

Table1. Clinical features of COVID-19 cases

Clinic Characteristics		Total Data (n=196)		
		Mean (SD)	Severity of COVID-19	
			Mild-Moderate	Severe-Critically Severe
Gender	(Male/Female)	67/129	27/63	40/66
Age	(Years old)	57.74 (15.87)	45.28 (10.33)	64.21 (14.33)
Blood	WBC (1 \times 10 ⁹ /L)	6.75 (3.49)	5.84(2.30)	7.23 (3.89)
	LYMC (1 \times 10 ⁹ /L)	1.12(0.58)	1.46(0.55)	0.94(0.51)
Routine	LYMPH (%)	19.91(11.52)	27.00 (11.07)	16.23 (9.96)
Test	NEUT (1 \times 10 ⁹ /L)	5.13(3.46)	3.85 (2.07)	5.79 (3.85)
Results	NEU (%)	71.34(15.24)	62.27 (16.27)	76.05(12.32)
	NLR	7.45 (13.08)	3.07 (2.27)	9.72 (15.57)

WBC: White Blood Cell Count, LYMC: Lymphocyte Count, LYMPH: Lymphocyte Ratio , NEUT: Neutrophil Count, NEU: Neutrophil Ratio, NLR: Neutrophil to Lymphocyte Ratio.

Table2. The joint significance of clinical characteristics

Clinic Characteristics	Estimate	Std. Error	z Value	P value
(Intercept)	-9.55	10.90	-0.88	0.38
Gender	0.76	0.54	1.42	0.16
Age	0.13	0.03	4.97	0.00 ***
WBC	0.61	2.10	0.29	0.77
LYMC	-0.54	2.60	-0.21	0.83
LYMPH	-0.06	0.14	-0.42	0.67
NEUT	-0.74	2.24	-0.33	0.74
NEU	0.06	0.11	0.57	0.57
NLR	0.04	0.16	0.22	0.83

WBC: White Blood Cell Count, LYMC: Lymphocyte Count, LYMPH: Lymphocyte Ratio , NEUT: Neutrophil Count, NEU: Neutrophil Ratio, NLR: Neutrophil to Lymphocyte Ratio.

Significant: '***' p < 0.001, '**' p < 0.01, '*' p < 0.05

Table3. Dispersion analysis of clinical characteristics

Clinic Characteristics	Df	Deviance resid	Df	resid. Dev	P value
NULL			156	202.10	
Gender	1	0.23	155	201.87	0.63
Age	1	63.55	154	138.32	0.00 ***
WBC	1	7.20	153	131.12	0.01 **
LYMC	1	15.65	152	115.47	0.00 ***
LYMPH	1	4.95	151	110.52	0.03 *
NEUT	1	0.29	150	110.23	0.59
NEU	1	0.38	149	109.86	0.54
NLR	1	0.06	148	109.79	0.80

WBC: White Blood Cell Count, LYMC: Lymphocyte Count, LYMPH: Lymphocyte Ratio , NEUT: Neutrophil Count, NEU: Neutrophil Ratio, NLR: Neutrophil to Lymphocyte Ratio.

Significant: '***' p < 0.001, '**' p < 0.01, '*' p < 0.05

Table 4. The joint significance of different subsets

Predicting Subset		Estimate	Std. Error	z Value	P value	
{Age}	(Intercept)	-5.48631	1.07496	-5.104	3.33E-07	***
	Age	0.11369	0.02024	5.617	1.95E-08	***
{Age, WBC, LYMC, LYMPH}	(Intercept)	-4.42541	1.80268	-2.455	0.0141	*
	Age	0.11312	0.02317	4.881	1.06E-06	***
	WBC	0.19011	0.17528	1.085	0.2781	
	LYMC	-1.42146	0.86853	-1.637	0.1017	*
	LYMPH	-0.02125	0.05182	-0.41	0.6818	
{Age, WBC, LYMC}	(Intercept)	-4.86915	1.46638	-3.321	0.000898	***
	Age	0.11255	0.02304	4.885	1.04E-06	***
	WBC	0.25167	0.09816	2.564	0.010351	*
	LYMC	-1.73006	0.45065	-3.839	0.000124	***

WBC: White Blood Cell Count, LYMC: Lymphocyte Count, LYMPH: Lymphocyte Ratio, NEUT: Neutrophil Count, NEU: Neutrophil Ratio, NLR: Neutrophil to Lymphocyte Ratio.

Significant: '***' $p < 0.001$, '**' $p < 0.01$, '*' $p < 0.05$