

## Supplementary

Supplementary table 1. Association between CDKAL1 gene SNPs and the risk of GDM

SNPs	GDM (%)	Non-GDM (%)	Cruded OR (95% CI)	Cruded P	Adjusted OR (95% CI)	Adjusted P
<b>rs10440833</b>						
Allele model						
T	940 (57.95)	1075 (63.24)	1 (ref.)		1 (ref.)	
A	682 (42.05)	625 (36.76)	1.248 (1.086-1.435)	0.002	1.241 (1.068-1.442)	<b>0.005</b>
Dominant Model						
TT	280 (34.53)	336 (39.53)	1 (ref.)		1 (ref.)	
AA+AT	531 (65.48)	514 (60.47)	1.240 (1.015-1.514)	0.035	1.213 (0.979-1.503)	0.078
Recessive Model						
AT+TT	660 (81.38)	739 (86.94)	1 (ref.)		1 (ref.)	
AA	151 (18.62)	111 (13.06)	1.213 (0.979-1.503)	0.002	1.549 (1.162-2.063)	<b>0.003</b>
Overdominant model						
AA+TT	431 (53.14)	447 (52.59)	1 (ref.)		1 (ref.)	
AT	380 (46.86)	403 (47.41)	1.023 (0.843-1.240)	0.820	1.052 (0.854-1.295)	0.635
<b>rs10946398</b>						
Allele model						
A	956 (57.73)	1069 (62.01)	1 (ref.)		1 (ref.)	
C	700 (42.27)	655 (37.99)	1.195 (1.041-1.371)	0.011	1.168 (1.007-1.355)	<b>0.040</b>
Dominant Model						
CC	150 (18.12)		1 (ref.)		1 (ref.)	
AA+CA	678 (81.88)	122 (14.15)	1.221 (1.001-1.490)	0.049	1.175 (0.949-1.455)	0.138
Recessive Model						
CC+CA	550 (66.43)	740 (85.85)	1 (ref.)		1 (ref.)	
AA	278 (33.57)	533 (61.83)	1.342 (1.034-1.742)	0.027	1.320 (0.997-1.748)	0.052
Overdominant model						
CC+AA	428 (51.69)	329 (38.17)	1 (ref.)		1 (ref.)	
CA	400 (48.31)	451 (52.32)	0.975 (0.806-1.180)	0.796	1.000 (0.814-1.228)	0.997
		411 (47.68)				

<b>rs4712523</b>							
Allele model							
A	942 (56.88)	1055 (61.34)	1 (ref.)		1 (ref.)		
G	714 (43.12)	665 (38.66)	1.202 (1.048-1.380)	0.009	1.176 (1.015-1.364)	<b>0.031</b>	
Dominant Model							
AA	270 (32.61)	323 (37.56)	1 (ref.)		1 (ref.)		
GG+GA	558 (67.39)	537 (62.44)	1.243 (1.017-1.519)	0.033	1.192 (0.961-1.477)	0.109	
Recessive Model							
GA+AA	672 (81.16)	732 (85.12)	1 (ref.)		1 (ref.)		
GG	156 (18.84)	128 (14.88)	1.328 (1.028-1.715)	0.030	1.318 (1.001-1.738)	<b>0.049</b>	
Overdominant model							
GG+AA	426 (51.45)	451 (52.44)	1 (ref.)		1 (ref.)		
GA	402 (48.55)	409 (47.56)	0.961 (0.794-1.163)	0.683	0.992 (0.808-1.218)	0.938	
<b>Supplementary table 1. Association between CDKAL1 gene SNPs and the risk of GDM(Continued)</b>							
SNPs	GDM (%)	Non-GDM (%)	Cruded OR (95% CI)	Cruded P	Adjusted OR (95% CI)	Adjusted P	
<b>rs4712524</b>							
Allele model							
A	949 (57.31)	1063 (61.73)	1 (ref.)		1 (ref.)		
G	707 (42.69)	659 (38.27)	1.202 (1.047-1.379)	0.009	1.171 (1.010-1.358)	<b>0.036</b>	
Dominant Model							
AA	275 (33.21)	325 (37.75)	1 (ref.)		1 (ref.)		
GG+GA	553 (66.79)	536 (62.25)	1.219 (0.999-1.489)	0.052	1.165 (0.941-1.443)	0.161	
Recessive Model							
GA+AA	674 (81.40)	738 (85.71)	1 (ref.)		1 (ref.)		
GG	154 (18.60)	123 (14.29)	1.371 (1.058-1.776)	0.017	1.351 (1.022-1.785)	<b>0.035</b>	
Overdominant model							
GG+AA	429 (51.81)	448 (52.03)	1 (ref.)		1 (ref.)		
GA	399 (48.19)	413 (47.97)	0.991 (0.819-1.200)	0.928	1.023 (0.833-1.256)	0.831	
<b>rs7754840</b>							
Allele model							
G	949 (57.24)	1067 (61.68)	1 (ref.)		1 (ref.)		
C	709 (42.76)	663 (38.32)	1.202 (1.048-1.379)	0.009	1.168 (1.008-1.354)	<b>0.039</b>	
Dominant Model							
GG	275 (33.17)	326 (37.69)	1 (ref.)		1 (ref.)		
CC+CG	554 (66.86)	539 (62.31)	1.218 (0.998-1.488)	0.052	1.163 (0.940-1.441)	0.165	
Recessive Model							
CG+GG	674 (81.30)	741 (85.66)	1 (ref.)		1 (ref.)		
CC	155 (18.70)	124 (14.34)	1.374 (1.062-1.779)	0.016	1.340 (1.015-1.768)	<b>0.039</b>	
Overdominant model							
CC+GG	430 (51.87)	450 (52.02)	1 (ref.)		1 (ref.)		
CG	399 (48.13)	415 (47.98)	0.994 (0.821-1.203)	0.950	1.021 (0.831-1.253)	0.845	

<b>rs7756992</b>							
Allele model							
A	<b>808 (49.27)</b>	900 (52.51)	1 (ref.)			1 (ref.)	
G	<b>832 (50.73)</b>	814 (47.49)	1.138 (0.994-1.304)	0.061		1.126 (0.973-1.303)	0.111
Dominant Model							
AA	<b>199 (24.27)</b>	231 (26.95)	1 (ref.)			1 (ref.)	
GG+GA	<b>621 (75.73)</b>	626 (73.05)	1.152 (0.924-1.434)	0.208		1.137 (0.899-1.439)	0.285
Recessive Model							
GA+AA	<b>609 (74.27)</b>	669 (78.06)	1 (ref.)			1 (ref.)	
GG	<b>211 (25.73)</b>	188 (21.94)	1.233 (0.984-1.544)	0.068		1.210 (0.950-1.542)	0.123
Overdominant model							
AA+GG	<b>410 (50.00)</b>	419 (48.89)	1 (ref.)			1 (ref.)	
GA	<b>410 (50.00)</b>	438 (51.11)	1.045 (0.863-1.266)	0.650		1.040 (0.846-1.278)	0.710

**Supplementary table 1.** Association between CDKAL1 gene SNPs and the risk of GDM(Continued)

SNPs	GDM (%)	Non-GDM (%)	Cruded OR (95% CI)	Cruded P	Adjusted OR (95% CI)	Adjusted P
<b>rs9465871</b>						
Allele model						
T	800 (48.19)	891 (51.74)	1 (ref.)		1 (ref.)	
C	860 (51.81)	831 (48.26)	1.153 (1.007-1.319)	0.039	1.127 (0.975-1.303)	0.106
Dominant Model						
TT	189 (22.77)	224 (26.02)	1 (ref.)		1 (ref.)	
CC+CT	641 (77.23)	637 (73.98)	1.193 (0.955-1.490)	0.121	1.268 (0.973-1.651)	0.079
Recessive Model						
CT+TT	611 (73.61)	667 (77.47)	1 (ref.)		1 (ref.)	
CC	219 (26.39)	194 (22.53)	1.232 (0.987-1.539)	0.065	1.121 (0.857-1.465)	0.404
Overdominant model						
CC+TT	408 (49.16)	418 (48.55)	1 (ref.)		1 (ref.)	
CT	422 (50.84)	443 (51.45)	1.025 (0.847-1.240)	0.802	1.058 (0.862-1.300)	0.589

Adjusted OR is adjusted for age, pre-pregnancy BMI, parity, family history of T2DM

SNPs, single nucleotide polymorphisms; GDM, gestational diabetes mellitus; BMI, body mass index; OR, odds ratio; CI, confidence interval; ref, reference genotype