

SUPPLEMENTARY MATERIAL

Figure S1. Age distribution of COVID-19 DS patients by survey group. (cases reported by clinicians are depicted in red and those reported by families are shown in blue)



Figure S2. Clinical signs and symptoms of Spanish individuals with DS and COVID-19. Results are expressed as absolute frequencies (%). For details see Supplementary Table 1.

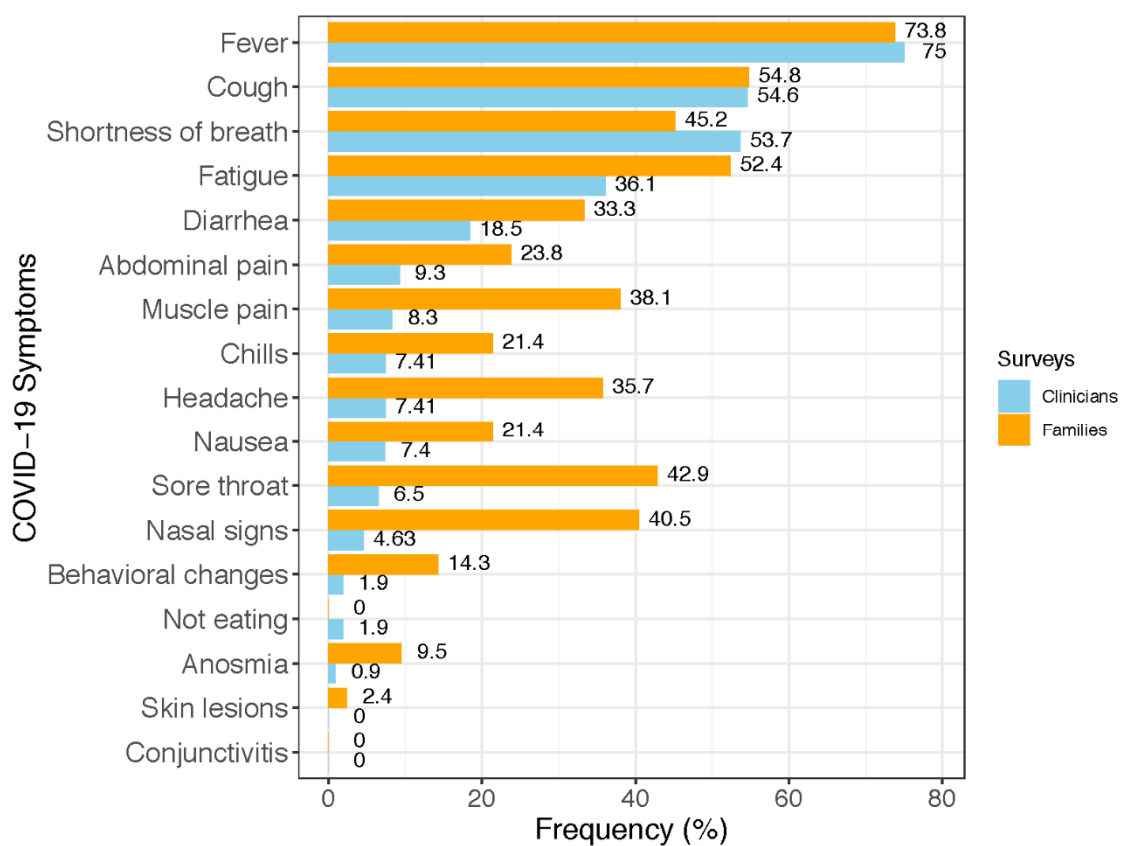


Figure S3. Most frequent symptoms in Spanish individuals with DS admitted to the hospital due to COVID-19. Data are represented as frequencies (percentages)

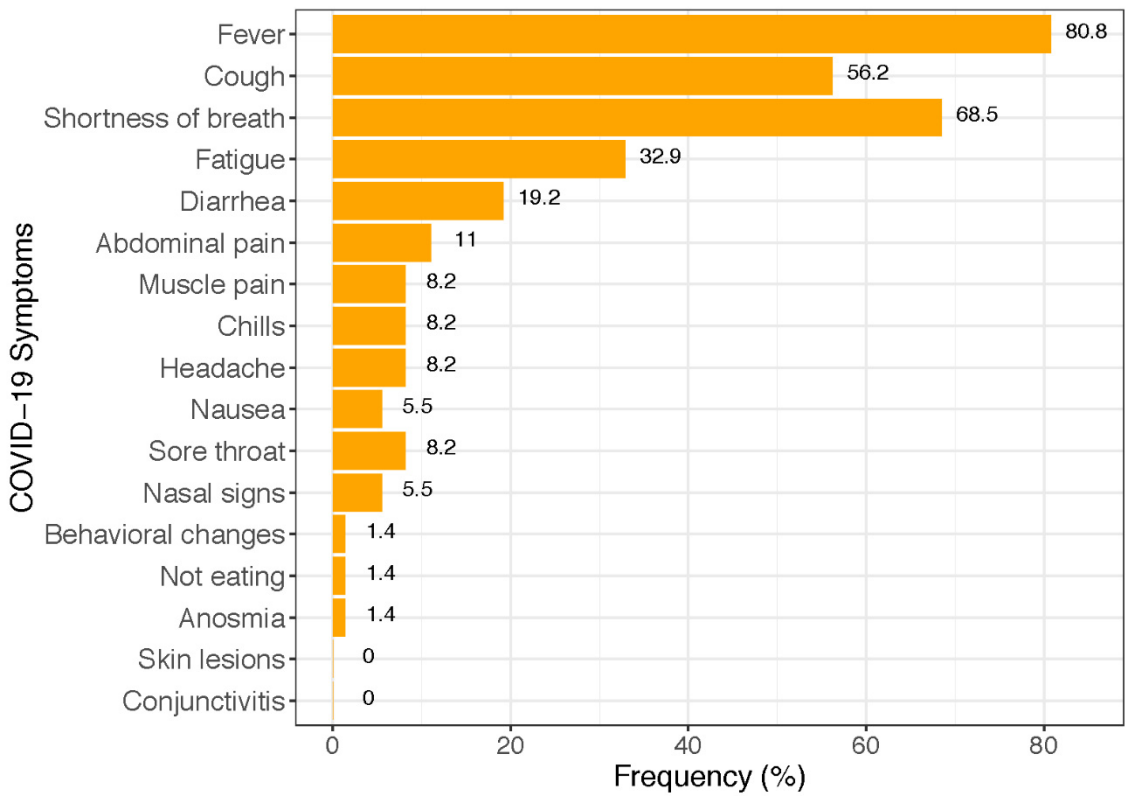


Figure S4. Distribution of hospitalization length of stay for individuals with DS with non-COVID-19 pneumoniae (CMBD cohort) according to age and outcome.

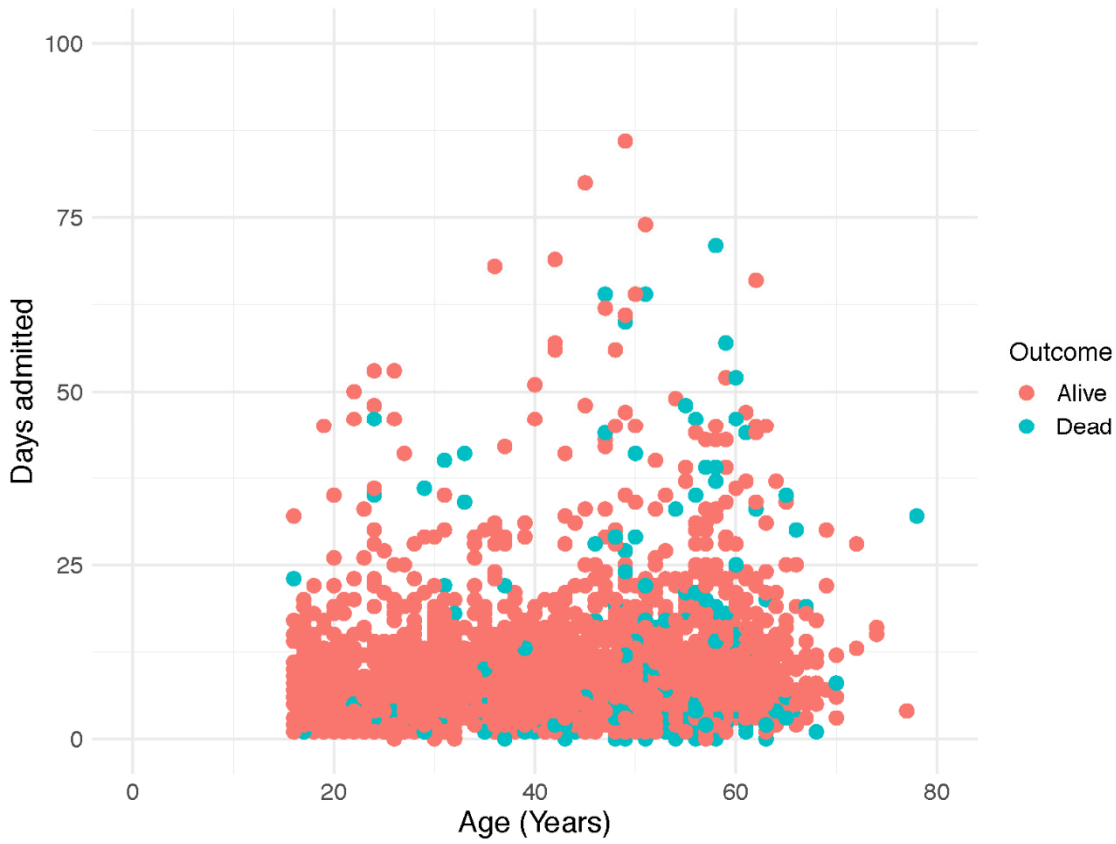


Table S1. Socio-demographic characteristics of T21RS Spanish DS COVID-19 patients grouped by data source (reported by families or clinicians)

Demographics	Total n = 150	Family surveys n = 42	Clinician surveys n = 108	p
Age (years) mean (SD)	41.7 ± 15.6	33.5 ± 16.5	44.8 ± 14.1	<0.001*
Gender (men)	81 (54)	20 (47.6)	61 (56.5)	0.46**
Type of trisomy				
Full/standard	91 (60.7)	31 (73.8)	60 (55.6)	1**
Mosaic	3 (2)	1 (2.4)	2 (1.8)	
Intellectual Disability				
Borderline/Mild	22 (14.7)	9 (21.4)	13 (12)	0.21**
Moderate/Severe	103 (68.7)	28 (66.7)	75 (69.4)	
Living in a residential care facility	61/145 (42.1)	12/42 (28.6)	49/103 (47.6)	<0.05**

Results are presented as mean ± SD or n (%). *Student's t test ** Chi square test

Table S2. Relevant clinical comorbidities of T21RS Spanish DS patients with COVID-19 T21RS grouped by data source (reported by families or clinicians)

Comorbidities	Total n (%)	Family surveys n (%)	Clinician surveys n (%)	χ^2 (p)
Congenital heart defect	37/140 (26.4)	14/41 (34.2)	23/99 (23.2)	0.21
Psychiatric conditions	51/141 (36.2)	6/40 (15)	45/101 (44.6)	< 0.001
Autism	3/150 (2)	2/42 (4.8)	1/108 (0.9)	0.19
Depression	6/150 (4)	0/42 (0)	6/108 (5.6)	0.19
Behavioural problems	30/150 (20)	1/42 (2.4)	29/108 (26.9)	< 0.001
Alzheimer's disease	34/134 (25.4)	1/34 (2.9)	33/100 (33)	< 0.001
Thyroid disorder	61/135 (45.2)	13/35 (37.1)	48/100 (48)	0.33
Seizures/epilepsy	23/138 (16.7)	4/34 (11.8)	19/104 (18.3)	0.44
Blood cancer	2/138 (1.4)	0/33 (0)	2/105 (1.9)	1
Obstructive sleep apnoea	31/126 (24.6)	7/32 (21.9)	24/94 (25.5)	0.81
Obesity	32/124 (25.8)	11/36 (30.6)	21/88 (23.9)	0.5
Hypertension	1/134 (0.7)	0/33 (0)	1/101 (1)	1
Coronary heart disease	4/134 (3)	2/34 (5.9)	2/100 (2)	0.26
Diabetes mellitus	5/134 (3.7)	0/34 (0)	5/100 (5)	0.33
Chronic lung disease	12/133 (9)	1/33 (3)	11/100 (11)	0.29
Gastrointestinal disorders	27/136 (19.8)	7/32 (21.9)	20/104 (19.2)	0.8

Results are presented as n (%). Denominators in each category may vary from total group sample, since missing data (not responded or "not known") in survey responses were removed from the analysis.

Table S3. Detailed description of clinical signs and symptoms of Spanish individuals with DS and COVID-19

Symptoms n (%)	Clinicians (n = 108)	Families (n = 42)	χ^2 (p)
Fever	81 (75)	31 (73.9)	1
Cough	59 (54.6)	23 (54.8)	1
Shortness of breath	58 (53.7)	19 (45.2)	0.37
Fatigue	39 (36.1)	22 (52.4)	0.09
Diarrhoea	20 (18.5)	14 (33.3)	0.08
Abdominal pain	10 (9.3)	10 (23.8)	0.03
Muscle pain	9 (9.3)	16 (38.1)	< 0.001
Chills	8 (7.4)	9 (21.4)	0.02
Headache	8 (7.4)	15 (37.7)	<0.001
Nausea	8 (7.4)	9 (21.4)	0.02
Sore throat	7 (6.5)	18 (42.9)	<0.001
Nasal signs	5 (4.6)	17 (40.5)	<0.001
Behavioural changes	2 (1.8)	6 (14.3)	<0.01
Not eating	2 (1.8)	0 (0)	1
Anosmia	1 (0.9)	4 (9.5)	0.02
Skin lesions	0 (0)	1 (2.4)	1
Conjunctivitis	0 (0)	0 (0)	1
Other	15 (13.9)	4 (9.5)	0.59

Results are presented as n (%).

Table S4. Treatments received by admitted patients with DS and COVID-19

Treatments	Frequency n (%) N=73
Glucocorticoids	26 (35.6)
Hydroxychloroquine	53 (72.6)
Chloroquine	2 (2.7)
Azithromycin	36 (49.3)
Tocilizumab	4 (5.5)
Melatonin	0 (0)
Colchicine	0 (0)
Antifungal medication	1 (1.4)
Immune globulin	0 (0)
Oxygen	60 (82.2)

The denominator in this analysis (n=73) is lower than the reported total group sample (n=86), since missing data (not responded or “not known”) in survey responses were removed from the analysis. Results are presented as n (%).

Table S5a. Comorbidities of CMBD cohort with pneumonia.

Comorbidity	Total n	Alive n (%)	Dead n (%)
Alzheimer's disease			
16-40	2	2 (100)	0 (0)
>40	149	119 (79.8)	30 (20.1)
Obesity			
16-40	135	125 (92.6)	10 (7.4)
>40	108	99 (91.7)	9 (8.3)
Epilepsy			
16-40	97	85 (87.6)	12 (12.3)
>40	291	246 (84.5)	45 (15.5)

Table S5b. Comorbidities of Spanish DS COVID-19 patients.

Comorbidity	Total n	Alive n (%)	Dead n (%)
Alzheimer's disease			
16-40	0	0	0
>40	22	8 (36.4)	14 (63.6)
Obesity			
16-40	9	9 (100)	0 (0)
>40	13	8 (61.5)	5 (38.5)
Epilepsy			
16-40	1	1 (100)	0 (0)
>40	8	1 (12.5)	7 (87.5)

Table S6. In-hospital mortality of Spanish DS COVID-19 and non-COVID-19 pneumonias patients

DS COVID-19 patients				Non-COVID-19 pneumonias		
Age groups	Total n	Alive n (%)	Dead n (%)	Total n	Alive n (%)	Dead n (%)
16-40	23	23 (100)	0 (0)	1244	1185 (95.3)	59 (4.7)
>40	62	39 (62.9)	23 (30.1)	1567	1353 (86.3)	214 (13.7)

Results are presented as n or n (%).