Supplementary Materials:

Table S1. Details of included studies

First Author	Number of included participants	Age	Female	Male	Long-COVID cases	Age	Female	Male	Long-COVID cases which underwent imaging	Age	Female	Male	ROB	Study design
Armange et al.	214	NM	NM	NM	99	NM	NM	NM	23	44	18	5	fair	cohort
Bai et al.	7	66.3	4	3	4	62.7	2	2	4	62.7	2	2	fair	Case-control
Cesarone et al.	18	56.9	8	10	18	56.9	8	10	18	56.9	8	10	fair	cohort
Gaspardone et al.	70	68	22	48	70	68	22	48	70	68	22	48	fair	cohort
Rinaldo et al.	75	57	32	43	68	NM	NM	NM	68	NM	NM	NM	fair	cohort
Sollini et al.	10	58	3	7	10	58	3	7	10	58	3	7	fair	cohort
Sollini et al.	13	54	5	8	13	53	5	8	13	54	5	8	fair	Case-control
Yin et al	337	53.5	167	170	91	58.7	167	170	91	58.7	34	57	fair	cohort
Miwa et al.	17	61.2	3	14	12	60.2	2	10	12	63.2	2	10	fair	cohort
Total originals	761	68.0	244	303	385	59.7	94	147	309	59.7	94	147	fair	---
Tung-Chen et al.[30]	1	41	1	0	1	41	1	0	1	41	1	0	fair	Case-series
Tung-Chen et al.	1	35	1	0	1	35	1	0	1	35	1	0	fair	Case-series
Tung-Chen et al.	1	64	0	1	1	64	0	1	1	64	0	1	fair	Case-series
Scelfo et al.[49]	1	59	1	0	1	59	1	0	1	59	1	0	fair	Case-series
Scelfo et al.	1	59	0	1	1	59	0	1	1	59	0	1	fair	Case-series
Aesif et al.[31]	1	46	0	1	1	46	0	1	1	46	0	1	fair	Case-series
Aesif et al.	1	57	1	0	1	57	1	0	1	57	1	0	fair	Case-series
Aesif et al.	1	57	0	1	1	57	0	1	1	57	0	1	fair	Case-series
Lago et al.[50]	1	72	0	1	1	72	0	1	1	72	0	1	fair	Case-series
Lago et al.	1	59	0	1	1	59	0	1	1	59	0	1	fair	Case-series
Lago et al.	1	63	1	0	1	63	1	0	1	63	1	0	fair	Case-series
Lago et al.	1	62	1	0	1	62	1	0	1	62	1	0	fair	Case-series
Rai et al.[51]	1	84	0	1	1	84	0	1	1	84	0	1	fair	Case-series
Rai et al.	1	65	0	1	1	65	0	1	1	65	0	1	fair	Case-series
Rai et al.	1	36	0	1	1	36	0	1	1	36	0	1	fair	Case-series
Singh et al.[52]	1	45	1	0	1	45	1	0	1	45	1	0	fair	Case-series
Total case-series	16	56.5	7	9	16	56.5	7	9	17	56.5	7	10	fair	Case-series
Abdelnour et al.[53]	1	68	1	0	1	68	1	0	1	68	1	0	fair	Case-report
Betelli et al.[54]	1	67	0	1	1	67	0	1	1	67	0	1	fair	Case-report
Horii et al.[55]	1	66	0	1	1	66	0	1	1	66	0	1	fair	Case-report
Zhou et al.[56]	1	40	0	1	1	40	0	1	1	40	0	1	fair	Case-report
Alhiyari et al.[32]	1	60	0	1	1	60	0	1	1	60	0	1	fair	Case-report
Aissaoui et al.[59]	1	61	0	1	1	61	0	1	1	61	0	1	fair	Case-report
Dayco et al.[58]	1	69	0	1	1	69	0	1	1	69	0	1	fair	Case-report
Garg et al.[28]	1	61	0	1	1	61	0	1	1	61	0	1	fair	Case-report
Hamad et al.[33]	1	42	0	1	1	42	0	1	1	42	0	1	fair	Case-report
Heiss et al.[29]	1	60	0	1	1	60	0	1	1	60	0	1	fair	Case-report
Liu et al.[59]	1	57	1	0	1	57	1	0	1	57	1	0	fair	Case-report

Malik et al.[34]	1	67	0	1	1	67	0	1	1	67	0	1	fair	Case-report
Mazzolini et al.[60]	1	74	1	0	1	74	1	0	1	74	1	0	fair	Case-report
Mitrani et al.[61]	1	55	0	1	1	55	0	1	1	55	0	1	fair	Case-report
Susanto et al.[62]	1	46	0	1	1	46	0	1	1	46	0	1	poor	Case-report
Zhu et al.[63]	1	30	0	1	1	30	0	1	1	30	0	1	fair	Case-report
Boehm et al.[64]	1	70	0	1	1	70	0	1	1	70	0	1	fair	Case-report
Total case-reports	17	58.4	3	14	17	58.4	3	14	30	57.7	3	27	---	Case-report

Table S2. Risk factors and comorbidities of Long-COVID patients in the included articles

First Author	Previously smoker	Currently smoker	Hypertension	Diabetes	Chronic obstructive lung disease	Autoimmune Dissease	Asthma	Chronic polmunary Disease	Intubated cases
Armange et al.	NM	4	NM	NM	NM	NM	4	NM	0
Bai et al.	NM	NM	1	0	0	0	0	0	NM
Cesarone et al.	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gaspardone et al.	NM	5	37	15	4	0	0	0	43
Rinaldo et al.	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sollini et al.	NM	NM	NM	NM	NM	NM	NM	NM	2
Sollini et al.	NM	NM	3	3	0	1	0	0	NM
Yin et al.	NM	8	NM	NM	NM	NM	NM	NM	NM
Miwa et al.	6	2	6	5	0	0	1	0	12
Tung-Chen et al.	NM	NM	NM	NM	NM	NM	NM	NM	NM
Tung-Chen et al.	NM	NM	NM	NM	NM	NM	NM	NM	NM
Tung-Chen et al.	NM	NM	NM	NM	NM	NM	NM	NM	NM
Scelfo et al.	NM	0	0	0	0	1	0	0	0
Scelfo et al.	NM	0	1	0	0	0	0	0	1
Aesif et al.	NM	NM	1	0	0	0	0	0	1
Aesif et al.	NM	NM	0	0	0	0	0	0	0
Aesif et al.	NM	NM	1	0	0	0	0	0	0
Lago et al.	1	0	0	0	0	0	0	0	0
Lago et al.	1	0	1	0	0	0	0	0	0
Lago et al.	1	0	1	0	0	0	0	0	0
Lago et al.	1	0	0	1	0	0	0	0	0
Rai et al.	0	0	0	0	0	0	0	0	0
Rai et al.	0	0	0	0	0	0	0	0	0
Rai et al.	0	0	0	0	0	0	0	0	0
Singh et al.	0	0	1	0	0	0	0	0	0
Abdelnour et al.	NM	NM	0	0	0	0	0	0	1
Betelli et al.	NM	NM	1	0	0	0	0	0	0
Horii et al.	1	1	1	0	0	0	0	0	1
Zhou et al.	NM	NM	0	0	0	0	0	0	0
Alhiyari et al.	0	0	0	1	0	0	0	0	0
Aissaoui et al.	0	0	0	0	0	0	1	0	0
Dayco et al.	NM	NM	0	0	0	0	0	0	0

Garg et al.	NM	NM	0	1	0	0	0	0	0
Hamad et al.	NM	NM	NM	NM	NM	NM	NM	NM	NM
Heiss et al.	NM	NM	NM	NM	NM	NM	NM	NM	0
Liu et al.	NM	NM	NM	NM	NM	NM	NM	NM	NM
Malik et al.	NM	NM	1	0	0	0	0	0	0
Mazzolini et al.	1	1	0	0	1	0	0	0	0
Mitrani et al.	NM	NM	NM	NM	NM	NM	NM	NM	0
Susanto et al.	0	0	0	0	0	0	0	0	NM
Zhu et al.	0	0	0	0	0	0	0	0	0
Boehm et al.	1	0	1	0	0	0	0	0	1

Table S3. Frequency of administrated medications during the acute phase in participants of included studies

First Author	Cases	COVID Medical Treatment	Anti-coagulants	Hydroxychloroquine	Corticostroids	Oral Antibiotics	Intra-venous Antibiotics	Antiviral therapy	IL-1 inhibitor	IL-6 inhibitors	Immunoglo therapy
Armange et al.	23	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bai et al.	4	4	NM	0	3	3	0	4	0	0	0
Cesarone et al.	18	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gaspardone et al.	70	55	NM	48	NM	25	NM	39	18	7	NM
Rinaldo et al.	68	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sollini et al.	10	NM	3	3	NM	NM	NM	NM	NM	NM	NM
Sollini et al.	13	3	7	6	5	4	5	4	0	0	0
Yin et al.	91	NM	NM	NM	NM	NM	NM	83	NM	NM	55
Miwa et al.	12	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Tung-Chen et al.	1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Tung-Chen et al.	1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Tung-Chen et al.	1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Scelfo et al.	1	1	0	1	0	0	0	1	0	1	0
Scelfo et al.	1	1	0	1	0	0	0	1	0	1	0
Aesif et al.	1	1	0	0	0	0	0	1	0	1	0
Aesif et al.	1	1	0	0	0	0	0	1	0	0	0
Aesif et al.	1	1	1	1	1	1	0	0	1	1	0
Lago et al.	1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Lago et al.	1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Lago et al.	1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Lago et al.	1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Rai et al.	1	1	1	0	1	0	0	1	0	0	0
Rai et al.	1	1	1	0	1	0	0	0	0	0	0
Rai et al.	1	1	0	0	1	0	1	1	0	0	0
Singh et al.	1	1	1	0	1	1	0	0	0	0	0
Abdelnour et al.	1	0	0	0	0	0	1	0	0	0	0
Betelli et al.	1	1	1	1	0	1	1	0	0	0	0

Horii et al.	1	1	0	1	0	0	1	1	0	1	0
Zhou et al.	1	1	0	0	1	0	0	1	0	0	1
Alhiyari et al.	1	1	0	0	1	0	1	1	0	0	0
Aissaoui et al.	1	0	1	0	1	0	0	0	0	0	0
Dayco et al.	1	1	0	0	1	0	0	0	0	0	0
Garg et al.	1	1	0	0	1	0	0	1	0	0	0
Hamad et al.	1	0	0	0	0	0	0	0	0	0	0
Heiss et al.	1	0	0	0	0	0	0	0	0	0	0
Liu et al.	1	1	0	0	1	0	0	1	0	0	0
Malik et al.	1	1	1	0	1	1	1	1	0	0	0
Mazzolini et al.	1	1	1	1	1	1	0	0	0	1	0
Mitrani et al.	1	1	0	0	1	0	1	0	0	0	0
Susanto et al.	1	1	0	1	0	1	1	1	0	0	0
Zhu et al.	1	0	0	0	1	0	1	1	0	0	0
Boehm et al.	1	1	0	1	1	1	1	1	0	0	0

Table S4. Frequency of Long-COVID symptoms in participants of included studies

First Author	Cough	Fatigue	Weakness	Dyspnea	Dyspnea on excertin
Armange et al.	NM	NM	9	19	NM
Bai et al.	4	1	0	0	0
Cesarone et al.	2	5	NM	6	NM
Gaspardone et al.	NM	NM	NM	NM	NM
Rinaldo et al.	NM	NM	NM	NM	NM
Sollini et al.	NM	7	NM	7	NM
Sollini et al.	0	8	0	9	0
Yin et al.	NM	NM	NM	91	NM
Miwa et al.	NM	NM	NM	NM	7
Tung-Chen et al.	0	0	1	0	1
Tung-Chen et al.	0	0	1	0	1
Tung-Chen et al.	0	0	1	0	1
Scelfo et al.	0	1	0	1	0
Scelfo et al.	0	0	1	1	0
Aesif et al.	NM	NM	NM	NM	NM
Aesif et al.	NM	NM	NM	NM	NM
Aesif et al.	NM	NM	NM	NM	NM
Lago et al.	NM	1	NM	0	NM
Lago et al.	NM	1	NM	0	NM
Lago et al.	NM	1	NM	0	NM
Lago et al.	NM	0	NM	1	NM
Rai et al.	NM	NM	NM	NM	NM
Rai et al.	NM	NM	NM	NM	1
Rai et al.	NM	NM	NM	NM	1
Singh et al.	0	NM	NM	1	NM

Abdelnour et al.	NM	NM	NM	NM	NM
Betelli et al.	0	0	0	1	0
Horii et al.	NM	NM	NM	NM	NM
Zhou et al.	NM	NM	NM	NM	NM
Alhiyari et al.	1	NM	NM	NM	NM
Aissaoui et al.	0	0	0	1	1
Dayco et al.	NM	NM	NM	NM	NM
Garg et al.	NM	NM	NM	NM	1
Hamad et al.	1	0	0	1	NM
Heiss et al.	NM	NM	NM	NM	1
Liu et al.	1	NM	NM	NM	NM
Malik et al.	NM	NM	NM	1	NM
Mazzolini et al.	NM	NM	NM	1	NM
Mitrani et al.	NM	NM	NM	1	1
Susanto et al.	NM	NM	NM	1	NM
Zhu et al.	1	NM	NM	1	NM
Boehm et al.	NM	NM	NM	NM	NM

Table S5. Imaging modalities and imaging findings of included case-studies

First Author	Evaluation setting	Evaluation time in days (performing the imaging)	Imaging Modality	imaging finding	Category Interstitial	Category Pleural	Category Airway	Category Parenchymal
Tung-Chen et al.[30]	Re-admission	56	CT, US	pleural thickening	0	1	0	0
Tung-Chen et al.	Re-admission	56	CT, US	GGO	0	0	0	1
Tung-Chen et al.	Re-admission	56	CT, US	Fibrotic change	0	0	0	0
Scelfo et al.[49]	Re-admission	29	CT	GGO, Consolidation, linear scaring, interstitial thickening	1	0	0	1
Scelfo et al.	Re-admission	28	CT	Consolidation, pleural effusion, reticulation	1	1	0	1
Aesif et al.[31]	Prolonged hospitalization	38	CT	GGO, Consolidation, pneumothorax, hemopneumothorax, airspace opacity	0	1	0	1
Aesif et al.	Prolonged hospitalization	40	CT	Consolidation, pleural effusion, airspace opacity	0	1	0	1
Aesif et al.	Prolonged hospitalization	122	CXR	complete opacification, volume loss	0	0	0	1
Lago et al.[50]	Follow-up assessment	90	CT	GGO, reticular opacity, volume loss	0	0	0	1
Lago et al.	Follow-up assessment	90	CT	GGO, reticular opacity, volume loss	0	0	0	1
Lago et al.	Follow-up assessment	90	CT	GGO, reticular opacity, volume loss	0	0	0	1
Lago et al.	Follow-up assessment	90	CT	GGO, reticular opacity, volume loss	0	0	0	1
Rai et al.[51]	Prolonged hospitalization	28	CT	reticular opacity, bronchiolectasis, bronchiectasis, emphysematous changes, architectural distortion, honeycomb-like appearance	1	0	1	1

Rai et al.	Prolonged hospitalization	42	CT, CXR	GGO, Consolidation, reticulation, honeycomb-like appearance, volume loss	1	0	0	1
Rai et al.	prolonged hospitalization	29	CT	GGO, Fibrotic change	1	0	0	1
Singh et al.[52]	prolonged hospitalization	31	CT	GGO, bronchiectasis, interstitial thickening	1	0	1	0
Abdelnour et al.[53]	prolonged hospitalization	41	CXR	Aeriation	0	0	0	1
Betelli et al.[54]	re-admission	35	CT	GGO, Consolidation, pleural effusion	0	1	0	1
Horii et al.[55]	prolonged hsp	50	CT	GGO, Consolidation, pleural effusion, atelectasis	0	1	0	1
Zhou et al.[56]	re-admission	44	CT	Consolidation	0	0	0	1
Alhiyari et al.[32]	re-admission	130	CT	GGO, bronchiectasis, interlobular septal thickening, reticulation, honeycomb-like appearance, interstitial pneumonia pattern	1	0	1	1
Aissaoui et al.[59]	Follow-up assessment	150	CT	GGO, reticulation, Fibrotic change, emphysematous changes	1	0	0	1
Dayco et al.[58]	prolonged hospitalization	90	CT	Fibrotic change, pulmonary edema	1	0	0	0
Garg et al.[28]	Follow-up assessment	53	CT	interlobular septal thickening, parenchymal band, Fibrotic change, bronchiectasis, bronchiolectasis, crazy-paving pattern	1	0	1	1
Hamad et al.[33]	re-admission	35	CXR	pneumothorax, airspace opacity	0	1	0	1
Heiss et al.[29]	Follow-up assessment	97	CT	GGO, Consolidation	0	0	0	1
Liu et al.[59]	Re-admission	46	CT	GGO, Consolidation	0	0	0	1
Malik et al.[34]	prolonged hospitalization	42	CT	GGO, Fibrotic change, bronchiectasis, architectural distortion, linear scaring, airspace disease, COVID pneumonia	1	0	1	1
Mazzolini et al.[60]	prolonged hospitalization	55	CT	GGO, Fibrotic change, architectural distortion, emphysematous changes, volume loss	1	0	0	0
Mitrani et al.[61]	Follow-up assessment	60	CXR	bilateral pneumonia/viral pneumonitis	0	0	0	1
Susanto et al.[62]	Follow-up assessment	75	CT	Fibrotic change, Consolidation, bronchiolectasis, parenchymal band	1	0	1	1
Zhu et al.[63]	prolonged hospitalization	28	CT	Fibrotic change	NM	NM	NM	NM
Boehm et al.[64]	prolonged hospitalization	40	CT	Consolidation	NM	NM	NM	1
Total	---	60.18	CT/CXR/US	---	13	7	20	27

Table S6. Frequency of lung imaging abnormalities per different evaluation setting

Evaluation setting	First Author	Number of Long COVID cases underwent imaging	Positive imaging	Negative imaging	Category Interstitial abnormalities	Category Pleural abnormalities	Category Airway abnormalities	Category Parenchymal abnormalities
Follow-up evaluation	Armange et al.	23	4	19	0	0	0	4
	Bai et al.	4	4	0	3	0	0	1
	Cesarone et al.	18	7	11	7	0	0	0
	Rinaldo et al.	68	43	25	NA	NA	NA	NA
	Sollini et al.	10	2	8	6	0	0	0
	Sollini et al.	13	4	9	NA	NA	NA	NA
	Yin et al.	91	NM	NM	76	7	22	68
	Miwa et al.	12	12	0	0	0	0	12
	Lago et al.	1	1	0	0	0	0	1
	Lago et al.	1	1	0	0	0	0	1
	Lago et al.	1	1	0	0	0	0	1
	Lago et al.	1	1	0	0	0	0	1
	Aissaoui et al.	1	1	0	1	0	0	1
	Garg et al.	1	1	0	1	0	1	1
	Heiss et al.	1	1	0	0	0	0	1
	Mitrani et al.	1	1	0	0	0	0	1
	Susanto et al.	1	1	0	1	0	1	1
	Total FU evaluation	248	85	72	95	7	24	94
Re-admission	Tung-Chen et al.	1	1	0	0	1	0	0
	Tung-Chen et al.	1	1	0	0	0	0	1
	Tung-Chen et al.	1	1	0	0	0	0	0
	Scelfo et al.	1	1	0	1	0	0	1
	Scelfo et al.	1	1	0	1	1	0	1
	Betelli et al.	1	1	0	0	1	0	1
	Zhou et al.	1	1	0	0	0	0	1
	Alhiyari et al.	1	1	0	1	0	1	1
	Hamad et al.	1	1	0	0	1	0	1
	Liu et al.	1	1	0	0	0	0	1
	Total Re-admission	10	10	0	3	3	1	9
Prolonged hospitalization	Gaspardone et al.	70	NM	NM	NA	NA	NA	NA
	Aesif et al.	1	1	0	0	1	0	1
	Aesif et al.	1	1	0	0	1	0	1
	Aesif et al.	1	1	0	0	0	0	1
	Rai et al.	1	1	0	1	0	1	1
	Rai et al.	1	1	0	1	0	0	1
	Rai et al.	1	1	0	1	0	0	1
	Singh et al.	1	1	0	1	0	1	0

Abdelnour et al.	1	1	0	0	0	0	1
Horii et al.	1	1	0	0	1	0	1
Dayco et al.	1	1	0	1	0	0	0
Malik et al.	1	1	0	1	0	1	1
Mazzolini et al.	1	1	0	1	0	0	0
Zhu et al.	1	NM	NM	NM	NM	NM	NM
Boehm et al.	1	NM	NM	NM	NM	NM	1
Total prolonged hospitalization	84	12	0	7	3	3	10