

Supplemental Table I: Race- and gender-specific lipid levels in the ARIC study cohort

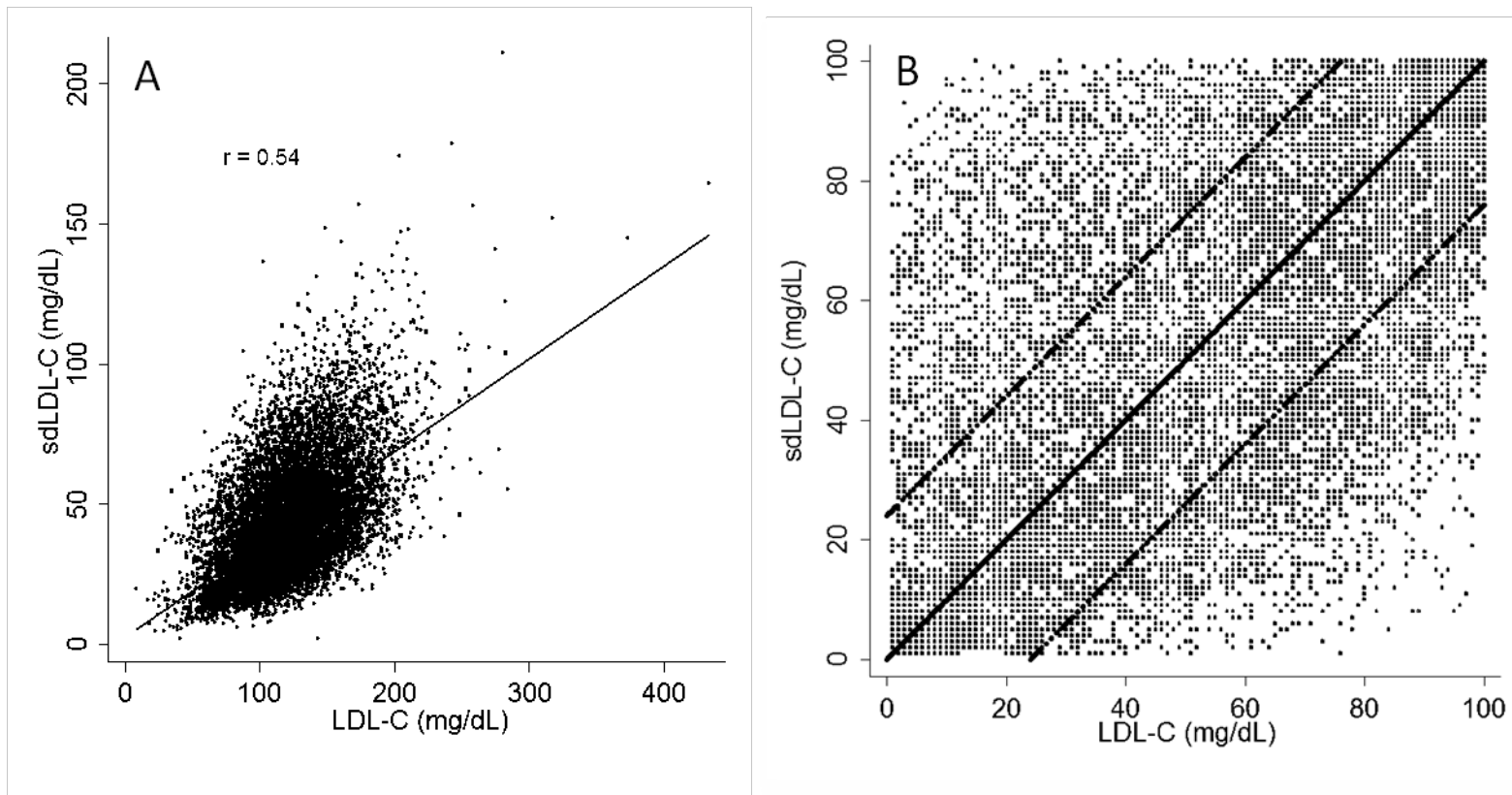
| Lipid fraction | | | | | P-value† by race | | | P-value† by gender | | |
|--------------------------|--------------------------|------------------------|---------------------------------|------------------------------|------------------|---------|---------|--------------------|-------------------|---------|
| | Caucasian Women (N=4763) | Caucasian Men (N=4141) | African American Women (N=1622) | African American Men (N=893) | Women | Men | Overall | Caucasians | African Americans | Overall |
| sdLDL-C, mg/dL | 45.07 (.3206) | 45.35 (.3070) | 36.57 (.4323) | 38.84 (.6268) | <0.0001 | <0.0001 | <0.0001 | 0.5286 | 0.0023 | 0.0009 |
| lbLDL-C, mg/dL | 78.79 (.4182) | 75.31 (.4281) | 87.85 (.7210) | 83.87 (.9142) | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0008 | <0.0001 |
| LDL-C, mg/dL | 123.60 (.4985) | 120.81 (.4846) | 124.31 (.9038) | 122.69 (1.1831) | 0.4790 | 0.1100 | 0.0597 | 0.0001 | 0.2822 | <0.0001 |
| sdLDL-C/LDL-C ratio | .3631 (.0022) | .3765 (.0024) | .2961 (.0032) | .3166 (.0043) | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Total cholesterol, mg/dL | 209.41 (.5306) | 191.71 (.5350) | 203.24 (.9575) | 193.29 (1.2391) | <0.0001 | 0.2197 | 0.0794 | <0.0001 | <0.0001 | <0.0001 |
| HDL-C, mg/dL | 55.472 (.2407) | 41.695 (.1933) | 56.105 (.4073) | 47.952 (.5391) | 0.1832 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Triglycerides, mg/dL | 153.78 (1.3302) | 150.04 (1.4051) | 114.81 (1.5708) | 115.46 (2.2402) | <0.0001 | <0.0001 | <0.0001 | 0.0532 | 0.8076 | 0.9889 |

*Data presented as mean (standard error of the mean).

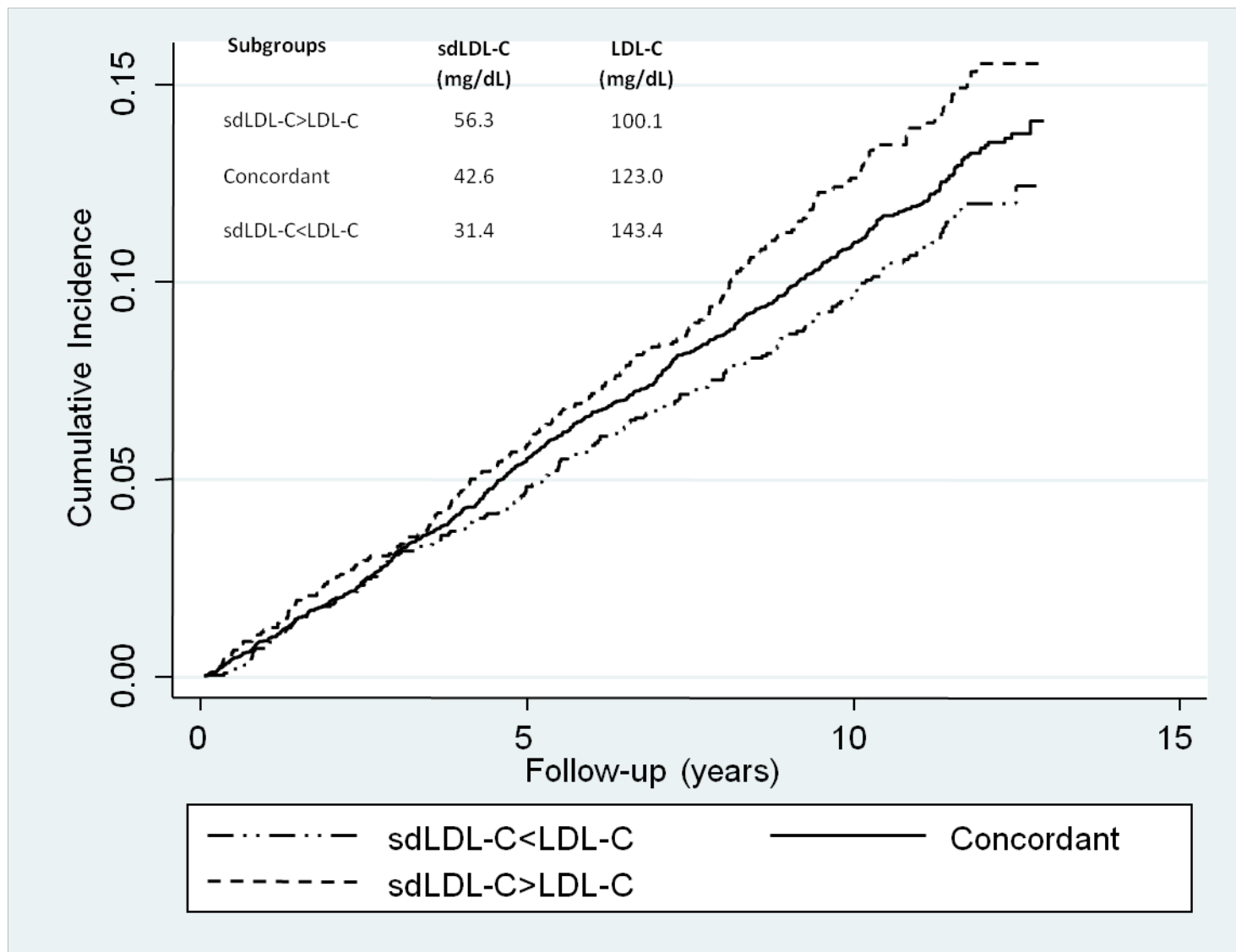
†P-value for test of differences in means, and p-value by race and gender.

Supplemental Table II: Association of the top SNPs in 8 loci with sdLDL-C/LDL-C ratio

| SNP | Location | Chromosome | # Sign SNPs | Coded Allele | Allele Frequency | N | Beta | SEBeta | P | Gene |
|------------|-----------|------------|-------------|--------------|------------------|------|----------|----------|------------------------|--------------------------------|
| rs964184 | 11q23.3 | 11 | 42 | C | 0.8588 | 6860 | -0.04646 | 0.003705 | 4.40×10^{-36} | APOA5/A4/C3/A1/ZNF259/BUD13 |
| rs4420638 | 19q13.32 | 19 | 4 | A | 0.8264 | 6860 | -0.03217 | 0.003545 | 1.13×10^{-19} | APOE/C1/C4/C2/TOMM40 |
| rs1260326 | 2p23.3 | 2 | 7 | C | 0.5856 | 6860 | -0.02206 | 0.002637 | 5.98×10^{-17} | GCKR/IFT172/ZNF51 |
| rs2980855 | 8q24.13 | 8 | 32 | C | 0.4682 | 6860 | -0.01807 | 0.002547 | 1.28×10^{-12} | TRIB1 |
| rs13244268 | 7q11.23 | 7 | 22 | C | 0.1232 | 6860 | -0.02587 | 0.003935 | 4.87×10^{-11} | BAZ1B/MLXIPL/TBL2/BCL7B/VPS37D |
| rs508487 | 11q23-q24 | 11 | 2 | C | 0.9402 | 6860 | -0.04084 | 0.006312 | 9.75×10^{-11} | PCSK7 |
| rs995000 | 1p31.3 | 1 | 70 | C | 0.6687 | 6860 | 0.015624 | 0.002702 | 7.32×10^{-9} | DOCK7/ANGPTL3/USP1 |
| rs7586601 | 2p23 | 2 | 1 | A | 0.556 | 6860 | 0.014932 | 0.002615 | 1.12×10^{-8} | NRBP1 |
| rs11208046 | 1p31.3 | 1 | 31 | C | 0.5658 | 6860 | -0.01331 | 0.002605 | 3.22×10^{-7} | ATG4C |
| rs12678919 | 8p22 | 8 | 3 | A | 0.893 | 6860 | 0.021005 | 0.004236 | 7.12×10^{-7} | LPL |



Supplemental Figure I: A) Correlation of LDL-C and sdLDL-C concentrations among 11234 ARIC participants. **B)** Relation of LDL-C and sdLDL-C levels given in percentile units. The dashed lines bracket concordant LDL-C and sdLDL-C values defined as those within ± 24 percentile units.



Supplemental Figure II: Cumulative incidence of cardiovascular events in sub-groups with concordant or discordant levels of LDL-C and sdLDL-C from proportional hazards models adjusted for age, gender, and race.