

SUPPLEMENTAL MATERIAL

Table S1. Baseline characteristics of 51,185 patients according to baseline serum non-high-density lipoprotein/high-density lipoprotein cholesterol level.

Characteristics	Overall (n=51,185)	Serum non-HDL/HDL cholesterol ratios							
		<1.5 (n=4,925)	1.5 to <2.0 (n=7,732)	2.0 to <2.5 (n=8,881)	2.5 to <3.0 (n=7,816)	3.0 to <3.5 (n=6,311)	3.5 to <4.0 (n=4,624)	4.0 to <4.5 (n=3,487)	≥4.5 (n=7,409)
Age, years	62.8±14.9	65.5±14.6	65.2±14.6	64.0±14.7	63.2±14.8	62.4±14.8	61.4±14.7	60.7±14.9	58.8±14.5
Sex, % women	43.6	49.3	47.6	44.9	43.5	42.5	42.0	40.9	37.1
Race, %									
White	46.4	43.3	43.9	45.7	46.5	46.7	46.5	49.5	50.4
Black	31.9	37.8	35.4	32.6	32.3	31.2	30.3	29.6	25.7
Hispanic	15.2	12.6	14.2	15.2	14.7	15.8	16.1	15.0	17.6
Asian	3.0	3.2	2.8	2.8	3.2	3.3	4.0	3.1	3.3
Others	3.4	3.1	3.7	3.7	3.2	3.3	4.0	3.1	3.3
Primary insurance, %									
Medicare	53.3	56.8	55.6	54.5	53.0	53.2	50.8	51.9	49.7
Medicaid	6.4	5.9	5.9	6.5	6.3	6.5	6.7	6.7	7.1
Others	40.3	37.3	38.5	38.9	40.6	40.3	42.5	41.4	43.2
Initial vascular access type, %									
Central venous catheter	74.2	71.1	71.6	73.9	73.6	75.4	74.6	76.8	77.4
Arteriovenous fistula	15.7	16.5	17.0	15.7	16.6	15.3	15.3	14.1	13.9
Arteriovenous graft	4.3	5.4	5.0	4.5	4.2	4.2	4.0	3.8	3.3
Others and unknown	5.8	7.0	6.4	5.9	5.6	5.1	6.1	5.3	5.4
Comorbidities, %									
Diabetes	62.8	65.6	64.1	63.3	61.9	62.4	62.3	60.7	61.8
Hypertension	51.8	53.0	52.5	52.2	51.8	52.0	52.3	51.3	49.9
Congestive heart failure	36.6	39.6	37.2	36.4	35.9	36.5	36.3	35.9	36.0
Atherosclerotic heart disease	18.2	18.5	18.3	18.2	18.3	19.0	18.4	17.7	17.4
Other cardiovascular disease	16.7	17.8	17.1	16.7	16.2	16.9	16.4	17.2	15.8
Cerebrovascular disease	1.7	2.1	1.3	1.7	1.8	1.7	2.0	2.0	1.7
Dyslipidemia	34.6	37.5	34.9	34.7	35.1	33.6	34.3	32.1	33.9
COPD	5.2	6.2	5.4	5.1	5.2	5.1	5.2	5.2	4.3
History of malignancy	2.3	2.1	2.1	2.4	2.2	2.2	2.5	1.8	2.6
Statin therapy, %	41.2	42.9	44.8	43.7	41.9	40.8	39.0	38.1	35.5
Dialysis dose: single pool Kt/V	1.5±0.3	1.5±0.3	1.5±0.3	1.5±0.3	1.5±0.3	1.5±0.3	1.5±0.3	1.5±0.3	1.5±0.3
Body mass index, kg/m ²	28.3±7.4	26.5±7.1	27.1±7.0	27.8±7.4	28.3±7.3	28.7±7.4	29.1±7.2	29.5±7.6	29.8±7.5
Lipid parameters									
Total cholesterol, mg/dL	151.1±42.6	129.9±34.6	133.7±35.4	139.2±36.5	145.6±36.6	153.0±37.6	161.6±39.3	168.7±40.7	186.8±46.5
LDL, mg/dL	79.5±33.7	53.1±20.0	63.5±22.9	70.7±25.8	77.7±28.0	84.2±29.9	90.8±32.3	96.7±34.4	109.6±39.4
Triglyceride, mg/dL	158.6±89.4	90.7±36.9	109.1±42.7	128.2±55.6	145.8±57.6	163.9±63.8	185.7±72.6	203.6±81.9	262.4±127.0
HDL, mg/dL	40.2±14.0	58.9±17.0	48.6±13.1	43.0±11.3	39.1±9.8	36.2±8.9	34.2±8.3	32.3±7.8	28.1±7.5
Non-HDL, mg/dL	110.8±39.3	71.1±19.9	85.1±22.8	96.2±25.5	106.6±27.0	116.8±28.8	127.4±31.1	136.4±33.0	158.7±40.9
Non-HDL /HDL ratio	3.1±1.6	1.2±0.2	1.8±0.1	2.2±0.1	2.7±0.1	3.3±0.1	3.7±0.1	4.2±0.1	5.9±2.1

Other laboratory parameters									
Hemoglobin, g/dL	11.1±1.2	11.1±1.2	11.1±1.1	11.1±1.2	11.1±1.2	11.1±1.2	11.1±1.2	11.1±1.2	11.0±1.2
White blood cells, × 10 ³ /μL	7.8±2.6	7.5±2.4	7.6±2.5	7.7±2.6	7.8±2.5	7.8±2.5	7.9±2.6	8.0±2.9	8.1±2.9
Albumin, g/dL	3.5±0.5	3.5±0.5	3.5±0.4	3.5±0.4	3.5±0.5	3.5±0.5	3.5±0.5	3.5±0.5	3.5±0.5
Calcium, mg/dL	9.1±0.6	9.1±0.5	9.1±0.6	9.1±0.5	9.1±0.6	9.1±0.6	9.1±0.6	9.1±0.6	9.1±0.6
Phosphorus, mg/dL	4.9±1.1	4.8±1.1	4.8±1.1	4.9±1.1	4.9±1.1	4.9±1.1	5.0±1.1	5.0±1.2	5.0±1.2
Intact PTH, pg/mL	316 (199-488)	301 (192-470)	310 (196-476)	313 (197-483)	315 (202-485)	320 (202-496)	320 (202-483)	339 (209-520)	321 (198-499)
Bicarbonate, mEq/L	23.6±2.7	23.8±2.8	23.9±2.7	23.8±2.7	23.6±2.7	23.6±2.6	23.5±2.6	23.5±2.7	23.2±2.6
TIBC, mg/dL	226.0±48.4	220.5±55.7	223.6±50.9	225.8±47.7	227.3±47.2	227.4±46.4	228.5±46.0	227.8±46.3	227.8±47.3
Ferritin, ng/mL	286 (168-486)	264 (152-446)	273 (161-461)	276 (163-469)	285 (169-479)	290 (172-490)	303 (177-496)	310 (179-526)	314 (183-540)

Data are presented as means ± standard deviations, medians (interquartile ranges), or percentages. COPD, chronic obstructive pulmonary disease; LDL, low-density lipoprotein; HDL, high-density lipoprotein; PTH, parathyroid hormone; TIBC, total iron binding capacity.

Table S2. Detailed causes of death among 4,578 patients who died from cardiovascular disease.

	Number	Percent (%)
Sudden cardiac death	2,840	62.0
Congestive heart failure	580	12.7
Acute myocardial infarction	504	11.0
Arrhythmia	231	5.1
Atherosclerotic heart disease	107	2.3
Cerebrovascular disease	232	5.1
Others	84	1.8

Table S3. Baseline characteristics in patients with or without data on cause of death among a total of 12,859 patients who died during the follow-up period (1/1/2007-12/31/2011).

Characteristics	Overall (n=12,859)	Available data on cause of death		p-value
		Presence (n=11,466)	Absence (n=1,393)	
Age, years	68.4±13.3	68.4±13.3	68.9±13.6	0.169
Sex, % women	43.6	43.7	43.4	0.824
Race, %				
White	58.0	57.4	62.8	<0.001
Black	26.5	26.7	25.2	0.225
Hispanic	10.7	11.0	8.5	0.004
Asian	1.9	2.0	1.2	0.049
Others	2.8	2.9	2.3	0.227
Primary insurance, %				
Medicare	61.7	61.5	63.8	0.088
Medicaid	5.5	5.5	5.0	0.365
Others	32.8	33.0	31.2	0.185
Initial vascular access type, %				
Central venous catheter	79.0	78.9	79.3	0.728
Arteriovenous fistula	11.1	11.0	12.1	0.225
Arteriovenous graft	4.2	4.3	3.5	0.152
Others and unknown	5.7	5.8	5.1	0.362
Comorbidities, %				
Diabetes	70.9	71.4	67.1	0.001
Hypertension	50.8	50.7	52.4	0.217
Congestive heart failure	39.9	39.7	41.1	0.299
Atherosclerotic heart disease	23.3	23.0	25.9	0.013
Other cardiovascular disease	21.4	20.9	24.7	0.001
Cerebrovascular disease	2.3	2.3	2.4	0.778
Dyslipidemia	38.5	38.8	35.6	0.021
COPD	6.7	6.5	7.9	0.052
History of malignancy	3.1	2.9	4.4	0.003
Statin use, %	19.8	19.5	22.1	0.035
Dialysis dose: single pool Kt/V	1.5±0.3	1.5±0.3	1.5±0.3	0.967
Body mass index, kg/m ²	27.2±7.3	27.2±7.2	27.3±7.7	0.567
Lipid parameters				
Total cholesterol, mg/dL	144.7±42.8	144.8±43.1	143.7±40.7	0.341
LDL, mg/dL	75.5±32.8	75.5±32.9	75.4±32.0	0.904
Triglyceride, mg/dL	147.0±81.5	147.4±82.0	143.6±77.4	0.098
HDL, mg/dL	40.0±14.6	40.0±14.6	39.7±13.9	0.462
Non-HDL, mg/dL	104.7±38.7	104.8±38.9	104.0±37.2	0.438
Non-HDL /HDL ratio	2.9±1.6	2.9±1.6	2.9±1.5	0.621
Other laboratory parameters				
Hemoglobin, g/dL	11.1±1.2	11.1±1.2	11.1±1.2	0.615
White blood cells, × 10 ³ /μL	8.1±3.0	8.1±3.1	8.0±2.8	0.249
Albumin, g/dL	3.4±0.5	3.4±0.5	3.4±0.5	0.987
Calcium, mg/dL	9.2±0.6	9.2±0.6	9.1±0.6	0.164
Phosphorus, mg/dL	4.8±1.2	4.8±1.2	4.8±1.1	0.949
Intact PTH, pg/mL	281 (178-437)	282 (179-439)	273 (172-421)	0.075
Bicarbonate, mEq/L	24.0±2.8	24.0±2.8	24.1±2.7	0.141
TIBC, mg/dL	215.4±51.1	215.3±51.1	216.2±51.5	0.498
Ferritin, ng/mL	296 (171-517)	296 (171-518)	292 (169-506)	0.450

Data are presented as means ± standard deviations, medians (interquartile ranges), or percentages. COPD, chronic obstructive pulmonary disease; LDL, low-density lipoprotein; HDL, high-density lipoprotein; PTH, parathyroid hormone; TIBC, total iron binding capacity.

Table S4. Competing risk regression analyses of association of serum non-high-density lipoprotein cholesterol levels and cardiovascular mortality.

Non-HDL (mg/dL)	Unadjusted			Case-mix			Case-mix & MICS			Case-mix, MICS & Statin		
	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>
Baseline models												
<60	1.83	(1.62-2.08)	<0.001	1.54	(1.32-1.75)	<0.001	1.46	(1.24-1.71)	<0.001	1.52	(1.27-1.81)	<0.001
60 to <85	1.44	(1.31-1.59)	<0.001	1.32	(1.20-1.45)	<0.001	1.29	(1.15-1.45)	<0.001	1.31	(1.16-1.48)	<0.001
85 to <100	1.17	(1.05-1.29)	0.004	1.11	(1.00-1.23)	0.048	1.11	(1.00-1.24)	0.056	1.14	(1.02-1.29)	0.027
100 to <115	1.00			1.00			1.00			1.00		
115 to <130	0.93	(0.82-1.05)	0.244	0.96	(0.86-1.08)	0.516	0.95	(0.84-1.08)	0.440	0.97	(0.85-1.10)	0.628
130 to <145	0.93	(0.82-1.06)	0.264	1.01	(0.89-1.15)	0.881	1.00	(0.86-1.15)	0.955	1.03	(0.88-1.20)	0.737
145 to <160	0.92	(0.80-1.07)	0.279	1.02	(0.88-1.19)	0.748	1.00	(0.85-1.19)	0.976	1.09	(0.91-1.31)	0.333
≥160	0.90	(0.79-1.01)	0.076	1.03	(0.91-1.16)	0.679	0.99	(0.81-1.20)	0.900	1.07	(0.87-1.31)	0.551
Time-varying models												
<60	2.37	(2.12-2.64)	<0.001	2.06	(1.84-2.31)	<0.001	1.94	(1.67-2.35)	<0.001	2.04	(1.73-2.41)	<0.001
60 to <85	1.53	(1.39-1.69)	<0.001	1.42	(1.29-1.57)	<0.001	1.39	(1.24-1.57)	<0.001	1.44	(1.27-1.64)	<0.001
85 to <100	1.19	(1.07-1.32)	0.002	1.14	(1.02-1.27)	0.019	1.13	(1.01-1.26)	0.031	1.16	(1.02-1.31)	0.021
100 to <115	1.00			1.00			1.00			1.00		
115 to <130	0.89	(0.79-1.01)	0.080	0.92	(0.81-1.05)	0.215	0.88	(0.77-1.00)	0.052	0.90	(0.78-1.03)	0.137
130 to <145	0.79	(0.68-0.91)	0.001	0.85	(0.73-0.98)	0.026	0.78	(0.66-0.92)	0.002	0.80	(0.67-0.95)	0.011
145 to <160	0.76	(0.64-0.90)	0.001	0.81	(0.69-0.97)	0.019	0.75	(0.61-0.91)	0.003	0.81	(0.65-1.00)	0.045
≥160	0.82	(0.71-0.94)	0.006	0.90	(0.78-1.04)	0.163	0.76	(0.62-0.95)	0.014	0.83	(0.66-1.05)	0.113

Adjustments in case-mix model: age, sex, race/ethnicity, primary insurance, vascular access type, comorbid conditions, and single-pool Kt/V; case-mix plus malnutrition-inflammation-cachexia syndrome (MICS) models: case-mix adjusted model plus body mass index and laboratory parameters including serum hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol; case-mix plus MICS plus statin models: statin therapy in addition to all covariates in case-mix and MICS models. HDL, high-density lipoprotein; HR, hazard ratio; CI, confidence interval.

Table S5. Associations of baseline non-high-density lipoprotein to high-density lipoprotein cholesterol ratio with all-cause and cardiovascular mortality.

Non-HDL/HDL ratio	Unadjusted			Case-mix			Case-mix & MICS			Case-mix, MICS & Statin		
	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>
All-cause mortality												
<1.5	1.28	(1.20-1.37)	<0.001	1.24	(1.16-1.33)	<0.001	1.15	(1.08-1.24)	<0.001	1.16	(1.07-1.26)	<0.001
1.5 to <2.0	1.12	(1.06-1.20)	<0.001	1.10	(1.03-1.17)	0.003	1.06	(0.99-1.13)	0.100	1.08	(1.01-1.16)	0.031
2.0 to <2.5	1.08	(1.02-1.15)	0.014	1.07	(1.00-1.13)	0.038	1.05	(0.99-1.12)	0.116	1.08	(1.01-1.15)	0.030
2.5 to <3.0	1.00			1.00			1.00			1.00		
3.0 to <3.5	1.00	(0.94-1.07)	0.930	1.03	(0.96-1.10)	0.442	1.04	(0.97-1.11)	0.255	1.06	(0.99-1.15)	0.104
3.5 to <4.0	0.98	(0.91-1.05)	0.513	1.01	(0.94-1.09)	0.711	1.06	(0.99-1.15)	0.108	1.07	(0.98-1.16)	0.140
4.0 to <4.5	0.95	(0.88-1.03)	0.245	0.98	(0.91-1.07)	0.712	1.04	(0.96-1.13)	0.383	1.03	(0.93-1.13)	0.589
≥4.5	0.93	(0.87-0.99)	0.032	1.03	(0.96-1.10)	0.379	1.11	(1.03-1.19)	0.005	1.05	(0.97-1.14)	0.224
Cardiovascular mortality												
<1.5	1.35	(1.21-1.51)	<0.001	1.32	(1.17-1.47)	<0.001	1.22	(1.08-1.37)	0.001	1.25	(1.08-1.40)	0.002
1.5 to <2.0	1.23	(1.11-1.36)	<0.001	1.21	(1.09-1.34)	<0.001	1.15	(1.03-1.28)	0.010	1.17	(1.04-1.31)	0.008
2.0 to <2.5	1.07	(0.96-1.19)	0.212	1.06	(0.96-1.18)	0.273	1.04	(0.93-1.15)	0.498	1.06	(0.94-1.19)	0.334
2.5 to <3.0	1.00			1.00			1.00			1.00		
3.0 to <3.5	1.08	(0.96-1.20)	0.198	1.09	(0.98-1.22)	0.122	1.11	(0.99-1.24)	0.084	1.11	(0.98-1.25)	0.110
3.5 to <4.0	1.07	(0.95-1.21)	0.281	1.10	(0.97-1.24)	0.145	1.14	(1.00-1.29)	0.048	1.15	(1.00-1.32)	0.048
4.0 to <4.5	0.86	(0.74-0.99)	0.042	0.88	(0.76-1.02)	0.088	0.94	(0.81-1.10)	0.445	0.95	(0.80-1.11)	0.506
≥4.5	0.90	(0.80-1.01)	0.063	0.97	(0.87-1.09)	0.641	1.07	(0.94-1.21)	0.303	1.04	(0.91-1.19)	0.537

Adjustments in case-mix model: age, sex, race/ethnicity, primary insurance, vascular access type, comorbid conditions, and single-pool Kt/V; case-mix plus malnutrition-inflammation-cachexia syndrome (MICS) models: case-mix adjusted model plus body mass index and laboratory parameters including serum hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol; case-mix plus MICS plus statin models: statin therapy in addition to all covariates in case-mix and MICS models. HDL, high-density lipoprotein; HR, hazard ratio; CI, confidence interval.

Table S6. Associations of time-varying non-high-density lipoprotein to high-density lipoprotein cholesterol ratio with all-cause and cardiovascular mortality.

Non-HDL/HDL ratio	Unadjusted			Case-mix			Case-mix & MICS			Case-mix, MICS & Statin		
	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>	HR	95% CI	<i>p</i>
All-cause mortality												
<1.5	1.34	(1.26-1.43)	<0.001	1.32	(1.24-1.41)	<0.001	1.13	(1.06-1.21)	<0.001	1.14	(1.06-1.23)	<0.001
1.5 to <2.0	1.17	(1.10-1.24)	<0.001	1.14	(1.07-1.21)	<0.001	1.04	(0.97-1.11)	0.264	1.08	(1.01-1.16)	0.033
2.0 to <2.5	1.08	(1.02-1.15)	0.012	1.06	(1.00-1.13)	0.069	1.00	(0.94-1.07)	0.991	1.03	(0.96-1.10)	0.449
2.5 to <3.0	1.00			1.00			1.00			1.00		
3.0 to <3.5	0.90	(0.83-0.96)	0.003	0.90	(0.84-0.97)	0.006	0.93	(0.87-1.01)	0.073	0.95	(0.87-1.03)	0.185
3.5 to <4.0	0.86	(0.79-0.93)	<0.001	0.88	(0.82-0.96)	0.003	0.94	(0.87-1.02)	0.159	0.93	(0.85-1.02)	0.106
4.0 to <4.5	0.87	(0.80-0.95)	0.003	0.91	(0.83-0.99)	0.033	0.96	(0.87-1.05)	0.382	0.96	(0.86-1.06)	0.392
≥4.5	0.91	(0.85-0.98)	0.013	0.99	(0.92-1.06)	0.680	1.10	(1.01-1.18)	0.021	1.05	(0.96-1.14)	0.284
Cardiovascular mortality												
<1.5	1.40	(1.26-1.55)	<0.001	1.39	(1.24-1.53)	<0.001	1.18	(1.06-1.32)	0.003	1.20	(1.06-1.36)	0.003
1.5 to <2.0	1.23	(1.11-1.36)	<0.001	1.19	(1.07-1.32)	0.001	1.09	(0.98-1.21)	0.120	1.14	(1.02-1.28)	0.025
2.0 to <2.5	1.06	(0.96-1.18)	0.263	1.04	(0.93-1.15)	0.497	0.98	(0.88-1.09)	0.695	1.01	(0.90-1.13)	0.904
2.5 to <3.0	1.00			1.00			1.00			1.00		
3.0 to <3.5	0.91	(0.81-1.03)	0.130	0.91	(0.81-1.03)	0.146	0.94	(0.83-1.06)	0.285	0.94	(0.82-1.08)	0.389
3.5 to <4.0	0.94	(0.83-1.08)	0.396	0.95	(0.84-1.09)	0.475	1.02	(0.89-1.16)	0.817	0.98	(0.84-1.14)	0.776
4.0 to <4.5	0.85	(0.73-0.98)	0.031	0.87	(0.75-1.01)	0.075	0.93	(0.80-1.09)	0.400	0.95	(0.80-1.13)	0.569
≥4.5	0.79	(0.70-0.89)	<0.001	0.83	(0.73-0.94)	0.003	0.94	(0.82-1.07)	0.343	0.93	(0.80-1.08)	0.348

Adjustments in case-mix model: age, sex, race/ethnicity, primary insurance, vascular access type, comorbid conditions, and single-pool Kt/V; case-mix plus malnutrition-inflammation-cachexia syndrome (MICS) models: case-mix adjusted model plus body mass index and laboratory parameters including serum hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol; case-mix plus MICS plus statin models: statin therapy in addition to all covariates in case-mix and MICS models. *Abbreviations:* HDL, high-density lipoprotein; HR, hazard ratio; CI, confidence interval.

Figure S1. Flow chart of patient selection for the cohort. Abbreviations: non-HDL, non-high-density lipoprotein.

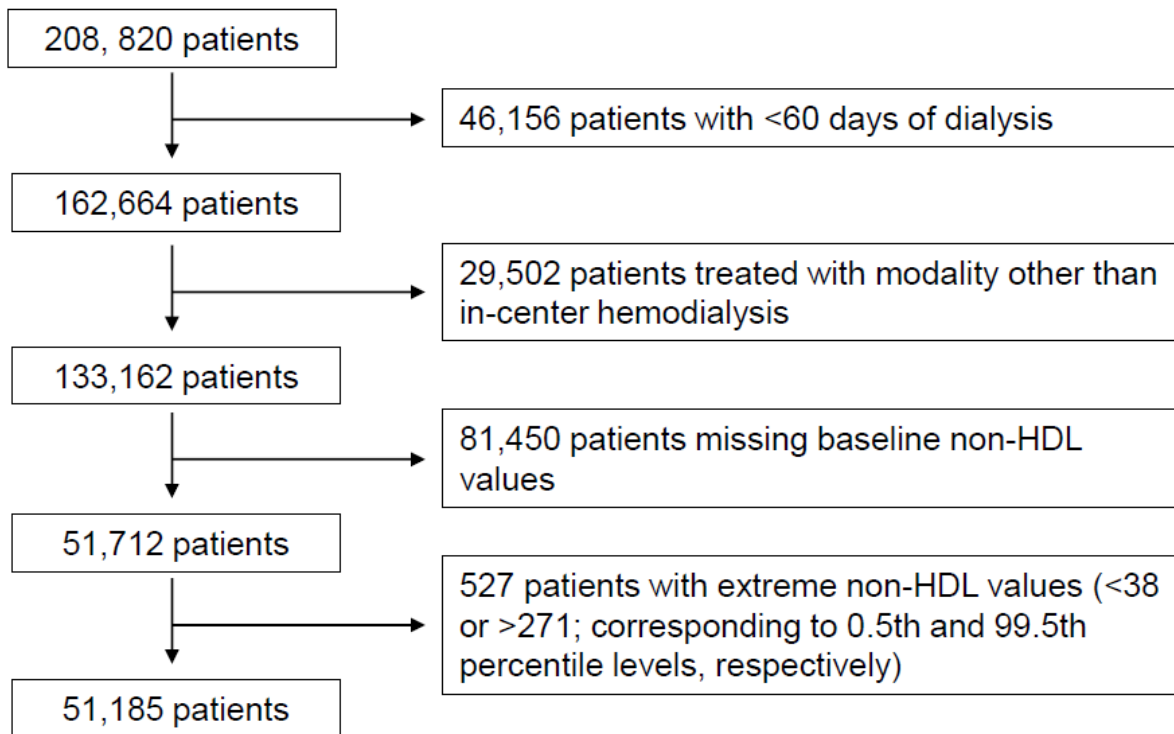
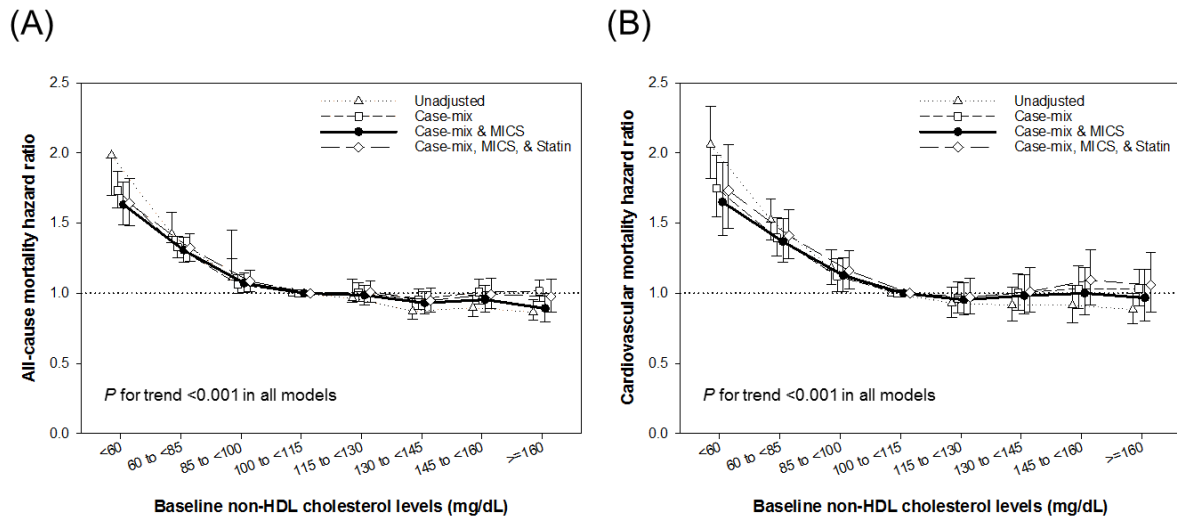
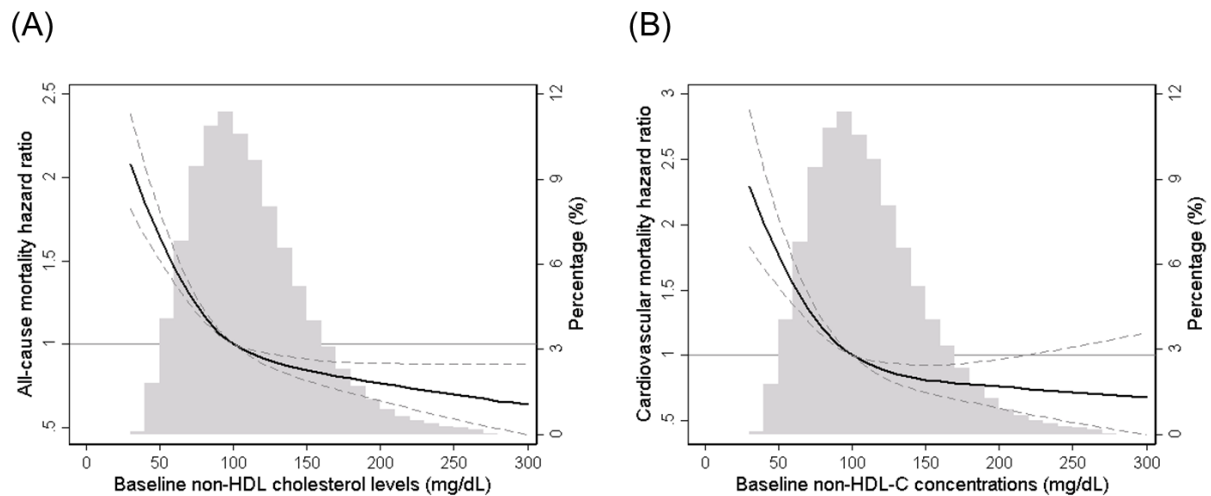


Figure S2. A fixed all-cause (A) and cardiovascular (B) mortality hazard ratios (and 95% confidence interval error bars) by baseline serum non-high-density lipoprotein (non-HDL) cholesterol levels.



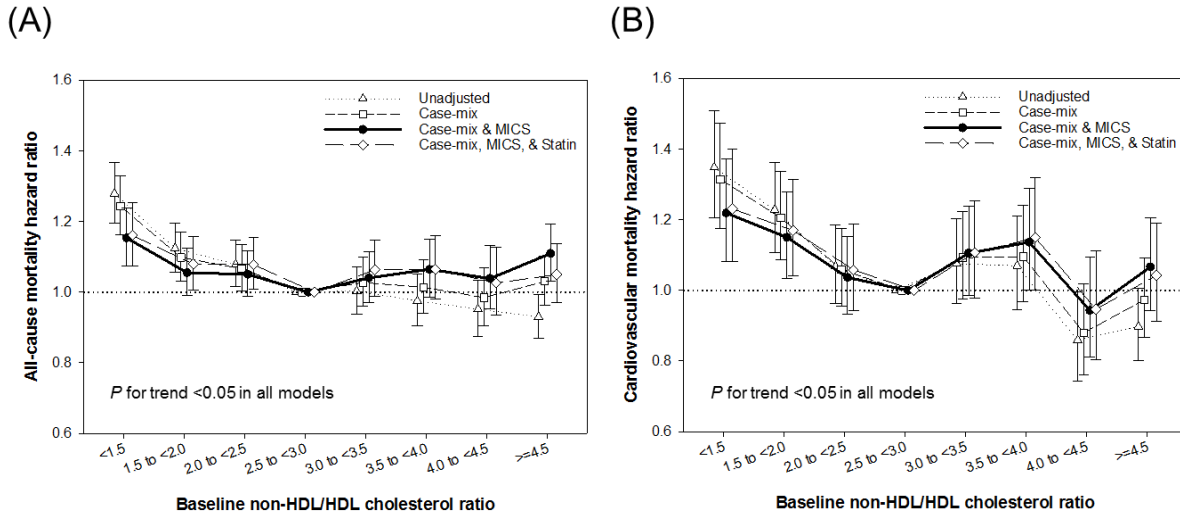
Adjustments in case-mix model: age, sex, race/ethnicity, primary insurance, vascular access type, comorbid conditions, and single-pool Kt/V; case-mix plus malnutrition-inflammation-cachexia syndrome (MICS) models: case-mix adjusted model plus body mass index and laboratory parameters including serum hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol; case-mix plus MICS plus statin models: statin therapy in addition to all covariates in case-mix and MICS models.

Figure S3. Multivariate adjusted hazard ratios of all-cause (A) and cardiovascular (B) mortality associated with baseline non-high-density lipoprotein (non-HDL) cholesterol levels in Cox model using restricted cubic splines, adjusted age, sex, race/ethnicity, primary insurance, vascular access type, comorbidities, single-pool Kt/V, body mass index, hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol.



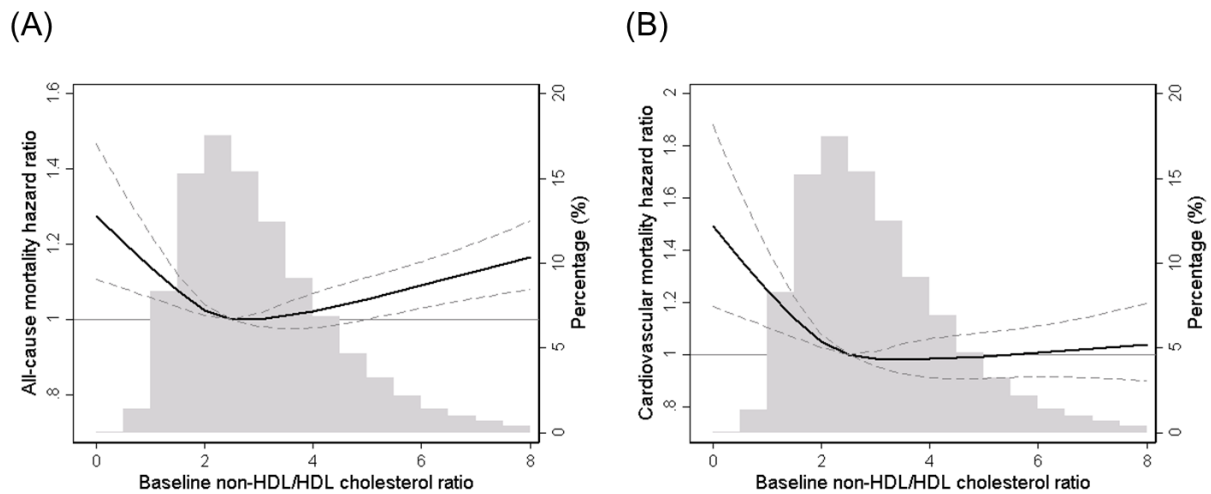
A histogram of observed baseline non-HDL cholesterol values and hazard reference ratio of 1 (solid line) is overlaid.

Figure S4. A fixed all-cause (A) and cardiovascular (B) mortality hazard ratios (and 95% confidence interval error bars) by baseline non-high-density lipoprotein to high-density lipoprotein (non-HDL/HDL) cholesterol ratios.



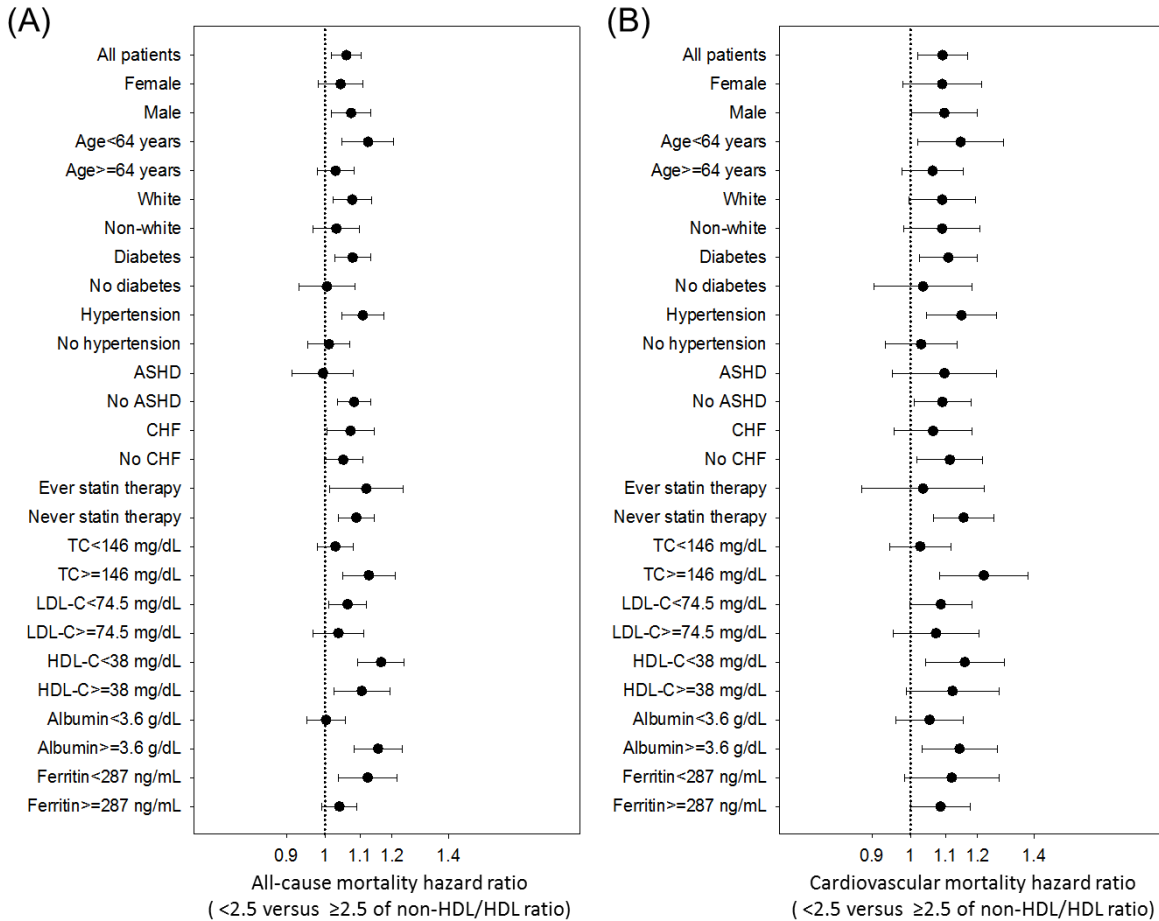
Adjustments in case-mix model: age, sex, race/ethnicity, primary insurance, vascular access type, comorbid conditions, and single-pool Kt/V; case-mix plus malnutrition-inflammation-cachexia syndrome (MICS) models: case-mix adjusted model plus body mass index and laboratory parameters including serum hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol; case-mix plus MICS plus statin models: statin therapy in addition to all covariates in case-mix and MICS models.

Figure S5. Multivariate adjusted hazard ratios of all-cause (A) and cardiovascular (B) mortality associated with baseline non-high-density lipoprotein to high-density lipoprotein (non-HDL/HDL) cholesterol ratios in Cox model using restricted cubic splines, adjusted age, sex, race/ethnicity, primary insurance, vascular access type, comorbidities, single-pool Kt/V, body mass index, hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol.



A histogram of observed baseline non-HDL/HDL cholesterol ratios and hazard reference ratio of 1 (solid line) is overlaid.

Figure S6. Overall and subgroup analyses of association between low time-varying non-high-density lipoprotein to high-density lipoprotein (non-HDL/HDL) cholesterol ratios <2.5 and all-cause (A) and cardiovascular (B) mortality, compared to those with ≥ 2.5 as reference.



Models were adjusted for age, sex, race/ethnicity, primary insurance, vascular access type, comorbid conditions, single-pool Kt/V, body mass index, serum hemoglobin, white blood cell count, albumin, calcium, phosphorus, intact parathyroid hormone, bicarbonate, total iron binding capacity, ferritin, and low-density lipoprotein cholesterol (LDL-C). Points and bars represent hazard ratio estimates and 95% confidence intervals, respectively. Abbreviations: ASHD, atherosclerotic heart disease; CHF, congestive heart failure; TC, total cholesterol.