

Supplementary Table 1. Baseline characteristics and glucocorticoid therapy of the entire study

Characteristics	No.(%) Total (n = 319)
Age years	72(66,82)
<70	127(39.8)
≥70	192(60.2)
Male	207(64.9)
BMI	24.5(22.2,26.9)
Days from onset to admission	9(7,14)
Length of hospital stay	9(6,14)
Diabetes mellitus	112(35.1)
Hypertension	189(59.2)
Malignancy	51(15.9)
Cardiovascular disease	82(25.7)
Chronic kidney disease	46(14.4)
Chronic lung disease	36(11.2)
Rheumatosis	11(3.4)
Solid organ transplantation	7(2.1)
PaO ₂ /FiO ₂	
≤300	128(40.1)
> 300	191(59.8)
Severity	
Moderate illness	178(55.8)
Severe illness	141(44.2)
Methylprednisolone use	304(95.3)
Days from onset to initial MP use	8(6,10)
Days of methylprednisolone use(≥20mg/d)	11(7,16)
Average daily dosage of MP	
< 40mg/d	200(62.6)
80 > and ≥40mg/d	114(35.7)
≥80mg/d	5(1.5)
High flow nasal cannula/Bilevel positive airway pressure	20(6.2)
Use of mechanical ventilation	5(1.5)
Death	21(6.5)

Supplementary Table 2. Comparison of clinical feature and chest CT changes in two groups

Variable	No. total(n=95)	MP increment group(n=69)	MP unchanging group(n=26)	P value
Age	72(67,81)	72(67,80.5)	76(69.75,83)	0.219
Sex(Male)	60(63.2)	43(62.3)	17(65.4)	0.782
Severity				0.631
Moderate	44(46.3)	33(47.8)	11(42.3)	
Severe	51(53.7)	36(52.2)	15(57.7)	
WHO score on MP adjustment				1
<6		90 65(94.2)	25(96.2)	
≥6		5 4(5.8)	1(3.8)	
Diabetes mellitus	36(37.9)	27(39.1)	9(34.6)	0.686
Hypertension	64(67.4)	49(71.0)	15(57.7)	0.217
Malignancy	25(26.3)	19(27.5)	6(23.1)	0.66
Cardiovascular disease	29(30.5)	20(29.0)	9(34.6)	0.595
Chronic kidney disease	11(11.6)	7(10.1)	4(15.4)	0.486
Chronic lung disease	11(11.6)	6(8.7)	5(19.2)	0.152
Immunosuppression	10(10.5)	7(10.1)	3(11.5)	1
Days from onset to MP adjustment	13(10,18)	13(10,18)	12(10,18)	0.953
CT score at PM adjustment	11(7,15)	11(7,14)	11(8,16)	0.837
CT score reduction after MP adjustment	66(69.5)	52(75.4)	14(53.8)	0.042
CT lesion area reduction after MP adjustment	69(72.6)	55(79.7)	14(53.8)	0.012
Inter time between CT scans	4(3,5)	4(3,5)	4.5(4,5)	0.03

Supplementary Table 3. Factors associated with CT lesions reduction after MP dose adjustment in COVID-19 patients with radiological progression

	CT lesions improvement	CT lesion no-improvement	P value(Univariate analysis)
Clinical features			
Age(>70y)	39(56.5)	16(61.5)	0.659
Sex(male)	44(63.8)	16(61.5)	0.841
Days from onset to MP adjustment	13(10,16)	15(10,19)	0.291
Illness Severity(moderate)	34(49.3)	17(65.4)	0.16
WHO outcome scores(≥ 6)	4(5.8)	1(3.8)	1
Diabetes mellitus	29(42.0)	7(26.9)	0.176
Hypertension	20(29.0)	5(19.2)	0.336
Malignancy	46(66.7)	18(69.2)	0.812
Cardiovascular disease	20(29.0)	9(34.6)	0.595
Chronic kidney disease	7(10.1)	4(15.4)	0.477
Chronic lung disease	6(8.7)	5(19.2)	0.166
Immunosuppression	5(7.2)	5(19.2)	0.09
Mean dose of every MP before adjustment	40(40,60)	55(40,63)	0.221
MP dose increasing	55(79.7)	14(53.8)	0.012
Chest CT lesion evaluation			
CT score at PM dose adjustment	10(7,14)	12(9,17)	0.082
Time between CT scans conducted	4(3,5)	5(4,5)	0.016