**Supplemental tables**

**Table 1 Characteristics of participants as compared with those of loss-to-follow-up**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables** | **Followed up** | | **Total (n=3038)** | ***χ2, P value*** |
| **Yes (n=1832)** | **No (n=1205)** |
| Age（years） | 48.68±9.72 | 42.87±12.20 | 46.38±11.14 | 13.88, <0.001† |
| Men | 830(45.3) | 586(48.6) | 1416(46.6) | 3.00, 0.083 |
| Nine education years and above \* | 663(36.4) | 659(55.0) | 1322(43.5) | 102.06, <0.001 |
| Farmer | 1506(82.2) | 825(68.5) | 2331(76.7) | 76.40, <0.001 |
| Family income |  |  |  | 1.70, 0.427 |
| Low | 305(16.7) | 204(16.9) | 509(16.8) |  |
| Medium | 1344(73.4) | 864(71.7) | 2208(72.7) |  |
| High | 183(10.0) | 137(11.4) | 320(10.5) |  |
| Family history of diabetes | 20(1.1) | 11(0.9) | 32(1.1) | 0.37, 0.544 |
| Ever Smoker | 604(33.0) | 408(33.9) | 1012(33.3) | 0.23, 0.633 |
| Alcohol use | 504(27.5) | 295(24.5) | 799(26.3) | 3.37, 0.067 |
| Physical activity \* | 51(2.9) | 62(5.4) | 113(3.7) | 10.94, 0.001 |
| Diet preference |  |  |  | 1.00, 0.606 |
| Meat mainly | 223(12.2) | 153(12.6) | 376(12.4) |  |
| Vegetable mainly | 248(13.5) | 150(12.4) | 398(13.1) |  |
| Equally | 1361(74.3) | 908(75.0) | 2269(74.6) |  |
| Tea drinking | 1523(83.1) | 960(79.7) | 2483(81.6) | 5.67, 0.017 |
| BMI (kg/m2) | 22.56±2.72 | 22.24±2.98 | 22.43±2.83 | 2.95, 0.003 † |
| Overweight/obesity | 502(27.4) | 300(24.9) | 802(26.4) | 17.59, 0.001 |
| Hypertension | 442(24.1) | 219(18.2) | 661(21.8) | 15.03, <0.001 |
| IFG in baseline | 60(3.3) | 56(4.6) | 116(3.8) | 3.80, 0.051 |

Notes: \* Missing data; † Student’s t-test for continuous variables (age and BMI at baseline).

Abbreviation: IFG, impaired fasting glucose; BMI, body mass index.

**Table 2 The association between 45 susceptible SNPs from 43 genes with type 2 diabetes mellitus (T2DM) in previous study**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Chromosome** | **Gene** | **SNP** | **Alleles (R/A)** | **RAF** | **OR (95%CI)** |
| 1 | FAF1 | rs17106184 | G/A | NR | 1.10 (1.07-1.14) |
| 2 | NYAP2 - MIR5702 | rs2943640 | C/A | 0.63 | 1.09 (1.05-1.13) |
| 2 | BCL11A | rs243021 | A/G | NR | 1.08 (1.06-1.10) |
| 2 | GRB14 | rs3923113 | A/C | 0.74 | 1.09 (1.06-1.13) |
| 3 | UBE2E2 | rs7612463 | C/A | 0.87 | 1.10 (1.04-1.16) |
| 3 | PPARG | rs1801282 | C/G | 0.88 | 1.16 (1.10-1.23) |
| 3 | IGF2BP2 | rs6769511 | C/T | 0.32 | 1.23 (1.15-1.31) |
| 3 | PSMD6 - PRICKLE2-AS1 | rs831571 | C/T | 0.61 | 1.09 (1.06-1.12) |
| 4 | RPS3AP18 - RPS14P6 | rs6813195 | C/T | NR | 1.08 (1.06-1.10) |
| 4 | MAEA | rs6815464 | C/G | 0.58 | 1.13 (1.10-1.16) |
| 5 | ARL15 | rs702634 | A/G | NR | 1.06 (1.04-1.09) |
| 6 | CDKAL1 | rs7756992 | G/A | 0.26 | 1.20 (1.16-1.25) |
| 6 | RREB1 - SSR1 | rs9502570 | C/T | NR | 1.06 (1.04-1.08) |
| 6 | ZFAND3 | rs9470794 | C/T | 0.27 | 1.12 (1.08-1.16) |
| 7 | FSCN3 - PAX4 | rs10229583 | G/A | 0.82 | 1.14 (1.09-1.19) |
| 7 | LOC101928423 | rs791595 | A/G | 0.08 | 1.17 (1.12-1.22) |
| 8 | SLC30A8 | rs3802177 | G/A | 0.68-0.70 | 1.15-1.23 |
| 9 | GPSM1 | rs11787792 | A/G | 0.87 | 1.15 (1.10-1.20) |
| 9 | PTPRD | rs17584499 | T/C | 0.06 | 1.57 (1.36-1.82) |
| 9 | KRT18P24 - CHCHD2P9 | rs17791513 | A/G | 0.93 | 1.21 (1.13-1.31) |
| 9 | CDKN2A/B | rs10811661 | T/C | 0.55-0.85 | 1.14-1.23 |
| 9 | GLIS3 | rs7041847 | A/G | 0.41 | 1.10 (1.07-1.13) |
| 10 | GRK5 | rs10886471 | C/T | 0.78 | 1.12 (1.08-1.16) |
| 10 | CDC123 | rs11257655 | T/C | 0.23-0.56 | 1.06-1.15 |
| 10 | CDC123 | rs10906115 | A/G | 0.57 | 1.13 (1.08-1.18) |
| 10 | HHEX | rs1111875 | C/T | 0.28-0.58 | 1.13-1.21 |
| 10 | HHEX | rs5015480 | C/T | 0.57 | 1.18 (1.11-1.23) |
| 10 | TCF7L2 | rs7903146 | T/C | 0.04-0.31 | 1.15-1.65 |
| 11 | ARAP1 | rs1552224 | A/C | NR | 1.14 (1.11-1.17) |
| 11 | KCNQ1 | rs2237892 | C/T | 0.50-0.61 | 1.30-1.40 |
| 11 | KCNJ11 | rs5215 | C/T | 0.38 | 1.08 (1.02-1.13) |
| 12 | RPSAP52 | rs2261181 | T/C | 0.09 | 1.16 (1.10-1.23) |
| 15 | ZFAND6 - FAH | rs11634397 | G/A | NR | 1.06 (1.04-1.08) |
| 15 | AP3S2; C15orf38-AP3S2 | rs2028299 | C/A | 0.31 | 1.10 (1.07-1.13) |
| 15 | NPM1P47 - C2CD4B | rs7172432 | A/G | 0.58 | 1.11 (1.08-1.14) |
| 15 | HMG20A | rs7178572 | G/A | 0.52-0.70 | 1.08-1.11 |
| 15 | RASGRP1 | rs7403531 | T/C | 0.35 | 1.10 (1.06-1.13) |
| 16 | FTO | rs9936385 | C/T | 0.39 | 1.13 (1.09-1.18) |
| 17 | HNF1B | rs4430796 | G/A | 0.28-0.53 | 1.13-1.19 |
| 17 | SRR | rs391300 | T/C | 0.62 | 1.28 (1.18-1.39) |
| 18 | MC4R | rs12970134 | A/G | 0.27 | 1.08 (1.03-1.12) |
| 19 | PEPD | rs3786897 | A/G | 0.56 | 1.10 (1.07-1.14) |
| 20 | HNF4A | rs4812829 | A/G | 0.29 | 1.09 (1.06-1.12) |
| X | KRT18P48 - DUSP9 | rs5945326 | A/G | 0.694 | 1.39 (1.24-1.56) |
| X | FAM58A | rs12010175 | G/A | 0.79 | 1.21 (1.14-1.28) |

Notes: Alleles (R/A), risk allele/ non-risk allele; RAF, risk allele frequency reported by previous studies;

Abbreviation: OR, odds ratio; 95%CI, 95% confidence interval.

**Table 3 Genotype, allele distribution and call rate of 45 targeted tag single nucleotide polymorphisms (tSNPs) in the cohort**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **tSNP** |  | **Genotype (%)** | | | **Allele (%)** | | ***PHWE*** | **Call rate (%)** |
| **A1/A2** | **A1/A1** | **A1/A2** | **A2/A2** | **A1** | **A2** |
| rs10229583 | A/G | 53(2.91) | 528(29.01) | 1239(68.08) | 634(17.42) | 3006(82.58) | 0.718 | 99.34 |
| rs10886471 | T/C | 84(4.60) | 611(33.48) | 1130(61.92) | 779(21.34) | 2871(78.66) | 0.903 | 99.62 |
| rs11257655 | C/T | 344(18.87) | 869(47.67) | 610(33.46) | 1557(42.70) | 2089(57.30) | 0.269 | 99.51 |
| rs11634397 | G/A | 11(0.60) | 274(15.05) | 1536(84.35) | 296(8.13) | 3346(91.87) | 0.747 | 99.40 |
| rs11787792 | G/A | 2(0.11) | 133(7.31) | 1685(92.58) | 137(3.76) | 3503(96.24) | 0.708 | 99.34 |
| rs12970134 | A/G | 44(2.41) | 466(25.56) | 1313(72.02) | 554(15.19) | 3092(84.81) | 0.728 | 99.51 |
| rs1552224 | C/A | 16(0.88) | 271(14.87) | 1535(84.25) | 303(8.32) | 3341(91.68) | 0.296 | 99.45 |
| rs17106184 | A/G | 21(1.15) | 401(22.02) | 1399(76.83) | 443(12.16) | 3199(87.84) | 0.192 | 99.40 |
| rs17584499 | T/C | 22(1.21) | 320(17.60) | 1476(81.19) | 364(10.01) | 3272(89.99) | 0.325 | 99.24 |
| rs17791513 | G/A | 6(0.33) | 162(8.90) | 1652(90.77) | 174(4.78) | 3466(95.22) | 0.343 | 99.34 |
| rs2028299 | C/A | 77(4.23) | 563(30.93) | 1180(64.84) | 717(19.70) | 2923(80.30) | 0.344 | 99.34 |
| rs2237892 | T/C | 196(10.75) | 785(43.04) | 843(46.22) | 1177(32.26) | 2471(67.74) | 0.512 | 99.56 |
| rs2943640 | A/C | 3(0.16) | 225(12.36) | 1593(87.48) | 231(6.34) | 3411(93.66) | 0.088 | 99.40 |
| rs3802177 | A/G | 388(21.35) | 844(46.45) | 585(32.20) | 1620(44.58) | 2014(55.42) | 0.011 | 99.18 |
| rs4430796 | G/A | 169(9.30) | 779(42.87) | 869(47.83) | 1117(30.74) | 2517(69.26) | 0.769 | 99.18 |
| rs4812829 | A/G | 354(19.43) | 915(50.22) | 553(30.35) | 1623(44.54) | 2021(55.46) | 0.481 | 99.45 |
| rs5215 | C/T | 289(15.88) | 828(45.49) | 703(38.63) | 1406(38.63) | 2234(61.37) | 0.084 | 99.34 |
| rs5945326 | G/A | 487(26.71) | 474(26.00) | 862(47.28) | 1448(39.71) | 2198(60.29) | <0.001 | 99.51 |
| rs702634 | G/A | 38(2.09) | 419(23.00) | 1365(74.92) | 495(13.58) | 3149(86.42) | 0.382 | 99.45 |
| rs7172432 | G/A | 227(12.49) | 846(46.53) | 745(40.98) | 1300(35.75) | 2336(64.25) | 0.582 | 99.24 |
| rs7612463 | A/C | 65(3.57) | 605(33.21) | 1152(63.23) | 735(20.17) | 2909(79.83) | 0.184 | 99.45 |
| rs7756992 | G/A | 439(24.16) | 920(50.63) | 458(25.21) | 1798(49.48) | 1836(50.52) | 0.586 | 99.18 |
| rs9502570 | C/T | 376(20.65) | 903(49.59) | 542(29.76) | 1655(45.44) | 1987(54.56) | 0.998 | 99.40 |
| rs10811661 | C/T | 357(19.68) | 883(48.68) | 574(31.64) | 1597(44.02) | 2031(55.98) | 0.600 | 99.02 |
| rs10906115 | G/A | 266(14.69) | 825(45.55) | 720(39.76) | 1357(37.47) | 2265(62.53) | 0.237 | 98.85 |
| rs1111875 | C/T | 129(7.10) | 734(40.42) | 953(52.48) | 992(27.31) | 2640(72.69) | 0.444 | 99.13 |
| rs12010175 | A/G | 225(12.44) | 302(16.69) | 1282(70.87) | 752(20.78) | 2866(79.22) | <0.001 | 98.74 |
| rs1801282 | G/C | 5(0.28) | 214(11.78) | 1597(87.94) | 224(6.17) | 3408(93.83) | 0.439 | 99.13 |
| rs2261181 | T/C | 26(1.43) | 401(22.07) | 1390(76.50) | 453(12.47) | 3181(87.53) | 0.631 | 99.18 |
| rs243021 | G/A | 222(12.23) | 841(46.34) | 752(41.43) | 1285(35.40) | 2345(64.60) | 0.576 | 99.07 |
| rs3786897 | G/A | 371(20.46) | 898(49.53) | 544(30.01) | 1640(45.23) | 1986(54.77) | 0.991 | 98.96 |
| rs391300 | T/C | 188(10.36) | 770(42.45) | 856(47.19) | 1146(31.59) | 2482(68.41) | 0.447 | 99.02 |
| rs3923113 | C/A | 37(2.04) | 475(26.17) | 1303(71.79) | 549(15.12) | 3081(84.88) | 0.409 | 99.07 |
| rs5015480 | C/T | 48(2.65) | 514(28.37) | 1250(68.98) | 610(16.83) | 3014(83.17) | 0.575 | 98.91 |
| rs6769511 | C/T | 122(6.79) | 626(34.86) | 1048(58.35) | 870(24.22) | 2722(75.78) | 0.032 | 98.03 |
| rs6813195 | T/C | 366(20.36) | 868(48.28) | 564(31.37) | 1600(44.49) | 1996(55.51) | 0.337 | 98.14 |
| rs6815464 | G/C | 393(21.68) | 849(46.83) | 571(31.49) | 1635(45.09) | 1991(54.91) | 0.021 | 98.96 |
| rs7041847 | A/G | 347(19.18) | 906(50.08) | 556(30.74) | 1600(44.22) | 2018(55.78) | 0.518 | 98.74 |
| rs7178572 | G/A | 248(13.66) | 866(47.69) | 702(38.66) | 1362(37.50) | 2270(62.50) | 0.460 | 99.13 |
| rs7403531 | T/C | 243(13.40) | 814(44.87) | 757(41.73) | 1300(35.83) | 2328(64.17) | 0.303 | 99.02 |
| rs7903146 | T/C | 4(0.22) | 111(6.11) | 1701(93.67) | 119(3.28) | 3513(96.72) | 0.129 | 99.13 |
| rs791595 | A/G | 35(1.93) | 469(25.84) | 1311(72.23) | 539(14.85) | 3091(85.15) | 0.352 | 99.07 |
| rs831571 | T/C | 248(13.68) | 836(46.11) | 729(40.21) | 1332(36.73) | 2294(63.27) | 0.735 | 98.96 |
| rs9470794 | C/T | 153(8.44) | 793(43.76) | 866(47.79) | 1099(30.33) | 2525(69.67) | 0.129 | 98.91 |
| rs9936385 | C/T | 23(1.27) | 390(21.48) | 1403(77.26) | 436(12.00) | 3196(88.00) | 0.481 | 99.13 |

**Table 4 Non-significant associations between 45 tag single nucleotide polymorphisms (tSNPs) and the risk of incident type 2 diabetes mellitus (T2DM)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SNP** |  | **Incidence density** | | **HR (95%CI)** | | ***P value*** | **aHR (95%CI) \*** | ***P value \**** |
| FAF1  rs17106184 | AA | 16.03 | | 1.34(0.43-4.20) | | 0.618 | 1.01(0.25-4.12) | 0.991 |
| AG | 12.40 | | 1.11(0.79-1.56) | | 0.563 | 1.12(0.76-1.65) | 0.560 |
| GG | 11.77 | | Ref | |  | Ref |  |
| Additive model |  | | 1.12(0.83-1.51) | | 0.471 | 1.09(0.78-1.54) | 0.611 |
| Dominant model  (AA+AG vs GG) | |  | | 1.12(0.80-1.56) | 0.509 | 1.11(0.76-1.62) | 0.573 |
| Recessive model  (AA vs AG+GG) |  | | 1.31(0.42-4.09) | | 0.645 | 0.98(0.24-4.01) | 0.980 |
| NYAP2 - MIR5702  rs2943640 | AA | 0.00 | | - | |  | - |  |
| AC | 13.77 | | 1.27(0.84-1.90) | | 0.258 | 1.16(0.72-1.89) | 0.539 |
| CC | 11.73 | | Ref | |  | Ref |  |
| Additive model |  | | 1.25(0.83-1.87) | | 0.280 | 1.16(0.71-1.88) | 0.552 |
| Dominant model  (AA+AC vs CC) |  | | 1.26(0.84-1.89) | | 0.267 | 1.16(0.72-1.88) | 0.545 |
| Recessive model  (AA vs AC+CC) |  | | - | |  | - |  |
| BCL11A  rs243021 | GG | 6.72 | | 0.52(0.29-0.94) | | 0.030 | 0.51(0.27-0.95) | 0.034 |
| GA | 12.02 | | 0.86(0.64-1.16) | | 0.327 | 0.80(0.56-1.13) | 0.203 |
| AA | 13.56 | | Ref | |  | Ref |  |
| Additive model |  | | 0.78(0.62-0.98) | | 0.033 | 0.75(0.58-0.97) | 0.026 |
| Dominant model  (GG+GA vs AA) |  | | 0.80(0.60-1.06) | | 0.118 | 0.74(0.53-1.03) | 0.075 |
| Recessive model  (GG vs GA+AA) |  | | 0.57(0.32-0.99) | | 0.047 | 0.58(0.32-1.05) | 0.007 |
| GRB14  rs3923113 | CC | 12.24 | | 1.26(0.47-3.42) | | 0.646 | 1.09(0.33-3.54) | 0.889 |
| CA | 15.42 | | 1.52(1.12-2.06) | | 0.007 | 1.44(1.01-2.05) | 0.045 |
| AA | 10.76 | | Ref | |  | Ref |  |
| Additive model |  | | 0.97(0.78-1.20) | | 0.767 | 1.04(0.81-1.33) | 0.767 |
| Dominant model  (CC+CA vs AA) |  | | 0.92(0.69-1.22) | | 0.546 | 0.94(0.68-1.31) | 0.727 |
| Recessive model  (CC vs CA+AA) |  | | 1.08(0.69-1.68) | | 0.739 | 1.34(0.83-2.17) | 0.231 |
| UBE2E2  rs7612463 | AA | 17.86 | | 1.47(0.77-2.80) | | 0.246 | 1.80(0.82-3.92) | 0.141 |
| AC | 11.81 | | 0.94(0.69-1.28) | | 0.699 | 0.91(0.64-1.31) | 0.623 |
| CC | 11.70 | | Ref | |  | Ref |  |
| Additive model |  | | 1.05(0.81-1.35) | | 0.719 | 1.06(0.78-1.42) | 0.720 |
| Dominant model  (AA+AC vs CC) |  | | 0.99(0.74-1.33) | | 0.948 | 0.98(0.69-1.37) | 0.894 |
| Recessive model  (AA vs AC+CC) |  | | 1.50(0.79-2.83) | | 0.214 | 1.85(0.86-4.01) | 0.117 |
| PPARG  rs1801282 | GG | 23.03 | | 2.93(0.41-20.93) | | 0.285 | - |  |
| GC | 11.28 | | 0.90(0.57-1.42) | | 0.664 | 1.02(0.61-1.72) | 0.928 |
| CC | 12.06 | | Ref | |  | Ref |  |
| Additive model |  | | 0.97(0.63-1.49) | | 0.878 | 0.97(0.59-1.61) | 0.911 |
| Dominant model  (GG+GC vs CC) |  | | 0.93(0.60-1.46) | | 0.762 | 1.00(0.60-1.67) | 0.992 |
| Recessive model  (GG vs GC+CC) |  | | 2.96(0.41-21.16) | | 0.279 | - | - |
| IGF2BP2  rs6769511 | CC | 14.25 | | 1.34(0.78-2.29) | | 0.295 | 1.44(0.79-2.63) | 0.238 |
| CT | 11.83 | | 1.01(0.74-1.38) | | 0.943 | 1.06(0.74-1.52) | 0.739 |
| TT | 11.63 | | Ref | |  | Ref |  |
| Additive model |  | | 1.09(0.87-1.37) | | 0.462 | 1.14(0.88-1.48) | 0.320 |
| Dominant model  (CC+CT vs TT) |  | | 1.06(0.79-1.42) | | 0.694 | 1.12(0.80-1.57) | 0.501 |
| Recessive model  (CC vs CT+TT) |  | | 1.33(0.78-2.25) | | 0.290 | 1.41(0.78-2.53) | 0.257 |
| PSMD6 - PRICKLE2-AS1  rs831571 | TT | 12.92 | | 1.06(0.69-1.65) | | 0.779 | 0.78(0.46-1.33) | 0.357 |
| TC | 11.08 | | 0.86(0.63-1.17) | | 0.348 | 1.01(0.71-1.43) | 0.978 |
| CC | 12.64 | | Ref | |  | Ref |  |
| Additive model |  | | 0.98(0.79-1.22) | | 0.875 | 0.92(0.72-1.16) | 0.465 |
| Dominant model (TT+TC vs CC) |  | | 0.91(0.68-1.21) | | 0.500 | 0.95(0.68-1.32) | 0.746 |
| Recessive model  (TT vs TC+CC) |  | | 1.15(0.76-1.73) | | 0.502 | 0.78(0.47-1.28) | 0.322 |
| RPS3AP18 - RPS14P6  rs6813195 | TT | 12.22 | | 1.19(0.79-1.80) | | 0.413 | 1.36(0.84-2.19) | 0.215 |
| TC | 12.95 | | 1.23(0.88-1.72) | | 0.234 | 1.16(0.78-1.72) | 0.477 |
| CC | 10.58 | | 1 | |  | 1 |  |
| Additive model |  | | 1.10(0.90-1.34) | | 0.353 | 1.16(0.92-1.48) | 0.216 |
| Dominant model (TT+TC vs CC) |  | | 1.22(0.88-1.67) | | 0.230 | 1.21(0.83-1.77) | 0.325 |
| Recessive model  (TT vs TC+CC) |  | | 1.05(0.74-1.49) | | 0.801 | 1.23(0.83-1.84) | 0.304 |
| MAEA  rs6815464 | GG | 12.57 | | 0.91(0.62-1.34) | | 0.647 | 1.08(0.70-1.67) | 0.715 |
| GC | 10.70 | | 0.79(0.57-1.09) | | 0.149 | 0.79(0.53-1.16) | 0.221 |
| CC | 13.40 | | Ref | |  | Ref |  |
| Additive model |  | | 0.94(0.77-1.14) | | 0.524 | 1.02(0.81-1.28) | 0.863 |
| Dominant model  (GG+GC vs CC) |  | | 0.83(0.61-1.12) | | 0.214 | 0.88(0.62-1.25) | 0.477 |
| Recessive model  (GG vs GC+CC) |  | | 1.05(0.75-1.48) | | 0.780 | 1.24(0.85-1.82) | 0.268 |
| ARL15  rs702634 | GG | 8.75 | | 0.63(0.20-1.99) | | 0.434 | 0.73(0.18-3.02) | 0.667 |
| GA | 12.24 | | 1.06(0.75-1.48) | | 0.755 | 1.38(0.95-2.01) | 0.095 |
| AA | 11.96 | | Ref | |  | Ref |  |
| Additive model |  | | 0.97(0.73-1.30) | | 0.847 | 1.21(0.87-1.67) | 0.253 |
| Dominant model  (GG+GA vs AA) |  | | 1.01(0.73-1.41) | | 0.942 | 1.32(0.91-1.92) | 0.139 |
| Recessive model  (GG vs GA+AA) |  | | 0.63(0.20-1.96) | | 0.420 | 0.67(0.16-2.76) | 0.584 |
| CDKAL1  rs7756992 | GG | 14.34 | | 1.12(0.76-1.65) | | 0.561 | 1.21(0.76-1.92) | 0.426 |
| GA | 10.81 | | 0.85(0.60-1.21) | | 0.360 | 1.02(0.67-1.56) | 0.908 |
| AA | 12.08 | | Ref | |  | Ref |  |
| Additive model |  | | 1.07(0.87-1.31) | | 0.531 | 1.10(0.87-1.40) | 0.411 |
| Dominant model  (GG+GA vs AA) |  | | 0.94(0.68-1.30) | | 0.698 | 1.09(0.73-1.61) | 0.684 |
| Recessive model  (GG vs GA+AA) |  | | 1.25(0.91-1.71) | | 0.162 | 1.19(0.83-1.71) | 0.355 |
| RREB1 - SSR1  rs9502570 | CC | 13.35 | | 1.12(0.75-1.67) | | 0.573 | 1.19(0.74-1.91) | 0.470 |
| CT | 11.48 | | 0.97(0.69-1.35) | | 0.851 | 1.10(0.73-1.64) | 0.658 |
| TT | 11.79 | | Ref | |  | Ref |  |
| Additive model |  | | 1.05(0.86-1.29) | | 0.613 | 1.09(0.86-1.38) | 0.470 |
| Dominant model  (CC+CT vs TT) |  | | 1.01(0.74-1.39) | | 0.933 | 1.12(0.77-1.65) | 0.548 |
| Recessive model  (CC vs CT+TT) |  | | 1.14(0.82-1.60) | | 0.436 | 1.12(0.76-1.65) | 0.565 |
| ZFAND3  rs9470794 | CC | 10.33 | | 0.92(0.52-1.62) | | 0.780 | 0.83(0.41-1.69) | 0.612 |
| CT | 12.63 | | 1.04(0.77-1.40) | | 0.785 | 1.10(0.78-1.55) | 0.581 |
| TT | 11.77 | | Ref | |  | Ref |  |
| Additive model |  | | 1.00(0.80-1.25) | | 0.977 | 1.00(0.77-1.30) | 0.997 |
| Dominant model  (CC+CT vs TT) |  | | 1.02(0.77-1.36) | | 0.872 | 1.06(0.76-1.48) | 0.727 |
| Recessive model  (CC vs CT+TT) |  | | 0.90(0.52-1.56) | | 0.717 | 0.80(0.40-1.58) | 0.514 |
| FSCN3 - PAX4  rs10229583 | AA | 15.08 | | 1.14(0.54-2.44) | | 0.729 | 0.74(0.29-1.88) | 0.525 |
| AG | 9.12 | | 0.71(0.50-1.00) | | 0.050 | 0.89(0.61-1.30) | 0.559 |
| GG | 13.06 | | Ref | |  | Ref |  |
| Additive model |  | | 0.82(0.62-1.10) | | 0.183 | 0.88(0.65-1.20) | 0.413 |
| Dominant model  (AA+AG vs GG) |  | | 0.75(0.54-1.04) | | 0.082 | 0.87(0.61-1.25) | 0.460 |
| Recessive model  (AA vs AG+GG) |  | | 1.25(0.59-2.67) | | 0.558 | 0.76(0.30-1.92) | 0.562 |
| LOC101928423  rs791595 | AA | 14.52 | | 1.41(0.52-3.83) | | 0.495 | 0.70(0.21-2.35) | 0.568 |
| AG | 12.45 | | 1.10(0.80-1.53) | | 0.546 | 1.06(0.73-1.54) | 0.764 |
| GG | 11.69 | | Ref | |  | Ref |  |
| Additive model |  | | 1.13(0.85-1.50) | | 0.411 | 0.99(0.72-1.37) | 0.949 |
| Dominant model  (AA+AG vs GG) |  | | 1.12(0.82-1.54) | | 0.471 | 1.03(0.71-1.48) | 0.889 |
| Recessive model  (AA vs AG+GG) |  | | 1.38(0.51-3.71) | | 0.527 | 0.69(0.21-2.30) | 0.548 |
| SLC30A8  rs3802177 | AA | 9.44 | | 0.68(0.45-1.03) | | 0.067 | 0.83(0.52-1.32) | 0.431 |
| AG | 11.58 | | 0.82(0.60-1.12) | | 0.208 | 0.87(0.60-1.26) | 0.461 |
| GG | 14.10 | | Ref | |  | Ref |  |
| Additive model |  | | 0.82(0.67-1.00) | | 0.056 | 0.90(0.72-1.14) | 0.394 |
| Dominant model  (AA+AG vs GG) |  | | 0.77(0.58-1.04) | | 0.087 | 0.86(0.61-1.21) | 0.383 |
| Recessive model  (AA vs AG+GG) |  | | 0.76(0.52-1.11) | | 0.156 | 0.90(0.59-1.36) | 0.615 |
| GPSM1  rs11787792 | GG | 0.00 | | - | |  | - |  |
| GA | 8.86 | | 0.84(0.44-1.58) | | 0.586 | 0.87(0.42-1.78) | 0.693 |
| AA | 12.22 | | Ref | |  | Ref |  |
| Additive model |  | | 0.81(0.43-1.52) | | 0.511 | 0.85(0.41-1.73) | 0.646 |
| Dominant model  (GG+GA vs AA) |  | | 0.82(0.43-1.55) | | 0.545 | 0.85(0.42-1.76) | 0.668 |
| Recessive model  (GG vs GA+AA) |  | | - | |  | - |  |
| KRT18P24 - CHCHD2P9  rs17791513 | GG | 0.00 | | - | |  | - |  |
| GA | 10.03 | | 0.81(0.47-1.39) | | 0.439 | 1.01(0.55-1.83) | 0.984 |
| AA | 12.20 | | Ref | |  | Ref |  |
| Additive model |  | | 0.77(0.45-1.31) | | 0.337 | 0.96(0.53-1.72) | 0.891 |
| Dominant model  (GG+GA vs AA) |  | | 0.78(0.45-1.35) | | 0.380 | 0.98(0.54-1.79) | 0.954 |
| Recessive model  (GG vs GA+AA) |  | | - | |  | - |  |
| CDKN2A/B  rs10811661 | CC | 12.54 | | 1.02(0.68-1.52) | | 0.938 | 0.91(0.57-1.45) | 0.682 |
| CT | 11.87 | | 1.00(0.72-1.38) | | 0.983 | 1.18(0.80-1.72) | 0.403 |
| TT | 11.89 | | Ref | |  | Ref |  |
| Additive model |  | | 1.01(0.82-1.23) | | 0.946 | 0.97(0.78-1.21) | 0.798 |
| Dominant model  (CC+CT vs TT) |  | | 1.00(0.74-1.36) | | 0.988 | 1.08(0.76-1.55) | 0.665 |
| Recessive model  (CC vs CT+TT) |  | | 1.02(0.72-1.45) | | 0.919 | 0.82(0.55-1.24) | 0.354 |
| GLIS3  rs7041847 | AA | 16.78 | | 1.57(1.06-2.32) | | 0.024 | 1.64(1.04-2.59) | 0.033 |
| AG | 11.26 | | 1.06(0.75-1.51) | | 0.149 | 1.06(0.72-1.57) | 0.769 |
| GG | 10.39 | | Ref | |  | Ref |  |
| Additive model |  | | 1.25(1.02-1.54) | | 0.031 | 1.27(1.00-1.61) | 0.049 |
| Dominant model  (AA+AG vs GG) |  | | 1.20(0.87-1.66) | | 0.260 | 1.21(0.84-1.74) | 0.307 |
| Recessive model  (AA vs AG+GG) |  | | 1.51(1.09-2.08) | | 0.013 | 1.59(1.08-2.34) | 0.020 |
| GRK5  rs10886471 | TT | 9.42 | | 0.63(0.29-1.35) | | 0.233 | 0.62(0.25-1.55) | 0.308 |
| TC | 11.16 | | 0.86(0.63-1.17) | | 0.322 | 0.99(0.69-1.41) | 0.950 |
| CC | 12.64 | | Ref | |  | Ref |  |
| Additive model |  | | 0.83(0.64-1.07) | | 0.148 | 0.90(0.68-1.20) | 0.484 |
| Dominant model  (TT+TC vs CC) |  | | 0.82(0.61-1.11) | | 0.204 | 0.94(0.66-1.32) | 0.701 |
| Recessive model  (TT vs TC+CC) |  | | 0.66(0.31-1.41) | | 0.287 | 0.63(0.25-1.54) | 0.308 |
| HHEX  rs1111875 | CC | 10.68 | | 0.88(0.48-1.60) | | 0.673 | 0.95(0.49-1.84) | 0.869 |
| CT | 11.98 | | 0.98(0.73-1.32) | | 0.896 | 0.92(0.66-1.30) | 0.655 |
| TT | 12.19 | | Ref | |  | Ref |  |
| Additive model |  | | 0.96(0.76-1.21) | | 0.719 | 0.95(0.73-1.24) | 0.699 |
| Dominant model  (CC+CT vs TT) |  | | 0.97(0.73-1.28) | | 0.808 | 0.93(0.67-1.29) | 0.654 |
| Recessive model  (CC vs CT+TT) |  | | 0.89(0.49-1.59) | | 0.687 | 0.98(0.51-1.87) | 0.945 |
| HHEX  rs5015480 | CC | 9.58 | | 0.93(0.34-2.51) | | 0.880 | 0.90(0.28-2.88) | 0.862 |
| CT | 14.27 | | 1.26(0.93-1.71) | | 0.131 | 1.28(0.90-1.83) | 0.166 |
| TT | 11.21 | | Ref | |  | Ref |  |
| Additive model |  | | 1.17(0.90-1.51) | | 0.249 | 1.17(0.87-1.59) | 0.302 |
| Dominant model  (CC+CT vs TT) |  | | 1.24(0.92-1.67) | | 0.162 | 1.25(0.89-1.78) | 0.203 |
| Recessive model  (CC vs CT+TT) |  | | 0.86(0.32-2.32) | | 0.765 | 0.83(0.26-2.63) | 0.750 |
| TCF7L2  rs7903146 | TT | 0.00 | | - | |  | - |  |
| TC | 16.99 | | 1.36(0.81-2.26) | | 0.243 | 1.66(0.89-3.12) | 0.111 |
| CC | 11.70 | | Ref | |  | Ref |  |
| Additive model |  | | 1.23(0.76-2.01) | | 0.403 | 1.51(0.83-2.75) | 0.176 |
| Dominant model  (TT+TC vs CC) |  | | 1.31(0.78-2.18) | | 0.308 | 1.61(0.86-3.01) | 0.135 |
| Recessive model  (TT vs TC+CC) |  | | - | |  | - |  |
| ARAP1  rs1552224 | CC | 7.40 | | 0.63(0.09-4.50) | | 0.645 | 1.39(0.19-10.11) | 0.745 |
| CA | 8.88 | | 0.68(0.43-1.08) | | 0.102 | 0.86(0.52-1.42) | 0.551 |
| AA | 12.55 | | Ref | |  | Ref |  |
| Additive model |  | | 1.43(2.18-0.94) | | 0.096 | 0.90(0.57-1.43) | 0.663 |
| Dominant model  (CC+CA vs AA) |  | | 0.68(0.44-1.06) | | 0.091 | 0.88(0.54-1.43) | 0.598 |
| Recessive model  (CC vs CA+AA) |  | | 0.66(0.09-4.73) | | 0.681 | 1.42(0.19-10.30) | 0.731 |
| KCNQ1  rs2237892 | TT | 7.58 | | 0.62(0.34-1.10) | | 0.102 | 0.73(0.40-1.36) | 0.326 |
| TC | 12.99 | | 1.09(0.81-1.46) | | 0.575 | 1.03(0.73-1.45) | 0.861 |
| CC | 12.12 | | Ref | |  | Ref |  |
| Additive model |  | | 0.90(0.73-1.12) | | 0.360 | 0.92(0.72-1.18) | 0.526 |
| Dominant model  (TT+TC vs CC) |  | | 0.99(0.74-1.32) | | 0.945 | 0.97(0.70-1.35) | 0.856 |
| Recessive model  (TT vs TC+CC) |  | | 0.59(0.34-1.04) | | 0.067 | 0.72(0.40-1.31) | 0.286 |
| KCNJ11  rs5215 | CC | 14.00 | | 1.13(0.76-1.69) | | 0.550 | 1.36(0.84-2.21) | 0.213 |
| CT | 10.97 | | 0.89(0.65-1.23) | | 0.487 | 1.10(0.76-1.58) | 0.618 |
| TT | 12.31 | | 1 | |  | 1 |  |
| Additive model |  | | 1.03(0.84-1.26) | | 0.770 | 1.15(0.91-1.46) | 0.239 |
| Dominant model  (CC+CT vs TT) |  | | 0.96(0.71-1.28) | | 0.758 | 1.16(0.82-1.63) | 0.402 |
| Recessive model  (CC vs CT+TT) |  | | 1.20(0.83-1.73) | | 0.332 | 1.29(0.83-2.01) | 0.252 |
| RPSAP52  rs2261181 | TT | 27.61 | | 2.82(1.25-6.40) | | 0.013 | 1.77(0.55-5.71) | 0.339 |
| TC | 13.88 | | 1.30(0.94-1.81) | | 0.118 | 1.40(0.96-2.04) | 0.078 |
| CC | 11.17 | | 1 | |  | 1 |  |
| Additive model |  | | 1.42(1.07-1.87) | | 0.015 | 1.38(1.00-1.91) | 0.053 |
| Dominant model  (TT+TC vs CC) |  | | 1.38(1.01-1.90) | | 0.044 | 1.42(0.99-2.05) | 0.060 |
| Recessive model  (TT vs TC+CC) |  | | 2.65(1.75-5.98) | | 0.019 | 1.61(0.50-5.17) | 0.422 |
| ZFAND6 – FAH  rs11634397 | GG | 0.00 | | - | |  | - |  |
| GA | 12.16 | | 0.97(0.66-1.45) | | 0.586 | 0.87(0.42-1.78) | 0.693 |
| AA | 12.02 | | Ref | |  | Ref |  |
| Additive model |  | | 0.90(0.62-1.32) | | 0.602 | 0.97(0.62-1.51) | 0.646 |
| Dominant model  (GG+GA vs AA) |  | | 0.94(0.63-1.39) | | 0.748 | 0.98(0.63-1.55) | 0.668 |
| Recessive model  (GG vs GA+AA) |  | | - | |  | - |  |
| AP3S2; C15orf38-AP3S2  rs2028299 | CC | 11.98 | | 1.00(0.49-2.04) | | 0.994 | 1.00(0.40-2.49) |  |
| CA | 13.89 | | 1.25(0.92-1.69) | | 0.147 | 1.36(0.96-1.94) | 0.998 |
| AA | 11.05 | | Ref | |  | Ref | 0.086 |
| Additive model |  | | 1.13(0.89-1.44) | | 0.308 | 1.20(0.90-1.59) |  |
| Dominant model  (CC+CA vs AA) |  | | 1.22(0.91-1.63) | | 0.186 | 1.32(0.94-1.86) | 0.207 |
| Recessive model  (CC vs CA+AA) |  | | 0.92(0.45-1.87) | | 0.823 | 0.90(0.37-2.21) | 0.113 |
| NPM1P47 - C2CD4B  rs7172432 | GG | 9.67 | | 0.87(0.53-1.44) | | 0.597 | 0.80(0.45-1.43) | 0.459 |
| GA | 12.97 | | 1.16(0.86-1.57) | | 0.328 | 1.03(0.73-1.46) | 0.866 |
| AA | 11.57 | | Ref | |  | Ref |  |
| Additive model |  | | 1.00(0.81-1.24) | | 0.967 | 0.94(0.73-1.21) | 0.629 |
| Dominant model  (GG+GA vs AA) |  | | 1.10(0.82-1.48) | | 0.513 | 0.98(0.70-1.38) | 0.928 |
| Recessive model  (GG vs GA+AA) |  | | 0.80(0.50-1.29) | | 0.368 | 0.79(0.46-1.36) | 0.398 |
| HMG20A  rs7178572 | GG | 12.02 | | 1.15(0.73-1.82) | | 0.541 | 1.00(0.56-1.76) | 0.988 |
| GA | 13.45 | | 1.33(0.97-1.82) | | 0.081 | 1.20(0.83-1.73) | 0.326 |
| AA | 10.20 | | Ref | |  | Ref |  |
| Additive model |  | | 1.12(0.91-1.38) | | 0.268 | 1.05(0.82-1.35) | 0.704 |
| Dominant model  (GG+GA vs AA) |  | | 1.29(0.95-1.74) | | 0.104 | 1.16(0.81-1.65) | 0.411 |
| Recessive model  (GG vs GA+AA) |  | | 0.98(0.65-1.48) | | 0.917 | 0.89(0.53-1.50) | 0.663 |
| RASGRP1  rs7403531 | TT | 9.83 | | 0.70(0.44-1.13) | | 0.146 | 0.67(0.38-1.17) | 0.159 |
| TC | 11.25 | | 0.89(0.65-1.20) | | 0.439 | 0.98(0.68-1.39) | 0.893 |
| CC | 13.37 | | Ref | |  | Ref |  |
| Additive model |  | | 0.85(0.69-1.05) | | 0.139 | 0.86(0.67-1.10) | 0.234 |
| Dominant model  (TT+TC vs CC) |  | | 0.84(0.63-1.12) | | 0.235 | 0.90(0.64-1.26) | 0.531 |
| Recessive model  (TT vs TC+CC) |  | | 0.74(0.47-1.17) | | 0.203 | 0.68(0.40-1.15) | 0.147 |
| FTO  rs9936385 | CC | 4.88 | | 0.51(0.07-3.67) | | 0.507 | 0.62(0.09-4.48) | 0.635 |
| CT | 12.14 | | 1.01(0.72-1.43) | | 0.943 | 1.23(0.84-1.80) | 0.280 |
| TT | 12.07 | | Ref | |  | Ref |  |
| Additive model |  | | 0.97(0.70-1.33) | | 0.836 | 1.14(0.81-1.62) | 0.447 |
| Dominant model  (CC+CT vs TT) |  | | 0.99(0.70-1.40) | | 0.954 | 1.20(0.82-1.75) | 0.340 |
| Recessive model  (CC vs CT+TT) |  | | 0.51(0.07-3.66) | | 0.505 | 0.59(0.08-4.27) | 0.602 |
| HNF1B  rs4430796 | GG | 13.62 | | 1.08(0.67-1.75) | | 0.757 | 1.00(0.56-1.78) | 0.996 |
| GA | 10.69 | | 0.83(0.61-1.12) | | 0.227 | 0.77(0.54-1.09) | 0.136 |
| AA | 12.83 | | Ref | |  | Ref |  |
| Additive model |  | | 1.05(1.31-0.84) | | 0.674 | 0.89(0.69-1.16) | 0.400 |
| Dominant model  (GG+GA vs AA) |  | | 0.87(0.66-1.16) | | 0.349 | 0.80(0.58-1.12) | 0.193 |
| Recessive model  (GG vs GA+AA) |  | | 1.17(0.74-1.87) | | 0.498 | 1.12(0.64-1.97) | 0.688 |
| SRR  rs391300 | TT | 13.34 | | 1.02(0.64-1.63) | | 0.931 | 1.25(0.76-2.08) | 0.381 |
| TC | 11.37 | | 0.89(0.66-1.21) | | 0.450 | 0.87(0.61-1.24) | 0.438 |
| CC | 12.29 | | Ref | |  | Ref |  |
| Additive model |  | | 0.97(0.78-1.20) | | 0.767 | 1.04(0.81-1.33) | 0.767 |
| Dominant model  (TT+TC vs CC) |  | | 0.92(0.69-1.22) | | 0.546 | 0.94(0.68-1.31) | 0.727 |
| Recessive model  (TT vs TC+CC) |  | | 1.08(0.69-1.68) | | 0.739 | 1.34(0.83-2.17) | 0.231 |
| PEPD  rs3786897 | GG | 9.43 | | 0.97(0.62-1.53) | | 0.901 | 0.75(0.44-1.30) | 0.306 |
| GA | 13.70 | | 1.33(0.95-1.85) | | 0.096 | 1.26(0.86-1.85) | 0.230 |
| AA | 10.76 | | Ref | |  | Ref |  |
| Additive model |  | | 1.03(0.84-1.26) | | 0.811 | 0.92(0.73-1.18) | 0.522 |
| Dominant model  (GG+GA vs AA) |  | | 1.23(0.89-1.70) | | 0.208 | 1.12(0.77-1.62) | 0.549 |
| Recessive model  (GG vs GA+AA) |  | | 0.81(0.55-1.20) | | 0.288 | 0.64(0.40-1.04) | 0.073 |
| HNF4A  rs4812829 | AA | 11.01 | | 0.94(0.61-1.44) | | 0.764 | 0.89(0.54-1.48) | 0.660 |
| AG | 12.71 | | 1.12(0.81-1.56) | | 0.486 | 1.17(0.80-1.71) | 0.408 |
| GG | 11.31 | | Ref | |  | Ref |  |
| Additive model |  | | 0.98(0.80-1.21) | | 0.882 | 0.97(0.77-1.23) | 0.829 |
| Dominant model  (AA+AG vs GG) |  | | 1.07(0.78-1.47) | | 0.673 | 1.09(0.76-1.57) | 0.632 |
| Recessive model  (AA vs AG+GG) |  | | 0.87(0.60-1.26) | | 0.458 | 0.81(0.52-1.26) | 0.346 |
| KRT18P48 - DUSP9  rs5945326 | GG | 9.80 | | 0.77(0.53-1.11) | | 0.156 | 0.90(0.59-1.36) | 0.606 |
| GA | 12.66 | | 0.99(0.71-1.39) | | 0.970 | 0.99(0.65-1.52) | 0.981 |
| AA | 12.66 | | Ref | |  | Ref |  |
| Additive model |  | | 0.89(0.75-1.06) | | 0.186 | 0.95(0.78-1.17) | 0.629 |
| Dominant model  (GG+GA vs AA) |  | | 0.88(0.66-1.17) | | 0.374 | 0.94(0.67-1.32) | 0.730 |
| Recessive model  (GG vs GA+AA) |  | | 0.77(0.55-1.09) | | 0.136 | 0.90(0.60-1.33) | 0.594 |
| FAM58A  rs12010175 | AA | 8.10 | | 0.69(0.41-1.16) | | 0.159 | 0.79(0.43-1.47) | 0.457 |
| AG | 14.90 | | 1.23(0.86-1.76) | | 0.248 | 1.13(0.72-1.76) | 0.594 |
| GG | 12.07 | | Ref | |  | Ref |  |
| Additive model |  | | 0.92(0.75-1.14) | | 0.458 | 0.95(0.74-1.23) | 0.708 |
| Dominant model  (AA+AG vs GG) |  | | 1.00(0.73-1.37) | | 0.985 | 0.99(0.68-1.45) | 0.977 |
| Recessive model  (AA vs AG+GG) |  | | 0.66(0.39-1.10) | | 0.111 | 0.78(0.42-1.44) | 0.427 |

Notes: \* Adjustment for age, sex, education level, household income, occupation, smoking status, alcohol use, physical activity, tea drinking, diet preference, vegetable consumption, fruit consumption, hypertension, overweight/obesity, impaired fasting glucose (IFG), and family history of type 2 diabetes mellitus (T2DM);

Abbreviation: HR, hazard ratio; aHR, adjusted hazard ratio; 95%CI, 95% confidence interval.