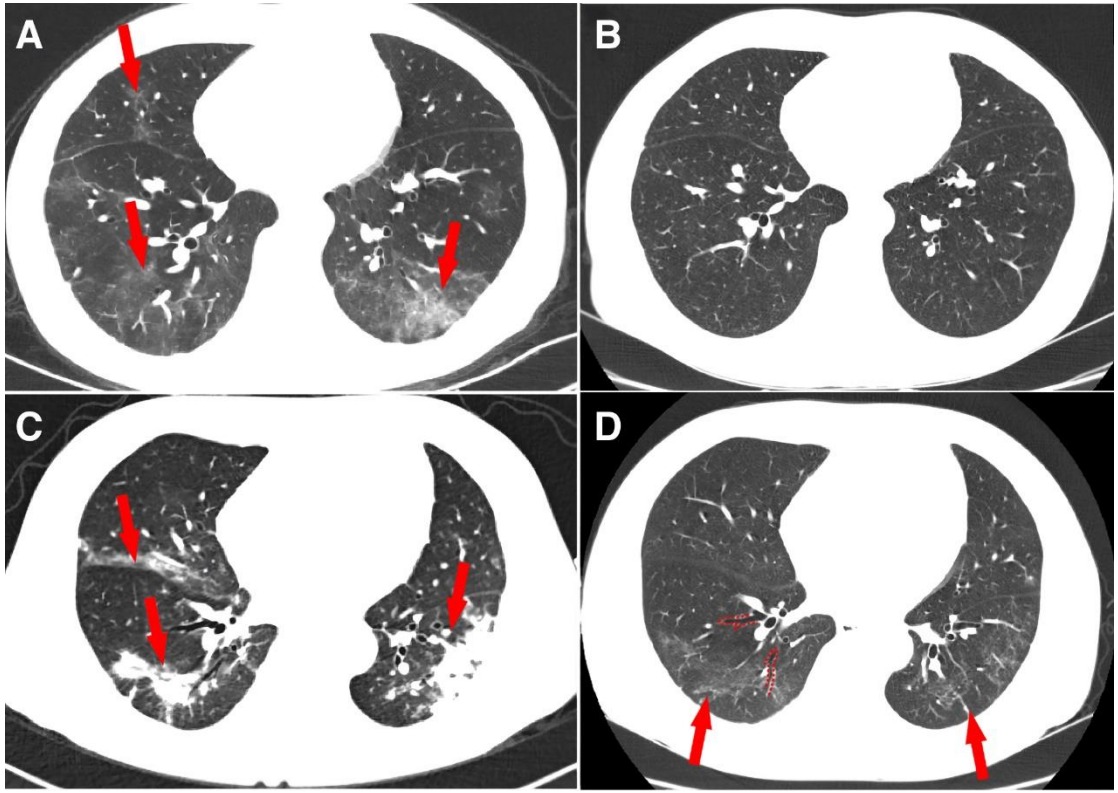

Supplementary Figure S1. CT findings of the confirmed COVID-19 of a mild type patient (A-B) and a severe type patient (C-D). A-B: CT maps from a 55-year-old male with dry cough and fever. The baseline chest CT showed bilateral subpleural ground glass opacity (GGO) (A) and totally absorbed three months follow up (B). C-D: CT maps from a 59-year-old male presented with high fever and cough. Baseline axial unenhanced chest CT (C) showed bilateral consolidation with GGO in the lower lobe (red arrows). Three months follow up the consolidation was absorbed and some fibers strand (arrows) and bronchiectasis (dotted line) in the lower lobe still existed.

Supplementary Table S1. Collection of the results of three mean XTRACT statistics, such as volume, length, FA of all subjects. *Note: Significant differences were labeled with bold fonts combined with different symbols, # (NC-MG), ɜ (MG-SG), * (NC-SG).* Data represent mean ± SD.

Tract	Volume (mm^3)			Length (mm)			Mean FA (per tract)		
	NC	MG	SG	NC	MG	SG	NC	MG	SG
AC	2340±653	2311±488	2415±586	21.21±7.39	**24.49±7.91 ɜ**	20.39±6.82	0.37±0.055	**0.40±0.064 ɜ**	0.36±0.052
AF_L	19678±2643	18559±2055	18901±2660	46.03±3.16	**44.08±2.99 #**	46.27±3.03	0.43±0.013	0.42±0.020	0.42±0.020
AF_R	20949±2517	20001±2054	20547±2576	44.64±2.84	43.72±2.68	45.07±3.01	0.43±0.015	0.43±0.021	0.42±0.016
AR_L	6000±1286	**5051±1021 #**	5496±1422	29.54±7.74	26.35±7.85	30.57±7.60	0.38±0.022	0.38±0.019	**0.38±0.020 ***
AR_R	5219±1376	5077±1519	4557±1555	21.82±7.26	**25.29±7.90 ɜ**	19.33±8.59	0.38±0.018	0.38±0.015	0.39±0.020
ATR_L	14506±2016	13926±1767	13841±1488	44.45±3.54	43.72±2.22	45.52±3.26	0.39±0.018	**0.38±0.021 #**	0.38±0.017
ATR_R	15420±2634	**14225±2081 #**	**14039±1531 ***	46.32±3.29	**44.01±3.68 #**	45.39±2.61	0.38±0.013	**0.37±0.018 #**	**0.37±0.015 ***
CBD_L	7996±1316	**7403±807 #**	**7243±1207 ***	70.61±6.98	**71.12±4.43 ɜ**	68.19±5.39	0.44±0.022	0.44±0.020	0.43±0.021
CBD_R	7824±1671	7114±1361	**7155±1224 ***	72.93±9.39	**67.89±7.30 #**	**68.11±7.75 ***	0.41±0.020	0.41±0.022	0.41±0.022
CBP_L	1446±562	1286±433	1439±612	22.94±7.31	23.13±5.10	23.61±5.30	0.40±0.041	**0.42±0.046 ɜ**	0.39±0.038
CBP_R	1828±968	1657±807	1722±777	25.68±5.81	25.01±4.12	26.12±3.59	0.38±0.036	0.39±0.030	0.37±0.033
CBT_L	3171±605	3134±541	3037±513	24.95±3.33	24.48±2.43	25.15±3.24	0.34±0.031	0.33±0.031	0.33±0.026
CBT_R	3364±460	3125±495	3365±618	24.40±3.87	22.83±2.89	24.37±3.85	0.35±0.025	0.34±0.026	**0.33±0.017 ***
CST_L	15324±2096	14725±1609	**14411±1677 ***	79.39±3.06	**77.48±2.88 #**	78.66±3.49	0.47±0.017	0.46±0.022	0.46±0.019
CST_R	15445±1772	14987±1767	14724±1582	77.83±3.04	**75.94±3.75 #**	77.65±3.51	0.47±0.015	0.47±0.023	0.47±0.015
FAT_L	9090±1425	8652±1153	8748±1418	35.37±2.91	34.23±2.46	**33.58±2.43 ***	0.37±0.019	0.37±0.023	**0.36±0.020 ***
FAT_R	9096±1431	**8340±1208 #**	**8426±1560 ***	33.2±2.690	32.14±1.82	32.75±2.43	0.37±0.016	0.36±0.022	0.36±0.019
FMA	19257±2074	18747±2035	18703±2204	77.73±5.84	76.64±5.22	77.93±6.33	0.46±0.022	**0.47±0.024 ɜ**	0.45±0.027
FMI	21354±3510	**19862±2961 #**	**19339±2837 ***	50.95±3.65	**47.48±3.39 #**	49.89±2.63	0.45±0.023	0.45±0.027	0.44±0.024
FX_L	6009±1669	5416±1889	**5030±2101 ***	46.25±23.2	39.34±23.1	44.34±23.01	0.32±0.034	0.30±0.074	**0.28±0.078** *
FX_R	5594±2815	5507±1541	5706±2129	46.17±21.7	50.69±17.7	41.07±19.4	0.31±0.067	0.31±0.032	0.32±0.031

IFO_L	22755±3485	22227±2538	22443±2520	68.6±4.920	68.48±3.54	69.29±4.18	0.44±0.014	0.44±0.017	0.44±0.019
IFO_R	23525±3063	22510±1949	**21974±2342 ***	69.53±5.79	68.21±5.29	68.56±4.82	0.44±0.013	0.44±0.018	**0.43±0.019 ***
ILF_L	12576±1893	**11374±1190 #**	**11412±1691 ***	44.03±4.53	43.24±5.76	**41.06±4.85 ***	0.39±0.018	**0.39±0.020 ə**	**0.37±0.024 ***
ILF_R	13863±2118	**12627±1640 #**	**12222±1728 ***	46.61±6.77	**43.18±4.76 #**	**43.54±4.85 ***	0.40±0.019	0.40±0.023	**0.39±0.021 ***
MCP	15160±2708	14509±3916	14931±2227	57.25±6.47	53.59±11.8	55.83±4.77	0.44±0.029	0.43±0.026	0.44±0.025
MDLF_L	17303±2157	16332±1658	17110±2072	61.78±3.79	60.36±3.92	62.35±4.15	0.41±0.012	**0.41±0.013 ə**	**0.40±0.020 ***
MDLF_R	18292±2325	17315±1601	17515±2340	61.15±3.53	59.47±3.87	60.86±3.57	0.42±0.015	0.42±0.015	0.42±0.018
OR_L	14731±1658	14344±1720	14216±1350	55.51±3.13	**53.56±3.24 #**	56.05±3.20	0.46±0.013	0.46±0.017	**0.45±0.021 ***
OR_R	15961±1989	15128±1516	**14923±1770 ***	55.73±3.18	54.22±3.80	56.11±3.15	0.46±0.014	0.46±0.022	**0.45±0.019 ***
SLF1_L	12939±3147	11717±2699	12009±2969	45.71±7.18	45.09±6.79	44.19±6.19	0.38±0.019	**0.38±0.017 ə**	**0.37±0.022 ***
SLF1_R	12133±2499	11071±2707	11412±2620	41.48±6.71	40.42±6.85	41.6±6.030	0.38±0.017	**0.38±0.015 ə**	**0.37±0.022 ***
SLF2_L	10308±2484	9733±2850	10566±2199	47.17±9.68	45.29±10.3	45.42±7.48	0.35±0.016	**0.35±0.017 ə**	**0.33±0.017 ***
SLF2_R	10949±3067	10828±2349	**9365.8±2541 ***	45.39±11.8	**49.17±3.70 ə**	41.82±13.1	0.34±0.065	0.35±0.022	0.34±0.018
SLF3_L	15058±2418	14099±1926	15250±1923	46.18±4.01	47.24±5.45	47.40±3.84	0.37±0.013	**0.37±0.016 ə**	**0.36±0.017 ***
SLF3_R	14612±2120	14021±1787	14448±2566	47.25±2.84	46.19±3.16	47.19±3.96	0.37±0.017	0.37±0.020	**0.36±0.018 ***
STR_L	13566±1877	12903±1408	13004±1454	40.89±2.11	40.28±1.59	**39.86±2.03***	0.41±0.021	0.41±0.026	0.40±0.020
STR_R	13478±1482	12851±1444	13442±1522	42.03±1.80	41.38±1.83	41.58±1.77	0.40±0.017	0.40±0.027	0.39±0.017
UF_L	9758±1769	10032±1540	10044±1597	49.36±4.52	50.59±4.91	50.22±4.79	0.37±0.015	0.38±0.018	0.37±0.017
UF_R	10138±1590	9922±1465	10093±1345	47.84±4.08	47.30±3.41	47.24±3.89	0.37±0.012	0.37±0.020	0.37±0.017
VOF_L	7181.2±1101	7063±1235	7397.2±1194	22.85±2.46	22.91±1.95	23.70±3.57	0.33±0.021	0.33±0.019	0.32±0.022
VOF_R	7408.1±1413	7052±1170	7367±836	24.43±3.08	24.43±2.83	24.62±2.54	0.33±0.025	0.33±0.023	0.33±0.022