

**Supplemental Table 1. Information of selected SNPs in GATA3**

SNP	Chr	Position	A1	A2	P for HWE	MAF_High risk by flow	MAF_Low risk by flow	MAF_Initially low risk	MAF in 1k genome_EUR
rs1244186	10	8092683	A	G	0.82	0.25	0.22	0.24	0.23
rs2275806	10	8095340	G	A	0.16	0.47	0.43	0.43	0.45
rs369421	10	8099177	G	A	0.37	0.18	0.15	0.16	0.17
rs2229359	10	8100647	A	G	0.67	0.07	0.07	0.07	0.07
rs3781093	10	8101927	G	A	0.04	0.16	0.16	0.15	0.18
rs3802604	10	8102272	G	A	0.07	0.39	0.37	0.36	0.38
rs3824662	10	8104208	A	C	0.14	0.17	0.19	0.17	0.19
rs568727	10	8106701	A	C	0.33	0.40	0.37	0.36	0.38
rs3802600	10	8108812	A	T	0.66	0.19	0.19	0.19	0.21
rs528778	10	8112143	A	G	0.45	0.23	0.19	0.18	0.19
rs10905284	10	8115362	C	A	0.48	0.47	0.44	0.43	0.43
rs434645	10	8121451	A	G	0.47	0.17	0.16	0.14	0.14

Supplemental Table 2. GATA3 SNPs and overall survival

Genotype	Treated Group (n=441)					Untreated Group (n=799)				
	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>
rs1244186										
GG	60/252	1.00		1.00		140/467	1.00		1.00	
AG	43/158	1.19 (0.80-1.77)	0.38	1.30 (0.87-1.93)	0.2	70/284	0.81 (0.61-1.08)	0.15	0.82 (0.62-1.10)	0.18
AA	9/31	1.26 (0.63-2.55)	0.51	1.39 (0.69-2.83)	0.36	12/44	0.93 (0.55-1.77)	0.95	1.01 (0.56-1.83)	0.96
Per risk allele		1.15 (0.86-1.53)	0.36	1.22 (0.92-1.63)	0.18		0.89 (0.70-1.11)	0.3	0.90 (0.71-1.13)	0.36
rs2275806										
AA	31/134	1.00		1.00		82/258	1.00		1.00	
GA	41/200	0.89 (0.55-1.42)	0.61	1.01 (0.63-1.62)	0.98	103/384	0.86 (0.64-1.15)	0.3	0.92 (0.69-1.23)	0.56
GG	39/105	1.72 (1.07-2.76)	0.03	1.83 (1.14-2.96)	0.01	36/152	0.74 (0.50-1.10)	0.14	0.71 (0.48-1.05)	0.09
Per risk allele		1.33 (1.03-1.71)	0.03	1.36 (1.06-1.75)	0.02		0.86 (0.71-1.04)	0.11	0.85 (0.71-1.03)	0.09
rs369421										
AA	71/301	1.00		1.00		162/571	1.00		1.00	
GA	36/125	1.29 (0.86-1.93)	0.22	1.37 (0.92-2.06)	0.12	53/202	0.95 (0.70-1.30)	0.76	0.89 (0.65-1.22)	0.46
GG	5/15	1.42 (0.57-3.53)	0.45	1.51 (0.61-3.74)	0.38	6/23	0.97 (0.43-2.20)	0.95	1.29 (0.57-2.92)	0.55
Per risk allele		1.24 (0.90-1.70)	0.19	1.30 (0.94-1.78)	0.11		0.97 (0.75-1.25)	0.79	0.96 (0.74-1.25)	0.77
rs2229359										
GG	89/378	1.00		1.00		191/687	1.00		1.00	
AG	23/59	1.70 (1.08-2.70)	0.02	1.85 (1.16-2.93)	0.009	30/103	1.07 (0.73-1.57)	0.75	1.05 (0.72-1.55)	0.79
AA	0/2		0.99		0.99	1/3	1.45 (0.20-10.38)	0.71	1.22 (0.17-8.71)	0.84
Per risk allele		1.50 (0.97-2.31)	0.07	1.66 (1.07-2.59)	0.02		1.09 (0.76-1.57)	0.64	1.06 (0.74-1.53)	0.74
rs3781093										
AA	70/303	1.00		1.00		161/564	1.00		1.00	
GA	38/131	1.30 (0.87-1.93)	0.2	1.23 (0.82-1.84)	0.31	56/216	0.92 (0.68-1.25)	0.59	0.92 (0.68-1.24)	0.58
GG	4/7	2.50 (0.91-6.87)	0.07	2.31 (0.83-6.43)	0.11	4/14	0.95 (0.35-2.56)	0.92	0.79 (0.29-2.13)	0.64
Per risk allele		1.38 (0.98-1.93)	0.07	1.30 (0.92-1.84)	0.13		0.93 (0.71-1.22)	0.6	0.91 (0.69-1.19)	0.47

rs3802604										
AA	31/164	1.00		1.00		96/337	1.00		1.00	
GA	51/206	1.30 (0.83-2.04)	0.25	1.36 (0.87-2.14)	0.18	99/342	1.04 (0.79-1.38)	0.77	1.07 (0.81-1.42)	0.64
GG	30/70	2.40 (1.45-3.97)	<b>0.0006</b>	2.45 (1.48-4.05)	<b>0.0005</b>	27/166	0.82 (0.54-1.26)	0.37	0.78 (0.51-1.20)	0.27
Per risk allele		1.55 (1.20-2.02)	<b>0.0009</b>	1.57 (1.21-2.03)	<b>0.0007</b>		0.95 (0.78-1.14)	0.56	0.94 (0.78-1.13)	0.48
rs3824662										
CC	67/294	1.00		1.00		154/536	1.00		1.00	
AC	39/134	1.36 (0.92-2.02)	0.13	1.28 (0.85-1.91)	0.23	62/243	0.90 (0.67-1.20)	0.46	0.89 (0.66-1.20)	0.44
AA	6/13	2.29 (0.99-5.28)	0.05	2.10 (0.90-4.93)	0.09	6/18	1.27 (0.56-2.87)	0.57	1.18 (0.52-2.67)	0.69
Per risk allele		1.42 (1.03-1.95)	0.03	1.34 (0.97-1.85)	0.08		0.95 (0.74-1.23)	0.71	0.94 (0.73-1.22)	0.64
rs568727										
CC	28/160	1.00		1.00		95/328	1.00		1.00	
AC	52/204	1.62 (1.02-2.58)	0.04	1.50 (0.94-2.39)	0.09	102/357	1.03 (0.78-1.37)	0.82	1.03 (0.78-1.36)	0.86
AA	32/77	2.75 (1.65-4.59)	<b>0.0001</b>	2.57 (1.43-4.30)	<b>0.0003</b>	24/111	0.76 (0.49-1.19)	0.23	0.74 (0.47-1.16)	0.19
Per risk allele		1.64 (1.27-2.12)	<b>0.0001</b>	1.59 (1.23-2.06)	<b>0.0005</b>		0.92 (0.76-1.11)	0.39	0.91 (0.75-1.10)	0.32
rs3802600										
TT	64/283	1.00		1.00		153/523	1.00		1.00	
AT	41/139	1.39 (0.94-2.05)	0.1	1.24 (0.83-1.86)	0.29	63/247	0.86 (0.64-1.15)	0.31	0.84 (0.62-1.12)	0.24
AA	6/17	1.70 (0.74-3.94)	0.21	1.67 (0.71-3.95)	0.24	5/25	0.68 (0.28-1.67)	0.4	0.72 (0.29-1.75)	0.47
Per risk allele		1.34 (0.98-1.82)	0.06	1.26 (0.92-1.73)	0.16		0.85 (0.66-1.09)	0.2	0.84 (0.65-1.08)	0.17
rs528778										
GG	60/271	1.00		1.00		142/527	1.00		1.00	
AG	44/145	1.49 (1.01-2.21)	0.04	1.51 (1.02-2.23)	0.04	70/244	1.09 (0.82-1.45)	0.56	1.02 (0.77-1.36)	0.88
AA	8/25	1.40 (0.67-2.94)	0.37	1.46 (0.70-3.07)	0.31	10/26	1.54 (0.81-2.92)	0.19	1.88 (0.99-3.57)	0.05
Per risk allele		1.30 (0.98-1.73)	0.07	1.32 (0.99-1.76)	0.06		1.15 (0.91-1.45)	0.24	1.14 (0.90-1.45)	0.28
rs10905284										
AA	25/126	1.00		1.00		62/261	1.00		1.00	
CA	51/219	1.28 (0.79-2.08)	0.32	1.27 (0.78-2.07)	0.33	123/381	1.48 (1.09-2.01)	0.01	1.44 (1.06-1.96)	0.02
CC	36/95	2.02 (1.21-3.39)	0.008	2.01 (1.20-3.38)	0.008	37/154	1.03 (0.68-1.54)	0.9	0.99 (0.66-1.48)	0.95

Per risk allele		1.42 (1.09-1.84)	0.008	1.42 (1.09-1.84)	0.009		1.06 (0.88-1.27)	0.55	1.04 (0.86-1.24)	0.71
rs434645										
GG	70/311	1.00		1.00		155/575	1.00		1.00	
AG	35/113	1.49 (0.99-2.24)	0.05	1.60 (1.06-2.41)	0.02	60/208	1.03 (0.77-1.39)	0.83	0.94 (0.70-1.27)	0.68
AA	7/17	1.85 (0.85-4.02)	0.12	1.94 (0.89-4.23)	0.1	7/14	2.16 (1.01-4.60)	0.05	2.81 (1.31-6.02)	0.008
Per risk allele		1.41 (1.05-1.90)	0.02	1.48 (1.09-1.99)	0.01		1.15 (0.89-1.49)	0.28	1.10 (0.84-1.43)	0.49

Supplemental Table 3. GATA3 SNPs and disease-free survival

Genotype	Treated Group (n=441)					Untreated Group (n=799)				
	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>
rs1244186										
GG	84/252	1.00		1.00		197/467	1.00		1.00	
AG	55/58	1.09 (0.78-1.54)	0.61	1.17 (0.83-1.64)	0.38	105/284	0.86 (0.68-1.09)	0.22	0.89 (0.70-1.13)	0.33
AA	13/31	1.27 (0.71-2.28)	0.42	1.34 (0.75-2.42)	0.33	14/44	0.77 (0.45-1.33)	0.35	0.82 (0.48-1.42)	0.48
Per risk allele		1.11 (0.87-1.42)	0.41	1.16 (0.91-1.48)	0.24		0.87 (0.72-1.05)	0.15	0.90 (0.74-1.09)	0.26
rs2275806										
AA	43/134	1.00		1.00		108/258	1.00		1.00	
GA	59/200	0.92 (0.62-1.36)	0.67	0.99 (0.67-1.48)	0.98	157/384	1.01 (0.79-1.29)	0.95	1.06 (0.83-1.36)	0.63
GG	49/105	1.59 (1.05-2.40)	0.03	1.67 (1.10-2.53)	0.02	51/152	0.80 (0.57-1.11)	0.18	0.80 (0.57-1.11)	0.18
Per risk allele		1.27 (1.02-1.58)	0.03	1.30 (1.04-1.61)	0.02		0.91 (0.78-1.06)	0.24	0.92 (0.79-1.07)	0.28
rs369421										
AA	98/301	1.00		1.00		233/571	1.00		1.00	
GA	47/125	1.23 (0.86-1.74)	0.25	1.27 (0.89-1.80)	0.18	76/202	0.95 (0.73-1.23)	0.7	0.94 (0.72-1.22)	0.63
GG	7/15	1.41 (0.65-3.04)	0.38	1.42 (0.66-3.05)	0.38	6/23	0.73 (0.35-1.56)	0.42	0.83 (0.39-1.77)	0.64
Per risk allele		1.21 (0.92-1.99)	0.18	1.23 (0.93-1.62)	0.14		0.92 (0.74-1.15)	0.46	0.93 (0.75-1.16)	0.53
rs2229359										
GG	124/378	1.00		1.00		276/687	1.00		1.00	
AG	28/59	1.54 (1.02-2.31)	0.04	1.59 (1.05-2.40)	0.03	40/103	0.99 (0.71-1.38)	0.94	1.01 (0.73-1.41)	0.95
AA	0/2	-	0.99	-	0.99	1/3	0.87 (0.12-6.17)	0.89	0.74 (0.10-5.31)	0.77
Per risk allele		1.35 (0.92-1.99)	0.12	1.42 (0.96-2.11)	0.08		0.99 (0.72-1.36)	0.96	1.00 (0.73-1.37)	0.99
rs3781093										
AA	99/303	1.00		1.00		226/564	1.00		1.00	
GA	49/131	1.21 (0.86-1.71)	0.27	1.18 (0.83-1.66)	0.36	85/216	1.00 (0.78-1.28)	0.99	0.99 (0.77-1.27)	0.93
GG	4/7	1.86 (0.69-5.07)	0.22	1.77 (0.64-4.90)	0.27	4/14	0.61 (0.23-1.63)	0.32	0.56 (0.21-1.50)	0.25
Per risk allele		1.25 (0.93-1.69)	0.15	1.21 (0.89-1.64)	0.22		0.94 (0.75-1.18)	0.59	0.92 (0.74-1.15)	0.49

rs3802604										
AA	49/164	1.00		1.00		134/337	1.00		1.00	
GA	66/206	1.05 (0.72-1.52)	0.8	1.08 (0.74-1.56)	0.69	145/342	1.12 (0.89-1.42)	0.33	1.15 (0.91-1.45)	0.25
GG	37/70	1.96 (1.28-3.00)	0.002	1.95 (1.27-2.99)	0.002	38/116	0.82 (0.57-1.17)	0.27	0.80 (0.56-1.15)	0.24
Per risk allele		1.38 (1.10-1.73)	0.006	1.38 (1.10-1.73)	0.005		0.96 (0.82-1.13)	0.63	0.96 (0.82-1.12)	0.62
rs3824662										
CC	94/294	1.00		1.00		216/536	1.00		1.00	
AC	51/134	1.28 (0.91-1.80)	0.16	1.22 (0.87-1.73)	0.25	95/243	0.98 (0.77-1.24)	0.84	0.96 (0.75-1.22)	0.71
AA	7/13	1.93 (0.89-4.15)	0.09	1.87 (0.86-4.09)	0.12	6/18	0.81 (0.36-1.83)	0.61	0.79 (0.35-1.79)	0.58
Per risk allele		1.32 (1.00-1.74)	0.05	1.28 (0.96-1.69)	0.09		0.95 (0.77-1.18)	0.65	0.93 (0.75-1.16)	0.54
rs568727										
CC	45/160	1.00		1.00		131/328	1.00		1.00	
AC	68/204	1.29 (0.88-1.88)	0.19	1.22 (0.83-1.79)	0.31	153/357	1.15 (0.91-1.45)	0.25	1.14 (0.90-1.44)	0.28
AA	39/77	2.12 (1.38-3.27)	<b>0.0006</b>	2.02 (1.31-3.12)	<b>0.001</b>	32/111	0.72 (0.49-1.05)	0.09	0.71 (0.48-1.04)	0.08
Per risk allele		1.45 (1.16-1.80)	<b>0.001</b>	1.41 (1.13-1.76)	<b>0.003</b>		0.93 (0.79-1.09)	0.37	0.92 (0.79-1.08)	0.33
rs3802600										
TT	89/283	1.00		1.00		209/523	1.00		1.00	
AT	55/139	1.37 (0.97-1.91)	0.07	1.29 (0.92-1.82)	0.15	101/247	1.03 (0.81-1.30)	0.83	1.00 (0.78-1.26)	0.97
AA	7/17	1.44 (0.67-3.11)	0.35	1.43 (0.65-3.16)	0.37	6/25	0.58 (0.26-1.30)	0.18	0.59 (0.26-1.32)	0.2
Per risk allele		1.29 (0.98-1.68)	0.07	1.25 (0.95-1.64)	0.11		0.94 (0.76-1.15)	0.54	0.92 (0.75-1.13)	0.44
rs528778										
GG	90/271	1.00		1.00		210/527	1.00		1.00	
AG	52/145	1.14 (0.81-1.61)	0.44	1.15 (0.82-1.62)	0.43	96/244	1.02 (0.80-1.29)	0.9	1.00 (0.79-1.27)	0.99
AA	10/25	1.15 (0.60-2.21)	0.68	1.15 (0.60-2.21)	0.68	11/26	1.06 (0.58-1.94)	0.85	1.16 (0.63-2.12)	0.64
Per risk allele		1.10 (0.85-1.42)	0.46	1.11 (0.86-1.43)	0.44		1.02 (0.84-1.25)	0.83	1.03 (0.84-1.26)	0.8
rs10905284										
AA	37/126	1.00		1.00		93/261	1.00		1.00	
CA	71/219	1.18 (0.79-1.76)	0.43	1.17 (0.79-1.76)	0.43	168/381	1.36 (1.06-1.75)	0.02	1.33 (1.03-1.72)	0.03
CC	44/95	1.70 (1.09-2.64)	0.02	1.68 (1.08-2.61)	0.02	56/154	1.06 (0.76-1.48)	0.72	1.03 (0.74-1.43)	0.87

Per risk allele		1.30 (1.04-1.63)	0.02	1.30 (1.04-1.62)	0.02		1.06 (0.91-1.24)	0.44	1.04 (0.90-1.22)	0.58
rs434645										
GG	101/311	1.00		1.00		224/575	1.00		1.00	
AG	43/113	1.25 (0.88-1.79)	0.22	1.31 (0.91-1.88)	0.14	85/208	1.06 (0.82-1.36)	0.66	1.02 (0.80-1.31)	0.87
AA	8/17	1.51 (0.73-3.09)	0.27	1.50 (0.73-3.09)	0.27	8/14	1.75 (0.86-3.54)	0.12	1.96 (0.97-3.98)	0.06
Per risk allele		1.24 (0.94-1.62)	0.12	1.27 (0.97-1.66)	0.09		1.13 (0.91-1.40)	0.28	1.11 (0.89-1.39)	0.35

Supplemental Table 4. GATA3 SNPs and overall survival in the treated group by tamoxifen therapy

Genotype	Tamoxifen Treated Group (n=220)					No Tamoxifen Treated Group (n=221)				
	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>
rs1244186										
GG	22/121	1.00		1.00		37/129	1.00		1.00	
AG	20/81	1.34 (0.73-2.45)	0.35	1.46 (0.79-2.68)	0.23	23/77	1.12 (0.67-1.89)	0.67	1.18 (0.70-2.00)	0.53
AA	8/16	3.00 (1.33-6.75)	0.008	2.73 (1.19-6.27)	0.02	1/15	0.23 (0.03-1.66)	0.14	0.31 (0.04-2.27)	0.25
Per risk allele		1.60 (1.07-2.39)	0.02	1.58 (1.06-2.36)	0.02		0.84 (0.55-1.29)	0.43	0.93 (0.60-1.45)	0.76
rs2275806										
AA	13/59	1.00		1.00		17/73	1.00		1.00	
GA	16/104	0.66 (0.32-1.38)	0.27	0.78 (0.37-1.66)	0.53	25/96	1.14 (0.61-2.11)	0.68	1.16 (0.62-2.15)	0.64
GG	20/54	1.64 (0.81-3.29)	0.17	1.70 (0.84-3.41)	0.14	19/51	1.79 (0.93-3.44)	0.08	1.88 (0.98-3.63)	0.06
Per risk allele		1.33 (0.90-1.96)	0.15	1.33 (0.91-1.93)	0.14		1.34 (0.96-1.88)	0.09	1.38 (0.98-1.94)	0.07
rs369421										
AA	27/146	1.00		1.00		43/153	1.00		1.00	
GA	18/66	1.54 (0.85-2.80)	0.16	1.70 (0.93-3.10)	0.09	18/59	1.16 (0.67-2.01)	0.6	1.15 (0.66-2.00)	0.62
GG	5/6	7.01 (2.66-18.47)	<b>8.20E-05</b>	4.82 (1.76-13.18)	0.002	0/9	-	0.99	-	0.99
Per risk allele		2.03 (1.28-3.23)	0.003	1.94 (1.25-3.02)	0.003		0.83 (0.52-1.34)	0.45	0.90 (0.55-1.47)	0.68
rs2229359										
GG	37/186	1.00		1.00		51/190	1.00		1.00	
AG	13/31	2.31 (1.23-4.35)	0.01	2.49 (1.31-4.72)	0.005	10/28	1.30 (0.66-2.57)	0.44	1.42 (0.72-2.80)	0.31
AA	0/1	-	0.99	-	0.99	0/1	-	0.99	-	0.99
Per risk allele		1.96 (1.09-3.52)	0.02	2.15 (1.18-3.92)	0.01		1.18 (0.62-2.24)	0.62	1.32 (0.68-25.54)	0.41
rs3781093										
AA	34/145	1.00		1.00		35/156	1.00		1.00	
GA	15/71	0.83 (0.45-1.52)	0.54	0.81 (0.44-1.50)	0.51	23/60	1.97 (1.16-3.33)	0.01	1.68 (0.99-2.86)	0.06
GG	1/2	2.95 (0.40-21.71)	0.29	2.10 (0.28-15.87)	0.47	3/5	2.40 (0.74-7.82)	0.15	2.49 (0.73-8.44)	0.14
Per risk allele		0.91 (0.52-1.61)	0.75	0.88 (0.50-1.56)	0.66		1.76 (1.17-2.64)	0.007	1.64 (1.06-2.51)	0.03



rs3802604										
AA	14/78	1.00		1.00		17/85	1.00		1.00	
GA	19/105	0.99 (0.50-1.99)	0.99	1.09 (0.54-2.20)	0.82	31/100	1.62 (0.90-2.93)	0.11	1.56 (0.86-2.81)	0.14
GG	17/35	2.90 (1.43-5.89)	0.003	2.66 (1.31-5.43)	0.007	13/35	1.97 (0.95-4.05)	0.07	2.23 (1.08-4.60)	0.03
Per risk allele		1.76 (1.19-2.61)	0.005	1.66 (1.13-2.44)	0.009		1.42 (1.00-2.00)	0.05	1.50 (1.05-2.14)	0.03
rs3824662										
CC	32/141	1.00		1.00		34/151	1.00		1.00	
AC	17/74	0.97 (0.54-1.75)	0.92	0.93 (0.51-1.68)	0.81	22/60	1.93 (1.13-3.29)	0.02	1.65 (0.96-2.85)	0.07
AA	1/3	1.79 (0.24-13.11)	0.57	1.90 (0.26-14.19)	0.53	5/10	2.38 (0.93-6.08)	0.07	2.23 (0.85-5.81)	0.1
Per risk allele		1.01 (0.59-1.74)	0.96	0.98 (0.56-1.70)	0.93		1.68 (1.15-2.44)	0.007	1.55 (1.05-2.30)	0.03
rs568727										
CC	13/76	1.00		1.00		14/82	1.00		1.00	
AC	19/105	1.07 (0.53-2.17)	0.85	1.02 (0.50-2.06)	0.96	33/99	2.29 (1.22-4.28)	0.01	1.97 (1.05-3.71)	0.04
AA	18/37	3.24 (1.58-6.61)	<b>0.001</b>	2.89 (1.40-5.96)	0.004	14/40	2.30 (1.09-4.82)	0.03	2.28 (1.08-4.80)	0.03
Per risk allele		1.82 (1.23-2.69)	0.003	1.71 (1.15-2.54)	0.008		1.52 (1.08-2.12)	0.02	1.51 (1.07-2.14)	0.02
rs3802600										
TT	29/132	1.00		1.00		34/149	1.00		1.00	
AT	19/81	1.02 (0.57-1.82)	0.95	0.90 (0.50-1.61)	0.72	22/58	1.99 (1.16-3.41)	0.01	1.65 (0.95-2.85)	0.07
AA	1/3	3.51 (0.48-25.93)	0.22	5.54 (0.56-54.32)	0.14	5/14	1.52 (0.59-3.88)	0.39	1.60 (0.62-4.13)	0.33
Per risk allele		1.10 (0.63-1.89)	0.75	0.98 (0.56-1.72)	0.95		1.45 (1.01-2.07)	0.04	1.39 (0.96-2.03)	0.08
rs528778										
GG	25/136	1.00		1.00		34/133	1.00		1.00	
AG	17/73	1.53 (0.84-2.78)	0.16	1.60 (0.87-2.91)	0.13	25/72	1.48 (0.88-2.48)	0.14	1.45 (0.86-2.44)	0.16
AA	6/9	3.96 (1.62-9.69)	0.002	3.19 (1.30-7.82)	0.01	2/16	0.44 (0.11-1.85)	0.26	0.56 (0.13-2.35)	0.43
Per risk allele		1.79 (1.17-2.73)	0.007	1.70 (1.13-2.57)	0.01		1.02 (0.69-1.50)	0.93	1.09 (0.73-1.62)	0.69
rs10905284										
AA	12/61	1.00		1.00		12/63	1.00		1.00	
CA	21/114	0.97 (0.48-1.97)	0.93	0.99 (0.49-2.03)	0.99	30/105	1.66 (0.85-3.25)	0.14	1.56 (0.79-3.06)	0.2
CC	17/43	2.07 (0.99-4.33)	0.05	2.02 (0.96-4.25)	0.06	19/52	2.00 (0.97-4.11)	0.06	2.04 (0.99-4.20)	0.05

Per risk allele		1.44 (0.97-2.15)	0.07	1.43 (0.96-2.11)	0.08		1.39 (0.99-1.96)	0.06	1.41 (1.00-2.01)	0.05
rs434645										
GG	27/154	1.00		1.00		42/155	1.00		1.00	
AG	19/59	1.97 (1.10-3.55)	0.02	2.03 (1.12-3.67)	0.02	16/54	1.19 (0.67-2.12)	0.56	1.35 (0.75-2.42)	0.32
AA	4/5	4.94 (1.72-14.18)	0.003	3.92 (1.34-11.45)	0.01	3/13	0.89 (0.27-2.86)	0.84	1.15 (0.36-3.75)	0.81
Per risk allele		2.08 (1.33-3.24)	<b>0.001</b>	1.99 (1.28-3.08)	0.002		1.05 (0.69-2.86)	0.82	1.19 (0.78-1.83)	0.42

---

**Supplemental Table 5. GATA3 SNPs and disease-free survival in the treated group by tamoxifen therapy**

Genotype	Tamoxifen Treated Group (n=220)					No Tamoxifen Treated Group (n=221)				
	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>	# events/ patients	Unadjusted HR (95% CI)	Unadjusted <i>P</i>	Adjusted HR (95% CI)	Adjusted <i>P</i>
rs1244186										
GG	34/121	1.00		1.00		49/129	1.00		1.00	
AG	26/81	1.13 (0.68-1.89)	0.63	1.19 (0.72-2.00)	0.5	29/77	1.09 (0.69-1.73)	0.72	1.14 (0.72-1.81)	0.59
AA	10/16	2.33 (1.15-4.71)	0.02	2.22 (1.09-4.54)	0.03	3/15	0.51 (0.116-1.63)	0.26	0.60 (0.18-1.95)	0.4
Per risk allele		1.39 (0.98-1.97)	0.06	1.39 (0.99-1.96)	0.06		0.90 (0.63-1.29)	0.57	0.96 (0.67-1.39)	0.84
rs2275806										
AA	17/59	1.00		1.00		25/73	1.00		1.00	
GA	25/104	0.79 (0.42-1.46)	0.44	0.83 (0.44-1.56)	0.56	34/96	1.07 (0.64-1.80)	0.79	1.10 (0.66-1.85)	0.71
GG	27/54	1.80 (0.98-3.30)	0.06	1.85 (1.01-3.39)	0.05	22/51	1.43 (0.81-2.53)	0.22	1.50 (0.84-2.66)	0.17
Per risk allele		1.40 (1.01-1.96)	0.05	1.41 (1.01-1.95)	0.04		1.19 (0.89-1.60)	0.24	1.22 (0.91-1.64)	0.18
rs369421										
AA	40/146	1.00		1.00		57/153	1.00		1.00	
GA	25/66	1.48 (0.90-2.44)	0.13	1.54 (0.93-2.55)	0.1	22/59	1.06 (0.65-1.74)	0.8	1.07 (0.65-1.75)	0.79
GG	5/6	4.13 (1.62-10.53)	0.003	3.13 (1.19-8.20)	0.02	2/9	0.50 (0.12-2.04)	0.33	0.63 (0.15-2.61)	0.52
Per risk allele		1.71 (1.15-2.55)	0.008	1.64 (1.11-2.41)	0.01		0.91 (0.61-1.35)	0.63	0.96 (0.64-1.44)	0.85
rs2229359										
GG	54/186	1.00		1.00		69/190	1.00		1.00	
AG	16/31	2.09 (1.20-3.66)	0.01	2.18 (1.24-3.84)	0.007	12/28	1.14 (0.62-2.11)	0.68	1.19 (0.64-2.20)	0.59
AA	0/1	-	0.99	-	0.99	0/1	-	0.99	-	0.99
Per risk allele		1.78 (1.06-2.98)	0.03	1.86 (1.10-3.15)	0.02		1.04 (0.58-1.86)	0.91	1.10 (0.61-1.99)	0.75
rs3781093										
AA	46/145	1.00		1.00		52/156	1.00		1.00	
GA	23/71	1.01 (0.61-1.66)	0.99	0.98 (0.59-1.62)	0.94	26/60	1.50 (0.93-2.40)	0.09	1.36 (0.85-2.19)	0.2
GG	1/2	1.94 (0.27-14.11)	0.51	1.48 (0.20-10.96)	0.7	3/5	1.74 (0.54-5.59)	0.35	2.03 (0.61-6.78)	0.25
Per risk allele		1.05 (0.65-1.68)	0.85	1.01 (0.63-1.61)	0.98		1.42 (0.97-2.08)	0.07	1.38 (0.93-2.06)	0.11

rs3802604										
AA	21/78	1.00		1.00		28/85	1.00		1.00	
GA	27/105	0.92 (0.52-1.63)	0.78	0.95 (0.53-1.70)	0.87	38/100	1.19 (0.73-1.93)	0.49	1.16 (0.71-1.89)	0.56
GG	22/35	2.78 (1.53-5.06)	<b>0.0008</b>	2.59 (1.41-4.73)	0.002	15/35	1.39 (0.74-2.60)	0.31	1.53 (0.81-2.87)	0.19
Per risk allele		1.69 (1.20-2.38)	0.002	1.62 (1.16-2.26)	0.005		1.18 (0.87-1.60)	0.29	1.22 (0.90-1.67)	0.2
rs3824662										
CC	45/141	1.00		1.00		48/151	1.00		1.00	
AC	24/74	1.02 (0.62-1.68)	0.93	0.99 (0.60-1.62)	0.95	27/60	1.63 (1.02-2.62)	0.04	1.49 (0.92-2.41)	0.1
AA	1/3	1.12 (0.15-8.14)	0.91	1.10 (0.15-8.06)	0.92	6/10	2.11 (0.90-4.95)	0.08	2.21 (0.93-5.26)	0.07
Per risk allele		1.02 (0.65-1.62)	0.92	0.99 (0.62-1.57)	0.96		1.53 (1.09-2.14)	0.01	1.49 (1.05-2.12)	0.03
rs568727										
CC	20/76	1.00		1.00		24/82	1.00		1.00	
AC	28/105	1.01 (0.57-1.80)	0.96	0.98 (0.55-1.74)	0.94	40/99	1.59 (0.96-2.64)	0.07	1.43 (0.86-2.39)	0.17
AA	22/37	2.81 (1.53-5.15)	<b>0.0009</b>	2.60 (1.41-4.82)	0.002	17/40	1.63 (0.87-3.03)	0.13	1.65 (0.88-3.07)	0.12
Per risk allele		1.67 (1.19-2.34)	0.003	1.60 (1.14-2.24)	0.007		1.30 (0.97-1.74)	0.08	1.29 (0.96-1.75)	0.09
rs3802600										
TT	40/132	1.00		1.00		48/149	1.00		1.00	
AT	28/81	1.15 (0.71-1.86)	0.58	1.07 (0.66-1.75)	0.78	27/58	1.74 (1.08-2.79)	0.02	1.55 (0.96-2.50)	0.07
AA	1/3	2.05 (0.28-14.93)	0.48	2.22 (0.27-18.07)	0.46	6/14	1.32 (0.56-3.08)	0.52	1.45 (0.61-3.42)	0.4
Per risk allele		1.18 (0.74-1.85)	0.49	1.11 (0.70-1.76)	0.66		1.34 (0.97-1.84)	0.08	1.33 (0.95-1.86)	0.1
rs528778										
GG	39/136	1.00		1.00		50/133	1.00		1.00	
AG	25/73	1.29 (0.78-2.13)	0.32	1.36 (0.82-2.26)	0.23	27/72	1.04 (0.65-1.66)	0.87	1.01 (0.63-1.62)	0.97
AA	6/9	2.39 (1.01-5.66)	0.05	2.04 (0.86-4.86)	0.11	4/16	0.60 (0.22-1.66)	0.33	0.69 (0.25-1.93)	0.48
Per risk allele		1.42 (0.98-2.07)	0.06	1.40 (0.97-2.01)	0.07		0.90 (0.63-1.28)	0.54	0.92 (0.64-1.32)	0.65
rs10905284										
AA	17/61	1.00		1.00		19/63	1.00		1.00	
CA	31/114	1.00 (0.56-1.81)	0.99	1.03 (0.57-1.88)	0.91	40/105	1.39 (0.80-2.40)	0.24	1.32 (0.76-2.28)	0.33
CC	22/43	2.02 (1.07-3.80)	0.03	1.98 (1.05-3.75)	0.03	22/52	1.47 (0.80-2.72)	0.22	1.49 (0.80-2.75)	0.21

Per risk allele		1.43 (1.02-2.01)	0.04	1.42 (1.01-1.98)	0.04		1.21 (0.90-1.63)	0.21	1.22 (0.90-1.64)	0.2
rs434645										
GG	41/154	1.00		1.00		59/155	1.00		1.00	
AG	25/59	1.76 (1.07-2.90)	0.03	1.84 (1.11-3.04)	0.02	18/54	0.91 (0.54-1.54)	0.73	0.96 (0.57-1.65)	0.89
AA	4/5	3.15 (1.13-8.80)	0.03	2.59 (0.91-7.39)	0.07	4/12	0.88 (0.32-2.42)	0.8	1.03 (0.37-2.85)	0.96
Per risk allele		1.76 (1.19-2.60)	0.004	1.72 (1.17-2.53)	0.006		0.92 (0.63-1.36)	0.69	0.99 (0.67-1.47)	0.96

**Supplemental Table 6. GATA3 SNPs and breast cancer outcomes in the Pathways Study**

SNP	A1/A2	Overall Survival		Disease-Free Survival	
		HR (95% CI)	P	HR (95% CI)	P
<i>All patients (n=1,000)</i>					
rs1244186	T/C	0.87 (0.54-1.38)	0.54	0.92 (0.68-1.25)	0.59
rs2275806	G/A	0.89 (0.64-1.24)	0.49	0.92 (0.73-1.17)	0.50
rs369421	C/T	1 (0.59-1.67)	0.99	1.1 (0.78-1.54)	0.59
rs2229359	T/C	1.23 (0.57-2.65)	0.60	1.26 (0.75-2.11)	0.38
rs3781093	G/A	0.86 (0.55-1.32)	0.49	0.91 (0.67-1.22)	0.52
rs3802604	C/T	0.87 (0.62-1.22)	0.42	0.98 (0.77-1.24)	0.84
rs3824662	T/G	0.95 (0.63-1.44)	0.81	0.95 (0.71-1.27)	0.72
rs568727	T/G	0.91 (0.63-1.3)	0.59	1.02 (0.8-1.32)	0.86
rs3802600	A/T	1.07 (0.7-1.64)	0.76	1 (0.74-1.35)	0.98
rs528778	T/C	0.95 (0.59-1.53)	0.84	1.12 (0.82-1.54)	0.47
rs10905284	C/A	0.92 (0.66-1.28)	0.62	1.04 (0.82-1.31)	0.75
rs434645	A/G	0.98 (0.6-1.6)	0.93	1.09 (0.78-1.53)	0.60
<i>Patients treated with adjuvant chemotherapy (n=515)</i>					
rs1244186	T/C	0.78 (0.43-1.41)	0.41	0.73 (0.48-1.13)	0.16
rs2275806	G/A	0.96 (0.61-1.52)	0.86	0.89 (0.64-1.25)	0.52
rs369421	C/T	1.07 (0.58-1.99)	0.82	0.95 (0.6-1.5)	0.83
rs2229359	T/C	0.96 (0.35-2.66)	0.94	1.16 (0.57-2.36)	0.68
rs3781093	G/A	0.76 (0.41-1.4)	0.38	0.96 (0.64-1.44)	0.83
rs3802604	C/T	0.92 (0.58-1.48)	0.74	0.95 (0.68-1.34)	0.79
rs3824662	T/G	0.84 (0.47-1.51)	0.56	1.01 (0.68-1.5)	0.97
rs568727	T/G	0.98 (0.6-1.62)	0.95	1.08 (0.75-1.54)	0.69
rs3802600	A/T	1.02 (0.59-1.78)	0.93	1.2 (0.81-1.77)	0.36
rs528778	T/C	1.08 (0.61-1.91)	0.79	0.95 (0.62-1.47)	0.82
rs10905284	C/A	0.92 (0.58-1.44)	0.71	1.04 (0.75-1.45)	0.80
rs434645	A/G	1.21 (0.67-2.19)	0.52	0.93 (0.58-1.49)	0.77
<i>Patients nontreated with adjuvant chemotherapy (n=483)</i>					
rs1244186	T/C	0.92 (0.43-1.97)	0.83	1.14 (0.72-1.78)	0.58
rs2275806	G/A	0.84 (0.51-1.39)	0.51	0.92 (0.65-1.29)	0.63
rs369421	C/T	0.73 (0.28-1.88)	0.51	1.3 (0.78-2.16)	0.32
rs2229359	T/C	1.38 (0.41-4.61)	0.60	1.39 (0.65-2.96)	0.40
rs3781093	G/A	1.03 (0.54-1.95)	0.93	0.85 (0.54-1.31)	0.45
rs3802604	C/T	0.79 (0.48-1.32)	0.37	0.98 (0.7-1.38)	0.90
rs3824662	T/G	1.16 (0.64-2.1)	0.63	0.86 (0.56-1.32)	0.48
rs568727	T/G	0.78 (0.46-1.35)	0.38	0.92 (0.64-1.32)	0.66
rs3802600	A/T	1.05 (0.52-2.12)	0.90	0.74 (0.46-1.21)	0.23
rs528778	T/C	0.72 (0.32-1.67)	0.45	1.34 (0.84-2.12)	0.22
rs10905284	C/A	0.93 (0.58-1.5)	0.77	1.01 (0.72-1.42)	0.95

rs434645

A/G

0.65 (0.27-1.59)

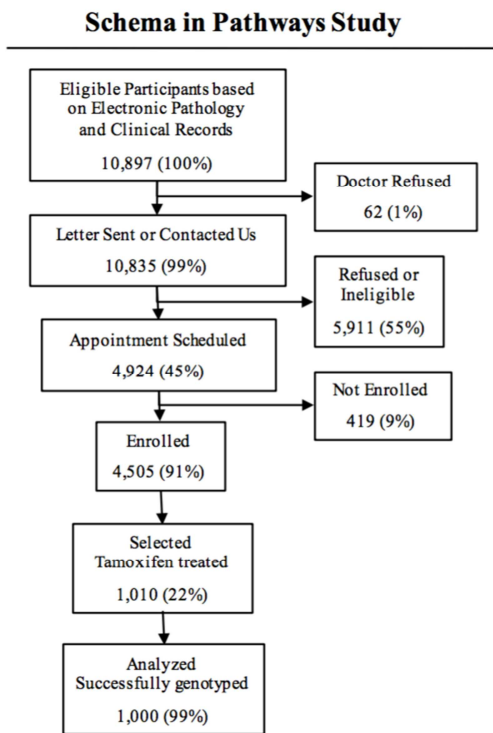
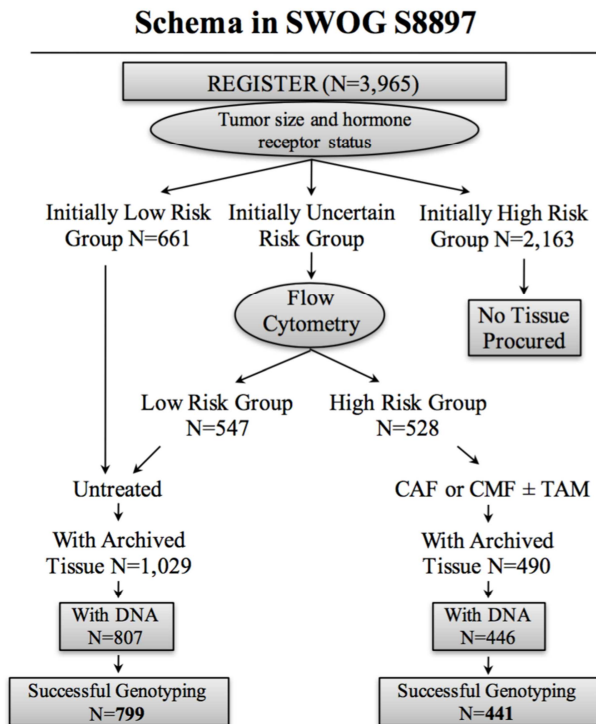
0.35

1.31 (0.81-2.14)

0.27

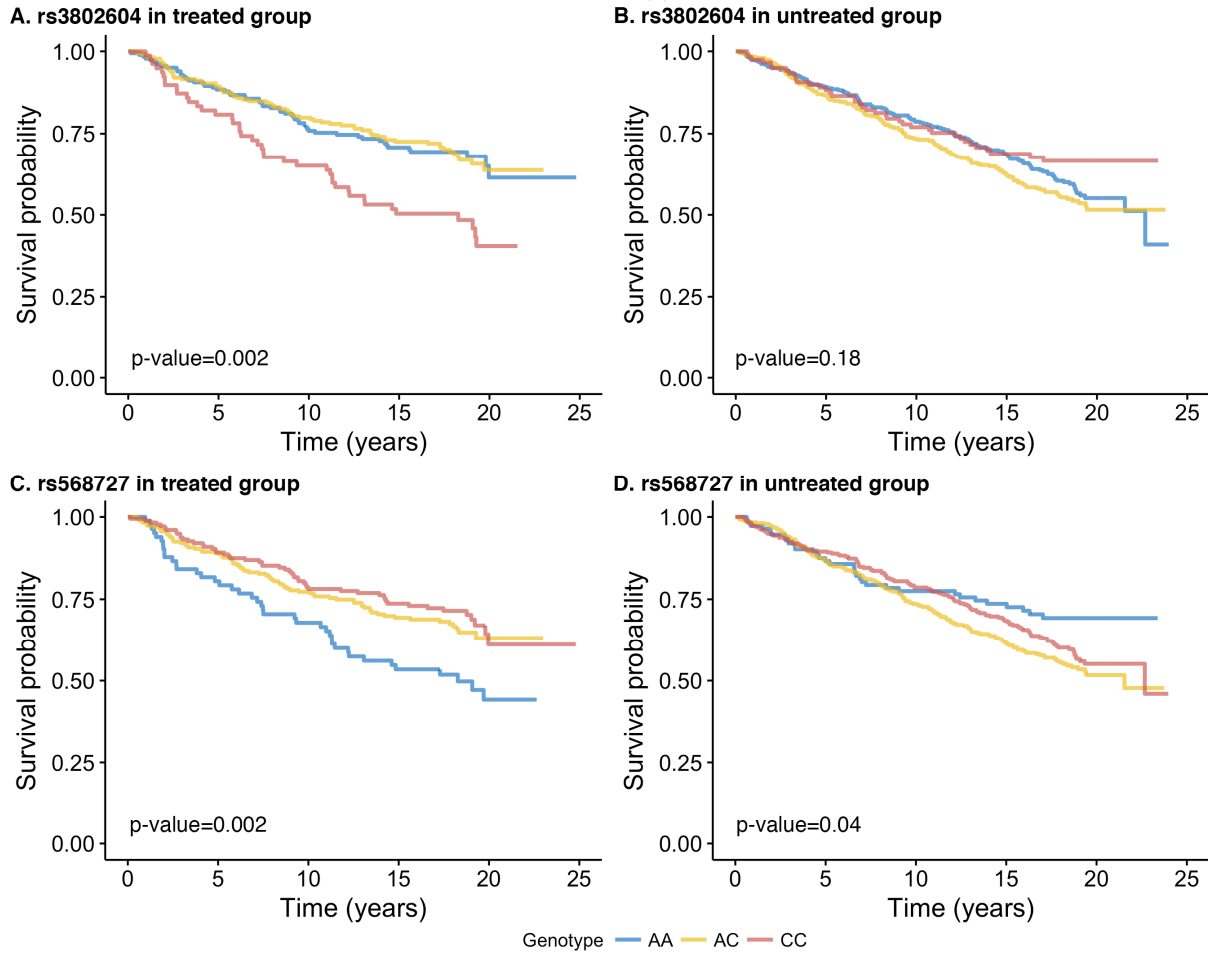
---

**Supplemental Figure 1.** Schemas of the S8897 trial and the Pathways Study





**Supplemental Figure 2.** Kaplan-Meier survival curves of disease-free survival by genotypes of the top two single nucleotide polymorphisms in *GATA3* in S8897 trial



**Figure legend:** Kaplan-Meier curves of disease-free survival by the genotypes of rs3802604 and rs568727, the two single nucleotide polymorphisms in *GATA3* remained significant after correcting for multiple comparison, are plotted separately for the treated and untreated group in S8897 trial. P-values are from log-rank test.