

**Supplemental files**

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**Supplemental-Table 1. Clinical Classifications of disease severity of COVID-19 patients<sup>a</sup>**

Stage	Classifications
Mild	Mild clinical symptoms with no pneumonia manifestation in imaging.
Moderate	Fever, respiratory tract symptoms with pneumonia manifestation in imaging.
Severe	Meeting any of the followings: Respiratory distress, RR $\geq$ 30 breaths/min; Pulse oxygen saturation (SpO <sub>2</sub> ) $\leq$ 93% on room air at rest state; Arterial partial pressure of oxygen (PaO <sub>2</sub> ) / oxygen concentration (FiO <sub>2</sub> ) $\leq$ 300 mmHg (1 mmHg=0.133 kPa).
Critical	Meeting any of the followings: Respiratory failure occurs and mechanical ventilation is required; Shock occurs; Complicated with other organ failure that requires monitoring and treatment in ICU.

<sup>a</sup>These classifications are selected from Guidance for Corona Virus Disease 2019 edited by National Health Committee of the People's Republic of China

**Supplemental-Table 2. Baseline laboratory data and treatment of COVID-19 patients**

	Total(n=555)	Wuhan(n=138)	Shenzhen(n=417)
<b>Laboratory findings</b>			
Leukocyte count- $\times 10^9/L$	4.8(3.9, 6.2)	5.5(4.4, 7.7)	4.7(3.8, 5.8)
Leukocyte count $>10 \times 10^9/L$ -No, %	33 (6)	23 (17)	10 (2)
Leukocyte count $<4 \times 10^9/L$ -No, %	151 (27)	26 (19)	125 (30)
Hemoglobin-g/L	135(123, 145)	124(115, 138)	137(126, 146)
Platelet count $\times 10^9/L$	192(150, 244)	224(156, 291)	187(148, 233)
Platelet count $<150 \times 10^9/L$ -No, %	137(25)	30(22)	107(26)
Lymphocyte count $\times 10^9/L$	1.2 (0.9, 1.7)	0.9 (0.6, 1.4)	1.31(1.0, 1.8)
Lymphocyte count $<1.5 \times 10^9/L$ -No, %	362(65)	109(79)	253(61)
Alanine aminotransferase -U/L	21(15, 33)	22(16, 40)	21(15, 31)
Aspartate aminotransferase -U/L	27(20, 36)	28(18, 41)	27(21, 35)
Liver injury <sup>a</sup> -No, %	120(22)	60(43)	60(14)
Albumin-g/L	41.9(38.0, 44.5)	34.1(30.5, 37.7)	43.1(41.0, 45.3)
Lactic dehydrogenase -U/L <sup>b</sup>	244(186, 412)	290(234, 407)	223(174, 412)
Lactic dehydrogenase $>250U/L$ -No/total, %	262 (49)	92 (67)	170(43)
Nitrogen-mg/dl <sup>b</sup>	72(58, 90)	83(60, 119)	70(58, 86)
Creatinine mg/dl <sup>b</sup>	0.7(0.6, 0.9)	0.8(0.7, 1.0)	0.7(0.6, 0.9)
Creatinine $>1.5mg/dl$ -No, %	13(2)	11(8)	2(0.5)
C reactive protein-mg/L <sup>b</sup>	11.0(3.3, 35.2)	36.5(6.3, 85.5)	8.7(2.8, 24.7)
C reactive protein $>10mg/L$ -No/total, %	289(52)	93(67)	196(47)
D-Dimer $>0.5mg/L$ -No/total, % <sup>b</sup>	224(41)	105(76)	119(29)
Cardiac troponin I $>0.04ng/L$ -No/total, % <sup>b</sup>	22(5)	14(10)	8(3)
Procalcitonin $>0.5ng/ml$ -No/total, % <sup>b</sup>	13(2)	13(10)	0(0)
<b>Treatment-No, %</b>			
Anti-virus agents	550(99)	134(97)	416(100)
Before Hospitalization	154(28)	98(71)	56(13)
Antibiotics	278(50)	117(85)	161(38)
Before Hospitalization	169(31)	94(68)	75(18)
NSAIDs	174(31)	31(22)	143(34)
Before Hospitalization	64(12)	16(12)	48(12)
Herbal Medicine	430(78)	123(89)	307(74)
Before Hospitalization	82(15)	64(46)	18(4)
Corticosteroids	150(27)	43(31)	107(26)
Before Hospitalization	18(3)	16(12)	2(0.5)
Mechanical ventilation-No, %	70(13)	33(24)	37(9)

Abbreviations: NSAIDs, Nonsteroidal anti-inflammatory drugs.

<sup>a</sup>Liver injury defined as alanine aminotransferase or aspartate aminotransferase  $> 40U/L$ .

<sup>b</sup>Missing data, Lactic dehydrogenase-18, Nitrogen-5, Creatinine-5, C reactive protein-1, D-Dimer-6, Cardiac troponin I-114, Procalcitonin-10.

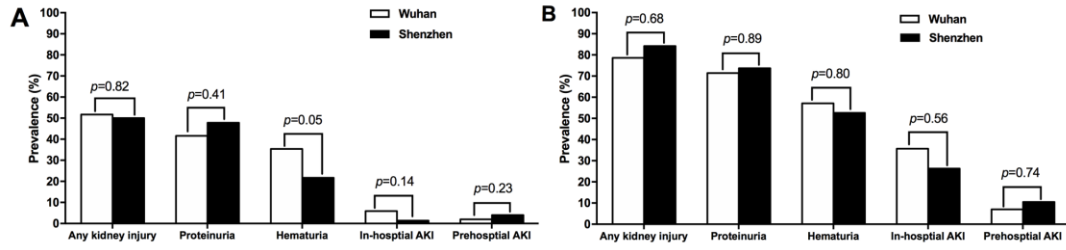
**Supplemental-Table 3. Association of kidney injury indicators with in-hospital death and disease progression in patients with coronavirus disease 2019 (COVID-19).**

Outcomes	Exposed (number of events/number of patients)	Unexposed (number of events/number of patients)	RR (95%CI)	<i>p</i> value
<b>In-hospital death(n=555)<sup>a</sup></b>				
Proteinuria	20/174	3/346	4.57 (1.27 to 16.38)	0.02
Hematuria	18/112	5/408	3.98 (1.64 to 9.66)	0.002
In-hospital AKI	9/21	16/499	3.33 (1.57 to 7.05)	0.002
Prehospital AKI	3/8	22/512	1.21 (0.45 to 3.22)	0.70
Any kidney injury	23/229	2/320	4.92 (1.17 to 20.61)	0.03
<b>Progression to critical illness(n=520)<sup>b</sup></b>				
Proteinuria	24/150	12/337	2.21 (1.03 to 4.74)	0.04
Hematuria	18/94	18/393	1.82 (1.03 to 3.23)	0.04
In-hospital AKI	5/11	35/476	1.49 (0.65 to 3.39)	0.35
Prehospital AKI	2/5	38/482	1.16 (0.39 to 3.45)	0.79
Any kidney injury	29/202	11/314	2.04 (1.01 to 4.10)	0.05

Rate ratios (RRs) of each variable were obtained using separate Poisson regression models after adjustment for age, sex, disease severity at admission, lactate dehydrogenase, C-reactive protein, troponin, d-dimer, lymphocyte count and comorbidities. Comorbidities include chronic kidney disease, hypertension, diabetes, coronary heart disease, chronic pulmonary disease or malignant tumor history.

<sup>a</sup>For the outcome of in-hospital death, 35 individuals for proteinuria, 35 for hematuria, 35 for in-hospital AKI, 35 for prehospital AKI and 6 for any kidney injury were excluded due to missing data.

<sup>b</sup>For the outcome of progression to critical illness, 33 individuals for proteinuria, 33 for hematuria, 33 for in-hospital AKI, 33 for prehospital AKI and 4 for any kidney injury were excluded due to missing data.



		Any kidney injury	Proteinuria	Hematuria	In-hospital AKI	Prehospital AKI
A	Wuhan	52% (62/120)	42% (47/113)	35% (40/113)	6% (7/119)	2% (2/119)
	Shenzhen	50% (36/72)	48% (33/69)	22% (15/69)	1% (1/71)	4% (3/71)
B	Wuhan	79% (11/14)	71% (10/14)	57% (8/14)	36% (5/14)	7% (1/14)
	Shenzhen	84% (16/19)	74% (14/19)	53% (10/19)	26% (5/19)	11% (2/19)

**Supplemental Figure 1. The prevalence of kidney injury in severe (A) and critical (B) patients.**

Severe and critical referred to disease severity at admission. 14 individuals for proteinuria, 14 for hematuria, 6 for in-hospital AKI, 6 for pre-hospital AKI and 4 for any kidney injury were excluded due to missing data.