SUPPLEMENTAL MATERIALS

Neutrophil-to-Lymphocyte Ratio/Platelet-to-Lymphocyte Ratio and Mortality among Hemodialysis Patients

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Supplemental Table 1. Characteristics among 108,548 included vs. 47,681 incident hemodialysis patients.

	Included	Excluded	Standardized difference
n (%)	108,548 (69%)	47,681 (31%)	N/A
Age (years)	63 ± 15	63 ± 16	0.00
Female (%)	44	42	-0.03
Race (%)			0.22
Caucasian	47	61	
African American	32	23	
Hispanics	15	11	
Asians	3	3	
Others	4	3	
Insurance (%)			0.16
Medicare	54	48	
Medicaid	7	6	
Others	39	46	
Access Type (%)			0.27
Central venous catheter	75	71	
AV Fistula	15	13	
AV Graft	4	3	
AV Other	0.1	0.1	
Unknown	6	13	
Body Mass Index (kg/m^2)	26.7 (23.0, 31.8)	26.9 (23.0, 32.2)	0.03
Single-pool Kt/v	1.47 ± 0.32	1.44 ± 0.43	-0.08
Normalized PCR (g/kg/day)	0.77 (0.64, 0.92)	0.67 (0.51, 0.84)	-0.44
Co-morbidities (%)			
Hypertension	51	44	-0.15
Diabetes	59	44	-0.28
Dyslipidemia	25	22	-0.09
Atherosclerotic heart disease	14	12	-0.06
Congestive heart failure	37	22	-0.33
Other cardiac disease	15	13	-0.07
Cerebrovascular disease	2	1	-0.04
Cancer	2	2	0.01
COPD	5	4	-0.05
HIV/AIDS	0.5	0.4	-0.01
Liver Disease	1	2	0.02
Alcohol	0.2	0.3	0.01
Substance Abuse	0.2	0.2	-0.01
Laboratory variables			
Hemoglobin (g/dl)	11.1 ± 1.2	10.6 ± 1.4	-0.41
WBC ($x10^3/mm^3$)	7.5 (6.1, 9.1)	8.0 (6.3, 10.1)	0.21

Neutrophil ($x10^3/mm^3$)	5.1 (4.0, 6.4)	5.6 (4.2, 7.3)	0.24
Lymphocyte ($x10^3/mm^3$)	1.4 (1.1, 1.8)	1.3 (0.9, 1.7)	-0.21
Platelet ($x10^3/mm^3$)	249 (199, 307)	243 (182, 312)	-0.07
Albumin (g/dl)	3.5 ± 0.5	3.4 ± 0.6	-0.22
Creatinine (g/dl)	5.9 ± 2.4	5.3 ± 2.5	-0.25
Calcium (mg/dl)	9.1 ± 0.6	9.1 ± 0.7	0.01
Phosphorus (mg/dl)	4.9 ± 1.1	4.6 ± 1.3	-0.24
Intact PTH (pg/ml)	314 (197, 486)	271 (153, 450)	-0.20
Alkaline Phosphatase (IU/L)	87 (69, 115)	88 (68, 120)	0.03
TIBC (mg/dl)	225 ± 49	217 ± 58	-0.14
Iron Saturation (%)	23±9	31±15	0.03
Ferritin (ng/ml)	282 (164, 484)	325 (175, 607)	0.16
Bicarbonate (mEq/l)	23.6 ± 2.7	24.0 ± 3.1	0.13

Note: Values are expressed as mean±SD, median (IQR), or percentage, appropriately. Differences in patient characteristics between two groups were compared by standardized difference, of which 0.8, 0.5, and 0.2 in absolute value were considered large, medium, and small differences, respectively. Abbreviations: COPD, chronic obstructive pulmonary disease; Human Immunodeficiency Virus; AIDS, acquired immune deficiency syndrome; WBC, white blood cell; PTH, parathyroid hormone; TIBC, total iron binding capacity. Conversion factors for units: albumin and hemoglobin in g/dL to g/L, 10; creatinine in mg/dL to mmol/L, 88.4; calcium in mg/dL to mmol/L, 0.2495; phosphorus in mg/dL to mmol/L, 0.3229. No conversion is necessary for ferritin in ng/mL and mg/L.

Supplemental Table 2. Characteristics of 108,548 incident hemodialysis patients stratified by neutrophil-to-lymphocyte ratio.

	Neutrophil-to-Lymphocyte Ratio						P_{trend}
	<2.0	2.0 - <3.0	3.0 - <4.0	4.0 - <5.0	5.0 - <6.0	≥6.0	
n (%)	10,399 (10%)	26,084 (24%)	26,490 (24%)	18,303 (17%)	11,284 (10%)	15,988 (15%)	N/A
Age (years)	59 ± 16	61 ± 15	62 ± 15	64 ± 15	65 ± 14	66 ± 14	<0.001
Female (%)	46	45	44	43	42	42	<0.001
Race (%)							
Caucasian	30	37	44	51	56	65	<0.001
African American	51	39	31	27	23	19	<0.001
Hispanics	14	17	17	15	14	10	<0.001
Asians	2	3	4	3	3	3	0.83
Others	3	4	4	4	4	3	<0.001
Insurance (%)							
Medicare	50	51	53	55	57	57	<0.001
Medicaid	9	8	7	7	6	5	<0.001
Others	41	41	40	39	37	37	<0.001
Access Type (%)							
Central venous catheter	67	72	75	77	78	80	<0.001
AV Fistula	19	17	15	14	13	11	<0.001
AV Graft	6	5	4	4	3	3	<0.001
AV Other	0.1	0.1	0.1	0.1	0.1	0.0	0.001
Unknown	8	6	6	5	5	6	<0.001
Body Mass Index (kg/m^2)	26.6 (23.1, 31.7)	27.0 (23.2, 32.1)	26.8 (23.0, 31.8)	26.7 (23.0, 31.9)	26.4 (22.7, 31.7)	26.1 (22.4, 31.2)	<0.001
Single-pool Kt/v	1.47 ± 0.33	1.47 ± 0.33	1.47 ± 0.32	1.47 ± 0.32	1.46 ± 0.32	1.46 ± 0.33	0.002
NPCR (g/kg per day)	0.75 (0.62, 0.89)	0.77 (0.64, 0.91)	0.77 (0.64, 0.92)	0.77 (0.64, 0.92)	0.77 (0.64, 0.93)	0.77 (0.64, 0.93)	<0.001
Co-morbidities (%)							
Hypertension	55	53	52	50	50	48	<0.001
Diabetes	54	58	60	60	60	57	<0.001
Dyslipidemia	25	25	25	25	26	26	0.17
Atherosclerotic heart disease	13	13	15	15	16	16	<0.001
Congestive heart failure	33	35	37	38	39	39	<0.001
Other cardiac disease	12	14	15	16	17	18	<0.001

Cerebrovascular disease	1	2	2	2	2	2	0.029
Cancer	2	2	2	2	2	4	<0.001
COPD	4	4	5	6	6	7	<0.001
HIV	1.8	0.6	0.3	0.3	0.3	0.3	<0.001
Liver Disease	1	1	1	2	2	2	<0.001
Alcohol	0.3	0.3	0.2	0.2	0.2	0.2	0.39
Substance Abuse	0.5	0.3	0.2	0.1	0.2	0.1	<0.001
Laboratory variables							
Hemoglobin (g/dl)	11.3 ± 1.2	11.2 ± 1.2	11.2 ± 1.2	11.1 ± 1.2	11.0 ± 1.2	10.8 ± 1.2	<0.001
WBC ($x10^3/mm^3$)	6.3 (5.1, 7.6)	6.9 (5.7, 8.2)	7.4 (6.1, 8.8)	7.9 (6.5, 9.4)	8.1 (6.8, 9.7)	8.9 (7.3, 10.8)	<0.001
Neutrophil ($x10^3/mm^3$)	3.4 (2.7, 4.1)	4.3 (3.6, 5.2)	5.0 (4.2, 6.0)	5.7 (4.7, 6.8)	6.1 (5.0, 7.3)	7.0 (5.7, 8.5)	<0.001
Lymphocyte ($x10^3/mm^3$)	2.1 (1.7, 2.6)	1.7 (1.4, 2.1)	1.5 (1.2, 1.8)	1.3 (1.1, 1.6)	1.2 (0.9, 1.4)	0.9 (0.7, 1.2)	<0.001
Platelet ($x10^3/mm^3$)	241 (193, 298)	249 (202, 304)	250 (201, 306)	251 (201, 311)	252 (198, 312)	247 (193, 313)	<0.001
Albumin (g/dl)	3.6 ± 0.5	3.6 ± 0.5	3.5 ± 0.5	3.5 ± 0.5	3.4 ± 0.5	3.4 ± 0.5	<0.001
Creatinine (g/dl)	6.4 ± 2.6	6.2 ± 2.5	6.0 ± 2.4	5.7 ± 2.3	5.5 ± 2.2	5.3 ± 2.1	<0.001
Calcium (mg/dl)	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	<0.001
Phosphorus (mg/dl)	4.9 ± 1.1	5.0 ± 1.1	5.0 ± 1.1	4.9 ± 1.1	4.9 ± 1.2	4.8 ± 1.2	<0.001
iPTH (pg/ml)	335 (207, 522)	334 (211, 521)	323 (203, 499)	308 (195, 472)	295 (189, 453)	277 (174, 425)	<0.001
Alkaline Phosphatase (IU/L)	84 (67, 110)	85 (67, 111)	86 (68, 113)	88 (70, 116)	89 (71, 120)	91 (71, 125)	<0.001
TIBC (mg/dl)	233 ± 50	231 ± 47	227 ± 47	224 ± 49	220 ± 49	212 ± 51	<0.001
Iron Saturation (%)	31±15	31±22	31±29	31±36	31±43	31±50	<0.001
Ferritin (ng/ml)	269 (158, 463)	261 (153, 439)	270 (157, 456)	284 (166, 488)	302 (173, 511)	341 (195, 604)	<0.001
Bicarbonate (mEq/l)	23.5 ± 2.7	23.5 ± 2.7	23.5 ± 2.7	23.6 ± 2.7	23.7 ± 2.8	23.8 ± 2.8	<0.001

Note: Values are expressed as mean±SD, median (IQR), or percentage, appropriately. Abbreviations: COPD, chronic obstructive pulmonary disease; Human Immunodeficiency Virus; AIDS, acquired immune deficiency syndrome; WBC, white blood cell; PTH, parathyroid hormone; TIBC, total iron binding capacity. Conversion factors for units: albumin and hemoglobin in g/dL to g/L, 10; creatinine in mg/dL to mmol/L, 88.4; calcium in mg/dL to mmol/L, 0.2495; phosphorus in mg/dL to mmol/L, 0.3229. No conversion is necessary for ferritin in ng/mL and mg/L.

Supplemental Table 3. Characteristics of 108,548 incident hemodialysis patients stratified by platelet-to-lymphocyte ratio.

	Platelet-to-Lymphocyte Ratio						P_{trend}
	<100	100 - <150	150 - <200	200 - <250	250 - <300	≥300	
n (%)	9,426 (9%)	27,097 (25%)	29,298 (27%)	19,512 (18%)	10,649 (10%)	12,566 (12%)	N/A
Age (years)	64 ± 15	62 ± 16	62 ± 15	63 ± 15	63 ± 15	63 ± 15	0.79
Female (%)	45	45	44	43	43	42	<0.001
Race (%)							
Caucasian	46	44	45	47	49	53	<0.001
African American	32	32	32	32	31	30	0.003
Hispanics	15	17	16	14	13	11	<0.001
Asians	4	4	3	3	3	2	<0.001
Others	3	4	4	4	4	3	<0.001
Insurance (%)							
Medicare	55	53	53	54	54	54	0.72
Medicaid	8	7	7	7	7	6	<0.001
Others	37	39	40	40	39	40	0.037
Access Type (%)							
Central venous catheter	73	73	74	76	77	78	<0.001
AV Fistula	14	16	16	15	14	13	<0.001
AV Graft	5	5	4	4	3	3	<0.001
AV Other	0.1	0.1	0.1	0.1	0.0	0.1	0.25
Unknown	7	6	6	6	5	6	<0.001
Body Mass Index (kg/m^2)	26.5 (22.9, 31.7)	27.1 (23.3, 32.3)	26.9 (23.1, 32.0)	26.6 (23.0, 31.7)	26.3 (22.8, 31.3)	25.8 (22.2, 30.5)	<0.001
Single-pool Kt/v	1.48 ± 0.33	1.47 ± 0.33	1.47 ± 0.32	1.47 ± 0.33	1.46 ± 0.32	1.46 ± 0.33	<0.001
NPCR (g/kg per day)	0.75 (0.62, 0.90)	0.77 (0.65, 0.92)	0.77 (0.65, 0.92)	0.77 (0.64, 0.92)	0.76 (0.64, 0.91)	0.76 (0.63, 0.91)	0.058
Co-morbidities (%)							
Hypertension	51	52	51	52	51	49	<0.001
Diabetes	54	58	59	60	60	57	<0.001
Dyslipidemia	25	25	25	25	26	25	0.86
Atherosclerotic heart disease	14	14	14	15	15	15	0.004
Congestive heart failure	35	36	37	38	38	38	<0.001

Other cardiac disease	14	15	15	16	16	16	<0.001
Cerebrovascular disease	2	2	2	2	2	2	0.12
Cancer	3	2	2	2	3	3	<0.001
COPD	5	5	5	5	5	6	<0.001
HIV	1.0	0.5	0.4	0.4	0.3	0.6	<0.001
Liver Disease	3	2	1	1	1	1	<0.001
Alcohol	0.3	0.2	0.2	0.2	0.2	0.2	0.41
Substance Abuse	0.4	0.2	0.2	0.3	0.3	0.2	0.30
Laboratory variables							
WBC ($x10^3/mm^3$)	7.7 (6.3, 9.4)	7.6 (6.3, 9.1)	7.4 (6.1, 9.0)	7.4 (6.0, 8.9)	7.3 (5.9, 9.0)	7.4 (5.9, 9.3)	<0.001
Neutrophil ($x10^3/mm^3$)	4.7 (3.6, 5.9)	4.9 (3.9, 6.1)	5.1 (4.0, 6.3)	5.2 (4.1, 6.5)	5.4 (4.2, 6.8)	5.7 (4.3, 7.2)	<0.001
Lymphocyte ($x10^3/mm^3$)	2.1 (1.6, 2.6)	1.8 (1.5, 2.1)	1.5 (1.2, 1.8)	1.3 (1.1, 1.5)	1.1 (0.9, 1.3)	0.9 (0.7, 1.1)	<0.001
Hemoglobin (g/dl)	11.2 ± 1.3	11.3 ± 1.1	11.2 ± 1.1	11.0 ± 1.2	10.9 ± 1.1	10.7 ± 1.2	<0.001
Platelet ($x10^3/mm^3$)	167 (125, 210)	219 (179, 262)	251 (208, 298)	275 (227, 328)	293 (242, 351)	317 (254, 388)	<0.001
Albumin (g/dl)	3.5 ± 0.5	3.6 ± 0.5	3.5 ± 0.5	3.5 ± 0.5	3.5 ± 0.5	3.4 ± 0.5	<0.001
Creatinine (g/dl)	5.9 ± 2.3	6.0 ± 2.4	5.9 ± 2.4	5.8 ± 2.3	5.7 ± 2.3	5.5 ± 2.3	<0.001
Calcium (mg/dl)	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	9.1 ± 0.6	0.70
Phosphorus (mg/dl)	4.8 ± 1.1	4.9 ± 1.2	5.0 ± 1.2	5.0 ± 1.1	4.9 ± 1.1	4.8 ± 1.2	0.060
Intact PTH (pg/ml)	297 (183, 469)	321 (204, 496)	325 (203, 500)	314 (200, 487)	304 (193, 473)	290 (178, 454)	<0.001
Alkaline Phosphatase (IU/L)	90 (69, 119)	86 (69, 112)	86 (68, 112)	87 (69, 115)	88 (69, 116)	90 (70, 124)	<0.001
TIBC (mg/dl)	224 ± 52	228 ± 47	227 ± 48	225 ± 48	223 ± 50	214 ± 51	<0.001
Iron Saturation (%)	31±15	31±22	31±29	31±36	31±43	31±50	<0.001
Ferritin (ng/ml)	306 (179, 539)	273 (160, 457)	271 (159, 460)	278 (159, 473)	288 (166, 503)	324 (182, 573)	<0.001
Bicarbonate (meq/l)	23.5 ± 2.7	23.5 ± 2.7	23.6 ± 2.7	23.6 ± 2.7	23.7 ± 2.7	23.8 ± 2.7	<0.001

Note: Values are expressed as mean±SD, median (IQR), or percentage, appropriately. Abbreviations: COPD, chronic obstructive pulmonary disease; Human Immunodeficiency Virus; AIDS, acquired immune deficiency syndrome; WBC, white blood cell; PTH, parathyroid hormone; TIBC, total iron binding capacity. Conversion factors for units: albumin and hemoglobin in g/dL to g/L, 10; creatinine in mg/dL to mmol/L, 88.4; calcium in mg/dL to mmol/L, 0.2495; phosphorus in mg/dL to mmol/L, 0.3229. No conversion is necessary for ferritin in ng/mL and mg/L.

Supplemental Table 4. Case-mix adjusted associations of baseline laboratory parameters with high neutrophil-to-lymphocyte ratio (NLR; ≥4.0 vs. <4.0) and platelet-to-lymphocyte ratio (PLR; ≥200 vs. <200) among 108,548 incident hemodialysis patients.

	NLR ≥4.0 (vs. <4.0)		PLR ≥200 (vs. <200)	
	OR (95% CI)	*P*	OR (95% CI)	*P*
WBC (per x10^3/μL)	1.30 (1.29, 1.31)	<0.001	0.97 (0.97, 0.98)	<0.001
Hemoglobin (per 1 g/dL)	0.81 (0.80, 0.82)	<0.001	0.78 (0.78, 0.79)	<0.001
Albumin (per 0.1 g/dL)	0.95 (0.94, 0.95)	<0.001	0.97 (0.97, 0.97)	<0.001
Creatinine (per 1 g/dL)	0.94 (0.93, 0.95)	<0.001	0.95 (0.95, 0.96)	<0.001
Calcium (per 0.1 mg/dL)	0.99 (0.99, 1.00)	<0.001	1.00 (1.00, 1.00)	0.079
Phosphorus (per 1 mg/dL)	0.94 (0.93, 0.95)	<0.001	1.00 (0.99, 1.01)	0.55
Intact PTH				
<150 pg/mL	*Reference*		*Reference*	
150 - 300 pg/mL	1.00 (0.96, 1.04)	0.98	0.97 (0.93, 1.00)	0.084
300 - 600 pg/mL	0.92 (0.89, 0.96)	<0.001	0.93 (0.90, 0.96)	<0.001
≥600 pg/mL	0.84 (0.80, 0.88)	<0.001	0.91 (0.87, 0.95)	<0.001
Alkaline phosphatase (per 10 IU/L)	1.02 (1.02, 1.02)	<0.001	1.01 (1.01, 1.01)	<0.001
Iron Saturation (per 1%)	0.98 (0.98, 0.98)	<0.001	0.97 (0.97, 0.97)	<0.001
TIBC (per 10 mg/dL)	0.95 (0.95, 0.96)	<0.001	0.98 (0.98, 0.98)	<0.001
Ferritin				
<150 ng/mL	*Reference*		*Reference*	
150 - 300 ng/mL	1.10 (1.06, 1.14)	<0.001	0.95 (0.92, 0.98)	0.003
300 - 600 ng/mL	1.25 (1.21, 1.30)	<0.001	1.01 (0.98, 1.05)	0.46
≥600 ng/mL	1.73 (1.66, 1.80)	<0.001	1.13 (1.09, 1.17)	<0.001
Bicarbonate (per 1 mEq/L)	1.01 (1.00, 1.01)	0.002	1.02 (1.01, 1.02)	<0.001

Each OR is estimated from a separate regression, adjusted for case-mix characteristics including baseline age, sex, race/ethnicity, primary insurance, vascular access type, comorbidities, and single-pool Kt/V. Abbreviations: WBC, white blood cell; PTH, parathyroid hormone; TIBC, total iron binding capacity.

Supplemental Table 5. Hazard ratios for all-cause mortality of neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) with three-level hierarchical adjustments.

	Baseline model			Time-varying model		
	Unadjusted	Case-mix adjusted	MICS adjusted	Unadjusted	Case-mix adjusted	MICS adjusted
NLR						
<2.0	0.91 (0.87 - 0.96)	0.97 (0.92 - 1.02)	0.95 (0.90 - 1.00)	0.78 (0.73 - 0.83)	0.84 (0.79 - 0.89)	0.90 (0.83 - 0.97)
2.0 - <3.0	Reference	Reference	Reference	Reference	Reference	Reference
3.0 - <4.0	1.23 (1.19 - 1.28)	1.16 (1.12 - 1.20)	1.11 (1.07 - 1.15)	1.48 (1.41 - 1.55)	1.36 (1.29 - 1.42)	1.17 (1.10 - 1.24)
4.0 - <5.0	1.52 (1.47 - 1.58)	1.35 (1.30 - 1.40)	1.24 (1.20 - 1.29)	2.16 (2.06 - 2.27)	1.83 (1.74 - 1.93)	1.39 (1.31 - 1.48)
5.0 - <6.0	1.83 (1.75 - 1.90)	1.53 (1.47 - 1.60)	1.36 (1.30 - 1.42)	3.28 (3.11 - 3.45)	2.63 (2.49 - 2.77)	1.74 (1.63 - 1.86)
≥6.0	2.46 (2.37 - 2.56)	1.94 (1.87 - 2.02)	1.57 (1.51 - 1.64)	6.29 (6.03 - 6.57)	4.54 (4.34 - 4.75)	2.38 (2.25 - 2.52)
PLR						
<100	1.28 (1.22 - 1.34)	1.21 (1.15 - 1.26)	1.12 (1.07 - 1.17)	1.41 (1.35 - 1.48)	1.39 (1.32 - 1.46)	1.26 (1.19 - 1.34)
100 - <150	Reference	Reference	Reference	Reference	Reference	Reference
150 - <200	1.05 (1.02 - 1.09)	1.05 (1.01 - 1.09)	1.02 (0.98 - 1.05)	1.30 (1.24 - 1.35)	1.21 (1.16 - 1.26)	1.10 (1.05 - 1.16)
200 - <250	1.15 (1.11 - 1.19)	1.12 (1.08 - 1.16)	1.05 (1.01 - 1.09)	1.76 (1.69 - 1.84)	1.52 (1.45 - 1.59)	1.16 (1.10 - 1.23)
250 - <300	1.32 (1.27 - 1.38)	1.25 (1.20 - 1.31)	1.12 (1.07 - 1.17)	2.36 (2.24 - 2.49)	1.88 (1.78 - 1.98)	1.25 (1.18 - 1.34)
≥300	1.56 (1.50 - 1.62)	1.43 (1.37 - 1.48)	1.14 (1.10 - 1.19)	4.02 (3.85 - 4.21)	2.95 (2.82 - 3.09)	1.47 (1.39 - 1.56)

MICS, malnutrition-inflammation-cachexia complex syndrome

Supplemental Table 6. Reclassification table for predicting 1-year mortality from the models with and without serum albumin in addition to the case-mix variables, at arbitrary cutoff values of 10%, 15%, and 20%.

Case-mix variables without serum albumin	**Serum albumin as a new predictor in addition to case-mix variables**				
Event	<10%	10-15%	15-20%	≥20%	Total
<10%	1,927	562	215	194	2,898
10-15%	731	1,086	632	631	3,080
15-20%	172	679	705	1,210	2,766
≥20%	21	259	705	4,129	5,114
Total	2,851	2,586	2,257	6,164	13,858
No Event					
<10%	40,960	3,988	1,045	628	46,621
10-15%	9,591	6,957	2,690	1,741	20,979
15-20%	1,783	4,612	3,233	3,058	12,686
≥20%	181	1,753	3,165	9,305	14,404
Total	52,515	17,310	10,133	14,732	94,690

Supplemental Table 7. Reclassification table for predicting 1-year mortality from the models with and without serum alkaline phosphatase (ALP) in addition to the case-mix variables, at arbitrary cutoff values of 10%, 15%, and 20%.

Case-mix variables without serum ALP	**Serum ALP as a new predictor in addition to case-mix variables**				
Event	<10%	10-15%	15-20%	≥20%	Total
<10%	2,536	269	42	51	2,898
10-15%	323	2,256	378	123	3,080
15-20%	0	395	1,900	471	2,766
≥20%	0	0	396	4,718	5,114
Total	2,859	2,920	2,716	5,363	13,858
No Event					
<10%	44,559	1,720	166	176	46,621
10-15%	3,409	15,769	1,398	403	20,979
15-20%	0	2,631	8,836	1,219	12,686
≥20%	0	0	1,786	12,618	14,404
Total	47,968	20,120	12,186	14,416	94,690

Supplemental Table 8. Reclassification table for predicting 1-year mortality from the models with and without neutrophil-to-lymphocyte ratio (NLR) in addition to the case-mix variables, at arbitrary cutoff values of 10%, 15%, and 20%.

Case-mix variables without NLR	**Serum NLR as a new predictor in addition to case-mix variables**				
Event	<10%	10-15%	15-20%	≥20%	Total
<10%	2,302	460	108	28	2,898
10-15%	643	1,529	576	332	3,080
15-20%	13	783	1,077	893	2,766
≥20%	0	59	821	4,234	5,114
Total	2,958	2,831	2,582	5,487	13,858
No Event					
<10%	42,788	3,230	471	132	46,621
10-15%	6,726	10,754	2,548	951	20,979
15-20%	80	5,185	4,840	2,581	12,686
≥20%	0	363	3,536	10,505	14,404
Total	49,594	19,532	11,395	14,169	94,690

Supplemental Table 9. Reclassification table for predicting 1-year mortality from the models with and without platelet-to-lymphocyte ratio (PLR) in addition to the case-mix variables, at arbitrary cutoff values of 10%, 15%, and 20%.

Case-mix variables without PLR	**Serum PLR as a new predictor in addition to case-mix variables**				
Event	<10%	10-15%	15-20%	≥20%	Total
<10%	2,669	226	3	0	2,898
10-15%	250	2,443	369	18	3,080
15-20%	0	321	2,061	384	2,766
≥20%	0	0	348	4,766	5,114
Total	2,919	2,990	2,781	5,168	13,858
No Event					
<10%	44,814	1,784	23	0	46,621
10-15%	2,168	17,081	1,675	55	20,979
15-20%	0	1,807	9,512	1,367	12,686
≥20%	0	0	1,323	13,081	14,404
Total	46,982	20,672	12,533	14,503	94,690

Supplemental Table 10. Reclassification table for predicting 1-year mortality from the models with and without serum alkaline phosphatase (ALP) in addition to the case-mix variables and serum albumin, at arbitrary cutoff values of 10%, 15%, and 20%.

Case-mix variables and serum albumin without serum ALP	**Serum ALP as a new predictor in addition to case-mix variables and serum albumin**				
Event	<10%	10-15%	15-20%	≥20%	Total
<10%	2,660	172	5	14	2,851
10-15%	164	2,130	238	54	2,586
15-20%	0	229	1,739	289	2,257
≥20%	0	0	266	5,898	6,164
Total	2,824	2,531	2,248	6,255	13,858
No Event					
<10%	51,263	1,099	87	66	52,515
10-15%	1,777	14,436	918	179	17,310
15-20%	0	1,428	7,933	772	10,133
≥20%	0	0	1,057	13,675	14,732
Total	53,040	16,963	9,995	14,692	94,690

Supplemental Table 11. Reclassification table for predicting 1-year mortality from the models with and without neutrophil-to-lymphocyte ratio (NLR) in addition to the case-mix variables and serum albumin, at arbitrary cutoff values of 10%, 15%, and 20%.

Case-mix variables and serum albumin without NLR	**Serum NLR as a new predictor in addition to case-mix variables and serum albumin**				
Event	<10%	10-15%	15-20%	≥20%	Total
<10%	2,402	381	60	8	2,851
10-15%	425	1,516	437	208	2,586
15-20%	1	574	1,031	651	2,257
≥20%	0	14	613	5,537	6,164
Total	2,828	2,485	2,141	6,404	13,858
No Event					
<10%	49,575	2,663	246	31	52,515
10-15%	4,504	10,183	2,084	539	17,310
15-20%	6	3,584	4,610	1,933	10,133
≥20%	0	98	2,628	12,006	14,732
Total	54,085	16,528	9,568	14,509	94,690

Supplemental Table 12. Reclassification table for predicting 1-year mortality from the models with and without neutrophil-to-lymphocyte ratio (NLR) in addition to the case-mix variables and serum albumin, at arbitrary cutoff values of 10%, 15%, and 20%.

Case-mix variables and serum albumin without PLR	**Serum PLR as a new predictor in addition to case-mix variables and serum albumin**				
Event	<10%	10-15%	15-20%	≥20%	Total
<10%	2,723	128	0	0	2,851
10-15%	118	2,267	200	1	2,586
15-20%	0	185	1,886	186	2,257
≥20%	0	0	192	5,972	6,164
Total	2,841	2,580	2,278	6,159	13,858
No Event					
<10%	51,495	1,020	0	0	52,515
10-15%	1,092	15,319	894	5	17,310
15-20%	0	916	8,487	730	10,133
≥20%	0	0	748	13,984	14,732
Total	52,587	17,255	10,129	14,719	94,690

Supplemental Figure 1. Cohort construction

