Supplementary Table 1. Correlation of HBP levels with cytokines and pulmonary function

	HBP	
	r	P-Value
Inflammation		
IL-2	0.22	0.310
IL-4	0.17	0.442
IL-6	0.69	0.000
IL-10	0.70	0.000
TNF-a	0.27	0.214
IFN-r	0.01	0.964
PCT	0.71	0.001
CRP	0.39	0.005
Pulmonary ventilation		
PH	-0.03	0.718
PaCO2	-0.03	0.744
PaO2	-0.09	0.279
SaO2	-0.04	0.657
PA-aO2	0.27	0.001
Qsp	0.20	0.010
ABE	-0.04	0.628
SBE	-0.04	0.582
Spiro-index	0.31	0.001
OI	-0.28	0.001

Supplementary Table 2. Blood clotting index analysis in the clinical stable and aggravation periods

	Clinical Stable period	&HBP P	Aggravation period	&HBP P	*Difference	*P
PT	14.60(14.20, 15.10)	0.333	15.00(14.40, 15.60)	0.022	0.40	0.134
PA	83.00(76.00, 88.00)	0.251	78.00(72.00, 85.00)	0.021	-5.00	0.145
Fibrinogen	2.98(2.44, 4.05)	0.438	2.50(2.04, 3.30)	0.849	-0.48	0.338
APTT	45.50(40.40, 49.80)	0.025	48.17(41.70, 54.80)	0.036	0.40	0.036
TT	17.60(16.70, 19.50)	0.675	17.50(16.60, 19.30)	0.407	-0.10	0.946
D-Dimer	2439.00(791.00, 6667.00)	0.025	4682.00(604.50, 5988.00)	0.017	2243.00	<0.001

PT: Prothrombin time; PA: Prothrombin activity; APTT: Activated partial thromboplastin time; TT: Thrombin time; &HBP: HBP relative to the left-hand column; *comparison of SARS-CoV-2 infection in remission-vs-recurrence.

Supplementary Table 3. Myocardial index in the clinical stable and aggravation periods

	Clinical Stable period	&HBP P	Aggravation Recurrence	&HBP P	*Difference	*P
AST	38.50(29.13, 51.68)	0.024	49.25(37.55, 65.53)	0.031	10.75	<0.001
CK	53.00(33.85, 80.70)	0.046	98.15(22.83, 214.90)	0.007	45.15	<0.001
CK-MB	7.00(6.00, 9.00)	0.409	8.50(5.00, 10.00)	0.361	0.5	0.027
cTnI	0.02(0.01, 0.06)	0.017	0.05(0.02, 0.07)	0.024	0.03	0.029
Mb	69.45(42.63, 158.10)	0.031	186.30(125.90, 312.20)	0.004	116.85	<0.001

AST: Aspartate Aminotransferase; CK: Creatine kinase; CK-MB: Creatine kinase isoenzymes; cTnI: cardiac troponin I; Mb: myoglobin. &HBP: HBP compared to the left-hand column. * comparison of SARS-CoV-2 infection in remission-vs-at recurrence.

Supplementary Table 4 Renal function test index

	Clinical Stable period	&HBP P	Aggravation Recurrence	&HBP P	*Difference	*P
BUN	10.45(7.38, 13.93)	<0.001	11.60(8.35, 12.25)	0.006	1.15	<0.001
Cr	76.50(48.68, 99.35)	0.034	90.15(54.55, 146.40)	0.015	13.65	<0.001
K^+	4.14(3.88, 4.54)	0.902	4.19(4.02, 4.38)	0.712	0.05	0.884

BUN: Blood urea nitrogen.

Supplementary Table 5 The nucleic acid test results in the severe COVID-19 patients*

Addmission Time, Days	5	10	15	20	25	30	35	40	45	50
Throat Swab	6[67%], 0, 3[33%]	10[77%], 0, 4[33%]	9[38%], 1[4%], 14[58%]	6[67%], 0, 3[33%]	0, 0, 1[100%]	0	0	0	0	0
Nose Swab	5[83%], 0, 1[17%]	4[80%], 0, 1[20%]	3[38%], 0, 5[62%]	2[100%], 0, 0	1[100%], 0, 0	0, 0, 1[100%]	0, 0, 1[100%]	0	0	0
Nasopharyngeal Swab	4[57%], 1[14%], 2[29%]	5[50%], 1[10%], 4[40%]	5[24%], 0, 5[76%]	8[73%], 0, 3[27%]	4[57%], 3[43%], 0	23[56%], 1[2%], 17[42%]	20[59%], 2[6%], 12[56%]	20[77%], 0, 6[23%]	14[78%], 0, 4[22%]	12[29%], 6[15%], 23[56%]
Tears Swab	5[100%], 0, 0	0, 0, 2[100%]	1[33%], 1[33%], 1[33%]	0, 0, 1[100%]	0, 1[100%], 0	0, 0, 2[100%]	0, 0, 2[100%]	0, 0, 3[100%]	0,	0, 0, 2[100%]
Crissum	0, 0, 3[100%]	0, 0, 1[100%]	2[33%], 1[17%], 3[50%]	0, 0, 2[100%]	2[29%], 1[14%], 4[57%]	6[32%], 2[10%], 11[58%]	5[45%], 0, 6[55%]	4[44%], 0, 5[56%]	4[80%], 0, 1[20%]	3[25%], 0, 9[75%]
Phlegm	13[87%], 0, 2[13%]	13[68%], 3[16%], 3[16%]	25[61%], 13[32%], 3[7%]	17[74%], 0, 6[26%]	2[40%], 1[20%], 2[40%]	6[33%], 2[11%], 10[56%]	6[43%], 0, 8[57%]	5[33%], 0, 10[67%]	2[22%], 1[11%], 6[67%]	2[8%], 1[4%], 23[88%]
Deep Phlegm	2[100%], 0, 0	2[100%], 0, 0	3[75%], 0, 1[15%]	1[100%], 0, 0	0, 0, 1[100%]	0, 0, 3[100%]	0, 0, 1[100%]	0, 0, 3[100%]	0, 0, 2[100%]	0, 0, 3[100%]
Plasma	3[50%], 2[33%], 1[17%]	1[14%], 0, 6[86%]	0, 0, 2[100%]	1[17%], 0, 5[83%]	0, 0, 3[100%]	2[50%], 0, 2[50%]	0, 0, 1[100%]	1[33%], 1[33%], 1[33%]	5[71%], 0, 2[29%]	3[30%], 0, 7[70%]
Gastric Juice	3[43%], 0, 4[57%]	1[14%], 0, 6[86%]	3[33%], 0, 6[67%]	1[50%], 0, 1[50%]	1[100%], 0, 0	1[33%], 0, 2[67%]	1[50%], 0, 1[50%]	0	0	0
Urine	1[10%], 0, 9[90%]	0, 0, 4[100%]	2[33%], 0, 4[67%]	0, 0, 1[100%]	0, 0, 1[100%]	0	0	0	0	0
Feces	3[43%], 1[14%], 3[43%]	3[43%], 0, 4[57%]	10[59%], 0, 7[41%]	7[70%], 1[10%], 2[20%]	4[57%], 0[14%], 2[29%]	12[75%], 0, 4[25%]	7[54%], 1[8%], 5[58%]	2[20%], 0, 8[80%]	0, 0, 3[100%]	0, 3[30%], 7[70%]%]

* N[%]: RNA test, Positive/Suspicious positive/Negative