Supplementary Table 2. ORs and 95% CIs of all SNPs among all European American and African American women in WCHS.

Gene	SNP	Chr.	Genotype	European American Women				African American Women			
				Case/Control	OR(95%CI)[a]	P[b]	P-trend	Case/Control	OR(95%CI)[a]	P[b]	P-trend
COMT	rs4633	22	GG	148/165	1.00	0.47	0.89	57/76	1.00	0.47	0.73
			GA	323/304	1.17 (0.88-1.56)			274/313	1.20 (0.81-1.78)		
			AA	164/167	1.03 (0.74-1.42)			273/344	1.06 (0.71-1.57)		
			GA/AA[c]	487/471	1.12 (0.86-1.47)	0.41		547/657	1.13 (0.77-1.64)	0.54	
CYP17A1	rs10883782	10	AA	429/414	1.00	0.67	0.39	468/588	1.00	0.31	0.42
			AG	185/192	0.93 (0.72-1.20)			126/135	1.21 (0.91-1.6)		
			GG	22/26	0.78 (0.43-1.45)			7/10	0.7 (0.26-1.89)		
			AG/GG	207/218	0.91 (0.71-1.17)	0.47		133/145	1.17 (0.89-1.54)	0.27	
CYP17A1	rs12413409	10	GG	513/519	1.00	0.59	0.49	544/659	1.00	1.00	N/A
			GA	114/109	1.05 (0.77-1.42)			60/74	1.00 (0.69-1.45)		
			AA	8/6	1.80 (0.57-5.67)			0/1	N/A		
			GA/AA	122/115	1.08 (0.80-1.45)	0.62		60/75	0.98 (0.68-1.43)	0.93	
CYP17A1	rs2486758	10	AA	390/405	1.00	0.59	0.47	529/640	1.00	0.13	0.78
			AG	220/207	1.14 (0.89-1.46)			76/88	1.13 (0.80-1.60)		
			GG	27/24	0.98 (0.54-1.79)			1/8	0.13 (0.02-1.08)		
			AG/GG	247/231	1.12 (0.88-1.42)	0.36		77/96	1.04 (0.74-1.46)	0.81	
CYP17A1	rs6162	10	GG	226/207	1.00	0.81	0.66	229/306	1.00	0.21	0.57
			GA	298/311	0.92 (0.71-1.19)			291/320	1.22 (0.96-1.56)		
			AA	113/116	0.94 (0.67-1.32)			86/109	0.99 (0.70-1.40)		
			GA/AA	411/427	0.93 (0.72-1.18)	0.53		377/429	1.16 (0.93-1.46)	0.19	
CYP17A1	rs619824	10	CC	210/205	1.00	0.96	0.87	81/99	1.00	0.95	0.77
			CA	303/304	1.01 (0.78-1.31)			275/338	1.00 (0.71-1.41)		
			AA	125/126	0.97 (0.69-1.35)			249/298	0.96 (0.68-1.37)		
			CA/AA	428/430	1 (0.78-1.28)	0.98		524/636	0.98 (0.71-1.36)	0.91	
CYP19A1	rs10046	15	AA	175/179	1.00	0.96	0.77	42/44	1.00	0.15	0.53
			AG	322/320	0.98 (0.75-1.29)			208/271	0.7 (0.43-1.13)		
			GG	140/137	0.95 (0.68-1.33)			354/420	0.86 (0.54-1.37)		
			AG/GG	462/457	0.97 (0.75-1.26)	0.82		562/691	0.79 (0.51-1.25)	0.32	
CYP19A1	rs11575899	15	II	264/274	1.00	0.27	0.70	287/332	1.00	0.59	0.97
			ID	307/284	1.11 (0.87-1.42)			241/316	0.92 (0.72-1.16)		
			DD	66/78	0.81 (0.55-1.2)			75/86	1.09 (0.76-1.57)		
			ID/DD	373/362	1.04 (0.83-1.32)	0.72		316/402	0.95 (0.76-1.19)	0.67	
CYP19A1	rs2445765	15	CC	441/428	1.00	0.29	0.17	356/407	1.00	0.27	0.14
			CG	185/185	0.90 (0.70-1.17)			221/275	0.91 (0.72-1.16)		
			GG	12/23	0.58 (0.28-1.22)			29/53	0.67 (0.41-1.11)		
			CG/GG	197/208	0.87 (0.68-1.12)	0.28		250/328	0.88 (0.7-1.1)	0.26	
CYP19A1	rs4775936	15	GG	166/175	1.00	0.46	0.42	447/538	1.00	0.59	0.86
			GA	336/321	1.19 (0.9-1.58)			139/177	0.9 (0.69-1.19)		
			AA	134/139	1.14 (0.81-1.59)			19/21	1.24 (0.64-2.4)		
			GA/AA	470/460	1.18 (0.9-1.53)	0.23		158/198	0.94 (0.72-1.21)	0.63	
CYP19A1	rs700518	15	GG	149/159	1.00	0.91	0.87	27/31	1.00	0.83	0.94
			GA	333/325	1.03 (0.78-1.37)			190/232	0.85 (0.48-1.51)		
			AA	155/152	0.97 (0.69-1.36)			388/472	0.9 (0.52-1.56)		
			GA/AA	488/477	1.01 (0.78-1.33)	0.92		578/704	0.88 (0.51-1.52)	0.66	
CYP19A1	rs700519	15	GG	597/592	1.00	0.57	0.45	428/511	1.00	0.56	0.40
			GA	40/42	0.87 (0.54-1.41)			165/201	0.96 (0.74-1.23)		
			AA	1/1	0.09 (0-15.88)			13/24	0.68 (0.33-1.39)		
			GA/AA	41/43	0.85 (0.53-1.37)	0.51		178/225	0.93 (0.73-1.19)	0.55	
CYP19A1	rs727479	15	AA	262/272	1.00	0.25	0.80	388/460	1.00	0.48	0.96
			AC	309/283	1.13 (0.89-1.45)			187/245	0.91 (0.71-1.16)		
			CC	67/80	0.83 (0.56-1.22)			31/31	1.25 (0.73-2.15)		
			AC/CC	376/363	1.07 (0.84-1.35)	0.60		218/276	0.95 (0.75-1.19)	0.64	
CYP19A1	rs749292	15	GG	176/182	1.00	0.72	0.59	179/200	1.00	0.44	0.46
			GA	335/324	1.12 (0.85-1.47)			286/362	0.84 (0.65-1.1)		
			AA	126/130	1.08 (0.77-1.52)			139/174	0.9 (0.66-1.23)		
			GA/AA	461/454	1.11 (0.86-1.44)	0.43		425/536	0.86 (0.67-1.1)	0.23	
CYP1A1	rs1378942	15	AA	229/240	1.00	0.68	0.53	9/11	1.00	0.30	0.12
			AC	309/317	1 (0.78-1.29)			110/115	0.89 (0.34-2.34)		
			CC	100/77	1.17 (0.8-1.69)			486/610	0.7 (0.27-1.84)		
			AC/CC	409/394	1.03 (0.81-1.31)	0.80		596/725	0.77 (0.3-1.99)	0.59	
CYP1A1	rs1799814	15	CC	555/554	1.00	0.88	0.73	597/727	1.00	0.96	N/A
			CA	68/72	0.99 (0.68-1.43)			6/8	0.97 (0.32-2.93)		
			AA	9/9	0.77 (0.28-2.11)			0/0	N/A		
			CA/AA	77/81	0.96 (0.68-1.36)	0.82		6/8	0.97 (0.32-2.93)	0.96	
CYP1A2	rs2470893	15	GG	360/350	1.00	0.47	0.63	535/668	1.00	0.13	**0.05**
			GA	245/244	1.04 (0.82-1.33)			64/64	1.37 (0.93-2.01)		
			AA	33/42	0.76 (0.46-1.25)			5/3	2.78 (0.60-12.80)		
			GA/AA	278/286	1.00 (0.79-1.26)	0.99		69/67	1.42 (0.97-2.07)	0.07	
CYP1A2	rs2472297	15	GG	443/444	1.00	0.99	0.89	553/680	1.00	0.48	0.25
			GA	173/173	1.01 (0.78-1.31)			50/54	1.21 (0.8-1.85)		

			AA	19/18	1.06 (0.53-2.09)			3/2	2.29 (0.35-15.2)		
			GA/AA	192/191	1.01 (0.79-1.31)	0.91		53/56	1.24 (0.82-1.88)	0.30	
CYP1A2	rs2472304	15	AA	218/228	1.00	0.83	0.79	10/11	1.00	0.54	0.27
			AG	312/318	0.97 (0.75-1.25)			115/130	0.78 (0.3-2.02)		
			GG	105/85	1.08 (0.75-1.56)			480/592	0.68 (0.27-1.75)		
			AG/GG	417/403	0.99 (0.78-1.27)	0.97		595/722	0.72 (0.28-1.82)	0.49	
CYP1A2	rs762551	15	AA	301/301	1.00	0.74	0.96	213/250	1.00	0.77	0.53
			AC	285/290	0.94 (0.73-1.19)			284/348	0.92 (0.71-1.18)		
			CC	51/44	1.1 (0.7-1.73)			109/137	0.92 (0.66-1.26)		
			AC/CC	336/334	0.96 (0.76-1.21)	0.72		393/485	0.92 (0.72-1.16)	0.47	
CYP1B1	rs1056836	2	GG	192/191	1.00	0.72	0.42	37/39	1.00	0.61	0.96
			GC	324/329	1.08 (0.83-1.41)			217/284	0.79 (0.48-1.3)		
			CC	120/115	1.15 (0.81-1.62)			352/413	0.84 (0.51-1.38)		
			GC/CC	444/444	1.1 (0.85-1.42)	0.47		569/697	0.82 (0.5-1.33)	0.41	
CYP1B1	rs1800440	2	AA	427/439	1.00	0.88	0.71	562/691	1.00	0.30	N/A
			AG	187/173	1.07 (0.82-1.38)			44/37	1.45 (0.9-2.34)		
			GG	24/20	1 (0.52-1.9)			0/4	N/A		
			AG/GG	211/193	1.06 (0.83-1.36)	0.64		44/41	1.31 (0.82-2.08)	0.26	
CYP2C9	rs1057910	10	AA	542/532	1.00	0.60	0.84	578/708	1.00	0.72	N/A
			AC	85/93	0.90 (0.65-1.26)			20/19	1.32 (0.68-2.57)		
			CC	5/4	1.74 (0.44-6.85)			1/0	N/A		
			AC/CC	90/97	0.93 (0.67-1.29)	0.68		21/19	1.39 (0.72-2.68)	0.33	
CYP3A4	rs4987161	7	AA	624/627	1.00	0.52	N/A	595/734	1.00	0.97	N/A
			AG	13/7	1.76 (0.67-4.63)			10/0	N/A		
			GG	0/1	N/A			0/0	N/A		
			AG/GG	13/8	1.55 (0.61-3.92)	0.36		10/0	N/A	N/A	
CYP3A5	rs776746	7	GG	539/541	1.00	0.52	0.31	54/79	1.00	0.58	0.77
			GA	94/91	0.87 (0.62-1.22)			261/298	1.23 (0.82-1.85)		
			AA	5/3	0.46 (0.08-2.75)			290/359	1.17 (0.78-1.76)		
			GA/AA	99/94	0.86 (0.62-1.19)	0.36		551/657	1.2 (0.82-1.77)	0.35	
CYP3A7	rs2257401	7	GG	517/526	1.00	0.31	0.48	115/160	1.00	0.53	0.35
			GC	113/103	0.98 (0.72-1.34)			315/375	1.17 (0.87-1.58)		
			CC	5/6	0.33 (0.08-1.36)			165/194	1.19 (0.85-1.66)		
			GC/CC	118/109	0.94 (0.69-1.28)	0.69		480/569	1.18 (0.89-1.56)	0.26	
ESR1	rs1801132	6	GG	373/433	1.00	0.0006	**0.0002**	469/575	1.00	0.89	0.63
			GC	217/185	1.34 (1.04-1.73)			129/153	1.06 (0.8-1.4)		
			CC	45/18	2.74 (1.53-4.92)			7/6	1.19 (0.38-3.74)		
			GC/CC	262/203	1.47 (1.16-1.87)	0.002		136/159	1.07 (0.81-1.4)	0.65	
ESR1	rs2046210	6	GG	237/256	1.00	0.007	**0.02**	84/109	1.00	0.45	0.54
			GA	293/310	1.02 (0.79-1.31)			283/316	1.13 (0.8-1.58)		
			AA	107/70	1.75 (1.21-2.54)			238/309	0.97 (0.68-1.37)		
			GA/AA	400/380	1.14 (0.9-1.45)	0.27		521/625	1.05 (0.76-1.45)	0.77	
ESR1	rs2228480	6	GG	437/444	1.00	0.51	0.78	415/515	1.00	0.85	0.57
			GA	179/165	1.05 (0.81-1.36)			164/193	1.06 (0.82-1.37)		
			AA	12/18	0.65 (0.3-1.42)			16/17	1.16 (0.56-2.38)		
			GA/AA	191/183	1.01 (0.78-1.3)	0.95		180/210	1.07 (0.84-1.37)	0.60	
ESR1	rs2234693	6	AA	192/185	1.00	0.68	0.74	139/168	1.00	0.20	0.29
			AG	318/331	0.94 (0.72-1.23)			315/355	1.09 (0.82-1.44)		
			GG	128/119	1.08 (0.77-1.52)			151/212	0.85 (0.62-1.17)		
			AG/GG	446/450	0.98 (0.76-1.26)	0.87		466/567	1.00 (0.77-1.31)	0.99	
ESR1	rs3020314	6	AA	261/331	1.00	0.0004	**0.00009**	54/58	1.00	0.63	0.51
			AG	291/254	1.47 (1.15-1.88)			243/297	0.82 (0.53-1.26)		
			GG	86/51	1.95 (1.3-2.94)			309/381	0.82 (0.53-1.25)		
			AG/GG	377/305	1.55 (1.23-1.96)	0.0002		552/678	0.82 (0.54-1.24)	0.34	
ESR1	rs3798577	6	AA	185/196	1.00	0.57	0.79	207/247	1.00	0.73	0.92
			AG	332/309	1.09 (0.83-1.43)			272/343	0.91 (0.71-1.18)		
			GG	118/130	0.93 (0.67-1.3)			126/144	1.01 (0.73-1.38)		
			AG/GG	450/439	1.04 (0.81-1.34)	0.75		398/487	0.94 (0.74-1.19)	0.62	
ESR1	rs9383938	6	CC	512/519	1.00	0.67	0.59	432/515	1.00	0.93	0.91
			CA	119/111	1.13 (0.83-1.52)			161/205	0.96 (0.75-1.24)		
			AA	5/6	0.77 (0.22-2.73)			13/15	1.1 (0.5-2.41)		
			CA/AA	124/117	1.11 (0.82-1.49)	0.50		174/220	0.97 (0.76-1.24)	0.83	
ESR1	rs9397435	6	AA	523/541	1.00	0.29	0.12	500/604	1.00	0.30	0.62
			AG	109/90	1.28 (0.93-1.76)			104/125	1.01 (0.75-1.36)		
			GG	6/5	1.39 (0.41-4.71)			2/7	0.27 (0.05-1.43)		
			AG/GG	115/95	1.29 (0.94-1.76)	0.12		106/132	0.97 (0.73-1.3)	0.85	
ESR2	rs1255998	14	CC	478/503	1.00	0.49	0.43	123/154	1.00	0.89	0.66
			CG	148/125	1.17 (0.88-1.55)			301/377	1.06 (0.79-1.42)		
			GG	11/7	0.78 (0.25-2.43)			177/204	1.08 (0.78-1.5)		
			CG/GG	159/132	1.15 (0.87-1.52)	0.33		478/581	1.07 (0.81-1.41)	0.65	
ESR2	rs1256049	14	GG	601/598	1.00	0.68	N/A	495/595	1.00	0.55	0.47
			GA	36/35	0.79 (0.47-1.33)			106/129	0.96 (0.72-1.29)		
			AA	0/1	N/A			4/11	0.52 (0.16-1.7)		

			GA/AA	36/36	0.77 (0.46-1.28)	0.31		110/140	0.93 (0.7-1.24)	0.62	
ESR2	rs1256065	14	AA	222/227	1.00	0.85	0.93	475/573	1.00	0.56	0.93
			AC	301/291	1.07 (0.82-1.38)			125/150	1.06 (0.8-1.41)		
			CC	115/118	0.99 (0.71-1.39)			6/12	0.61 (0.22-1.67)		
			AC/CC	416/409	1.05 (0.82-1.33)	0.71		131/162	1.03 (0.78-1.36)	0.85	
ESR2	rs2987983	14	AA	271/275	1.00	0.27	0.29	98/130	1.00	0.52	0.25
			AG	273/285	0.98 (0.76-1.26)			280/351	1.1 (0.8-1.52)		
			GG	92/75	1.31 (0.91-1.9)			227/255	1.21 (0.87-1.69)		
			AG/GG	365/360	1.05 (0.83-1.32)	0.70		507/606	1.15 (0.85-1.55)	0.37	
ESR2	rs3020450	14	GG	271/265	1.00	0.20	0.33	213/249	1.00	0.97	0.79
			GA	277/298	0.95 (0.74-1.21)			286/356	0.98 (0.76-1.26)		
			AA	89/73	1.32 (0.91-1.92)			107/129	0.96 (0.69-1.33)		
			GA/AA	366/371	1.02 (0.81-1.29)	0.87		393/485	0.97 (0.77-1.23)	0.82	
HSD17B2	rs4445895	16	GG	230/221	1.00	0.83	0.80	268/352	1.00	0.37	0.21
			GA	301/309	0.92 (0.71-1.2)			273/308	1.18 (0.93-1.49)		
			AA	106/106	0.98 (0.7-1.38)			65/75	1.17 (0.8-1.72)		
			GA/AA	407/415	0.94 (0.74-1.2)	0.61		338/383	1.18 (0.94-1.47)	0.16	
PR	rs1042838	11	CC	448/435	1.00	0.80	0.78	568/678	1.00	0.45	N/A
			CA	163/177	0.93 (0.71-1.21)			31/49	0.72 (0.44-1.2)		
			AA	19/17	1.12 (0.55-2.28)			2/0	N/A		
			CA/AA	182/194	0.94 (0.73-1.22)	0.65		33/49	0.77 (0.47-1.26)	0.30	
SRD5A1	rs3736316	5	GG	227/222	1.00	0.94	0.75	272/342	1.00	0.34	0.17
			GA	305/299	0.99 (0.76-1.27)			265/324	1.08 (0.85-1.37)		
			AA	106/114	0.94 (0.67-1.33)			68/70	1.33 (0.9-1.95)		
			GA/AA	411/413	0.97 (0.76-1.24)	0.83		333/394	1.13 (0.9-1.41)	0.30	
SRD5A1	rs3822430	5	AA	232/223	1.00	0.87	0.60	273/343	1.00	0.32	0.16
			AG	299/296	0.95 (0.74-1.23)			262/323	1.07 (0.85-1.36)		
			GG	107/116	0.92 (0.65-1.29)			68/69	1.35 (0.92-1.98)		
			AG/GG	406/412	0.94 (0.74-1.2)	0.63		330/392	1.12 (0.9-1.4)	0.32	
SRD5A2	rs523349	2	CC	318/312	1.00	0.49	0.54	340/370	1.00	0.13	0.06
			CG	263/257	1.03 (0.81-1.32)			226/308	0.79 (0.63-1.00)		
			GG	57/65	0.8 (0.53-1.21)			40/58	0.79 (0.51-1.24)		
			CG/GG	320/322	0.99 (0.78-1.24)	0.90		266/366	0.79 (0.63-0.99)	0.04	
UGT1A1	rs10929302	2	GG	312/291	1.00	0.46	0.22	307/368	1.00	0.71	0.76
			GA	268/278	0.9 (0.71-1.16)			253/300	1.03 (0.82-1.31)		
			AA	58/67	0.79 (0.53-1.18)			44/65	0.86 (0.56-1.32)		
			GA/AA	326/345	0.88 (0.7-1.11)	0.29		297/365	1 (0.8-1.26)	0.97	
UGT1A1	rs4124874	2	AA	177/184	1.00	0.61	0.92	20/20	1.00	0.10	0.12
			AC	309/294	1.13 (0.86-1.49)			163/241	0.73 (0.37-1.45)		
			CC	152/158	1.01 (0.73-1.39)			422/474	0.96 (0.49-1.88)		
			AC/CC	461/452	1.09 (0.84-1.4)	0.53		585/715	0.86 (0.44-1.68)	0.67	
UGT1A6	rs2070959	2	AA	287/256	1.00	0.20	0.56	342/443	1.00	0.02	0.45
			AG	274/306	0.82 (0.64-1.05)			235/243	1.32 (1.04-1.67)		
			GG	77/71	1.03 (0.71-1.51)			26/49	0.73 (0.44-1.22)		
			AG/GG	351/377	0.86 (0.68-1.08)	0.20		261/292	1.22 (0.97-1.53)	0.09	
UGT1A9	rs6714486	2	TT	558/567	1.00	0.40	0.27	439/513	1.00	0.23	0.11
			TA	70/60	1.29 (0.87-1.89)			148/187	0.87 (0.67-1.14)		
			AA	1/2	0.6 (0.05-7.15)			16/26	0.6 (0.3-1.18)		
			TA/AA	71/62	1.26 (0.86-1.85)	0.23		164/213	0.84 (0.65-1.08)	0.18	
UGT2B15	rs1902023	4	AA	169/166	1.00	0.12	0.08	91/142	1.00	0.05	0.38
			AC	341/322	0.97 (0.74-1.28)			321/354	1.48 (1.08-2.03)		
			CC	124/147	0.73 (0.52-1.02)			193/240	1.27 (0.90-1.77)		
			AC/CC	465/469	0.89 (0.69-1.16)	0.40		514/594	1.39 (1.03-1.88)	0.03	

Abbrevations: OR, odds ratio; 95%CI, 95% confidence interval; p-trend, p value for linear trend before correction for mutiple testing.

a. Adjusted for age at diagnosis (continuous), education (less than high school, high school, college and graduate school), family history of breast cancer (yes, no), history of benign breast disease (yes, no), menopausal status (premenopausal, postmenopausal), number of full pregnancy (continuous), breast feeding (yes, no, nulliparous) , Hormone Replacement Therapy (HRT, yes, no), body mass index (continuous), proportion of European ancestry (continuous) and estrogen months (continuous).

b. P, p value calculated using a genotypic (codominant) model.

c. OR, 95%CI and corresponding p values were also caculated for each SNP after herozygotes and rare homozygotes (dominant model) to account for the low number of rare homozygotes for certain SNPs .