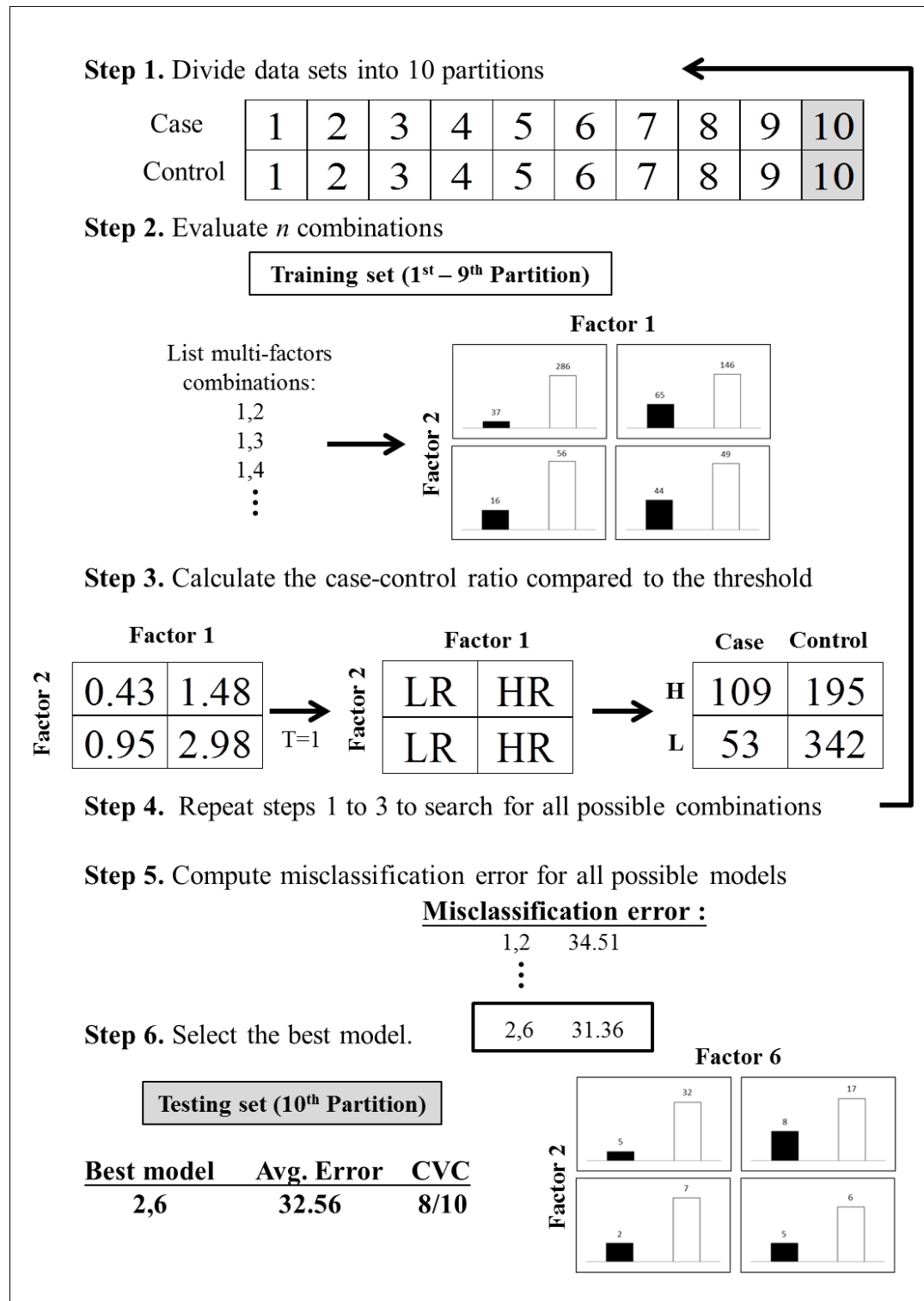


# Supplementary materials

Supplementary Figure S1. MDR-based MDR-ER flowchart.



Supplementary Table S1. Clinical characteristic distribution according to the overall survival status in hemodialysis patients.

Variables	Mortality (-)		Mortality (+)		P*
	n	%	n	%	
Sex					0.544
Male	272	45.41	78	42.86	
Female	327	54.59	104	57.14	
DM					< 0.001
No	481	80.3	115	63.19	
Yes	118	19.7	67	36.81	
Age (years)					< 0.001
< 61.59	381	63.61	60	32.97	
≥ 61.59	218	36.39	122	67.03	
Hemodialysis vintage (years)					0.804
< 7.49	379	63.27	117	64.29	
≥ 7.49	220	36.73	65	35.71	
Hemoglobin (Hgb, g/dL)					< 0.001
< 10.48	260	43.41	114	62.64	
≥ 10.48	339	56.59	68	37.36	
White blood cell (WBC, 10 <sup>3</sup> /μL)					0.177
< 6.19	366	61.10	101	55.49	
≥ 6.19	233	38.90	81	44.51	
Platelet (10 <sup>3</sup> /μL)					0.637
< 195	341	56.93	100	54.95	
≥ 195	258	43.07	82	45.05	
Albumin (g/dL)					< 0.001
≥ 3.76	428	71.45	66	36.26	
< 3.76	171	28.55	116	63.74	
Ferritin (Fe, ng/cc)					0.001
< 415.48	319	53.26	71	39.01	
≥ 415.48	280	46.74	111	60.99	
Blood urea nitrogen (BUN, mg/dL)					0.079
< 68.77	278	46.41	98	53.85	
≥ 68.77	321	53.59	84	46.15	
Creatinine (Cr, mg/dL)					< 0.001
≥ 10.65	330	55.09	58	31.87	
< 10.65	269	44.91	124	68.13	
Potassium (K, meq/L)					0.045
< 5	314	52.42	80	43.96	
≥ 5	285	47.58	102	56.04	
Corrected serum calcium (Ca, mg/dL)					0.368
< 9.53	319	53.26	90	49.45	
≥ 9.53	280	46.74	92	50.55	
Phosphorus (P, mg/dL)					0.158
< 5	309	51.59	83	45.60	
≥ 5	290	48.41	99	54.40	
Urea Reduction Ratio (URR)					0.056
< 0.74	245	40.90	89	48.90	
≥ 0.74	354	59.10	93	51.10	
Kt/V urea-Daugirdas score					0.004
< 1.7	286	47.75	65	35.71	
≥ 1.7	313	52.25	117	64.29	
Cardiothoracic ratio (CT ratio)					< 0.001
< 0.51	386	64.44	74	40.66	
≥ 0.51	213	35.56	108	59.34	
Parathyroid hormone (PTH, pg/mL)					0.129
< 402.06	371	61.94	124	68.13	
≥ 402.06	228	38.06	58	31.87	

\*P-value were estimated from  $\chi^2$  test.

Supplementary Table S2. Dichotomize values of the continuous spectrum according to different statistical inferences.

Variables	K-means	Median	Mean
Age	61.59	59.00	59.29
Hemodialysis vintage	7.49	4.84	6.27
Hemoglobin (Hgb)	10.48	10.54	10.61
White blood cell (WBC)	6.90	5.90	6.19
Platelet	195.00	190.00	192.87
Albumin	3.76	3.85	3.82
Ferritin (Fe)	478.92	415.48	452.21
Blood urea nitrogen (BUN)	68.77	69.40	69.91
Creatinine (Cr)	10.31	10.65	10.72
Potassium (K)	4.90	5.00	4.94
Corrected serum calcium (Ca)	9.53	9.46	9.50
Phosphorus (P)	4.98	5.00	5.04
URR	0.74	0.75	0.75
Kt/v	1.67	1.66	1.70
Cardiothoracic (CT) ratio	0.51	0.50	0.50
Parathyroid hormone (PTH)	404.58	277.82	402.06

Supplementary Table S3. Dichotomous results of the continuous spectrum using ROC analysis.

Variables	Methods	AUC*	95% CI	
Age	K-means	<b>0.653</b>	0.61	0.69
	Median	0.651	0.61	0.69
	Mean	0.646	0.61	0.68
Hemodialysis vintage	K-means	0.438	0.4	0.48
	Median	0.417	0.38	0.46
	Mean	<b>0.444</b>	0.4	0.48
Hemoglobin (Hgb)	K-means	<b>0.404</b>	0.36	0.44
	Median	0.402	0.36	0.44
	Mean	0.403	0.36	0.44
White blood cell (WBC)	K-means	0.476	0.44	0.51
	Median	0.482	0.44	0.52
	Mean	<b>0.489</b>	0.45	0.53
Platelet	K-means	<b>0.472</b>	0.43	0.51
	Median	0.464	0.42	0.51
	Mean	0.469	0.43	0.51
Albumin	K-means	<b>0.676</b>	0.64	0.72
	Median	0.651	0.61	0.69
	Mean	0.668	0.63	0.71
Ferritin (Fe)	K-means	0.555	0.51	0.6
	Median	<b>0.571</b>	0.53	0.61
	Mean	0.565	0.52	0.61
Blood urea nitrogen (BUN)	K-means	<b>0.463</b>	0.42	0.5
	Median	0.460	0.42	0.5
	Mean	0.457	0.42	0.5
Creatinine (Cr)	K-means	0.385	0.34	0.43
	Median	<b>0.387</b>	0.35	0.43
	Mean	0.385	0.35	0.42
Potassium (K)	K-means	0.443	0.4	0.48
	Median	<b>0.458</b>	0.42	0.5
	Mean	0.455	0.41	0.5
Corrected serum calcium (Ca)	K-means	<b>0.519</b>	0.48	0.56
	Median	0.513	0.47	0.55
	Mean	0.517	0.47	0.56
Phosphorus (P)	K-means	0.470	0.43	0.51
	Median	<b>0.470</b>	0.43	0.51
	Mean	0.467	0.43	0.51
URR	K-means	<b>0.453</b>	0.41	0.49
	Median	0.450	0.41	0.49
	Mean	0.450	0.41	0.49
Kt/v	K-means	0.549	0.51	0.59
	Medians	0.556	0.52	0.6
	Mean	<b>0.560</b>	0.52	0.6
Cardiothoracic (CT) ratio	K-means	<b>0.619</b>	0.58	0.66
	Median	0.612	0.57	0.65
	Mean	0.611	0.57	0.65
Parathyroid hormone (PTH)	K-means	0.467	0.43	0.51
	Median	0.464	0.42	0.51
	Mean	<b>0.469</b>	0.43	0.51

Bold font indicates the best AUC estimated from ROC analysis.