

Appendix Tables 1: Baseline comparison between NSCU and SCU groups after propensity score matching in non-severe patients with COVID-19.

Parameters	NSGU ^a (n=418)	SGU ^a (n=418)	<i>P</i> value ^b	SD ^c
Age (years)	54 (38-66)	53 (38-64)	0.4533	-0.052
Laboratory test				
White blood cell count (10 ⁹ /L)	5.11 (4.12-6.68)	4.94 (3.62-6.66)	0.6885	-0.030
Albumin(g/L)	39.15 (35.80-42.50)	39.40 (35.90-42.70)	0.2210	0.088
C-reaction protein (mg/L)	8.73 (1.30-36.80)	14.05 (3.60-38.10)	0.8132	0.019
Sex			0.5799	-0.038
Female	217 (51.91)	209 (50.00)		
Male	201 (48.09)	209 (50.00)		
Symptom				
Cough	195 (46.65)	201 (48.09)	0.6777	-0.029
Fever	297 (71.05)	297 (71.05)	1.0000	0.000
Anhelation	40 (9.57)	34 (8.13)	0.4650	0.050
Comorbidity				
Hypertension	139 (33.25)	130 (31.10)	0.5052	0.046
Malignancy	28 (6.70)	32 (7.66)	0.5920	-0.040
Diabetes	69 (16.51)	61 (14.59)	0.4452	0.054
COPD	27 (6.46)	26 (6.22)	0.8871	0.010
Coronary heart disease	40 (9.57)	39 (9.33)	0.9059	0.009
Treatment				
Antivirus drugs	397 (94.98)	396 (94.74)	0.8756	0.008
NSAID	161 (38.52)	173 (41.39)	0.3968	-0.064
Antibiotics drugs	390 (93.30)	393 (94.02)	0.6703	-0.019

NSCU=Non-systemic corticosteroids use; SCU=Systemic corticosteroids use; SD=Standard deviation; COPD=Chronic obstructive pulmonary disease; NSAID= Nonsteroidal anti-inflammatory drug.

^a Categorical variables are presented as number (percent), and continuous variables are presented as median (interquartile range).

^b The *P* value was calculated by Chi-square test or Fisher's exact test

^c SD, Standardized differences be used to compare the mean of baseline covariate between NSCU and SCU group

Appendix Tables 2: Baseline comparison between NSCU and SCU groups after inverse probability of treatment weighted in non-severe patients with COVID-19.

Parameters	NSGU (n=1665)	SGU (n=1801)	<i>P</i> value ^a	SD ^b
Age (years)	55 (40-66)	56 (42-66)	0.0426	-0.034
Laboratory test				
White blood cell count (10 ⁹ /L)	5.32 (4.19-6.61)	4.90 (3.63-6.37)	0.1475	-0.023
Albumin(g/L)	39.70 (36.30-42.80)	39.50 (36.00-42.30)	0.2008	0.065
C-reaction protein (mg/L)	3.60 (0.90-21.30)	6.70 (1.00-26.60)	0.6349	-0.070
Sex				
Female	913 (45.83)	1068 (59.32)		
Male	752 (45.17)	732 (40.68)		
Symptom				
Cough	773 (46.42)	814 (45.20)	0.4710	0.014
Fever	1012 (60.77)	1047 (58.18)	0.1211	-0.005
Anhelation	166 (9.98)	224 (12.46)	0.0208	0.024
Comorbidity				
Hypertension	535 (32.12)	605 (33.45)	0.4081	0.020
Malignancy	97 (5.85)	91 (5.05)	0.3007	-0.014
Diabetes	257 (15.42)	254 (14.11)	0.2783	0.041
COPD	105 (6.32)	180 (10.01)	<0.0001	0.056
Coronary heart disease	147 (8.82)	131 (7.28)	0.0967	0.067
Treatment				
Antivirus drugs	1475 (88.59)	1474 (81.78)	<0.0001	-0.015
NSAID	472 (28.34)	456 (25.31)	0.0438	0.015
Antibiotics drugs	1193 (71.65)	1189 (66.07)	0.0004	0.001

NSCU=Non-systemic corticosteroids use; SCU=Systemic corticosteroids use; SD=Standard deviation; COPD=Chronic obstructive pulmonary disease; NSAID= Nonsteroidal anti-inflammatory drug.

^a Categorical variables are presented as number (percent), and continuous variables are presented as median (interquartile range).

^b The *P* value was calculated by Chi-square test or Fisher's exact test

^c SD, Standardized differences be used to compare the mean of baseline covariate between NSGU and SGU group

Appendix Tables 3. The interaction analysis between the corticosteroids and suspected-influencing factors.

	Progression to severe type		All-cause death (30 days)	
	OR	P value	OR	P value
Sex*corticosteroids	1.705	0.0918	2.612	0.3514
Age*corticosteroids	1.012	0.2151	0.956	0.2821
Cough*corticosteroids	0.5814	0.0649	0.539	0.5479
Fever*corticosteroids	1.502	0.2358	1.199	0.8511
Anhelation*corticosteroids	0.510	0.2001	0.000	0.9812
Hypertension*corticosteroids	0.990	0.9745	1.679	0.6494
Diabetes*corticosteroids	1.321	0.4951	0.619	0.6613
Malignancy*corticosteroids	0.667	0.4825	1.836	0.7021
Coronary heart disease*corticosteroids	1.501	0.4274	2.735	0.3087
COPD*corticosteroids	1.174	0.7952	1.992	0.5471
Antivirus drugs*corticosteroids	0.976	0.9724	0.919	0.9597
Antibiotics drugs*corticosteroids	0.538	0.3322	77078.91	0.9459
NSAID*corticosteroids	2.544	0.0045	0.137	0.1364

COPD=Chronic obstructive pulmonary disease; NSAID= Nonsteroidal anti-inflammatory drug;

^a Adjust for basic demographic characteristics (age and Sex), symptoms (cough, fever and anhelation), comorbidities (hypertension, diabetes, malignancy, COPD and coronary heart disease), treatments (antiviral drugs, NSAID and antibiotics drugs), lab data on admission (white blood cell count, albumin, and C-reaction protein).

Appendix Figure 1: Kaplan-Meier Curves for cumulative probability of all-cause mortality during 30-day follow-up duration in SCU/NSCU groups in PSM (A) and IPTW (B) cohorts. Abbreviations: SCU=Systemic corticosteroids use; NSCU=Non systemic corticosteroids use; PSM=Propensity score matching; IPTW= Inverse probability of treatment weight.

