

POST COVID-19 LUNG INJURY

Clinical Presentation and Management

Rakesh Sinha, MD

Pulmonary Critical Care Medicine



Expert care with a personal touch

Disclosures

- None

WHO definition of post COVID-19 condition

- *Post COVID-19 condition occurs in individuals with a history of probable or confirmed SARS CoV-2 infection, usually 3 months from the onset of COVID-19 with symptoms and that last for at least 2 months and cannot be explained by an alternative diagnosis.*

WHO definition of post COVID-19 condition

- *Common symptoms include fatigue, shortness of breath, cognitive dysfunction but also others and generally have an impact on everyday functioning. Symptoms may be new onset following initial recovery from an acute COVID-19 episode or persist from the initial illness. Symptoms may also fluctuate or relapse over time.*

Global Prevalence of Post-Acute Sequelae of COVID-19 (PASC) or Long COVID

- Meta-analysis of 31 studies
- Global pooled PASC prevalence estimated at 43% of all patients who tested positive for Covid-19 (31% in US)
- Global pooled PASC prevalence estimate for patients who had to be hospitalized due to Covid-19 was 57%

ACCEPTED MANUSCRIPT

Global Prevalence of Post COVID-19 Condition or Long COVID: A Meta-Analysis and Systematic Review

Chen Chen, MA, Spencer R. Hauptert, BS, Lauren Zimmermann, BSc , Xu Shi, PhD, Lars G. Fritsche, PhD, Bhramar Mukherjee, PhD  [Author Notes](#)

The Journal of Infectious Diseases, jiac136, <https://doi.org/10.1093/infdis/jiac136>

Published: 16 April 2022 **Article history** ▼

Overall Post COVID-19 Condition		0.43 [0.39; 0.46]; (31)
Sex	Female	0.49 [0.35; 0.63]; (9)
	Male	0.37 [0.24; 0.51]; (9)
Region	Europe	0.44 [0.32; 0.56]; (13)
	Asia	0.51 [0.37; 0.65]; (7)
	USA	0.31 [0.21; 0.43]; (7)
Follow-up time	30 days	0.37 [0.26; 0.49]; (10)
	60 days	0.25 [0.15; 0.38]; (10)
	90 days	0.32 [0.14; 0.57]; (9)
	120 days	0.49 [0.40; 0.59]; (13)

Post Covid-19 Condition Symptoms

General symptoms	Fatigue	0.23 [0.17; 0.30]; (28)
	Tachycardia	0.06 [0.03; 0.11]; (9)
	Dizziness	0.05 [0.02; 0.09]; (7)
	Appetite	0.04 [0.02; 0.09]; (8)
	Sore throat	0.03 [0.02; 0.05]; (12)
	Fever	0.02 [0.01; 0.04]; (14)

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Respiratory symptoms	Dyspnea	0.13 [0.11; 0.15]; (28) —
	Cough	0.07 [0.05; 0.09]; (28) —
	Chest pain	0.05 [0.04; 0.07]; (16) —
Psychological symptoms	Anxiety	0.08 [0.04; 0.16]; (11)
	Depression	0.07 [0.03; 0.15]; (8)

Neurologic symptoms

Memory problems	0.14 [0.10; 0.19]; (9)
Sleep problems	0.11 [0.05; 0.23]; (15)
Concentration/ Confusion / Brain fog	0.09 [0.05; 0.15]; (13)
Taste	0.08 [0.04; 0.13]; (10)
Smell	0.07 [0.05; 0.11]; (15)
Smell or Taste	0.06 [0.02; 0.21]; (10)
Headache	0.05 [0.03; 0.07]; (22)

Musculoskeletal symptoms	Joint pain	0.10 [0.04; 0.22]; (6)
	Myalgia	0.06 [0.04; 0.09]; (19)
Gastrointestinal symptoms	Abdominal pain	0.04 [0.01; 0.09]; (7)
	Diarrhea	0.03 [0.01; 0.05]; (11)
Dermatologic symptoms	Hair loss	0.07 [0.02; 0.24]; (10)

Lung Injury is common in Covid 19

- COVID-19 is a multisystem disease
- Lungs are the primary target of infection
- 54% with paucisymptomatic patients had lung involvement on LDCT

ORIGINAL ARTICLE

Open

Prevalence and risk factors for lung involvement on low-dose chest CT (LDCT) in a paucisymptomatic population of 247 patients affected by COVID-19

Maxime Castelli^{1†}, Arnaud Maurin¹, Axel Bartoli^{1,2}, Michael Dassa¹ , Baptiste Marchi¹, Julie Finance³, Jean-Christophe Lagier^{3,4}, Matthieu Million^{3,4}, Philippe Parola^{3,5}, Philippe Brouqui^{3,4}, Didier Raoult^{3,4}, Sebastien Cortaredona^{3,5}, Alexis Jacquier^{1,2}, Jean-Yves Gaubert^{1,6,7} and Paul Habert^{1,6,7*†} 

Chest CT and PFT findings among COVID-19 patients at 3 and 6 months after hospital discharge

ORIGINAL RESEARCH article

Front. Med., 13 January 2022 | <https://doi.org/10.3389/fmed.2021.686878>



Pulmonary Sequelae in Patients After Recovery From Coronavirus Disease 2019: A Follow-Up Study With Chest CT

 Xuejiao Liao^{1,2†},  Dapeng Li^{2,3†},  Zhi Liu^{4†},  Zhenghua Ma¹,  Lina Zhang¹,  Jingke Dong¹,
 Yirong Shi¹,  Xiaowen Gu¹,  Guangping Zheng⁵,  Ling Huang⁴,  Lijun Yuan³,  Jing Cao³,
 Dan Shu²,  Xiangyi Yang²,  Qing He^{3*‡},  Guobao Li^{4*‡},  Zheng Zhang^{2,3*‡} and  Lei Liu^{3*‡}

Chest CT findings of COVID-19 patients at 3 and 6 months after hospital discharge

	Admission (N = 273)	Discharge (N = 268)	3 months (N = 246)	6 months (N = 170)
Distribution of lesions, N (%)				
No lesion	12 (4.4)	14 (5.2)	62 (25.2)	40 (23.5)
Random	12 (4.4)	1 (0.4)	8 (3.3)	1 (0.6)
Peripheral	237 (86.8)	242 (90.3)	174 (70.7)	128 (75.3)
Diffuse	12 (4.4)	11 (4.1)	2 (0.8)	1 (0.6)
Involvement of the lesions, N (%)				
No involvement	12 (4.4)	15 (5.6)	62 (25.2)	40 (23.5)
Single lobe	46 (16.8)	46 (17.2)	61 (24.8)	45 (26.5)
Bilateral multilobe	215 (78.8)	207 (77.2)	123 (50.0)	85 (50.0)

Chest CT findings of COVID-19 patients at 3 and 6 months after hospital discharge

	Admission (N = 273)	Discharge (N = 268)	3 months (N = 246)	6 months (N = 170)
Mosaicism, N (%)				
No	268 (98.2)	268 (100.0)	243 (98.8)	169 (99.4)
Yes	5 (1.8)	0 (0.0)	3 (1.2)	1 (0.6)
Ground-glass opacity, N (%)				
No	20 (7.3)	30 (11.2)	110 (44.7)	88 (51.8)
Yes	253 (92.7)	238 (88.8)	136 (55.3)	82 (48.2)
Crazy-paving pattern, N (%)				
No	220 (80.6)	264 (98.5)	245 (99.6)	169 (99.4)
Yes	53 (19.4)	4 (1.5)	1 (0.4)	1 (0.6)

Chest CT findings of COVID-19 patients at 3 and 6 months after hospital discharge

	Admission (N = 273)	Discharge (N = 268)	3 months (N = 246)	6 months (N = 170)
Reticulation, N (%)				
No	266 (97.4)	260 (97.0)	239 (97.2)	167 (98.2)
Yes	7 (2.6)	8 (3.0)	7 (2.8)	3 (1.8)
Parenchymal band, N (%)				
No	251 (91.9)	204 (76.1)	152 (61.8)	94 (55.3)
Yes	22 (8.1)	64 (23.9)	94 (38.2)	76 (44.7)
Consolidation, N (%)				
No	245 (89.7)	247 (92.2)	244 (99.2)	169 (99.4)
Yes	28 (10.3)	21 (7.8)	2 (0.8)	1 (0.6)

Chest CT findings of COVID-19 patients at 3 and 6 months after hospital discharge

	Admission (N = 273)	Discharge (N = 268)	3 months (N = 246)	6 months (N = 170)
Bronchiectasis, N (%)				
No	266 (97.4)	260 (97.0)	234 (95.1)	163 (95.9)
Yes	7 (2.6)	8 (3.0)	12 (4.9)	7 (4.1)
Honeycombing, N (%)				
No	272 (99.6)	266 (99.3)	244 (99.2)	169 (99.4)
Yes	1 (0.4)	2 (0.7)	2 (0.8)	1 (0.6)

Chest CT findings of COVID-19 patients at 3 and 6 months after hospital discharge

	Admission (N = 273)	Discharge (N = 268)	3 months (N = 246)	6 months (N = 170)
No. of lobes involved, median (IQR)	4 (2, 5)	4 (2, 5)	2 (0, 4)	2 (1, 4)
Total CT score, median (IQR)	5 (3, 9)	4 (2, 6)	2 (0, 4)	2 (1, 4)
Left upper lobe	1 (0, 2)	1 (0, 1)	0 (0, 1)	0 (0, 1)
Left lower lobe	2 (1, 2)	1 (1, 2)	1 (0, 1)	0 (0, 1)
Right upper lobe	1 (0, 1)	1 (0, 1)	0 (0, 1)	0 (0, 1)
Right middle lobe	1 (0, 1)	1 (0, 1)	0 (0, 1)	0 (0, 1)
Right lower lobe	2 (1, 3)	1 (1, 2)	1 (0, 1)	1 (0, 1)

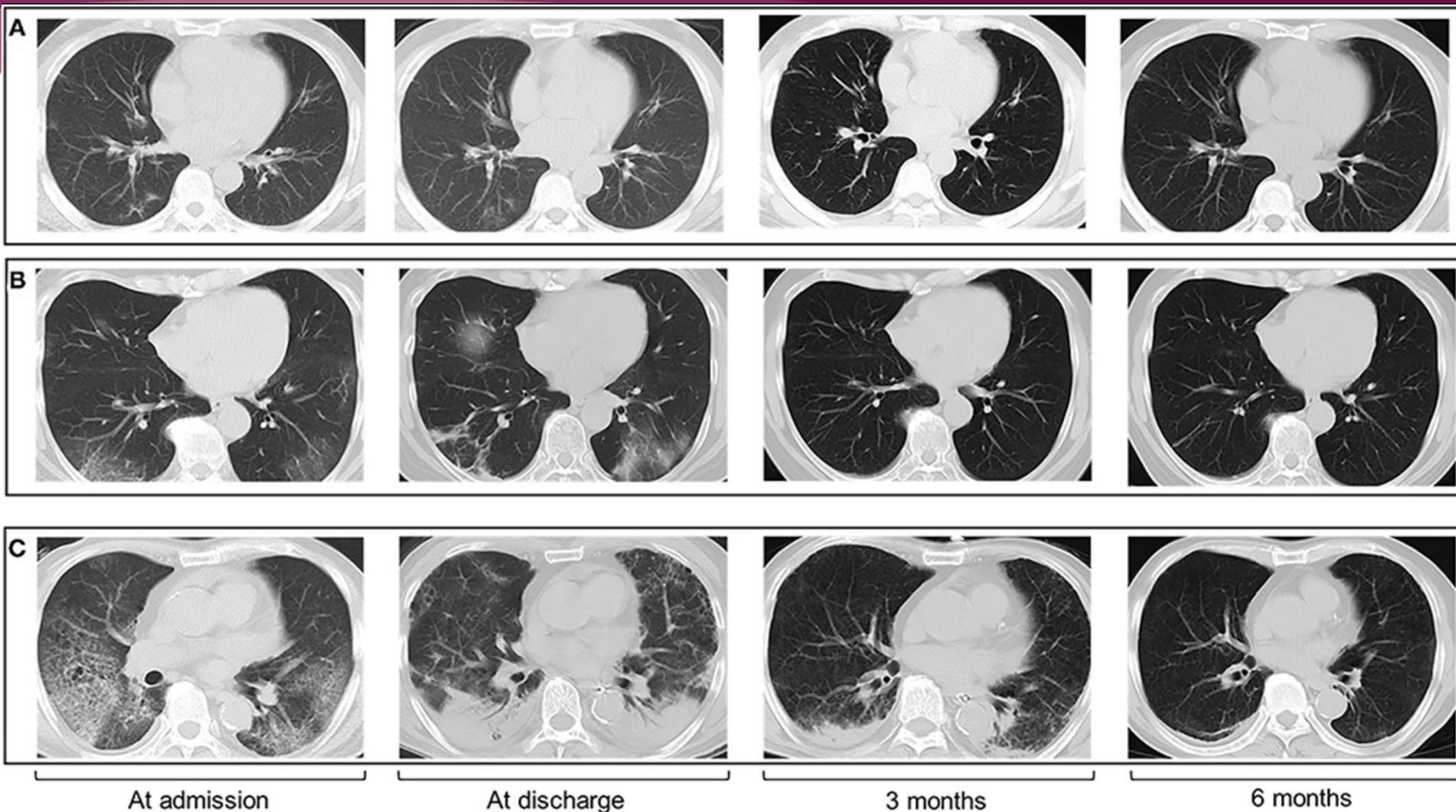
Chest CT findings of COVID-19 patients at 6 months after hospital discharge based on severity

	Mild (N = 3)	Moderate (N = 130)	Severe / Critical (N = 37)
Ground-glass opacity, N (%)			
No	2 (66.7)	78 (60.0)	8 (21.6)
Yes	<u>1 (33.3)</u>	<u>52 (40.0)</u>	<u>29 (78.4)</u>
Parenchymal band, N (%)			
No	3 (100.0)	70 (53.8)	21 (56.8)
Yes	0 (0.0)	<u>60 (46.2)</u>	<u>16 (43.2)</u>
Reticulation, N (%)			
No	3 (100.0)	130 (100.0)	34 (91.9)
Yes	0 (0.0)	0 (0.0)	<u>3 (8.1)</u>
Bronchiectasis, N (%)			
No	3 (100.0)	126 (96.9)	34 (91.9)
Yes	0 (0.0)	<u>4 (3.1)</u>	<u>3 (8.1)</u>

Chest CT findings of COVID-19 patients at 6 months after hospital discharge based on severity

	Mild (N = 3)	Moderate (N = 130)	Severe / Critical (N = 37)
Honeycombing, N (%)			
No	3 (100.0)	130 (100.0)	36 (97.3)
Yes	0 (0.0)	0 (0.0)	<u>1 (2.7)</u>
Crazy-paving pattern, N (%)			
No	3 (100.0)	130 (100.0)	36 (97.3)
Yes	0 (0.0)	0 (0.0)	<u>1 (2.7)</u>
Mosaicism (%)			
No	3 (100.0)	130 (100.0)	36 (97.3)
Yes	0 (0.0)	0 (0.0)	<u>1 (2.7)</u>
Consolidation, N (%)			
No	3 (100.0)	129 (99.2)	37 (100.0)
Yes	0 (0.0)	<u>1 (0.8)</u>	0 (0.0)

Chest CT findings of COVID-19 patients at 3 and 6 months after hospital discharge based on severity



At admission

At discharge

3 months

6 months

PFT findings in COVID-19 patients at 3 and 6 months after hospital discharge

Variables	3 months	6 months
Spirometry	<i>N</i> = 118	<i>N</i> = 96
FVC < 80% predicted, <i>N</i> (%)	4 (3.4)	6 (6.2)
FEV ₁ < 80% predicted, <i>N</i> (%)	6 (5.1)	9 (9.4)
MMEF < 65% predicted, <i>N</i> (%)	33 (28.4)	28 (29.2)
Diffusion capacity	<i>N</i> = 51	<i>N</i> = 99
<i>D</i> _{LCO} < 80%, predicted, <i>N</i> (%)	20 (39.2)	44 (44.4)
<i>D</i> _{LCO} / <i>V</i> _A < 80%, predicted, <i>N</i> (%)	11 (22.0)	21 (21.9)
Lung volume	<i>N</i> = 51	<i>N</i> = 99
TLC < 80%, predicted, <i>N</i> (%)	6 (11.8)	14 (14.1)
RV < 80% predicted, <i>N</i> (%)	2 (3.9)	2 (2.0)

Respiratory Outcomes over 12 months in patients hospitalized for severe COVID-19

[Lancet Respir Med.](#) 2021 Jul; 9(7): 747–754.

Published online 2021 May 5. doi: [10.1016/S2213-2600\(21\)00174-0](https://doi.org/10.1016/S2213-2600(21)00174-0)

PMCID: PMC8099316

EMSID: [EMS121334](#)

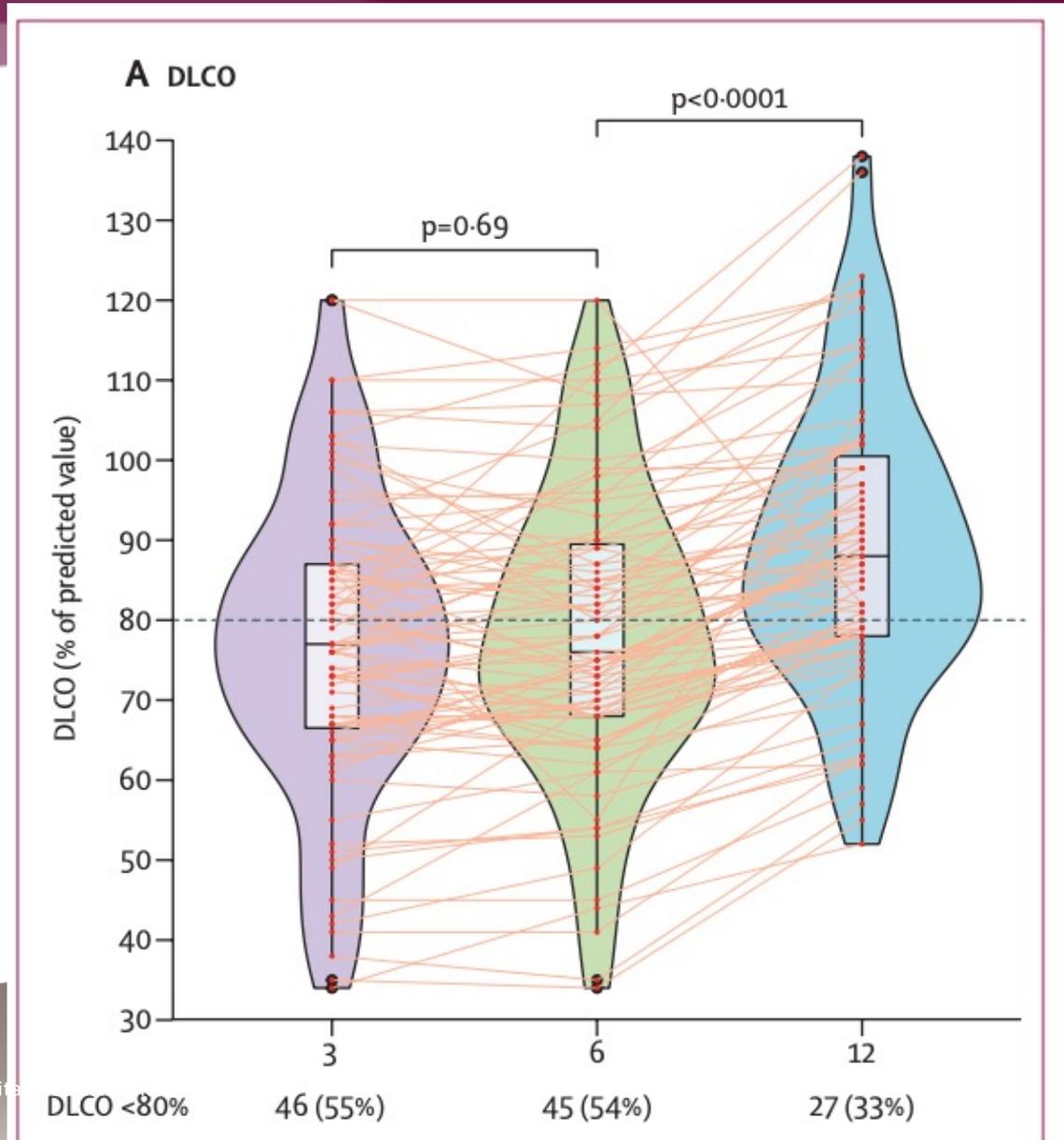
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3-month, 6-month, 9-month, and 12-month respiratory outcomes in patients following COVID-19-related hospitalisation: a prospective study

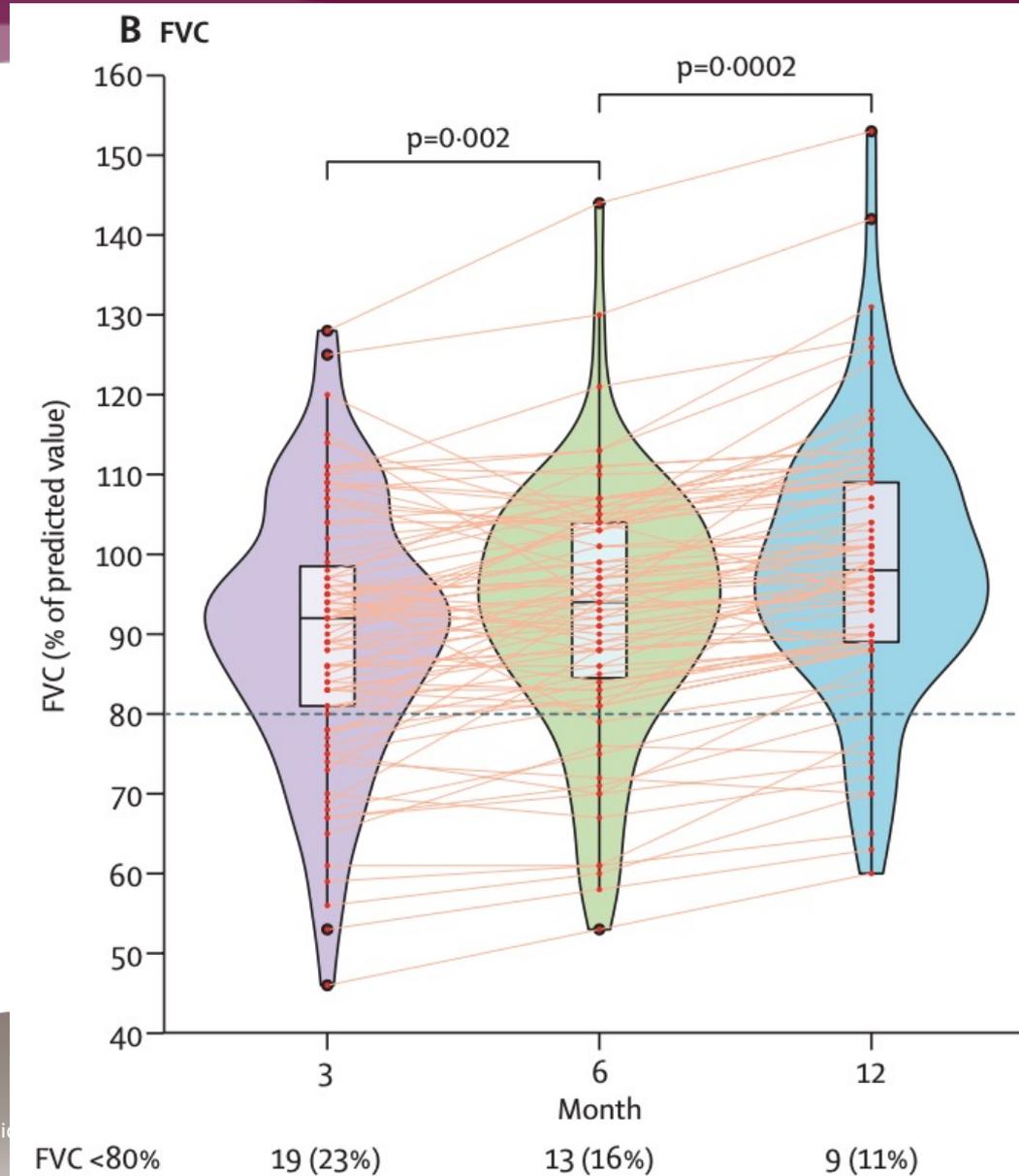
[Xiaojun Wu](#), MD,^{a,*} [Xiaofan Liu](#), MD,^{b,*} [Yilu Zhou](#), MSc,^{c,d,*} [Hongying Yu](#), MD,^{a,*} [Ruiyun Li](#), MD,^{a,*} [Qingyuan Zhan](#), Prof, MD,^{f,*} [Fang Ni](#), BM,^b [Si Fang](#), BM,^b [Yang Lu](#), MD,^b [Xuhong Ding](#), MD,^a [Hailing Liu](#), MD,^a [Rob M Ewing](#), PhD,^{c,d} [Mark G Jones](#), PhD,^{d,e,g,t****} [Yi Hu](#), MD,^{b,t***} [Hanxiang Nie](#), Prof, MD,^{a,t**} and [Yihua Wang](#), PhD^{c,d,g,t*}



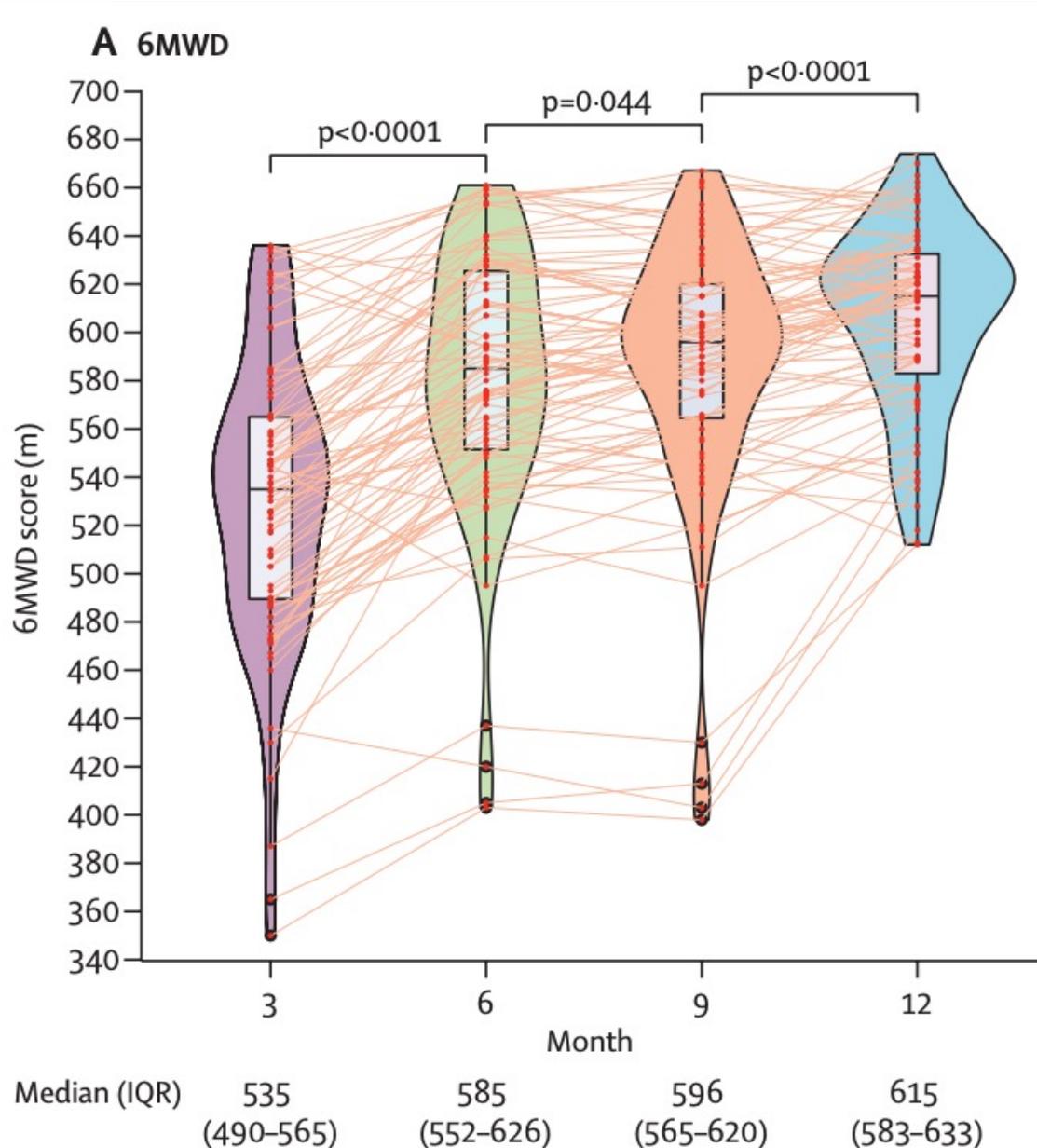
Temporal changes in DLCO following severe COVID-19-related hospitalization



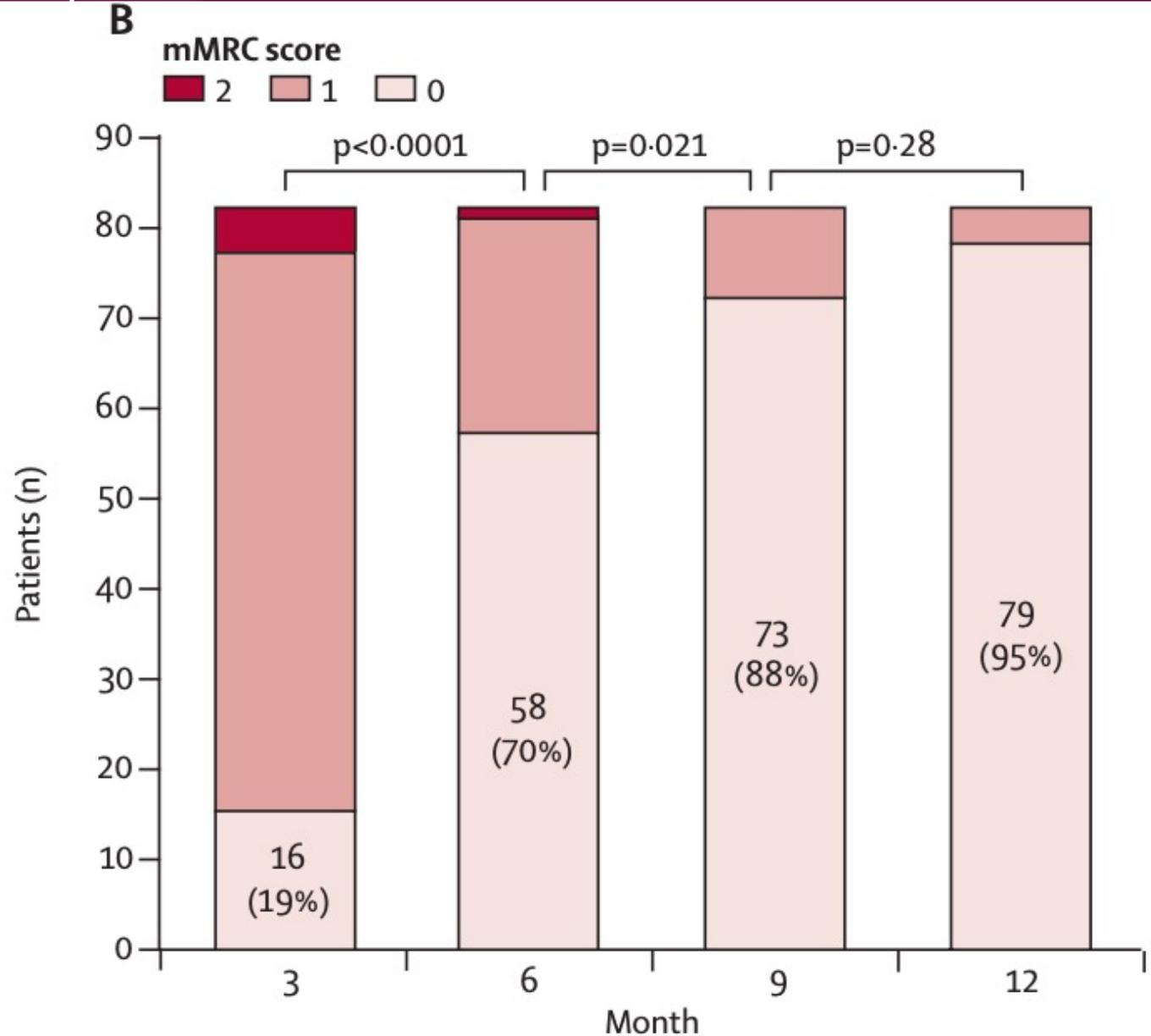
Temporal changes in FVC following severe COVID-19-related hospitalization



Temporal changes in 6MWD following severe COVID-19-related hospitalization



Temporal changes in mMRC score following severe COVID-19-related hospitalization



HRCT scores in patients with severe COVID-19 at 12 months after discharge

	HRCT normal (n=63)	HRCT abnormal (n=20)
Hospitalisation		
Length of hospital stay, days	28 (24-33)	35 (29-37)
Peak CT pneumonia score during hospitalisation	27 (24-33)	36 (30-44)
Oxygen supply		
Nasal cannula or mask (n=37)	32 (51%)	5 (25%)
HFNC or NIV (n=46)	31 (49%)	15 (75%)

HRCT scores in patients with severe COVID-19 at 12 months after discharge

	HRCT normal (n=63)	HRCT abnormal (n=20)
Pulmonary function at month 12*		
DLCO	90 (82-102)	77 (66-81)
FEF _{25-75%}	89 (76-109)	92 (72-123)
FEV ₁ :FVC	82 (78-85)	85 (80-86)
FRC	107 (89-126)	99 (76-106)
FVC	99 (90-111)	92 (79-100)
FEV ₁	97 (87-110)	88 (75-106)
RV	88 (74-102)	75 (64-89)
TLC	95 (88-104)	88 (72-94)
VC	101 (91-112)	92 (79-100)

Quantitative Chest CT Assessment of Small Airways Disease in Post-Acute SARS-CoV-2 Infection

Radiology

"In Press" papers have undergone full peer review and have been accepted for publication in Radiology. This article will undergo copyediting, layout, and proof review before it is published in its final version. Please note that during production of the final copyedited article, errors may be discovered which could affect the content.

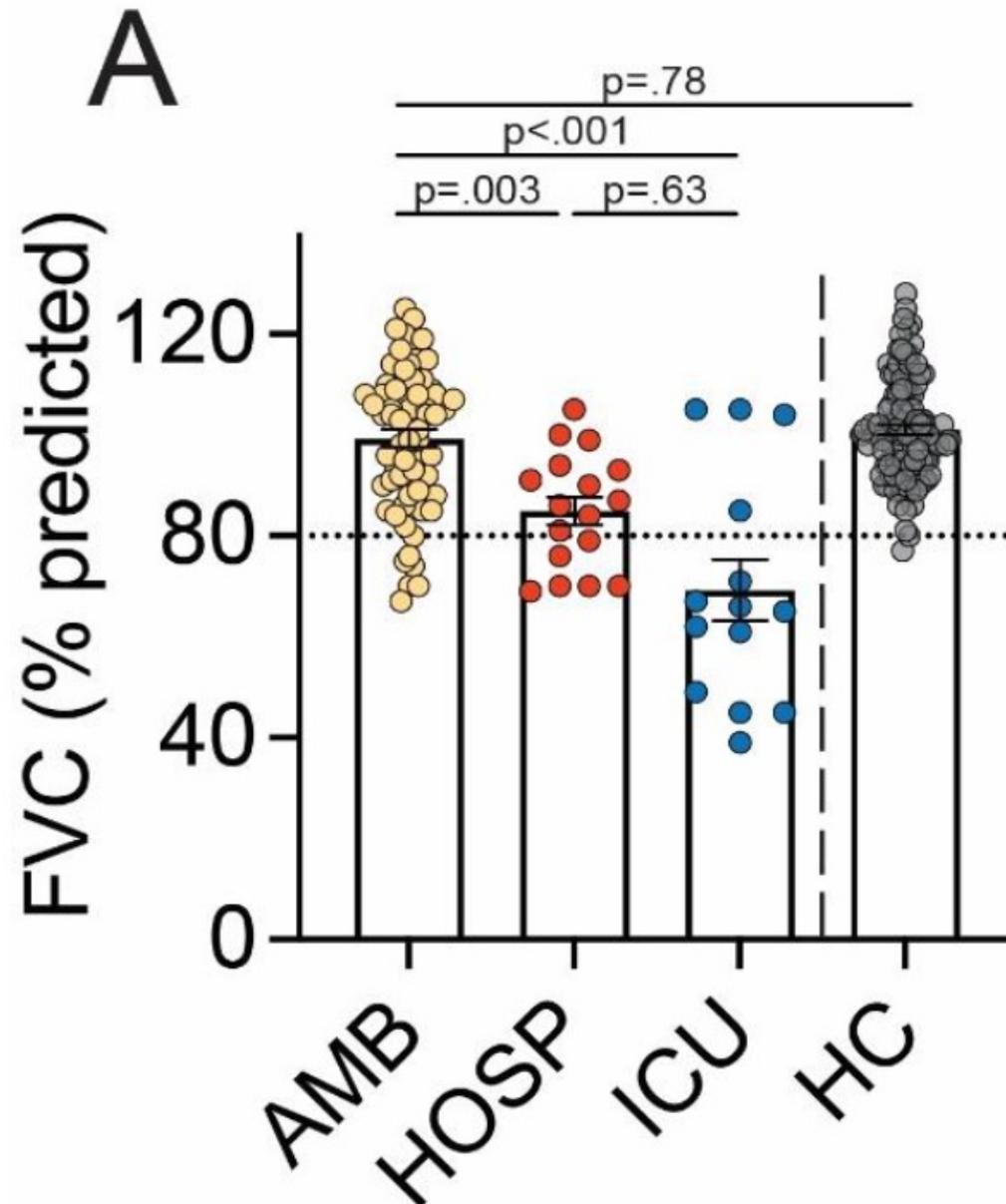
Quantitative Chest CT Assessment of Small Airways Disease in Post-Acute SARS-CoV-2 Infection

Manuscript Type: Original Research

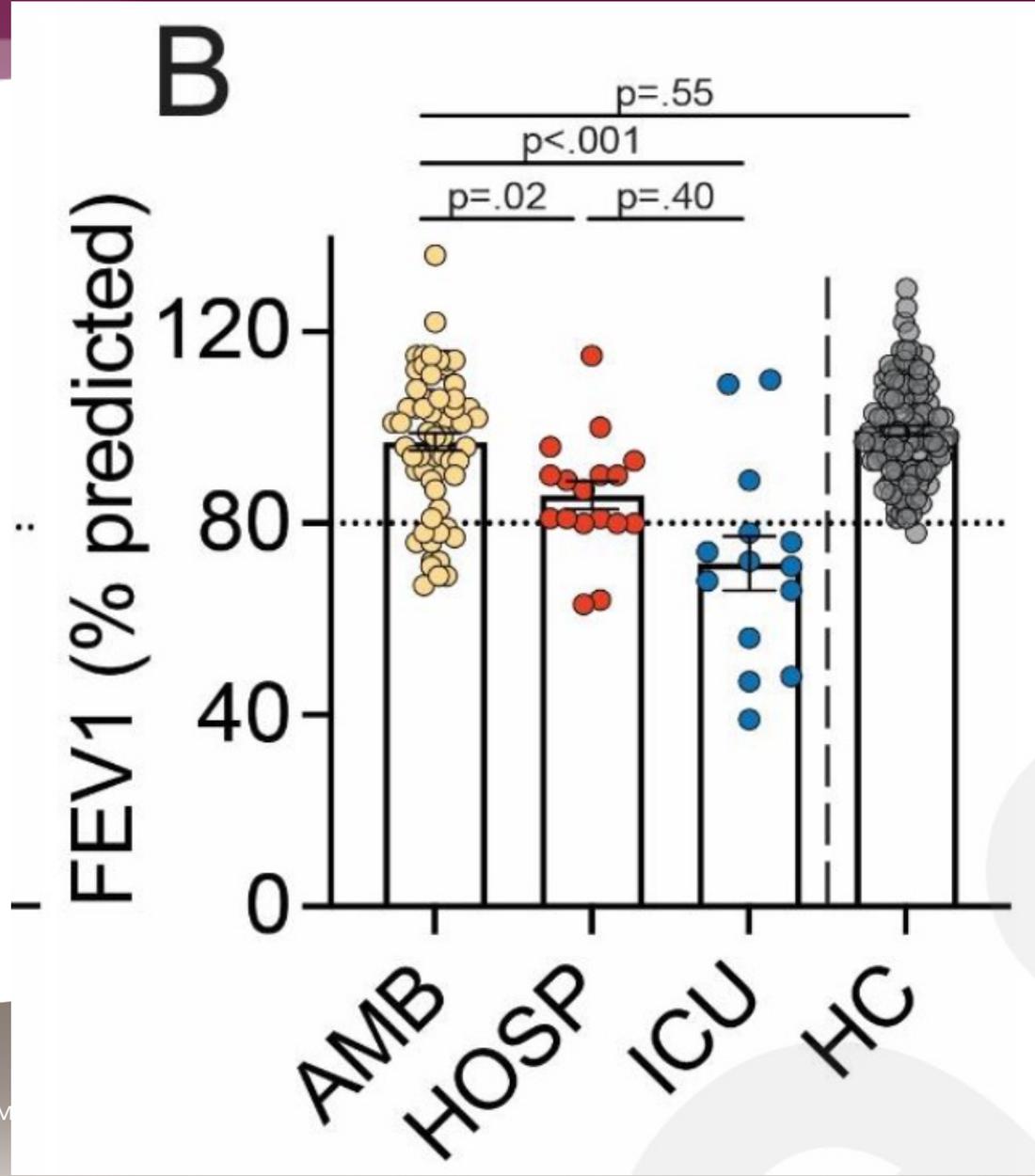
Josalyn L. Cho^{1*}, Raul Villacreses^{1*}, Prashant Nagpal², Junfeng Guo^{2,3}, Alejandro A. Pezzulo¹, Andrew L. Thurman¹, Nabeel Y. Hamzeh¹, Robert J. Blount¹, Spyridon Fortis^{1,4}, Eric A. Hoffman^{1,2,3}, Joseph Zabner¹, Alejandro P. Comellas¹



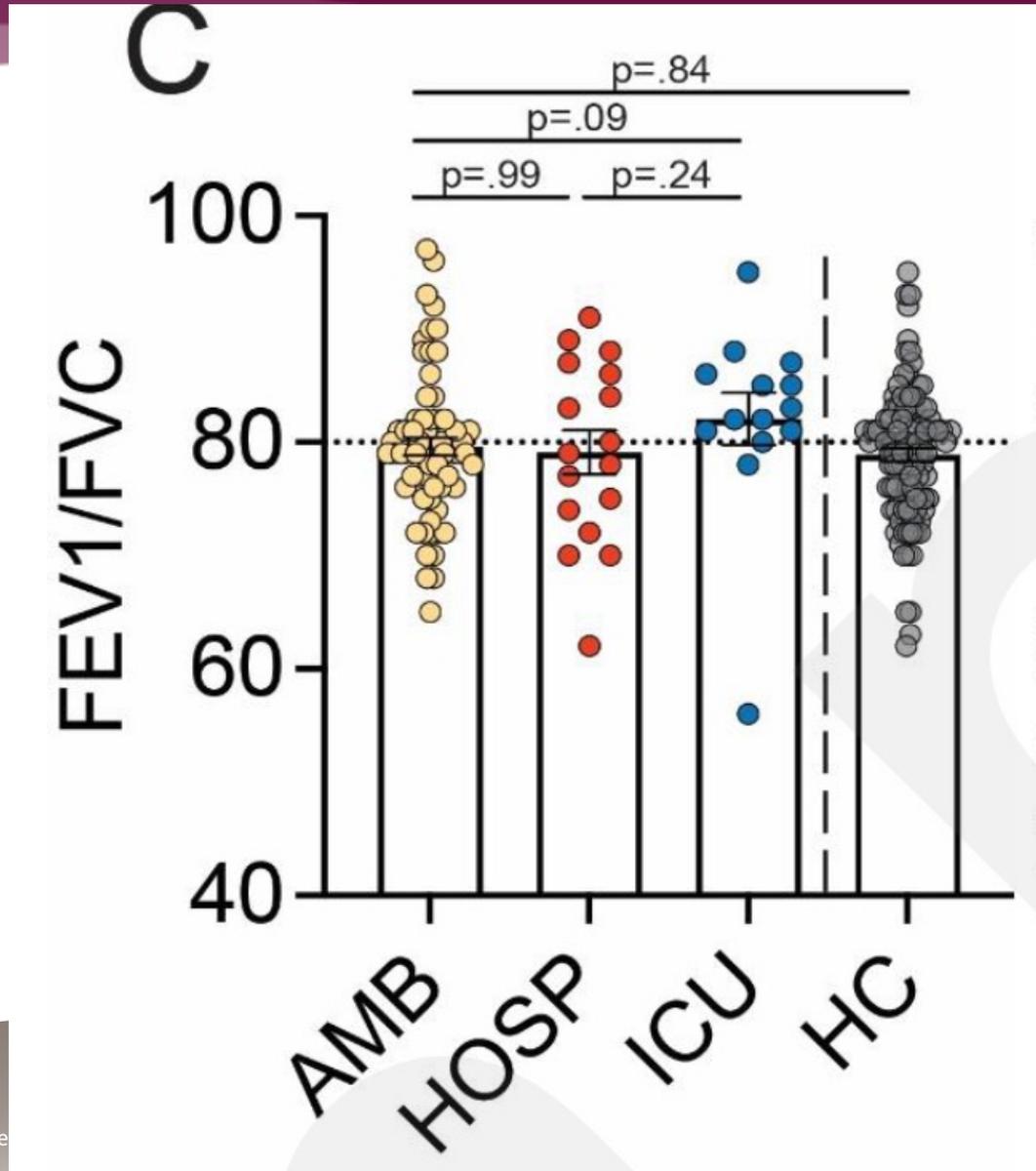
Pulmonary Function Testing in post acute Covid 19



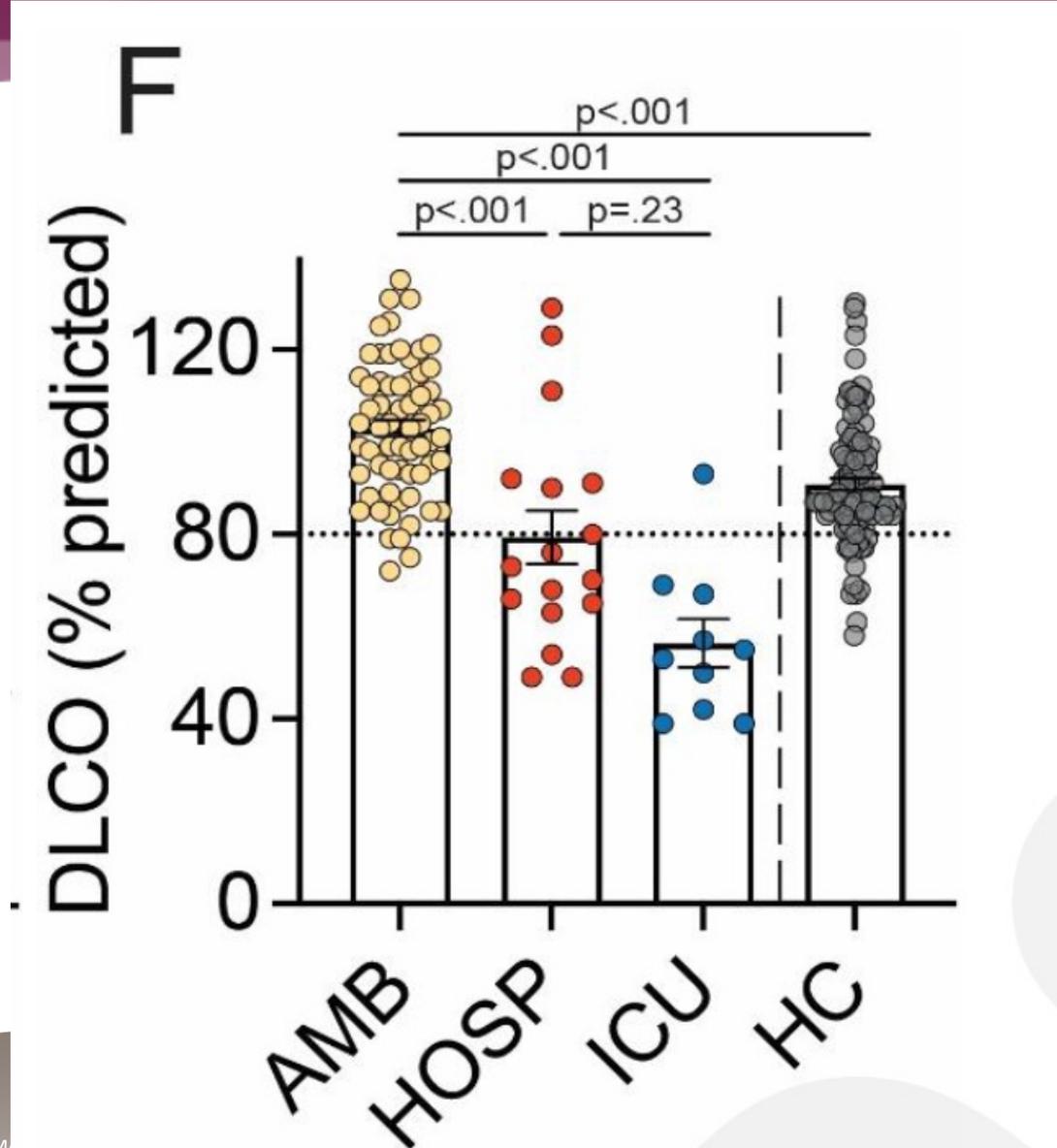
Pulmonary Function Testing in post acute Covid 19



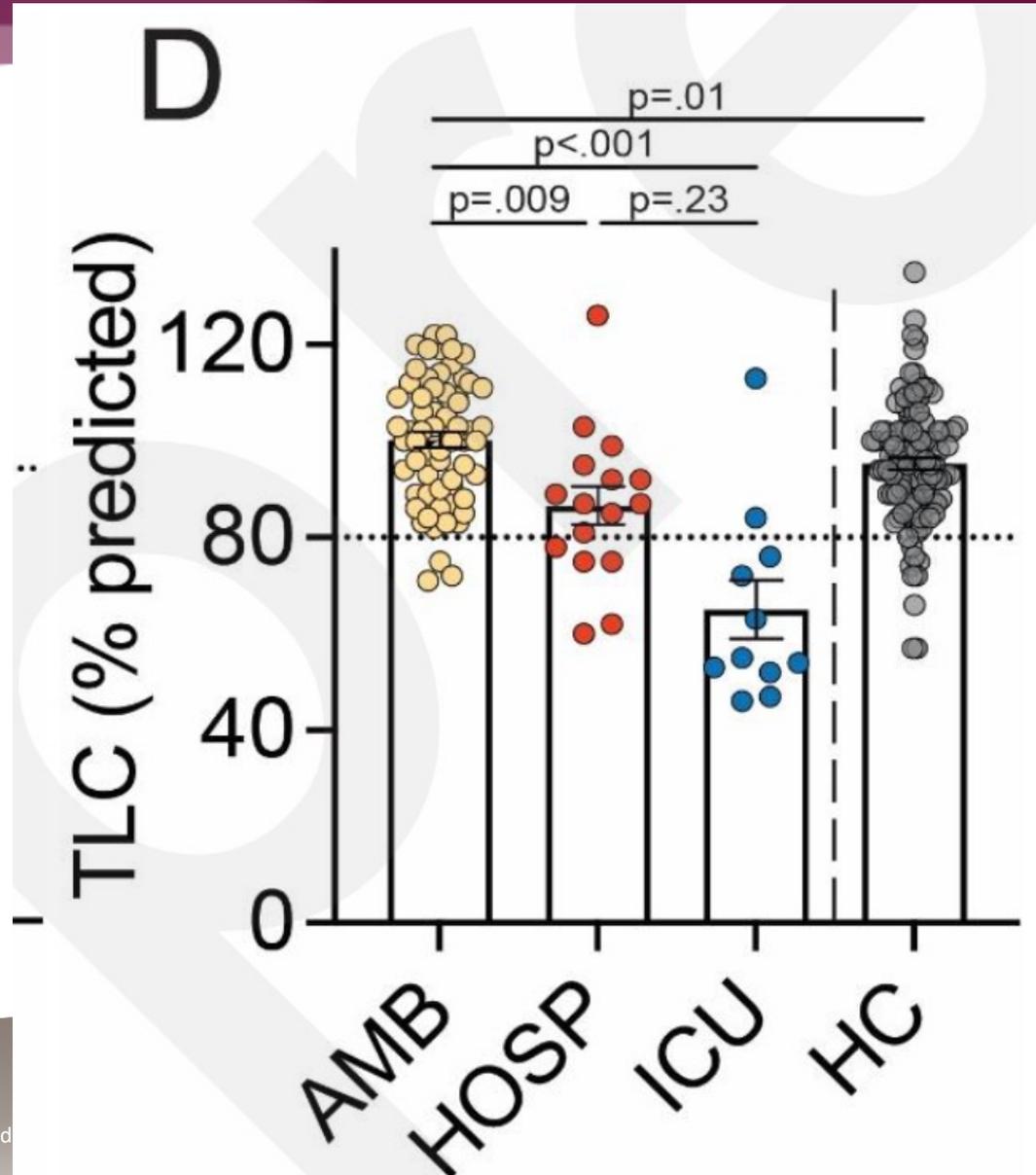
Pulmonary Function Testing in post acute Covid 19



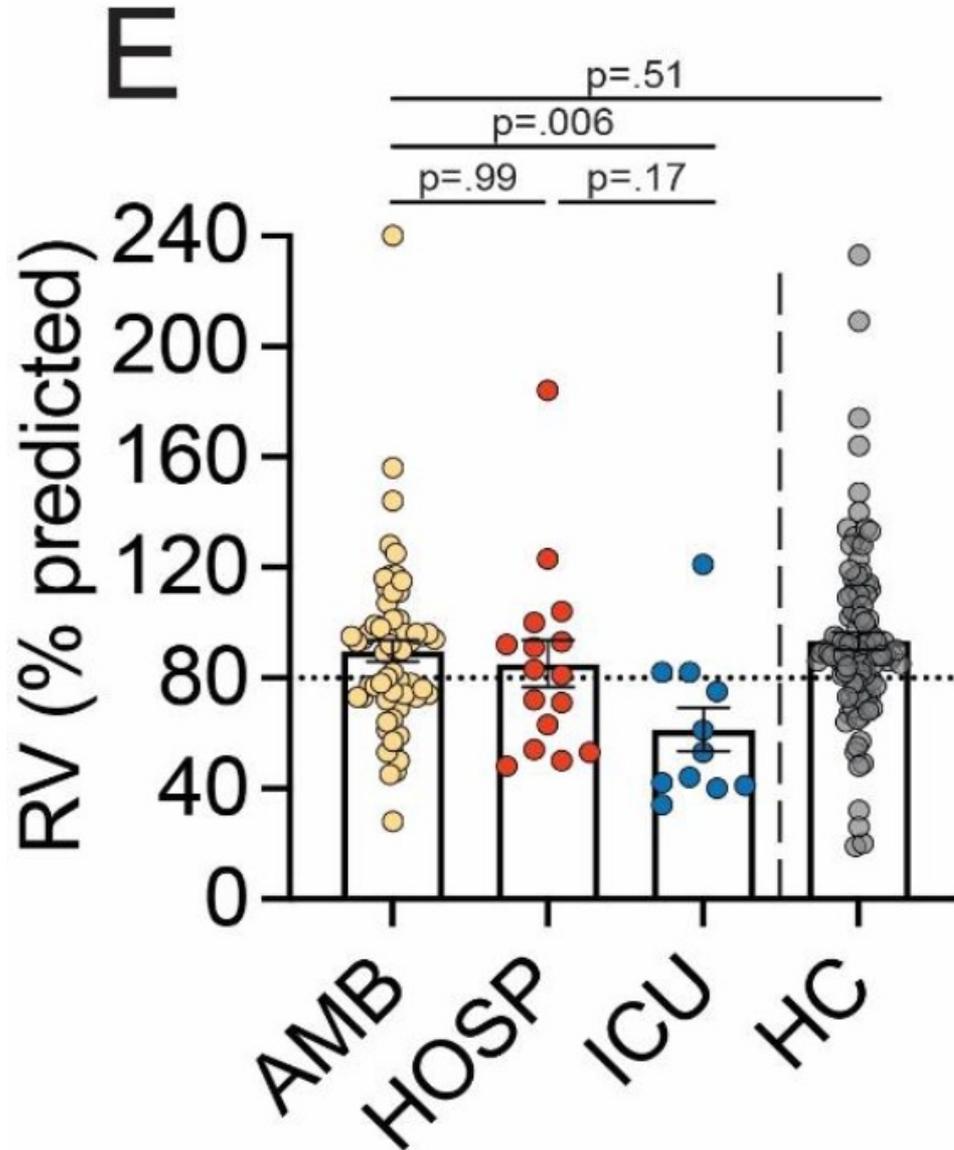
Pulmonary Function Testing in post acute Covid 19



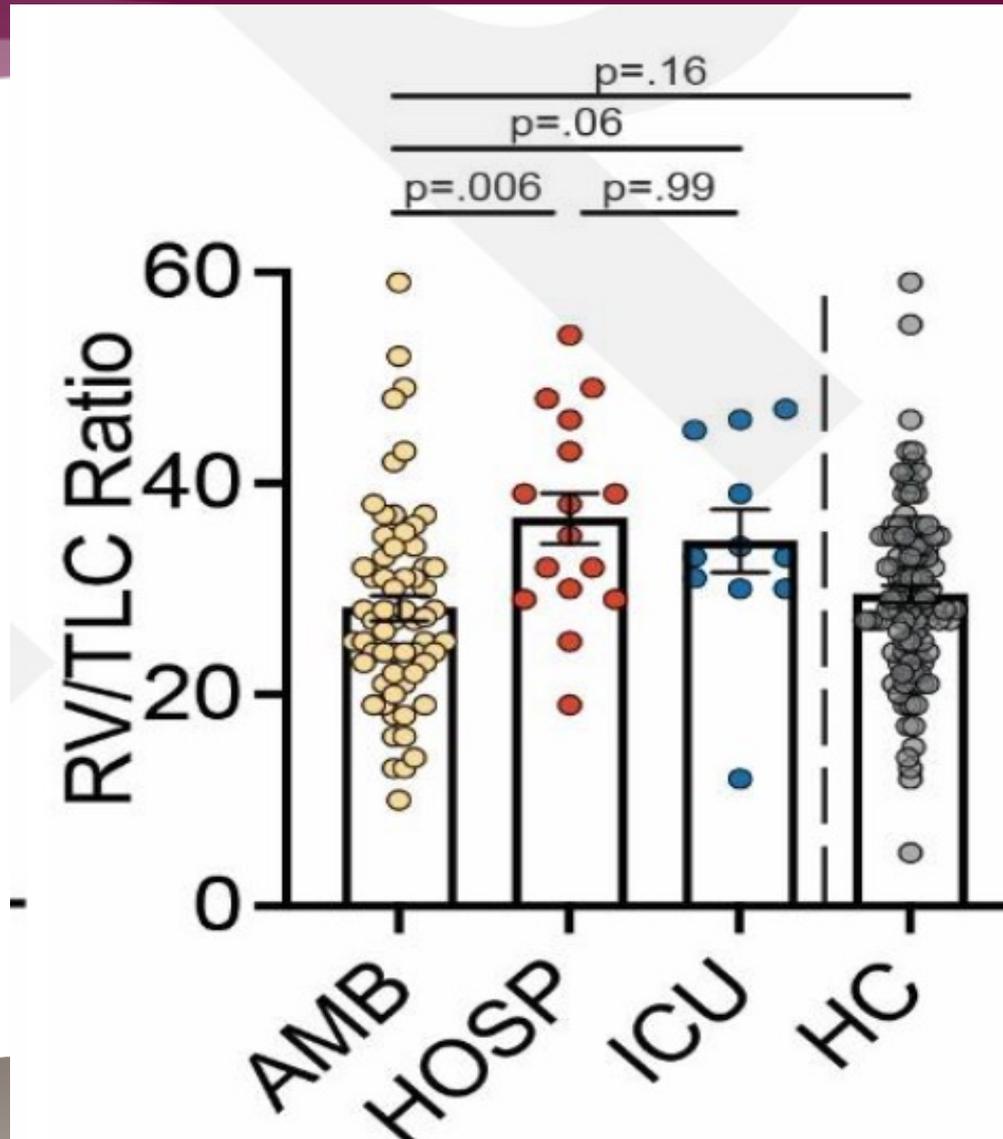
Pulmonary Function Testing in post acute Covid 19



Pulmonary Function Testing in post acute Covid 19



Pulmonary Function Testing in post acute Covid 19



Chest CT Findings

Finding - no. (%)	PASC Group	Amb	Hosp	ICU
Air trapping ^D	50/86 (58%)	32/56 (57%)	11/15 (73%)	7/15 (47%)
Without GGO	24/50 (48%)	20/32 (63%)	4/11 (36%)	0/7 (0%)
With GGO	26/50 (52%)	12/32 (38%)	7/11 (64%)	7/7 (100%)
Ground glass opacities	46/91 (51%)	21/59 (36%)	10/16 (63%)	15/16 (94%)
Pulmonary nodule	32/91 (35%)	19/59 (32%)	9/16 (56%)	4/16 (25%)
Nodule type - no. (%)				
Solid	22/32 (69%)	13/19 (68%)	7/9 (78%)	2/4 (50%)
Ground glass	6/32 (19%)	5/19 (26%)	0/9 (0%)	1/4 (25%)
Mixed	4/32 (13%)	1/19 (5%)	2/9 (22%)	1/4 (25%)

Chest CT Findings

Finding - no. (%)	PASC Group	Amb	Hosp	ICU
Traction bronchiectasis	23/91 (25%)	5/59 (8%)	7/16 (44%)	11/16 (69%)
Architectural distortion, honeycombing or scar	22/91 (24%)	2/59 (3%)	7/16 (44%)	13/16 (81%)
Bronchial wall thickening	7/91 (8%)	4/59 (7%)	2/16 (13%)	1/16 (6%)
Lymphadenopathy	3/91 (3%)	0/59(0%)	0/16 (0%)	3/16 (19%)
Emphysema	3/91 (3%)	0/59(0%)	1/16 (6%)	2/16 (13%)
Consolidation	2/91 (2%)	0/59 (0%)	0/16 (0%)	2/16 (13%)
Pleural effusion	0/91(0%)	0/59(0%)	0/16 (0%)	0/16 (0%)

Chest CT Findings

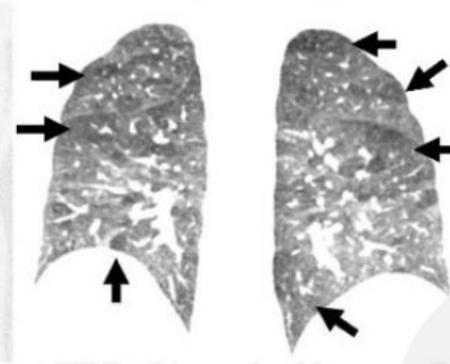
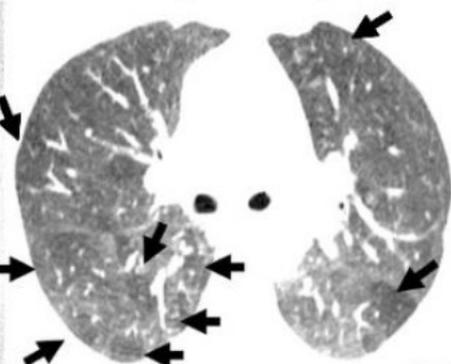
Inspiratory

Expiratory

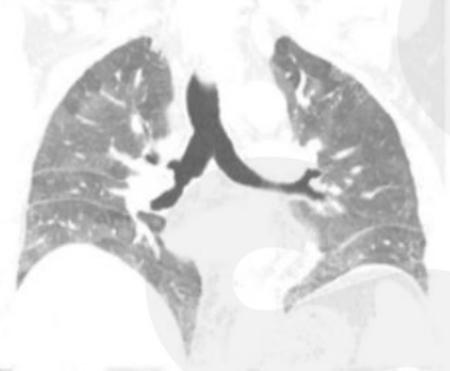
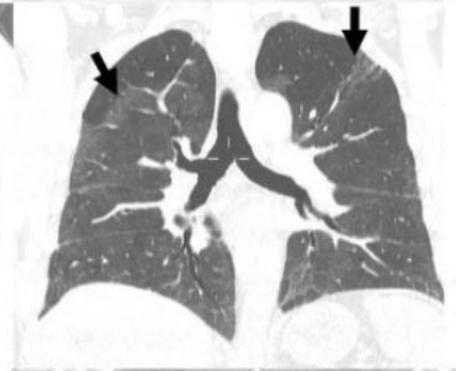
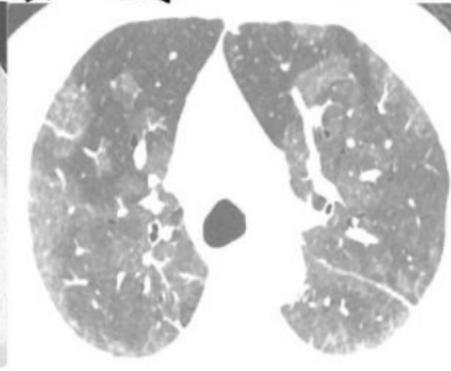
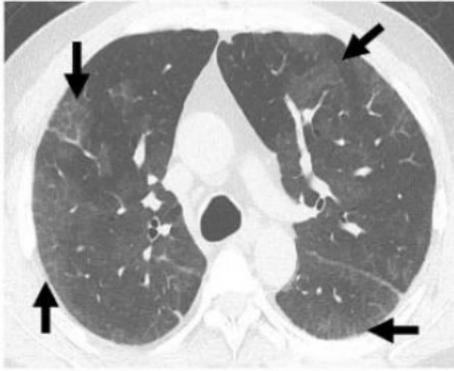
Inspiratory

Expiratory

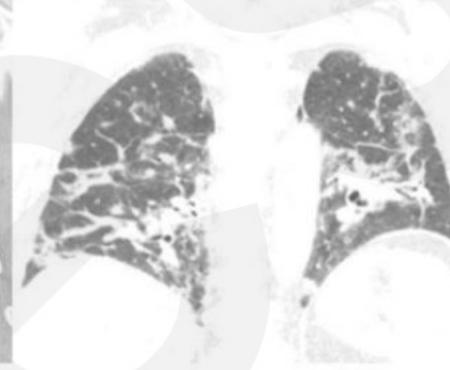
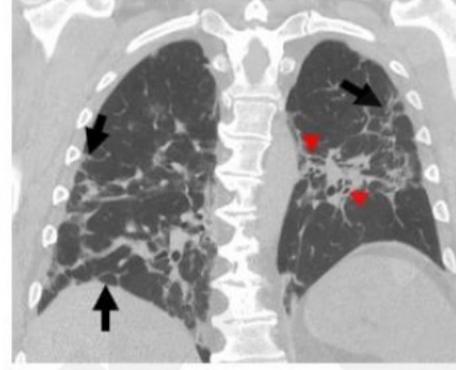
Air-trapping



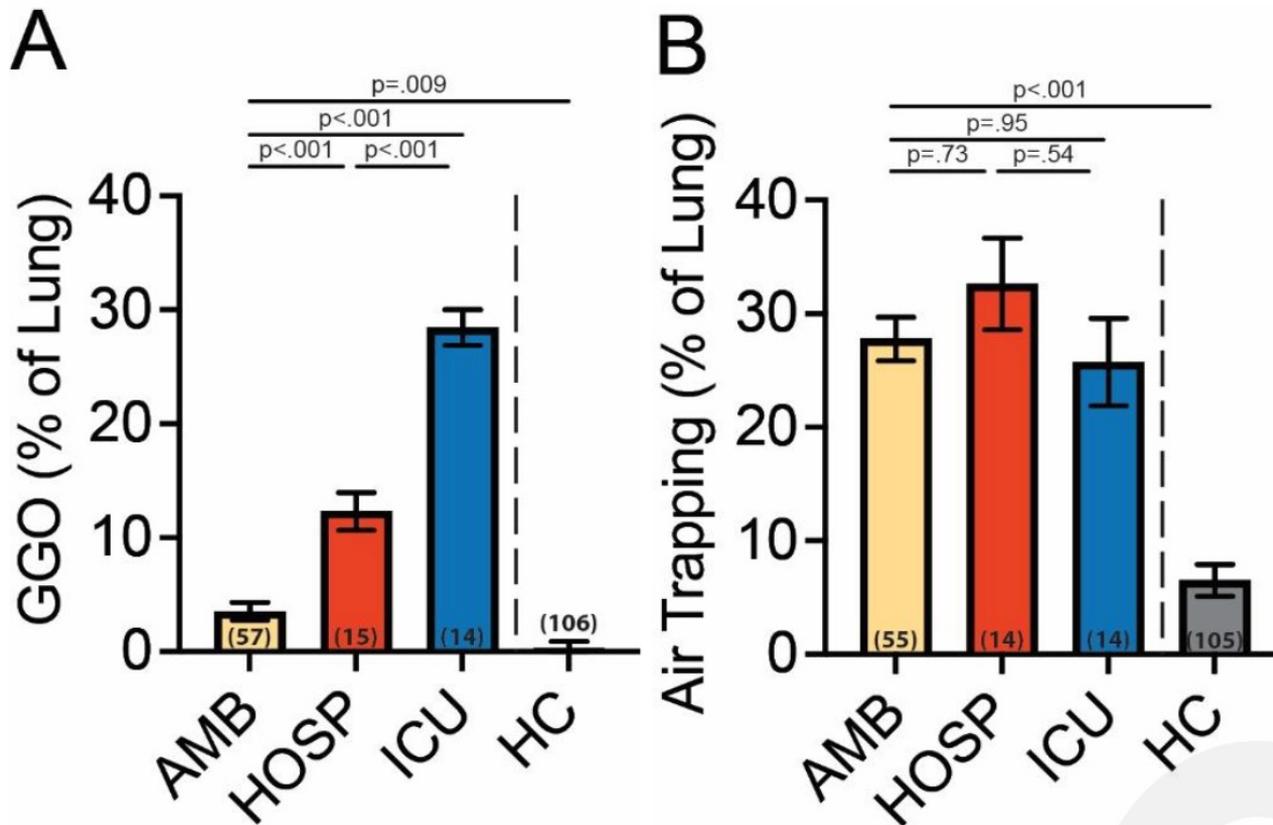
Ground-glass opacity



Fibrosis



Quantification of GGO measured via texture analysis and air trapping measured by Disease Probability Measure on CT



Correlation between RV/TLC measured by CT vs PFT

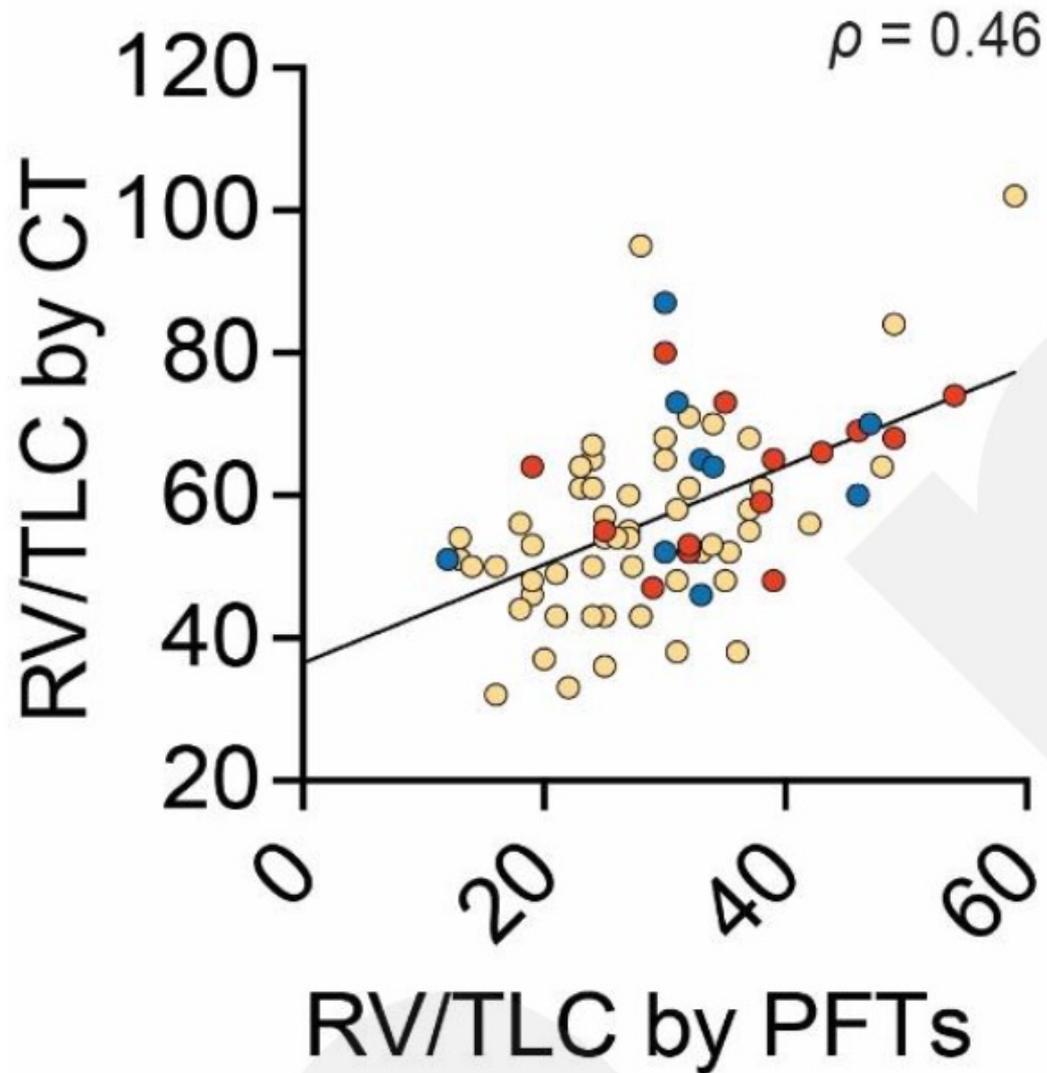
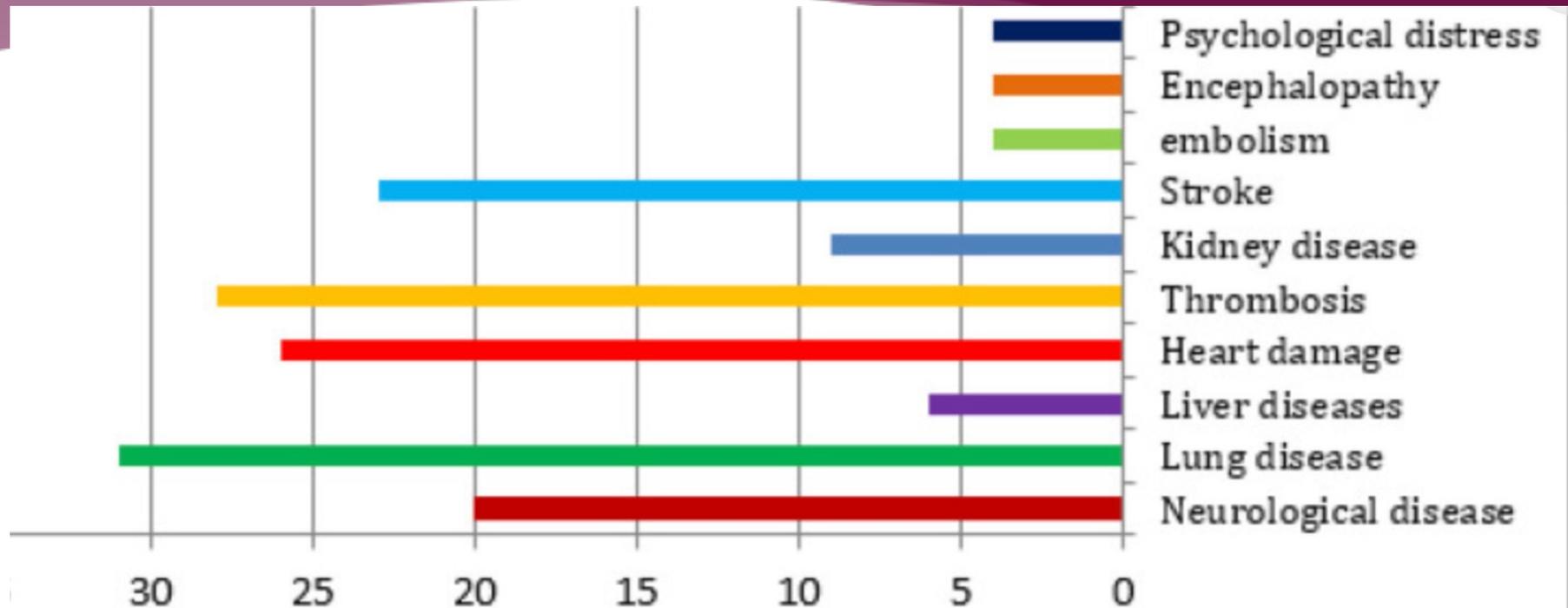


Table E3: Clinical Characteristics of Post-Acute COVID-19

Characteristic	PASC Group (N=100)	Amb (N=67)	Hosp (N=17)	ICU (N=16)
Symptoms - no. (%)				
Dyspnea	73/100 (73%)	45/67 (67%)	14/17 (82%)	14/16 (88%)
Fatigue	56/100 (56%)	39/67 (58%)	10/17 (59%)	7/16 (44%)
Cough	34/100 (34%)	21/67 (31%)	4/17(24%)	9/16 (56%)
Myalgias	27/100 (27%)	19/67 (28%)	4/17 (24%)	4/16 (25%)
Upper respiratory symptoms	21/100 (21%)	14/67(21%)	4/17 (24%)	3/16 (19%)
Lightheadedness	19/100 (19%)	13/67 (19%)	4/17 (24%)	2/16 (13%)
Anosmia	17/100 (17%)	14/67 (21%)	0/17 (0%)	3/16 (19%)
Dysgeusia	14/100 (14%)	10/67 (15%)	1/17 (6%)	3/16 (19%)
Diarrhea	10/100 (10%)	8/67 (12%)	1/17 (6%)	1/16 (6%)
Subjective fever	5/100 (5%)	3/67(5%)	1/17 (6%)	1/16 (6%)
Rash	3/100 (3%)	3/67 (5%)	0/17(0%)	0/16 (0%)

Frequency of identified late complications of COVID-19



[Arch Acad Emerg Med.](#) 2021; 9(1): e14.

Published online 2021 Jan 20. doi: [10.22037/aaem.v9i1.1058](https://doi.org/10.22037/aaem.v9i1.1058)

PMCID: PMC7927752

PMID: [33681819](https://pubmed.ncbi.nlm.nih.gov/33681819/)

Late Complications of COVID-19; a Systematic Review of Current Evidence

[SeyedAhmad SeyedAlinaghi](#),¹ [Amir Masoud Afsahi](#),² [Mehrzaad MohsseniPour](#),¹ [Farzane Behnezhad](#),³
[Mohammad Amin Salehi](#),¹ [Alireza Barzegary](#),⁴ [Pegah Mirzapour](#),¹ [Esmail Mehraeen](#),^{5,*} and [Omid Dadras](#)⁶

Steroids in post Covid 19 diffuse parenchymal lung abnormalities

TABLE 1 Study outcomes assessed at 6 weeks

	High-dose prednisolone	Low-dose prednisolone
Patients, n	65	65
Primary outcome		
Complete radiological response [#]	16 (24.6)	12 (18.5)
Key secondary outcomes		
Complete/good radiological response [#]	55 (84.6)	52 (80.0)
FVC, % predicted [¶]	71.1±16.3	67.4±14.8
Improvement in resting S _{pO₂} , ⁺ %	2 (0–6)	2 (1–6)
Improvement in dyspnoea, mMRC score ⁺	1 (1–2)	2 (1–2)
≥1 point improvement ⁺	56 (91.8)	56 (93.3)

High-dose *versus* low-dose prednisolone in symptomatic patients with post-COVID-19 diffuse parenchymal lung abnormalities: an open-label, randomised trial (the COLDSTER trial)

Sahajal Dhooria, Shivani Chaudhary, Inderpaul Singh Sehgal, Ritesh Agarwal, Siddhant Arora, Mandeep Garg, Nidhi Prabhakar, Goverdhan Dutt Puri, Ashish Bhalla, Vikas Suri, Lakshmi Narayana Yaddanapudi, Valliappan Muthu, Kuruswamy Thurai Prasad, Ashutosh Nath Aggarwal

European Respiratory Journal 2022 59: 2102930; DOI: 10.1183/13993003.02930-2021

Steroids in post Covid 19 diffuse parenchymal lung abnormalities

TABLE 1 Study outcomes assessed at 6 weeks

	High-dose prednisolone	Low-dose prednisolone
Exploratory outcomes		
6MWD, [§] m	349±93	318±129
Improvement in 6MWD, ^f m	86 (33–128)	70 (43–170)
Change in chest CT scores^{+,##}		
Ground-glass opacities	−1.01±1.63	−0.53±1.45
Consolidation	−1.16±0.88	−1.13±1.10
Reticulation	−0.08±0.85	−0.02±0.80
Parenchymal bands	0.14±0.77	0.28±0.87
Traction bronchiectasis	0.36±1.13	0.37±1.22

a lower glucocorticoid dose may be sufficient once a decision is made to treat

Role of antifibrotic drugs in post Covid 19 ILD

Role of antifibrotic drugs in the management of post-COVID-19 interstitial lung disease: A review of literature and report from an expert working group

Salvi, Sundeep Santosh¹; Ghorpade, Deesha¹; Dhoori, Sahajal²; Dhar, Raja³; Dumra, Harjit⁴; Chhajer, Prashant N⁵; Bhattacharya, Parathasarathi⁶; Rajan, Sujeet⁷; Talwar, Deepak⁸; Christopher, Devasahayam J⁹; Mohan, Murali¹⁰; Udwadia, Zarir¹¹

Author Information

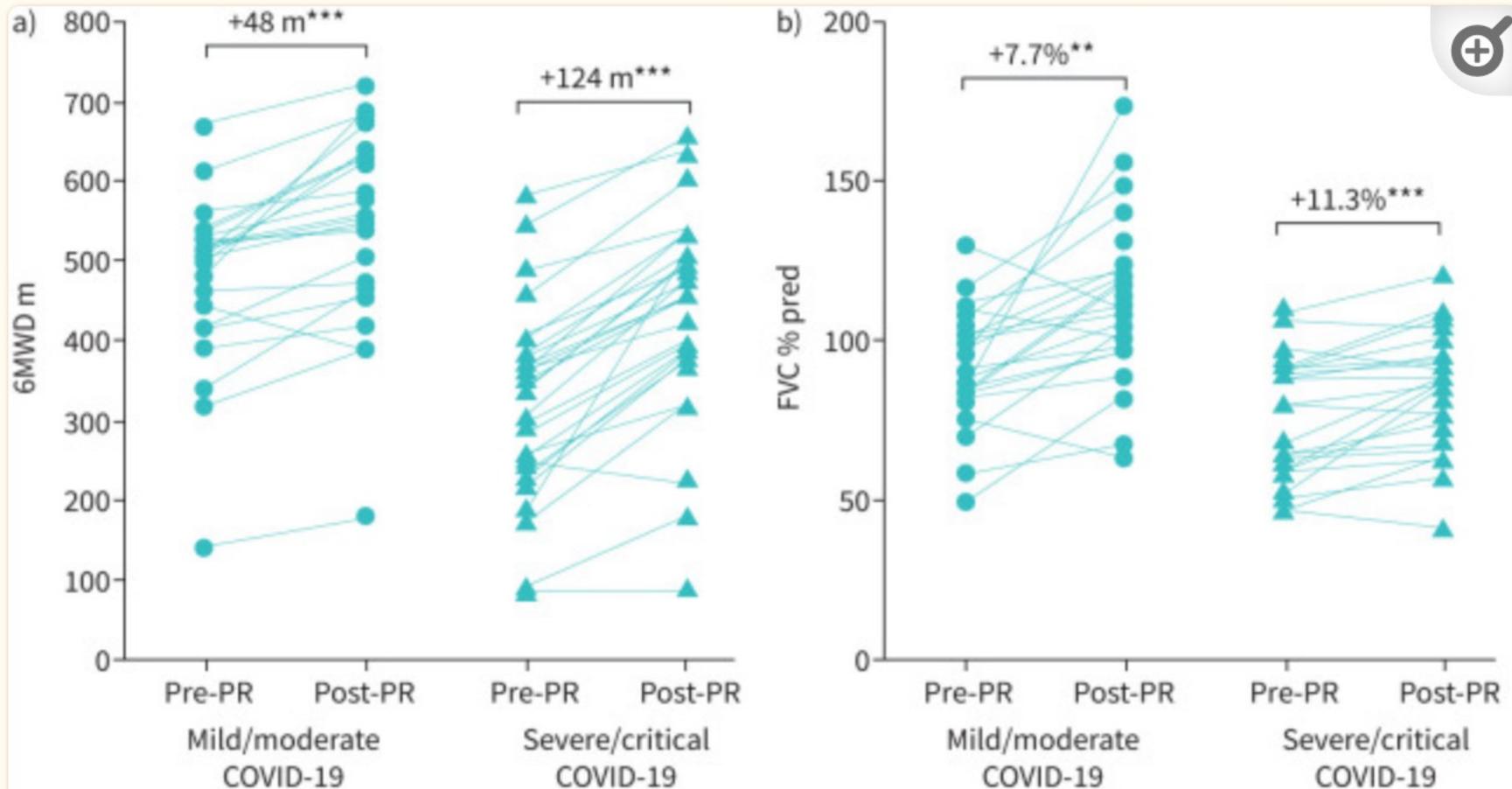
Lung India: Mar–Apr 2022 - Volume 39 - Issue 2 - p 177-186

doi: 10.4103/lungindia.lungindia_659_21 

No evidence for or against use of antifibrotic drug



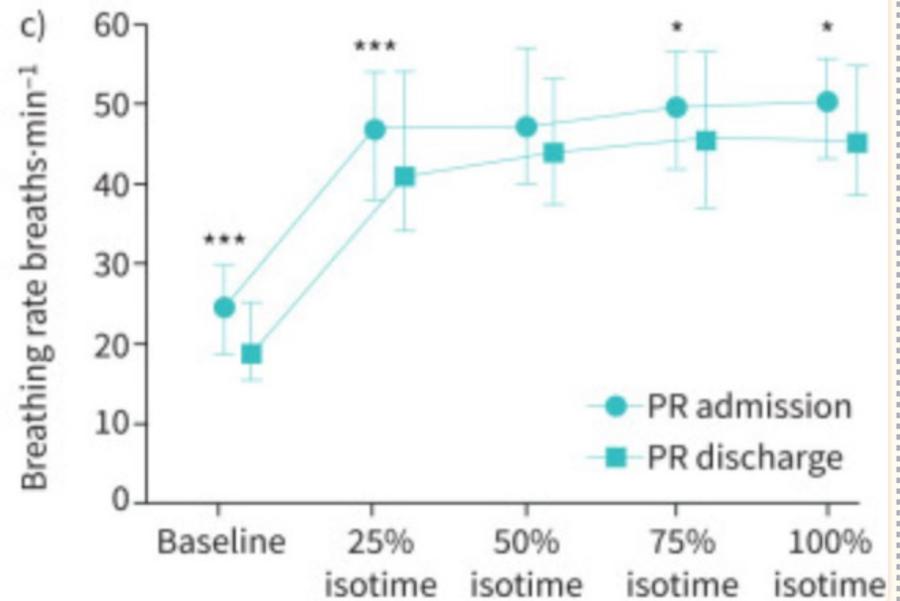
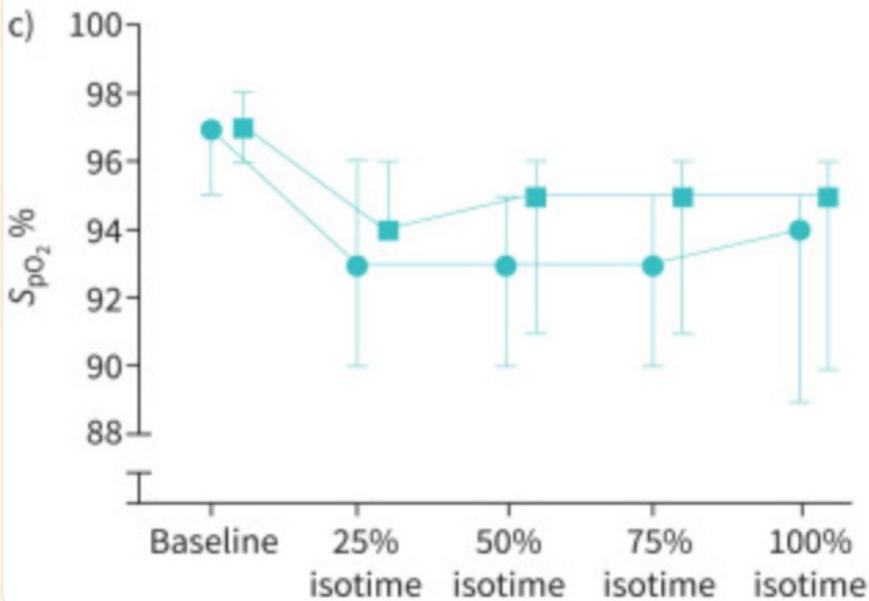
Benefits of Pulmonary Rehab



Benefits of pulmonary rehabilitation in COVID-19: a prospective observational cohort study

[Rainer Gloeckl](#)^{1,2,7}, [Daniela Leitl](#)^{1,2,7}, [Inga Jarosch](#)^{1,2}, [Tessa Schneeberger](#)^{1,2}, [Christoph Nell](#)³, [Nikola Stenzel](#)⁴,
[Claus F. Vogelmeier](#)⁵, [Klaus Kenn](#)^{1,2} and [Andreas R. Koczulla](#)^{1,2,6}

Benefits of Pulmonary Rehab



Effect of Pulmonary Rehab: Systematic Review

- PR could improve exercise capacity measured by 6-MWT among patients with mild-moderate lung impairment after Covid 19.
- PFT improvements were inconsistent across studies.

> [Front Med \(Lausanne\)](#). 2022 Feb 21;9:837420. doi: 10.3389/fmed.2022.837420.
eCollection 2022.

Effect of Pulmonary Rehabilitation for Patients With Post-COVID-19: A Systematic Review and Meta-Analysis

Huan Chen ^{1 2}, Hangyu Shi ^{1 3}, Xitong Liu ⁴, Tianheng Sun ^{1 3}, Jiani Wu ¹, Zhishun Liu ¹

Key points/Recommendations

- High prevalence of post-Covid 19 Lung Injury (more than half of hospitalized patients)
- More severe/critical illness leads to higher risk and severity of getting post-Covid 19 Lung Injury
- Spirometry is inadequate for assessment of post-Covid 19 Lung Injury
- Complete PFT including Diffusion capacity should be performed for assessment of post-Covid 19 Lung Injury as high prevalence of air trapping (small airway disease) is noted in post-Covid 19 Lung Injury

Key points/Recommendations

- HRCT Chest with both Inspiratory and Expiratory view should be obtained as high prevalence of air trapping (small airway disease) is noted in post-Covid 19 Lung Injury
- Air trapping, Ground glass opacities, lung nodules, traction bronchiectasis, honeycombing are common CT findings
- CT findings improve slowly over time but may persist for over a year

Key points/Recommendations

- PFT may improve over time
- Exercise capacity viz. 6 MWD improve over time
- No specific medications but may consider low dose prednisone in significantly symptomatic patient with persistent GGO
- Pulmonary Rehab may enhance recovery

Thank you

- Questions?

