 ■ negative z-score ■ no activity pattern available

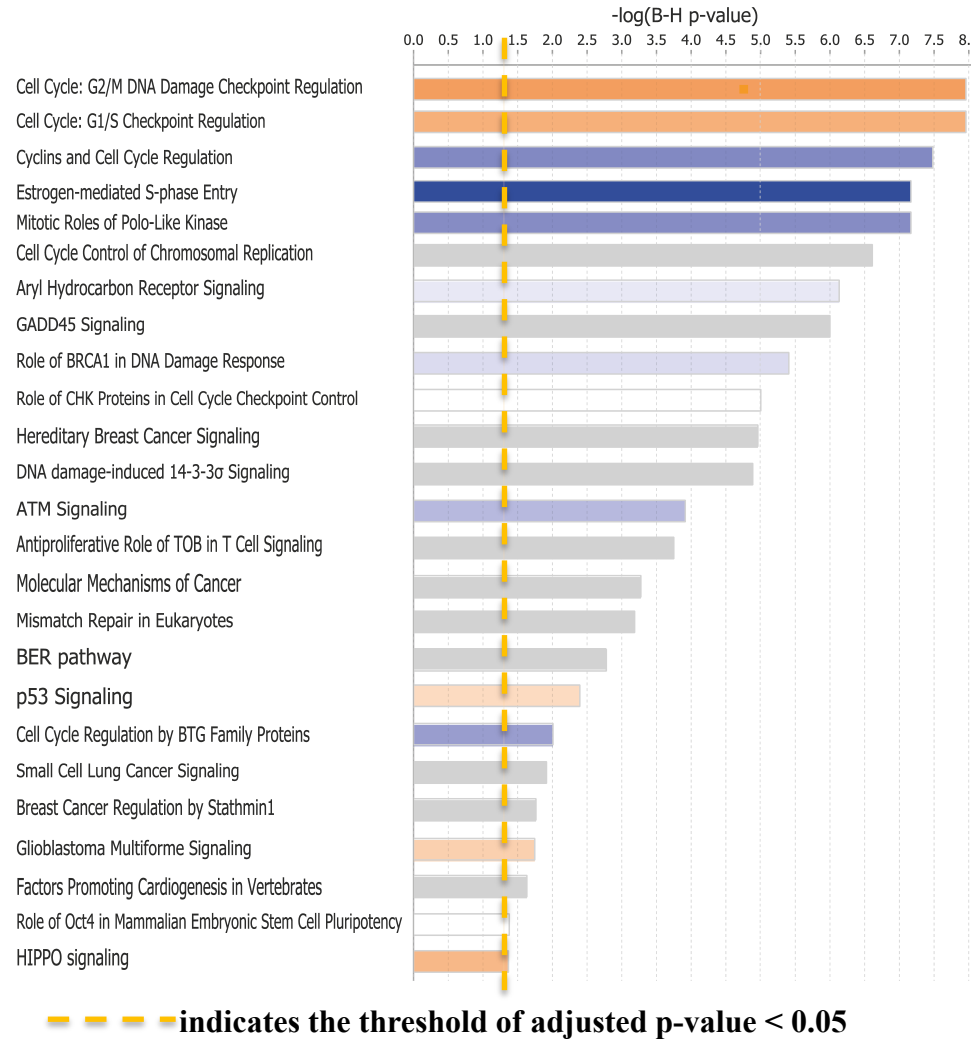
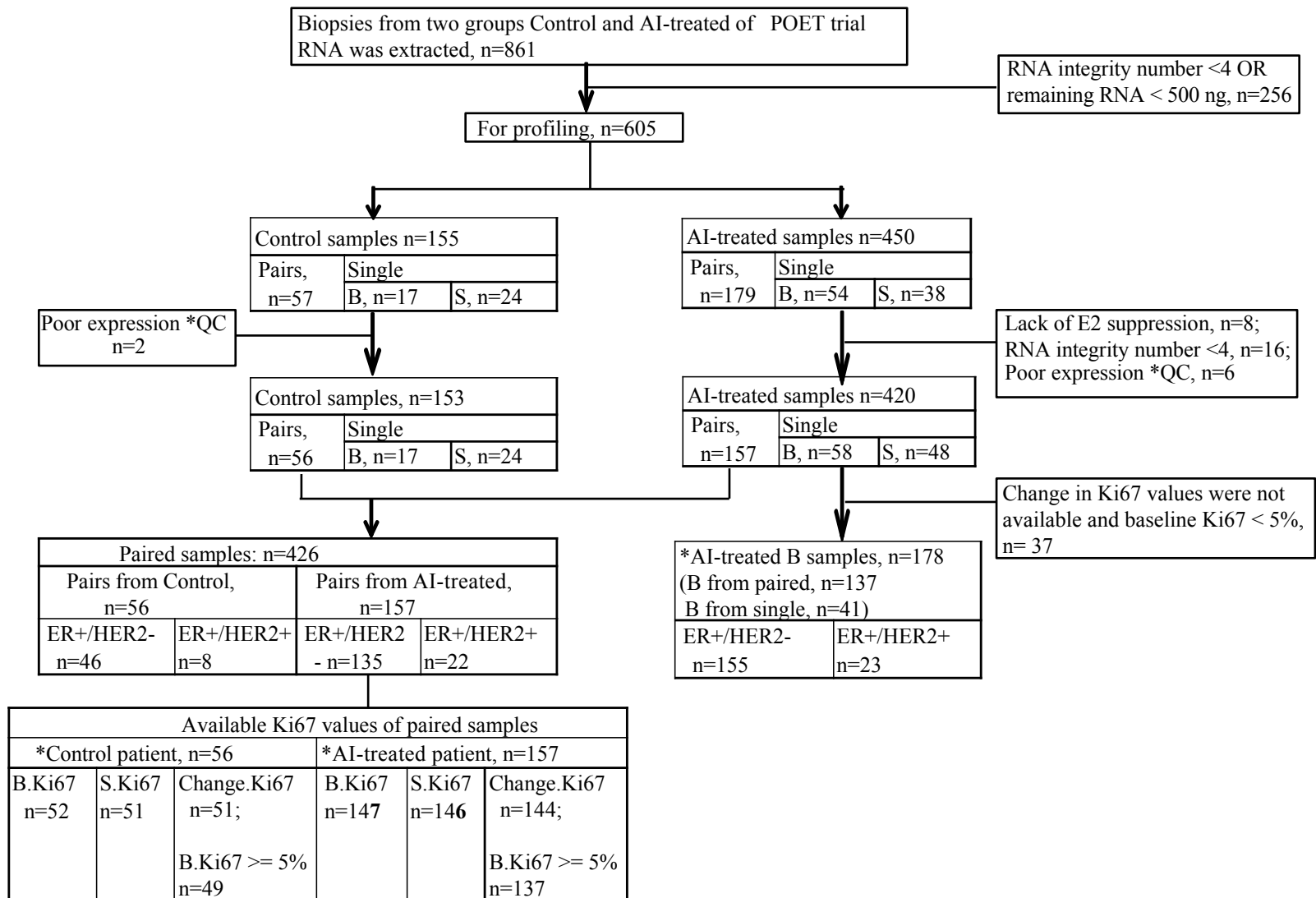


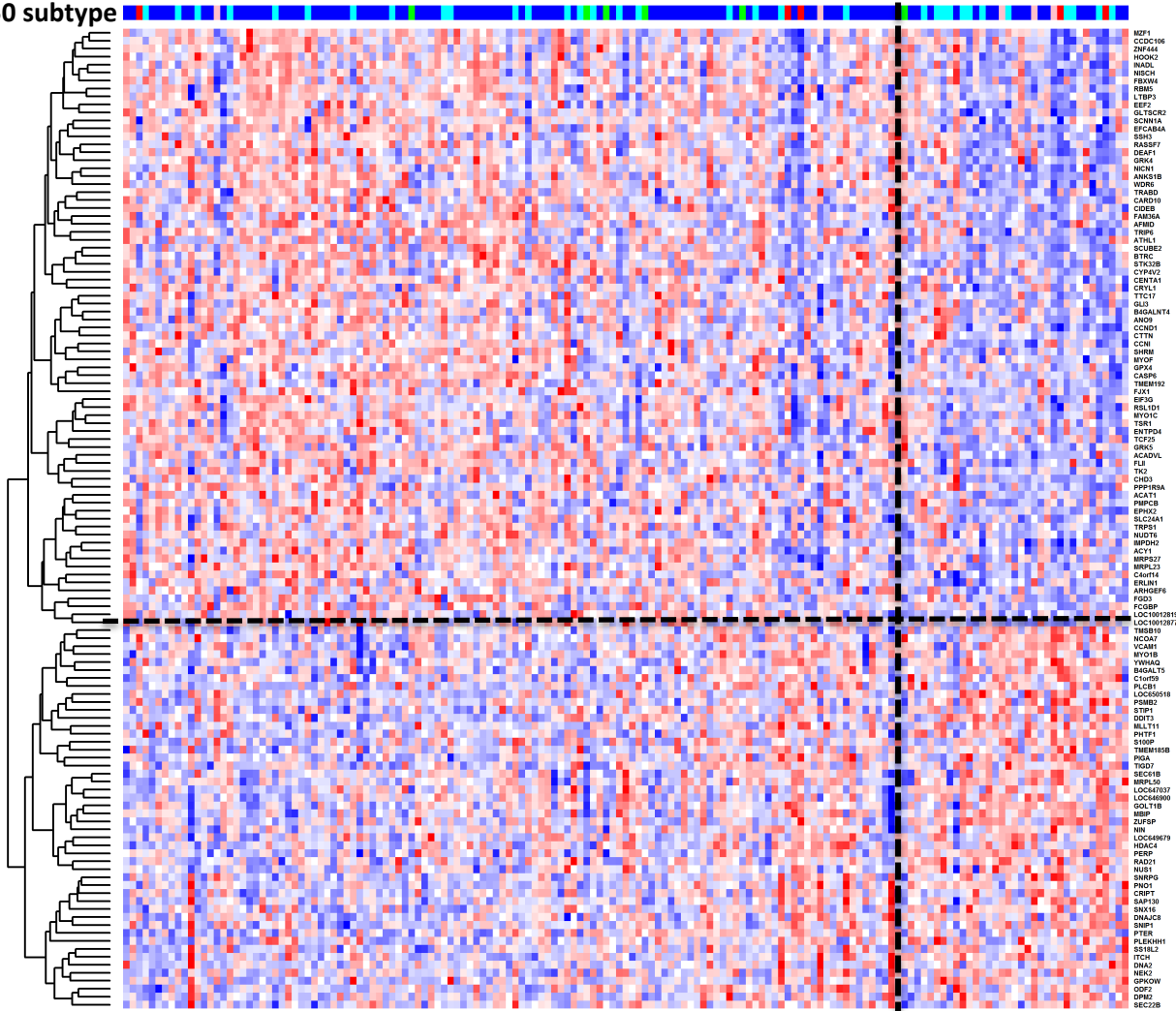
Figure 4



- * Number of patients' data used in the study from
- no presurgical treatment group, n = 56
 - 2 week's presurgical AI group : n = 198 (157 + 41)

**Additional file 3:
Figure S1**

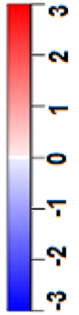
PAM50 subtype



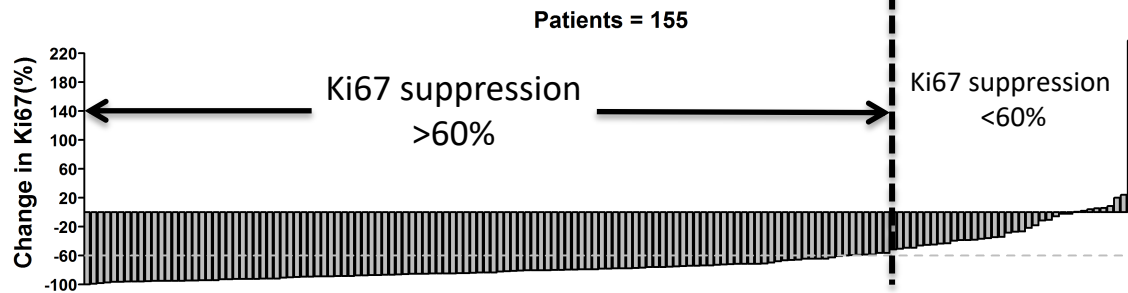
Her2-enriched
Luminal B
Luminal A
Basal
Normal

intrinsic subgroup coding

Features = 123

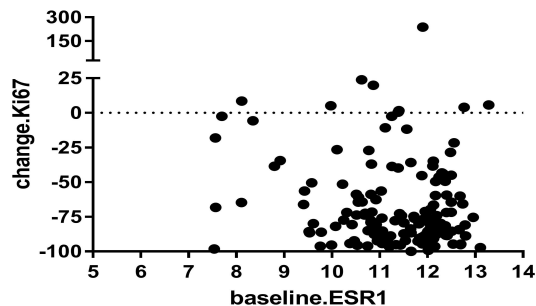


z-score change key



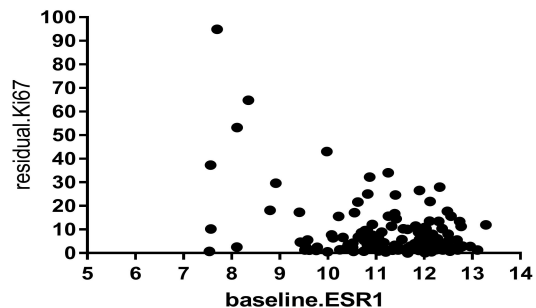
Additional file 4:
Figure S2

a POETIC HER2- (n=155) baselineESR1 change in Ki67



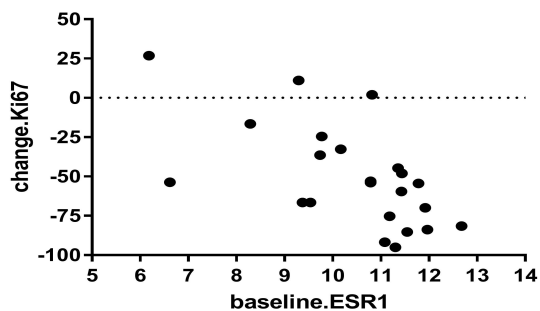
	baseline.ESR1 vs. change.Ki67
Spearman r	
r	-0.1099
95% confidence interval	-0.2673 to 0.0533
P value	
P (two-tailed)	0.1735
P value summary	ns
Exact or approximate P value?	Approximate
Significant? (alpha = 0.05)	No
Number of XY Pairs	155

b POETIC HER2- (n=155) baselineESR1 residual Ki67



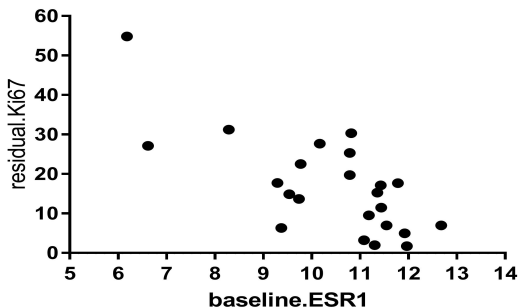
	baseline.ESR1 vs. residual.Ki67
Spearman r	
r	-0.1558
95% confidence interval	-0.3102 to 0.00657
P value	
P (two-tailed)	0.0529
P value summary	ns
Exact or approximate P value?	Approximate
Significant? (alpha = 0.05)	No
Number of XY Pairs	155

c POETIC HER2+ (n=23) baselineESR1 change in Ki67



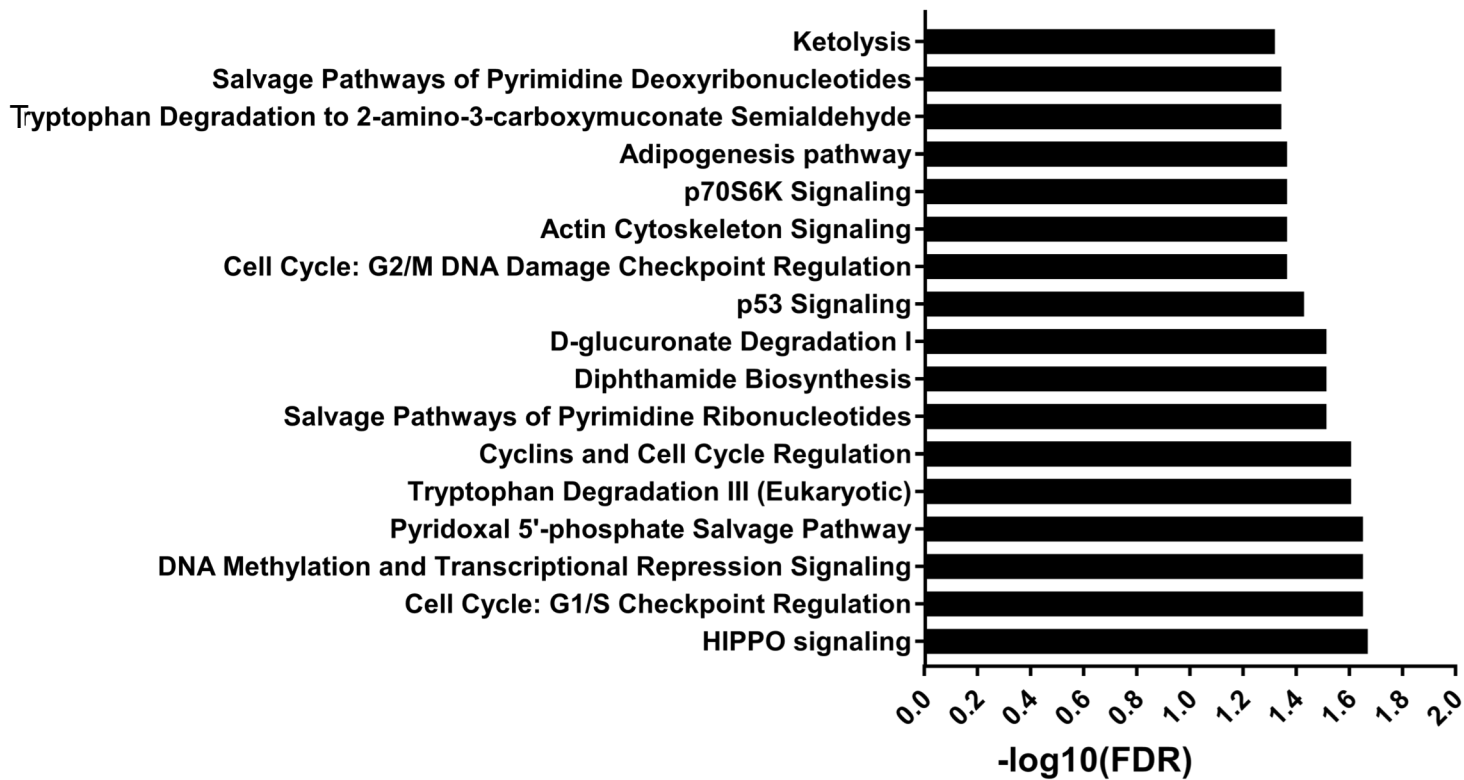
	baseline.ESR1 vs. change.Ki67
Spearman r	
r	-0.6077
95% confidence interval	-0.8199 to -0.2487
P value	
P (two-tailed)	0.0021
P value summary	**
Exact or approximate P value?	Approximate
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	23

d POETIC HER2+ (n=23) baselineESR1 residual Ki67

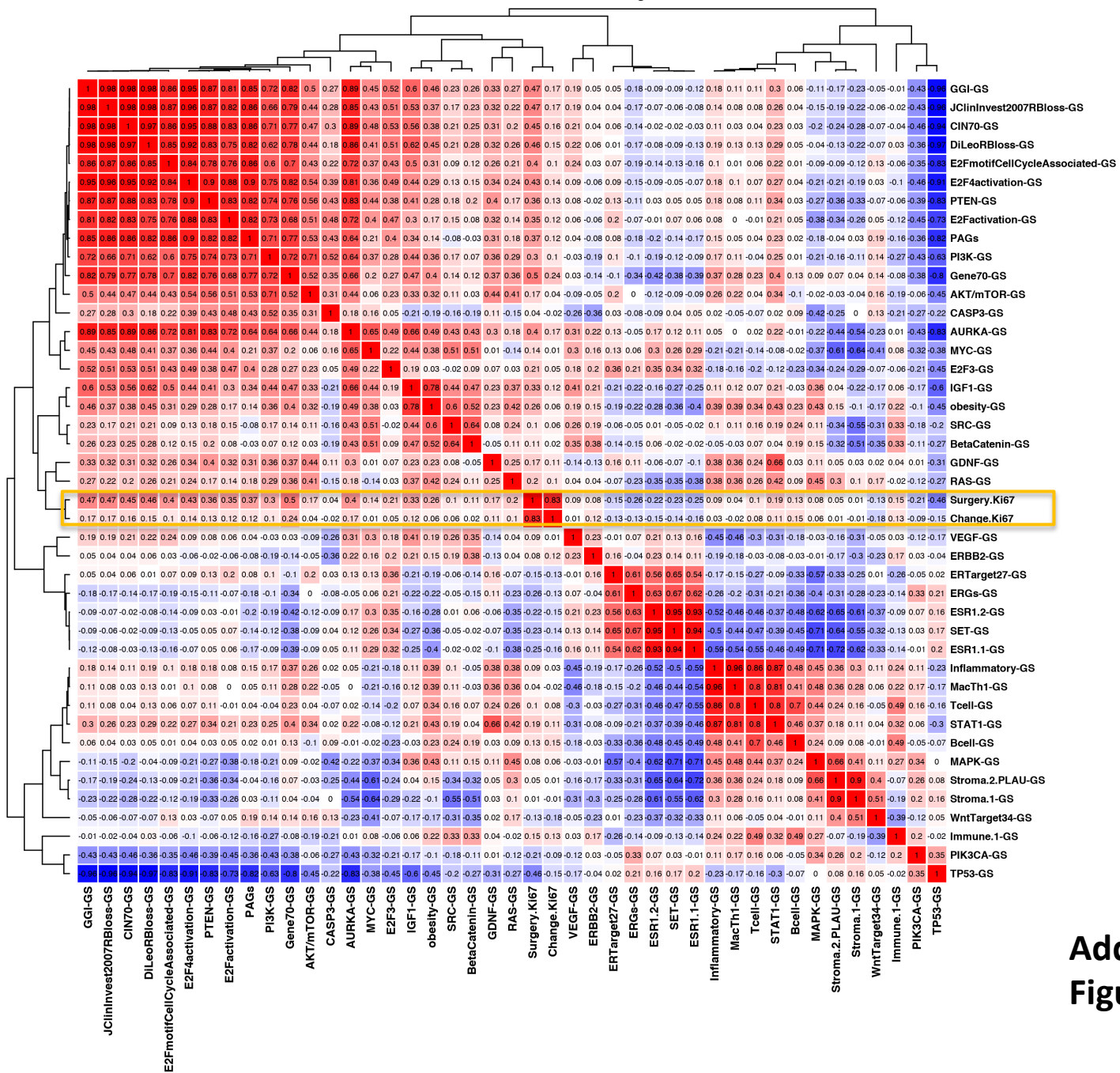


	baseline.ESR1 vs. residual.Ki67
Spearman r	
r	-0.6156
95% confidence interval	-0.824 to -0.2605
P value	
P (two-tailed)	0.0018
P value summary	**
Exact or approximate P value?	Approximate
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	23

**Additional file 5:
Figure S3**



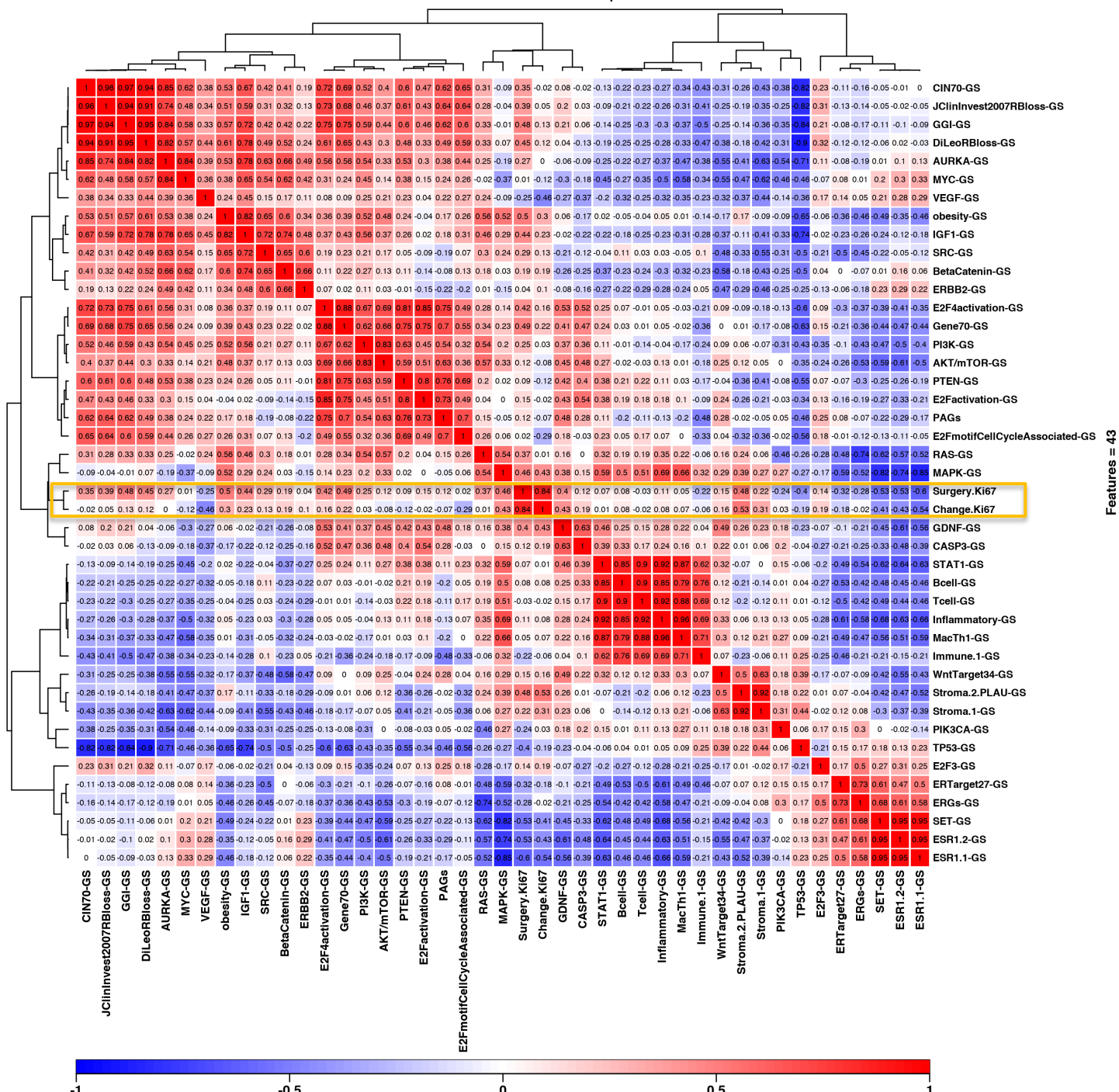
**Additional file 6:
Figure. S4**



Features = 43

Additional file 7:
Figure S5a

B.HER2pos

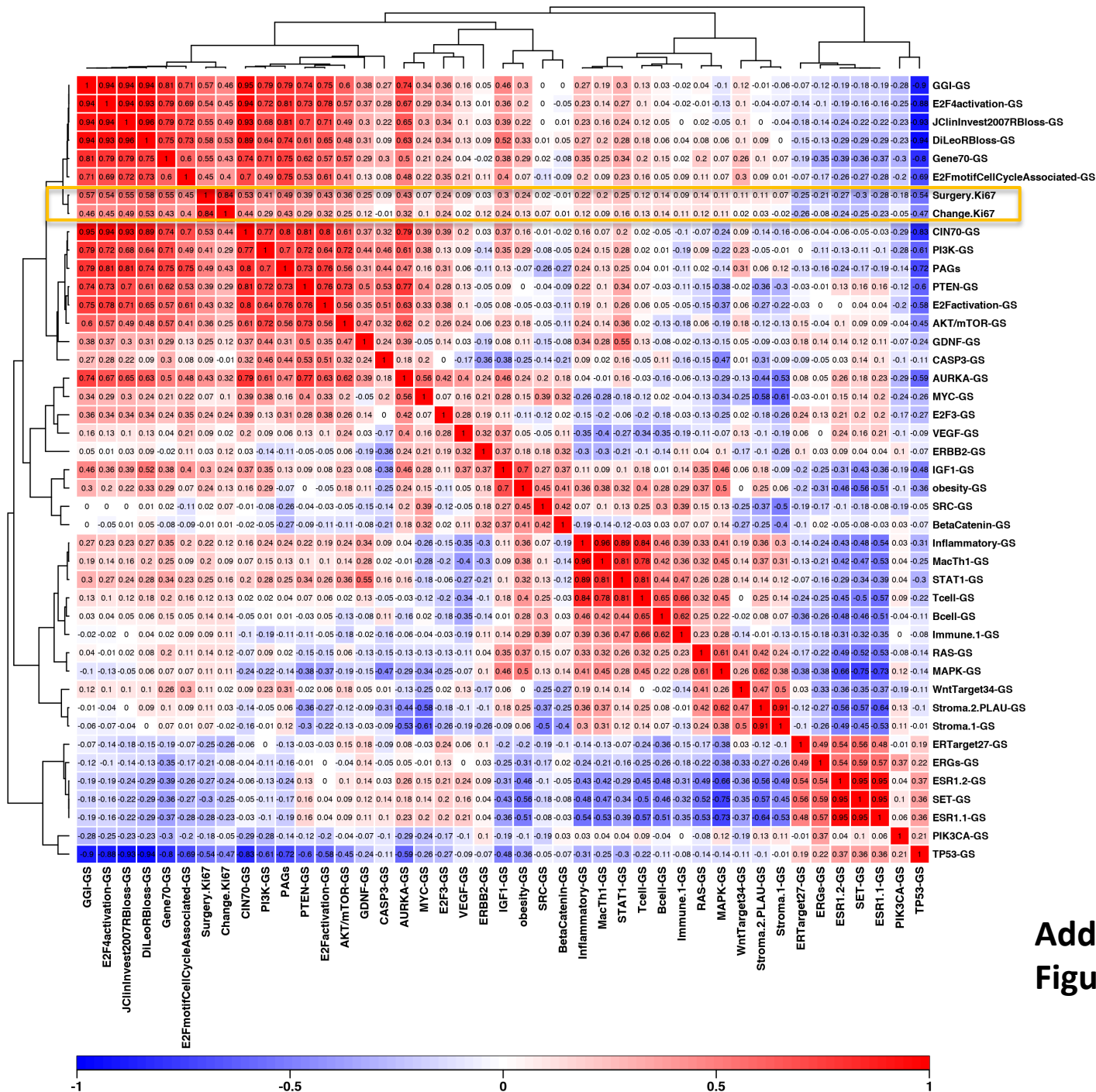


Additional file 7:
Figure S5b

Pathways	#	CDK2	CCNE1	BRCA1	CCNE2	CDK1	CCND1	CHEK1	E2F2	E2F5	CCNB1	CDC25A	CDC25C	CDK6	SKP2	CCNB2	CCND2	PPM1J	SFN	TGFB3	MYC	PCNA	PLK1	SMAD4	CCNA2	FANCD2	RFC5,SLC19A1	AURKA	BLM	CDKN2D	FAS	FOXO1	FZD7	HDAC11	KAT2B	MSH6	PKMYT1	PRKCA	SMARCA4	SUV39H1	TGFB2								
Cell Cycle: G2/MDNA Damage Checkpoint Regulation	12																																																
Cell Cycle: G1/S Checkpoint Regulation	17																																																
Cyclins and Cell Cycle Regulation	19																																																
Estrogen-mediated S-phase Entry	11																																																
Mitotic Roles of Polo-Like Kinase	8																																																
Cell Cycle Control of Chromosomal Replication	2																																																
Aryl Hydrocarbon Receptor Signaling	12																																																
GADD45 Signaling	9																																																
Role of BRCA1 in DNA Damage Response	10																																																
Role of CHK Proteins in Cell Cycle Checkpoint Control	12																																																
Hereditary Breast Cancer Signaling	14																																																
DNA damage-induced 14-3-3 σ Signaling	8																																																
ATM Signaling	10																																																
Antiproliferative Role of TOB in T Cell Signaling	8																																																
Molecular Mechanisms of Cancer	24																																																
Mismatch Repair in Eukaryotes	3																																																
BER pathway	1																																																
p53 Signaling	9																																																
Cell Cycle Regulation by BTG Family Proteins	7																																																
Small Cell Lung Cancer Signaling	12																																																
Breast Cancer Regulation by Stathmin1	8																																																
Glioblastoma Multiforme Signaling	9																																																
Factors Promoting Cardiogenesis in Vertebrates	8																																																
Role of Oct4 in Mammalian Embryonic Stem Cell Pluripotency	1																																																
HIPPO signaling	4																																																

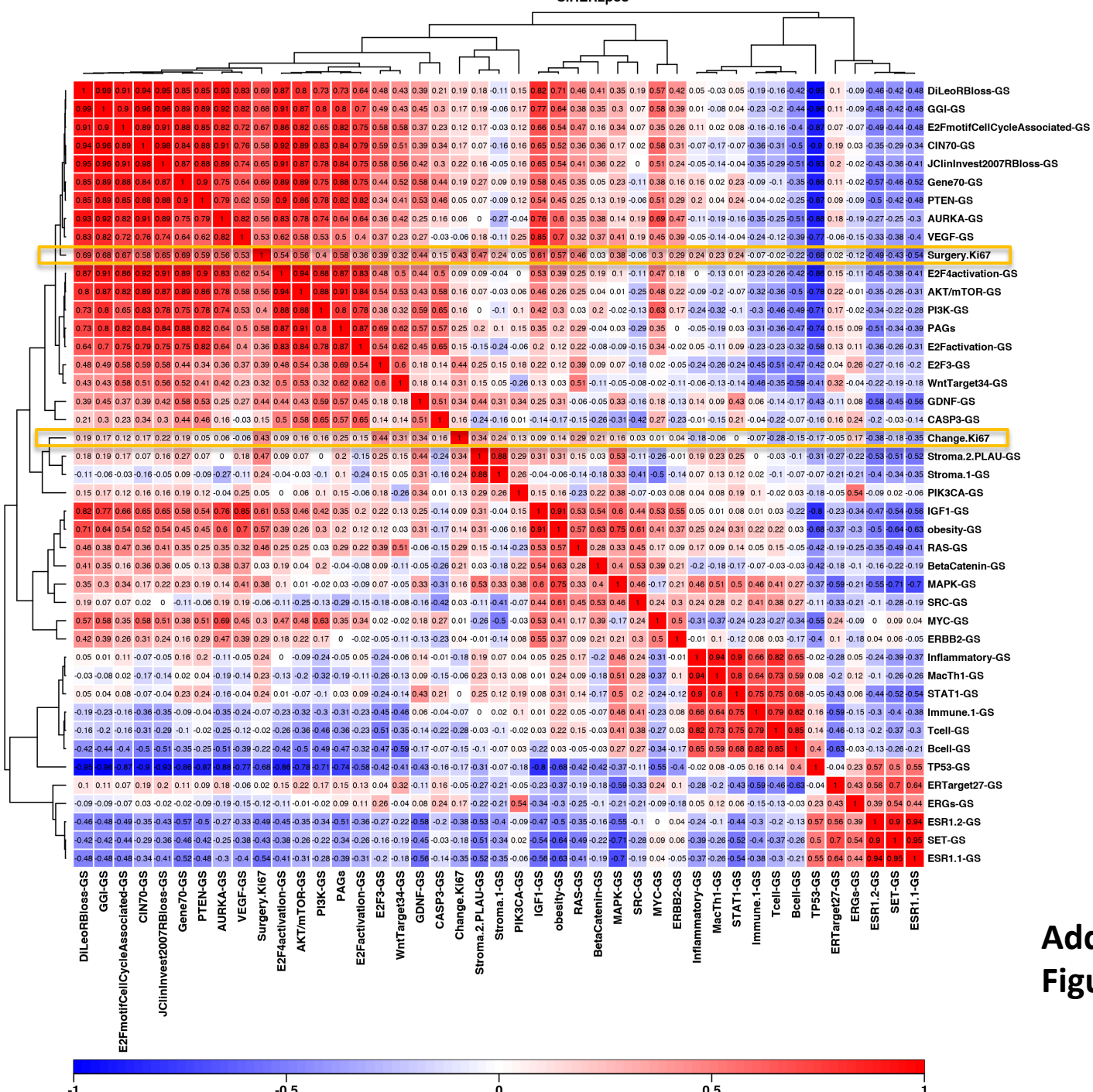
**Additional file 9:
Figure S6**

S.HER2neg



Additional file 10:
Figure S7a

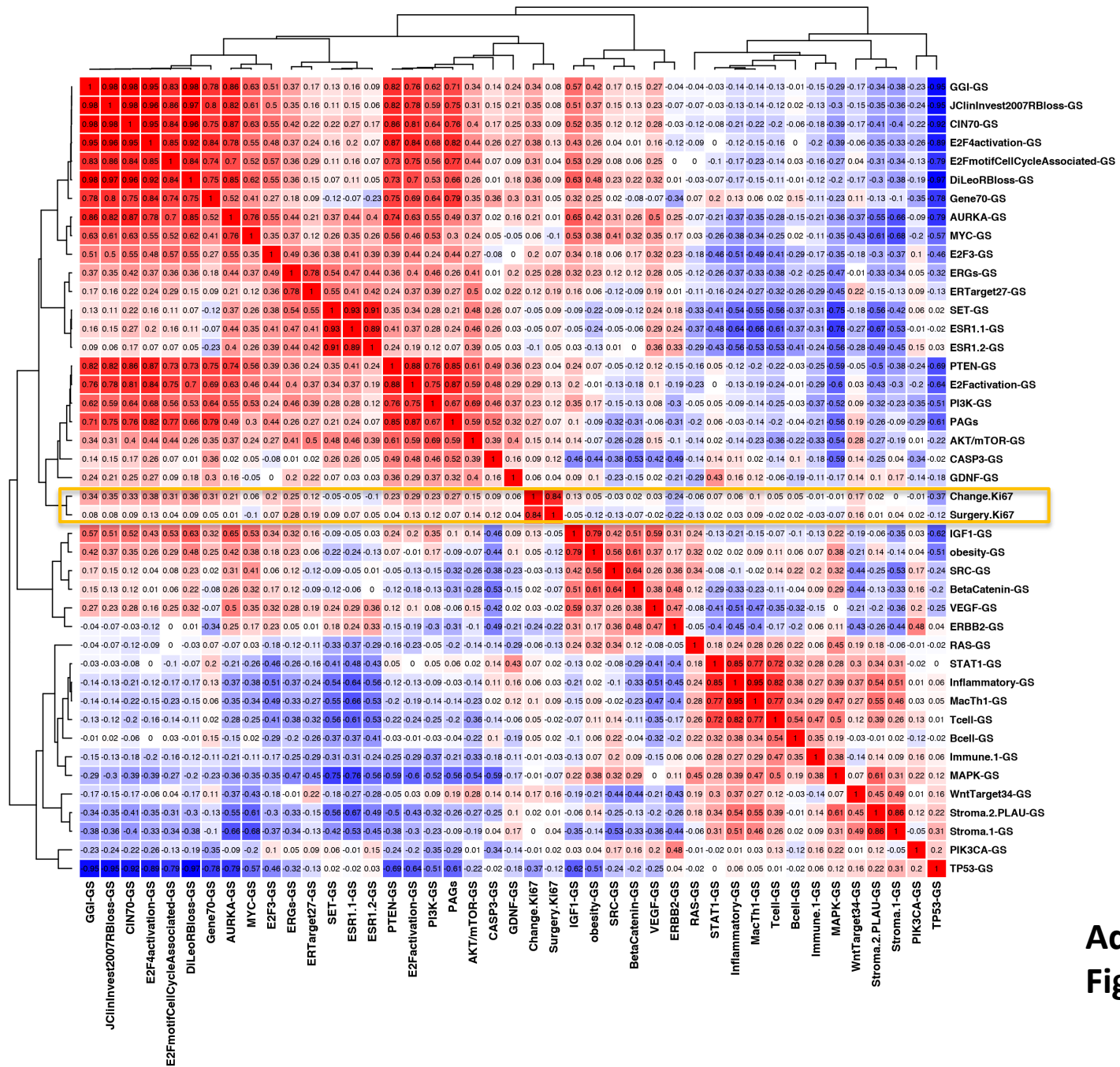
S.HER2pos



Features = 43

Additional file 10:
Figure S7b

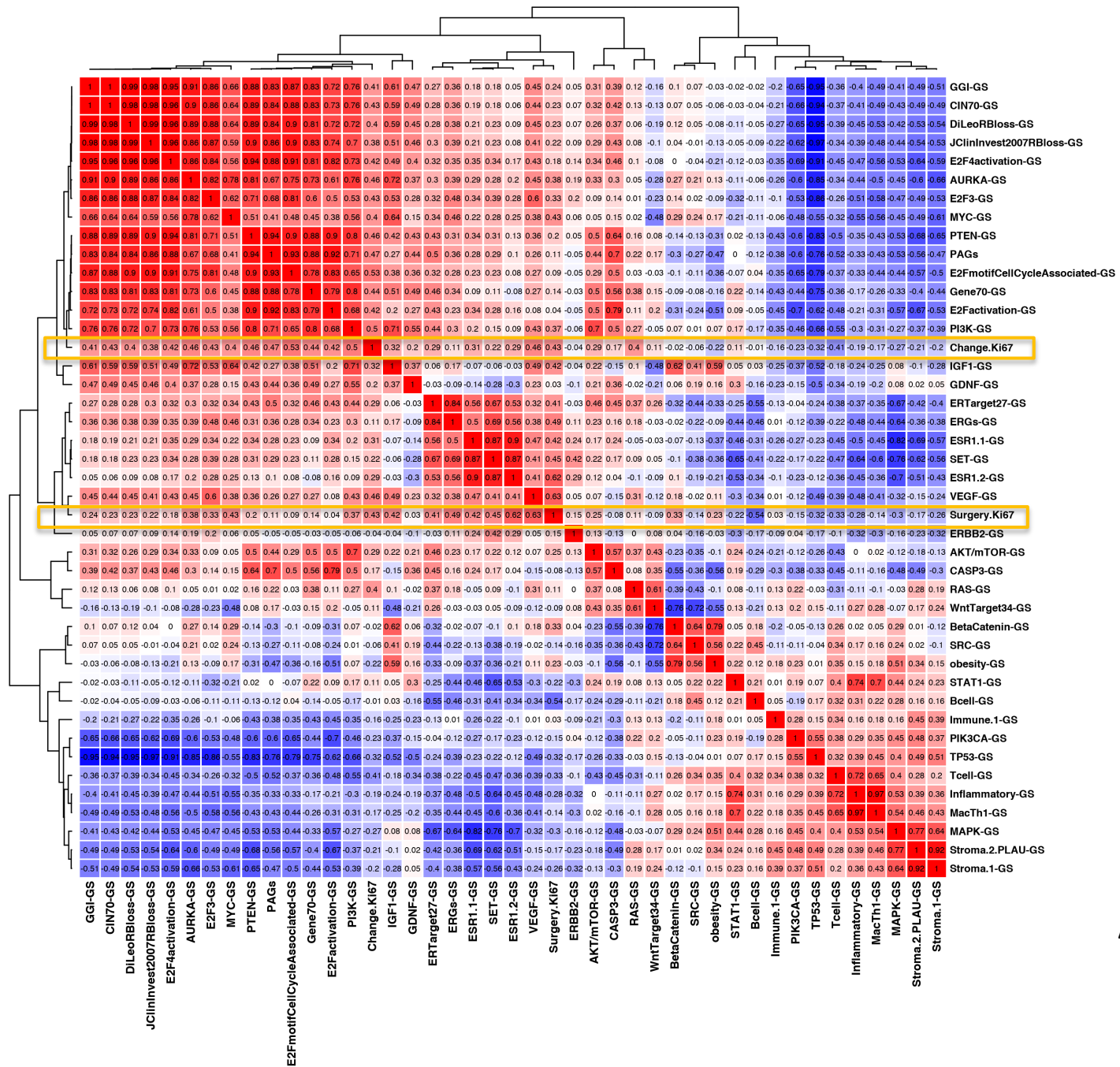
change.HER2neg



Features = 43

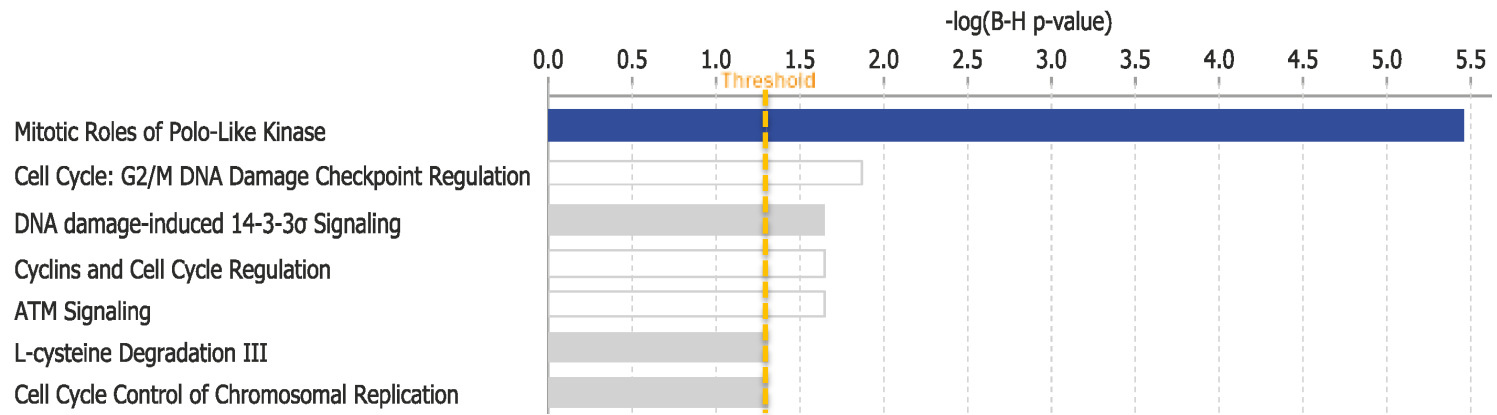
Additional file 11:
Figure S8a

change.HER2pos



Features = 43

Additional file 11:
Figure S8b



**Additional file 12:
Figure S9**