

## Supplementary Materials: Genetic Evidence for the Association between Schizophrenia and Breast Cancer

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**Table S1. Characteristics of selected SCZ-associated SNPs in the current Mendelian randomization of SCZ on breast cancer risk.**

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs4648845	1	2387101	T	C	0.48	0.95	1.08	$6.74 \times 10^{-12}$	0.99	0.2103	Selected for MR
rs34269918	1	8424984	ga	g	0.68	0.99	1.06	$3.27 \times 10^{-9}$	1.01	0.3695	Selected for MR
rs6694545	1	30437268	A	G	0.24	0.97	1.08	$6.20 \times 10^{-12}$	1.01	0.4889	Selected for MR
rs2970610	1	44097530	T	C	0.36	1	1.07	$1.39 \times 10^{-11}$	0.99	0.08941	Selected for MR
rs12129719	1	66324512	A	G	0.56	0.97	1.06	$3.35 \times 10^{-8}$	0.99	0.3098	Selected for MR
rs12129573	1	73768366	A	C	0.40	1	1.08	$8.94 \times 10^{-15}$	1.00	0.7473	Selected for MR

Table S1. Cont.

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs6680011	1	95840866	C	A	0.15	1	1.08	$2.83 \times 10^{-8}$	1.00	0.8881	Selected for MR
rs11165867	1	97878068	T	C	0.16	1	1.07	$3.87 \times 10^{-8}$	1.00	0.8983	Selected for MR
rs2660304	1	98512127	T	G	0.79	0.99	1.11	$2.18 \times 10^{-18}$	1.00	0.854	Selected for MR
rs140505938	1	150031490	C	T	0.83	1	1.09	$6.50 \times 10^{-10}$	1.00	0.7292	Selected for MR
rs6701877	1	174015259	G	T	0.82	0.99	1.08	$2.37 \times 10^{-8}$	0.99	0.4819	Selected for MR
rs4650963	1	177309490	T	G	0.14	0.95	1.09	$1.16 \times 10^{-08}$	0.99	0.3678	Selected for MR
rs55770408	1	190643601	C	T	0.24	0.99	1.06	$3.02 \times 10^{-8}$	0.99	0.2365	Selected for MR
rs28374258	1	190949551	A	T	0.19	1	1.08	$6.35 \times 10^{-10}$	0.99	0.3069	Selected for MR
rs6678676	1	200266503	C	T	0.78	0.99	1.07	$3.22 \times 10^{-8}$	0.99	0.1815	Selected for MR
rs72769124	1	239210058	A	C	0.10	1	1.11	$4.73 \times 10^{-10}$	1.01	0.3946	Selected for MR
rs10803138	1	243555219	G	A	0.73	0.99	1.07	$2.03 \times 10^{-09}$	0.98	0.02217	Selected for MR
rs14403	1	243663893	C	T	0.79	0.99	1.08	$1.71 \times 10^{-10}$	1.00	0.7403	Selected for MR
rs12712510	2	22749726	T	C	0.47	0.98	1.06	$8.18 \times 10^{-9}$	1.00	0.7339	Selected for MR
rs77011057	2	58064341	A	G	0.94	0.99	1.12	$4.48 \times 10^{-8}$	1.00	0.7771	Selected for MR
rs75575209	2	58138192	T	A	0.08	0.99	1.1	$4.60 \times 10^{-9}$	1.03	0.008013	Selected for MR
rs7596038	2	58383820	C	T	0.56	1	1.07	$2.37 \times 10^{-12}$	1.00	0.4509	Selected for MR
rs2077586	2	73161551	A	G	0.73	0.71	1.06	$2.96 \times 10^{-8}$	1.00	0.8398	Selected for MR
rs56145559	2	73623439	T	C	0.21	0.99	1.07	$1.01 \times 10^{-9}$	1.00	0.901	Selected for MR
rs12991836	2	145141541	C	A	0.37	0.79	1.06	$6.46 \times 10^{-10}$	1.01	0.1097	Selected for MR
rs56807175	2	146436222	TC	T	0.18	0.98	1.09	$1.36 \times 10^{-11}$	1.01	0.36	Selected for MR
rs10196799	2	185640728	A	T	0.58	0.98	1.06	$4.51 \times 10^{-9}$	1.00	0.9907	Selected for MR
rs6434928	2	198304577	G	A	0.27	1	1.08	$3.62 \times 10^{-13}$	1.01	0.4184	Selected for MR
rs1451488	2	199990107	G	A	0.53	0.98	1.07	$4.75 \times 10^{-12}$	1.03	$4.45 \times 10^{-5}$	Selected for MR
rs34719143	2	200244409	T	TC	0.94	0.77	1.09	$7.71 \times 10^{-9}$	1.04	0.005777	Selected for MR

**Table S1. Cont.**

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs76432012	2	200576767	T	C	0.95	0.94	1.15	$2.75 \times 10^{-8}$	1.04	0.006521	Selected for MR
rs2949006	2	200715388	T	G	0.18	0.99	1.11	$3.69 \times 10^{-17}$	1.01	0.07467	Selected for MR
rs200626410	2	200768453	ttc	t	0.77	0.67	1.08	$2.95 \times 10^{-9}$	1.01	0.3326	Selected for MR
rs1347692	2	201297861	C	T	0.47	0.98	1.06	$4.11 \times 10^{-10}$	1.01	0.03389	Selected for MR
rs11685299	2	225391296	C	A	0.67	1	1.06	$3.86 \times 10^{-9}$	1.01	0.1302	Selected for MR
rs4144797	2	233562197	T	C	0.39	0.97	1.09	$4.33 \times 10^{-16}$	1.01	0.07592	Selected for MR
rs35346733	3	2521322	A	G	0.19	0.93	1.09	$2.42 \times 10^{-12}$	1.00	0.9622	Selected for MR
rs6800435	3	10804551	A	C	0.12	0.98	1.09	$2.00 \times 10^{-8}$	1.01	0.3573	Selected for MR
rs9881798	3	16846967	C	A	0.39	0.98	1.06	$2.81 \times 10^{-8}$	0.99	0.2024	Selected for MR
rs11409090	3	17887635	AT	A	0.48	0.96	1.06	$2.11 \times 10^{-9}$	1.02	0.00998	Selected for MR
rs75968099	3	36858583	T	C	0.36	1	1.07	$9.41 \times 10^{-11}$	0.99	0.1599	Selected for MR
rs1080500	3	53175017	G	A	0.67	0.88	1.08	$2.71 \times 10^{-12}$	1.01	0.3137	Selected for MR
rs312477	3	53515136	G	A	0.77	1	1.07	$1.38 \times 10^{-8}$	1.00	0.862	Selected for MR
rs1353545	3	60287845	C	G	0.34	0.99	1.06	$5.67 \times 10^{-9}$	0.99	0.2905	Selected for MR
rs704373	3	63867355	A	G	0.36	1	1.07	$1.39 \times 10^{-10}$	1.03	$9.76 \times 10^{-5}$	Selected for MR
rs7632921	3	71543758	G	T	0.56	0.99	1.06	$9.52 \times 10^{-9}$	1.03	$9.24 \times 10^{-6}$	Excluded due to pleiotropy by MR-PRESSO
rs7432375	3	136288405	G	A	0.56	1	1.07	$4.07 \times 10^{-12}$	1.02	0.01898	Selected for MR
rs489939	3	161470592	G	A	0.63	1	1.06	$1.24 \times 10^{-8}$	1.01	0.3329	Selected for MR
rs34796896	3	180623255	G	A	0.79	1	1.09	$3.19 \times 10^{-12}$	1.00	0.7559	Selected for MR
rs55672338	3	181051857	A	T	0.52	0.97	1.06	$1.52 \times 10^{-9}$	0.99	0.1033	Selected for MR
rs215411	4	23423603	A	T	0.31	1	1.06	$1.40 \times 10^{-8}$	0.99	0.1179	Selected for MR
rs13107325	4	103188709	T	C	0.08	1	1.17	$1.19 \times 10^{-16}$	1.02	0.1657	Selected for MR

**Table S1. Cont.**

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs13121251	4	143829759	T	C	0.66	0.99	1.06	$4.06 \times 10^{-8}$	1.01	0.3866	Selected for MR
rs10520163	4	170626552	T	C	0.50	1	1.05	$2.81 \times 10^{-8}$	1.00	0.9727	Selected for MR
rs12498839	4	176731401	A	G	0.04	0.97	1.14	$9.67 \times 10^{-11}$	1.01	0.3557	Selected for MR
rs62334820	4	176855221	T	C	0.19	0.97	1.08	$9.60 \times 10^{-12}$	1.02	0.02595	Selected for MR
rs16902086	5	45285752	G	A	0.36	1	1.07	$5.55 \times 10^{-11}$	1.05	$8.19 \times 10^{-12}$	Excluded due to pleiotropy by MR-PRESSO
rs77853293	5	49840113	C	T	0.45	1	1.06	$1.77 \times 10^{-8}$	1.03	$5.26 \times 10^{-5}$	Selected for MR
rs7701440	5	60620980	C	T	0.47	0.99	1.08	$3.72 \times 10^{-14}$	1.00	0.7998	Selected for MR
rs254782	5	88000630	G	A	0.96	0.98	1.13	$4.40 \times 10^{-8}$	1.00	0.927	Selected for MR
rs16867576	5	88746331	A	G	0.89	0.93	1.11	$1.65 \times 10^{-11}$	1.00	0.8769	Selected for MR
rs13169274	5	137855305	C	T	0.50	0.99	1.06	$7.06 \times 10^{-10}$	1.01	0.08214	Selected for MR
rs79212538	5	151993104	T	G	0.04	0.98	1.15	$5.55 \times 10^{-10}$	1.02	0.224	Selected for MR
rs111294930	5	152177121	A	G	0.72	0.97	1.09	$9.04 \times 10^{-12}$	1.00	0.8294	Selected for MR
rs2910032	5	152540354	C	T	0.46	1	1.07	$3.72 \times 10^{-11}$	0.99	0.1082	Selected for MR
rs12522290	5	152797656	C	G	0.82	0.98	1.08	$1.34 \times 10^{-9}$	1.00	0.8804	Selected for MR
rs3130820	6	29206683	T	A	0.93	1	1.28	$2.12 \times 10^{-44}$	1.07	$7.41 \times 10^{-9}$	Excluded due to pleiotropy by MR-PRESSO
rs1339227	6	73155701	C	T	0.66	0.98	1.06	$3.76 \times 10^{-10}$	1.01	0.02659	Selected for MR
rs4470825	6	83789798	G	A	0.58	0.98	1.06	$8.94 \times 10^{-9}$	1.00	0.7167	Selected for MR
rs217287	6	84407466	C	T	0.56	0.98	1.07	$9.53 \times 10^{-13}$	1.01	0.4495	Selected for MR
rs634940	6	93077500	T	G	0.24	0.96	1.07	$1.30 \times 10^{-8}$	1.01	0.2842	Selected for MR
rs760608	6	114719447	G	A	0.27	0.97	1.06	$1.90 \times 10^{-8}$	1.01	0.06045	Selected for MR

**Table S1. Cont.**

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs35736453	6	128329493	tc	t	0.72	0.98	1.06	$2.95 \times 10^{-8}$	1.01	0.1124	Selected for MR
rs72342102	6	143650817	t	ttttg	0.20	0.99	1.07	$7.93 \times 10^{-9}$	1.00	0.829	Selected for MR
rs10650434	7	2025096	ACT	A	0.42	1	1.09	$1.10 \times 10^{-18}$	0.98	0.000997	Excluded due to pleiotropy by MR-PRESSO
rs146678232	7	24777089	C	CA	0.17	0.99	1.07	$1.63 \times 10^{-8}$	1.01	0.3398	Selected for MR
rs12704290	7	86427626	G	A	0.87	0.99	1.12	$3.57 \times 10^{-14}$	1.01	0.3342	Selected for MR
rs147922658	7	86775498	taag	t	0.97	1	1.18	$7.71 \times 10^{-10}$	0.98	0.2485	Selected for MR
rs7789569	7	104927586	T	C	0.36	1	1.07	$7.00 \times 10^{-11}$	1.00	0.7235	Selected for MR
rs211829	7	110048893	T	C	0.58	1	1.06	$2.29 \times 10^{-9}$	1.01	0.2826	Selected for MR
rs12705761	7	110976264	G	C	0.58	0.98	1.07	$5.11 \times 10^{-11}$	1.01	0.2164	Selected for MR
rs7801375	7	131567263	G	A	0.85	0.99	1.08	$6.27 \times 10^{-9}$	0.99	0.2387	Selected for MR
rs4523180	7	131619693	T	G	0.92	0.74	1.11	$3.83 \times 10^{-8}$	1.01	0.5433	Selected for MR
rs3735025	7	137074844	T	C	0.64	0.94	1.07	$7.02 \times 10^{-11}$	1.00	0.5676	Selected for MR
rs139425113	8	4180611	GA	G	0.22	1	1.07	$8.48 \times 10^{-9}$	1.02	0.06371	Selected for MR
rs11993663	8	10032894	A	C	0.31	1	1.06	$3.40 \times 10^{-8}$	0.99	0.3463	Selected for MR
rs2410572	8	18421474	G	A	0.43	0.99	1.06	$1.07 \times 10^{-8}$	1.00	0.4823	Selected for MR
rs1042992	8	26269191	T	C	0.17	1	1.08	$3.67 \times 10^{-9}$	1.00	0.9737	Selected for MR
rs2565065	8	27328021	A	G	0.28	1	1.07	$1.74 \times 10^{-9}$	1.00	0.7532	Selected for MR
rs11783093	8	27425349	C	T	0.85	1	1.1	$7.64 \times 10^{-12}$	1.03	0.000913	Selected for MR
rs55669358	8	34312412	C	T	0.11	1	1.1	$1.37 \times 10^{-8}$	0.98	0.1345	Selected for MR
rs10156310	8	38209129	A	T	0.76	1	1.08	$5.56 \times 10^{-10}$	0.99	0.2748	Selected for MR
rs1473594	8	60696526	T	C	0.40	1	1.07	$3.33 \times 10^{-11}$	1.00	0.5711	Selected for MR
rs7010876	8	89264751	T	A	0.28	0.99	1.06	$6.51 \times 10^{-9}$	1.00	0.7146	Selected for MR

**Table S1. Cont.**

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs36043959	8	111472014	A	G	0.19	1	1.08	$4.07 \times 10^{-12}$	0.99	0.3556	Selected for MR
rs4976967	8	143293307	G	A	0.68	0.92	1.07	$9.07 \times 10^{-9}$	0.99	0.4649	Selected for MR
rs58033671	8	143320118	accct gcacgc cgc	a	0.55	0.96	1.09	$8.65 \times 10^{-18}$	1.00	0.5138	Selected for MR
rs67439964	8	143343398	T	C	0.77	0.93	1.08	$1.16 \times 10^{-9}$	1.01	0.4704	Excluded due to LD r <sup>2</sup> of 0.12 with rs58033671
rs1319017	9	84736303	A	G	0.35	0.98	1.07	$7.82 \times 10^{-11}$	1.00	0.8014	Selected for MR
rs10985817	9	101071090	C	T	0.17	1	1.08	$1.02 \times 10^{-9}$	1.01	0.1416	Selected for MR
rs7099380	10	18549016	A	G	0.56	1	1.06	$1.47 \times 10^{-8}$	1.00	0.7617	Selected for MR
rs7893279	10	18745105	T	G	0.89	0.98	1.12	$4.80 \times 10^{-13}$	1.00	0.7161	Selected for MR
rs7476192	10	104649375	T	G	0.65	0.91	1.08	$3.77 \times 10^{-12}$	0.99	0.03129	Selected for MR
rs12416331	10	104928914	T	A	0.91	1	1.16	$7.09 \times 10^{-18}$	1.00	0.7426	Selected for MR
rs1899543	11	24406419	T	A	0.55	1	1.06	$1.23 \times 10^{-9}$	0.99	0.4091	Selected for MR
rs1765142	11	30378559	A	C	0.66	0.97	1.06	$1.13 \times 10^{-8}$	1.01	0.06988	Selected for MR
rs7951870	11	46373311	C	T	0.18	0.98	1.1	$2.99 \times 10^{-13}$	1.02	0.02453	Selected for MR
rs7129727	11	57484660	A	G	0.31	1	1.06	$1.47 \times 10^{-9}$	1.02	0.008475	Selected for MR
rs58950470	11	65383755	T	G	0.34	0.99	1.06	$2.07 \times 10^{-8}$	1.02	0.002873	Selected for MR
rs2514218	11	113392994	C	T	0.65	0.97	1.08	$2.42 \times 10^{-12}$	1.01	0.3752	Selected for MR
rs4936277	11	113431960	A	G	0.58	0.98	1.06	$1.52 \times 10^{-8}$	1.01	0.3049	Selected for MR
rs12293670	11	124612932	A	G	0.65	0.99	1.08	$1.70 \times 10^{-15}$	1.00	0.567	Selected for MR
rs35774874	11	130811356	T	C	0.49	0.99	1.07	$1.97 \times 10^{-11}$	1.00	0.8366	Selected for MR
rs5795787	11	132397822	g	gtaa	0.52	0.99	1.06	$2.69 \times 10^{-8}$	1.00	0.6731	Selected for MR

**Table S1. Cont.**

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs2917569	11	132568255	T	C	0.50	0.96	1.06	$3.11 \times 10^{-10}$	1.00	0.9166	Selected for MR
rs4936215	11	133852684	A	G	0.78	0.89	1.1	$5.32 \times 10^{-14}$	1.00	0.5885	Selected for MR
rs893949	11	134296384	C	T	0.47	0.83	1.05	$2.98 \times 10^{-8}$	1.00	0.4782	Selected for MR
rs2007044	12	2344960	G	A	0.37	1	1.09	$5.63 \times 10^{-20}$	1.03	$6.04 \times 10^{-5}$	Selected for MR
rs12823424	12	2514112	A	G	0.70	0.97	1.07	$2.28 \times 10^{-9}$	1.01	0.4576	Selected for MR
rs1120004	12	23633432	T	G	0.24	1	1.06	$1.42 \times 10^{-8}$	1.01	0.3364	Selected for MR
rs10783624	12	39522907	C	A	0.34	0.98	1.06	$5.44 \times 10^{-9}$	1.00	0.6665	Selected for MR
rs324015	12	57490100	C	T	0.75	1	1.07	$1.42 \times 10^{-10}$	1.00	0.5405	Selected for MR
rs61937595	12	57682956	C	T	0.91	0.92	1.13	$3.28 \times 10^{-11}$	1.04	0.003089	Selected for MR
rs4240748	12	92246786	G	C	0.63	0.99	1.06	$2.15 \times 10^{-8}$	0.99	0.2305	Selected for MR
rs36104021	12	103361112	C	G	0.87	0.93	1.09	$7.31 \times 10^{-9}$	1.00	0.8788	Selected for MR
rs4766428	12	110723245	T	C	0.45	0.98	1.08	$2.68 \times 10^{-14}$	1.01	0.04506	Selected for MR
rs2851447	12	123665113	G	C	0.28	0.99	1.09	$5.55 \times 10^{-16}$	0.99	0.1377	Selected for MR
rs9545047	13	79859456	A	C	0.61	0.99	1.06	$1.15 \times 10^{-8}$	0.99	0.2565	Selected for MR
rs10148671	14	29469373	C	T	0.63	1	1.07	$5.46 \times 10^{-10}$	1.01	0.4454	Selected for MR
rs1191551	14	30000405	T	G	0.22	0.98	1.08	$4.12 \times 10^{-10}$	1.01	0.311	Selected for MR
rs199687649	14	30189985	ca	c	0.15	0.9	1.07	$7.31 \times 10^{-9}$	0.99	0.4263	Excluded due to LD $r^2$ of 0.11 with rs1191551
rs34179565	14	33298731	C	CA	0.47	0.98	1.06	$8.88 \times 10^{-9}$	0.99	0.2351	Selected for MR
rs150437760	14	59981768	A	C	0.94	1	1.13	$4.58 \times 10^{-8}$	0.98	0.193	Selected for MR
rs2332700	14	72417326	C	G	0.25	0.95	1.07	$1.52 \times 10^{-10}$	1.01	0.04485	Selected for MR
rs35604463	14	99712032	G	A	0.55	0.99	1.06	$1.66 \times 10^{-8}$	0.99	0.07341	Selected for MR
rs10083370	14	104314182	G	A	0.38	0.99	1.08	$3.44 \times 10^{-14}$	0.99	0.1313	Selected for MR

Table S1. *Cont.*

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs80020004	14	104495116	T	C	0.10	0.92	1.09	$1.85 \times 10^{-8}$	1.00	0.9596	Selected for MR
rs56282503	15	40566759	C	T	0.30	0.88	1.06	$2.30 \times 10^{-8}$	1.00	0.6239	Selected for MR
rs281299	15	47686081	T	C	0.62	1	1.06	$2.19 \times 10^{-8}$	1.02	0.003907	Selected for MR
rs12898315	15	61854003	A	G	0.57	1	1.06	$2.51 \times 10^{-9}$	1.01	0.3566	Selected for MR
rs12148337	15	70589272	T	C	0.48	0.98	1.06	$1.16 \times 10^{-8}$	1.01	0.3248	Selected for MR
rs3743078	15	78894759	G	C	0.76	1	1.08	$3.11 \times 10^{-12}$	1.00	0.7168	Selected for MR
rs783540	15	83254708	G	A	0.42	1	1.06	$8.45 \times 10^{-10}$	1.00	0.7613	Selected for MR
rs12908161	15	85207825	A	G	0.74	0.99	1.07	$9.41 \times 10^{-10}$	1.00	0.8334	Selected for MR
rs17514846	15	91416550	C	A	0.54	1	1.07	$2.55 \times 10^{-12}$	1.03	$6.35 \times 10^{-6}$	Excluded due to pleiotropy by MR-PRESSO
rs12447542	16	7744180	A	G	0.14	0.9	1.09	$1.44 \times 10^{-8}$	1.00	0.6457	Selected for MR
rs7191183	16	9900057	C	T	0.32	0.99	1.06	$6.31 \times 10^{-9}$	1.00	0.6729	Selected for MR
rs7499750	16	13749265	A	C	0.26	0.99	1.07	$4.24 \times 10^{-10}$	1.00	0.7846	Selected for MR
rs198160	16	24240725	G	T	0.50	0.91	1.06	$4.88 \times 10^{-8}$	0.99	0.4324	Selected for MR
rs11646127	16	29966277	G	C	0.56	1	1.07	$5.52 \times 10^{-13}$	1.00	0.9542	Selected for MR
rs42945	16	58545426	G	A	0.56	0.97	1.07	$2.25 \times 10^{-10}$	0.99	0.1888	Selected for MR
rs17465671	16	63712719	C	A	0.49	0.94	1.06	$4.14 \times 10^{-9}$	1.01	0.0468	Selected for MR
rs1975802	16	68285847	G	A	0.17	1	1.07	$3.56 \times 10^{-8}$	1.02	0.0164	Selected for MR
rs2161711	16	71359066	A	G	0.82	0.99	1.07	$4.22 \times 10^{-8}$	1.01	0.4783	Selected for MR
rs7216638	17	2156453	T	A	0.64	0.99	1.07	$4.59 \times 10^{-10}$	0.98	0.009876	Selected for MR
rs4925114	17	17711270	A	G	0.40	0.96	1.06	$2.64 \times 10^{-8}$	1.02	0.002487	Selected for MR
rs66885728	17	19014831	G	C	0.87	0.74	1.09	$1.47 \times 10^{-8}$	1.00	0.9011	Selected for MR
rs7225476	17	78561603	A	G	0.56	1	1.05	$4.86 \times 10^{-8}$	1.01	0.05844	Selected for MR



**Table S1. Cont.**

SNP	Chr	Base position_b37	Effect allele	Other allele	Effect allele frequency <sup>a</sup>	BCAC_onco2_Imputation_r <sup>2b</sup>	OR_SC Z	p_SCZ	OR_BC	p_BC	Note
rs5825114	18	52749216	ga	g	0.61	1	1.08	$5.03 \times 10^{-14}$	1.01	0.3052	Selected for MR
rs79926379	18	53009097	G	A	0.04	0.97	1.18	$1.61 \times 10^{-11}$	1.03	0.05325	Selected for MR
rs66791238	18	53230650	T	C	0.78	0.97	1.07	$6.41 \times 10^{-9}$	1.01	0.3576	Excluded due to LD $r^2$ of 0.11 with rs5825114
rs28758902	18	53408187	T	C	0.46	1	1.07	$4.75 \times 10^{-13}$	1.00	0.6464	Selected for MR
rs144158419	18	53554733	C	T	0.92	0.98	1.14	$5.03 \times 10^{-13}$	1.01	0.2415	Selected for MR
rs1789595	18	53775254	A	T	0.71	1	1.07	$2.23 \times 10^{-09}$	1.00	0.6505	Selected for MR
rs56775891	18	77575613	T	C	0.25	0.99	1.07	$2.03 \times 10^{-9}$	1.00	0.5678	Selected for MR
rs72986630	19	11849736	T	C	0.06	0.84	1.15	$8.09 \times 10^{-10}$	0.98	0.1099	Selected for MR
rs2905432	19	19484295	G	A	0.33	1	1.07	$6.62 \times 10^{-12}$	1.05	$9.23 \times 10^{-12}$	Excluded due to pleiotropy by MR-PRESSO
rs2053079	19	30987423	G	A	0.26	0.99	1.07	$1.82 \times 10^{-10}$	1.01	0.1038	Selected for MR
rs7508148	19	50152142	T	C	0.74	0.98	1.08	$4.06 \times 10^{-11}$	1.00	0.8563	Selected for MR
rs6035706	20	20821005	G	A	0.30	0.99	1.06	$7.24 \times 10^{-9}$	1.01	0.1148	Selected for MR
rs6065094	20	37453194	G	A	0.65	1	1.09	$7.91 \times 10^{-17}$	1.00	0.5726	Selected for MR
rs9611177	22	39840130	C	T	0.61	0.9	1.06	$3.84 \times 10^{-8}$	0.99	0.2749	Selected for MR
rs5757730	22	39967430	G	A	0.56	0.94	1.07	$1.76 \times 10^{-12}$	1.00	0.6199	Selected for MR
rs4820386	22	40068051	T	C	0.45	0.99	1.06	$4.07 \times 10^{-10}$	1.01	0.1182	Selected for MR
rs9607782	22	41587556	A	T	0.27	0.97	1.08	$5.54 \times 10^{-13}$	1.00	0.5132	Selected for MR
rs1023497	22	42340508	C	G	0.80	1	1.08	$2.04 \times 10^{-11}$	1.00	0.9377	Selected for MR
rs6002655	22	42603814	T	C	0.43	0.95	1.08	$2.15 \times 10^{-14}$	0.99	0.1143	Selected for MR
rs12009217	23	5920882	G	A	0.13	1	1.07	$1.78 \times 10^{-10}$	1.01	0.08249	Selected for MR
rs62606711	23	68377204	A	G	0.18	0.99	1.07	$1.26 \times 10^{-12}$	1.00	0.6163	Selected for MR

<sup>a</sup> Effective allele frequency in the 1000 Genomes EUR super-population. <sup>b</sup> Linkage disequilibrium (LD) data are based on 1000 Genomes Phase 3 EUR.