

**Supplementary Table 5. Cox analysis for outcomes**

Variable	Univariate			Multivariate		
	Model 1		Model 2		Model 3	
	HR (95% CI)	p-value	HR (95% CI)	p-value	HR (95% CI)	p-value
Primary composite outcome						
Constipation	1.536 (1.482-1.592)	<0.001	1.244 (1.200-1.289)	<0.001	1.221 (1.172-1.259)	<0.001
Age	1.058 (1.057-1.060)	<0.001	1.058 (1.057-1.060)	<0.001	1.062 (1.059-1.064)	<0.001
Male sex	1.163 (1.123-1.203)	<0.001	1.276 (1.233-1.321)	<0.001	1.248 (1.201-1.287)	<0.001
Dialysis vintage	0.994 (0.991-0.997)	<0.001	1.011 (1.008-1.015)	<0.001	1.017 (1.013-1.021)	<0.001
Body mass index	0.979 (0.974-0.984)	<0.001				<0.001
Pre-HD SBP	1.007 (1.005-1.008)	<0.001				<0.001
Pre-HD DBP	0.984 (0.982-0.985)	<0.001				0.33
Diabetes mellitus	1.003 (1.003-1.003)	<0.001			1.003 (1.002-1.003)	<0.001
Hypertension	1.000 (1.000-1.000)	0.43			1.000 (0.999-1.000)	<0.001
IHD	1.003 (1.002-1.004)	<0.001			1.003 (1.002-1.003)	<0.001
CHF	1.001 (1.000-1.002)	<0.001			1.000 (1.000-1.001)	<0.001
CVD	1.007 (1.004-1.012)	<0.001			1.004 (1.002-1.007)	<0.001
Af	1.006 (1.002-1.009)	<0.001			1.002 (1.001-1.003)	0.003
Malignancy	1.002 (1.001-1.003)	<0.001			1.001 (1.001-1.002)	<0.001
Hemoglobin	0.890 (0.872-0.909)	<0.001			1.000 (0.999-1.002)	0.06
Albumin	0.395 (0.376-0.414)	<0.001			0.949 (0.926-0.973)	<0.001
Creatinine	0.865 (0.859-0.870)	<0.001			0.628 (0.591-0.667)	<0.001
Phosphorus	0.855 (0.843-0.866)	<0.001			0.940 (0.931-0.949)	<0.001
Calcium	0.927 (0.908-0.946)	<0.001			1.064 (1.046-1.083)	<0.001
Iron saturation	0.997 (0.997-0.998)	<0.001			1.072 (1.045-1.100)	<0.001
Ferritin	1.000 (1.000-1.000)	<0.001			0.995 (0.994-0.996)	<0.001
spKt/V	0.844 (0.789-0.902)	<0.001			1.000 (1.000-1.000)	<0.001
Statin use	1.180 (1.140-1.221)	<0.001			1.084 (0.946-1.241)	0.25
Antiplatelet use <sup>a</sup>	1.288 (1.244-1.333)	<0.001			0.985 (0.946-1.026)	0.48
ACEI/ARB use	1.022 (0.986-1.059)	0.23			1.051 (1.009-1.094)	0.02
B blocker use	1.071 (1.036-1.108)	<0.001			1.039 (0.999-1.081)	0.05
All-cause death						
Constipation	1.609 (1.549-1.671)	<0.001	1.259 (1.212-1.308)	<0.001	1.229 (1.183-1.277)	<0.001
Age	1.068 (1.066-1.070)	<0.001	1.069 (1.067-1.070)	<0.001	1.067 (1.065-1.069)	<0.001
Male sex	1.176 (1.134-1.220)	<0.001	1.316 (1.269-1.366)	<0.001	1.286 (1.240-1.335)	<0.001
Dialysis vintage	0.995 (0.991-0.998)	0.004	1.016 (1.012-1.019)	<0.001	1.019 (1.016-1.021)	<0.001
Body mass index	0.972 (0.967-0.977)	<0.001			0.971 (0.964-0.978)	<0.001

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**Supplementary Table 5. Continued**

Variable	Univariate			Multivariate		
	Model 1		Model 2		Model 3	
	HR (95% CI)	p-value	HR (95% CI)	p-value	HR (95% CI)	p-value
Pre-HD SBP	1.006 (1.004-1.007)	<0.001			1.006 (1.004-1.007)	<0.001
Pre-HD DBP	0.980 (0.978-0.982)	<0.001			1.001 (0.998-1.003)	0.52
Diabetes mellitus	1.003 (1.003-1.003)	<0.001		1.002 (1.002-1.003)	1.002 (1.001-1.002)	<0.001
Hypertension	1.000 (1.000-1.000)	0.37		0.999 (0.999-1.000)		<0.001
IHD	1.003 (1.003-1.004)	<0.001		1.002 (1.001-1.002)	1.001 (1.001-1.002)	<0.001
CHF	1.001 (1.000-1.001)	<0.001		1.000 (1.000-1.000)	1.001 (0.999-1.002)	0.28
CVD	1.006 (1.003-1.008)	<0.001		1.003 (1.002-1.004)	1.002 (1.001-1.004)	<0.001
Af	1.007 (1.003-1.009)	<0.001		1.002 (1.002-1.003)	1.003 (1.001-1.004)	<0.001
Malignancy	1.002 (1.001-1.004)	<0.001		1.001 (1.000-1.003)	1.000 (0.999-1.002)	0.56
Hemoglobin	0.867 (0.848-0.886)	<0.001			0.932 (0.907-0.957)	<0.001
Albumin	0.346 (0.329-0.363)	<0.001			0.588 (0.551-0.626)	<0.001
Creatinine	0.847 (0.842-0.853)	<0.001			0.931 (0.922-0.941)	<0.001
Phosphorus	0.828 (0.816-0.840)	<0.001			1.066 (1.047-1.086)	<0.001
Calcium	0.913 (0.894-0.933)	<0.001			1.085 (1.056-1.115)	<0.001
Iron saturation	0.998 (0.997-0.999)	<0.001			0.995 (0.994-0.997)	<0.001
Ferritin	1.000 (1.000-1.000)	<0.001			1.000 (1.000-1.000)	<0.001
spKt/V	0.874 (0.813-0.938)	<0.001			1.112 (0.962-1.286)	0.15
Statin use	1.195 (1.152-1.240)	<0.001			0.977 (0.935-1.021)	0.3
Antiplatelet use <sup>a</sup>	1.332 (1.283-1.382)	<0.001			1.074 (1.028-1.123)	0.001
ACEI/ARB use	1.000 (0.963-1.039)	0.996				
Beta-blocker use	1.051 (1.014-1.089)	0.006			1.028 (0.986-1.072)	0.19
Ischemic stroke						
Constipation	1.530 (1.359-1.733)	<0.001	1.304 (1.153-1.474)	<0.001	1.256 (1.111-1.421)	<0.001
Age	1.040 (1.035-1.045)	<0.001	1.038 (1.032-1.043)	<0.001	1.036 (1.030-1.041)	<0.001
Male sex	0.984 (0.877-1.104)	0.78	1.040 (0.927-1.168)	0.5	1.010 (0.900-1.134)	0.86
Dialysis vintage	0.979 (0.967-0.991)	<0.001	0.989 (0.977-1.001)	0.08	0.996 (0.983-1.008)	0.482
Body mass index	1.003 (0.986-1.020)	0.73				
Pre-HD SBP	1.015 (1.012-1.019)	<0.001			1.014 (1.010-1.017)	<0.001
Pre-HD DBP	1.000 (0.994-1.006)	0.99				
Diabetes mellitus	1.004 (1.003-1.005)	<0.001		1.003 (1.003-1.004)	1.002 (1.001-1.003)	<0.001
Hypertension	1.000 (0.999-1.000)	0.59		0.999 (0.998-1.000)		0.09
IHD	1.001 (1.000-1.003)	0.17		1.000 (0.998-1.001)		0.73
CHF	1.000 (0.999-1.000)	0.497		0.998 (0.997-1.001)		0.634
CVD	1.005 (1.002-1.009)	<0.001		1.002 (0.999-1.006)	1.004 (1.000-1.009)	0.001

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Supplementary Table 5. Continued

Variable	Univariate			Multivariate		
	Model 1		Model 2		Model 3	
	HR (95% CI)	p-value	HR (95% CI)	p-value	HR (95% CI)	p-value
Af	1.008 (1.003-1.012)	0.02	1.001 (1.000-1.004)	0.14	1.003 (1.000-1.007)	0.09
Malignancy	1.002 (0.998-1.006)	0.32	1.007 (1.002-1.010)	<0.001		
Hemoglobin	0.966 (0.902-1.034)	0.32				
Albumin	0.643 (0.543-0.762)	<0.001			0.956 (0.795-1.150)	0.63
Creatinine	0.895 (0.876-0.915)	<0.001			0.955 (0.927-0.983)	0.002
Phosphorus	0.917 (0.878-0.959)	<0.001			1.056 (1.003-1.112)	0.038
Calcium	0.934 (0.872-1.001)	0.06				
Iron saturation	0.992 (0.989-0.996)	<0.001			0.994 (0.990-0.998)	0.003
Ferritin	1.000 (1.000-1.000)	0.48				
spKt/V	0.812 (0.646-1.021)	0.08				
Statin use	1.223 (1.089-1.374)	<0.001			0.960 (0.847-1.088)	0.52
Antiplatelet use <sup>a</sup>	1.264 (1.123-1.422)	<0.001			1.020 (0.900-1.156)	0.76
ACEI/ARB use	1.199 (1.059-1.359)	0.004			0.992 (0.863-1.141)	0.91
Beta-blocker use	1.342 (1.195-1.507)	<0.001			1.216 (1.070-1.383)	0.003

ACEI, angiotensin-converting enzyme inhibitor; Af, atrial fibrillation or flutter; ARB, angiotensin receptor blocker; CHF, congestive heart failure; CI, confidence interval; CVD, cerebrovascular disease; DBP, diastolic blood pressure; HD, hemodialysis; HR, hazard ratio; IHD, ischemic heart disease; SBP, systolic blood pressure; spKt/V, single-pool Kt/V.

<sup>a</sup>Use of aspirin or P2Y12 inhibitor.