

Table S1: Baseline characteristics by relative plasma volume status (median).

Variable	rPVS < MEDIAN	rPVS > MEDIAN	P-value
N (%)	101 (50.2)	100 (49.8)	
Age (years)	77.7 ± 8.6	80.0 ± 8.0	0.052
BMI (Kg/cm²)	30.0 (26.7 – 35.4)	26.9 (24.1 – 31.0)	<0.001
Weight at admission (Kg)	82.0 (72.5 – 94.1)	70.0 (60.0 – 80.0)	<0.001
Gender male (n[%])	28 (27.7)	66 (66.0)	<0.001
Advanced NYHA class (III & IV) (n[%])	20 (20.6)	30 (31.3)	0.092
SBP (mmHg)	141.5 (122.0 – 164.2)	134.0 (123.2 – 154.4)	0.247
DBP (mmHg)	74.5 (67.0 – 94.1)	69.0 (60.0 – 79.2)	0.006
HR (B.p.s)	78.0 (68.0 – 93.2)	80.0 (65.0 – 93.0)	0.927
Physical examination (n[%])			
• JVD	67 (69.1)	67 (69.1)	1.000
• Edemas	80 (82.5)	82 (84.5)	0.699
• Crackles	43 (59.7)	57 (78.1)	0.017
LEVF (n[%])			0.191
• HFpEF	53 (53.0)	63 (65.6)	
• HFmrEF	20 (20.0)	13 (13.5)	
• HFrEF	27 (27.0)	20 (20.8)	
HF-treatment (n[%])			
• Loop diuretics	86 (89.6)	84 (86.6)	0.522
• ACEi/ARA	74 (77.1)	67 (69.1)	0.210
• B-blockers	57 (59.4)	53 (54.6)	0.506
• MRA	33 (35.1)	34 (35.1)	0.994
Comorbidities (n[%])			
• Chronic HF	67 (66.3)	63 (63.6)	0.689
• Hypertension	85 (85.9)	88 (88.0)	0.654
• ICD	32 (32.3)	38 (38.0)	0.402
• Dyslipemia	14 (50.0)	15 (57.7)	0.571
• Diabetes	37 (37.4)	47 (47.0)	0.169
• AF/flutter	60 (60.6)	64 (64.0)	0.621
• COPD/Asthma	20 (20.2)	16 (16.0)	0.441
• CKD	25 (25.3)	29 (29.3)	0.523
• Anemia	3 (4.2)	25 (33.8)	<0.001
Biochemistry			
• Urea (g/dL)	0.56 (0.43 – 0.73)	0.55 (0.43 – 0.73)	0.774
• Creatinine (mg/dL)	1.03 (0.84 – 0.73)	1.10 (0.80 – 1.30)	0.758
• Cystatin C (mg/dL)	1.31 (1.05 – 1.62)	1.44 (1.13 – 1.78)	0.074
• Sodium (mmol/L)	141.9 (140.0 – 144.0)	141.5 (139.0 – 143.8)	0.286
• Potassium (mmol/L)	4.05 ± 0.49	3.99 ± 0.56	0.672
• Albumin (g/dL)	3.20 ± 0.37	3.12 ± 0.38	0.155
• Hemoglobin (g/L)	13.3 ± 1.5	10.8 ± 1.3	<0.001
• Hematocrit (%)	40.8 (38.0 – 43.8)	33.7 (30.3 – 36.1)	<0.001
Markers of congestion			
• rPVS (%)			
• CA125 (U/mL)	40.8 (19.1 – 113.7)	58.5 (30.5 – 119.5)	0.084
• NT-proBNP (pg/mL)	3071 (1527 – 6267)	4209 (1930 – 7758)	0.071
• U/C ratio	0.51 (0.38 – 0.63)	0.50 (0.41 – 0.62)	0.917
• Lung ultrasound (n[%])	55 (54.5)	64 (64.0)	0.169

Values are expressed as mean ± S.D. or median (25th – 75th). ACEi: Angiotensin converting enzyme inhibitor; ACM: All-cause mortality; AF: Atrial fibrillation; ARA: Angiotensin receptor antagonist; BMI: Body mass index; CKD: Chronic kidney disease; COPD: Chronic obstructive pulmonary disease; DBP: Diastolic blood pressure; HF: Heart failure; HFpEF: Heart failure with preserved ejection fraction; HFmrEF: Heart failure with mid range ejection fraction; HFrEF: Heart failure with reduced ejection fraction; HR: Heart rate; ICD: Ischemic coronary disease; JVD: Jugular vein distension; LEVF: Left ventricular ejection fraction; MRA: Mineralocorticoid receptor antagonist; rPVS: Relative plasma volume status; **U/C Ratio: Urea/creatinine Ratio.**

Table S2: Baseline characteristics by NT-proBNP (median).

Variable	NT-proBNP < MEDIAN	NT-proBNP > MEDIAN	P-value
N (%)	101	102	
Age (years)	77.3 ± 9.1	80.4 ± 7.1	0.007
BMI (Kg/cm²)	30.3 (27.0 – 33.7)	26.7 (24.7 – 32.0)	0.001
Weight at admission (Kg)	80.0 (67.0 – 90.0)	72.7 (63.0 – 81.9)	0.004
Gender Male (n[%])	28 (27.7)	66 (66.0)	<0.001
Advanced NYHA class (III & IV)	20 (20.6)	30 (31.3)	0.092
SBP (mmHg)	140.0 (124.5 – 163.5)	131.0 (118.0 – 178.0)	0.041
DBP (mmHg)	74.0 (66.0 – 83.5)	70.0 (62.0 – 83.0)	0.062
HR (B.p.s)	79.0 (68.0 – 92.5)	76.0 (65.0 – 95.0)	0.821
Physical examination (n[%])			
• JVD	67 (69.1)	67 (69.1)	1.000
• Edemas	80 (82.5)	82 (84.5)	0.699
• Crackles	43 (59.7)	57 (78.1)	0.017
LEVF (n[%])			0.191
• HFpEF	53 (53.0)	63 (65.6)	
• HFmEF	20 (20.0)	13 (13.5)	
• HFrEF	27 (27.0)	20 (20.8)	
HF-treatment (n[%])			
• Loop diuretics	86 (89.6)	84 (86.6)	0.522
• ACEi/ARA	74 (77.1)	67 (69.1)	0.210
• B-blockers	57 (59.4)	53 (54.6)	0.506
• MRB	33 (35.1)	34 (35.1)	0.994
Comorbidities (n[%])			
• Chronic HF	67 (51.5)	63 (63.6)	0.689
• Hypertension	85 (85.9)	88 (88.0)	0.654
• ICD	32 (32.3)	38 (38.0)	0.402
• Dyslipemia	14 (50.0)	15 (57.7)	0.571
• Diabetes	37 (37.4)	47 (47.0)	0.169
• AF/flutter	60 (60.6)	64 (64.0)	0.621
• COPD/Asthma	20 (20.2)	16 (16.0)	0.441
• CKD	25 (25.3)	29 (29.3)	0.523
• Anemia	3 (4.2)	25 (33.8)	<0.001
Biochemistry			
• Urea (g/dL)	0.50 (0.40 – 0.69)	0.60 (0.45 – 0.78)	0.006
• Creatinine (mg/dL)	1.01 (0.76 – 1.30)	1.20 (0.94 – 1.47)	<0.001
• Cystatin C (ng/L)	1.35 (1.03 – 1.71)	1.44 (1.19 – 1.79)	0.061
• Sodium (mmol/L)	141.7 (139.8 – 143.7)	141.7 (139.0 – 144.2)	0.797
• Potassium (mmol/L)	3.98 ± 0.51	4.06 ± 0.54	0.349
• Albumin (g/dL)	3.25 ± 0.36	3.08 ± 0.37	0.002
• Hemoglobin (g/L)	12.2 ± 2.0	12.0 ± 1.7	0.281
• Hematocritum (%)	36.8 (33.7 – 42.1)	37.2 (33.5 – 40.2)	0.607
Markers of congestion			
• rPVS (%)	-4.87 (-13.20 – 3.84)	-2.25 (-11.53 – 6.00)	0.091
• CA125 (ng/L)	31.7 (17.0 – 97.1)	66.7 (37.3 – 127.0)	<0.001
• NT-proBNP (pg/mL)			
• Ratio U/C	0.52 (0.39 – 0.63)	0.48 (0.41 – 0.63)	0.432
• Lung ultrasound (n[%])	55 (54.5)	64 (64.0)	0.169

ACEi: Angiotensin converting enzyme inhibitor; ACM: All-cause mortality; AF: Atrial fibrillation; ARA: Angiotensin receptor antagonist; BMI: Body mass index; CKD: Chronic kidney disease; COPD: Chronic obstructive pulmonary disease; DBP: Diastolic blood pressure; HF: Heart failure; HFpEF: Heart failure with preserved ejection fraction; HFmEF: Heart failure with mid range ejection fraction; HFrEF: Heart failure with reduced ejection fraction; HR: Heart rate; ICD: Ischemic coronary disease; JVD: Jugular vein distension; LEVF: Left ventricular ejection fraction; MRB: Mineralocorticoid receptor antagonist; rPVS: Relative plasma volume status. **U/C Ratio: Urea/creatinine Ratio.**

Values are expressed as mean ± S.D. or median (25th – 75th).

Table S3: Baseline characteristics by CA125 (median).

Variable	CA125 < MEDIAN	CA125 > MEDIAN	P-value
N (%)	101	102	
Age (years)	78.8 ± 8.4	78.9 ± 8.2	0.874
BMI (Kg/cm²)	29.0 (25.8 – 33.3)	27.8 (25.0 – 32.8)	0.191
Weight at admission (Kg)	79.0 (65.7 – 90.0)	74.0 (63.0 – 83.2)	0.070
Gender Male (n[%])	28 (27.7)	66 (66.0)	<0.001
Advanced NYHA class (III & IV) (n[%])	20 (20.6)	30 (31.3)	0.092
SBP (mmHg)	140.0 (124.2 – 163.2)	133.0 (118.5 – 150.7)	0.070
DBP (mmHg)	71.0 (64.0 – 85.0)	73.0 (63.0 – 80.0)	0.632
HR (B.p.s)	74.5 (66.0 – 91.5)	80.0 (67.0 – 96.5)	0.162
Physical examination (n[%])			
• JVD	67 (69.1)	67 (69.1)	1.000
• Edemas	80 (82.5)	82 (84.5)	0.699
• Crackles	43 (59.7)	57 (78.1)	0.017
LEVF (n[%])			
• HFpEF	53 (53.0)	63 (65.6)	0.191
• HFmrEF	20 (20.0)	13 (13.5)	0.191
• HFrEF	27 (27.0)	20 (20.8)	0.191
HF-treatment (n[%])			
• Loop diuretics	86 (89.6)	84 (86.6)	0.522
• ACEi/ARA	74 (77.1)	67 (69.1)	0.210
• B-blockers	57 (59.4)	53 (54.6)	0.506
• MRA	33 (35.1)	34 (35.1)	0.994
Comorbidities (n[%])			
• Chronic HF	67 (66.3)	63 (63.6)	0.689
• Hypertension	85 (85.9)	88 (88.0)	0.654
• ICD	32 (32.3)	38 (38.0)	0.402
• Dyslipemia	14 (50.0)	15 (57.7)	0.571
• Diabetes	37 (37.4)	47 (47.0)	0.169
• AF/flutter	60 (60.6)	64 (64.0)	0.621
• COPD/Asthma	20 (20.2)	16 (16.0)	0.441
• CKD	25 (25.3)	29 (29.3)	0.523
• Anemia	3 (4.2)	25 (33.8)	<0.001
Biochemistry			
• Urea (g/dL)	0.54 (0.42 – 0.73)	0.55 (0.41 – 0.75)	0.421
• Creatinine (mg/dL)	1.07 (0.82 – 1.41)	1.14 (0.88 – 1.40)	0.231
• Cystatin C (mg/dL)	1.42 (1.13 – 1.74)	1.37 (1.09 – 1.74)	0.798
• Sodium (mmol/L)	141.6 (139.7 – 144.0)	141.4 (139.0 – 143.9)	0.463
• Potassium (mmol/L)	3.93 ± 0.53	4.12 ± 0.52	0.039
• Albumin (g/dL)	3.18 ± 0.35	3.14 ± 0.40	0.455
• Hemoglobin (g/L)	12.1 ± 2.0	12.0 ± 1.8	0.670
• Hematocrit (%)	36.6 (32.8 – 42.0)	37.2 (34.2 – 40.1)	0.869
Markers of congestion			
• rPVS (%)	-4.79 (-13.15 – 4.93)	-2.21 (-11.53 – 5.18)	0.527
• CA125 (U/mL)			
• NT-proBNP (pg/mL)	2411 (1197 – 5775)	4388 (2480 – 8723)	<0.001
• U/C ratio	0.50 (0.40 – 0.63)	0.51 (0.40 – 0.61)	0.819
• Lung ultrasound (n[%])	55 (54.5)	64 (64.0)	0.169

ACEi: Angiotensin converting enzyme inhibitor; ACM: All-cause mortality; AF: Atrial fibrillation; ARA: Angiotensin receptor antagonist; BMI: Body mass index; CKD: Chronic kidney disease; COPD: Chronic obstructive pulmonary disease; DBP: Diastolic blood pressure; HF: Heart failure; HFpEF: Heart failure with preserved ejection fraction; HFmrEF: Heart failure with mid range ejection fraction; HFrEF: Heart failure with reduced ejection fraction; HR: Heart rate; ICD: Ischemic coronary disease; JVD: Jugular vein distension; LEVF: Left ventricular ejection fraction; MRA: Mineralocorticoid receptor antagonist; rPVS: Relative plasma volume status. **U/C Ratio: Urea/creatinine Ratio.**

Values are expressed as mean ± S.D. or median (25th – 75th).

Table S4: Baseline characteristics by the presence of significant “B” Kerley lines.

Variable	B LINES NEGATIVE	B LINES POSITIVE	P-value
N (%)	84 (41.4)	119 (58.6)	
Age (years)	77.7 ± 8.7	79.7 ± 8.0	0.090
BMI (Kg/cm²)	30.2 (25.2 – 35.0)	27.6 (25.1 – 31.4)	0.038
Weight at admission (Kg)	80 (63.7 – 90.0)	75.0 (65.0 – 82.0)	0.143
Gender Male (n[%])	28 (27.7)	66 (66.0)	<0.001
Advanced NYHA class (III & IV)	20 (20.6)	30 (31.3)	0.092
SBP (mmHg)	140.0 (124.0 – 164.0)	135.0 (120.5 – 155.7)	0.398
DBP (mmHg)	72.5 (63.0 – 86.2)	71.0 (63.2 – 82.0)	0.562
HR (B.p.s)	79.5 (67.2 – 94.5)	78.0 (66.0 – 93.0)	0.780
Physical examination (n[%])			
• JVD	67 (69.1)	67 (69.1)	1.000
• Edemas	80 (82.5)	82 (84.5)	0.699
• Crackles	43 (59.7)	57 (78.1)	0.017
LEVF (n[%])			0.191
• HFpEF	53 (53.0)	63 (65.6)	
• HFmrEF	20 (20.0)	13 (13.5)	
• HFrEF	27 (27.0)	20 (20.8)	
HF-treatment (n[%])			
• Loop diuretics	86 (89.6)	84 (86.6)	0.522
• ACEi/ARA	74 (77.1)	67 (69.1)	0.210
• B-blockers	57 (59.4)	53 (54.6)	0.506
• MRA	33 (35.1)	34 (35.1)	0.994
Comorbidities (n[%])			
• Chronic HF	67 (66.3)	63 (63.6)	0.689
• Hypertension	85 (85.9)	88 (88.0)	0.654
• ICD	32 (32.3)	38 (38.0)	0.402
• Dyslipemia	14 (50.0)	15 (57.7)	0.571
• Diabetes	37 (37.4)	47 (47.0)	0.169
• AF/flutter	60 (60.6)	64 (64.0)	0.621
• COPD/Asthma	20 (20.2)	16 (16.0)	0.441
• CKD	25 (25.3)	29 (29.3)	0.523
• Anemia	3 (4.2)	25 (33.8)	<0.001
Biochemistry			
• Urea (g/dL)	0.55 (0.42 – 0.71)	0.55 (0.41 – 0.76)	0.956
• Creatinine (mg/dL)	1.06 (0.86 – 1.40)	1.10 (0.85 – 1.41)	0.711
• Cystatin C (ng/L)	1.42 (1.10 – 1.80)	1.38 (1.10 – 1.70)	0.282
• Sodium (mmol/L)	141.2 (139.1 – 143.3)	142.0 (139.9 – 144.2)	0.242
• Potassium (mmol/L)	4.00 ± 0.55	4.04 ± 0.41	0.624
• Albumin (g/dL)	3.22 ± 0.33	3.11 ± 0.40	0.056
• Hemoglobin (g/L)	12.2 ± 1.9	12.0 ± 1.8	0.134
• Hematocritum (%)	37.5 (34.3 – 42.1)	36.3 (32.8 – 40.4)	0.057
Markers of congestion			
• rPVS (%)	-4.79 (-12.22 – 1.66)	-2.25 (-12.0 – 5.87)	0.160
• CA125 (ng/L)	42.5 (19.7 – 112.9)	57.0 (26.3 – 116.9)	0.290
• NT-proBNP (pg/mL)	2823 (1475 – 5118)	4278 (2119 – 8669)	0.004
• U/C ratio	0.51 (0.40 – 0.63)	0.50 (0.40 – 0.63)	0.722
• Lung ultrasound (n[%])			

ACEi: Angiotensin converting enzyme inhibitor; ACM: All-cause mortality; AF: Atrial fibrillation; ARA: Angiotensin receptor antagonist; BMI: Body mass index; CKD: Chronic kidney disease; COPD: Chronic obstructive pulmonary disease; DBP: Diastolic blood pressure; HF: Heart failure; HFpEF: Heart failure with preserved ejection fraction; HFmrEF: Heart failure with mid range ejection fraction; HFrEF: Heart failure with reduced ejection fraction; HR: Heart rate; ICD: Ischemic coronary disease; JVD: Jugular vein distension; LEVF: Left ventricular ejection fraction; MRA: Mineralocorticoid receptor antagonist; rPVS: Relative plasma volume status. **U/C Ratio: Urea/creatinine Ratio.**

Values are expressed as mean ± S.D. or median (25th – 75th).

Table S5: Baseline characteristics by Urea/Creatinine ratio (median).

Variable	RATIO U/C < MEDIAN	RATIO U/C > MEDIAN	P-value
N (%)	101	101	
Age (years)	78.3 ± 8.6	79.3 ± 8.1	0.390
BMI (Kg/cm ²)	27.6 (25.2 – 32.4)	29.0 (25.1 – 34.1)	0.480
Weight at admission (Kg)	77.0 (65.0 – 86.0)	76.6 (64.0 – 87.0)	0.963
Gender Male (n[%])	28 (27.7)	66 (66.0)	<0.001
Advanced NYHA class (III & IV) (n[%])	20 (20.6)	30 (31.3)	0.092
SBP (mmHg)	141.0 (122.0 – 172.0)	133.0 (122.0 – 148.0)	0.132
DBP (mmHg)	74.0 (64.0 – 88.0)	70.5 (63.0 – 79.0)	0.110
HR (B.p.s)	76.0 (65.0 – 97.0)	80.0 (68.2 – 91.0)	0.621
Physical examination (n[%])			
• JVD	67 (69.1)	67 (69.1)	1.000
• Edemas	80 (82.5)	82 (84.5)	0.699
• Crackles	43 (59.7)	57 (78.1)	0.017
LEVF (n[%])			0.191
• HFpEF	53 (53.0)	63 (65.6)	
• HFmEF	20 (20.0)	13 (13.5)	
• HFrEF	27 (27.0)	20 (20.8)	
HF-treatment (n[%])			
• Loop diuretics	86 (89.6)	84 (86.6)	0.522
• ACEi/ARA	74 (77.1)	67 (69.1)	0.210
• B-blockers	57 (59.4)	53 (54.6)	0.506
• MRB	33 (35.1)	34 (35.1)	0.994
Comorbidities (n[%])			
• Chronic HF	67 (66.3)	63 (63.6)	0.689
• Hypertension	85 (85.9)	88 (88.0)	0.654
• ICD	32 (32.3)	38 (38.0)	0.402
• Dyslipemia	14 (50.0)	15 (57.7)	0.571
• Diabetes	37 (37.4)	47 (47.0)	0.169
• AF/flutter	60 (60.6)	64 (64.0)	0.621
• COPD/Asthma	20 (20.2)	16 (16.0)	0.441
• CKD	25 (25.3)	29 (29.3)	0.523
• Anemia	3 (4.2)	25 (33.8)	<0.001
Biochemistry			
• Urea (g/dL)	0.45 (0.37 – 0.58)	0.69 (0.51 – 0.87)	<0.001
• Creatinine (mg/dL)	1.14 (0.89 – 1.42)	1.03 (0.82 – 1.37)	0.046
• Cystatin C (ng/L)	1.40 (1.12 – 1.72)	1.39 (1.06 – 1.74)	0.916
• Sodium (mmol/L)	141.7 (140.0 – 144.1)	141.3 (139.0 – 143.6)	0.183
• Potassium (mmol/L)	4.00 ± 0.49	4.04 ± 0.57	0.314
• Albumin (g/dL)	3.16 ± 0.35	3.16 ± 0.40	0.975
• Hemoglobin (g/L)	12.1 ± 1.8	12.0 ± 1.9	0.722
• Hematocritum (%)	37.0 (33.8 – 41.0)	37.1 (33.5 – 41.4)	0.848
Markers of congestion			
• rPV (%)	-2.70 (-13.80 – 5.10)	-3.33 (-11.27 – 4.85)	0.616
• CA125 (ng/L)	50.0 (21.5 – 103.5)	54.3 (23.8 – 124.9)	0.440
• NT-proBNP (pg/mL)	4005 (2221 – 7548)	2969 (1335 – 6810)	0.040
• Ratio U/C			
• Lung ultrasound (n[%])	55 (54.5)	64 (64.0)	0.169

ACEi: Angiotensin converting enzyme inhibitor; ACM: All-cause mortality; AF: Atrial fibrillation; ARA: Angiotensin receptor antagonist; BMI: Body mass index; CKD: Chronic kidney disease; COPD: Chronic obstructive pulmonary disease; DBP: Diastolic blood pressure; HF: Heart failure; HFpEF: Heart failure with preserved ejection fraction; HFmEF: Heart failure with mid range ejection fraction; HFrEF: Heart failure with reduced ejection fraction; HR: Heart rate; ICD: Ischemic coronary disease; JVD: Jugular vein distension; LEVF: Left ventricular ejection fraction; MRB: Mineralocorticoid receptor antagonist; rPVS: Relative plasma volume status. **U/C Ratio: Urea/creatinine Ratio.**

Values are expressed as mean ± S.D. or median (25th – 75th).