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| Supplement Table 1: Association of chronic kidney disease and apo-lipoprotein B in young people  |
| Variable $ | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR(95% CI\*) | 1.53(1.33,1.77) | 159(1.37,1.84) | 1.50 (1.29,1.75) | 1.41 (1.11,1.79) | 1.37 (1.08,1.75) |
| LR\* | -1611.00  | -1602.50  | -1575.80  | -1563.30  | -1545.40  |
| Chi-Square(DF) | / | 16.98(4) | 53.37(7) | 25.08(6) | 35.78(6) |
| t-value | 5.91  | 6.15  | 5.30  | 2.78  | 2.56  |
| DF | 2293.00  | 2289.00  | 2282.00  | 2276.00  | 2270.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 2: Association of chronic kidney disease and apo-lipoprotein B in middle-age people  |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR(95% CI) | 1.57(1.44,1.73) | 1.59(1.37,1.84) | 1.51(1.37,1.66) | 1.30(1.11,1.53) | 1.32(1.12,1.55) |
| LR$ | -3509.10  | -3457.10  | -3370.10  | -3311.80  | -3287.50  |
| Chi-Square | / | 104(4) | 174(7) | 116.57(6) | 48.58(6) |
| t-value(df) | 9.69  | 9.78  | 8.55  | 3.29  | 3.41  |
| DF | 4677.00  | 4673.00  | 4666.00  | 4660.00  | 4654.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 3: Association of chronic kidney disease and apo-lipoprotein B in older people  |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR | 1.28(1.12,1.47) | 1.19(1.03,1.37) | 1.14(0.99,1.33) | 1.14(0.87,1.49) | 1.18(0.90,1.55) |
| LR | -1405.70  | -1390.00  | -1308.60  | -1263.30  | -1250.70  |
| Chi-Square | / | 31.22(4) | 162.86  | 90.61  | 25.17  |
| t-value | 3.53  | 2.37  | 1.76  | 0.96  | 1.20  |
| DF | 1337.00  | 1333.00  | 1326.00  | 1320.00  | 1314.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | 0.04  | 0.17  | 0.11  |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 4: Association of chronic kidney disease and apo-lipoprotein B in female |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR | 2.03(1.86,2.22) | 1.45(1.32,1.60) | 1.36(1.23,1.50) | 1.13(0.96,1.35) | 1.14(0.96,1.36) |
| LR | -4106.6 | -3360 | -3242 | -3162.3 | -3151.7 |
| Chi-Square | / | 1493.2 | 236.01 | 159.4 | 21.2 |
| t-value | 15.71 | 7.51 | 6.07 | 1.44 | 1.54 |
| DF | 4439 | 4435 | 4428 | 4422 | 4416 |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | 0.07 | 0.06 |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 5: Association of chronic kidney disease and apo-lipoprotein B in male |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR\* | 1.55(1.42,1.70) | 1.49(1.35,1.65) | 1.42(1.28,1.57) | 1.41(1.20,1.66) | 1.41(1.20,1.67) |
| LR$ | -3617.20  | -3113.30  | -3039.20  | -2991.80  | -2962.50  |
| Chi-Square | / | 1007.60  | 148.36  | 94.70  | 58.60  |
| t-value | 9.50(5) | 8.01(9) | 6.86(16) | 4.08(22) | 4.10(28) |
| DF | 3873.00  | 3869.00  | 3862.00  | 3856.00  | 3850.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 6: Association of chronic kidney disease and apo-lipoprotein B in people whose BMI is no more than 25 |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR\* | 1.79(1.66,1.94) | 1.48(1.37,1.61) | 1.37(1.25,1.49) | 1.15(1.00,1.34) | 1.16(1.00,1.34) |
| LR$ | -5587.80  | -4629.70  | -4503.70  | -4416.00  | -4385.80  |
| Chi-Square | / | 1916.20  | 252.07  | 175.31  | 60.45  |
| t-value | 14.45(5) | 9.00(9) | 7.06(16) | 1.93(22) | 1.93(28) |
| DF | 5901.00  | 5897.00  | 5890.00  | 5884.00  | 5878.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | 0.03  | 0.03  |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 7: Association of chronic kidney disease and apo-lipoprotein B in people whose BMI is higher than 25 |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR\* | 1.74(1.55,1.94) | 1.51(1.35,1.70) | 1.45(1.28,1.63) | 1.60(1.31,1.96) | 1.62(1.32,1.99) |
| LR$ | -2191.40  | -1862.00  | -1796.80  | -1765.90  | -1754.00  |
| Chi-Square | / | 658.73  | 130.50  | 61.74  | 23.88  |
| t-value | 9.73(5) | 6.92(9) | 6.07(16) | 4.57(22) | 4.64(28) |
| DF | 2411.00  | 2407.00  | 2400.00  | 2394.00  | 2388.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 8: Association of chronic kidney disease and apo-lipoprotein B in people with hyperuricemia |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR\* | 1.43(1.25,1.64) | 1.38(1.19,1.59) | 1.40(1.21,1.63) | 1.50(1.16,1.93) | 1.52(1.18,1.97) |
| LR$ | -1441.20  | -1189.10  | -1170.30  | -1111.90  | -1097.50  |
| Chi-Square | / | 504.10  | 37.60  | 116.83  | 28.78  |
| t-value | 5.14  | 4.34  | 4.51  | 3.10  | 3.21  |
| DF | 7037.00  | 7033.00  | 7026.00  | 7020.00  | 7014.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |

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| Supplement Table 9: Association of chronic kidney disease and apo-lipoprotein B in people with hyperuricemia |
| Variable  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| OR\* | 1.75(1.63,1.88) | 1.42(1.31,1.45) | 1.39(1.29,1.51) | 1.19(1.04,1.36) | 1.19(1.04,1.37) |
| LR$ | -6209.30  | -5141.80  | -5106.70  | -5042.90  | -5017.20  |
| Chi-Square | / | 2135.00  | 70.14  | 127.66  | 51.37  |
| t-value | 15.21(5) | 8.73(9) | 8.20(16) | 2.54(22) | 2.57(28) |
| DF | 1275.00  | 1271.00  | 1264.00  | 1258.00  | 1252.00  |
| p（Apo-lipoprotein B） | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| $ Model 1: Estimate without covariate. Model 2: Adjusted for demographic characteristics (age, gender, body mass index, region and education). Model 3: Adjusted for model 2, nutrient status (fat intakes, protein intakes and calorie intakes) and comorbidities (Hyperuricemia, diabetes, anemia and hypertension). Model 4: Adjusted for model 3 and biochemical indicators (hemoglobin, albumin, apo-lipoprotein A, urea nitrogen, triglycerides, total cholesterol, high-density lipoprotein and low-density lipoprotein).Model 5: Adjusted for model 4 and life style (smoking, alcohol drinking, water drinking, tea drinking, screen view and sleeping duration).\* LR test was performed between model 1 vs. model 2, model 2 vs. model 3, model 3 vs. model 4, and model4 vs. model5; the P value of LR is < 0.001 |