

**Table S1** Baseline information of the 109 patients with COVID-19

	Cases (n=109)
<b>Age</b>	
Mean (SD)	46 (16.8%)
Range	3–78
≤ 29	22 (20.18%)
≤ 39	16 (14.68%)
40–49	22 (20.18%)
50–59	18 (16.51%)
60–69	22 (20.18%)
≥70	9 (8.26%)
<b>Sex</b>	
Male	54 (49.54%)
Female	55 (50.46%)
<b>Occupation</b>	
Retiree	21 (19.27%)
Office worker	12 (11.01%)
Self-employed	10 (9.17%)
Farmer	9 (8.26%)
Student	6 (5.5%)
Worker	4 (3.67%)
Personnel in a specific technical field	3 (2.75%)
Unemployed	2 (1.83%)
Teacher	2 (1.83%)
Free occupation	1 (0.92%)
Tour guide	1 (0.92%)
Doctor	1 (0.92%)
<b>Native province</b>	
Hubei	58 (53.21%)
Yunnan	43 (39.45%)
Hunan	3 (2.75%)
Anhui	2 (1.83%)
Zhejiang	1 (0.92%)
Guangdong	1 (0.92%)
Jiangxi	1 (0.92%)

**Table S1** (continued)**Table S1** (continued)

	Cases (n=109)
<b>History of exposure</b>	
Traveled from Wuhan to Yunnan	42 (38.53%)
Returned to Yunnan from Wuhan	25 (22.94%)
History of close contact	18 (16.51%)
Self-drove from Wuhan to Yunnan	9 (8.26%)
Returned to Yunnan via Wuhan	9 (8.26%)
Returned to Yunnan from a business trip to Wuhan	1 (0.92%)
Traveled to Wuhan and returned to Yunnan	1 (0.92%)
Unclear history of exposure	4 (3.67%)
<b>Epidemiological history</b>	
First generation	84 (77.06%)
Second generation	20 (18.35%)
Third generation	2 (1.83%)
Unclear	3 (2.75%)

**Table S2** Clinical classification and computed tomography imaging features of the 109 patients with COVID-19

Abnormal imaging features during initial CT examination	Cases (n=109)	Location of the lesions (R/L 1–10)	Cases (n=109)
Nature of lesions			
Pure GGO lesions	97 (88.99%)	R1 Apical segment of the superior lobe of the right lung	30 (27.52%)
Mixed GGO and consolidation lesions	51 (46.79%)	R2 Posterior segment of the superior lobe of the right lung	52 (47.71%)
Pure consolidation lesions	16 (14.68%)	R3 Anterior segment of the superior lobe of the right lung	38 (34.86%)
Range of the lesions		R4 Outer segment of the middle lobe of the right lung	38 (34.86%)
Peripheral and subpleural region	104 (95.41%)	R5 Inner segment of the middle lobe of the right lung	33 (30.28%)
Near the lung hilus (around the segmental and lobar bronchus)	45 (41.28%)	R6 Dorsal segment of the inferior lobe of the right lung	54 (49.54%)
Number of lesions		R7 Medial basal segment of the inferior lobe of the right lung	30 (27.52%)
Single	12 (11.01%)	R8 Anterior basal segment of the inferior lobe of the right lung	28 (25.69%)
Multiple	97 (88.99%)	R9 Lateral basal segment of the inferior lobe of the right lung	46 (42.2%)
Shape of the lesions		R10 Posterior basal segment of the inferior lobe of the right lung	63 (57.8%)
Round	90 (82.57%)	L1+2 Apicoposterior segment of the superior lobe of the left lung	38 (34.86%)
Wedge	59 (54.13%)	L3 Anterior segment of superior lobe of left lung	29 (26.61%)
Irregular	63 (57.8%)	L4 Superior lingular segment of the superior lobe of the left lung	38 (34.86%)
Vascular changes		L5 Inferior lingular segment of the superior lobe of the left lung	33 (30.28%)
Vascular thickening	87 (79.82%)	L6 Dorsal segment of inferior lobe of left lung	49 (44.95%)
Vascular convergence sign	65 (59.63%)	L7+8 Anterior medial basal segment of the inferior lobe of the left lung	32 (29.36%)
Lesions near the interlobar pleura	63 (57.8%)	L9 Lateral basal segment of the inferior lobe of the left lung	53 (48.62%)
Associated with interlobar pleural traction and displacement	52 (47.71%)	L10 Posterior basal segment of the inferior lobe of the left lung	59 (54.13%)
Interlobular septal thickening	30 (27.52%)		
Associated with interlobar pleural thickening	45 (41.28%)		
Lesions near chest wall	95 (87.16%)		
Subpleural lucency shadow	63 (57.8%)	Other signs	32 (29.36%)
Interlobular septal thickening	62 (56.88%)	Crazy-paving sign	55 (50.46%)
Adjacent pleural traction and thickening	58 (53.21%)	Halo sign	35 (32.11%)
Subpleural line	29 (26.61%)	Banyan crown sign	14 (12.84%)
Clinical classification		Focus with bronchiectasis	
Moderate	87 (79.82%)	Mediastinal lymph node enlargement	
Severe	17 (15.6%)	Transverse diameter $\geq$ 1 cm	1 (0.92%)
Critical	5 (4.59%)		

a: GGO, ground-glass opacity; b: CT, computed tomography

**Table S3** Epidemiological history and computed tomography imaging features of the 109 patients with COVID-19

CT imaging features	Epidemiological history (Generations 1–3)					
	Accumulated lesions		$\chi^2$	P	Coefficient of contingency	Cramer V
	(+)	(-)				
Location of the lesions						
R7 Medial basal segment of the inferior lobe of the right lung*	30 (28.04%)	77 (71.96%)	9.0545	0.0108	0.2793	0.2909
Lesions near the chest wall*						
Lobular septal thickening*	61 (57.01%)	46 (42.99%)	8.7841	0.0124	0.2754	0.2865
GGO associated with interlobar pleural traction and displacement*	52 (48.6%)	55 (51.4%)	8.1127	0.0173	0.2655	0.2754
Lesions near the interlobar pleura*	63 (58.88%)	44 (41.12%)	8.0711	0.0177	0.2648	0.2746
Subpleural line*	29 (27.1%)	78 (72.9%)	7.2171	0.0271	0.2514	0.2597

a: GGO, ground-glass opacity; b: CT, computed tomography; c: \*, P<0.05

**Table S4** Comparison of CT features between Generation 1 and Generation 2

CT imaging features	Epidemiological history (Generations 1 and 2)						
	Accumulated lesions				$\chi^2$	P	Gamma
	(+)	RR value (+)	(-)	RR value (-)			
Location of the lesions							
L3 Anterior segment of the superior lobe of the left lung	29 (27.1%)	2.373	78 (72.9%)	0.794	2.9311	0.0869	-0.4986
L4 Superior lingular segment of the superior lobe of the left lung*	38 (35.51%)	2.3274	69 (64.49%)	0.7206	4.2016	0.0404	-0.5272
Range of the lesions							
Near the lung hilus (around the segmental and lobar bronchus)*	44 (41.12%)	1.6429	63 (58.88%)	0.5867	4.7191	0.0298	0.4737
Lesions near chest wall							
Interlobular septal thickening between the lesions and pleura*	61 (57.01%)	2.1122	46 (42.99%)	0.5134	8.442	0.0037	0.6089
Near the interlobar pleural lesion*	63 (58.88%)	1.6429	44 (41.12%)	0.5867	4.7191	0.0298	0.4737
Associated with interlobar pleural thickening*	45 (42.06%)	2.1905	62 (57.94%)	0.6693	4.9626	0.0259	0.5319
Interlobar pleural GGO associated with interlobar pleural traction and displacement*	52 (48.6%)	2.4643	55 (51.4%)	0.7804	3.8692	0.0492	0.4502
Interlobular septal thickening between interlobar pleural lesions and interlobar pleura	30 (28.04%)	2.4643	77 (71.96%)	0.7804	3.2645	0.0708	0.519

GGO, ground-glass opacity; CT, computed tomography; RR, Relative risk; \*, P<0.05

**Table S5** Comparison of CT imaging characteristics between the clinical classifications

CT imaging features	Clinical classification (moderate, severe, and critical)					
	Accumulated lesions		$\chi^2$	P	Coefficient of Cramer contingency V	
	(+)	(-)				
Location of the lesions						
L1+2 Apicoposterior segment of the superior lobe of the left lung	71 (65.14%)	38 (34.86%)	13.666	0.0011	0.3338	0.3541
L3 Anterior segment of the superior lobe of the left lung	29 (26.61%)	80 (73.39%)	14.8988	0.0006	0.3468	0.3697
L4 Superior lingular segment of the superior lobe of the left lung	38 (34.86%)	71 (65.14%)	17.8642	0.0001	0.3753	0.4048
L5 Inferior lingular segment of the superior lobe of the left lung	33 (30.28%)	76 (69.72%)	11.9593	0.0025	0.3144	0.3312
L6 Dorsal segment of the inferior lobe of the left lung	49 (44.95%)	60 (55.05%)	6.1847	0.0454	0.2317	0.2382
L10 Posterior basal segment of the inferior lobe of the left lung	59 (54.13%)	50 (45.87%)	9.3728	0.0092	0.2814	0.2932
R1 Apical segment of the superior lobe of the right lung	30 (27.52%)	79 (72.48%)	7.3053	0.0259	0.2506	0.2589
R2 Posterior segment of the superior lobe of the right lung	52 (47.71%)	57 (52.29%)	4.9943	0.0823	0.2093	0.2141
R3 Anterior segment of the superior lobe of the right lung	38 (34.86%)	71 (65.14%)	7.1275	0.0283	0.2477	0.2557
R4 Outer segment of the middle lobe of the right lung	71 (65.14%)	38 (34.86%)	13.8732	0.001	0.336	0.3568
R7 Medial basal segment of the inferior lobe of the right lung	30 (27.52%)	79 (72.48%)	4.5395	0.1033	0.2	0.2041
Shape of the lesions (wedge-shaped)	59 (54.13%)	50 (45.87%)	19.0126	<.0001	0.3854	0.4176
Lesions near the interlobar pleura	63 (57.8%)	46 (42.2%)	12.7044	0.0017	0.3231	0.3414
GGO lesions near interlobar pleura associated with interlobar pleural traction and displacement	52 (47.71%)	57 (52.29%)	9.6776	0.0079	0.2856	0.298
Interlobular septal thickening	30 (27.52%)	79 (72.48%)	7.3053	0.0259	0.2506	0.2589
Lesions near the interlobar pleura associated with interlobar pleural thickening	45 (41.28%)	64 (58.72%)	5.7163	0.0574	0.2232	0.229
Vascular changes						
Vascular thickening	87 (79.82%)	22 (20.18%)	6.97	0.0307	0.2452	0.2529
Vascular convergence sign	65 (59.63%)	44 (40.37%)	8.6814	0.013	0.2716	0.2822
Other signs						
Banyan crown sign	35 (32.11%)	74 (67.89%)	12.6062	0.0018	0.322	0.3401
Crazy-paving sign	32 (29.36%)	77 (70.64%)	5.4652	0.065	0.2185	0.2239
Enlarged lymph nodes in the mediastinum (transverse diameter $\geq$ 1 cm)	1 (0.92%)	108 (99.08%)	5.4619	0.0652	0.2184	0.2239
Lesions associated with bronchiectasis	14 (12.84%)	95 (87.16%)	5.4318	0.0661	0.2179	0.2232

GGO, Ground-glass opacity; CT, computed tomography; \*, P < 0.05

**Table S6** ROC model (COVID-19)

ROC correlation model/statistics	Area	Standard deviation	Wald 95% confidence interval	Somers' D	Gamma	Tau-a
ROC model 1	0.8016	0.0642	0.6759-0.9274	0.6033	0.6175	0.1087
ROC model 2	0.9132	0.0286	0.8571-0.9693	0.8264	0.8264	0.1489
ROC model 3	0.9758	0.0149	0.9466-1	0.9516	0.9516	0.1715
ROC correlation statistics						
Shape of the lesions (round-shaped)	0.6786	0.0853	0.5113-0.8459	0.3571	0.7143	0.0644
Location of the lesions						
R9 Lateral basal segment of the inferior lobe of the right lung	0.6198	0.0716	0.4794-0.7601	0.2396	0.5166	0.0432
L3 Anterior segment of the superior lobe of the left lung	0.6038	0.0556	0.4949-0.7128	0.2077	0.6	0.0374
L6 Dorsal segment of the inferior lobe of the left lung	0.5912	0.0857	0.4233-0.7592	0.1824	0.3532	0.0329
R8 Anterior basal segment of the inferior lobe of the right lung	0.5874	0.0553	0.4791-0.6957	0.1747	0.5464	0.0315
L4 Superior lingular segment of the superior lobe of the left lung	0.5797	0.087	0.4092-0.7502	0.1593	0.3187	0.0287
R1 Apical segment of the superior lobe of the right lung	0.5736	0.0848	0.4074-0.7398	0.1473	0.3268	0.0265
Halo sign	0.6082	0.0808	0.4499-0.7666	0.2165	0.4273	0.039
Lesions near the chest wall						
Subpleural lucency shadow	0.6077	0.0856	0.44-0.7754	0.2154	0.4118	0.0388
Interlobular septal thickening	0.6022	0.0856	0.4344-0.77	0.2044	0.3924	0.0368
Shape of the lesions (wedge-shaped)	0.5863	0.0808	0.4279-0.7446	0.1725	0.3528	0.0311
Nature of the lesions						
Purely consolidation lesions	0.5824	0.0196	0.5441-0.6207	0.1648	1	0.0297
Mixed GGO and consolidation lesions	0.5863	0.0808	0.4279-0.7446	0.1725	0.3528	0.0311
Range of the lesions: near the lung hilus	0.5753	0.0808	0.417-0.7335	0.1505	0.3135	0.0271

a: GGO, Ground-glass opacity; b: ROC, receiver operating characteristic.