

**Supplementary Data for**

**Comparative and kinetic analysis of viral shedding and immunological responses in MERS patients representing a broad spectrum of disease severity**

Chan-Ki Min<sup>1,2,\*</sup>, Shinye Cheon<sup>3,\*</sup>, Na-Young Ha<sup>1,2,\*</sup>, Kyung Mok Sohn<sup>3,\*</sup>, Yuri Kim<sup>1,2</sup>, Abdimadiyeva Aigerim<sup>1,2</sup>, Hyun Mu Shin<sup>1,2</sup>, Ji-Yeob Choi<sup>2,4</sup>, Kyung-Soo Inn<sup>5</sup>, Jin-Hwan Kim<sup>6</sup>, Jae Young Moon<sup>7</sup>, Myung-Sik Choi<sup>1</sup>, Nam-Hyuk Cho<sup>1,2,8,†</sup> and Yeon-Sook Kim<sup>3,†</sup>

<sup>1</sup>Department of Microbiology and Immunology, Seoul National University College of Medicine, Seoul, Republic of Korea. <sup>2</sup>Department of Biomedical Sciences, Seoul National University College of Medicine, Seoul, Republic of Korea. <sup>3</sup>Division of Infectious Diseases, Department of Internal Medicine, Chungnam National University School of Medicine, Daejeon, Republic of Korea. <sup>4</sup>Cancer Research Institute, Seoul National University College of Medicine, Seoul, Republic of Korea, <sup>5</sup>Department of Pharmaceutical Science, College of Pharmacy, Kyung Hee University, Seoul, Republic of Korea, <sup>6</sup>Department of Radiology, Chungnam National University School of Medicine, Daejeon, Republic of Korea. <sup>7</sup>Division of Pulmonology and Critical Care Medicine, Department of Internal Medicine, Chungnam National University School of Medicine, Daejeon, Republic of Korea. <sup>8</sup>Institute of Endemic Disease, Seoul National University Medical Research Center and Bundang Hospital, Seoul, Republic of Korea.

**Supplementary Fig. S1. Schematic diagram of epidemiological and clinical courses of MERS patients included in this study.**

**Supplementary Fig. S2. Determination of antibody titers of secretory IgA in respiratory samples.** Since there were no negative samples, cut-off values (mean optical densities  $\pm 3 \times$  S.D.) were determined by using the OD values of baselines ( $> 1: 6400$  diluted samples).

**Supplementary Fig. S3. Kinetic responses of cytokines in MERS patients.** Kinetic responses of cytokines not included in Fig. 6 and showed significant upregulation in any of the clinical groups are presented. All these data values are included in Supplementary Table 3. The concentrations of the cytokines are presented in pg/ml. \*: data point is out of x-axis range.

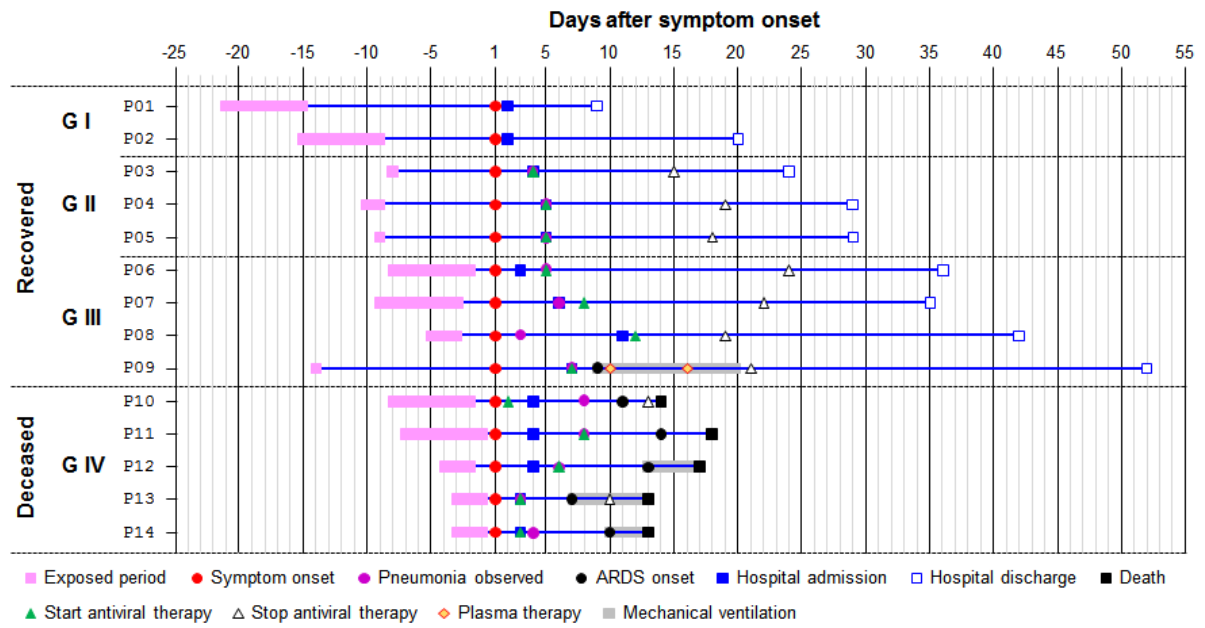
**Supplementary Table S1. Laboratory data for fourteen MERS patients included in this study.** Summary of data from each patient on admission and at acute phase.

**Supplementary Table S2. Summary of anti-viral therapy applied to MERS patients.**

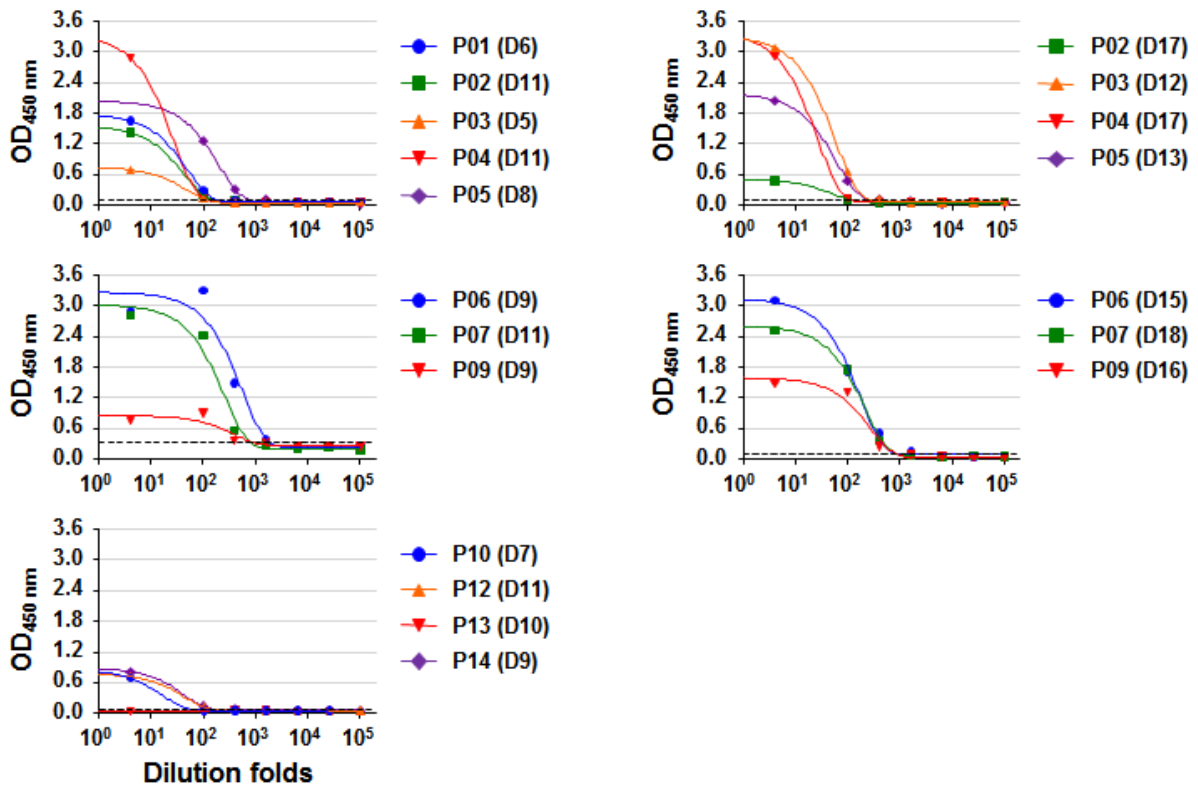
**Supplementary Table S3. Kinetic changes in leukocyte and platelet counts in MERS patients.**

**Supplementary Table S4. Kinetic responses of 39 cytokines, chemokines, and growth factors in MERS patients.**

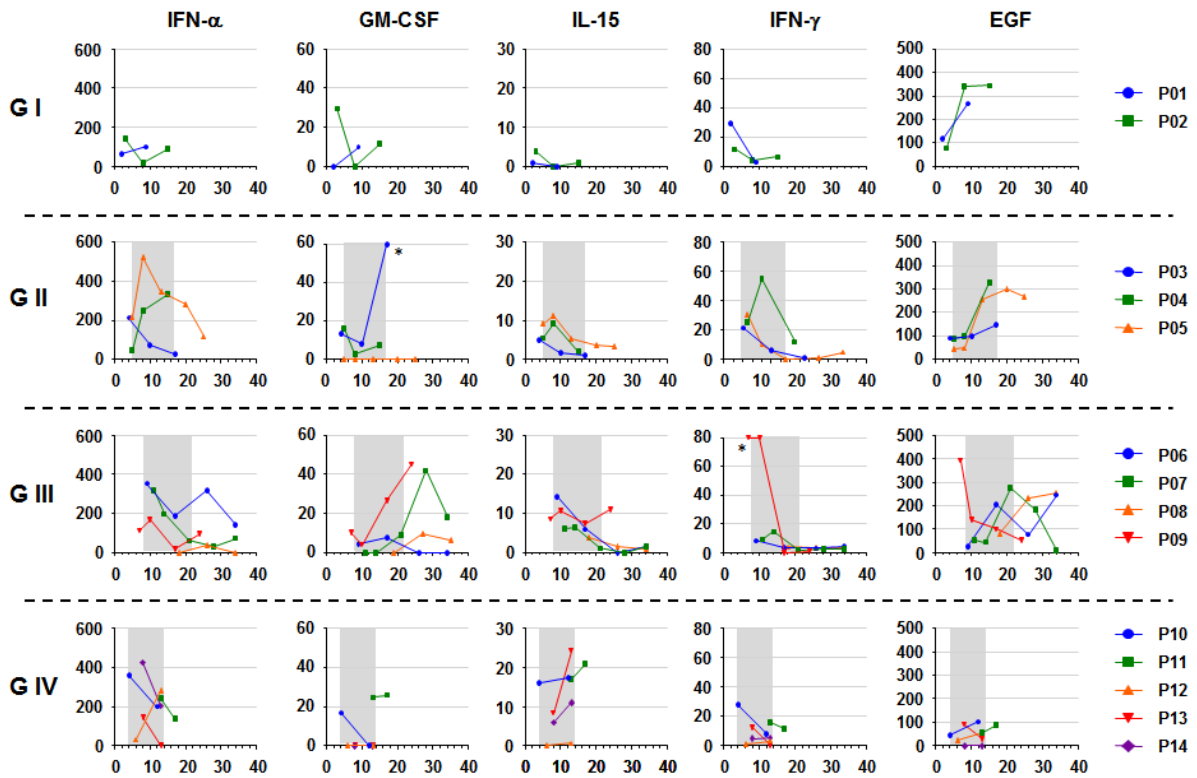
**Supplementary Table S5. Hazards ratios and 95% confidence intervals of mortality according to the virological and immunological factors.**



**Supplementary Fig. S1. Schematic diagram of epidemiological and clinical courses of MERS patients included in this study.**



**Supplementary Fig. S2. Determination of antibody titers of secretory IgA in respiratory samples.** Since there were no negative samples, cut-off values (mean optical densities  $\pm 3 \times$  S.D.) were determined by using the OD values of baselines ( $> 1: 6400$  diluted samples).



**Supplementary Fig. S3. Kinetic responses of cytokines in MERS patients.** Kinetic responses of cytokines not included in Fig. 6 and showed significant upregulation in any of the clinical groups are presented. All these data values are included in Supplementary Table 3. The concentrations of the cytokines are presented in pg/ml. \*: data point is out of y-axis range.

**Supplementary Table S1. Laboratory data for fourteen MERS patients included in this study.** Summary of data from each patient on admission and at acute phase.

Group	Patient's ID	Group I				Group II				Group III				Group IV				Normal range			
		P01	P02	Average		P03	P04	P05	Average	P06	P07	P08	P09	Average	P10	P11	P12		P13	P14	Average
On admission	Days after symptom onset	D2	D2	4550	D4	D5	D5	3300	D3	D6	D12	D7	Average	D4	D5	D4	D3	D3	D3	Average	3800 - 10000 1000 - 4000 20 - 51 150 - 450 135 - 175 8 - 20 0.8 - 1.2 4.0 - 5.0 0 - 0.05 0 - 37 200 - 400 30 - 110 22 - 51
	Leucocyte (cells/ $\mu$ L)	4200	4900	4550	1800	4700	3400	3300	2240	2000	1910	4100	2633	3600	6740	7000	5500	8400	8400	6248	
	Lymphocyte (cells/ $\mu$ L)	1200	1600	1400	800	1200	600	867	510	600	630	600	585	800	1190	1900	200	300	300	878	
	Lymphocyte (%)	28.6	32.7	30.6	44.4	25.5	17.6	29.2	22.8	30.0	33.0	14.6	25.1	22.2	17.6	27.1	3.6	3.5	3.5	14.8	
	Platelet (cells $\times 10^3/\mu$ L)	145	166	156	140	257	175	191	118	131	155	165	142	135	233	184	189	111	185	170	
	Hemoglobin (g/L)	138	127	133	136	117	126	126	129	120	132	115	124	128	121	143	120	143	120	126	
	BUN (mg/dl)	10	18	14	5	8	5	6	9	12	12	13	12	11	17	9	20	21	21	16	
	Cr (mg/dl)	0.86	0.56	0.81	0.45	0.49	0.56	0.50	0.67	0.67	0.77	0.56	0.67	0.88	0.97	0.88	1.16	1.16	1.19	0.98	
	Albumin (g/dl)	3.6	3.5	3.6	3.9	3.1	3.1	3.4	3.3	3.3	3.5	3.1	2.6	3.1	3.4	3.2	2.3	2.6	2.5	2.7	
	CRP (mg/dl)	0.5	2.7	1.6	0.5	15.1	4.7	6.8	0.05	0.05	0.7	1.5	16.9	5.7	0.5	0.7	0.5	0.7	0.5	6.2	
	Procalcitonin (ng/ml)	-	-	-	0.05	-	-	0.05	0.05	0.05	-	0.34	0.89	0.43	-	0.74	0.07	-	0.52	0.44	
	AST (U/L)	27	13	20	16	25	105	49	42	42	52	231	31	89	27	41	16	16	21	55	
	ALT (U/L)	13	12	13	10	16	68	31	16	16	25	159	15	46	12	28	29	10	16	19	
	LDH (U/L)	691	270	481	523	488	705	565	430	613	1587	530	790	384	384	328	419	419	452	390	
Amylase (U/L)	43	62	53	38	33	74	46	60	66	754	39	235	68	66	78	136	136	53	80		
Lipase (U/L)	35	26	31	34	28	41	34	27	27	967	37	265	42	40	35	29	29	19	33		
Proteinuria	-	trace	-	-	1+	1+	-	-	trace	3+	-	-	trace	-	-	-	-	1+	-		
Arterial blood gas values																					
pH	ND*	ND	ND	ND	7.40	ND	7.40	7.40	7.40	ND	7.50	7.42	7.44	ND	7.40	7.40	7.34	7.43	7.39	7.35 - 7.45	
pCO <sub>2</sub> (mmHg)	ND	ND	ND	ND	36.0	ND	36.0	36.0	40.0	ND	28.0	28.0	31.3	ND	38.0	33.0	30.0	28.0	31.8	32.0 - 45.0	
pO <sub>2</sub> (mmHg)	ND	ND	ND	ND	73.0	ND	73.0	73.0	92.0	ND	68.0	85.3	85.3	ND	87.0	74.0	97.0	56.0	78.5	75.0 - 100.0	
HCO <sub>3</sub> (mmol/L)	ND	ND	ND	ND	22.3	ND	22.3	22.3	24.8	ND	20.3	18.2	21.1	ND	24.0	21.9	16.6	17.3	20.0	19 - 24	
O <sub>2</sub> saturation (%)	ND	ND	ND	ND	94.0	ND	94.0	94.0	97.0	ND	98.0	94.0	96.3	ND	97.0	95.0	97.0	95.0	96.0	96 - 97	
Acute phase																					
Days after symptom onset	ND	ND	ND	D5	D8	D8	3533	D6	D18	D12	D9	Average	D13	D18	D17	D13	D13	D13	Average	11300	
Leucocyte (cells/ $\mu$ L)	1600	5300	3700	1600	900	400	633	3000	1600	1400	8140	3535	5600	13800	11700	15800	9800	9800	11300		
Lymphocyte (cells/ $\mu$ L)	600	900	400	37.5	17.0	10.8	21.8	500	200	500	400	400	200	400	500	200	200	100	280		
Lymphocyte (%)	37.5	17.0	10.8	21.8	16.7	12.5	35.7	16.7	12.5	35.7	4.9	17.4	3.6	2.9	4.3	1.3	1.3	1.0	2.6		
Platelet (cells $\times 10^3/\mu$ L)	140	322	228	140	322	228	220	88	81	163	346	170	146	66	41	66	74	94	84		
Hemoglobin (g/L)	136	114	116	136	114	116	122	131	114	134	114	123	128	113	130	126	126	115	122		
BUN (mg/dl)	ND	ND	ND	5	6	6	6	11	8	12	6	9	14	51	21	58	61	61	41		
Cr (mg/dl)	ND	0.45	0.51	0.45	0.49	0.58	0.51	0.88	0.60	0.55	0.57	0.63	0.73	1.34	0.60	1.00	1.51	1.04	1.04		
Albumin (g/dl)	ND	3.8	3.1	3.8	3.1	2.8	3.2	2.7	3.0	3.1	3.0	3.0	2.3	2.8	2.1	2.5	2.5	2.9	2.5		
CRP (mg/dl)	ND	0.5	9.6	0.5	9.6	9.8	6.6	2.1	1.2	1.0	8.1	3.1	12.9	13.4	6.7	10.2	5.5	5.5	9.7		
Procalcitonin (ng/ml)	ND	-	-	-	-	-	-	-	-	-	56	56	-	-	-	-	-	-	-		
AST (U/L)	ND	14	17	14	17	79	37	141	49	242	79	128	110	77	39	88	88	35	70		
ALT (U/L)	ND	11	14	11	14	55	27	107	30	137	90	83	67	14	13	60	60	31	37		
LDH (U/L)	ND	384	448	384	448	786	539	74	400	1844	596	979	1003	1054	820	1241	1241	776	979		
Amylase (U/L)	ND	41	37	41	37	108	62	53	59	715	76	226	98	279	36	567	393	393	275		
Lipase (U/L)	ND	42	32	42	32	69	48	36	32	844	48	240	41	179	27	338	338	19	121		
Proteinuria	-	-	1+	-	-	1+	-	3+	1+	3+	2+	-	1+	2+	2+	1+	1+	1+	-		
Arterial blood gas values																					
pH	ND	ND	7.41	ND	ND	7.41	7.41	7.41	ND	7.50	7.43	7.45	7.45	7.09	7.43	7.08	7.18	7.18	7.25		
pCO <sub>2</sub> (mmHg)	ND	ND	33.0	ND	ND	33.0	33.0	23.3	ND	28.0	13.0	20.8	29.0	67.0	58.0	95.0	59.0	59.0	61.6		
pO <sub>2</sub> (mmHg)	ND	ND	75.0	ND	ND	75.0	75.0	84.0	ND	96.0	71.0	83.7	42.0	46.0	85.0	43.0	35.0	35.0	50.2		
HCO <sub>3</sub> (mmol/L)	ND	ND	21.9	ND	ND	21.9	21.9	22.2	ND	20.3	19.5	20.7	20.2	20.3	38.5	28.2	22.0	22.0	25.8		
O <sub>2</sub> saturation (%)	ND	ND	95.0	ND	ND	95.0	95.0	96.0	ND	98.0	95.0	96.3	80.0	63.0	97.0	57.0	50.0	50.0	69.4		

**Supplementary Table S2. Summary of anti-viral therapy applied to MERS patients.**

Anti-viral Therapy**	Patient's ID.													
	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	P13	P14
Pegylated IFN- $\alpha$	-	-	D4 <sup>†</sup> , D11	D6, D13	D5, D12	D5, D12, D19	D8, D15	D12, D19	D7, D14	D9	D8, D15	D6, D13	D3, D10	D4, D10
Ribavirin	-	-	D4 ~ D15	D6 ~ D18	D5 ~ D18	D5 ~ D24	D8 ~ D21	D12 ~ D19	D7 ~ D13	D4 ~ D13	D6 ~ D17	D6 ~ D17	D3 ~ D7	D3 ~ D13
lopinavir/ritonavir	-	-	D4 ~ D15	D6 ~ D18	D5 ~ D18	-	D8 ~ D13	-	D7 ~ D22	D4 ~ D13	D8 ~ D17	D6 ~ D17	D8 ~ D13	D8 ~ D13
Anti-viral plasma**	-	-	-	-	-	-	-	-	D10, D16	-	-	-	-	-

<sup>†</sup> Days after symptom onset.

\*\* IFN- $\alpha$ 2a (180  $\mu$ g/week); Ribavirin (400 – 1200 mg, three times a day); lopinavir/ritonavir (400/100 mg PO every 12h)

\*\*\* anti-S1 IgG level: 3.97 unit/ml

Supplementary Table S3. Kinetic changes in leukocyte and platelet counts in MERS patients.

Patient's ID.	Days after symptom onset	Normal range																			
		2	3	4	8																
P01	Hb (g/dl)	13.8	13.5	14.3	14.1																
	PLT (x 10 <sup>3</sup> /μl)	145	159	155	305																
	WBC (μl)	4200	4300	5100	7300																
	neutrophil (μl)	2356	2498	3254	4424																
	lymphocyte (μl)	1193	1195	1244	2132																
	monocyte (μl)	592	559	520	642																
	neutrophils (%)	56.1	58.1	64.4	60.6																
lymphocytes (%)	28.4	27.8	24.4	29.2																	
monocytes (%)	14.1	13	10.2	8.8																	
P02	Days after symptom onset																				
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				
	Hb (g/dl)	12.7	13.4	13	12.9	12	11.8	12.1	12	13.6	12.6	12.1									
	PLT (x 10 <sup>3</sup> /μl)	166	188	201	203	223	231	262	280	312	294	280									
	WBC (μl)	4900	5200	5500	4700	4800	4500	5200	6000	7120	7000	5600									
	neutrophil (μl)	2818	2980	3427	2491	2654	2448	2881	3600	4286	4767	3517									
	lymphocyte (μl)	1632	1804	1639	1814	1829	1625	1830	1794	2342	1736	1635									
monocyte (μl)	328	281	297	244	245	239	265	312	292	280	241										
neutrophils (%)	57.5	57.3	62.3	53	53.2	54.4	55.4	60	60.2	68.1	62.8										
lymphocytes (%)	33.3	34.7	29.8	38.6	38.1	36.1	35.2	29.9	32.9	24.8	29.2										
monocytes (%)	6.7	6.4	6.4	6.2	5.1	5.3	5.1	5.2	4.1	5.1	4.3										
P03	Days after symptom onset																				
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					
	Hb (g/dl)	13.6	13.8	13.6	13.3	13.1	13.4	12.9	12.4	12.4	12.1	12.8	12.9	12.3	12.7	11.7					
	PLT (x 10 <sup>3</sup> /μl)	140	128	123	134	160	201	230	278	331	399	427	440	456	493	428					
	WBC (μl)	1600	1600	9900	8220	5300	2700	2700	2400	2200	3700	3500	2900	2800	3200	3000					
	neutrophil (μl)	639	611	3583	6732	4060	1658	1787	1274	1210	2279	2170	1572	1590	1776	1526					
	lymphocyte (μl)	903	846	1000	1192	954	772	581	732	755	858	816	902	893	1085	1092					
monocyte (μl)	148	130	317	288	265	251	302	346	165	463	448	377	269	310	242						
neutrophils (%)	46.6	38.2	86.7	81.9	76.6	61.4	66.2	53.1	55	61.6	62	54.2	96.8	55.5	54.2						
lymphocytes (%)	44.6	52.9	10.1	14.5	18	28.6	21.5	30.5	34.3	23.2	23.3	31.1	31.9	33.9	36.4						
monocytes (%)	8.2	8.1	3.2	3.5	5.3	9.3	11.2	14.4	7.5	12.5	12.8	13	9.6	9.7	8.1						
P04	Days after symptom onset																				
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	22	24				
	Hb (g/dl)	11.7	11.4	10.9	11.4	11.2	11.3	11.5	11.6	10.8	11.3	10.6	10.9	10.7	10.8	10.1	10.1				
	PLT (x 10 <sup>3</sup> /μl)	257	322	330	343	427	457	525	493	502	405	385	332	328	278	257	217				
	WBC (μl)	4700	4300	4300	4300	4600	4800	4000	3200	4300	4400	4100	3600	4200	4000	3900	3600				
	neutrophil (μl)	3304	3297	3682	4737	2594	2486	1692	966	2189	2270	2189	1193	1202	1256	1300	1259	1040			
	lymphocyte (μl)	1161	1489	941	980	1490	1819	1844	1840	1733	1694	1427	2464	2027	2482	2248	2193	2149			
monocyte (μl)	207	445	499	415	432	365	372	346	292	326	373	332	270	332	308	269	234				
neutrophils (%)	70.3	62.2	70.8	76.4	56.4	51.8	42.2	30.2	50.9	51.5	53.4	31.1	33.4	29.9	32.5	33.3	28.9				
lymphocytes (%)	24.7	28.1	18.1	15.8	32.4	37.9	46.1	67.5	40.3	38.5	34.8	60.1	65.3	69.1	66.2	65.2	59.7				
monocytes (%)	4.4	8.4	9.6	6.7	9.4	7.6	9.3	10.8	6.8	7.4	9.1	8.1	7.5	7.9	7.7	6.9	6.5				
P05	Days after symptom onset																				
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	22	24				
	Hb (g/dl)	12.6	11.7	11.6	11.6	12.6	12.2	12.2	11.8	11.5	11.6	12	11	11.6	10.6	10.7	10.8	9.8			
	PLT (x 10 <sup>3</sup> /μl)	175	149	204	222	371	371	385	401	425	458	389	330	331	420	416	356				
	WBC (μl)	3400	4400	3700	4400	4800	4000	3800	4350	3900	3800	2800	3300	2600	3100	3400	3400	3100			
	neutrophil (μl)	2615	3480	2738	3705	3917	3260	2820	2984	2968	2827	1722	2241	1342	860	1309	1649	1593			
	lymphocyte (μl)	561	576	692	466	552	504	657	835	445	509	633	627	660	1646	1482	1221	1026			
monocyte (μl)	211	354	252	207	149	212	300	492	417	398	400	393	572	552	575	473	446				
neutrophils (%)	76.9	79.1	74	84.2	81.6	81.6	74.2	68.6	76.1	74.4	61.6	67.9	51.6	28.4	38.5	48.5	50.1				
lymphocytes (%)	16.5	13.1	18.7	10.6	11.5	12.6	17.3	19.2	11.4	13.4	22.6	19	25.4	53.1	43.6	35.9	33.1				
monocytes (%)	6.2	7.6	6.8	4.7	3.1	5.3	7.9	11.3	10.7	10.2	14.3	11.9	22	17.8	16.9	13.9	14.4				
P06	Days after symptom onset																				
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	22	24	27		
	Hb (g/dl)	12.9	14	14	13.9	13.9	13.1	13.7	14.1	12.8	12.7	12.5	12.2	11.9	11.6	11	11	12.1	11.1		
	PLT (x 10 <sup>3</sup> /μl)	118	99	90	77	76	88	103	122	123	131	139	146	155	99	108	126	102	138		
	WBC (μl)	2240	3000	1700	10000	8700	3000	1400	14200	10000	4800	2800	2300	3100	1900	1400	4800	2400	2800		
	neutrophil (μl)	1496	1424	923	9050	8004	2328	720	13618	9190	3898	1814	1463	1721	1032	706	3950	1471	1145		
	lymphocyte (μl)	511	688	559	620	513	468	494	525	630	566	566	481	694	496	374	379	410	1014		
monocyte (μl)	199	184	113	174	149	150	13	153	133	122	128	138	138	340	301	461	494	468			
neutrophils (%)	66.8	61.9	54.3	90.5	92	77.6	51.4	95.9	91.9	81.2	64.8	63.6	55.5	54.3	50.4	82.3	61.3	40.9			
lymphocytes (%)	22.8	29.9	32.9	6.2	5.9	15.6	35.3	3.7	6.3	11.8	20.2	20.9	22.4	26.1	26.7	7.9	17.1	36.2			
monocytes (%)	7.1	8	12.5	3.3	2	6.3	11.8	0.3	1.5	6.7	14.2	14.7	20.5	17.9	21.5	9.6	20.6	16.7			
P07	Days after symptom onset																				
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	23	25	27	30	33	
	Hb (g/dl)	12	11.3	11.4	11.4	11.9	12.6	12.8	11.3	12.8	13.6	10.9	10.1	9.5	8.1	10.2	10.4	11.5	10.9	11.4	11.2
	PLT (x 10 <sup>3</sup> /μl)	131	83	81	88	100	126	138	117	106	120	187	211	251	315	377	417	419	358	311	253
	WBC (μl)	2000	1600	1600	1700	1500	2400	1800	1800	1900	1600	2700	2300	2080	1600	1900	2400	2300	2400	2500	2380
	neutrophil (μl)	1208	779	846	981	1000	948	1483	1354	1549	1245	2138	1757	1387	707	874	1027	906	986	1233	1031
	lymphocyte (μl)	642	661	638	533	564	629	434	395	268	334	422	437	528	661	676	1026	1051	903	990	
monocyte (μl)	150	118	107	80	128	60	120	106	143	110	159	147	227	240	327	439	331	326	298	309	
neutrophils (%)	60.4	48.7	52.9	61.3	58.8	63.2	76.8	75.2	81.5	77.8	79.2	76.4	66.7	44.2	46	42.8	39.4	41.1	49.3	43.3	
lymphocytes (%)	32.1	43.2	39.9	33.3	33.2	32.6	18.1	18.6	10.9	15	14.7	16.6	21.1	39.1	34.8	36.5	44.6	44.2	36.1	41.6	
monocytes (%)	7.5	7.4	6.7	5.5	5.4	5.3	5.9	2.5	6.9	5.3	6.4	10.9	9.5	16	17.2	18.3	14.4	13.6	11.9	13	
P08	Days after symptom onset																				
	12	13	14	15	16	17	18	19	20	21	22	23	28								
	Hb (g/dl)	13.2	13.7	12.1	12.9	12.9	13	13.2	12.4	12.5	12.3	12.7	11.7	12.3							
	PLT (x 10 <sup>3</sup> /μl)	155	167	179	204	225	260	277	294	348	357	398	410	403							
	WBC (μl)	1910	7700	9300	6200	5200	7400	9000	9100	8200	8900	7900	5000	5200							
	neutrophil (μl)	1117	7951	3351	5134	4118	6065	7200	7586	5890	5478	5270	3401								
	lymphocyte (μl)	623	747	632	670	614	614	637	683	689	1015	1122	1160	1389							
monocyte (μl)	166	262	307	391	442	659	909	974	1099	970	869	540	281								
neutrophils (%)	58.5	86.9	89.8	82.8	79.2	82.4	80	81.3	78	77.3	74.4	65.4	55.4								
lymphocytes (%)	32.6	9.7	6.8	10.8	11.8	8.3	9.3	7.5	8.4	11.4	14.2	23.2	26.9								
monocytes (%)	8.7	3.4	3.3	6.3	8.5	8.9	10.1	10.7	13.4	10.9	11	10.8	16.4								
P09	Days after symptom onset																				
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	31	34	
	Hb (g/dl)	11.5	9.9	9.8	15.4	13.5	12.9	12.8	12.3	12	8.4	11.2	10.4	9.8	11.5	10.4	9.2	8.4	9.7	8.9	9.2
	PLT (x 10 <sup>3</sup> /μl)	165	157	177	95	81	62	68	70	73	134	121	146	114	133	198	190	199	203	157	129
	WBC (μl)	4100	5600	4400	6400	7800	6100	7300	9000	15000	14200	14200									





