Supplementary Table S1: Baseline characteristics of the entire study cohort and after stratification based on the excluded and included patients.

	Entire cohort	**Excluded patients**	**Included patients**	**p**
N	11,211	5,829	5,382	
Age (years)	67.0 (55.0-76.0)	67.0 (55.0-76.0)	67.0 (56.0-76.0)	0.930
Sex (male) (%)	6,718 (60.0%)	3,484 (59.8%)	3,234 (60.1%)	0.720
Body height (cm)	165.0 (158.0-171.0)	165.0 (158.0-171.0)	164.0 (157.0-170.0)	**<0.001**
Body weight (kg)	70.0 (60.1-80.5)	70.0 (60.3-80.6)	70.0 (60.0-80.5)	0.500
BMI (kg/m²)	25.6 (22.6-29.3)	25.5 (22.5-29.1)	25.8 (22.8-29.4)	**0.001**
Vintage (days)	5.0 (1.0-17.0)	6.0 (1.0-19.0)	5.0 (1.0-16.0)	**<0.001**
Serum albumin (g/l)	36.0 (32.0-40.0)	35.2 (31.0-39.0)	37.0 (33.0-40.0)	**<0.001**
CRP (mg/l)	8.0 (3.0-24.1)	9.0 (3.4-28.4)	7.6 (2.6-21.0)	**<0.001**
Hb (g/l)	101.0 (90.7-112.0)	100.0 (90.0-111.0)	102.0 (91.0-113.0)	**<0.001**

Abbreviations are indicated in Tables 1 and 2. Data are presented as median (IQR) for continuous measures, and n (%) for categorical measures. p values for differences between excluded and included patients were assessed by non-parametric Mann–Whitney U test for continuous parameters or Chi-squared test for categorical variables, and significant p values (< 0.05) are depicted in **bold**.

Supplementary Table S2: Multivariate hazard regression analysis of groups of different **baseline** lipid parameters for all-cause mortality, cardiovascular mortality, and non-CV mortality in the entire cohort (N = 5,382).

			All-cause mortality					Cardiovascular mortality					Non-cardiovascular mortality				
	Quartile	N	HR	p	[95% Conf. Interval]		$p_{inter-action}$	HR	p	[95% Conf. Interval]		$p_{inter-action}$	HR	p	[95% Conf. Interval]		$p_{inter-action}$
Total chol.	Q1 (<137 mg/dl)	1345	1.000				0.972	1.000				0.592	1.000				0.971
	Q2 (138-162 mg/dl)	1345	0.836	**0.004**	0.741	0.944		0.772	**0.005**	0.644	0.925		0.913	0.297	0.769	1.083	
	Q3 (163-192 mg/dl)	1338	0.823	**0.002**	0.726	0.933		0.767	**0.006**	0.636	0.926		0.858	0.095	0.717	1.027	
	Q4 (>193 mg/dl)	1354	0.850	**0.013**	0.747	0.966		0.833	0.056	0.691	1.004		0.886	0.202	0.735	1.067	
HDL chol.	Q1 (<31 mg/dl)	1108	1.000				0.336	1.000				0.987	1.000				0.339
	Q2 (32-38 mg/dl)	1165	0.914	0.192	0.799	1.046		0.892	0.260	0.730	1.089		0.930	0.461	0.768	1.127	
	Q3 (39-48 mg/dl)	1097	0.919	0.230	0.799	1.055		0.977	0.825	0.798	1.197		0.856	0.127	0.700	1.045	
	Q4 (>49 mg/dl)	1176	0.780	**0.001**	0.675	0.901		0.768	**0.015**	0.621	0.950		0.774	**0.015**	0.629	0.951	
Non-HDL chol.	Q1 (<95 mg/dl)	1136	1.000				0.988	1.000				0.595	1.000				0.751
	Q2 (196-120 mg/dl)	1133	0.853	**0.019**	0.747	0.974		0.769	**0.010**	0.629	0.940		0.944	0.538	0.785	1.134	
	Q3 (121-149 mg/dl)	1123	0.895	0.109	0.782	1.025		0.857	0.134	0.700	1.049		0.941	0.533	0.776	1.140	
	Q4 (>150 mg/dl)	1154	0.920	0.234	0.801	1.056		0.944	0.579	0.771	1.156		0.916	0.392	0.751	1.119	
LDL chol.	Q1 (<670.6 mg/dl)	1120	1.000				0.229	1.000				0.903	1.000				0.198
	Q2 (670.6-890.7 mg/dl)	1121	0.849	**0.016**	0.744	0.970		0.775	**0.015**	0.632	0.952		0.915	0.346	0.760	1.101	
	Q3 (890.7-1140.6 mg/dl)	1121	0.831	**0.007**	0.726	0.951		0.829	0.067	0.679	1.013		0.842	0.079	0.695	1.020	
	Q4 (>1140.6 mg/dl)	1120	0.832	**0.009**	0.725	0.956		0.885	0.232	0.725	1.081		0.810	**0.041**	0.662	0.991	
Triglycerides	Q1 (<101 mg/dl)	1296	1.000				0.279	1.000				0.832	1.000				0.188
	Q2 (102-141 mg/dl)	1300	0.977	0.722	0.862	1.108		0.907	0.311	0.751	1.095		1.068	0.462	0.896	1.275	
	Q3 (142-204 mg/dl)	1302	0.961	0.551	0.845	1.094		0.947	0.578	0.781	1.148		1.028	0.770	0.856	1.234	
	Q4 (>205 mg/dl)	1305	1.039	0.569	0.910	1.188		1.019	0.853	0.838	1.238		1.057	0.581	0.869	1.285	

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, presence of inflammation/malnutrition, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, region, and hospitalization. Conf. Interval, Confidence interval; HR, Hazard ratio; all other abbreviations are indicated in Table 1. Groups were defined according to quartiles (Q) and Q1 was used as the reference group

for all lipid parameters. HR, 95% CI, and p values for comparisons against Q1, as well as for interaction effects of inflammation/malnutrition on the outcome, are given and significant p values (< 0.05) are depicted in **bold**.

Supplementary Table S3: Multivariate hazard regression analysis of groups of different **time-dependent** lipid parameters for all-cause mortality stratified by inflammation/malnutrition status.

		All-cause mortality							
		Patients without inflammation/malnutrition				Patients with inflammation/malnutrition			
	Quartile	HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]	
Total chol.	Q1 (<137 mg/dl)	1.000				1.000			
	Q2 (138-162 mg/dl)	0.739	**0.032**	0.561	0.974	0.723	**<0.001**	0.607	0.861
	Q3 (163-192 mg/dl)	0.744	**0.044**	0.557	0.992	0.754	**0.003**	0.628	0.907
	Q4 (>193 mg/dl)	0.741	0.056	0.545	1.008	0.674	**<0.001**	0.546	0.832
HDL chol.	Q1 (<31 mg/dl)	1.000				1.000			
	Q2 (32-38 mg/dl)	0.847	0.312	0.614	1.168	0.809	**0.026**	0.671	0.975
	Q3 (39-48 mg/dl)	0.726	0.058	0.522	1.011	0.696	**0.001**	0.565	0.856
	Q4 (>49 mg/dl)	0.799	0.178	0.577	1.108	0.857	0.139	0.699	1.051
Non-HDL chol.	Q1 (<95 mg/dl)	1.000				1.000			
	Q2 (196-120 mg/dl)	0.809	0.144	0.609	1.075	0.714	**<0.001**	0.594	0.860
	Q3 (121-149 mg/dl)	0.705	**0.026**	0.519	0.958	0.772	**0.008**	0.637	0.935
	Q4 (>150 mg/dl)	0.819	0.220	0.595	1.127	0.680	**0.001**	0.545	0.848
LDL chol.	Q1 (<67.6 mg/dl)	1.000				1.000			
	Q2 (67.6-89.7 mg/dl)	0.964	0.804	0.720	1.291	0.691	**<0.001**	0.571	0.836
	Q3 (89.7-114.6 mg/dl)	0.830	0.237	0.610	1.130	0.768	**0.007**	0.634	0.931
	Q4 (>114.6 mg/dl)	0.863	0.369	0.627	1.189	0.706	**0.001**	0.572	0.871
Triglycerides	Q1 (<101 mg/dl)	1.000				1.000			
	Q2 (102-141 mg/dl)	1.097	0.508	0.834	1.443	1.004	0.962	0.848	1.189
	Q3 (142-204 mg/dl)	0.977	0.876	0.730	1.307	0.877	0.179	0.725	1.062
	Q4 (>205 mg/dl)	0.859	0.362	0.619	1.191	0.728	**0.006**	0.580	0.915

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, region, and hospitalization. Abbreviations are indicated in Tables 1 and 2. Groups were defined according to quartiles and Q1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (<0.05) are depicted in **bold.**

Supplementary Table S4: Multivariate hazard regression analysis of groups of different time-dependent lipid parameters for cardiovascular mortality stratified by inflammation/malnutrition status.

		Cardiovascular mortality							
		Patients without inflammation/malnutrition				Patients with inflammation/malnutrition			
	Quartile	HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]	
Total chol.	Q1 (<137 mg/dl)	1.000				1.000			
	Q2 (138-162 mg/dl)	0.577	**0.007**	0.387	0.861	0.745	**0.031**	0.570	0.973
	Q3 (163-192 mg/dl)	0.620	**0.023**	0.411	0.936	0.804	0.119	0.611	1.057
	Q4 (>193 mg/dl)	0.613	**0.028**	0.396	0.949	0.743	0.057	0.547	1.009
HDL chol.	Q1 (<31 mg/dl)	1.000				1.000			
	Q2 (32-38 mg/dl)	1.077	0.756	0.674	1.722	0.715	**0.020**	0.539	0.948
	Q3 (39-48 mg/dl)	0.793	0.357	0.485	1.298	0.693	**0.018**	0.511	0.940
	Q4 (>49 mg/dl)	0.936	0.789	0.578	1.517	0.824	0.209	0.610	1.114
Non-HDL chol.	Q1 (<95 mg/dl)	1.000				1.000			
	Q2 (196-120 mg/dl)	0.895	0.581	0.603	1.328	0.638	**0.003**	0.476	0.856
	Q3 (121-149 mg/dl)	0.545	**0.011**	0.341	0.869	0.924	0.579	0.700	1.221
	Q4 (>150 mg/dl)	0.805	0.350	0.510	1.269	0.750	0.078	0.544	1.033
LDL chol.	Q1 (<67.6 mg/dl)	1.000				1.000			
	Q2 (67.6-89.7 mg/dl)	0.861	0.464	0.577	1.286	0.672	**0.010**	0.497	0.908
	Q3 (89.7-114.6 mg/dl)	0.548	**0.011**	0.346	0.870	0.919	0.560	0.691	1.221
	Q4 (>114.6 mg/dl)	0.710	0.133	0.455	1.110	0.834	0.250	0.612	1.136
Triglycerides	Q1 (<101 mg/dl)	1.000				1.000			
	Q2 (102-141 mg/dl)	1.038	0.854	0.695	1.551	0.958	0.744	0.740	1.240
	Q3 (142-204 mg/dl)	1.001	0.996	0.655	1.529	0.901	0.475	0.678	1.198
	Q4 (>205 mg/dl)	1.063	0.792	0.674	1.678	0.817	0.216	0.592	1.126

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, region, and hospitalization. Abbreviations are indicated in Tables 1 and 2. Groups were defined according to quartiles and Q1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (<0.05) are depicted in **bold.**

Supplementary Table S5: Multivariate hazard regression analysis of groups of different time-dependent lipid parameters for non-cardiovascular mortality stratified by inflammation/malnutrition status.

		Non-cardiovascular mortality							
		Patients without inflammation/malnutrition				Patients with inflammation/malnutrition			
	Quartile	HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]	
Total chol.	Q1 (<137 mg/dl)	1.000				1.000			
	Q2 (138-162 mg/dl)	0.909	0.644	0.606	1.363	0.755	**0.022**	0.593	0.960
	Q3 (163-192 mg/dl)	0.866	0.511	0.563	1.331	0.741	**0.025**	0.570	0.963
	Q4 (>193 mg/dl)	0.954	0.838	0.606	1.501	0.621	**0.003**	0.453	0.852
HDL chol.	Q1 (<31 mg/dl)	1.000				1.000			
	Q2 (32-38 mg/dl)	0.639	0.061	0.400	1.020	0.950	0.702	0.730	1.236
	Q3 (39-48 mg/dl)	0.605	**0.037**	0.377	0.970	0.718	**0.030**	0.533	0.968
	Q4 (>49 mg/dl)	0.678	0.100	0.427	1.077	0.859	0.315	0.638	1.156
Non-HDL chol.	Q1 (<95 mg/dl)	1.000				1.000			
	Q2 (196-120 mg/dl)	0.708	0.120	0.458	1.094	0.750	**0.026**	0.582	0.967
	Q3 (121-149 mg/dl)	0.885	0.576	0.576	1.359	0.682	**0.008**	0.515	0.904
	Q4 (>150 mg/dl)	0.864	0.539	0.541	1.379	0.643	**0.008**	0.465	0.890
LDL chol.	Q1 (<67.6 mg/dl)	1.000				1.000			
	Q2 (67.6-89.7 mg/dl)	1.171	0.487	0.751	1.825	0.676	**0.003**	0.521	0.879
	Q3 (89.7-114.6 mg/dl)	1.152	0.539	0.733	1.813	0.669	**0.005**	0.507	0.883
	Q4 (>114.6 mg/dl)	1.102	0.695	0.678	1.792	0.641	**0.004**	0.472	0.870
Triglycerides	Q1 (<101 mg/dl)	1.000				1.000			
	Q2 (102-141 mg/dl)	1.229	0.309	0.826	1.830	1.102	0.415	0.872	1.394
	Q3 (142-204 mg/dl)	1.063	0.776	0.696	1.625	0.875	0.341	0.666	1.151
	Q4 (>205 mg/dl)	0.785	0.345	0.476	1.296	0.680	**0.030**	0.480	0.964

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, region, and hospitalization. Abbreviations are indicated in Tables 1 and 2. Groups were defined according to quartiles and Q1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (<0.05) are depicted in **bold.**

Supplementary Table S6: Multivariate hazard regression analysis of quartiles of different time-dependent lipid parameters for all-cause mortality, cardiovascular (CV) mortality, and non-CV mortality in all patients not on statin treatment (N = 2,946).

Non-statin users		All-cause mortality				CV mortality				Non-CV mortality			
	Quartile	HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]	
Total chol.	Q1 (<137 mg/dl)	1.000				1.000				1.000			
	Q2 (138-162 mg/dl)	0.739	**0.002**	0.608	0.897	0.740	**0.040**	0.555	0.986	0.762	0.058	0.575	1.009
	Q3 (163-192 mg/dl)	0.763	**0.010**	0.622	0.937	0.713	**0.029**	0.526	0.966	0.819	0.187	0.609	1.102
	Q4 (>193 mg/dl)	0.695	**0.003**	0.548	0.882	0.655	**0.016**	0.465	0.924	0.750	0.113	0.525	1.071
HDL chol.	Q1 (<31 mg/dl)	1.000				1.000				1.000			
	Q2 (32-38 mg/dl)	0.911	0.394	0.734	1.129	0.884	0.439	0.647	1.208	1.000	0.999	0.729	1.372
	Q3 (39-48 mg/dl)	0.685	**0.002**	0.542	0.867	0.718	0.051	0.514	1.001	0.669	**0.026**	0.470	0.953
	Q4 (>49 mg/dl)	0.783	**0.036**	0.623	0.985	0.729	0.063	0.522	1.018	0.781	0.154	0.556	1.097
Non-HDL chol.	Q1 (<95 mg/dl)	1.000				1.000				1.000			
	Q2 (196-120 mg/dl)	0.773	**0.014**	0.629	0.950	0.740	0.054	0.545	1.005	0.723	**0.036**	0.534	0.978
	Q3 (121-149 mg/dl)	0.849	0.133	0.686	1.051	0.829	0.235	0.608	1.130	0.890	0.460	0.653	1.213
	Q4 (>150 mg/dl)	0.732	**0.016**	0.568	0.944	0.733	0.092	0.510	1.052	0.771	0.180	0.527	1.128
LDL chol.	Q1 (<67.6 mg/dl)	1.000				1.000				1.000			
	Q2 (67.6-89.7 mg/dl)	0.803	**0.047**	0.646	0.998	0.698	**0.029**	0.505	0.965	0.837	0.265	0.612	1.144
	Q3 (89.7-114.6 mg/dl)	0.862	0.183	0.694	1.072	0.817	0.205	0.597	1.117	0.861	0.364	0.623	1.190
	Q4 (>114.6 mg/dl)	0.723	**0.009**	0.567	0.923	0.668	**0.023**	0.471	0.947	0.823	0.286	0.575	1.178
Triglycerides	Q1 (<101 mg/dl)	1.000				1.000				1.000			
	Q2 (102-141 mg/dl)	0.939	0.508	0.780	1.131	0.875	0.350	0.660	1.158	1.030	0.826	0.792	1.340
	Q3 (142-204 mg/dl)	0.860	0.166	0.695	1.065	0.956	0.773	0.705	1.296	0.798	0.169	0.578	1.101
	Q4 (>205 mg/dl)	0.900	0.411	0.699	1.158	1.052	0.772	0.745	1.486	0.784	0.243	0.522	1.179

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, presence of inflammation/malnutrition, calcium, phosphate, parathyroid hormone, hemoglobin, region, and hospitalization. Abbreviations are indicated in Tables 1 and 2. Groups were defined according to quartiles (Q) and Q1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (< 0.05) are depicted in **bold.**

Supplementary Table S7: Multivariate hazard regression analysis of quartiles of different time-dependent lipid parameters for all-cause mortality, cardiovascular (CV) mortality, and non-CV mortality in all patients on statin treatment (N = 2,436).

Statin users		All-cause mortality				CV mortality				Non-CV mortality			
	Quartile	HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]	
Total chol.	Q1 (<137 mg/dl)	1.000				1.000				1.000			
	Q2 (138-162 mg/dl)	0.692	**0.002**	0.552	0.869	0.588	**0.004**	0.411	0.842	0.834	0.240	0.616	1.129
	Q3 (163-192 mg/dl)	0.718	**0.006**	0.566	0.910	0.762	0.125	0.538	1.078	0.704	**0.044**	0.501	0.990
	Q4 (>193 mg/dl)	0.698	**0.006**	0.542	0.900	0.716	0.077	0.495	1.037	0.723	0.085	0.501	1.045
HDL chol.	Q1 (<31 mg/dl)	1.000				1.000				1.000			
	Q2 (32-38 mg/dl)	0.716	**0.007**	0.562	0.914	0.731	0.097	0.505	1.059	0.733	0.068	0.525	1.023
	Q3 (39-48 mg/dl)	0.730	**0.018**	0.563	0.948	0.726	0.119	0.486	1.085	0.714	0.067	0.499	1.024
	Q4 (>49 mg/dl)	0.935	0.619	0.718	1.218	1.072	0.726	0.726	1.584	0.888	0.531	0.612	1.288
Non-HDL chol.	Q1 (<95 mg/dl)	1.000				1.000				1.000			
	Q2 (196-120 mg/dl)	0.695	**0.003**	0.549	0.881	0.680	**0.039**	0.471	0.980	0.742	0.067	0.539	1.021
	Q3 (121-149 mg/dl)	0.614	**<0.001**	0.474	0.794	0.696	0.062	0.475	1.018	0.584	**0.004**	0.407	0.840
	Q4 (>150 mg/dl)	0.704	**0.008**	0.543	0.912	0.760	0.161	0.518	1.115	0.674	**0.037**	0.465	0.977
LDL chol.	Q1 (<67.6 mg/dl)	1.000				1.000				1.000			
	Q2 (67.6-89.7 mg/dl)	0.715	**0.006**	0.564	0.907	0.770	0.154	0.538	1.103	0.719	**0.046**	0.519	0.995
	Q3 (89.7-114.6 mg/dl)	0.679	**0.003**	0.527	0.876	0.693	0.066	0.469	1.025	0.695	**0.039**	0.491	0.982
	Q4 (>114.6 mg/dl)	0.807	0.099	0.625	1.041	0.958	0.820	0.661	1.388	0.705	0.065	0.487	1.022
Triglycerides	Q1 (<101 mg/dl)	1.000				1.000				1.000			
	Q2 (102-141 mg/dl)	1.159	0.208	0.921	1.459	1.112	0.548	0.786	1.574	1.321	0.091	0.956	1.826
	Q3 (142-204 mg/dl)	0.953	0.702	0.746	1.218	0.864	0.443	0.594	1.256	1.100	0.586	0.781	1.550
	Q4 (>205 mg/dl)	0.663	**0.004**	0.501	0.878	0.713	0.101	0.476	1.068	0.701	0.089	0.465	1.055

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, presence of inflammation/malnutrition, calcium, phosphate, parathyroid hormone, hemoglobin, region, and hospitalization. Abbreviations are indicated in Tables 1 and 2. Groups were defined according to quartiles (Q) and Q1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (< 0.05) are depicted in **bold.**

Supplementary Table S8: Multivariate hazard regression analysis of groups of different time-dependent lipid parameters for all-cause mortality, cardiovascular (CV) mortality, and non-CV mortality in patients being treated in Western European dialysis facilities

Western Europe		All-cause mortality				CV mortality				Non-CV mortality			
	Quartile	HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]	
Total chol.	Q1 (<137 mg/dl)	1.000				1.000				1.000			
	Q2 (138-162 mg/dl)	0.742	**0.001**	0.624	0.882	0.703	**0.011**	0.535	0.923	0.772	**0.028**	0.613	0.972
	Q3 (163-192 mg/dl)	0.796	**0.016**	0.661	0.958	0.797	0.124	0.597	1.064	0.785	0.061	0.609	1.011
	Q4 (>193 mg/dl)	0.847	0.132	0.683	1.051	0.893	0.492	0.646	1.234	0.823	0.201	0.610	1.110
HDL chol.	Q1 (<31 mg/dl)	1.000				1.000				1.000			
	Q2 (32-38 mg/dl)	0.855	0.124	0.701	1.044	0.880	0.425	0.642	1.206	0.855	0.245	0.657	1.113
	Q3 (39-48 mg/dl)	0.799	**0.037**	0.648	0.987	0.857	0.358	0.616	1.191	0.749	**0.046**	0.565	0.994
	Q4 (>49 mg/dl)	0.897	0.308	0.727	1.106	0.966	0.834	0.695	1.341	0.822	0.177	0.618	1.092
Non-HDL chol.	Q1 (<95 mg/dl)	1.000				1.000				1.000			
	Q2 (196-120 mg/dl)	0.771	**0.004**	0.645	0.921	0.767	0.064	0.580	1.016	0.758	**0.024**	0.596	0.965
	Q3 (121-149 mg/dl)	0.779	**0.012**	0.641	0.947	0.823	0.203	0.609	1.111	0.754	**0.037**	0.578	0.984
	Q4 (>150 mg/dl)	0.845	0.139	0.676	1.056	0.931	0.676	0.665	1.303	0.830	0.229	0.613	1.124
LDL chol.	Q1 (<67.6 mg/dl)	1.000				1.000				1.000			
	Q2 (67.6-89.7 mg/dl)	0.780	**0.008**	0.650	0.936	0.711	**0.020**	0.534	0.947	0.822	0.117	0.644	1.050
	Q3 (89.7-114.6 mg/dl)	0.770	**0.009**	0.633	0.935	0.714	**0.030**	0.526	0.968	0.794	0.085	0.610	1.033
	Q4 (>114.6 mg/dl)	0.789	**0.031**	0.635	0.979	0.817	0.223	0.591	1.131	0.775	0.094	0.576	1.044
Triglycerides	Q1 (<101 mg/dl)	1.000				1.000				1.000			
	Q2 (102-141 mg/dl)	0.989	0.894	0.837	1.168	0.909	0.476	0.698	1.182	1.094	0.433	0.874	1.369
	Q3 (142-204 mg/dl)	0.793	**0.019**	0.653	0.963	0.747	0.062	0.549	1.015	0.899	0.421	0.693	1.165
	Q4 (>205 mg/dl)	0.883	0.294	0.699	1.114	1.097	0.588	0.784	1.535	0.817	0.237	0.584	1.143

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, presence of inflammation/malnutrition, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, and hospitalization. Abbreviations are indicated in Tables 1 and 2. Groups were defined according to quartiles (Q) and Q1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (< 0.05) are depicted in **bold.**

Supplementary Table S9: Multivariate hazard regression predicator of groups of different time-dependent lipid parameters for all-cause mortality, cardiovascular (CV) mortality, and non-CV mortality in patients being treated in Central/Eastern European dialysis facilities

Central/Eastern Europe		All-cause mortality				CV mortality				Non-CV mortality			
	Quartile	HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]		HR	p	[95% Conf. Interval]	
Total chol.	Q1 (<137 mg/dl)	1.000				1.000				1.000			
	Q2 (138-162 mg/dl)	0.645	**0.002**	0.486	0.857	0.639	**0.023**	0.434	0.940	0.770	0.268	0.485	1.222
	Q3 (163-192 mg/dl)	0.585	**<0.001**	0.442	0.773	0.608	**0.009**	0.417	0.885	0.607	**0.039**	0.378	0.976
	Q4 (>193 mg/dl)	0.480	**<0.001**	0.359	0.642	0.496	**<0.001**	0.334	0.736	0.497	**0.006**	0.304	0.815
HDL chol.	Q1 (<31 mg/dl)	1.000				1.000				1.000			
	Q2 (32-38 mg/dl)	0.758	0.052	0.573	1.002	0.750	0.132	0.516	1.090	0.828	0.433	0.516	1.328
	Q3 (39-48 mg/dl)	0.516	**<0.001**	0.372	0.716	0.528	**0.004**	0.344	0.812	0.488	**0.017**	0.271	0.878
	Q4 (>49 mg/dl)	0.676	**0.015**	0.492	0.928	0.673	0.060	0.445	1.018	0.734	0.272	0.423	1.275
Non-HDL chol.	Q1 (<95 mg/dl)	1.000				1.000				1.000			
	Q2 (196-120 mg/dl)	0.620	**0.003**	0.453	0.848	0.585	**0.013**	0.383	0.894	0.568	**0.036**	0.335	0.964
	Q3 (121-149 mg/dl)	0.611	**0.001**	0.453	0.826	0.663	**0.043**	0.446	0.986	0.559	**0.024**	0.338	0.926
	Q4 (>150 mg/dl)	0.519	**<0.001**	0.380	0.708	0.549	**0.005**	0.363	0.832	0.421	**0.001**	0.248	0.716
LDL chol.	Q1 (<67.6 mg/dl)	1.000				1.000				1.000			
	Q2 (67.6-89.7 mg/dl)	0.704	**0.036**	0.507	0.977	0.779	0.269	0.500	1.214	0.548	**0.035**	0.314	0.958
	Q3 (89.7-114.6 mg/dl)	0.772	0.096	0.569	1.047	0.894	0.589	0.594	1.345	0.617	0.067	0.368	1.034
	Q4 (>114.6 mg/dl)	0.653	**0.007**	0.479	0.890	0.758	0.194	0.499	1.152	0.554	**0.024**	0.331	0.926
Triglycerides	Q1 (<101 mg/dl)	1.000				1.000				1.000			
	Q2 (102-141 mg/dl)	1.170	0.284	0.878	1.561	1.166	0.434	0.793	1.715	1.255	0.338	0.788	11.000
	Q3 (142-204 mg/dl)	1.210	0.199	0.905	1.618	1.334	0.144	0.906	1.965	1.007	0.979	0.616	1.645
	Q4 (>205 mg/dl)	0.715	**0.038**	0.521	0.981	0.790	0.273	0.519	1.204	0.599	0.061	0.350	1.025

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of CV diseases, presence of cancer, dialysis vintage, smoking status, eKt/V, presence of inflammation/malnutrition, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, and hospitalization. Abbreviations are indicated in Tables 1 and 2. Groups were defined according to quartiles (Q) and Q1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (< 0.05) are depicted in **bold.**

Supplementary Table S10: Multivariate hazard regression analysis of groups of different **time-dependent** lipid parameters for all-cause mortality stratified by sex in the entire cohort (N = 5,382).

			All-cause mortality–both sexes					All-cause mortality – men					All-cause mortality – women				
	Quartile	N	HR	p	[95% Conf. Interval]		$p_{inter-action}$	HR	p	[95% Conf. Interval]		$p_{inter-action}$	HR	p	[95% Conf. Interval]		$p_{inter-action}$
Total chol.	Q1 (<137 mg/dl)	1345	1.000				0.682	1.000				0.652	1.000				0.769
	Q2 (138-162 mg/dl)	1345	0.709	**<0.001**	0.612	0.822		0.792	**0.011**	0.662	0.947		0.557	**<0.001**	0.431	0.719	
	Q3 (163-192 mg/dl)	1338	0.705	**<0.001**	0.604	0.822		0.750	**0.004**	0.618	0.910		0.589	**<0.001**	0.458	0.758	
	Q4 (>193 mg/dl)	1354	0.633	**<0.001**	0.533	0.752		0.795	**0.030**	0.641	0.986		0.442	**<0.001**	0.337	0.578	
HDL chol.	Q1 (<31 mg/dl)	1108	1.000				0.932	1.000				0.786	1.000				0.975
	Q2 (32-38 mg/dl)	1165	0.818	**0.015**	0.696	0.961		0.876	0.183	0.721	1.064		0.739	**0.040**	0.555	0.986	
	Q3 (39-48 mg/dl)	1097	0.705	**<0.001**	0.592	0.840		0.736	**0.006**	0.592	0.916		0.671	**0.007**	0.501	0.897	
	Q4 (>49 mg/dl)	1176	0.827	**0.033**	0.695	0.985		0.999	0.998	0.805	1.242		0.442	**0.005**	0.503	0.884	
Non-HDL chol.	Q1 (<95 mg/dl)	1136	1.000				0.544	1.000				0.234	1.000				0.970
	Q2 (196-120 mg/dl)	1133	0.721	**<0.001**	0.618	0.842		0.734	**0.002**	0.604	0.891		0.680	**0.003**	0.527	0.878	
	Q3 (121-149 mg/dl)	1123	0.701	**<0.001**	0.596	0.826		0.768	**0.010**	0.628	0.939		0.579	**<0.001**	0.443	0.758	
	Q4 (>150 mg/dl)	1154	0.650	**<0.001**	0.542	0.779		0.768	**0.019**	0.616	0.958		0.485	**<0.001**	0.362	0.649	
LDL chol.	Q1 (<670.6 mg/dl)	1120	1.000				0.126	1.000				0.207	1.000				0.159
	Q2 (670.6-890.7 mg/dl)	1121	0.756	**0.001**	0.645	0.887		0.818	**0.045**	0.672	0.995		0.644	**0.001**	0.491	0.845	
	Q3 (890.7-1140.6 mg/dl)	1121	0.755	**0.001**	0.641	0.890		0.768	**0.012**	0.625	0.944		0.703	**0.009**	0.540	0.917	
	Q4 (>1140.6 mg/dl)	1120	0.694	**<0.001**	0.581	0.829		0.820	0.074	0.659	1.019		0.515	**<0.001**	0.386	0.686	
Triglycerides	Q1 (<101 mg/dl)	1296	1.000				0.845	1.000				0.960	1.000				0.761
	Q2 (102-141 mg/dl)	1300	1.021	0.780	0.884	1.178		0.928	0.412	0.777	1.108		1.223	0.115	0.952	1.572	
	Q3 (142-204 mg/dl)	1302	0.883	0.126	0.740	1.035		0.805	**0.032**	0.660	0.982		1.039	0.776	0.793	1.363	
	Q4 (>205 mg/dl)	1305	0.709	**<0.001**	0.591	0.851		0.694	**0.002**	0.552	0.871		0.746	0.064	0.547	1.017	

Multivariate hazard regression analysis adjusted for age, presence of diabetes mellitus, presence of cardiovascular diseases, presence of cancer, dialysis vintage, smoking status, equilibrated Kt/V (eKt/V), presence of inflammation/malnutrition, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, region, and hospitalization. Conf. Interval, Confidence interval; HR, Hazard ratio; all other abbreviations are indicated in Table 1. Groups were defined according to quartiles (Q) and Q1

was used as the reference group for all lipid parameters. HR, 95% CI, and p values for comparisons against Q1, as well as for interaction effects of inflammation/malnutrition on the outcome, are given and significant p values (< 0.05) are depicted in **bold**. To improve readability and comparison, results of the entire cohort (Table 2, with additional adjustment for sex) are also shown in the first column.

Supplementary Table S11: Multivariate hazard regression analysis of groups of **baseline** total cholesterol and baseline non-HDL cholesterol for all-cause mortality in the entire cohort (N = 5,382), as well as stratified by inflammation/malnutrition status according to Liu et al. (13)

			Entire cohort				**Patients without inflammation/ malnutrition**				**Patients with inflammation/ malnutrition**			
		N	**HR**	**p**	**[95% Conf. Interval]**		**HR**	**p**	**[95% Conf. Interval]**		**HR**	**p**	**[95% Conf. Interval]**	
Total chol.	1 (<160 mg/dl)	2782	1.000				1.000				1.000			
	2 (160-199 mg/dl)	1883	0.913	0.075	0.827	1.009	0.917	0.336	0.769	1.094	0.826	**0.003**	0.728	0.936
	3 (200-239 mg/dl)	888	0.909	0.158	0.796	1.038	0.920	0.471	0.732	1.155	0.873	0.114	0.738	1.033
	4 (>240 mg/dl)	384	0.939	0.514	0.776	1.136	1.006	0.972	0.714	1.418	0.806	0.071	0.638	1.018
Non-HDL chol.	1 (<130 mg/dl)	2906	1.000				1.000				1.000			
	2 (130-159 mg/dl)	1095	0.968	0.594	0.859	1.091	1.003	0.978	0.815	1.234	0.836	**0.022**	0.717	0.974
	3 (160-189 mg/dl)	622	0.909	0.232	0.777	1.063	1.009	0.949	0.772	1.319	0.857	0.134	0.701	1.048
	4 (>190 mg/dl)	399	1.083	0.389	0.904	1.297	1.054	0.775	0.734	1.513	0.996	0.968	0.804	1.233

Multivariate hazard regression analysis was performed similar to Liu et al (13) using a similar lag time of 4 months, similar lipid thresholds for baseline total cholesterol and non-HDL cholesterol, as well as similar statistical adjustment for age, sex, and region. Abbreviations are indicated in Tables 1 and 2. Group 1 was used as the reference group for all lipid parameters. HR, 95% CI, and p values are given, and significant p values (< 0.05) are depicted in **bold.**

Supplementary Table S12: Multivariate hazard regression analysis of groups of different **time-dependent** lipid parameters for all-cause mortality, cardiovascular mortality, and non-cardiovascular mortality in the entire cohort (N = 5,382) using a different definition of inflammation/malnutrition, i.e. **CRP ≥ 3 mg/l [32] and/or serum albumin <36 g/l**.

			All-cause mortality					Cardiovascular mortality					Non-cardiovascular mortality				
	Quartile	N	HR	p	[95% Conf. Interval]		$p_{interaction}$	HR	p	[95% Conf. Interval]		$p_{interaction}$	HR	p	[95% Conf. Interval]		$p_{interaction}$
Total chol.	Q1 (<137 mg/dl)	1345	1.000				0.202	1.000				0.300	1.000				0.598
	Q2 (138-162 mg/dl)	1345	0.691	**<0.001**	0.596	0.801		0.663	**<0.001**	0.531	0.827		0.745	**0.005**	0.606	0.915	
	Q3 (163-192 mg/dl)	1338	0.708	**<0.001**	0.607	0.826		0.710	**0.003**	0.565	0.892		0.716	**0.003**	0.573	0.895	
	Q4 (>193 mg/dl)	1354	0.647	**<0.001**	0.544	0.769		0.652	**0.001**	0.507	0.837		0.666	**0.002**	0.516	0.860	
HDL chol.	Q1 (<31 mg/dl)	1108	1.000				0.159	1.000				**0.014**	1.000				0.690
	Q2 (32-38 mg/dl)	1165	0.781	**0.003**	0.665	0.917		0.773	**0.034**	0.609	0.981		0.818	0.086	0.651	1.028	
	Q3 (39-48 mg/dl)	1097	0.665	**<0.001**	0.551	0.779		0.664	**0.002**	0.514	0.856		0.642	**0.001**	0.499	0.825	
	Q4 (>49 mg/dl)	1176	0.757	**0.002**	0.638	0.899		0.773	**0.044**	0.602	0.993		0.729	**0.013**	0.569	0.936	
Non-HDL chol.	Q1 (<95 mg/dl)	1136	1.000				0.688	1.000				0.331	1.000				0.863
	Q2 (196-120 mg/dl)	1133	0.717	**<0.001**	0.614	0.837		0.702	**0.003**	0.555	0.886		0.703	**0.002**	0.565	0.875	
	Q3 (121-149 mg/dl)	1123	0.722	**<0.001**	0.613	0.849		0.759	**0.024**	0.598	0.963		0.711	**0.004**	0.563	0.899	
	Q4 (>150 mg/dl)	1154	0.692	**<0.001**	0.578	0.829		0.727	**0.017**	0.560	0.945		0.679	**0.004**	0.522	0.885	
LDL chol.	Q1 (<670.6 mg/dl)	1120	1.000				0.219	1.000				0.861	1.000				0.056
	Q2 (670.6-890.7 mg/dl)	1121	0.749	**<0.001**	0.638	0.878		0.720	**0.007**	0.566	0.915		0.763	**0.018**	0.609	0.954	
	Q3 (890.7-1140.6 mg/dl)	1121	0.764	**0.001**	0.649	0.899		0.774	**0.037**	0.608	0.984		0.749	**0.016**	0.593	0.947	
	Q4 (>1140.6 mg/dl)	1120	0.725	**<0.001**	0.608	0.864		0.761	**0.035**	0.591	0.981		0.720	**0.012**	0.557	0.931	
Triglycerides	Q1 (<101 mg/dl)	1296	1.000				0.071	1.000				0.141	1.000				0.258
	Q2 (102-141 mg/dl)	1300	1.027	0.708	0.890	1.186		0.977	**0.835**	0.787	1.213		1.128	0.243	0.922	1.379	
	Q3 (142-204 mg/dl)	1302	0.823	0.163	0.761	1.046		0.915	0.464	0.723	1.159		0.913	0.433	0.726	1.146	
	Q4 (>205 mg/dl)	1305	0.758	**0.004**	0.629	0.913		0.871	0.299	0.670	1.131		0.704	**0.015**	0.530	0.935	

Multivariate hazard regression analysis adjusted for age, sex, presence of diabetes mellitus, presence of cardiovascular diseases, presence of cancer, dialysis vintage, smoking status, equilibrated Kt/V (eKt/V), presence of inflammation/malnutrition, calcium, phosphate, parathyroid hormone, hemoglobin, statin treatment, region, and hospitalization. Conf. Interval, Confidence interval; HR, Hazard ratio; all other abbreviations are indicated in Table 1. Groups were defined according to quartiles (Q) and Q1

was used as the reference group for all lipid parameters. HR, 95% CI, and p values for comparisons against Q1, as well as for interaction effects of inflammation/malnutrition on the outcome, are given and significant p values (< 0.05) are depicted in **bold**.