

Supplemental Table 1: Univariate analysis for AVF dysfunction

Covariate	HR(95%CI)	P-value
age,y	1.0009 (0.9897,1.0122)	0.881
sex	1.24 (0.94,1.62)	0.122
DM	0.91 (0.63,1.3)	0.596
IJVC	0.56 (0.41,0.76)	<0.001
Smoke	1.02 (0.71,1.47)	0.904
SIRI	1.0056 (0.9841,1.0276)	0.636
PLR	1 (0.9986,1.0014)	0.975
MLR	2.01 (1.57,2.57)	<0.001
NLR	1.0028 (0.9831,1.0229)	0.789
MPV,fL	1.01 (0.905,1.1066)	0.848
RDW,fL	1.06 (0.99,1.13)	0.073
monocyte, $\times 10^9$ /L	1.3 (0.76,2.22)	0.336
Hb,g/L	1.0023 (0.9948,1.0098)	0.549
CRP,ug/L	1.0049 (1.0008,1.0089)	0.018
Alb,g/L	1.01 (0.98,1.04)	0.441
triglycerides,mmol/L	0.9 (0.77,1.05)	0.172
cholesterol,mmol/L	0.96 (0.87,1.06)	0.374
Ca,mmol/L	1.07 (0.63,1.81)	0.799
P,mmol/L	0.93 (0.75,1.16)	0.536
Mg,mmol/L	1.8 (0.49,2.81)	0.714
CAR	1.18 (1.03,1.36)	0.019

Abbreviations: HR: hazard ratios, CI: confidence interval, MLR: monocyte-to-lymphocyte ratio, MPV: Mean platelet volume, RDW: Red blood cell distribution width, Hb: Hemoglobin, Alb: albumin, Ca: calcium, P: phosphorus, Mg: magnesium, SIRI: systemic inflammation response index, PLR: platelet-to-lymphocyte ratio, CRP: C reactive protein, IJVC: internal jugular vein catheters, AVF: arteriovenous fistula, CAR: C-reactive protein to albumin ratio.

Supplemental Table 2: Distributions of variables with missing data comparing observed complete case data to results from pooling the datasets with imputed variables from multiple imputation

	Number (%) with missing data	Complete case Mean (SD)	Multiple imputation Mean (SD)
triglycerides	41(5.9)	1.4(1.0)	1.4(1.1)
cholesterol	41(5.9)	4.1(2.1)	4.1(2.1)

Abbreviations: CRP: C reactive protein, Alb: albumin, P: phosphorus, Mg: magnesium

Supplemental Table 3: Complete dataset and multiple imputation datasets unadjusted and confounder adjusted associations of CAR with AVF dysfunction

Variable	Complete dataset		Multiple imputation datasets	
	HR 95%CI	P-Value	HR 95%CI	P-Value
CAR	1.28 (1.06,1.53)	0.009	1.28 (1.06,1.53)	0.008
CAR(Tertiles)				
Low	1(Ref)		1(Ref)	
Medium	1.05 (0.72,1.54)	0.800	1.12 (0.77,1.62)	0.56
High	1.76 (1.21,2.57)	0.003	1.76 (1.21,2.55)	0.003
P for trend	0.001		0.002	

Adjusted for age, sex, smoke, IJVC, DM, MPV, RDW, monocyte, Hb, Ca, P, Mg, SIRI, PLR, NLR, MLR, triglycerides, cholesterol.

CAR (Tertiles): Low: $CAR < 0.035$, Medium: $0.035 \leq CAR < 0.146$, High: $CAR \geq 0.146$.

Abbreviations: HR: hazard ratios, CI: confidence interval, MLR: monocyte-to-lymphocyte ratio, MPV: Mean platelet volume, RDW: Red blood cell distribution width, Hb: Hemoglobin, Ca: calcium, P: phosphorus, Mg: magnesium, SIRI: systemic inflammation response index, PLR: platelet-to-lymphocyte ratio, IJVC: internal jugular vein catheters, AVF: arteriovenous fistula, CAR: C-reactive protein to albumin ratio.