TALLER CONDICIÓN POST-COVID-19/CONVALECIENTE/
ACTUALIZACIÓN PROTOCOLO DE ACTUACIÓN COVID- 19

Hospital Clínico Quirúrgico Hermanos Ameijeiras

Sociedad Cubana Medicina Interna

Epidemiología, mecanismos patogénicos, criterios diagnósticos, y manifestaciones clínicas de la condición Post-COVID-19

COMITÉ DE INNOVACIÓN DEL MINSAP

13 de mayo 2022

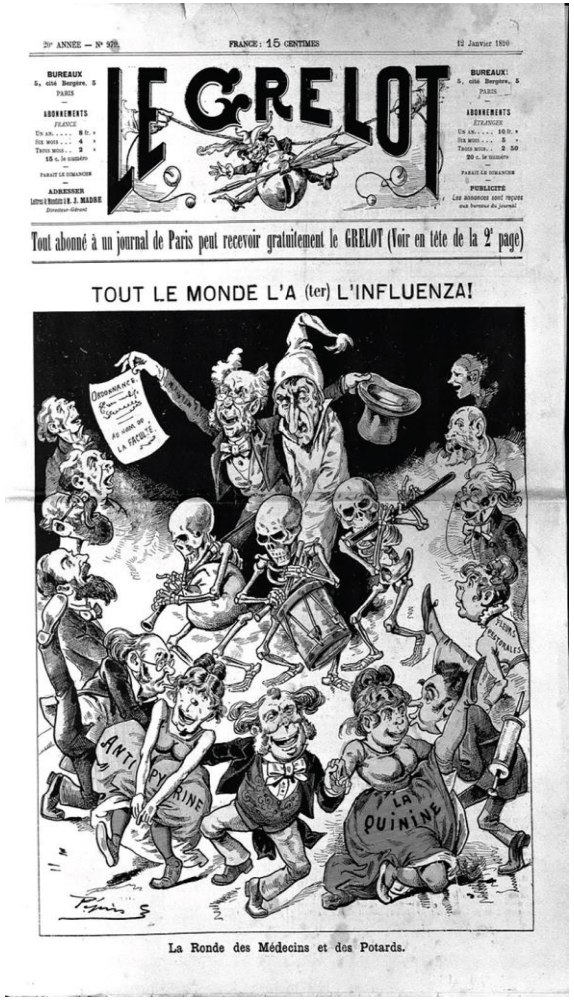
Afecciones persistentes al COVID-19 y afecciones posteriores al COVID-19

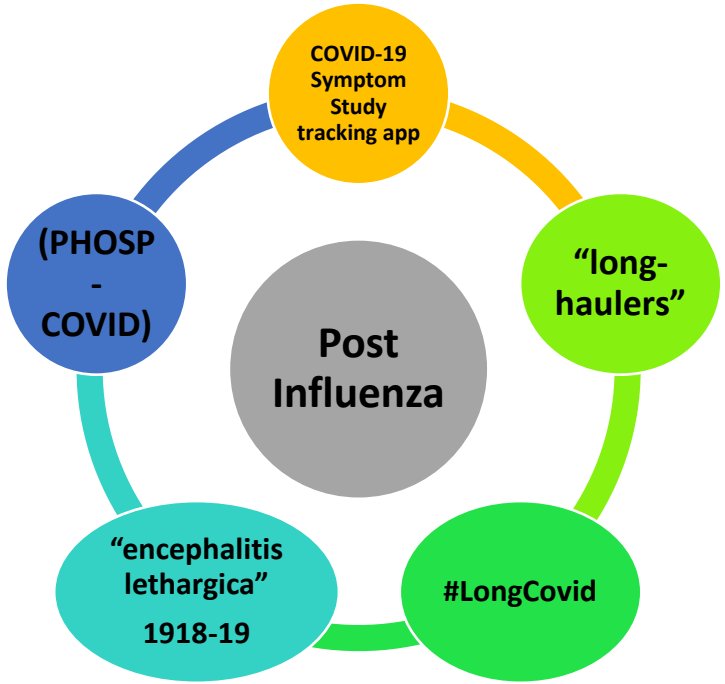
Algunas personas que se infectaron por el virus que causa el COVID-19 pueden tener efectos a largo plazo por la infección, conocidos como afecciones posteriores al COVID-19 (PCC, por sus siglas en inglés) o afecciones persistentes al COVID-19.

Las personas llaman a las afecciones posteriores al COVID-19 por varios nombres, tales como COVID-19 persistente, COVID-19 de larga duración, COVID-19 posagudo, secuelas posagudas de la infección por el SARS CoV-2 (PASC, por sus siglas en inglés), efectos a largo plazo del COVID-19 o COVID-19 crónico.

Influenza Rusa 1889-92

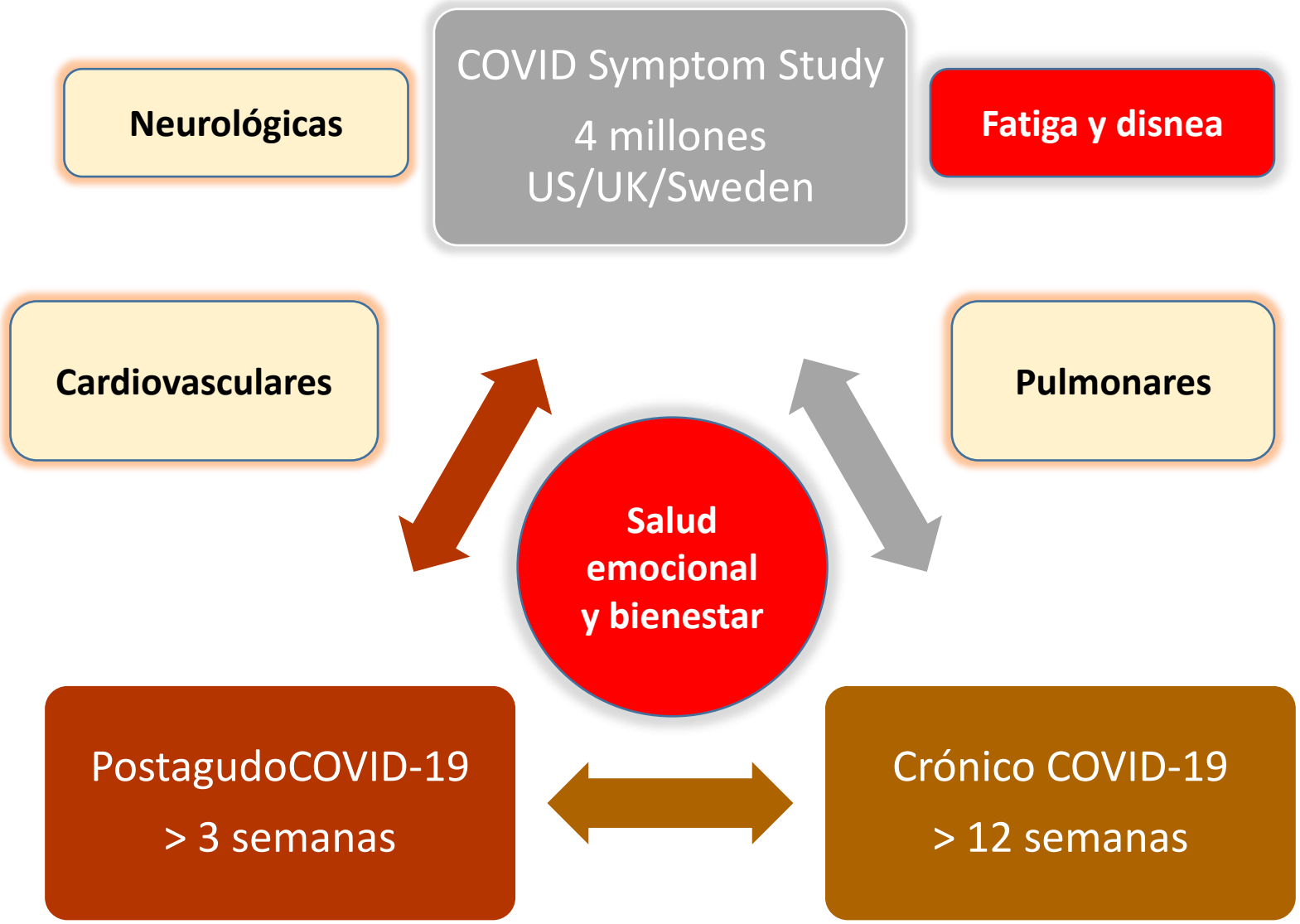
neuralgia, neurasthenia, neuritis, nerve exhaustion, “grippe catalepsy”, “post-grippal numbness”,psychoses, “prostration”, “inertia”, anxiety, and paranoia.





www.thelancet.com Published online October 12, 2020
https://doi.org/10.1016/S0140-6736(20)32134-6

Consecuencias a largo plazo de la COVID-19



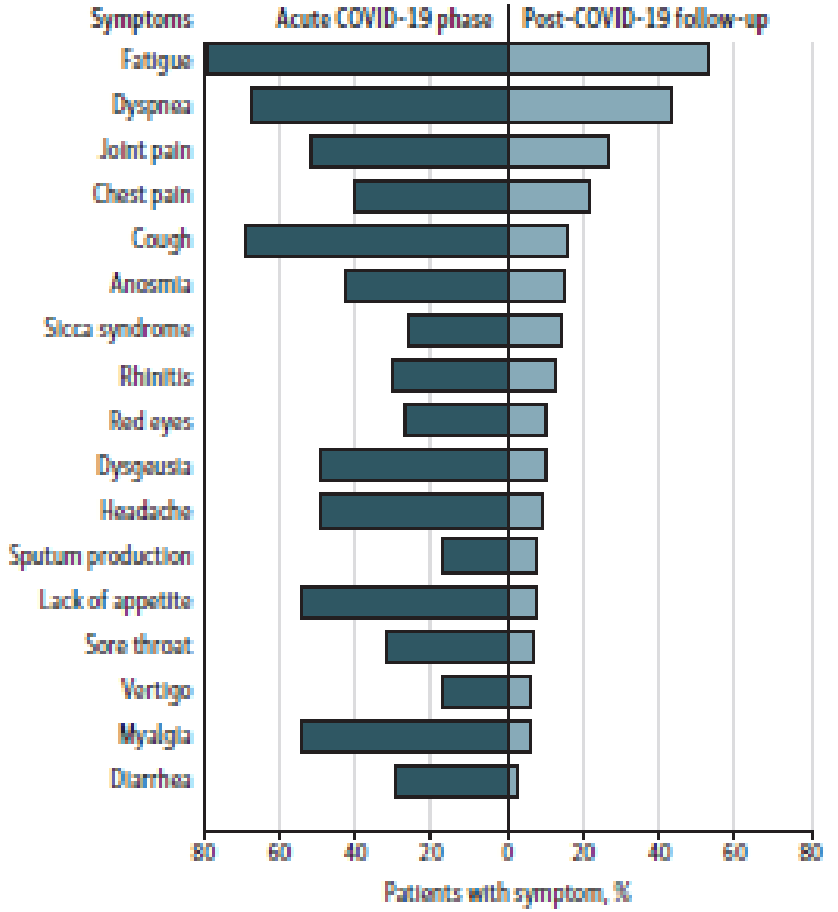
Published Online: October 5, 2020.
doi:10.1001/jama.2020.19719

Síntomas persistentes post COVID-

71.4/31 845 sintomáticos de los confirmados en Italia hasta 3 de junio 2020

Acute COVID-19 characteristics, No. (%)	143
Pneumonia diagnosed	104 (72.7)
Intensive care unit admission	18 (12.6)
Oxygen supplementation	
Oxygen therapy	77 (53.8)
Ventilation	
Noninvasive	21 (14.7)
Mechanical	7 (4.9)
Pharmacological treatments during acute COVID-19	
Antiretroviral	102 (71.3)
Hydroxychloroquine	104 (72.7)
Azithromycin	59 (41.3)
Anti-IL-6 drugs (tocilizumab)	44 (30.8)
Length of hospital stay, mean (SD), d	13.5 (9.7)
Post-acute COVID-19 follow-up characteristics	
Days since symptoms onset, mean (SD)	60.3 (13.6)
Days since discharge, mean (SD)	36.1 (12.9)
Persistent symptoms, No. (%)	
None	18 (12.6)
1 or 2	46 (32.2)
≥3	79 (55.2)
Worsened quality of life, No. (%)[b]	63 (44.1)

Figure. COVID-19–Related Symptoms



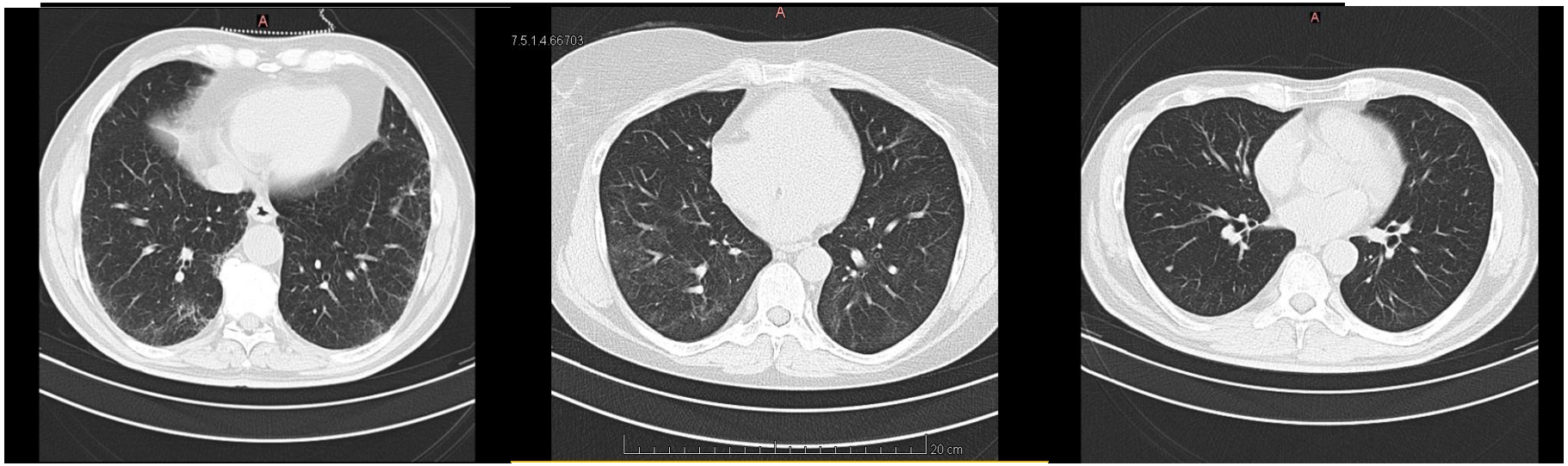
JAMA August 11, 2020 Volume 324, Number 6

Principales hallazgos en la TAC de tórax simple

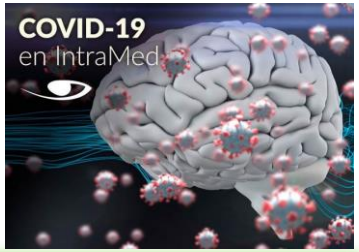
Instituto Pedro Kourí

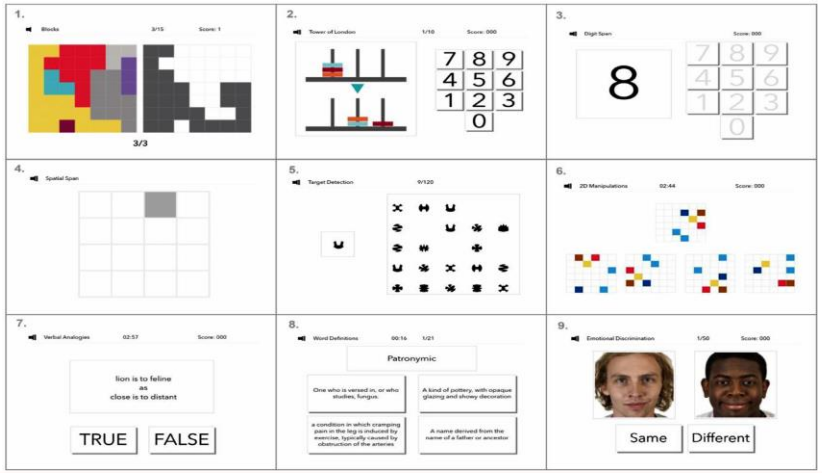
✓ En 34 de las 36 personas estudiadas (94,4 %) se observaron hallazgos en la tomografía de tórax.
✓ 100% de los asintomáticos y 82,5 % de los sintomáticos.
✓ Los hallazgos no tuvieron traducción clínica.

Hallazgos	Sintomáticos n=25	Asintomáticos n=9	Total n= 34
Presencia de múltiples nodulillos subpleurales y peribroncovasculares.	20	7	27
Engrosamiento septal y tractos de fibrosis pulmonar.	16	6	22
Imágenes en vidrio deslustrado.	2	0	2
Pequeñas adenopatías en mediastino y periaórticas.	7	2	9
Total	45	15	60



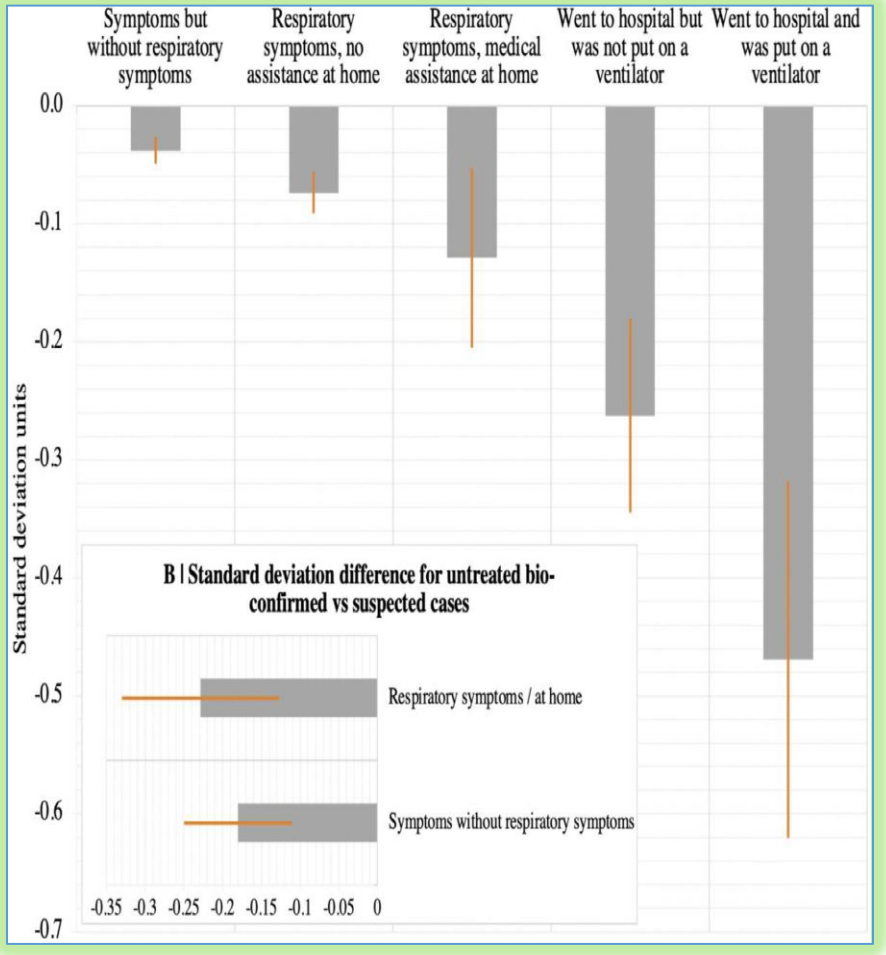
Cognitive deficits in people who have recovered from COVID-19





COVID-19 tiene un impacto multidominio en la cognición humana.

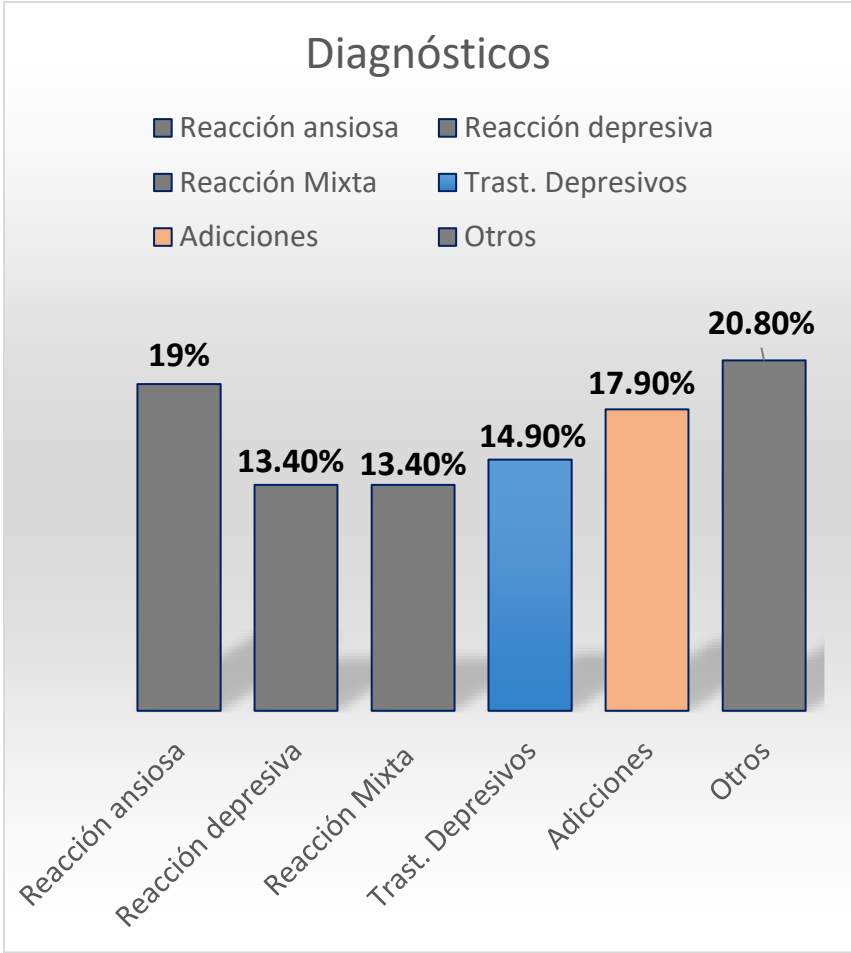
‘Long Covid’ cognitive symptoms that persist into the early-chronic phase.



A. Hampshire et al., Cognitive deficits in people who have recovered from COVID-19, EClinicalMedicine (2021), https://doi.org/10.1016/j.eclinm.2021.101044

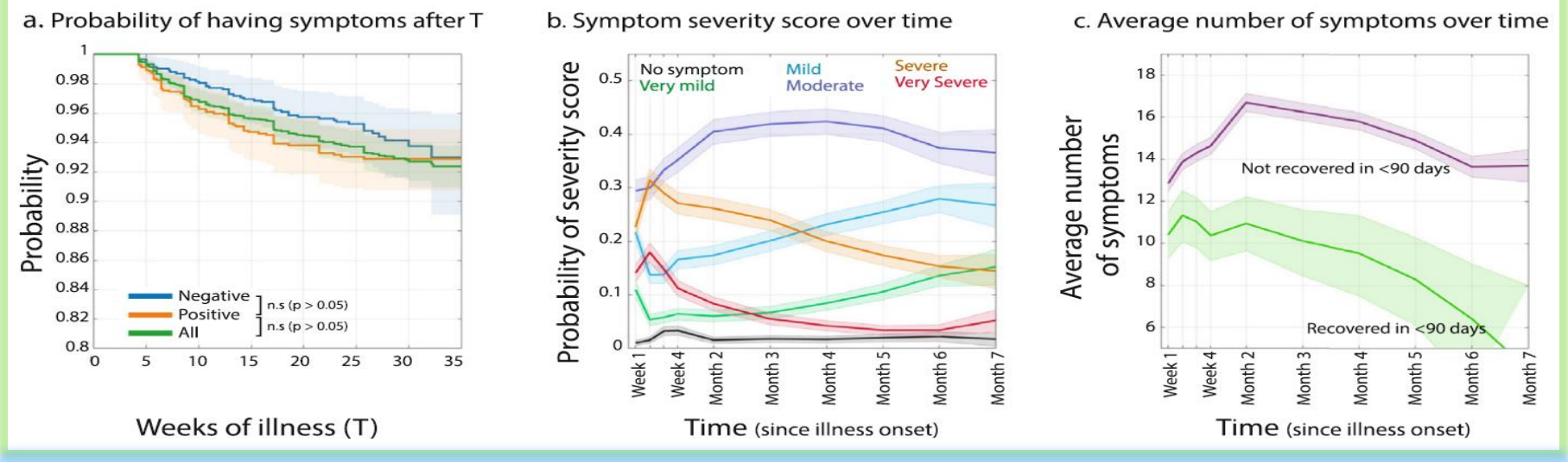
Resultados

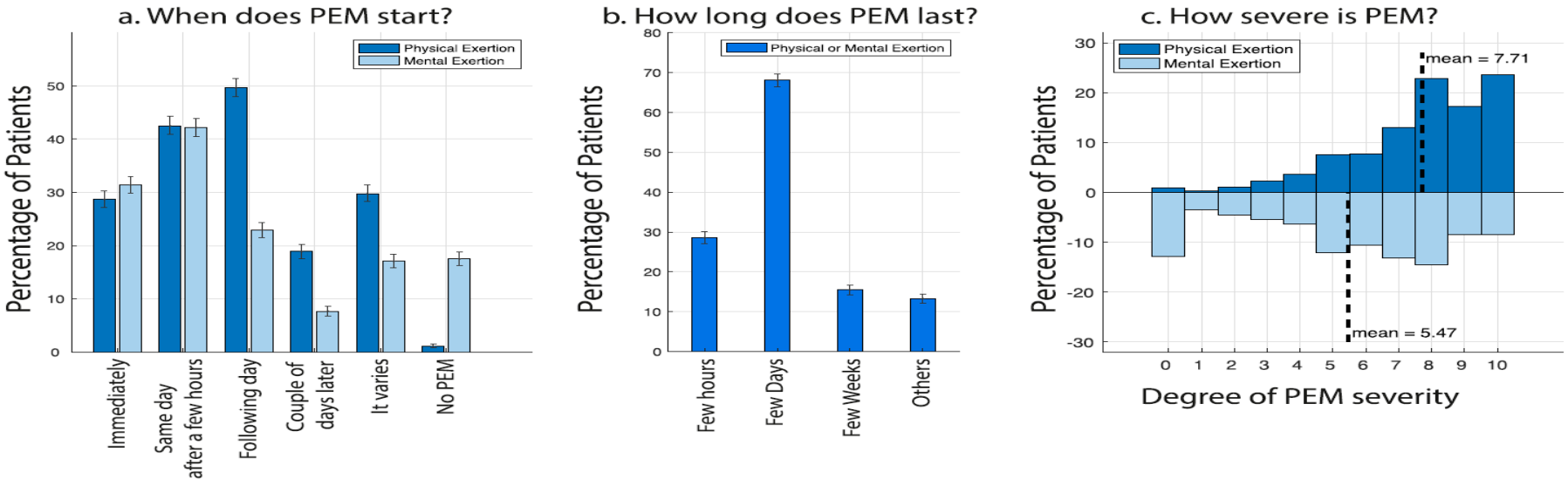
- ✓ **Muestra**:194 personas de cinco provincias.
- ✓ **Edad promedio**: 44.6 años
- ✓ **Sexo:** Femenino 51% (n=99), Masculino 49% (n=95)
- ✓ **Escolaridad**: 54% media y media superior.
- ✓ Manifestaciones **sintomáticas** afectivas de ansiedad y/o depresión en un 52%.
- ✓ **Trastornos mentales** en 34.5% de la población estudiada, con predominio de los trastornos de adaptación (45.8%)
- ✓ La afectación del gusto y olfato, fue independiente a la presencia e intensidad de síntomas de COVID.



Caracterización de la salud mental de pacientes convalecientes de COVID -19

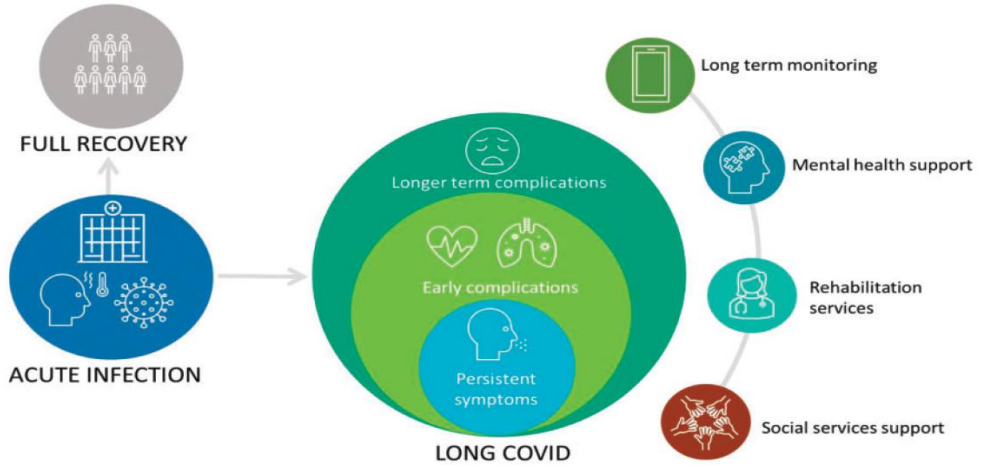
Characterizing long COVID in an international cohort: 7 months of symptoms and their impact

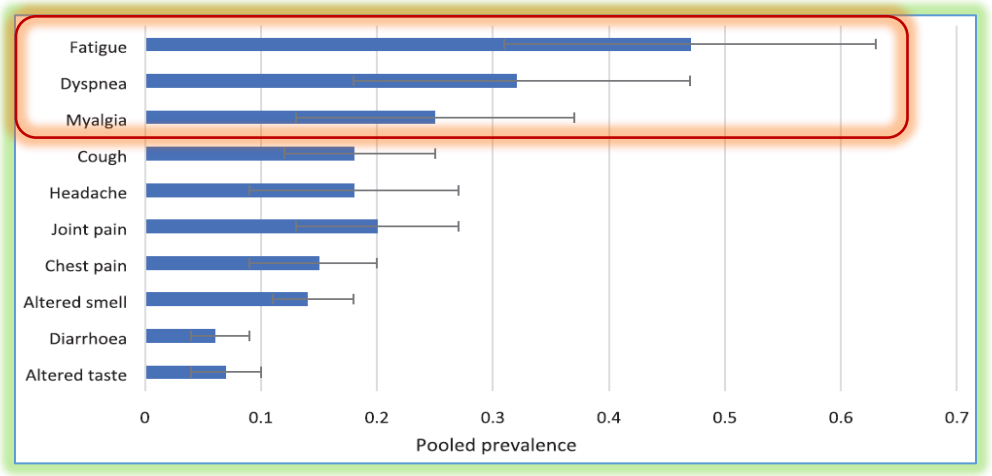


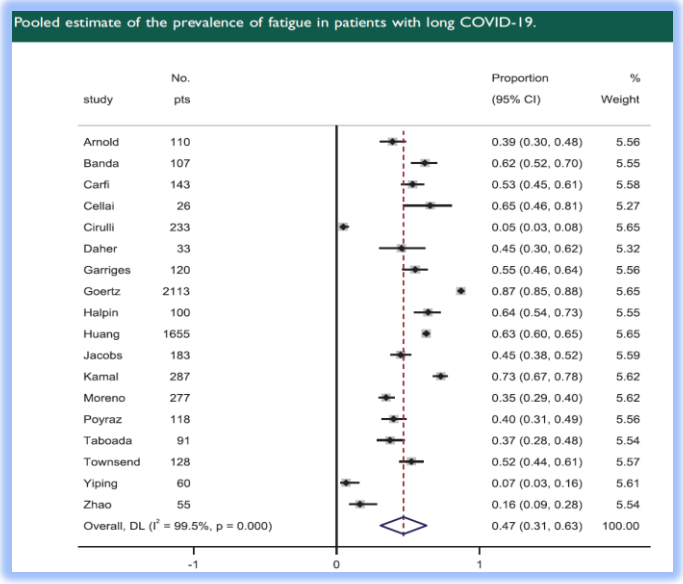


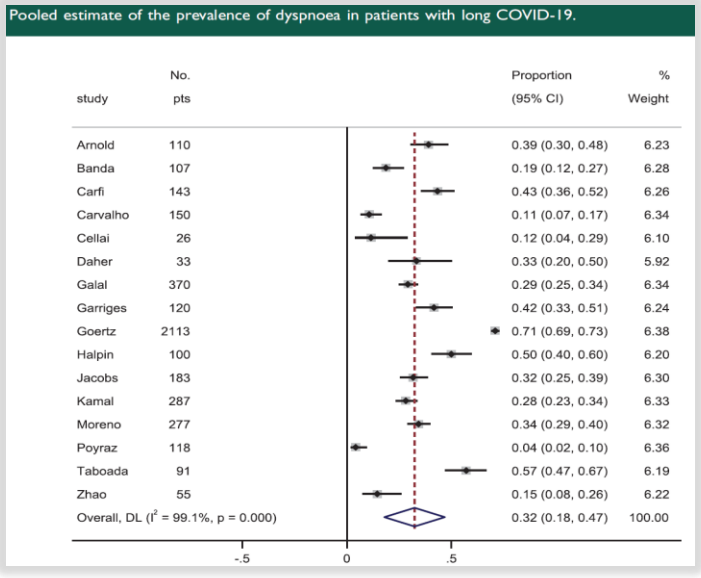
H.E. Davis et al., Characterizing long COVID in an international cohort: 7 months of symptoms and their impact, EClinicalMedicine (2021), https://doi.org/10.1016/j.eclinm.2021.101019

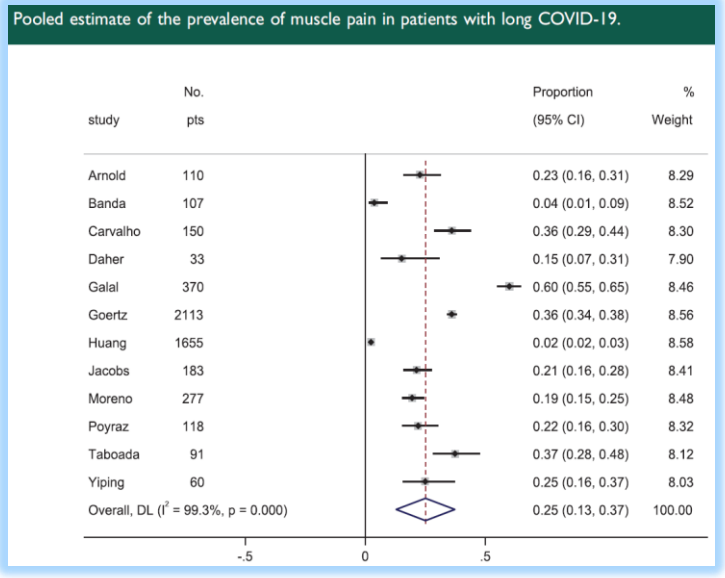
Symptoms, complications and management of long COVID: a review



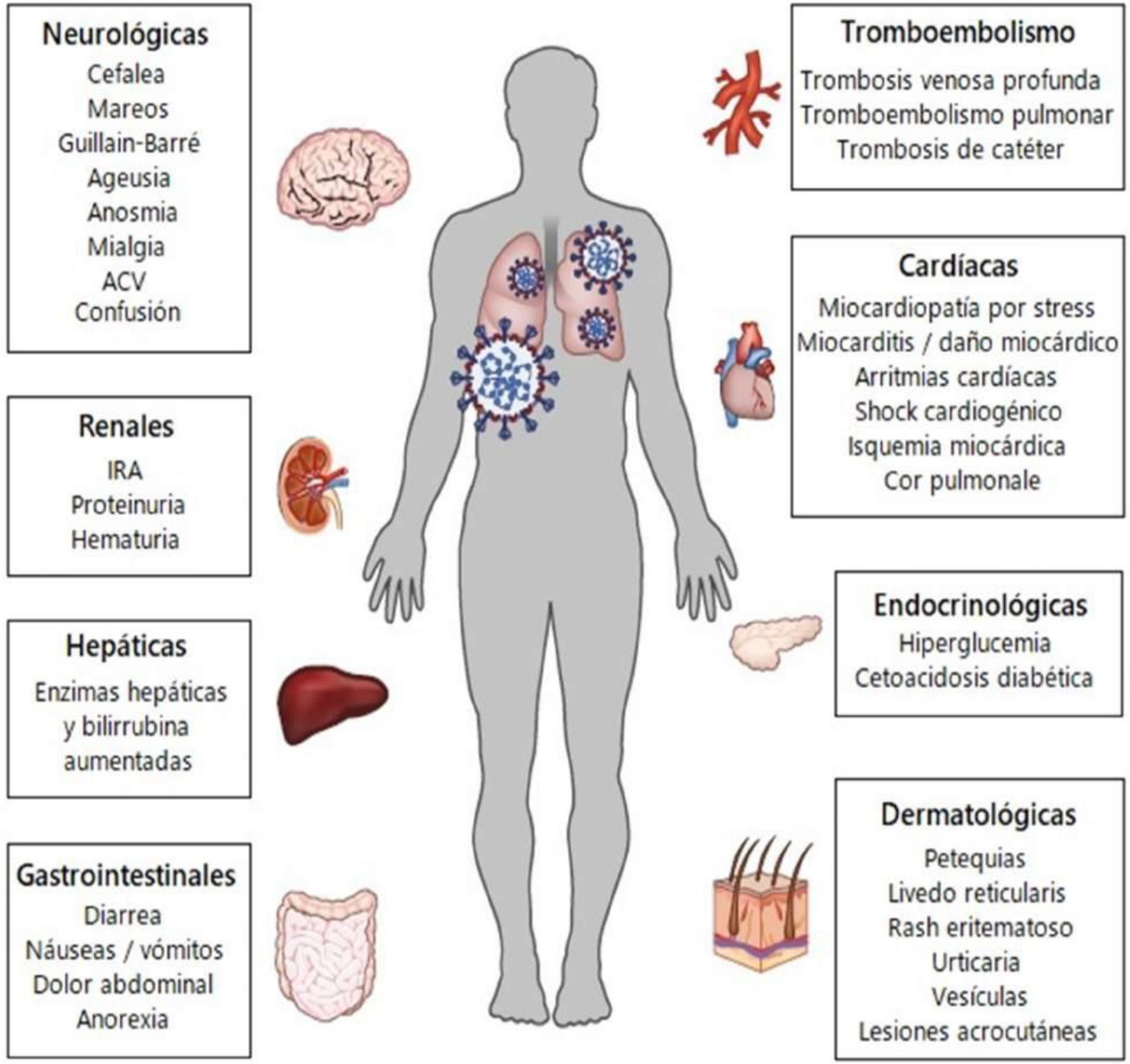




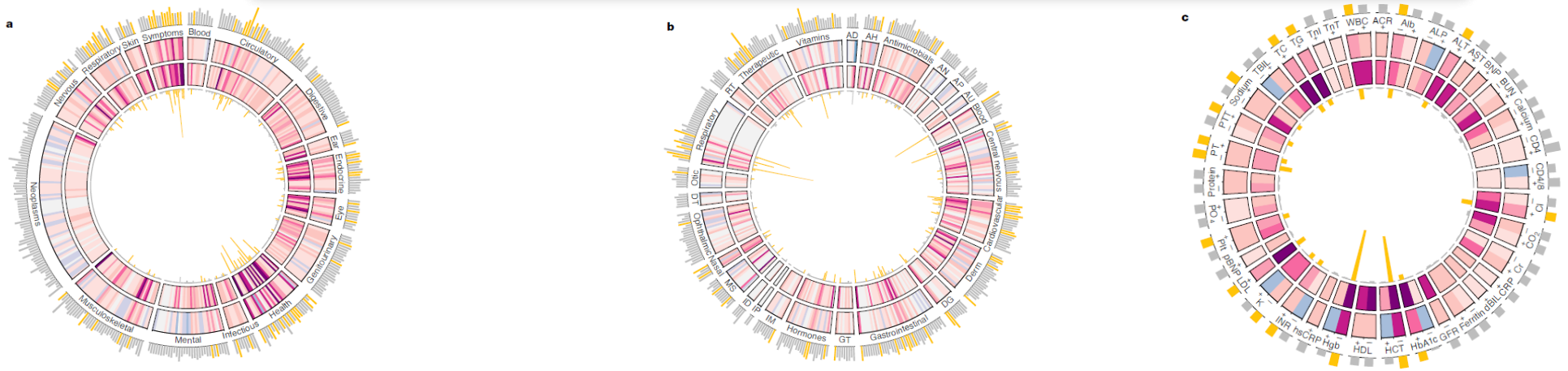




Journal of the Royal Society of Medicine; 0(0) 1–15
DOI: 10.1177/01410768211032850


Neurológicas
Cefalea
Mareos
Guillain-Barré
Ageusia
Anosmia
Mialgia
ACV
Confusión
Renales
IRA
Proteinuria
Hematuria
Hepáticas
Enzimas hepáticas y bilirrubina aumentadas
Gastrointestinales
Diarrea
Náuseas / vómitos
Dolor abdominal
Anorexia
Tromboembolismo
Trombosis venosa profunda
Tromboembolismo pulmonar
Trombosis de catéter
Cardíacas
Miocardiopatía por stress
Miocarditis / daño miocárdico
Arritmias cardíacas
Shock cardiogénico
Isquemia miocárdica
Cor pulmonale
Endocrinológicas
Hiperglucemia
Cetoacidosis diabética
Dermatológicas
Petequias
Livedo reticularis
Rash eritematoso
Urticaria
Vesículas
Lesiones acrocutáneas

High-dimensional characterization of post-acute sequelae of COVID-19



Respiratory signs and symptoms	28.51 (26.40–30.50)
Hypertension	15.18 (11.53–18.62)
Sleep–wake disorders	14.53 (11.53–17.36)
Nervous system signs and symptoms	14.32 (12.16–16.36)
Musculoskeletal pain (not low back pain)	13.89 (9.89–17.71)
Malaise and fatigue	12.64 (11.24–13.93)
Disorders of lipid metabolism	12.32 (8.18–16.24)
Chest pain	10.08 (8.63–11.42)
Obesity	9.53 (7.55–11.37)
Trauma- and stressor-related disorders	8.93 (6.62–11.09)
Cardiac dysrhythmias	8.41 (7.18–9.53)
Diabetes mellitus	8.23 (6.36–9.95)
Skin disorders (itch, rash or other)	7.52 (5.17–9.73)
Oesophageal disorders	6.90 (4.58–9.07)
Circulatory signs and symptoms	6.65 (5.18–8.01)
Abdominal pain	5.73 (3.70–7.62)
Muscle disorders	5.73 (4.60–6.74)
Anxiety- and fear-related disorders	5.42 (3.42–7.29)
Arthralgia and arthritis	5.16 (3.18–7.01)
Nervous system disorders	4.85 (3.65–5.93)
Anaemia	4.79 (3.53–5.93)
Lower respiratory disease	4.67 (3.96–5.28)
Chronic obstructive pulmonary disease	4.44 (3.16–5.59)
Genitourinary signs and symptoms	4.39 (2.98–5.68)
Coronary atherosclerosis and other heart disease	4.38 (2.96–5.67)
Headache	4.10 (2.49–5.58)
Heart failure	3.94 (2.97–4.80)
Gastrointestinal disorders	3.58 (2.15–4.88)
Respiratory failure, insufficiency or arrest	3.37 (2.71–3.92)
Neurocognitive disorders	3.17 (2.24–3.98)
Acute phlebitis, thrombophlebitis or thromboembolism	3.05 (2.51–3.49)
Urinary tract infections	2.99 (1.94–3.93)
Dysphagia	2.83 (1.79–3.76)
Asthma	2.82 (1.92–3.61)
Acute pulmonary embolism	2.63 (2.25–2.92)
Bacterial infections	2.38 (1.52–3.13)
Pressure ulcer of skin	2.05 (1.40–2.59)
Pleurisy or pleural effusion	1.52 (0.95–1.98)

Bronchodilators (sympathomimetic or inhalation)	22.23 (20.68–23.67)
Non-opioid analgesics	19.97 (17.41–22.40)
Anticoagulants	16.43 (14.85–17.89)
Non-opioid-containing antitussives or expectorants	12.83 (11.61–13.95)
Antilipaemic agents	11.56 (8.73–14.19)
NSAIDs	10.94 (8.04–13.67)
Beta blockers	9.74 (8.06–11.27)
Topical anti-inflammatories	9.63 (6.74–12.37)
Opioid analgesics	9.39 (7.21–11.43)
Laxatives	9.22 (6.99–11.31)
Antiasthmatics	8.87 (7.65–9.97)
Antidepressants	7.83 (5.19–10.30)
Vitamin D	7.80 (5.36–10.09)
Glucocorticoids	7.65 (5.67–9.50)
Vitamin C	7.23 (6.45–7.90)
Calcium channel blockers	7.18 (5.61–8.61)
Nasal anti-inflammatories	6.33 (4.57–7.96)
Anticonvulsants	5.78 (3.68–7.72)
Oral hypoglycaemic agents	5.39 (3.99–6.64)
Topical antifungals	5.10 (3.37–6.69)
Insulin	4.95 (3.87–5.90)
Zinc	4.90 (4.39–5.32)
Penicillins	4.87 (3.15–6.44)
Histamine antagonists	4.83 (3.63–5.91)
Skeletal muscle relaxants	4.78 (2.62–6.79)
Loop diuretics	4.72 (3.59–5.72)
Topical nasal and throat agents	4.13 (3.09–5.05)
Potassium	3.72 (2.35–4.96)
Iron	3.57 (2.46–4.56)
Magnesium	3.36 (2.27–4.32)
Antiemetics	3.07 (1.66–4.36)
Cyanocobalamin	2.98 (1.69–4.14)
Antidiarrheal agents	2.87 (1.70–3.91)
Thiazides or related diuretics	2.52 (1.37–3.54)
Vaccines	2.43 (1.43–3.31)
Multivitamins	2.31 (1.40–3.10)
Anti-inflammatories (inhalation)	1.37 (0.80–1.83)
Antiarrhythmics	1.28 (0.79–1.67)
Magnesium-containing antacids	1.07 (0.62–1.42)

Haemoglobin lower than 14 (M) or 12 (F) g dl^{-1}	31.03 (28.16–33.76)
Haematocrit lower than 42% (M) or 37% (F)	30.73 (27.64–33.67)
Haemoglobin A1C higher than 5.6%	10.66 (6.77–14.35)
Triglycerides higher than 150 mg dl^{-1}	9.94 (6.61–13.11)
Low density lipoprotein higher than 130 mg dl^{-1}	9.48 (7.02–11.81)
Total cholesterol higher than 200 mg dl^{-1}	9.40 (6.63–12.03)
Serum chloride higher than 107 mmol l^{-1}	9.21 (7.05–11.24)
Total white blood cell count lower than 4,800 per mm^3	8.45 (6.47–10.29)
Alanine aminotransferase higher than 40 U l^{-1}	7.62 (5.20–9.90)
Serum albumin lower than 3.5 g dl^{-1}	6.44 (4.84–7.92)
Prothrombin time lower than 11.5 s	4.81 (3.88–5.64)
Serum potassium lower than 3.5 mmol l^{-1}	4.44 (2.92–5.85)
Platelet count higher than 400,000 per mm^3	3.05 (2.10–3.88)
Prothrombin time higher than 14.7 s	2.99 (2.00–3.86)
International normalized ratio higher than 1.2 ratio	2.94 (1.96–3.80)
Partial thromboplastin time higher than 36.5 s	2.66 (1.75–3.46)
Serum sodium higher than 145 mmol l^{-1}	1.64 (0.97–2.20)

https://doi.org/10.1038/s41586-021-03553-9

National Institute for Health and Care Excellence (NICE)

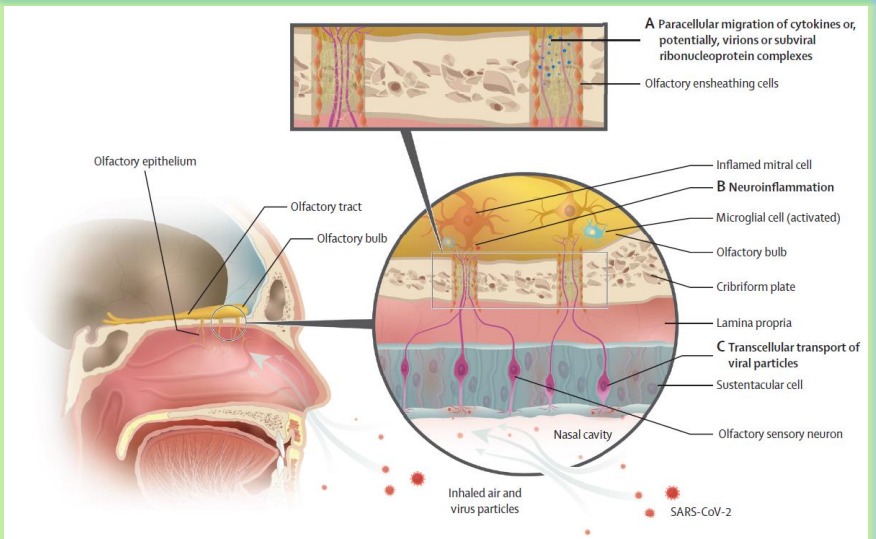
- Ongoing symptomatic COVID-19: Signs and symptoms of COVID-19 from **4 to 12 weeks** not explained by an alternative diagnosis after protocolized study.

- Post-COVID-19 syndrome: Signs and symptoms that develop during or following an infection consistent with COVID-19, **continue for >12** weeks and are not explained by an alternative diagnosis.

The term “syndrome” reflects the concurrence of a multisystem, fluctuating, and often overlapping **clusters** of signs and symptoms that, in some patients, may follow a **relapsing-remitting pattern** and that may **change over time** and affect any bodily system.

NICE. COVID-19 Rapid Guideline: Managing the Long-Term Effects of COVID-19.
Available online: https://www.nice.org.uk/guidance/ng188 (

Post-viral effects of COVID-19 in the olfactory system and their implications



	Prevalence of dysfunction	Follow-up from symptom onset	Country	Assessment method*
Vaira et al[11]	29 (21%) of 138 patients	60 days	Italy	Self-report or quantitative olfactometry†
Andrews et al[17]	60 (68%) of 88 patients	52 days (mean)	Italy and UK	Self-report
Chiesa-Estomba et al[28]	384 (51%) of 751 patients	47 days (mean)	Belgium, France, and Spain	Self-report
Otte et al[35]	27 (54%) of 50 patients	49 days	Germany	Quantitative olfactometry
Carfì et al[36]	21 (15%) of 143 patients	60 days (mean)	Italy	Self-report
Otte et al[37]	42 (46%) of 91 patients	58 days (mean)	Germany	Quantitative olfactometry
Boscolo-Rizzo et al[38]	34 (19%) of 183 patients	56 days (mean)	Italy	Self-report
Klein et al[39]	15 (14%) of 105 patients	6 months	Israel	Self-report
Logue et al[40]	24 (14%) of 177 patients	169 days (median)	USA	Self-report
Boscolo-Rizzo et al[41]	87 (60%) of 145 patients	6 months	Italy	Quantitative olfactometry
Huang et al[42]	176 (11%) of 1655 patients	6 months	China	Self-report
Pilotto et al[43]	26 (16%) of 165 patients	6 months	Italy	Self-report

Transitory or short-term dysfunction

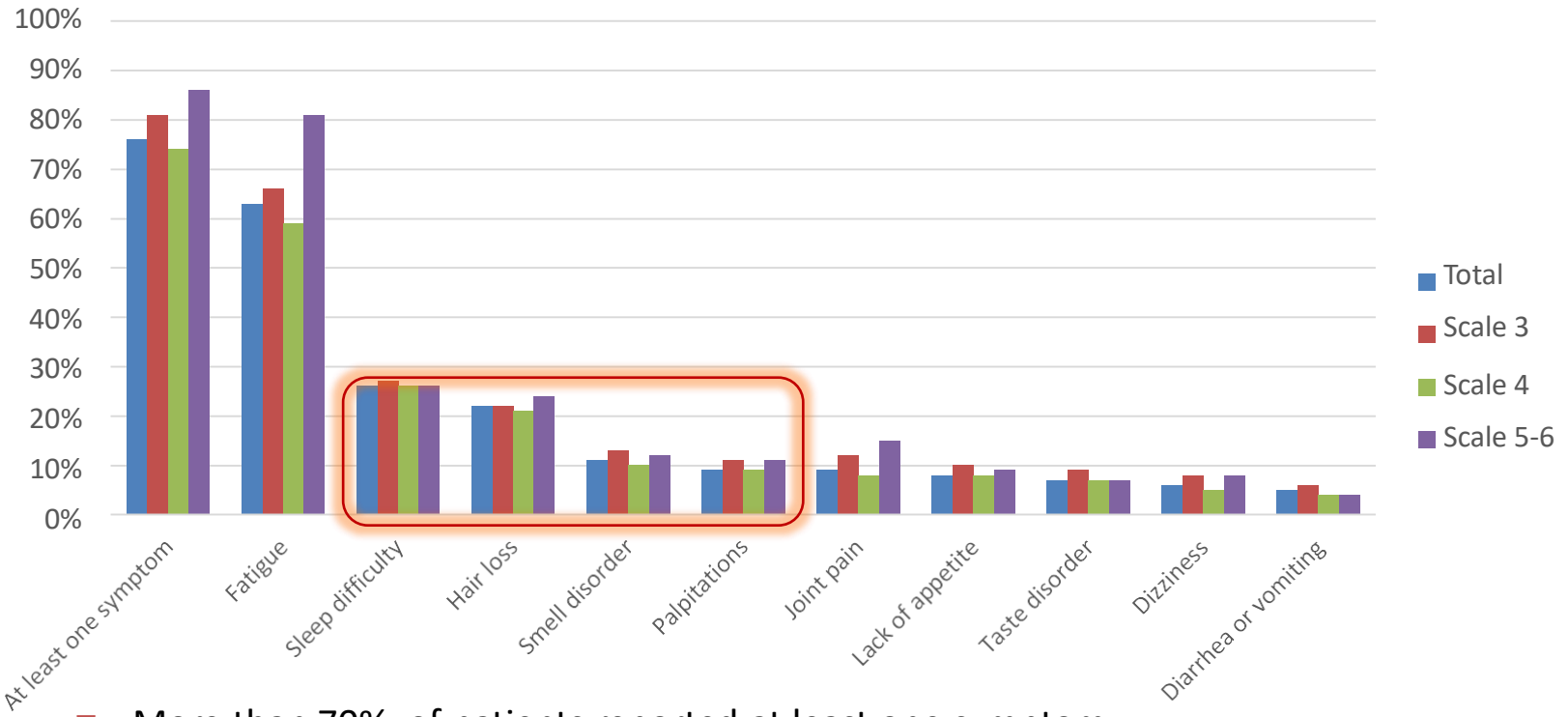
- Conductive (obstructive) or mechanical losses (eg, congestion) resulting from blockage of inspired air due to local inflammation and oedema of mucosal tissue in the olfactory cleft and upper nasal passages
- Sensorineural (olfactory epithelium and cranial nerve 1) dysfunction can be subdivided into two types:
  - Altered quantity or function of odorant-binding receptor molecules
  - Neuropraxia or dysfunction of olfactory sensory neurons
- Central (olfactory bulbs and brain) dysfunction could be further subdivided* into:
  - Pathosis isolated to the olfactory bulbs
  - Pathosis isolated to higher-order brain regions such as the piriform cortex and orbitofrontal cortex.

Chronic or permanent dysfunction

- Loss of olfactory epithelium (possibly because of death of neural stem cells)
- Disruption of central olfactory processing networks[24,25]
  - Uncertain functional recovery

www.thelancet.com/neurology Published online July 30, 2021 https://doi.org/10.1016/S1474-4422(21)00182-4

Persisting symptoms at follow-up

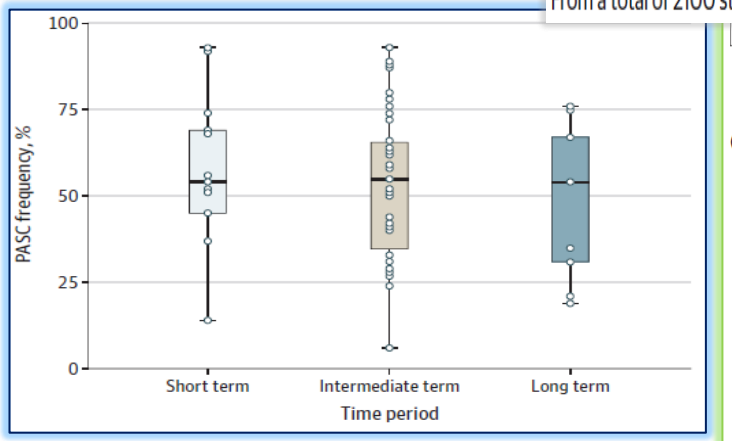


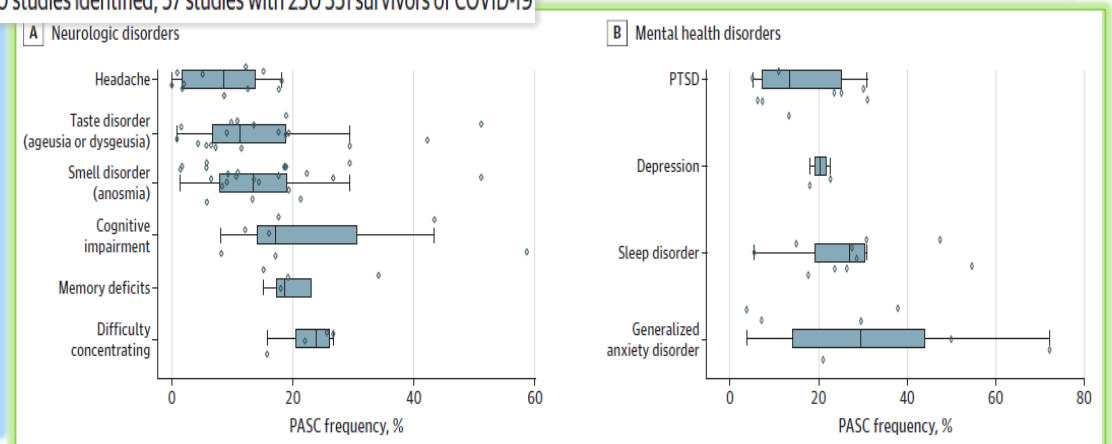
- More than 70% of patients reported at least one symptom.
- The most common symptoms are fatigue/muscle weakness(63%) and sleep difficulty(26%).

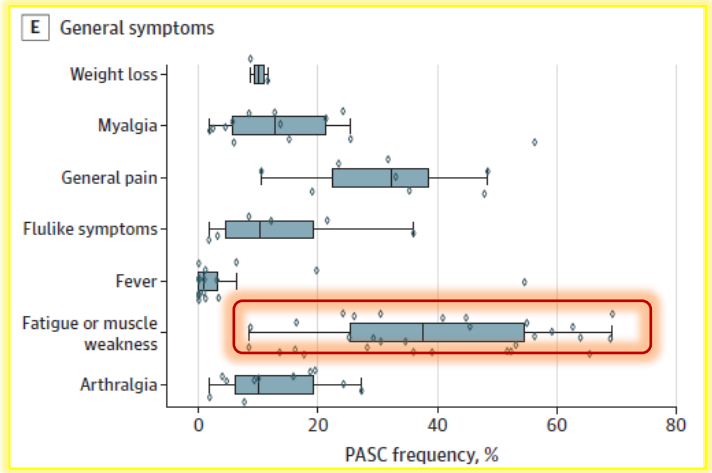
Huang et al. Lancet. 2021.

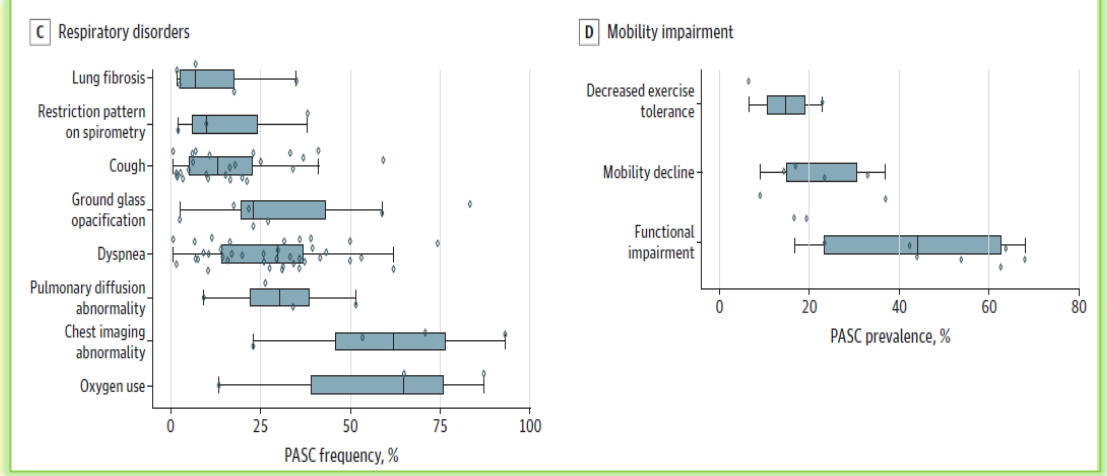
Short-term and Long-term Rates of Postacute Sequelae of SARS-CoV-2 Infection A Systematic Review (PROSPERO/PRISMA)

From a total of 2100 studies identified, 57 studies with 250 351 survivors of COVID-19









In this systematic review, more than half of COVID-19 survivors experienced PASC 6 months after recovery. The most common PASC involved functional mobility impairments, pulmonary abnormalities, and mental health disorders

JAMA Network Open. 2021;4(10):e2128568. doi:10.1001/jamanetworkopen.2021.28568

SÍNDROME DE FATIGA CRÓNICA

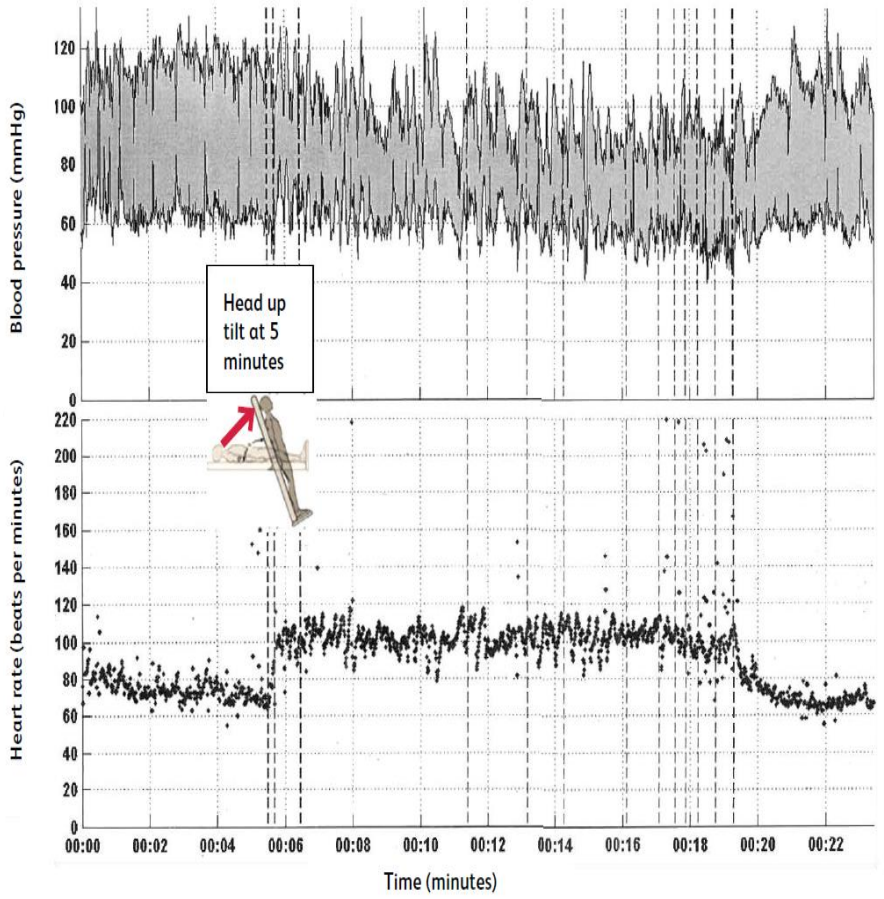
Las nuevas recomendaciones consensuadas para encefalomielitis miálgica/síndrome de fatiga crónica (EM/SFC), incluyen los siguientes criterios diagnósticos, junto con una guía de tratamiento actualizada:

Medscape

Fuente: doi.org/10.1016/j.mayocp.2021.07.004

Autonomic dysfunction in ‘long COVID’: rationale, physiology and management strategies

Autonomic dysfunction in long COVID

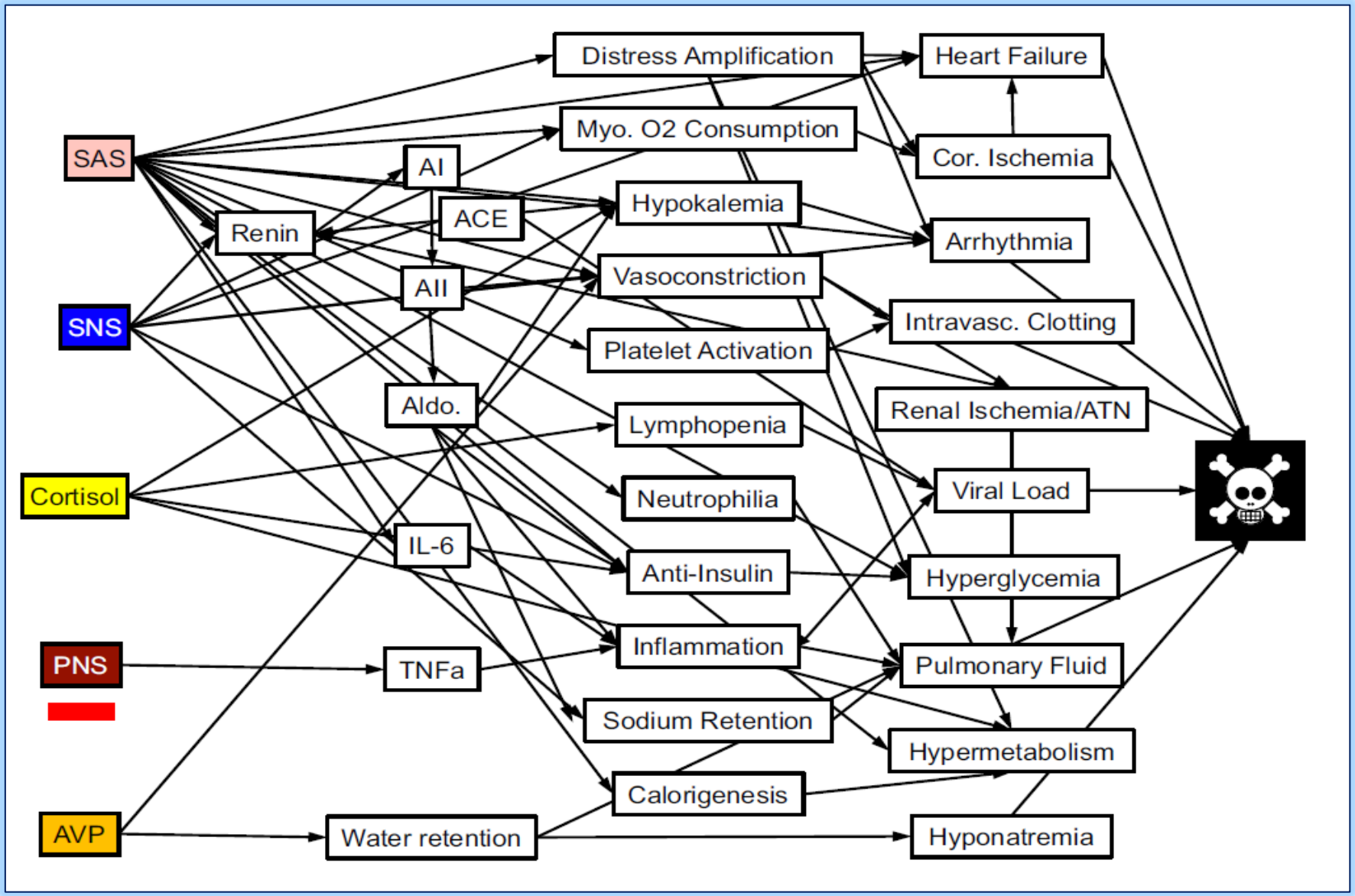


infection during the COVID-19 pandemic

Patient	Symptoms	Timing of antecedent illness	Observations in clinic	Other investigations	Clinical diagnosis
26-year-old female	Palpitations on standing Dyspnoea Fatigue	Gastrointestinal symptoms 5 days prior to symptoms (suspected viral illness)	Postural BP 104/82 to 120/79 mmHg Postural HR 121–150 bpm	Echocardiogram normal ECG normal	Viral induced postural orthostatic tachycardia syndrome
43-year-old female	Palpitations Fatigue Breathlessness	Upper respiratory tract symptoms 1 month previously (suspected COVID-19)	Postural BP 121/92 to 129/96 mmHg Postural HR 86–106 bpm	Ambulatory BP monitor: average BP 101/66 mmHg 24-hour Holter: sinus rhythm, HRB 68–159, average 86 bpm. Diurnal sinus tachycardia	Viral induced reactive tachycardia, with sympathetic overactivity
50-year-old female	Palpitations Chest pain	Chesty cough March 2020 (suspected COVID-19)	Postural BP 136/48 to 115/91 mmHg Postural HR 48–60 bpm	24-hour Holter: sinus rhythm, rate 37–134 bpm, average 51 bpm	Post viral orthostatic intolerance
30-year old female	Aches Dizziness Diarrhoea Dizziness and palpitations	Flu-like symptoms March 2020 (confirmed COVID-19)	Postural HR 80–118 bpm Postural BP 112/79 to 123/103 mmHg	Head-up tilt: starting BP 106/69 and HR 67 bpm, BP 72/52 mmHg and HR 99 bpm after 14 minutes	Post viral orthostatic intolerance with reactive tachycardia
50-year-old female	Recurrent presyncopal episodes Fatigue Panic attacks	Suspected COVID-19 infection March 2020	Postural HR 88–113 bpm Postural BP 137/85 mmHg to 122/88 mmHg	Echocardiogram normal Ambulatory BP monitor: average 101/65 mmHg; Holter monitor: sinus tachycardia Head up tilt: postural drop of 17 mmHg and HR rise to 132 bpm after 24 minutes	Orthostatic intolerance with a tendency to vasovagal presyncope
44-year-old female	Dizziness on walking Fatigue Irritable bowel symptoms Anxiety	Upper respiratory tract symptoms for 5 weeks in March 2020 (suspected COVID-19)	Telephone consultation so only readings from patient’s BP monitor: 88/67 mmHg	Nil	Orthostatic intolerance

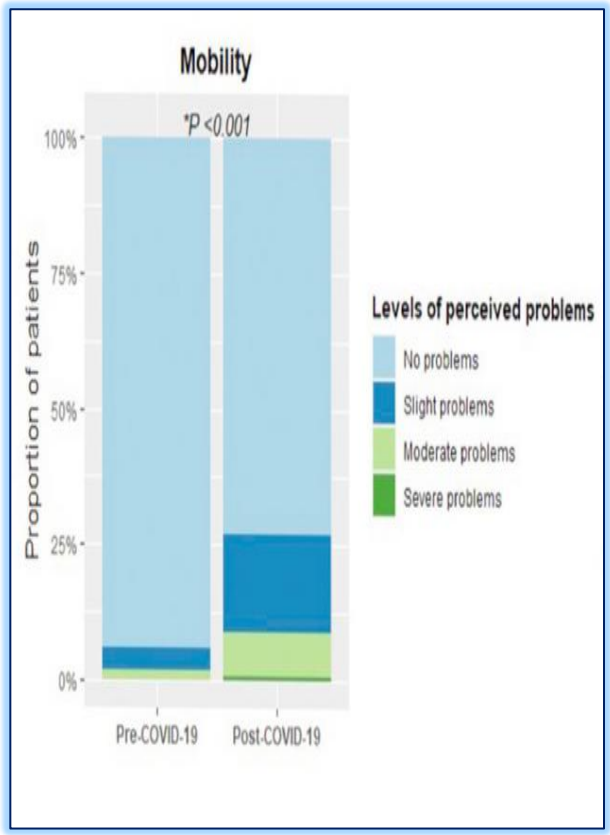
Clinical Medicine 2021 Vol 21, No 1: e63–7

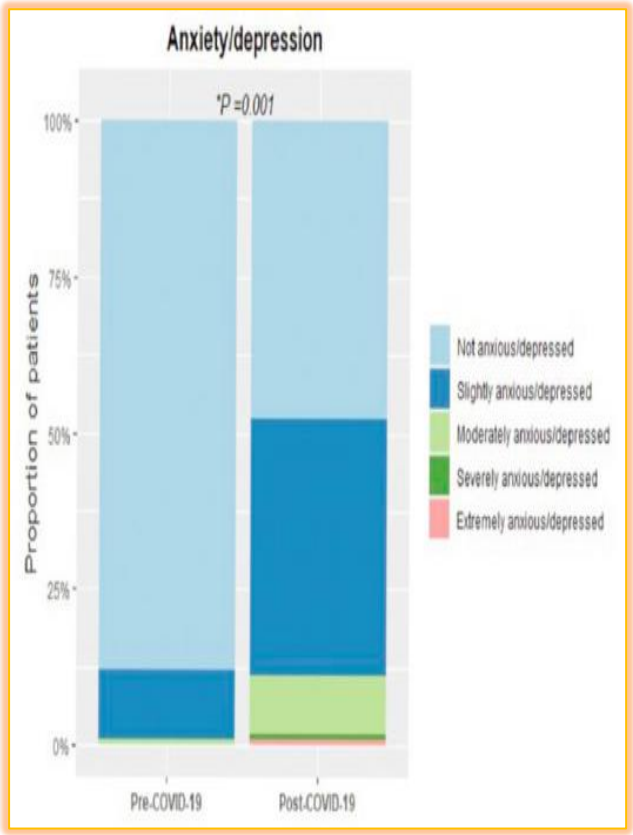
The extended autonomic system, dyshomeostasis, and COVID-19

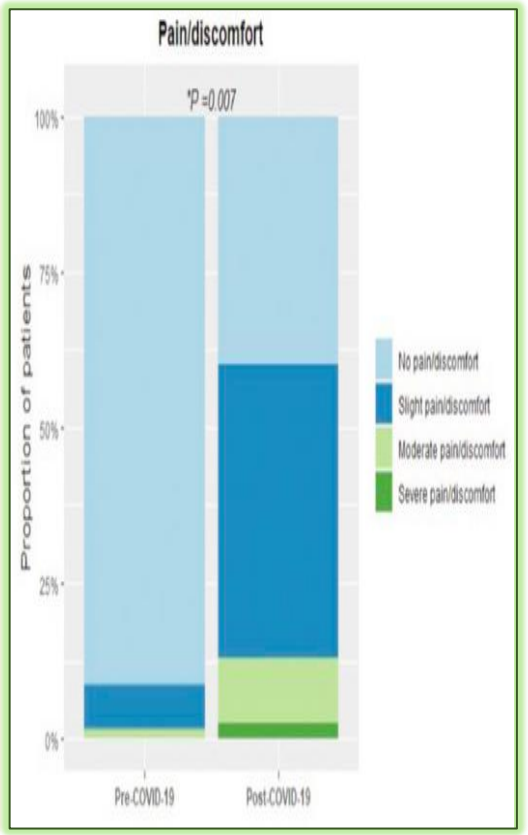


Clinical Autonomic Research (2020) 30:299–315

Decreased quality of life and spirometric alterations even after mild-moderate COVID-19







Restrictive lung impairment was the most common spirometric alteration in 17%(20/115), of whom 65%(13/20) had mild COVID-19.

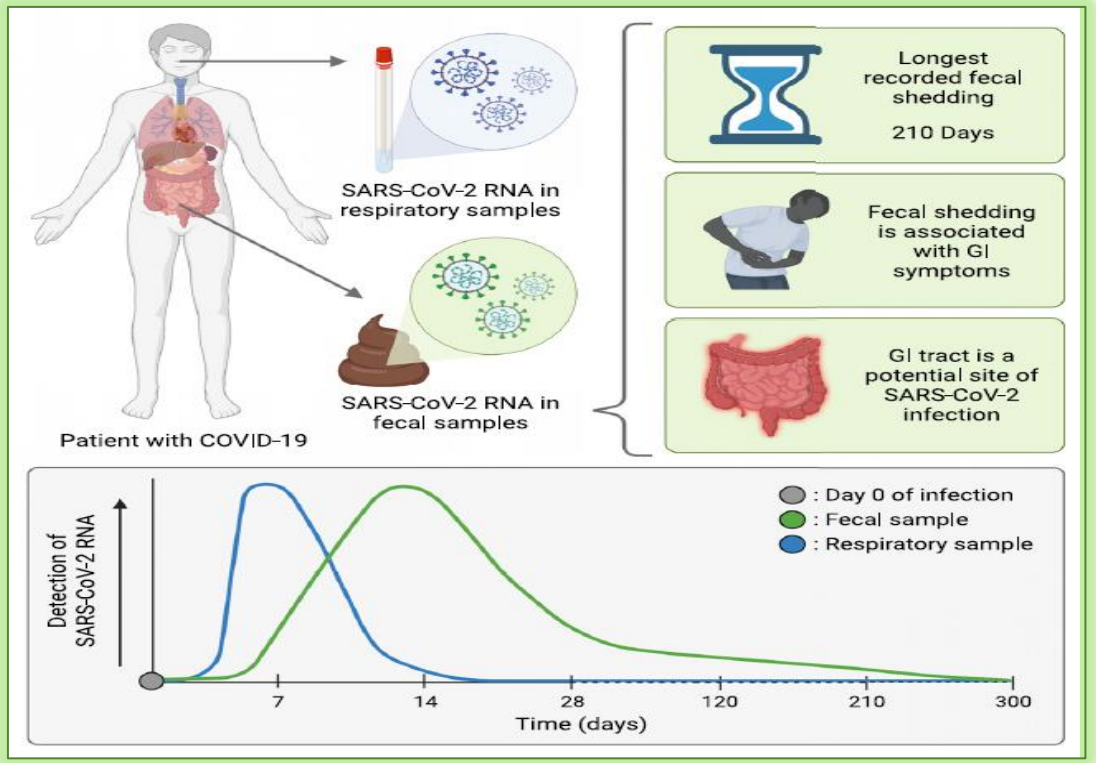
Respiratory Medicine 181 (2021) 106391

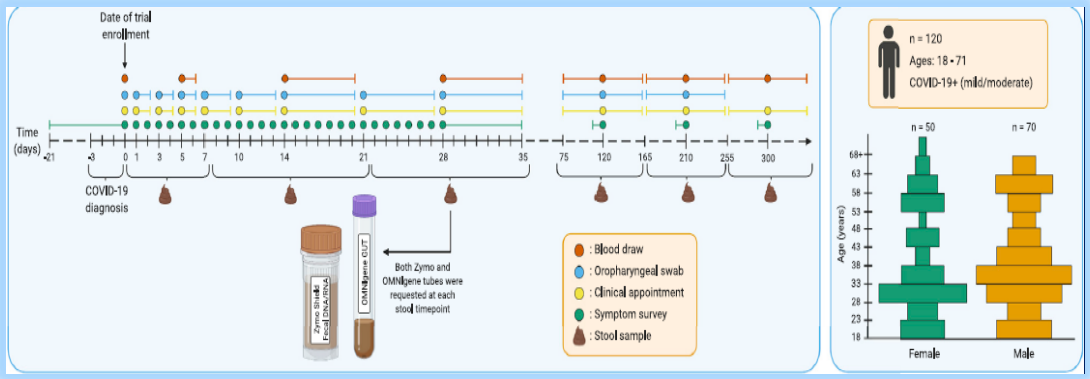
“limited understanding of the clinical characterization during the recovery period and associated pathophysiology have limited progress in treatment and management”

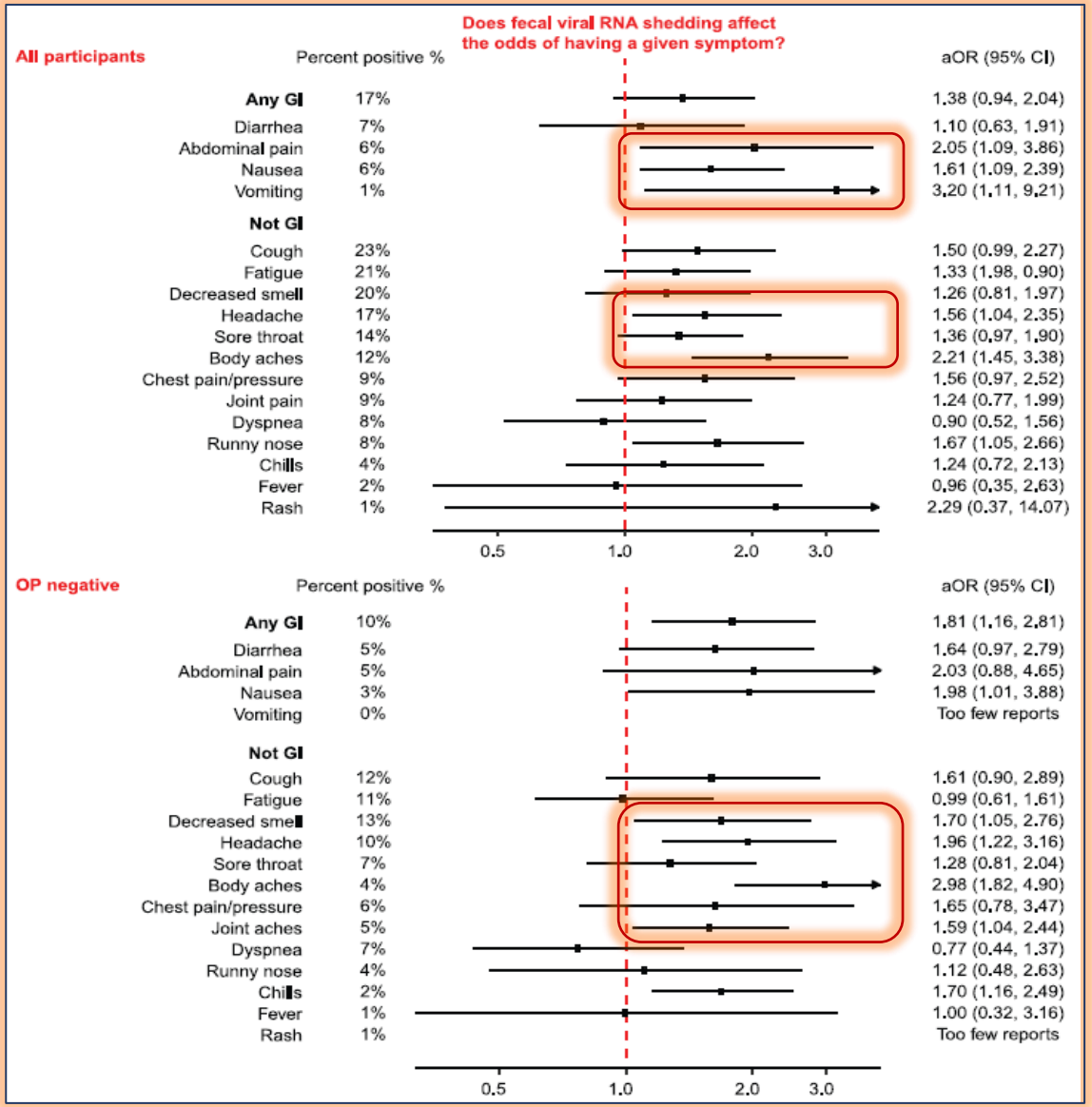
Some (non-mutually exclusive) working hypotheses for current investigations

- Residual damage to ACE2-positive infected tissue (though might this not be expected to make long Covid a condition correlated with severity of the acute infection)?
- Ongoing immune stimulation from reservoirs (gut) of persistent infection (-meriting greater focus on anti-virals..?)
- Acute infection causes chronic perturbation of immune subsets
- Acute infection causes activation of an autoimmune response

Gastrointestinal symptoms and fecal shedding of SARS-CoV-2 RNA suggest prolonged gastrointestinal infection







Natarajan et al., Gastrointestinal symptoms and fecal shedding of SARS-CoV-2 RNA suggest prolonged gastrointestinal infection, Med (2022), https://doi.org/10.1016/j.medj.2022.04.001

And an emerging dataset on autoimmunity following COVID-19

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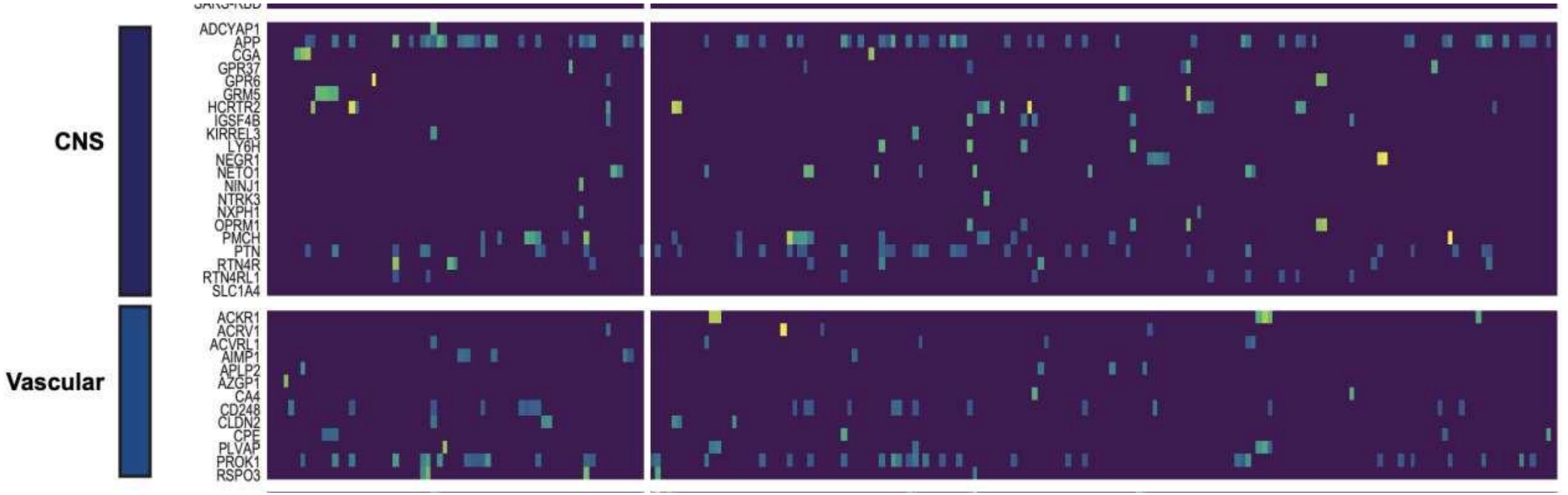
Comments (3)

Diverse Functional Autoantibodies in Patients with COVID-19

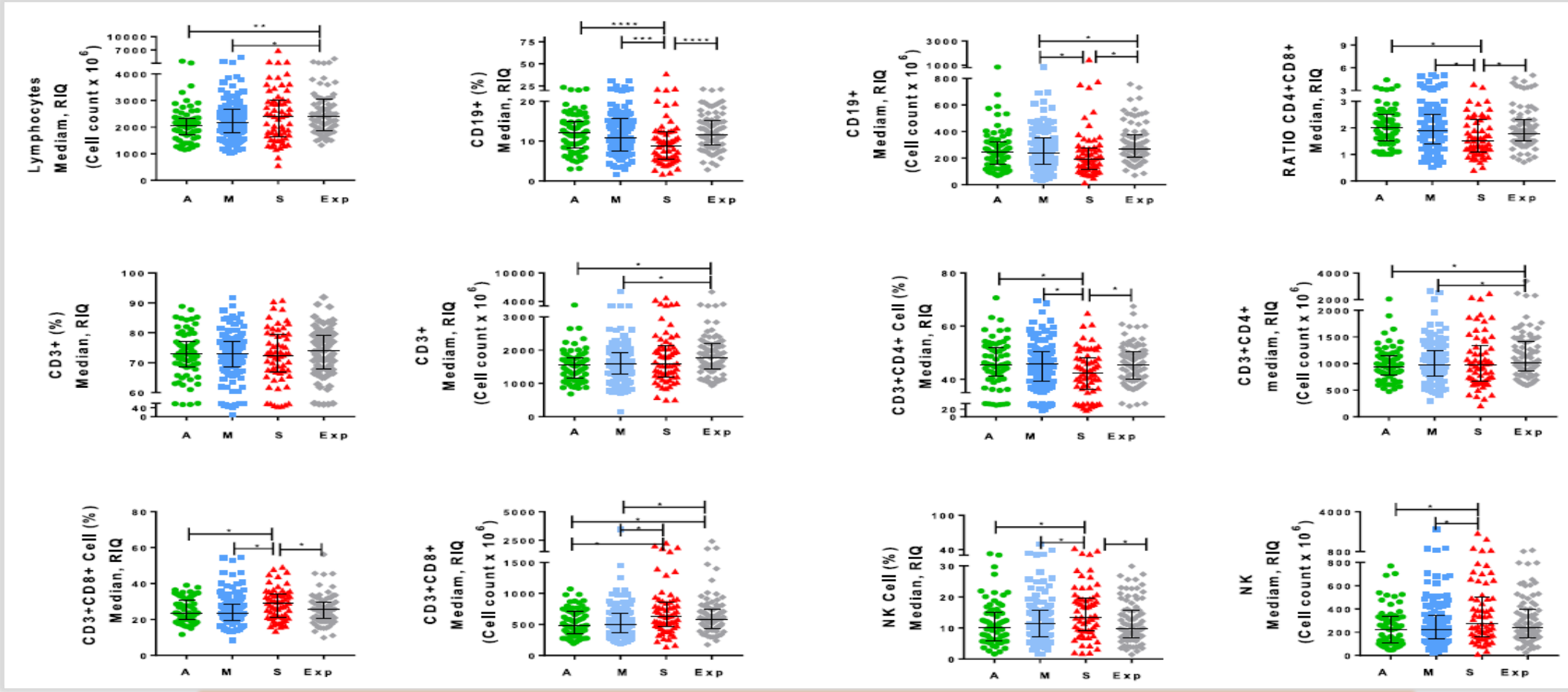
Eric Y. Wang, Tianyang Mao, Jon Klein, Yile Dai, John D. Huck, Feimei Liu, Neil S. Zheng, Ting Zhou, Benjamin Israelow, Patrick Wong, Carolina Lucas, Julio Silva, Ji Eun Oh, Eric Song, Emily S. Perotti, Suzanne Fischer, Melissa Campbell, John B. Fournier, Anne L. Wyllie, Chantal B. F. Vogels, Isabel M. Ott, Chaney C. Kalinich, Mary E. Petrone, Anne E. Watkins, Yale IMPACT Team, Charles Dela Cruz, Shelli F. Farhadian, Wade L. Schulz, Nathan D. Grubaugh, Albert I. Ko, Akiko Iwasaki, Aaron M. Ring

doi: https://doi.org/10.1101/2020.12.10.20247205



Assessment of changes in immune status linked to COVID-19 convalescent and its clinical severity in patients and uninfected exposed relatives

cim
Centro de Inmunología Molecular



The identified alterations of B and T lymphocytes suggest that convalescent patients with the severe disease could be vulnerable to

infectious, autoimmune or autotinflammatory processes

Immunobiology 227 (2022)152216
https://doi.org/10.1016/j.imbio.2022.152216

Health Care Utilization and Clinical Characteristics of Nonhospitalized Adults in an Integrated Health Care System 28–180 Days After COVID-19 Diagnosis — Georgia, May 2020–March 2021

Characteristic	Total*	No. of days since COVID-19 diagnosis		
		28–59	60–119	120–180
Visit specialty				
Primary care/Geriatrics	1,627 (74.7)	819 (79.1)	1,102 (78.6)	1,073 (78.3)
Behavioral health/Psychiatry	262 (12.0)	171 (16.5)	220 (15.7)	209 (15.3)
Dermatology	236 (10.8)	145 (14.0)	176 (12.6)	181 (13.2)
Cardiology	146 (6.7)	108 (10.4)	123 (8.8)	116 (8.5)
Gastroenterology	134 (6.2)	92 (8.9)	117 (8.3)	108 (7.9)
Neurology	69 (3.2)	52 (5.0)	60 (4.3)	57 (4.2)
Pulmonology	58 (2.7)	46 (4.4)	52 (3.7)	48 (3.5)
Other specialty	1,309 (60.1)	712 (68.7)	955 (68.1)	942 (68.8)
Potentially COVID-19–related†††				
Dermatology	129 (15.7)	31 (12.4)	52 (12.2)	59 (12.6)
Behavioral/Mental health	92 (11.2)	25 (10.0)	44 (10.3)	49 (10.5)
Gastroenterology	88 (10.7)	17 (6.8)	48 (11.2)	38 (8.1)
Cardiology	79 (9.6)	34 (13.7)	35 (8.2)	33 (7.1)
Otolaryngology	63 (7.7)	14 (5.6)	34 (8.0)	33 (7.1)
Pulmonology	41 (5.0)	13 (5.2)	19 (4.4)	16 (3.4)
Neurology	32 (3.9)	8 (3.2)	13 (3.0)	18 (3.9)
New diagnoses				
Back pain (M54)	219 (10.1)	80 (8.1)	94 (5.0)	135 (7.1)
Joint disorder (M25)	211 (9.7)	50 (5.1)	113 (6.0)	133 (7.0)
Muscle or soft tissue disorder (M79)	172 (7.9)	53 (5.4)	92 (4.9)	100 (5.3)
Abdominal and pelvic pain (R10)	167 (7.7)	52 (5.3)	100 (5.3)	84 (4.4)
Anxiety (F41)	96 (4.4)	33 (3.4)	51 (2.7)	68 (3.6)
Hyperlipidemia (E78)	96 (4.4)	25 (2.5)	42 (2.2)	43 (2.3)
Overweight/Obesity (E66)	96 (4.4)	23 (2.3)	43 (2.3)	42 (2.2)
Urinary tract infection and urinary incontinence (N39)	76 (3.5)	14 (1.4)	34 (1.8)	38 (2.0)
Hypertension (I10)	73 (3.4)	27 (2.7)	48 (2.6)	33 (1.7)
Diabetes mellitus (E11)	72 (3.3)	24 (2.4)	39 (2.1)	49 (2.6)
Disorders of refraction and accommodation (H52)	67 (3.1)	12 (1.2)	29 (1.6)	31 (1.6)
Gastresophageal reflux (K21)	67 (3.1)	19 (1.9)	29 (1.6)	38 (2.0)

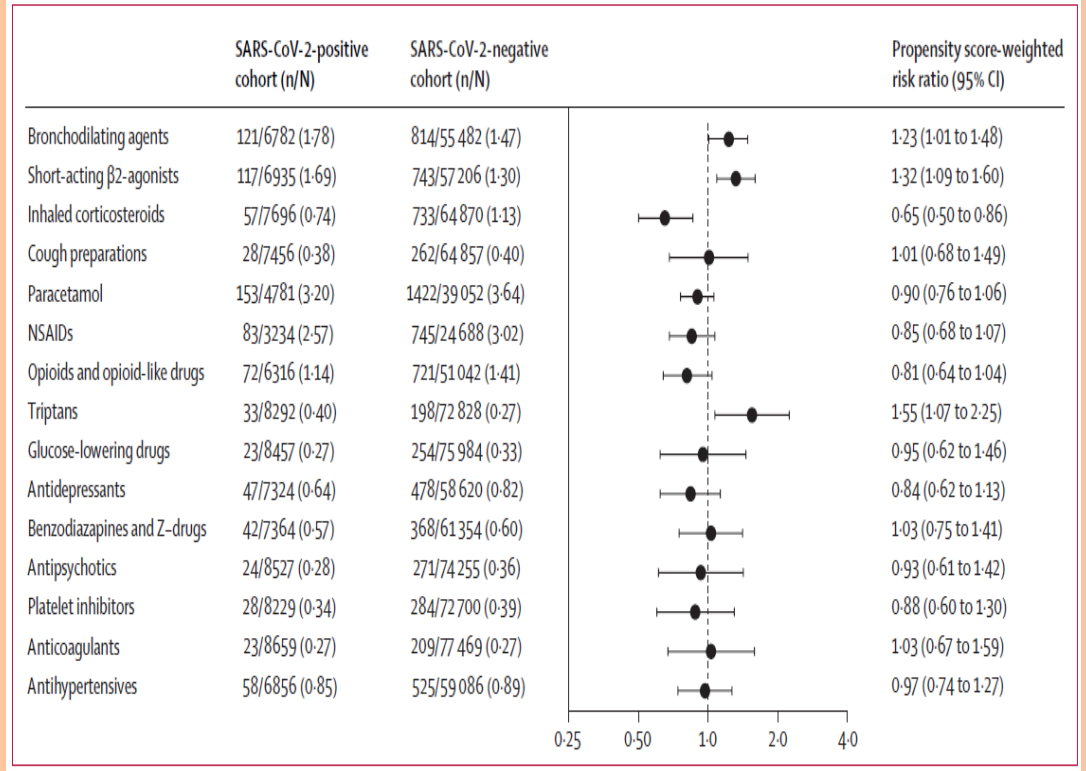
Among 3,171 nonhospitalized adult COVID-19 patients, 69% had one or more outpatient visits 28–180 days after the diagnosis

Symptoms potentially related to COVID-19 were common new visit diagnoses

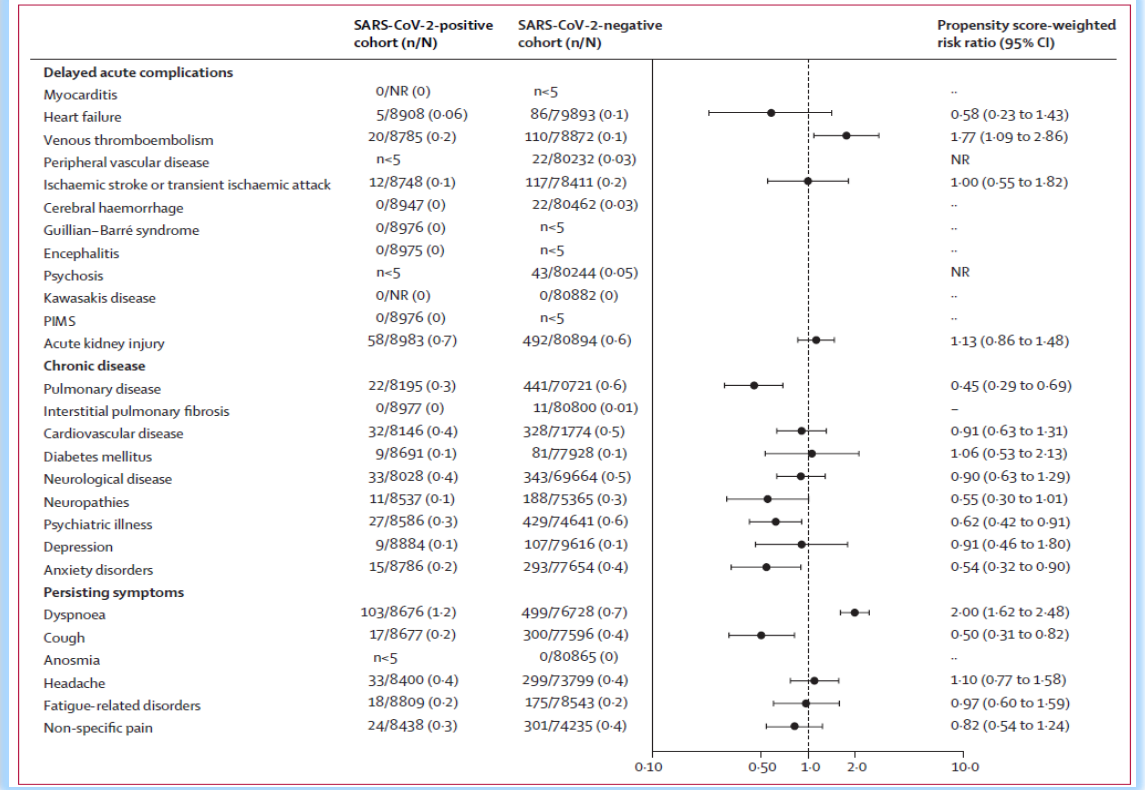
Two thirds had a visit for a new primary diagnosis

MMWR / April 30, 2021 / Vol. 70 / No. 17
US Department of Health and Human Services/Centers for Disease Control and Prevention

Post-acute effects of SARS-CoV-2 infection in individuals not requiring hospital admission: a Danish population-based cohort study



	SARS-CoV-2-positive cohort (n/N)	SARS-CoV-2-negative cohort (n/N)	Propensity score-weighted risk ratio (95% CI)
Bronchodilating agents	121/6782 (1·78)	814/55 482 (1·47)	1·23 (1·01 to 1·48)
Short-acting β2-agonists	117/6935 (1·69)	743/57 206 (1·30)	1·32 (1·09 to 1·60)
Inhaled corticosteroids	57/7696 (0·74)	733/64 870 (1·13)	0·65 (0·50 to 0·86)
Cough preparations	28/7456 (0·38)	262/64 857 (0·40)	1·01 (0·68 to 1·49)
Paracetamol	153/4781 (3·20)	1422/39 052 (3·64)	0·90 (0·76 to 1·06)
NSAIDs	83/3234 (2·57)	745/24 688 (3·02)	0·85 (0·68 to 1·07)
Opioids and opioid-like drugs	72/6316 (1·14)	721/51 042 (1·41)	0·81 (0·64 to 1·04)
Triptans	33/8292 (0·40)	198/72 828 (0·27)	1·55 (1·07 to 2·25)
Glucose-lowering drugs	23/8457 (0·27)	254/75 984 (0·33)	0·95 (0·62 to 1·46)
Antidepressants	47/7324 (0·64)	478/58 620 (0·82)	0·84 (0·62 to 1·13)
Benzodiazapines and Z-drugs	42/7364 (0·57)	368/61 354 (0·60)	1·03 (0·75 to 1·41)
Antipsychotics	24/8527 (0·28)	271/74 255 (0·36)	0·93 (0·61 to 1·42)
Platelet inhibitors	28/8229 (0·34)	284/72 700 (0·39)	0·88 (0·60 to 1·30)
Anticoagulants	23/8659 (0·27)	209/77 469 (0·27)	1·03 (0·67 to 1·59)
Antihypertensives	58/6856 (0·85)	525/59 086 (0·89)	0·97 (0·74 to 1·27)



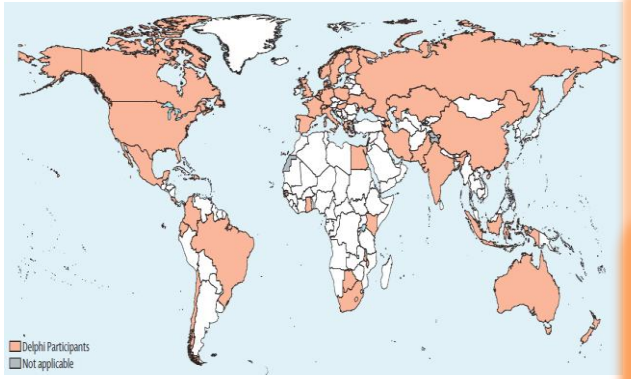
	SARS-CoV-2-positive cohort (n/N)	SARS-CoV-2-negative cohort (n/N)	Propensity score-weighted risk ratio (95% CI)
Delayed acute complications			
Myocarditis	0/NR (0)	n<5	..
Heart failure	5/8908 (0·06)	86/79893 (0·1)	0·58 (0·23 to 1·43)
Venous thromboembolism	20/8785 (0·2)	110/78872 (0·1)	1·77 (1·09 to 2·86)
Peripheral vascular disease	n<5	22/80232 (0·03)	NR
Ischaemic stroke or transient ischaemic attack	12/8748 (0·1)	117/78411 (0·2)	1·00 (0·55 to 1·82)
Cerebral haemorrhage	0/8947 (0)	22/80462 (0·03)	..
Guillian–Barré syndrome	0/8976 (0)	n<5	..
Encephalitis	0/8975 (0)	n<5	..
Psychosis	n<5	43/80244 (0·05)	NR
Kawasakis disease	0/NR (0)	0/80882 (0)	..
PIMS	0/8976 (0)	n<5	..
Acute kidney injury	58/8983 (0·7)	492/80894 (0·6)	1·13 (0·86 to 1·48)
Chronic disease			
Pulmonary disease	22/8195 (0·3)	441/70721 (0·6)	0·45 (0·29 to 0·69)
Interstitial pulmonary fibrosis	0/8977 (0)	11/80800 (0·01)	–
Cardiovascular disease	32/8146 (0·4)	328/71774 (0·5)	0·91 (0·63 to 1·31)
Diabetes mellitus	9/8691 (0·1)	81/77928 (0·1)	1·06 (0·53 to 2·13)
Neurological disease	33/8028 (0·4)	343/69664 (0·5)	0·90 (0·63 to 1·29)
Neuropathies	11/8537 (0·1)	188/75365 (0·3)	0·55 (0·30 to 1·01)
Psychiatric illness	27/8586 (0·3)	429/74641 (0·6)	0·62 (0·42 to 0·91)
Depression	9/8884 (0·1)	107/79616 (0·1)	0·91 (0·46 to 1·80)
Anxiety disorders	15/8786 (0·2)	293/77654 (0·4)	0·54 (0·32 to 0·90)
Persisting symptoms			
Dyspnoea	103/8676 (1·2)	499/76728 (0·7)	2·00 (1·62 to 2·48)
Cough	17/8677 (0·2)	300/77596 (0·4)	0·50 (0·31 to 0·82)
Anosmia	n<5	0/80865 (0)	..
Headache	33/8400 (0·4)	299/73799 (0·4)	1·10 (0·77 to 1·58)
Fatigue-related disorders	18/8809 (0·2)	175/78543 (0·2)	0·97 (0·60 to 1·59)
Non-specific pain	24/8438 (0·3)	301/74235 (0·4)	0·82 (0·54 to 1·24)

Interpretation The absolute risk of severe post-acute complications after SARS-CoV-2 infection not requiring hospital admission is low. However, increases in visits to general practitioners and outpatient hospital visits could indicate COVID-19 sequelae.

www.thelancet.com/infection Published online May 10, 2021 https://doi.org/10.1016/S1473-3099(21)00211-5

A clinical case definition of post-COVID-19 condition by a Delphi consensus

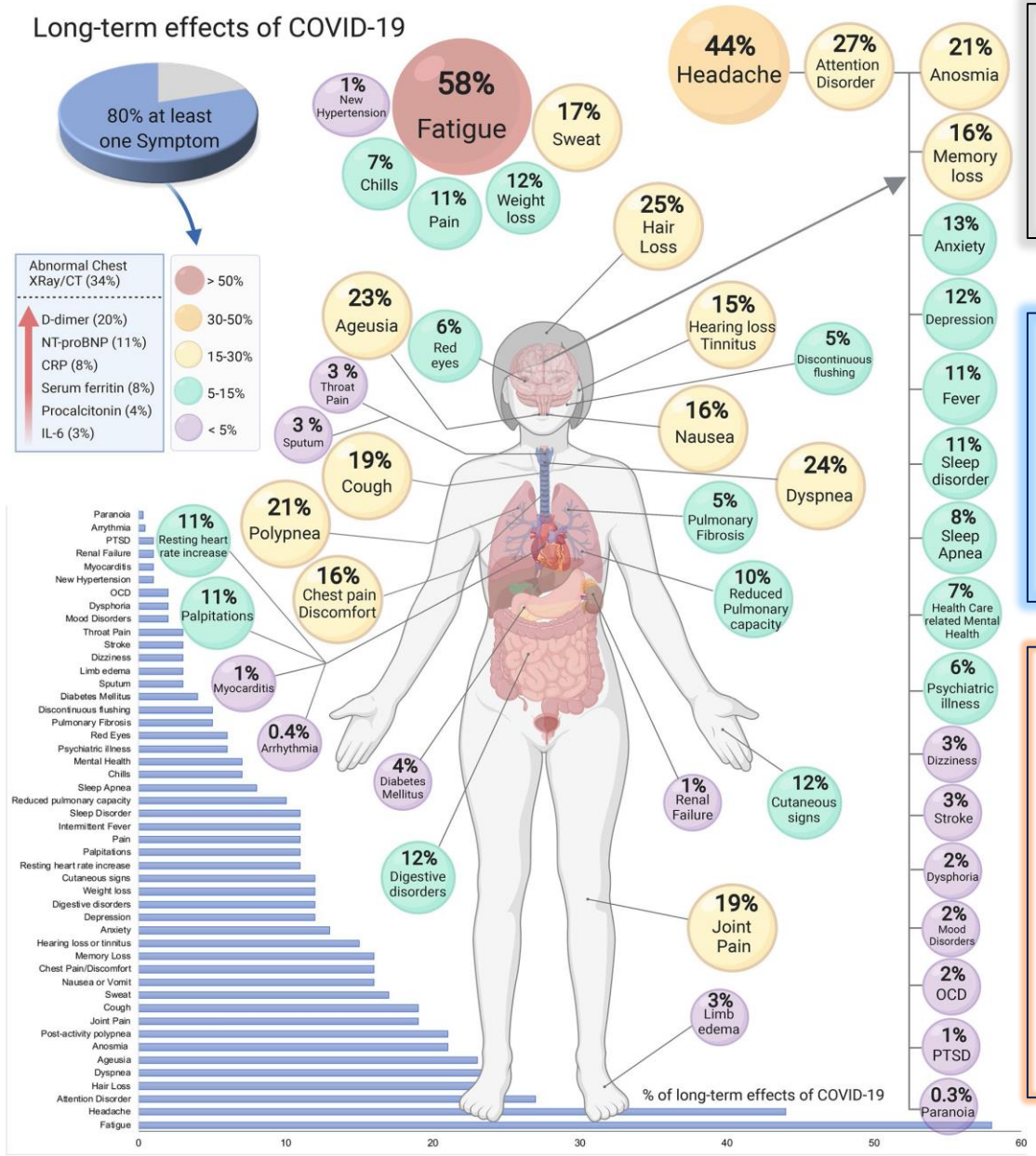
Joan B Soriano, Srinivas Murthy, John C Marshall, Pryanka Relan, Janet V Diaz, on behalf of the WHO Clinical Case Definition Working Group on Post-COVID-19 Condition



Panel: A definition of the 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 that last for at least 2 months and cannot be explained by an alternative diagnosis. Common symptoms include fatigue, shortness of breath, and cognitive dysfunction (other symptoms are listed in the appendix [p 4] and published literature[14]), and generally have an impact on everyday functioning. Symptoms might be new onset after initial recovery from an acute COVID-19 episode or persist from the initial illness. Symptoms might also fluctuate or relapse over time.

www.thelancet.com/infection **Published online December 21, 2021** **https://doi.org/10.1016/S1473-3099(21)00703-9**



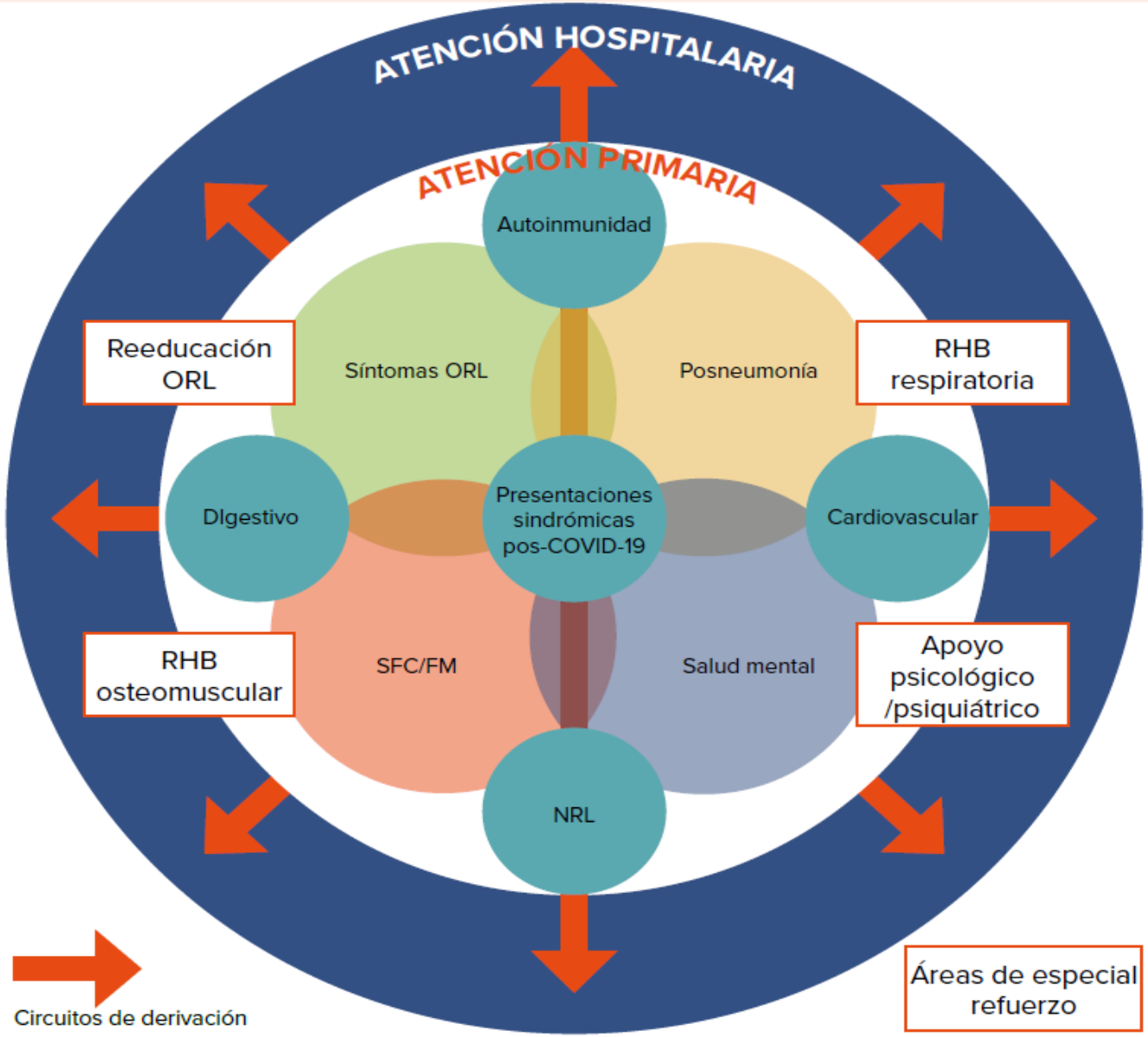
More than 50 long-term effects of COVID-19: a systematic review and meta-analysis

The five most common symptoms were **fatigue** (58%), headache (44%), attention disorder (27%), hair loss (25%), and dyspnea (24%).

Multi-disciplinary teams are crucial to developing preventive measures, rehabilitation techniques, and clinical management strategies with whole-patient perspectives designed to address long COVID-19 care

Scientific Reports | (2021) 11:16144 |
https://doi.org/10.1038/s41598-021-95565-8

MANIFESTACIONES PERSISTENTES DE COVID 19
Guía de práctica clínica. Sociedad Catalana de Medicina Familiar y Comunitaria



IDEAS PRINCIPALES

Los datos epidemiológicos varían según la población estudiada y del momento de la evaluación clínica

La fisiopatogenia está determinada por la presencia de alteraciones funcionales y/o anatómicas, así como por la coexistencia de comorbilidades

La evaluación protocolizada facilita un uso racional de recursos y oportuna rehabilitación, con una adecuada conducción por el sistema sanitario


Gracias