Table S2A Univariate and multivariate Cox proportional regression analyses for predictive value of the BUN/creatinine ratio on all-cause mortality in the total acute decompensated heart failure (ADHF) population

	Total population			
	Model 1			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.016 [1.009-1.021]	<0.0001*	1.015 [1.006-1.023]	0.0018*
Age	1.048 [1.039-1.057]	<0.0001*	1.054 [1.045-1.064]	<0.0001*
LVEF	0.990 [0.984-0.996]	0.0020*	0.974 [0.968-0.981]	<0.0001*
Loop diuretics (dis)	1.455 [1.147-1.871]	0.0017*	1.455 [1.038-1.710]	0.0228*
Beta-blockers (dis)	0.759 [0.616-0.943]	0.0133*	0.747 [0.598-0.940]	0.0133*
ACE-I/ARB (dis)	0.603 [0.500-0.730]	<0.0001*	0.631 [0.521-0.766]	<0.0001*
	Model 2			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.016 [1.009-1.021]	<0.0001*	1.015 [1.005-1.023]	0.0023*
Age	1.048 [1.039-1.057]	<0.0001*	1.054 [1.044-1.064]	<0.0001*
ICM	1.550 [1.278-1.874]	<0.0001*	1.300 [1.060-1.590]	0.0188*
Systolic BP, mmHg	0.991 [0.986-0.997]	0.0028*	0.990 [0.984-0.996]	0.0012*
Resting heart rate, beats/min	1.010 [1.002-1.017]	0.0067*	1.010 [1.002-1.017]	0.0068*

LVEF	0.990 [0.984-0.996]	0.0020*	0.978 [0.972-0.985]	<0.0001*
Loop diuretics (dis)	1.455 [1.147-1.871]	0.0017*	1.246 [0.974-1.614]	0.0402*
Beta-blockers (dis)	0.759 [0.616-0.943]	0.0133*	0.721 [0.577-0.907]	0.0057*
ACE-I/ARB (dis)	0.60 [0.50-0.73]	<0.0001*	0.647 [0.532-0.788]	<0.0001*

In Model 1, in addition to the BUN/Cr ratio at discharge, we included established prognostic factors for ADHF including age, LVEF at discharge, and treatment with ACE-Is or ARBs, loop diuretics, and beta-blockers at discharge.

In Model 2, the independent variables that were significantly associated with all-cause mortality in the univariate analyses, such as the presence of an ischemic etiology (ICM), SBP, and resting HR, were included the model, in addition to the above-mentioned established predictive factors.

dis, at discharge.

Table S2B Univariate and multivariate Cox proportional regression analyses for predictive value of the BUN/creatinine ratio on all-cause mortality in the extreme hemodilution category

	Extreme hemodilution			
	Model 1			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.029 [1.011-1.046]	0.0015*	1.021 [1.003-1.039]	0.0224*
Age	1.040 [1.025-1.056]	<0.0001*	1.037 [1.022-1.053]	<0.0001*
LVEF	0.993 [0.982-1.004]	0.2614		
Loop diuretics (dis)	1.575 [1.053-2.436]	0.0260*	1.622 [1.080-2.515]	0.0187*
Beta-blockers (dis)	0.682 [0.474-0.998]	0.0494*	0.852 [0.588-1.257]	0.4150
ACE-I/ARB (dis)	0.650 [0.460-0.928]	0.0182*	0.676 [0.476-0.970]	0.0338*
	Model 2			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.029 [1.011-1.046]	0.0015*	1024 [1.004-1.042]	0.0140*
Age	1.040 [1.025-1.056]	<0.0001*	1.035 [1.020-1.051]	<0.0001*
Ischemic etiology	1.604 [1.128-2.265]	0.0088*	1.649 [1.130-2.394]	0.0096*
Systolic BP, mm Hg	0.987 [0.978-0.996]	0.0058*	0.985 [0.975-0.995]	0.0040*
Resting heart rate, beats/min	1.007 [0.994-1.020]	0.2598		

LVEF	0.993 [0.982-1.004]	0.2614		
Loop diuretics (dis)	1.575 [1.053-2.436]	0.0260*	1.401 [0.928-2.183]	0.1103
Beta-blockers (dis)	0.682 [0.474-0.998]	0.0494*	0.718[0.489-1.072]	0.1046
ACE-I/ARB (dis)	0.650 [0.460-0.928]	0.0182*	0.658 [0.462-0.947]	0.0247*

In Model 1, in addition to the BUN/Cr ratio at discharge, we included established prognostic factors for ADHF including age, LVEF at discharge, and treatment with ACE-Is or ARBs, loop diuretics, and beta-blockers at discharge.

In Model 2, the independent variables that were significantly associated with all-cause mortality in the univariate analyses, such as the presence of an ICM, SBP, and resting HR, were included the model, in addition to the above-mentioned established predictive factors.

Table S2C Univariate and multivariate Cox proportional regression analyses for predictive value of the BUN/creatinine ratio on all-cause mortality in the modest hemodilution category

	Modest hemodilution			
	Model 1			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	p value	HR [95%CI]	p value
BUN/creatinine ratio	1.029 [1.009-1.048]	0.0047*	1.015 [0.994-1.034]	0.1509
Age	1.061 [1.041-1.082]	<0.0001*	1.062 [1.042-1.084]	<0.0001*
LVEF	0.990 [0.978-1.001]	0.0952		
Loop diuretics (dis)	2.324 [1.358-4.338]	0.0014*	2.205 [1.284-4.126]	0.0031*
Beta-blockers (dis)	0.741[0.484-1.177]	0.1973		
ACE-I/ARB (dis)	0.506 [0.350-0.741]	0.0006*	0.585 [0.403-0.858]	0.0065*
	Model 2			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	p value	HR [95%CI]	p value
BUN/creatinine ratio	1.029 [1.009-1.048]	0.0047*	1.016 [0.994-1.036]	0.1323
Age	1.061 [1.041-1.082]	<0.0001*	1.061 [1.041-1.084]	<0.0001*
Ischemic etiology	1.483 [1.025-2.125]	0.0367*	1.382 [0.939-2.014]	0.0990
Systolic BP, mmHg	0.992 [0.982-1.002]	0.1614		
Resting heart rate, beats/min	1.014 [1.001-1.025]	0.0272*	1.010 [0.997-1.023]	0.1162

LVEF	0.990 [0.978-1.001]	0.0952		
Loop diuretics (dis)	2.324 [1.358-4.338]	0.0014*	2.084 [1.210-3.909]	0.0067*
Beta-blockers (dis)	0.741 [0.484-1.177]	0.1973		
ACE-I/ARB (dis)	0.506 [0.350-0.741]	0.0006*	0.589 [0.404-0.868]	0.0079*

In Model 1, in addition to the BUN/Cr ratio at discharge, we included established prognostic factors for ADHF including age, LVEF at discharge, and treatment with ACE-Is or ARBs, loop diuretics, and beta-blockers at discharge.

In Model 2, the independent variables that were significantly associated with all-cause mortality in the univariate analyses, such as the presence of an ICM, SBP, and resting HR, were included the model, in addition to the above-mentioned established predictive factors.

Table S2D Univariate and multivariate Cox proportional regression analyses for predictive value of the BUN/creatinine ratio on all-cause mortality in the modest hemoconcentration category

	Modest hemoconcentration			
	Model 1			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.011 [0.986-1.034]	0.3720		
Age	1.044 [1.024-1.066]	<0.0001*	1.044 [1.024-1.066]	<0.0001*
LVEF	0.998 [0.985-1.011]	0.8022		
Loop diuretics (dis)	1.407 [0.872-2.391]	0.1662		
Beta-blockers (dis)	0.828 [0.540-1.309]	0.4097		
ACE-I/ARB (dis)	0.688 [0.463-1.038]	0.0744		
	Model 2			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.011 [0.986-1.034]	0.3720		
Age	1.044 [1.024-1.066]	<0.0001*	1.043 [1.023-1.064]	<0.0001*
Ischemic etiology	1.630 [1.053-2.465]	0.0288*	1.450 [0.935-2.198]	0.0949
Systolic BP, mmHg	0.998 [0.986-1.010]	0.8693		
Resting heart rate, beats/min	1.005 [0.988-1.022]	0.5216		

LVEF	0.998 [0.985-1.011]	0.8022
Loop diuretics (dis)	1.407 [0.872-2.391]	0.1662
Beta-blockers (dis)	0.828 [0.540-1.309]	0.4097
ACE-I/ARB (dis)	0.688 [0.463-1.038]	0.0744

In Model 1, in addition to the BUN/Cr ratio at discharge, we included established prognostic factors for ADHF including age, LVEF at discharge, and treatment with ACE-Is or ARBs, loop diuretics, and beta-blockers at discharge.

In Model 2, the independent variables that were significantly associated with all-cause mortality in the univariate analyses, such as the presence of an ICM, SBP, and resting HR, were included the model, in addition to the above-mentioned established predictive factors.

Table S2E. Univariate and multivariate Cox proportional regression analyses for predictive value of the BUN/creatinine ratio on all-cause mortality in the extreme hemoconcentration category

	Extreme hemoconcentration			
	Model 1			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.015 [1.004-1.022]	0.0108*	1.021 [1.007-1.032]	0.0067*
Age	1.053 [1.034-1.073]	<0.0001*	1.068 [1.046-1.091]	<0.0001*
LVEF	0.982 [0.968-0.995]	0.0081*	0.960 [0.946-0.974]	<0.0001*
Loop diuretics (dis)	0.998 [0.611-1.722]	0.9964		
Beta-blockers (dis)	0.865 [0.546-1.428]	0.5596		
ACE-I/ARB (dis)	0.528 [0.353-0.793]	0.0023*	0.521 [0.345-0.790]	0.0023*
	Model 2			
	Univariate analysis		**Multivariate analysis**	
	HR [95%CI]	**p value**	**HR [95%CI]**	**p value**
BUN/creatinine ratio	1.015 [1.004-1.022]	0.0108*	1.021 [1.007-1.032]	0.0067*
Age	1.053 [1.034-1.073]	<0.0001*	1.068 [1.046-1.091]	<0.0001*
Ischemic etiology	1.370 [0.888-2.076]	0.1510		
Systolic BP, mmHg	0.990 [0.977-1.002]	0.1143		

Resting heart rate, beats/min	1.010 [0.993-1.026]	0.2276		
LVEF	0.982 [0.968-0.995]	0.0081*	0.960 [0.946-0.974]	<0.0001*
Loop diuretics (dis)	0.998 [0.611-1.722]	0.9964		
Beta-blockers (dis)	0.865 [0.546-1.428]	0.5596		
ACE-I/ARB (dis)	0.528 [0.353-0.793]	0.0023*	0.521 [0.345-0.790]	0.0023*

In Model 1, in addition to the BUN/Cr ratio at discharge, we included established prognostic factors for ADHF including age, LVEF at discharge, and treatment with ACE-Is or ARBs, loop diuretics, and beta-blockers at discharge.

In Model 2, the independent variables that were significantly associated with all-cause mortality in the univariate analyses, such as the presence of an ICM, SBP, and resting HR, were included the model, in addition to the above-mentioned established predictive factors.