

Summary of case-control analyses by quartiles of cMZ twins

Language																
Q1 (N = 13)	CHR	SNP	BP	A1	F_A	F_U	A2	CHISQ	OR	UNADJ	BONF	FDR_BH	Band	Alleles	Gene(s)	Role
	6	rs7767901	9014658	C	0.03846	0.2117	T	4.666	0.1489	3.08E-02	1.23E-01	6.39E-02	6p24.3	C/T		
	6	rs6597379	9000801	T	0.03846	0.21	C	4.601	0.1505	3.20E-02	1.28E-01	6.39E-02	6p24.3	C/T		
Q4 (N = 18)																
	CHR	SNP	BP	A1	F_A	F_U	A2	CHISQ	OR	UNADJ	BONF	FDR_BH	Band	Alleles	Gene(s)	Role
	8	rs4481588	35609723	T	0.25	0.08764	C	11.64	3.47	6.46E-04	2.59E-03	2.59E-03	8p12	C/T	UNC5D	Intron
	5	rs2546481	1.15E+08	T	0.3056	0.1445	C	7.448	2.605	6.35E-03	2.54E-02	1.27E-02	5q22.3	C/T		
	6	rs6597379	9000801	T	0.3611	0.21	C	4.902	2.127	2.68E-02	1.07E-01	2.91E-02	6p24.3	C/T		
	6	rs7767901	9014658	C	0.3611	0.2117	T	4.762	2.105	2.91E-02	1.16E-01	2.91E-02	6p24.3	C/T		
Nonverbal																
Q1 (N = 11)	CHR	SNP	BP	A1	F_A	F_U	A2	CHISQ	OR	UNADJ	BONF	FDR_BH	Band	Alleles	Gene(s)	Role
	8	rs359782	47302891	A	0.65	0.2483	G	17.14	5.623	3.47E-05	4.17E-04	4.17E-04	8q11.1	A/G		
	14	rs7145220	34193684	G	0.75	0.3704	A	12.28	5.099	4.57E-04	5.48E-03	2.74E-03	14q13.1	A/G		
	4	rs1313228	20972739	G	0.8182	0.4608	A	11.25	5.265	7.96E-04	9.55E-03	3.18E-03	4p15.2	A/G	KCNIP4	Intron
	22	rs2073454	20847479	A	0.75	0.4123	C	9.361	4.276	2.22E-03	2.66E-02	4.21E-03	22q11.22	A/C		
	5	rs2216904	51769238	T	0.7273	0.409	C	9.168	3.853	2.46E-03	2.96E-02	4.21E-03	5q11.2	C/T		
	7	rs1023568	26875121	C	0.3182	0.1133	T	9.087	3.652	2.58E-03	3.09E-02	4.21E-03	7p15.2	C/T	SKAP2	Promoter
	4	rs893929	1.44E+08	A	0.1364	0.4559	G	9.018	0.1885	2.67E-03	3.21E-02	4.21E-03	4q31.21	A/G		
	13	rs1886215	41847359	T	0.7273	0.4128	C	8.928	3.794	2.81E-03	3.37E-02	4.21E-03	13q14.11	C/T		
	1	rs1092530	2.35E+08	T	0.3182	0.1189	C	8.244	3.457	4.09E-03	4.91E-02	4.99E-03	1q43	C/T	RYR2	Intron
	3	rs1554125	58252541	A	0.5455	0.2724	C	8.215	3.205	4.16E-03	4.99E-02	4.99E-03	3p14.3	A/C	ABHD6	Intron
	13	rs2221406	88972527	A	0.4091	0.1783	G	7.928	3.191	4.87E-03	5.84E-02	5.31E-03	13q31.3	A/G		
	4	rs1768636	1.44E+08	A	0.1364	0.4017	G	6.423	0.2351	1.13E-02	1.35E-01	1.13E-02	4q31.21	A/G		
Q4 (N = 18)																
	CHR	SNP	BP	A1	F_A	F_U	A2	CHISQ	OR	UNADJ	BONF	FDR_BH	Band	Alleles	Gene(s)	Role
	4	rs1768636	1.44E+08	A	0.6667	0.4017	G	10.42	2.979	1.25E-03	1.50E-02	1.50E-02	4q31.21	A/G		
	22	rs2073454	20847479	A	0.1667	0.4123	C	8.911	0.285	2.84E-03	3.40E-02	1.70E-02	22q11.22	A/C		
	4	rs893929	1.44E+08	A	0.6667	0.4559	G	6.398	2.387	1.14E-02	1.37E-01	3.48E-02	4q31.21	A/G		
	14	rs7145220	34193684	G	0.1667	0.3704	A	6.372	0.3399	1.16E-02	1.39E-01	3.48E-02	14q13.1	A/G		
	13	rs2221406	88972527	A	0.02778	0.1783	G	5.552	0.1317	1.85E-02	2.22E-01	3.85E-02	13q31.3	A/G		
	8	rs359782	47302891	A	0.08333	0.2483	G	5.226	0.2752	2.23E-02	2.67E-01	3.85E-02	8q11.1	A/G		
	1	rs1092530	2.35E+08	T	0	0.1189	C	4.855	0	2.76E-02	3.31E-01	3.85E-02	1q43	C/T	RYR2	Intron
	4	rs1313228	20972739	G	0.2778	0.4608	A	4.821	0.45	2.81E-02	3.38E-01	3.85E-02	4p15.2	A/G	KCNIP4	Intron
	3	rs1554125	58252541	A	0.1111	0.2724	C	4.704	0.3339	3.01E-02	3.61E-01	3.85E-02	3p14.3	A/C	ABHD6	Intron
	7	rs1023568	26875121	C	0	0.1133	T	4.596	0	3.21E-02	3.85E-01	3.85E-02	7p15.2	C/T	SKAP2	Promoter
	13	rs1886215	41847359	T	0.25	0.4128	C	3.909	0.4742	4.80E-02	5.76E-01	5.24E-02	13q14.11	C/T		
	5	rs2216904	51769238	T	0.25	0.409	C	3.741	0.4817	5.31E-02	6.37E-01	5.31E-02	5q11.2	C/T		
Play																
Q1 (N = 14)	CHR	SNP	BP	A1	F_A	F_U	A2	CHISQ	OR	UNADJ	BONF	FDR_BH	Band	Alleles	Gene(s)	Role
in Q1	1	rs497576	2.38E+08	T	0.1538	0.4754	C	10.73	0.2006	1.06E-03	5.28E-03	5.28E-03	1q43	C/T	CHRM3	Intron
	4	rs1313091	1.74E+08	T	0.4643	0.2463	C	7.103	2.652	7.70E-03	3.85E-02	1.10E-02	4q34.1	C/T	GALNTL6	Intron
	3	rs347134	32414789	C	0.1071	0.3456	T	7.012	0.2272	8.10E-03	4.05E-02	1.10E-02	3p22.3	C/T	CMTM7	Intron
	2	rs1866472	1.29E+08	T	0.1071	0.3426	C	6.863	0.2303	8.80E-03	4.40E-02	1.10E-02	2q14.3	C/T		
	5	rs357519	87546610	G	0	0.1385	T	4.177	0	4.10E-02	2.05E-01	4.10E-02	5q14.3	G/T	TMEM161	Intron
Q4 (N = 14)																
in Q4	5	rs357519	87546610	G	0.4286	0.1385	T	19.43	4.665	1.04E-05	5.21E-05	5.21E-05	5q14.3	G/T	TMEM161	Intron
	2	rs1866472	1.29E+08	T	0.625	0.3426	C	8.437	3.198	3.68E-03	1.84E-02	9.19E-03	2q14.3	C/T		

8	rs4873076	47255301	C	0.5333	0.2633	T	11.17	3.198	8.32E-04	5.91E-02	3.03E-03	q11.1	C/T		
1	rs4908488	7947179	C	0.4	0.1699	T	11.12	3.257	8.54E-04	6.06E-02	3.03E-03	p36.23	T C	PARK7	intronic
13	rs1417216	65202004	A	0.2	0.05763	G	10.97	4.088	9.25E-04	6.56E-02	3.09E-03	q21.32			
8	rs7293734	47457400	T	0.5333	0.2662	C	10.85	3.15	9.88E-04	7.02E-02	3.09E-03	q11.1			
12	rs1230693	36528296	T	0.7667	0.4673	C	10.73	3.745	1.06E-03	7.49E-02	3.09E-03	q12			
8	rs1199170	77674728	A	0.4	0.173	G	10.68	3.188	1.09E-03	7.71E-02	3.09E-03	q21.11	G A	ZFHX4-AS1	non-coding intronic
10	rs3802739	1.21E+08	C	0.6667	0.3764	T	10.67	3.313	1.09E-03	7.71E-02	3.09E-03	q26.11	T C	FAM45A	intronic
8	rs4535748	47582366	T	0.5333	0.2688	C	10.58	3.109	1.15E-03	8.13E-02	3.13E-03	q11.1	G A	HSPA8P13	3downstream
6	rs9379030	6340921	G	0.4333	0.1972	A	10.44	3.113	1.23E-03	8.74E-02	3.20E-03	p25.1	A G	LY86_AS1	non-coding intronic
12	rs7966266	36912405	A	0.7667	0.4718	G	10.4	3.679	1.26E-03	8.95E-02	3.20E-03	q12			
10	rs6602032	3159771	G	0.6	0.3249	A	10.26	3.117	1.36E-03	9.65E-02	3.30E-03	p15.2	G A	PFKP	intronic
10	rs915272	1.21E+08	T	0.6667	0.382	C	10.21	3.235	1.39E-03	9.89E-02	3.30E-03	q26.11	T C	FAM45B	non-coding intronic
1	rs2140682	34596209	C	0.1667	0.4549	T	9.995	0.2397	1.57E-03	1.11E-01	3.45E-03	p34.3			
6	rs9374710	1.19E+08	A	0.06667	0.3391	C	9.9	0.1392	1.65E-03	1.17E-01	3.45E-03	q22.2	C A	SLC35F1	intronic
6	rs4245496	1.18E+08	T	0.06667	0.3387	C	9.877	0.1394	1.67E-03	1.19E-01	3.45E-03	q22.2	C T	SLC35F1	intronic
3	rs1332011	1.24E+08	C	0.7	0.4163	T	9.862	3.271	1.69E-03	1.20E-01	3.45E-03	q21.1	T C	FAM162A	intronic
1	rs2049420	34596147	C	0.1333	0.4165	T	9.847	0.2156	1.70E-03	1.21E-01	3.45E-03	p34.3			
4	rs7664705	1.79E+08	T	0.06667	0.335	C	9.663	0.1418	1.88E-03	1.34E-01	3.71E-03	q34.3	C T	RP11-130F	non-coding intronic
8	rs359813	47339255	A	0.5	0.2472	G	9.516	3.046	2.04E-03	1.45E-01	3.91E-03	q11.1	C/T		
5	rs6556348	1.58E+08	T	0.7	0.4231	C	9.357	3.182	2.22E-03	1.58E-01	4.15E-03	q33.3	C T	RP11-542A	non-coding intronic
8	rs1113615	47292439	T	0.5	0.2593	G	8.966	2.857	2.75E-03	1.95E-01	5.01E-03	q11.1	T G	AC113134.3downstream	
20	rs2209339	12607029	A	0.2	0.471	C	8.793	0.2808	3.02E-03	2.15E-01	5.37E-03	p12.1			
5	rs253365	16850415	C	0.7	0.4372	T	8.359	3.003	3.84E-03	2.73E-01	6.62E-03	p15.1	C T	MYO10	intronic
7	rs1048690	88621188	T	0.06667	0.3109	C	8.321	0.1584	3.92E-03	2.78E-01	6.62E-03	q21.13	C T	ZNF804B	intronic
12	rs1601746	36912462	C	0.2333	0.4891	A	7.806	0.3179	5.21E-03	3.70E-01	8.60E-03	q12			
10	rs4880592	3163581	G	0.1333	0.3794	A	7.677	0.2517	5.59E-03	3.97E-01	9.02E-03	p15.2	A G	PFKP	intronic
7	rs7787455	88588409	A	0.06667	0.2914	G	7.312	0.1737	6.85E-03	4.86E-01	1.08E-02	q21.13	A G	ZNF804B	intronic
8	rs1205636	47588382	A	0.5	0.2676	G	7.108	2.737	7.68E-03	5.45E-01	1.19E-02	q11.1			
8	rs406800	88604177	G	0.7333	0.493	A	6.888	2.828	8.68E-03	6.16E-01	1.31E-02	q21.3	C T	CNBD1	intronic
9	rs1160246	1.19E+08	T	0.6333	0.4006	C	6.719	2.585	9.54E-03	6.77E-01	1.41E-02	q33.1	C T	ASTN2	intronic
9	rs871120	1.19E+08	A	0.6333	0.4025	G	6.598	2.564	1.02E-02	7.25E-01	1.48E-02	q33.1	C T	ASTN2	intronic
12	rs2138077	1.27E+08	A	0.1667	0.393	G	6.412	0.3089	1.13E-02	8.05E-01	1.61E-02	q24.32			
2	rs6743414	49277575	A	0	0.1748	G	6.345	0	1.18E-02	8.36E-01	1.64E-02	p16.3			
7	rs2189061	88577308	T	0.03333	0.2224	G	6.185	0.1206	1.29E-02	9.15E-01	1.74E-02	q21.13	T G	ZNF804B	intronic
13	rs9635033	79956028	T	0.2	0.4248	G	6.17	0.3385	1.30E-02	9.23E-01	1.74E-02	q31.1			
5	rs7724820	1.58E+08	A	0.6333	0.4113	G	6.064	2.472	1.38E-02	9.80E-01	1.81E-02	q33.3	G A	LOC10192	non-coding intronic
13	rs9532449	39369698	T	0.1333	0.3443	C	5.888	0.293	1.52E-02	1.00E+00	1.97E-02	q14.11			
17	rs1165610	73754653	T	0.1667	0.3796	C	5.747	0.3269	1.65E-02	1.00E+00	2.09E-02	q25.3	C T	THA1P	3downstream
11	rs479844	65308533	T	0.2667	0.4821	C	5.545	0.3906	1.85E-02	1.00E+00	2.31E-02	q13.1			
18	rs1940979	23511166	T	0.1667	0.364	C	5.024	0.3494	2.50E-02	1.00E+00	3.06E-02	q12.1			
13	rs2221406	88972527	A	0.3333	0.1782	G	4.879	2.306	2.72E-02	1.00E+00	3.23E-02	q31.3			
5	rs1952651	1.58E+08	G	0.6333	0.4329	T	4.875	2.263	2.73E-02	1.00E+00	3.23E-02	q33.3	A C	LOC10192	non-coding intronic
7	rs7802386	88591218	A	0	0.1391	C	4.844	0	2.78E-02	1.00E+00	3.23E-02	q21.13	A C	ZNF804B	intronic
21	rs2822892	15044008	G	0.5667	0.3733	A	4.762	2.196	2.91E-02	1.00E+00	3.32E-02	q11.2	A G	AF127936	. non-coding intronic
3	rs1170873	72008678	C	0.4	0.2315	T	4.741	2.213	2.95E-02	1.00E+00	3.32E-02	p13			
2	rs6433615	1.77E+08	G	0.3	0.158	A	4.501	2.284	3.39E-02	1.00E+00	3.76E-02	q31.1	A G	AC092162	.non-coding intronic
8	rs6473217	81360413	T	0.06667	0.2268	C	4.372	0.2436	3.65E-02	1.00E+00	3.99E-02	q21.13	T C	RP11-941F	non-coding intronic
5	rs4704936	1.58E+08	G	0.6333	0.4527	T	3.923	2.088</td							

7 rs9986865	36807127 C		0	0.1783 T	6.068	0	1.38E-02	9.77E-01	4.04E-02 p14.2			
3 rs6445971	58289364 G	0.07143	0.281 T	6.066	0.1969	1.38E-02	9.78E-01	4.04E-02 p14.3	G T	RP11-80H15upstream		
11 rs479844	65308533 T	0.7143	0.4821 C	6.008	2.685	1.42E-02	1.00E+00	4.04E-02 q13.1				
8 rs1199170	77674728 A	0	0.173 G	5.849	0	1.56E-02	1.00E+00	4.26E-02 q21.11	G A	ZFHX4-AS1 non-coding intronic		
5 rs1952651	1.58E+08 G	0.2143	0.4329 T	5.424	0.3572	1.99E-02	1.00E+00	5.05E-02 q33.3	A C	LOC10192 non-coding intronic		
12 rs2138077	1.27E+08 A	0.6071	0.393 G	5.344	2.387	2.08E-02	1.00E+00	5.05E-02 q24.32				
8 rs4873076	47255301 C	0.07143	0.2633 T	5.296	0.2153	2.14E-02	1.00E+00	5.05E-02 q11.1				
2 rs6433615	1.77E+08 G	0	0.158 A	5.248	0	2.20E-02	1.00E+00	5.05E-02 q31.1	A G	AC092162.non-coding intronic		
8 rs1010002	73553339 A	0	0.1775 C	5.174	0	2.29E-02	1.00E+00	5.05E-02 q13.3				
8 rs359807	47309786 T	0.07143	0.2595 C	5.14	0.2195	2.34E-02	1.00E+00	5.05E-02 q11.1				
8 rs1113615	47292439 T	0.07143	0.2593 G	5.128	0.2198	2.35E-02	1.00E+00	5.05E-02 q11.1	T G	AC113134.3downstream		
8 rs1113614	47240116 G	0.07143	0.2581 A	5.082	0.2211	2.42E-02	1.00E+00	5.05E-02 q11.1				
6 rs4245496	1.18E+08 T	0.5357	0.3387 C	4.814	2.252	2.82E-02	1.00E+00	5.73E-02 q22.2	C T	SLC35F1 intronic		
8 rs359782	47302891 A	0.07143	0.2482 G	4.674	0.233	3.06E-02	1.00E+00	6.04E-02 q11.1				
6 rs9379030	6340921 G	0.03571	0.1972 A	4.602	0.1508	3.19E-02	1.00E+00	6.05E-02 p25.1	A G	LY86_AS1 non-coding intronic		
6 rs9374710	1.19E+08 A	0.5385	0.3391 C	4.578	2.274	3.24E-02	1.00E+00	6.05E-02 q22.2	C A	SLC35F1 intronic		
17 rs1165610	73754653 T	0.5714	0.3796 C	4.346	2.179	3.71E-02	1.00E+00	6.75E-02 q25.3	C T	THA1P 3downstream		
10 rs6602032	3159771 G	0.1429	0.3249 A	4.213	0.3463	4.01E-02	1.00E+00	7.05E-02 p15.2	G A	PFKP intronic		
1 rs2049420	34596147 C	0.6071	0.4165 T	4.162	2.165	4.13E-02	1.00E+00	7.05E-02 p34.3				
2 rs6743414	49277575 A	0.3214	0.1748 G	4.137	2.237	4.20E-02	1.00E+00	7.05E-02 p16.3				
18 rs1768373	52800291 A	0.07143	0.2338 G	4.109	0.2521	4.27E-02	1.00E+00	7.05E-02 q21.31	G A	WDR7 intronic		
8 rs7827943	73568186 A	0.07143	0.2327 G	4.065	0.2537	4.38E-02	1.00E+00	7.06E-02 q13.3				
3 rs1170873	72008678 C	0.07143	0.2315 T	4.022	0.2553	4.49E-02	1.00E+00	7.08E-02 p13				
13 rs2221406	88972527 A	0.03571	0.1782 G	3.874	0.1708	4.91E-02	1.00E+00	7.57E-02 q31.3				
8 rs4535748	47582366 T	0.1071	0.2688 C	3.709	0.3264	5.41E-02	1.00E+00	7.74E-02 q11.1	G A	HSPA8P13 3downstream		
8 rs7293777	47261663 T	0.08333	0.2547 C	3.703	0.266	5.43E-02	1.00E+00	7.74E-02 q11.1				
12 rs1230693	36528296 T	0.2857	0.4673 C	3.689	0.456	5.48E-02	1.00E+00	7.74E-02 q12				
8 rs1009982	47711911 G	0.08333	0.254 A	3.677	0.267	5.52E-02	1.00E+00	7.74E-02 q11.1				
8 rs1205636	47588382 A	0.1071	0.2676 G	3.664	0.3285	5.56E-02	1.00E+00	7.74E-02 q11.1				
8 rs7293734	47457400 T	0.1071	0.2662 C	3.613	0.3308	5.73E-02	1.00E+00	7.83E-02 q11.1				
8 rs9650442	47224322 T	0.08333	0.2493 C	3.523	0.2737	6.05E-02	1.00E+00	8.11E-02 q11.1				
8 rs359813	47339255 A	0.08333	0.2472 G	3.452	0.2769	6.32E-02	1.00E+00	8.14E-02 q11.1				
6 rs3004002	77426060 T	0.2143	0.3847 C	3.419	0.4362	6.44E-02	1.00E+00	8.14E-02 q14.1	G A	RP11-354K5upstream		
8 rs2354491	47901302 C	0.1071	0.2604 T	3.402	0.3409	6.51E-02	1.00E+00	8.14E-02 q11.1	G A	RP11-101E 3downstream		
4 rs7664705	1.79E+08 T	0.5	0.335 C	3.395	1.985	6.54E-02	1.00E+00	8.14E-02 q34.3	C T	RP11-130F non-coding intronic		
8 rs1916188	47915603 A	0.1071	0.2581 C	3.321	0.3449	6.84E-02	1.00E+00	8.30E-02 q11.1				
8 rs990760	47859016 T	0.1071	0.257 C	3.28	0.347	7.01E-02	1.00E+00	8.30E-02 q11.1	A G	MTND1P7,non-coding intronic		
8 rs406800	88604177 G	0.3214	0.493 A	3.28	0.4871	7.01E-02	1.00E+00	8.30E-02 q21.3	C T	CNBD1 intronic		
5 rs253365	16850415 C	0.2692	0.4372 T	2.968	0.4742	8.49E-02	1.00E+00	9.89E-02 p15.1	C T	MYO10 intronic		

Perseverative Behavior (Sameness)

Q1 (N = 15)	CHR	SNP	BP	A1	F_A	F_U	A2	CHISQ	OR	UNADJ	BONF	FDR_BH	Band	Alleles	Gene(s)	Role
11 rs4930028		2889641	A		0.6	0.3487	C	8.271	2.801	4.03E-03	1.61E-02	1.38E-02	11p15.4	A/C	SLC22A18	Intron
5 rs324454		55238308	A		0.6667	0.4222	G	7.299	2.737	6.90E-03	2.76E-02	1.38E-02	5q11.2	A/G	IL31RA	Intron
11 rs7926034		90154444	A		0.6667	0.4407	G	6.172	2.538	1.30E-02	5.19E-02	1.73E-02	11q14.3	A/G		
Q4 (N = 18)	CHR	SNP	BP	A1	F_A	F_U	A2	CHISQ	OR	UNADJ	BONF	FDR_BH	Band	Alleles	Gene(s)	Role
12 rs2058604		12841126	A		0.6944	0.3751	C	15.51	3.787	8.19E-05	3.28E-04	3.28E-04	12p13.1	A/C	APOLD1	Downstream
11 rs4930028		2889641	A		0.08333	0.3487	C	11.11	0.1698	8.58E-04	3.43E-03	1.72E-03	11p15.4	A/C	SLC22A18	Intron
11 rs7926034		90154444	A		0.25	0.4407	G	5.276	0.423	2.16E-02	8.65E-02	2.88E-02	11q14.3	A/G		
5 rs324454		55238308	A		0.25	0.4222	G	4.346	0.4562	3.71E-02	1.48E-01	3.71E-02	5q11.2	A/G	IL31RA	Intron