

Supplementary Table 1: Allele frequency¹ (HWE Pvalue) in the study populations.

SNP	Search set1	Search set2	Search set3	MEC-White	MEC-Japanese	Seoul	Taiwan	Thai
rs10736303	0.51 (0.76)	0.52 (0.60)	0.50 (0.04)	0.48 (0.02)	0.46 (0.08)	0.47 (0.40)	0.43 (0.22)	0.39 (0.32)
rs2981578	0.51 (0.91)	0.52 (0.48)	0.51 (0.06)	0.48 (0.06)	0.48 (0.11)	0.46 (0.90)	0.43 (0.32)	0.39 (0.59)
rs35054928	0.57 (0.94)	0.58 (0.64)	0.57 (0.70)	.	.	0.56 (0.08)	.	.
rs2981575	0.58 (0.87)	0.59 (0.86)	0.58 (0.98)	0.58 (0.09)	0.63 (0.02)	0.57 (0.56)	0.56 (0.01)	0.52 (0.45)
rs2981582	0.59 (0.92)	0.60 (0.71)	0.59 (0.75)	0.59 (0.27)	0.73 (0.17)	0.68 (0.83)	0.67 (0.15)	0.64 (0.51)

SNP	CARE-LA	LIFE	MEC-AA	CARE-AA Atlanta	CARE-AA Detroit	CARE-AA Philadelphia	CARE-AA LA	CARE-AA Seattle
rs10736303	0.17 (0.17)	0.12 (0.97)	0.17 (0.06)	0.17 (0.23)	0.13 (0.95)	0.11 (0.12)	0.16 (1.00)	0.11 (0.97)
rs2981578	0.18 (0.31)	0.12 (0.84)	0.18 (0.14)	0.17 (0.23)	0.14 (0.95)	0.11 (0.16)	0.16 (1.00)	0.11 (0.94)
rs35054928	0.43 (0.44)	0.40 (0.90)	0.40 (0.30)	0.39 (0.20)	0.39 (0.88)	0.31 (0.15)	0.39 (0.83)	0.47 (0.54)
rs2981575	0.46 (0.62)	0.45 (0.75)	0.43 (0.19)	0.43 (0.83)	0.43 (0.19)	0.34 (0.24)	0.44 (0.90)	0.47 (0.64)
rs2981582	0.56 (0.59)	0.57 (0.42)	0.54 (0.25)	.	.	.	.	.

1. Allele is the common/non-risk allele in Europeans

Supplementary Table 2: Summary of breast cancer case-control studies and SNPs used in fine-mapping work (including AA samples present in more than one study)

a. Study Characteristics

Study	Abbreviation	Number of subjects			Age Range
		Number Invasive Cases	Number Controls	Positive FH cases	
Taiwanese Breast Cancer Study	TWBCS	921	940	21	30-85
IARC – Thai Breast Cancer Study	TBCS	474	390	16	17-82
Multiethnic cohort (White)	MEC-W	425	435	69	
Multiethnic cohort (Japanese)	MEC-J	448	394	77	
Studies of Epidemiology and Risk Factors in Cancer Heredity (Sets 1 and 2)	SEARCH	4,470	4,560	591	25-80
SEARCH set 3		2,301	2,280	370	26-81
Seoul Breast Cancer Project	SBCP	2,442	1,780	175	>=40
Women's Contraceptive and Reproductive Experiences Study (African American)	CARE-AA	452	435	136	35-64
Multiethnic cohort (African American)	MEC-AA	436	653	166	45-83
LIFE	LIFE	140	0	19	23-49
CARE-LA	CARE-LA	383	236	7	35-64
Total after duplicate samples removed		12,734	12,024	626	

b. Set of SNPs utilized for fine-scale mapping

SNP	Chr10 position	Study genotyped
rs4752569	123321680	SEARCH & SBCP test plates, SEARCH Sets 1,2
rs35012336	123323184	SEARCH & SBCP test plates, SEARCH Sets 1,2
rs7895676	123323987	SEARCH, SBCP, CARE-AA test plates
rs10736303	123324447	all studies
rs11200014	123324920	SEARCH & SBCP test plates, MEC-J, MEC-W, SBCP
rs2912781	123326484	SEARCH, SBCP & CARE-AA test plates
rs2912780	123327107	SEARCH & SBCP test plates, SEARCH sets 1&2, MEC-J, MEC-W, SBCP, TWBCS
rs2912778	123328644	SEARCH & SBCP test plates, SEARCH set1
rs2981578	123330301	all studies
rs35054928	123330423	SEARCH, SBCP & CARE-AA test plates, SEARCH all sets, SBCP, all AA studies
rs4752571	123332557	SEARCH & SBCP test plates, all Asian studies
rs2981575	123336106	all studies
rs1219642	123338379	SEARCH & SBCP test plates, SEARCH sets 1&2,all Asian studies
rs2912774	123338652	SEARCH & SBCP test plates, SEARCH sets 1&2,all Asian studies
rs2936870	123338892	SEARCH & SBCP test plates, SEARCH sets 1&2,all Asian studies
rs2420946	123341314	SEARCH & SBCP test plates, SEARCH sets 1&2,all Asian studies
rs2981582	123342307	all studies except CARE-AA
rs3135718	123343859	SEARCH & SBCP test plates, all Asian studies

Supplementary Table 3: Comparison of weighted and unweighted risk estimates for SNPs among CARE-AA women

SNP	Crude		Age- and site-adj				Age- site- famhx-adj					
	Unweighted		Weighted		Unweighted		Weighted					
	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)				
rs2981578	1.2	(0.9-1.5)	1.1	(0.8-1.5)	1.1	(0.9-1.5)	1.1	(0.8-1.5)	1.2	(0.9-1.6)	1.2	(0.9-1.6)
Het	1.0	(0.4-2.6)	0.9	(0.3-2.3)	0.9	(0.4-2.4)	0.8	(0.3-2.2)	1.2	(0.4-3.6)	1.2	(0.4-3.5)
Homo Mut	1.2	(0.5-3.0)	1.0	(0.4-2.6)	1.1	(0.4-2.8)	1.0	(0.4-2.5)	1.5	(0.5-4.2)	1.4	(0.5-3.9)
rs2981575	1.2	(1.0-1.4)	1.2	(1.0-1.5)	1.2	(1.0-1.4)	1.2	(1.0-1.5)	1.2	(0.9-1.4)	1.2	(0.9-1.5)
Het	1.1	(0.8-1.7)	1.1	(0.7-1.6)	1.1	(0.8-1.6)	1.1	(0.7-1.6)	1.1	(0.8-1.6)	1.1	(0.7-1.6)
Homo Mut	1.4	(0.9-2.0)	1.4	(0.9-2.2)	1.4	(0.9-2.0)	1.4	(0.9-2.2)	1.3	(0.9-2.0)	1.4	(0.9-2.2)
rs35054928	1.0	(0.9-1.3)	1.2	(0.9-1.4)	1.0	(0.9-1.3)	1.2	(0.9-1.5)	1.0	(0.9-1.3)	1.2	(0.9-1.5)
Het	0.9	(0.6-1.4)	1.0	(0.6-1.6)	0.9	(0.6-1.4)	1.0	(0.6-1.6)	0.9	(0.6-1.4)	1.0	(0.6-1.6)
Homo Mut	1.0	(0.7-1.6)	1.3	(0.8-2.0)	1.0	(0.7-1.6)	1.3	(0.8-2.0)	1.0	(0.7-1.6)	1.3	(0.8-2.1)
rs10736303	1.1	(0.9-1.5)	1.1	(0.8-1.5)	1.1	(0.9-1.5)	1.1	(0.8-1.5)	1.2	(0.9-1.6)	1.1	(0.8-1.5)
Het	1.1	(0.4-2.7)	0.9	(0.3-2.3)	1.0	(0.4-2.5)	0.9	(0.3-2.3)	1.3	(0.4-3.7)	1.2	(0.4-3.6)
Homo Mut	1.2	(0.5-3.0)	1.0	(0.4-2.6)	1.1	(0.4-2.8)	1.0	(0.4-2.5)	1.5	(0.5-4.2)	1.4	(0.5-4.0)

Supplementary Table 4: Estimated r^2 for SNPs in intron 2 of *FGFR2*:

a. 95 African American women from CARE-AA

	rs7895676	rs10736303	rs2912781	rs2912778	rs2981578	rs35054928
rs7895676	1.00					
rs10736303	0.95	1.00				
rs2912781	0.85	0.96	1.00			
rs2912778	0.91	1.00	0.96	1.00		
rs2981578	0.91	1.00	0.96	1.00	1.00	
rs35054928	0.36	0.38	0.30	0.37	0.38	1.00
rs2981575	0.24	0.30	0.22	0.30	0.29	0.77

b. 80 UK women from SEARCH (lower left) and 84 Korean samples from SBCP (upper right) [1].

	rs7895676	rs10736303	rs2912781	rs2912778	rs2981578	rs35054928	rs2981575
rs7895676		0.90	0.83	0.93	0.89	0.63	0.53
rs10736303	0.97		0.86	0.81	0.95	0.61	0.57
rs2912781	0.95	0.97		0.77	0.79	0.53	0.49
rs2912778	0.95	0.97	1.00		0.90	0.58	0.49
rs2981578	0.97	0.95	0.97	0.97		0.64	0.58
rs35054928	0.76	0.79	0.76	0.76	0.74		0.90
rs2981575	0.85	0.77	0.74	0.74	0.73	0.98	

Supplementary Table 5: Estimated D' for 7 SNPs in intron 2 of *FGFR2* in 95 African American women from CARE-AA.

	Rs7895676	rs10736303	rs2912781	rs2912778	rs2981578	rs35054928
rs7895676						
rs10736303	1.00					
rs2912781	0.95	1.00				
rs2912778	1.00	1.00	1.00			
rs2981578	1.00	1.00	1.00	1.00		
rs35054928	0.93	1.00	0.93	1.00	1.00	
rs2981575	0.84	0.94	0.85	0.93	0.93	0.92

Supplementary Table 6: Genotype counts for each SNP

rs10736303

Study	AA control	AA case	AG control	AG case	GG control	GG case	Total
MEC-Japanese	98	92	183	205	109	144	831
MEC-White	103	71	226	227	92	122	841
Searchset1	645	484	1124	1104	491	589	4437
Searchset2	649	540	1160	1079	456	565	4449
Searchset3	640	551	1093	1117	534	627	4562
Seoul	358	393	675	989	366	611	3392
Taiwan	205	143	453	423	275	346	1845
Thai	40	36	79	136	66	118	475
CARE-AA	10	9	112	106	309	337	883
MEC-AA	28	12	175	108	432	295	1050
CARE-LA+LIFE	6	11	40	77	101	261	496

rs2981578

Study	AA control	AA case	AG control	AG case	GG control	GG case	Total
MEC-Japanese	102	100	184	200	92	137	815
MEC-White	104	74	222	216	88	119	823
Searchset1	659	483	1115	1085	480	585	4407
Searchset2	654	524	1149	1077	453	555	4412
Searchset3	638	546	1081	1113	523	616	4517
Seoul	342	379	684	995	362	607	3369
Taiwan	206	131	435	427	268	341	1808
Thai	73	52	166	205	115	183	794
CARE-AA	10	9	114	105	306	333	877
MEC-AA	27	14	185	105	408	281	1020
CARE-LA+LIFE	7	10	41	81	90	238	467

rs35054928

Study	-/- control	-/- case	-/C control	-/C case	CC control	CC case	Total
MEC-Japanese	.	.	.	.	.	.	.
MEC-White	.	.	.	.	.	.	.
Searchset1	806	617	1092	1093	369	466	4443
Searchset2	804	666	1101	1072	354	426	4423
Searchset3	771	652	1071	1136	373	463	4466
Seoul	478	583	630	947	250	413	3301
Taiwan	.	.	.	.	.	.	.
Thai	.	.	.	.	.	.	.
CARE-AA	61	64	212	208	155	169	869
MEC-AA	108	67	295	191	236	150	1047
CARE-LA+LIFE	33	35	63	98	48	79	356

rs2981575

Study	AA control	AA case	AG control	AG case	GG control	GG case	Total
MEC-Japanese	176	156	147	192	51	73	795
MEC-White	158	111	213	222	54	84	842
Searchset1	809	635	1061	1044	338	443	4330
Searchset2	816	684	1038	1051	320	399	4308
Searchset3	807	698	1093	1136	369	455	4558
Seoul	429	557	581	865	214	340	2986
Taiwan	338	261	413	421	158	212	1803
Thai	110	106	162	223	71	120	792
CARE-AA	77	68	224	227	129	155	880

MEC-AA	126	81	307	186	205	141	1046
CARE-LA+LIFE	38	73	68	167	42	113	501

rs2981582

Study	GG control	GG case	GA control	GA case	AA control	AA case	Total
MEC-Japanese	222	225	136	171	29	38	821
MEC-White	168	113	204	210	51	79	825
Searchset1	869	670	1059	1066	327	420	4411
Searchset2	838	726	1054	1022	306	399	4345
Searchset3	837	738	1088	1119	351	437	4570
Seoul	690	921	618	886	132	213	3460
Taiwan	455	371	365	402	90	114	1797
Thai	174	172	158	220	36	78	838
CARE-AA							
MEC-AA	192	128	314	197	141	94	1066
CARE-LA+LIFE	53	110	65	161	29	75	493