

# **SUPPLEMENTAL MATERIAL**

**Table S1. Hazard Ratios (95%CI) for ASCVD events across concordant/discordant groups by medians: the Atherosclerosis Risk in Communities Study (1996-2016).**

Lipid Target Groups	hsCRP	n ASCVD events/ n individuals	Model 1 HR (95%CI)	Model 2 HR (95%CI)	Model 3 HR (95%CI)	Model 4 HR (95%CI)
<b>LDL-C &lt; median</b> (n=4,797)	< median	308/2,438	REF	REF	REF	REF
	≥ median	379/2,359	1.49 (1.28-1.75)	1.34 (1.13-1.59)	1.29 (1.09-1.54)	1.30 (1.09-1.54)
<b>LDL-C ≥ median</b> (n=4,951)	< median	373/2,432	REF	REF	REF	REF
	≥ median	514/2,519	1.58 (1.38-1.81)	1.35 (1.16-1.58)	1.33 (1.14-1.54)	1.32 (1.13-1.53)
<b>Dual lipids &lt; median</b> (n=4,445)	< median	283/2,295	REF	REF	REF	REF
	≥ median	340/2,150	1.50 (1.27-1.77)	1.37 (1.14-1.65)	1.33 (1.11-1.60)	1.33 (1.11-1.60)
<b>Dual lipids ≥ median</b> (n=4,549)	< median	350/2,211	REF	REF	REF	REF
	≥ median	485/2,338	1.57 (1.37-1.81)	1.38 (1.18-1.61)	1.36 (1.16-1.60)	1.35 (1.16-1.58)
<b>Triple lipids &lt; median</b> (n=3,938)	< median	237/2,060	REF	REF	REF	REF
	≥ median	290/1,878	1.57 (1.31-1.88)	1.46 (1.19-1.78)	1.42 (1.16-1.74)	1.42 (1.16-1.73)
<b>Triple lipids ≥ median</b> (n=4,064)	< median	315/1,954	REF	REF	REF	REF
	≥ median	442/2,110	1.56 (1.34-1.81)	1.33 (1.13-1.57)	1.32 (1.12-1.56)	1.31 (1.11-1.55)
<b>Quadruple lipids &lt; median</b> (n=3,120)	< median	171/1,660	REF	REF	REF	N/A
	≥ median	207/1,460	1.62 (1.31-2.01)	1.60 (1.26-2.02)	1.56 (1.23-1.98)	N/A
<b>Quadruple lipids ≥ median</b> (n=3,079)	< median	257/1,460	REF	REF	REF	N/A
	≥ median	362/1,619	1.52 (1.29-1.79)	1.30 (1.08-1.56)	1.29 (1.08-1.55)	N/A
<b>Quadruple lipids &lt; median + HDL-C ≥ median</b> (n=2,971)	< median	159/1,574	REF	REF	REF	N/A
	≥ median	189/1,397	1.58 (1.26-1.97)	1.59 (1.25-2.03)	1.56 (1.22-1.99)	N/A
<b>Quadruple lipids ≥ median + HDL-C &lt; median</b> (n=1,253)	< median	116/557	REF	REF	REF	N/A
	≥ median	174/696	1.43 (1.12-1.82)	1.25 (0.96-1.64)	1.26 (0.96-1.65)	N/A

Dual lipids: LDL-C + non-HDL-C; Triple lipids: LDL-C + non-HDL-C + apoB. Quadruple lipids: LDL-C + non-HDL-C + apoB + TC/HDL-C

hsCRP <median groups are reference.

**Medians: LDL-C: 123 mg/dL, non-HDL-C: 149 mg/dL, apoB: 98 mg/dL, TC/HDL: 4.2, HDL-C: 40 mg/dL, hsCRP: 2.4 mg/L**

Model 1: adjusted for age, sex, race/center

Model 2: Model 1 + physical activity + smoking status + BMI+ systolic blood pressure + treatment for hypertension + diabetes + lipid-lowering medication use

Model 3: Model 2 + log-triglycerides

Model 4: Model 3 + log-HDL-C.

N/A: Not applicable

SI conversion factors: To convert total, LDL-C and HDL-C to mmol/L, multiply by 0.0249. To convert triglycerides to mmol/L, multiply by 0.0113.

**Table S2. Hazard Ratios (95%CI) for ASCVD events across concordant/discordant groups by risk categories in medians: the Atherosclerosis Risk in Communities Study (1996-2016).**

Lipid Target Groups	hsCRP	Low risk (<7.5%)		High risk (≥7.5%)	
		n ASCVD events/ n individuals	HR (95%CI)	n ASCVD events/ n individuals	HR (95%CI)
<b>LDL-C &lt; median</b> (n=4,797)	< median	96/1,239	REF	208/1,175	REF
	≥ median	156/1,254	1.70 (1.32-2.19)	219/1,085	1.24 (1.02-1.49)
<b>LDL-C ≥ median</b> (n=4,951)	< median	93/1,007	REF	277/1,406	REF
	≥ median	155/1,113	1.58 (1.23-2.05)	353/1,388	1.42 (1.21-1.67)
<b>Dual lipids &lt; median</b> (n=4,445)	< median	90/1,193	REF	190/1,080	REF
	≥ median	143/1,162	1.72 (1.32-2.24)	193/969	1.23 (1.01-1.51)
<b>Dual lipids ≥ median</b> (n=4,549)	< median	86/887	REF	262/1,307	REF
	≥ median	146/1,030	1.53 (1.17-2.00)	335/1,294	1.44 (1.22-1.69)
<b>Triple lipids &lt; median</b> (n=3,938)	< median	80/1,091	REF	154/948	REF
	≥ median	125/1,010	1.79 (1.35-2.37)	162/851	1.27 (1.02-1.59)
<b>Triple lipids ≥ median</b> (n=4,064)	< median	75/779	REF	238/1,162	REF
	≥ median	134/931	1.57 (1.18-2.08)	304/1,169	1.42 (1.20-1.69)
<b>Quadruple lipids &lt; median</b> (n=3,120)	< median	65/955	REF	104/688	REF
	≥ median	96/857	1.73 (1.26-2.37)	110/591	1.35 (1.03-1.77)
<b>Quadruple lipids ≥ median</b> (n=3,079)	< median	56/507	REF	199/942	REF
	≥ median	101/651	1.47 (1.06-2.04)	258/962	1.42 (1.18-1.71)
<b>Quadruple lipids &lt;median + HDL-C ≥ median</b> (n=2,971)	< median	61/913	REF	96/644	REF
	≥ median	89/835	1.67 (1.21-2.32)	99/550	1.31 (0.99-1.74)
<b>Quadruple lipids ≥median + HDL-C &lt;median</b> (n=1,253)	< median	18/139	REF	96/413	REF
	≥ median	45/243	1.51 (0.88-2.62)	126/449	1.37 (1.05-1.79)

Dual lipids: LDL-C + non-HDL-C; Triple lipids: LDL-C + non-HDL-C + apoB. Quadruple lipids: LDL-C + non-HDL-C + apoB + TC/HDL-C  
hsCRP <median groups are reference.

**Medians: LDL-C: 123 mg/dL, non-HDL-C: 149 mg/dL, apoB: 98 mg/dL, TC/HDL: 4.2, HDL-C: 40 mg/dL, hsCRP: 2.4 mg/L**

Models adjusted for lipid-lowering medication use

N/A: Not applicable

SI conversion factors: To convert total, LDL-C and HDL-C to mmol/L, multiple by 0.0249. To convert triglycerides to mmol/L, multiple by 0.0113

**Table S3. Hazard Ratios (95%CI) for coronary death (competing risk) across concordant/discordant groups by medians: the Atherosclerosis Risk in Communities Study (1996-2016).**

Lipid Target Groups	hsCRP	n coronary deaths/ n individuals	Model 1 HR (95%CI)	Model 2 HR (95%CI)	Model 3 HR (95%CI)	Model 4 HR (95%CI)
<b>Triple lipids &lt; median</b> (n=3,938)	< median	41/2,060	REF	REF	REF	REF
	≥ median	75/1,878	2.30 (1.56-3.39)	1.82 (1.19-2.80)	1.83 (1.19-2.80)	1.81 (1.18-2.77)
<b>Triple lipids ≥ median</b> (n=4,064)	< median	48/1,954	REF	REF	REF	REF
	≥ median	92/2,110	2.00 (1.40-2.87)	1.65 (1.11-2.46)	1.63 (1.09-2.44)	1.61 (1.08-2.42)
<b>Quadruple lipids &lt; median</b> (n=3,120)	< median	27/1,660	REF	REF	REF	N/A
	≥ median	51/1,460	2.53 (1.57-4.06)	2.30 (1.37-3.87)	2.31 (1.37-3.88)	N/A
<b>Quadruple lipids ≥ median</b> (n=3,079)	< median	41/1,460	REF	REF	REF	N/A
	≥ median	78/1,619	1.91 (1.29-2.82)	1.56 (1.03-2.37)	1.56 (1.03-2.37)	N/A

hsCRP <median groups are reference. Triple lipids: LDL-C + non-HDL-C + apoB. Quadruple lipids: LDL-C + non-HDL-C + apoB + TC/HDL-C

**Medians: LDL-C: 123 mg/dL, non-HDL-C: 149 mg/dL, apoB: 98 mg/dL, TC/HDL: 4.2, HDL-C: 40 mg/dL, hsCRP: 2.4 mg/L**

**Competing event: non-coronary death**

Model 1: adjusted for age, sex, race/center

Model 2: Model 1 + physical activity + smoking status + BMI+ systolic blood pressure + treatment for hypertension + diabetes + lipid-lowering medication use

Model 3: Model 2 + log-triglycerides

Model 4: Model 3 + log-HDL-C.

N/A: Not applicable

SI conversion factors: To convert total, LDL-C and HDL-C to mmol/L, multiple by 0.0249. To convert triglycerides to mmol/L, multiple by 0.0113

**Table S4. Hazard Ratios (95%CI) for ASCVD events across concordant/discordant groups by JUPITER cutpoints: the Atherosclerosis Risk in Communities Study (1996-2016).**

Lipid Target Groups	hsCRP	n ASCVD events/ n individuals	Model 1 HR (95%CI)	Model 2 HR (95%CI)	Model 3 HR (95%CI)	Model 4 HR (95%CI)
<b>LDL-C &lt; cutpoint</b> (n=5,623)	< 2 mg/L	313/2,547	REF	REF	REF	REF
	≥ 2 mg/L	508/3,076	1.58 (1.36-1.83)	1.41 (1.21-1.66)	1.37 (1.17-1.61)	1.37 (1.16-1.61)
<b>LDL -C ≥ cutpoint</b> (n=4,125)	< 2 mg/L	277/1,766	REF	REF	REF	REF
	≥ 2 mg/L	476/2,359	1.48 (1.27-1.72)	1.30 (1.10-1.53)	1.28 (1.08-1.51)	1.27 (1.07-1.50)
<b>Dual lipids &lt; cutpoint</b> (n=5,367)	< 2 mg/L	300/2,450	REF	REF	REF	REF
	≥ 2 mg/L	476/2,917	1.56 (1.34-1.81)	1.41 (1.19-1.66)	1.36 (1.15-1.61)	1.36 (1.15-1.60)
<b>Dual lipids ≥ cutpoint</b> (n=3,483)	< 2 mg/L	239/1,447	REF	REF	REF	REF
	≥ 2 mg/L	425/2,036	1.45 (1.23-1.70)	1.28 (1.07-1.53)	1.27 (1.06-1.52)	1.26 (1.05-1.51)
<b>Triple lipids &lt; cutpoint</b> (n=4,709)	< 2 mg/L	252/2,208	REF	REF	REF	REF
	≥ 2 mg/L	398/2,501	1.60 (1.36-1.89)	1.45 (1.21-1.73)	1.41 (1.18-1.68)	1.40 (1.17-1.68)
<b>Triple lipids ≥ cutpoint</b> (n=3,140)	< 2 mg/L	215/1,294	REF	REF	REF	REF
	≥ 2 mg/L	392/1,846	1.46 (1.24-1.73)	1.27 (1.06-1.54)	1.27 (1.05-1.53)	1.26 (1.04-1.52)
<b>Quadruple lipids &lt; cutpoint</b> (n=3,765)	< 2 mg/L	189/1,797	REF	REF	REF	N/A
	≥ 2 mg/L	279/1,968	1.52 (1.25-1.84)	1.43 (1.15-1.76)	1.39 (1.12-1.72)	N/A
<b>Quadruple lipids ≥ cutpoint</b> (n=3,371)	< 2 mg/L	172/1,956	REF	REF	REF	N/A
	≥ 2 mg/L	322/1,415	1.45 (1.20-1.75)	1.28 (1.04-1.58)	1.28 (1.04-1.57)	N/A
<b>Quadruple lipids &lt; cutpoint + HDL-C ≥ cutpoint</b> (n=2,552)	< 2 mg/L	127/1,252	REF	REF	REF	N/A
	≥ 2 mg/L	163/1,300	1.40 (1.10-1.79)	1.42 (1.09-1.86)	1.37 (1.02-1.80)	N/A
<b>Quadruple lipids ≥ cutpoint + HDL-C &lt; cutpoint</b> (n=2,027)	< 2 mg/L	148/789	REF	REF	REF	N/A
	≥ 2 mg/L	290/1,238	1.46 (1.19-1.78)	1.30 (1.04-1.62)	1.26 (1.04-1.62)	N/A

Dual lipids: LDL-C + non-HDL-C; Triple lipids: LDL-C + non-HDL-C + apoB. Quadruple lipids: LDL-C + non-HDL-C + apoB + TC/HDL-C  
hsCRP <2 mg/L groups are reference.

Cutpoints: LDL-C: 130 mg/dL (percentile 57), non-HDL-C: 160 mg/dL, apoB: 102 mg/dL, TC/HDL: 4.4, HDL-C: 50 mg/dL, hsCRP: 2 mg/L

Model 1: adjusted for age, sex, race/center

Model 2: Model 1 + physical activity + smoking status + BMI+ systolic blood pressure + treatment for hypertension + diabetes + lipid-lowering medication use

Model 3: Model 2 + log-triglycerides

Model 4: Model 3 + log-HDL-C.

N/A: Not applicable

SI conversion factors: To convert total, LDL-C and HDL-C to mmol/L, multiple by 0.0249. To convert triglycerides to mmol/L, multiple by 0.0113.

**Table S5. Hazard Ratios (95%CI) for ASCVD events across concordant/discordant groups by JUPITER cutpoints and hsCRP categories: the Atherosclerosis Risk in Communities Study (1996-2016).**

Lipid Target Groups	hsCRP	n ASCVD events/ n individuals	Model 1 HR (95%CI)	Model 2 HR (95%CI)	Model 3 HR (95%CI)	Model 4 HR (95%CI)
<b>LDL-C &lt; cutpoint</b> (n=5,623)	<1 mg/L	154/1,375	REF	REF	REF	REF
	1 to <2 mg/L	159/1,172	1.22 (0.98-1.53)	1.18 (0.93-1.50)	1.14 (0.90-1.44)	1.13 (0.89-1.43)
	2 to <3 mg/L	105/664	1.54 (1.20-1.97)	1.42 (1.09-1.85)	1.36 (1.04-1.78)	1.35 (1.03-1.76)
	≥3 mg/L	403/2,412	1.81 (1.50-2.20)	1.59 (1.28-1.97)	1.51 (1.21-1.87)	1.50 (1.21-1.86)
<b>LDL -C ≥ cutpoint</b> (n=4,125)	<1 mg/L	122/858	REF	REF	REF	REF
	1 to <2 mg/L	155/908	1.24 (0.97-1.57)	1.15 (0.89-1.47)	1.13 (0.88-1.46)	1.12 (0.87-1.44)
	2 to <3 mg/L	89/563	1.15 (0.87-1.51)	1.12 (0.84-1.49)	1.10 (0.83-1.47)	1.09 (0.82-1.46)
	≥3 mg/L	386/1,795	1.86 (1.51-2.29)	1.51 (1.20-1.91)	1.48 (1.17-1.87)	1.46 (1.15-1.84)
<b>Dual lipids &lt; cutpoint</b> (n=5,367)	<1 mg/L	145/1,336	REF	REF	REF	REF
	1 to <2 mg/L	155/1,114	1.29 (1.03-1.62)	1.26 (0.99-1.60)	1.20 (0.94-1.54)	1.20 (0.94-1.52)
	2 to <3 mg/L	99/632	1.56 (1.21-2.02)	1.44 (1.10-1.90)	1.38 (1.05-1.83)	1.37 (1.04-1.81)
	≥3 mg/L	377/2,285	1.84 (1.51-2.24)	1.64 (1.31-2.04)	1.55 (1.24-1.93)	1.54 (1.23-1.93)
<b>Dual lipids ≥ cutpoint</b> (n=3,483)	<1 mg/L	107/683	REF	REF	REF	REF
	1 to <2 mg/L	132/764	1.14 (0.88-1.47)	1.08 (0.82-1.41)	1.07 (0.82-1.40)	1.06 (0.81-1.39)
	2 to <3 mg/L	78/470	1.10 (0.82-1.48)	1.06 (0.78-1.44)	1.05 (0.77-1.43)	1.04 (0.76-1.42)
	≥3 mg/L	346/1,565	1.71 (1.38-2.14)	1.44 (1.13-1.83)	1.42 (1.11-1.82)	1.40 (1.10-1.79)
<b>Triple lipids &lt; cutpoint</b> (n=4,709)	<1 mg/L	126/1,228	REF	REF	REF	REF
	1 to <2 mg/L	126/980	1.29 (1.01-1.65)	1.24 (0.95-1.61)	1.19 (0.92-1.55)	1.18 (0.91-1.54)
	2 to <3 mg/L	89/551	1.71 (1.30-2.24)	1.55 (1.15-2.08)	1.49 (1.11-2.00)	1.48 (1.10-1.99)

	≥3 mg/L	309/1,950	1.84 (1.49-2.28)	1.64 (1.29-2.08)	1.56 (1.23-1.98)	1.55 (1.22-1.97)
<b>Triple lipids ≥ cutpoint</b> (n=3,140)	<1 mg/L	98/610	REF	REF	REF	REF
	1 to <2 mg/L	117/684	1.11 (0.84-1.45)	1.05 (0.79-1.40)	1.05 (0.79-1.39)	1.04 (0.78-1.38)
	2 to <3 mg/L	74/426	1.12 (0.83-1.52)	1.06 (0.77-1.47)	1.06 (0.77-1.46)	1.05 (0.76-1.45)
	≥3 mg/L	317/1,419	1.70 (1.35-2.14)	1.41 (1.09-1.81)	1.39 (1.08-1.80)	1.37 (1.06-1.78)
<b>Quadruple lipids &lt; cutpoint</b> (n=3,765)	<1 mg/L	100/1,035	REF	REF	REF	REF
	1 to <2 mg/L	89/762	1.26 (0.94-1.70)	1.23 (0.91-1.67)	1.20 (0.88-1.63)	N/A
	2 to <3 mg/L	55/417	1.48 (1.06-2.06)	1.36 (0.95-1.96)	1.32 (0.92-1.90)	N/A
	≥3 mg/L	224/1,551	1.75 (1.37-2.24)	1.66 (1.26-2.18)	1.60 (1.21-2.10)	N/A
<b>Quadruple lipids ≥ cutpoint</b> (n=3,371)	<1 mg/L	77/439	REF	REF	REF	REF
	1 to <2 mg/L	95/517	1.09 (0.81-1.47)	1.05 (0.76-1.44)	1.04 (0.76-1.43)	N/A
	2 to <3 mg/L	66/329	1.18 (0.85-1.64)	1.15 (0.81-1.63)	1.14 (0.81-1.62)	N/A
	≥3 mg/L	255/1,085	1.65 (1.27-2.13)	1.38 (1.04-1.84)	1.37 (1.03-1.83)	N/A
<b>Quadruple lipids &lt; cutpoint + HDL-C ≥ cutpoint</b> (n=2,552)	<1 mg/L	72/753	REF	REF	REF	REF
	1 to <2 mg/L	55/499	1.25 (0.88-1.79)	1.29 (0.88-1.89)	1.25 (0.85-1.83)	N/A
	2 to <3 mg/L	35/267	1.56 (1.04-2.34)	1.53 (0.99-2.37)	1.48 (0.95-2.30)	N/A
	≥3 mg/L	128/1,033	1.54 (1.13-2.09)	1.62 (1.15-2.28)	1.53 (1.08-2.17)	N/A
<b>Quadruple lipids ≥ cutpoint + HDL-C &lt; cutpoint</b> (n=2,027)	<1 mg/L	66/361	REF	REF	REF	REF
	1 to <2 mg/L	82/428	1.08 (0.78-1.49)	1.05 (0.74-1.48)	1.05 (0.74-1.48)	N/A
	2 to <3 mg/L	60/290	1.17 (0.83-1.67)	1.14 (0.79-1.65)	1.14 (0.79-1.65)	N/A
	≥3 mg/L	229/947	1.65 (1.25-2.18)	1.41 (1.04-1.92)	1.41 (1.03-1.91)	N/A

Dual lipids: LDL-C + non-HDL-C; Triple lipids: LDL-C + non-HDL-C + apoB. Quadruple lipids: LDL-C + non-HDL-C + apoB + TC/HDL-C

hsCRP <1 mg/L is reference group

**Cutpoints: LDL-C: 130 mg/dL (percentile 57), non-HDL-C: 160 mg/dL, apoB: 102 mg/dL, TC/HDL: 4.4, HDL-C: 50 mg/dL, hsCRP: 2 mg/L**

Model 1: adjusted for age, sex, race/center

Model 2: Model 1 + physical activity + smoking status + BMI+ systolic blood pressure + treatment for hypertension + diabetes + lipid-lowering medication use

Model 3: Model 2 + log-triglycerides

Model 4: Model 3 + log-HDL-C

N/A: Not applicable

SI conversion factors: To convert total, LDL-C and HDL-C to mmol/L, multiple by 0.0249. To convert triglycerides to mmol/L, multiple by 0.0113.



**Table S6. Hazard Ratios (95%CI) for ASCVD events across concordant/discordant groups by high-risk cutpoints: the Atherosclerosis Risk in Communities Study (1996-2016).**

Lipid Target Groups	hsCRP	n ASCVD events/ n individuals	Model 1 HR (95%CI)	Model 2 HR (95%CI)	Model 3 HR (95%CI)	Model 4 HR (95%CI)
<b>LDL-C &lt; cutpoint</b> (n=2,066)	< 2 mg/L	114/962	REF	REF	REF	REF
	≥ 2 mg/L	163/1,104	1.41 (1.10-1.81)	1.41 (1.06-1.86)	1.35 (1.02-1.79)	1.35 (1.02-1.79)
<b>LDL -C ≥ cutpoint</b> (n=7,682)	< 2 mg/L	476/3,351	REF	REF	REF	REF
	≥ 2 mg/L	821/4,331	1.57 (1.40-1.76)	1.35 (1.19-1.54)	1.32 (1.16-1.50)	1.31 (1.15-1.49)
<b>Dual lipids &lt; cutpoint</b> (n=1,957)	< 2 mg/L	109/924	REF	REF	REF	REF
	≥ 2 mg/L	151/1,033	1.39 (1.08-1.80)	1.42 (1.07-1.90)	1.35 (1.01-1.81)	1.36 (1.01-1.81)
<b>Dual lipids ≥ cutpoint</b> (n=6,811)	< 2 mg/L	429/2,902	REF	REF	REF	REF
	≥ 2 mg/L	752/3,909	1.53 (1.35-1.73)	1.33 (1.16-1.52)	1.29 (1.13-1.48)	1.29 (1.13-1.47)
<b>Triple lipids &lt; cutpoint</b> (n=1,489)	< 2 mg/L	86/731	REF	REF	REF	REF
	≥ 2 mg/L	118/758	1.50 (1.12-2.00)	1.52 (1.10-2.10)	1.45 (1.05-2.01)	1.45 (1.05-2.01)
<b>Triple lipids ≥ cutpoint</b> (n=6,624)	< 2 mg/L	417/2,820	REF	REF	REF	REF
	≥ 2 mg/L	730/3,804	1.53 (1.35-1.73)	1.35 (1.18-1.55)	1.32 (1.15-1.51)	1.31 (1.14-1.50)
<b>Quadruple lipids &lt; cutpoint</b> (n=976)	< 2 mg/L	55/500	REF	REF	REF	N/A
	≥ 2 mg/L	65/476	1.40 (0.96-2.04)	1.49 (0.98-2.25)	1.44 (0.95-2.19)	N/A
<b>Quadruple lipids ≥ cutpoint</b> (n=6,200)	< 2 mg/L	403/2,612	REF	REF	REF	N/A
	≥ 2 mg/L	703/3,588	1.48 (1.30-1.67)	1.32 (1.15-1.51)	1.29 (1.12-1.48)	N/A
<b>Quadruple lipids &lt; cutpoint + HDL-C ≥ cutpoint</b> (n=907)	< 2 mg/L	52/469	REF	REF	REF	N/A
	≥ 2 mg/L	56/438	1.29 (0.87-1.91)	1.32 (0.86-2.04)	1.30 (0.84-2.01)	N/A
<b>Quadruple lipids ≥ cutpoint + HDL-C &lt; cutpoint</b> (n=4,017)	< 2 mg/L	281/1,652	REF	REF	REF	N/A
	≥ 2 mg/L	515/2,365	1.48 (1.28-1.72)	1.34 (1.14-1.58)	1.33 (1.13-1.56)	N/A

Dual lipids: LDL-C + non-HDL-C; Triple lipids: LDL-C + non-HDL-C + apoB. Quadruple lipids: LDL-C + non-HDL-C + apoB + TC/HDL-C

hsCRP <2 mg/L groups are reference.

**Cutpoints: LDL-C: 100 mg/dL (percentile 21), non-HDL-C: 130 mg/dL, apoB: 80 mg/dL, TC/HDL: 3.1, HDL-C: 50 mg/dL, hsCRP: 2 mg/L**

Model 1: adjusted for age, sex, race/center

Model 2: Model 1 + physical activity + smoking status + BMI+ systolic blood pressure + treatment for hypertension + diabetes + lipid-lowering medication use

Model 3: Model 2 + log-triglycerides

Model 4: Model 3 + log-HDL-C.

N/A: Not applicable

SI conversion factors: To convert total, LDL-C and HDL-C to mmol/L, multiple by 0.0249. To convert triglycerides to mmol/L, multiple by 0.0113

**Table S7. Time-Varying Hazard Ratios (95%CI) for ASCVD events across concordant/discordant groups by medians: the Atherosclerosis Risk in Communities Study (1996-2016).**

Lipid Target Groups	hsCRP	n ASCVD events/ n individuals	Model 1 HR (95%CI)	Model 2 HR (95%CI)	Model 3 HR (95%CI)	Model 4 HR (95%CI)
<b>LDL-C &lt; median</b> (n=4,797)	< median	308/2,438	REF	REF	REF	REF
	≥ median	379/2,359	1.48 (1.26-1.73)	1.40 (1.17-1.66)	1.37 (1.15-1.64)	1.37 (1.15-1.64)
<b>LDL-C ≥ median</b> (n=4,951)	< median	373/2,432	REF	REF	REF	REF
	≥ median	514/2,519	1.43 (1.25-1.65)	1.30 (1.11-1.51)	1.27 (1.09-1.49)	1.27 (1.09-1.49)
<b>Dual lipids &lt; median</b> (n=4,445)	< median	283/2,295	REF	REF	REF	REF
	≥ median	340/2,150	1.44 (1.22-1.70)	1.39 (1.16-1.67)	1.37 (1.14-1.65)	1.37 (1.14-1.65)
<b>Dual lipids ≥ median</b> (n=4,549)	< median	350/2,211	REF	REF	REF	REF
	≥ median	485/2,338	1.46 (1.27-1.69)	1.36 (1.16-1.59)	1.34 (1.15-1.58)	1.34 (1.15-1.58)
<b>Triple lipids &lt; median</b> (n=3,938)	< median	237/2,060	REF	REF	REF	REF
	≥ median	290/1,878	1.54 (1.29-1.85)	1.45 (1.18-1.77)	1.44 (1.18-1.76)	1.44 (1.18-1.76)
<b>Triple lipids ≥ median</b> (n=4,064)	< median	315/1,954	REF	REF	REF	REF
	≥ median	442/2,110	1.42 (1.23-1.65)	1.29 (1.09-1.52)	1.28 (1.08-1.51)	1.28 (1.08-1.51)
<b>Quadruple lipids &lt; median</b> (n=3,120)	< median	171/1,660	REF	REF	REF	N/A
	≥ median	207/1,460	1.50 (1.21-1.86)	1.48 (1.16-1.88)	1.47 (1.15-1.87)	N/A
<b>Quadruple lipids ≥ median</b> (n=3,079)	< median	257/1,460	REF	REF	REF	N/A
	≥ median	362/1,619	1.36 (1.16-1.61)	1.19 (0.99-1.43)	1.19 (0.99-1.43)	N/A
<b>Quadruple lipids &lt; median + HDL-C ≥ median</b> (n=2,971)	< median	159/1,574	REF	REF	REF	N/A
	≥ median	189/1,397	1.45 (1.16-1.82)	1.47 (1.15-1.89)	1.46 (1.13-1.87)	N/A
<b>Quadruple lipids ≥ median + HDL-C &lt; median</b> (n=1,253)	< median	116/557	REF	REF	REF	N/A
	≥ median	174/696	1.29 (1.01-1.64)	1.11 (0.85-1.47)	1.12 (0.85-1.48)	N/A

Dual lipids: LDL-C + non-HDL-C; Triple lipids: LDL-C + non-HDL-C + apoB. Quadruple lipids: LDL-C + non-HDL-C + apoB + TC/HDL-C  
hsCRP <median groups are reference.

**Medians: LDL-C: 123 mg/dL, non-HDL-C: 149 mg/dL, apoB: 98 mg/dL, TC/HDL: 4.2, HDL-C: 40 mg/dL, hsCRP: 2.4 mg/L**

Model 1: adjusted for age, sex, race/center

Model 2: Model 1 + physical activity + smoking status (time-varying) + BMI (time-varying) + systolic blood pressure (time-varying) + treatment for hypertension (time-varying) + diabetes (time-varying) + lipid-lowering medications use (time-varying)

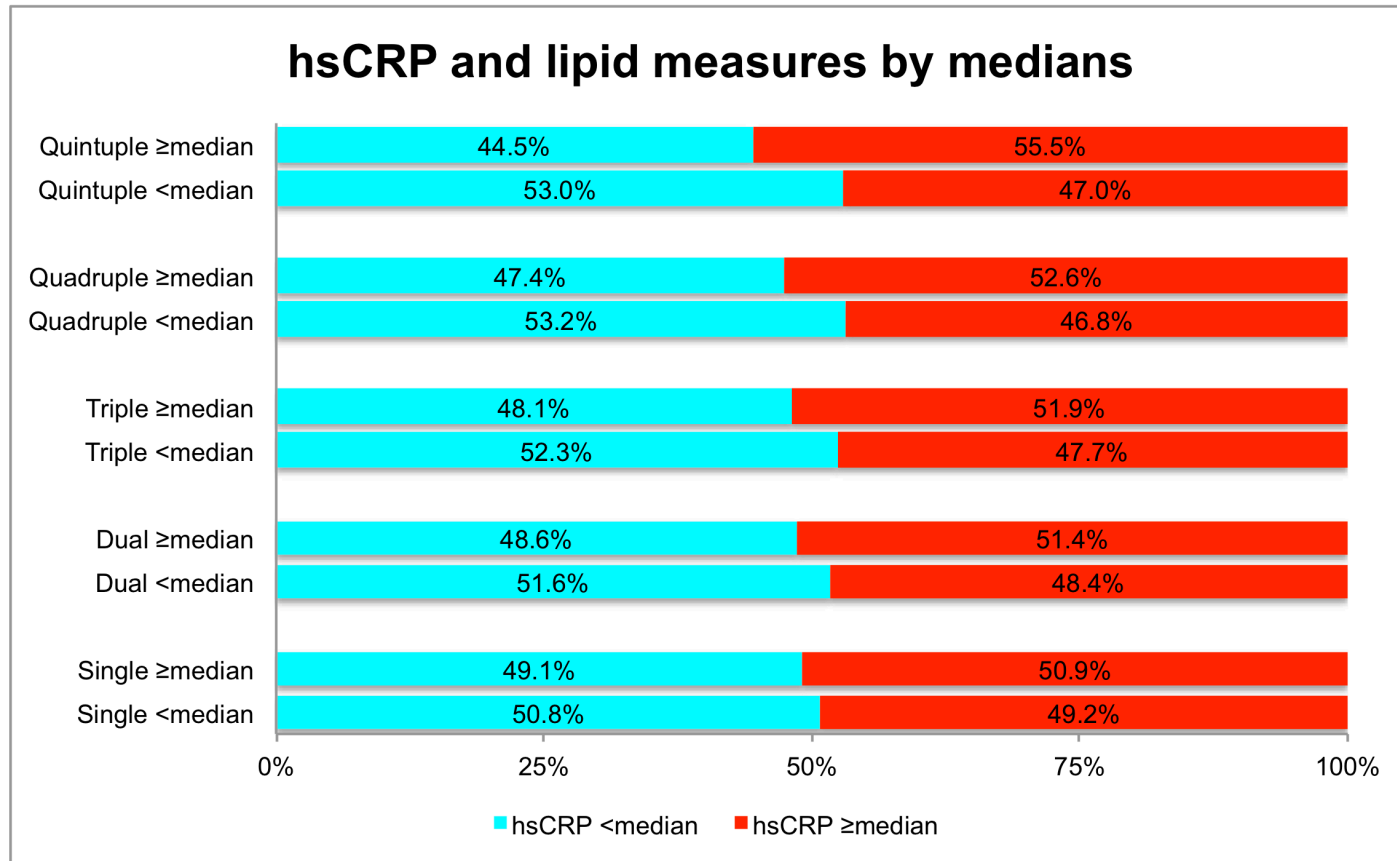
Model 3: Model 2 + log-triglycerides

Model 4: Model 3 + log-HDL-C.

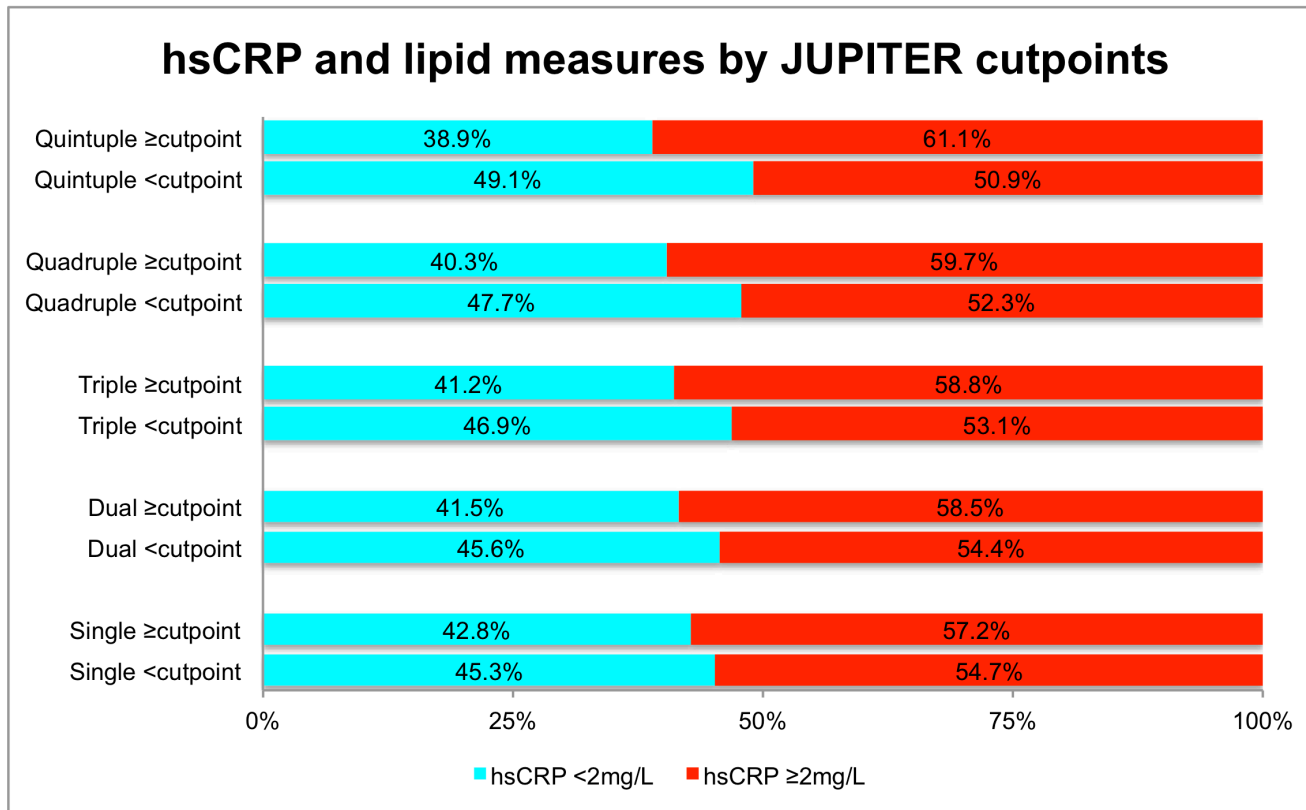
N/A: Not applicable

SI conversion factors: To convert total, LDL-C and HDL-C to mmol/L, multiple by 0.0249. To convert triglycerides to mmol/L, multiple by 0.0113.

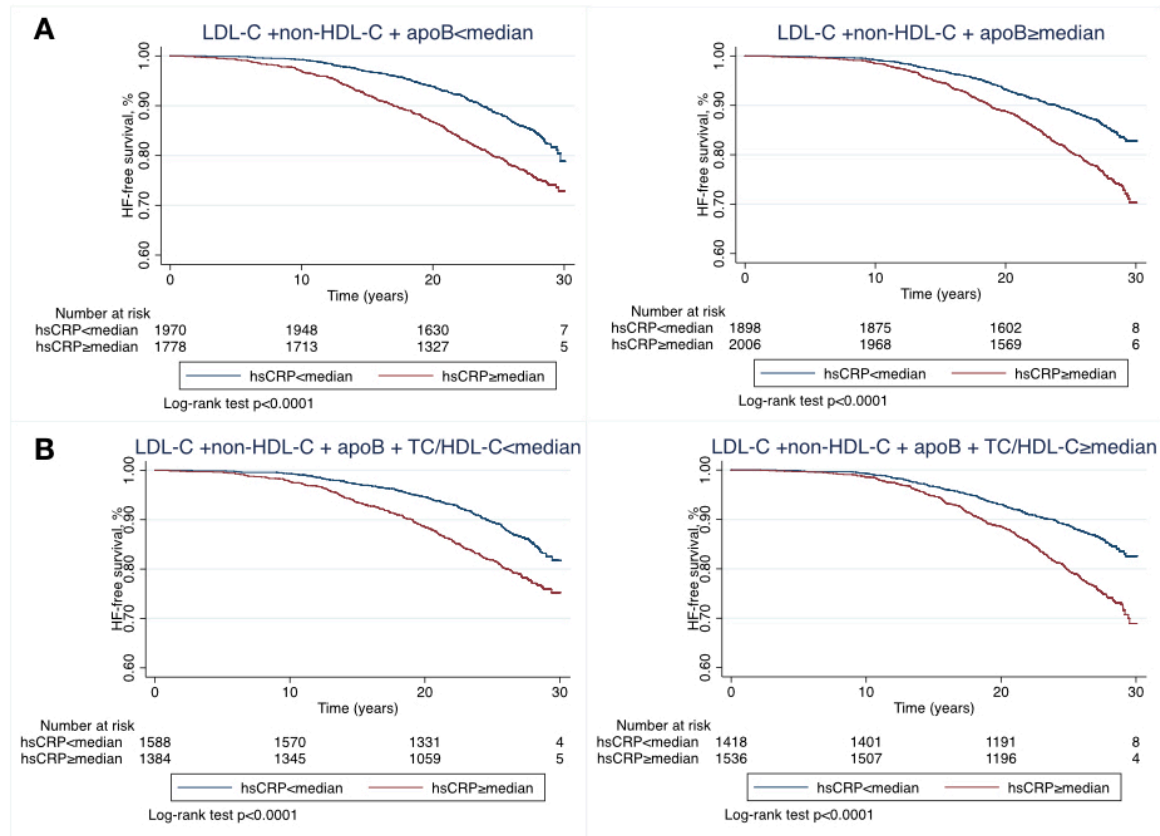
**Figure S1. Proportions of hsCRP > and ≤median in single, dual, triple, quadruple and quintuple lipid group < and ≥median.**



**Figure S2. Proportions of hsCRP > and ≤2mg/L in single, dual, triple, quadruple and quintuple lipid groups < and ≥JUPITER cutpoints.**



**Figure S3. Kaplan-Meier curves for event-free survival of incident heart failure by hsCRP < and  $\geq$ median among individuals with triple (A), quadruple (B) lipid measures < median (left) and  $\geq$  median (right)**



**Figure S4. Kaplan-Meier curves for event-free survival of total mortality by hsCRP < and  $\geq$ median among individuals with triple (A), quadruple (B) lipid measures < median (left) and  $\geq$  median (right)**

