

Supplementary Table 5. Estimates of the causal effect of age at menarche on lung function for all 122 SNPs, for adults (ECRHS, NFBC 1966, UK Biobank) and adolescents (ALSPAC, NFBC 1986). *EA* : effect allele; *Beta* : estimate of the effect of one year increase in age at menarche on FVC (ml) or FEV₁/FVC (%); *Beta SE* : standard error of beta.

SNP	EA	FVC				FEV1/FVC			
		Adults		Adolescents		Adults		Adolescents	
		(n=46,944)		(n=3,025)		(n=46,944)		(n=3,025)	
		Beta	Beta SE	Beta	Beta SE	Beta	Beta SE	Beta	Beta SE
rs10144321	a	-15.5	143.0	-254.3	315.8	-1.3	4.3	2.5	4.5
rs1038903	t	93.0	139.9	-191.8	310.3	0.5	3.5	-1.3	4.5
rs10423674	a	132.5	130.6	-108.3	467.4	1.8	1.7	0.5	6.3
rs10453225	g	197.6	59.2	-96.4	129.7	-0.3	2.0	1.2	2.0
rs10739221	c	216.1	74.9	-29.0	160.1	-6.0	5.1	1.0	2.5
rs10789181	a	54.0	168.6	189.3	378.0	-0.3	2.6	2.3	5.7
rs1079866	g	-15.1	100.9	-202.1	216.5	10.3	5.4	3.9	3.3
rs10816359	t	177.3	169.7	-52.0	391.6	2.0	3.8	2.3	6.0
rs10895140	g	-211.8	131.9	-356.5	289.7	-0.5	3.5	3.0	4.5
rs10938397	a	203.8	127.1	-62.5	273.9	4.8	4.4	-0.8	4.3
rs10980854	a	-70.3	175.3	-888.5	394.1	1.7	2.9	2.3	3.2
rs10980921	c	-99.4	100.5	-246.0	231.4	-1.2	3.2	0.8	3.6
rs11022756	a	57.2	108.6	-361.4	241.7	-8.7	5.6	14.7	6.7
rs11165924	a	337.7	188.5	517.7	427.7	2.8	4.0	6.0	5.8
rs11215400	c	103.0	140.8	441.0	316.0	5.7	5.1	-4.0	5.4
rs1129700	t	-3.0	164.7	-722.0	390.0	3.7	4.7	1.2	3.2
rs11578152	g	171.3	166.5	50.3	366.8	2.0	3.0	7.3	4.6
rs11715566	t	141.4	99.0	229.4	224.4	1.5	4.0	-1.8	4.5
rs11767400	a	-282.0	141.7	-166.8	308.5	0.3	3.8	-6.6	5.7
rs11792861	a	96.8	135.0	210.5	304.9	-8.0	5.0	-12.0	6.8
rs12148769	g	165.8	166.7	697.6	395.1	-0.5	5.5	-4.8	4.8
rs12446632	a	-193.5	180.0	-494.3	411.4	-3.3	4.0	-5.8	4.8
rs12472911	c	-167.5	147.7	-141.3	333.4	8.3	4.4	1.5	5.3
rs1254337	t	-24.0	134.3	212.0	325.3	5.0	3.8	1.3	4.5
rs12571664	t	-1.0	156.2	-221.8	346.3	-4.0	4.7	11.0	6.0
rs12607903	c	-24.3	136.8	-277.5	305.7	1.3	4.3	5.5	5.1
rs12915845	c	-53.3	165.9	-385.7	381.4	2.8	4.8	-6.3	5.8
rs13053505	g	-76.3	163.5	281.0	340.8	5.3	5.1	-2.5	3.7
rs13067731	t	-252.3	172.5	448.5	394.6	-0.7	2.8	-5.5	5.1
rs13135934	c	-175.3	169.9	-322.0	382.8	-3.3	4.3	2.3	5.7
rs13179411	t	147.8	112.5	146.2	236.6	-8.0	5.2	5.0	3.6
rs13196561	c	254.5	156.2	-235.3	342.3	-1.4	2.8	4.4	3.4
rs1324913	g	119.3	174.5	91.7	395.0	3.4	3.2	4.2	3.8
rs1364063	c	338.0	105.6	-407.8	230.2	-0.2	2.8	-12.3	6.0
rs1400974	a	-118.2	104.1	204.8	241.3	-1.0	3.2	3.3	4.3
rs1461503	c	-95.0	99.1	-164.2	220.8	9.3	4.9	0.6	6.6
rs1469039	a	-96.0	128.3	167.2	261.2	-0.8	3.5	18.7	8.5
rs1532331	g	161.0	179.3	358.0	381.0	-8.5	7.1	5.6	4.5

SNP	EA	FVC				FEV1/FVC			
		Adults (n=46,944)		Adolescents (n=3,025)		Adults (n=46,944)		Adolescents (n=3,025)	
		Beta	Beta SE	Beta	Beta SE	Beta	Beta SE	Beta	Beta SE
rs16860328	g	45.5	124.6	274.0	286.8	0.2	5.4	-0.5	5.0
rs16896742	g	221.8	142.4	365.5	290.7	2.7	6.7	-1.4	5.6
rs16918254	a	208.2	192.7	750.0	474.6	-2.3	3.0	2.6	5.2
rs16918636	t	60.0	205.3	-951.7	535.9	0.5	4.3	6.3	4.3
rs17086188	a	285.4	169.2	-215.0	257.4	-0.7	4.1	-3.8	4.3
rs17171818	c	-225.5	156.0	-182.0	333.9	-2.4	5.2	-3.0	6.0
rs17233066	c	-106.3	116.1	349.7	361.8	-3.8	3.5	4.7	5.7
rs17236969	t	-67.6	140.2	-107.6	372.4	0.8	3.5	-7.0	4.3
rs17266097	t	318.8	131.7	87.8	279.7	-3.7	4.7	-2.6	3.4
rs1874984	c	-35.3	123.3	541.3	291.9	9.3	5.2	3.0	2.1
rs1915146	g	-178.3	168.0	223.0	386.5	1.4	3.4	5.0	5.7
rs1958560	a	98.7	167.5	-59.0	374.1	2.0	2.8	-3.0	5.7
rs2063730	c	148.6	126.1	91.6	278.9	-2.9	1.9	6.0	6.1
rs2137289	a	230.2	104.4	239.2	232.4	-2.0	5.0	-7.5	4.6
rs2153127	t	-230.6	63.4	-156.8	142.3	-2.7	4.7	-2.7	5.4
rs2274465	c	-19.0	172.7	-413.0	389.1	-1.3	4.7	1.8	4.5
rs239198	t	22.7	164.7	-200.0	369.5	4.5	3.6	-6.0	4.3
rs244293	g	-78.7	170.5	-611.7	398.9	-2.7	4.7	11.0	5.5
rs246185	c	204.5	135.3	410.0	297.7	3.0	4.0	-1.8	4.5
rs2479724	t	-136.0	164.6	-174.7	370.8	0.3	3.5	5.7	6.1
rs251130	g	-56.5	138.0	-598.8	314.3	-7.0	4.4	-6.7	5.4
rs2600959	a	122.8	130.4	-361.3	302.9	-4.0	3.8	-0.5	3.7
rs268067	a	158.8	158.5	143.8	349.4	7.0	5.2	6.0	4.3
rs2687729	g	45.0	138.4	-599.8	312.5	2.7	4.7	-5.0	4.9
rs2688325	t	151.3	181.5	-764.3	431.0	2.2	3.0	4.5	4.8
rs2836950	c	375.0	181.1	582.0	383.8	7.0	3.9	-12.8	6.2
rs2947411	a	39.0	109.3	292.3	247.7	2.0	3.8	-6.0	3.0
rs3101336	t	-20.3	125.5	-206.8	284.2	2.3	4.5	-0.1	4.4
rs3733631	c	-265.4	140.2	217.6	294.6	-6.5	5.8	-0.3	4.3
rs3743266	t	-35.8	133.3	-307.5	325.0	0.8	2.5	10.0	6.0
rs4369815	t	125.3	173.3	-133.7	433.6	-0.3	4.0	7.0	5.8
rs466639	c	115.6	93.3	263.8	201.9	3.8	3.5	0.5	4.5
rs4756059	t	-99.9	139.0	229.7	310.3	4.3	4.7	6.8	4.1
rs4840086	a	-14.0	123.8	-56.0	279.1	8.0	4.9	-1.0	6.3
rs4875053	g	79.3	169.4	230.7	367.6	-1.3	3.8	1.7	5.7
rs4895808	c	-556.3	189.0	-898.0	396.0	-10.6	3.6	3.7	5.7
rs4929947	g	260.3	132.6	152.5	292.4	2.0	5.7	3.8	4.8
rs543874	a	125.2	121.9	60.0	283.7	-1.0	4.7	-8.3	5.8
rs6009583	c	-77.3	188.6	-645.3	449.9	-8.7	4.9	-5.1	3.0
rs6427782	a	221.0	168.4	-48.0	368.7	4.3	4.3	-3.0	4.0
rs652260	t	-136.7	165.9	-437.7	387.6	0.7	2.4	-0.5	4.3
rs6555855	g	82.8	149.8	-33.5	314.0	2.0	3.8	-0.3	4.3
rs6563739	g	101.0	171.8	674.3	414.5	2.5	3.5	2.0	6.0

SNP	EA	FVC				FEV1/FVC			
		Adults (n=46,944)		Adolescents (n=3,025)		Adults (n=46,944)		Adolescents (n=3,025)	
		Beta	Beta SE	Beta	Beta SE	Beta	Beta SE	Beta	Beta SE
rs6747380	a	12.6	91.2	-120.4	190.4	-1.0	5.0	-1.8	6.0
rs6758290	t	27.5	123.8	142.8	278.3	5.3	5.8	3.0	5.0
rs6762477	g	-452.3	140.7	403.0	293.0	-6.5	4.1	3.0	5.7
rs6770162	a	-30.8	123.3	23.5	289.0	-1.3	4.7	9.3	5.2
rs6933660	c	352.3	184.9	-96.0	405.3	-9.0	4.7	-2.0	6.3
rs6938574	t	245.8	175.6	-467.5	440.2	-1.0	5.7	-3.3	4.3
rs6964833	t	-245.0	146.0	-430.8	341.2	-7.5	3.9	-2.0	5.7
rs7037266	a	258.3	175.7	-8.7	371.0	4.7	5.1	1.0	5.0
rs7103411	c	108.3	152.4	-138.5	368.1	2.3	4.3	4.3	5.7
rs7104764	g	67.7	191.1	932.0	463.5	-7.0	4.8	7.8	4.1
rs7138803	g	45.0	127.1	-231.5	296.7	4.0	3.5	-3.5	4.3
rs7141210	t	-253.3	177.8	-9.7	394.0	3.5	3.8	-2.8	4.0
rs7215990	g	-58.8	146.0	-64.0	338.4	-4.8	3.6	6.7	5.8
rs7463166	a	-73.0	171.4	-415.0	391.5	2.7	4.7	2.3	1.5
rs7514705	c	-54.8	125.4	-452.5	281.2	-0.3	1.3	1.5	4.8
rs7642134	g	236.5	129.7	57.0	291.1	-0.8	4.0	-2.8	4.3
rs7647973	a	-107.8	114.1	-434.2	267.7	-0.5	3.5	5.7	5.7
rs7701886	a	174.0	168.2	39.3	388.0	-1.3	5.0	-2.3	6.0
rs7759938	c	-116.0	44.2	-112.4	101.9	-5.5	5.4	-3.8	6.5
rs7821178	c	121.3	131.9	-3.0	310.2	3.3	3.8	1.3	4.3
rs7828501	g	270.0	128.8	104.8	285.5	0.5	3.5	-0.3	4.3
rs7853970	t	-2.0	167.3	-799.0	396.1	-1.5	3.8	-1.8	4.3
rs7865468	a	-22.7	179.7	-286.7	399.2	2.5	4.0	5.5	4.6
rs7955374	t	450.8	207.8	267.5	429.3	1.7	5.0	-5.3	5.7
rs8032675	t	-149.3	127.4	-431.0	292.0	-1.0	5.0	-2.7	5.4
rs8050136	c	225.8	128.1	-74.5	285.4	-7.3	4.6	-1.3	5.5
rs852069	g	305.3	132.8	-54.0	283.3	5.5	3.9	-0.2	4.2
rs889122	g	-103.3	137.6	99.5	299.9	-1.5	3.8	7.5	4.9
rs900400	t	-438.3	189.6	20.7	378.3	-2.0	4.7	-6.7	5.8
rs913588	g	-224.7	167.6	495.8	374.7	6.8	4.4	6.3	5.1
rs929843	a	367.8	160.8	-124.5	299.3	-8.0	5.2	-11.3	6.0
rs9321659	a	-247.7	128.0	-435.8	304.3	-5.4	3.3	2.0	3.6
rs939317	g	-54.5	140.5	-408.3	398.2	2.0	3.2	-4.4	3.6
rs9447700	c	-109.3	177.3	-171.3	358.9	-2.8	3.8	-4.0	4.4
rs9475752	c	-147.8	155.1	388.0	384.1	-4.0	4.6	-1.8	5.5
rs951366	t	-278.0	160.5	220.4	247.0	0.8	3.5	1.3	4.3
rs9560113	g	178.8	111.7	-58.4	235.9	-4.0	4.6	1.9	3.7
rs9635759	a	113.6	108.0	-58.4	294.3	0.8	3.5	-4.3	3.6
rs9647570	g	166.6	142.3	-519.5	370.3	-2.8	3.9	-4.0	4.4
rs9849248	c	215.8	173.9	-134.8	283.7	-4.0	4.7	-1.9	5.6
rs988913	c	222.8	130.5	-134.8	283.8	0.7	3.5	1.2	4.1