

ANNEX 1 Follow-up Questionnaire

A: Do you have a loss of smell or flavor? (No loss of smell/ flavor, we recorded 0 score)

Please select the score (0–10) you consider appropriate to assess the severity, where 0 is no loss of smell/ flavor and 10 is total loss of smell/ flavor (flavor of food and drinks).

B: Do you have a loss of taste (acid, salty, sweet, bitter)? (No loss of taste, we recorded 0 score)

Please select the score (0–10) you consider appropriate to assess the severity, where 0 is no loss of taste and 10 is total loss of taste. Taste is considered only for acid, bitter, salty, and sweet.

C: If you have had disorder of smell or taste, is the loss of smell or taste your first symptom of COVID-19?

1: Yes, I felt a loss of smell or taste before the onset of general symptoms (fever, fatigue, myalgia, etc.).

2: No, I felt a loss of smell or taste after/simultaneously with the onset of general symptoms (fever, fatigue, difficulty in breathing, etc.).

3: I can't tell the order in which they appear.

D: If you have had disorders of smell or taste, please indicate how many days have you suffered from this disorder:

1: I still have loss of smell or taste despite of being recovered from other throat/nasal or general symptoms since

2: I still have loss of smell and taste as well as the other throat/nasal or general symptoms since.....

3: The loss of smell or taste had lasted for — days and I have recovered.

E: Do you have any comorbidity (allergic rhinitis, chronic rhinosinusitis, asthma and chronic obstructive pulmonary disease) of upper respiratory tract?

1: Yes. Which one?

2: No.

3: I don't know.

F: Do you have any nasal symptom (nasal obstruction, rhinorrhea, nasal itching and sneezing) of upper respiratory tract?

What are they? Please select the score (0–10) you consider appropriate to assess the severity, where 0 is no nasal symptom and 10 is the worst imaginable complaint of nasal symptom.

G: If you have had nasal symptoms (nasal obstruction, rhinorrhea, nasal itching and sneezing), are they your first symptoms of COVID-19?

1: Yes, I felt nasal symptoms before the onset of general symptoms (fever, fatigue, myalgia, etc.).

2: No, I felt nasal symptoms after/simultaneously with the onset of general symptoms (fever, fatigue, difficulty breathing, etc.).

3: I can't tell the order in which they appear.

Table E1 Demographic and clinical characteristics of 1172 etiologically confirmed patients stratified by the presence of loss of smell and loss of taste

Characteristics	Without loss of smell and taste	With loss of smell or taste	With loss of smell and taste	<i>P</i> value
Subject, <i>n</i> (%)	881 (75.2)	205 (17.5)	86 (7.3)	–
Gender, male, <i>n</i> (%)	444 (50.4)	92 (44.9)	41 (47.7)	0.35
Age, years, median (IQR)	62 (48, 69)	59 (46, 67)*	57.5 (42.75, 66)*	0.03
Severe cases, <i>n</i> (%)	146 (16.6)	38 (18.5)	15 (17.4)	0.79
Loss of smell/taste recovered, <i>n</i> (%)	–	182 (88.8)	79 (91.9)	0.53
Loss of smell/taste duration, days, median (IQR)	–	7 (5, 14.25)	8 (7, 13)	0.39
Any airway comorbidity, <i>n</i> (%)	147 (16.7)	40 (19.5)	16 (18.6)	0.59
AR	87 (9.9)	19 (9.3)	9 (10.5)	0.94
CRS	50 (5.7)	18 (8.8)	4 (4.7)	0.21
Asthma	22 (2.5)	4 (2.0)	3 (3.5)	0.74
COPD	7 (0.8)	2 (1.0)	1 (1.2)	0.92
Systemic signs and symptoms, <i>n</i> (%)	–	–	–	–
Fever	684 (77.6)	168 (82.0)	69 (80.2)	0.37
Cough	579 (65.7)	129 (62.9)	59 (68.6)	0.51
Myalgia	127 (14.4)	31 (15.1)	14 (16.3)	0.88
Fatigue	209 (23.7)	52 (25.4)	24 (27.9)	0.64
Anorexia	203 (23.0)	52 (25.4)	19 (22.1)	0.75
Confusion	5 (0.6)	1 (0.5)	0 (0)	0.78
Dizziness	39 (4.4)	8 (3.9)	5 (5.8)	0.77
Laboratory results	–	–	–	–
Blood routine, subject, <i>n</i>	881	205	86	–
White blood cell count, ×10 ⁹ /L	5.5 (4.4, 6.9)	5.4 (4.2, 6.9)	6.0 (4.6, 7.7)	0.08
Neutrophil count, ×10 ⁹ /L	3.8 (2.7, 5.2)	3.7 (2.6, 5.5)	3.9 (2.8, 5.4)	0.52
Neutrophil percentage	65.3 (56.9, 74)	64.1 (57, 72.5)	68.5 (57.4, 74.5)	0.70
Lymphocyte count, ×10 ⁹ /L	1.2 (0.9, 1.6)	1.3 (0.8, 1.6)	1.3 (1.0, 1.6)	0.67
Lymphocyte percentage	22.9 (15.4, 31.3)	23.2 (17.3, 30.5)	21.4 (15.8, 30.3)	0.71
Monocyte count, ×10 ⁹ /L	0.5 (0.4, 0.7)	0.5 (0.4, 0.6)	0.5 (0.4, 0.7)	0.30
Monocyte percentage	8.7 (7.1, 10.5)	9 (7.1, 10.6)	8.7 (6.7, 10.6)	0.82
Eosinophil count, ×10 ⁹ /L	0.05 (0.01, 0.1)	0.04 (0, 0.09)	0.04 (0.01, 0.09)	0.64
Eosinophil percentage	0.9 (0.2, 1.8)	0.7 (0, 1.7)	0.8 (0.3, 1.7)	0.62
Platelet count, ×10 ⁹ /L	245.5 (191.3, 313.8)	245 (194, 308)	251 (189.5, 315.5)	0.84
Hemoglobin, g	127 (116, 137)	126 (115, 137)	128.5 (118, 138.3)	0.62
Liver and renal function test, subject, <i>n</i>	881	205	86	–
Alanine aminotransferase, U/L	24 (15, 41)	21 (15, 37)	27.5 (15, 43.3)	0.27
Aspartate aminotransferase, U/L	24 (18, 36)	22 (18, 33)	24.5 (18, 33)	0.46
Albumin, g/L	36 (32.8, 39.6)	36.2 (32.5, 40.4)	35.6 (32.4, 38.9)	0.61
Globulin, g/L	32 (28.8, 35.7)	32.1 (29.3, 35.3)	33.3 (28.7, 36.7)	0.31

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Characteristics	Without loss of smell and taste	With loss of smell or taste	With loss of smell and taste	<i>P</i> value
Alkaline phosphatase, U/L	66 (55, 78)	63 (53, 77)	62 (52, 80)	0.44
Total bilirubin, $\mu\text{mol/L}$	8.7 (6.5, 11.8)	8.5 (6.5, 12.1)	8.4 (6.6, 11.1)	0.88
Lactose dehydrogenase, U/L	250 (200, 317.5)	238 (195, 305)	257 (193, 320)	0.25
Urea, mmol/L	4.2 (3.3, 5.4)	4 (3.2, 5.1)	4 (3.3, 5.4)	0.17
Creatinine, $\mu\text{mol/L}$	68 (57, 82)	64 (56, 78)	67.5 (54, 81)	0.19
Urine acid, $\mu\text{mol/L}$	255 (195, 315)	248.5 (194.5, 293.5)	251 (202.8, 311.3)	0.84
Glomerular filtration, mL/min/1.73 m ²	93.6 (81.9, 103.5)	95.1 (85.2, 106.9)	95.6 (84.3, 109.9)	0.08
Electrolytes, subject, <i>n</i>	881	205	86	–
K ⁺ , mmol/L	4.16 (3.82, 4.47)	4.17 (3.82, 4.49)	4.08 (3.81, 4.41)	0.52
Na ⁺ , mmol/L	139.7 (137.4, 141.5)	139.8 (137.9, 142)	139.7 (137.6, 141.5)	0.24
Cl ⁻ , mmol/L	101.3 (98.8, 103.3)	101.3 (99.1, 103.5)	101.5 (99.0, 103.6)	0.88
Ca ²⁺ , mmol/L	2.16 (2.09, 2.23)	2.16 (2.07, 2.25)	2.16 (2.08, 2.25)	0.87
Cardiac troponin I, pg/mL	3.3 (1.9, 7.4)	3.1 (1.9, 6.6)	2.6 (1.9, 7)	0.50
ESR, mm/h	30 (14, 55.5)	35 (19, 62)	27 (12, 60)	0.27
CRP, mg/L	5.6 (1.4, 27.7)	5.3 (1.2, 26.8)	6.4 (2, 39.5)	0.32
Inflammatory mediators, subject, <i>n</i>	730	178	75	–
Ferritin, $\mu\text{g/L}$	525.9 (314.2, 879.6)	515.9 (289.2, 764.1)	594.1 (252.2, 1035.4)	0.38
Interleukin-10, pg/mL	5 (5, 5)	5 (5, 5)	5 (5, 5)	0.50
Interleukin-1 β , pg/mL	5 (5, 5)	5 (5, 5)	5 (5, 5)	0.71
Interleukin-2 receptor, U/mL	502.5 (336, 779.8)	493 (317, 705)	523 (357.5, 708)	0.35
Interleukin-6, pg/mL	4.6 (2.0, 16.6)	4.4 (1.9, 13.1)	3.9 (1.6, 12.1)	0.74
Interleukin-8, pg/mL	9.2 (5.4, 17.3)	9.4 (5.4, 17.2)	9.1 (5, 15.7)	0.71
Tumor necrosis factor, pg/mL	8.1 (6.3, 10.4)	8.1 (6.3, 10.2)	7.2 (5.7, 9.4)	0.11
Procalcitonin, ng/mL	0.05 (0.03, 0.07)	0.05 (0.03, 0.07)	0.05 (0.02, 0.09)	0.58
Immunoglobulins and complements, subject, <i>n</i>	268	71	27	–
IgA, g/L	2.12 (1.62, 2.8)	2.15 (1.81, 2.45)	2.19 (1.47, 3.02)	0.91
IgG, g/L	11.5 (10, 13.2)	11.35 (9.95, 13.73)	11.85 (9.53, 13.38)	0.93
IgM, g/L	0.95 (0.71, 1.34)	0.97 (0.79, 1.41)	0.91 (0.66, 1.23)	0.37
C3, g/L	0.87 (0.76, 0.99)	0.89 (0.76, 1.01)	0.91 (0.76, 1.05)	0.64
C4, g/L	0.23 (0.17, 0.29)	0.21 (0.17, 0.27)	0.24 (0.20, 0.29)	0.46

IQR, interquartile range; AR, allergic rhinitis; CRS, chronic rhinosinusitis; COPD, chronic obstructive pulmonary disease; ERS, erythrocyte sedimentation rate; CRP, C-reactive protein; Ig, immunoglobulin; C, complement. Data are presented as medians and interquartile ranges (IQR) for continuous variables and number with percentage for categorical variables. *P* values were calculated from Kruskal-Wallis, χ^2 test or Fisher's exact test. **P*<0.05 vs. mild

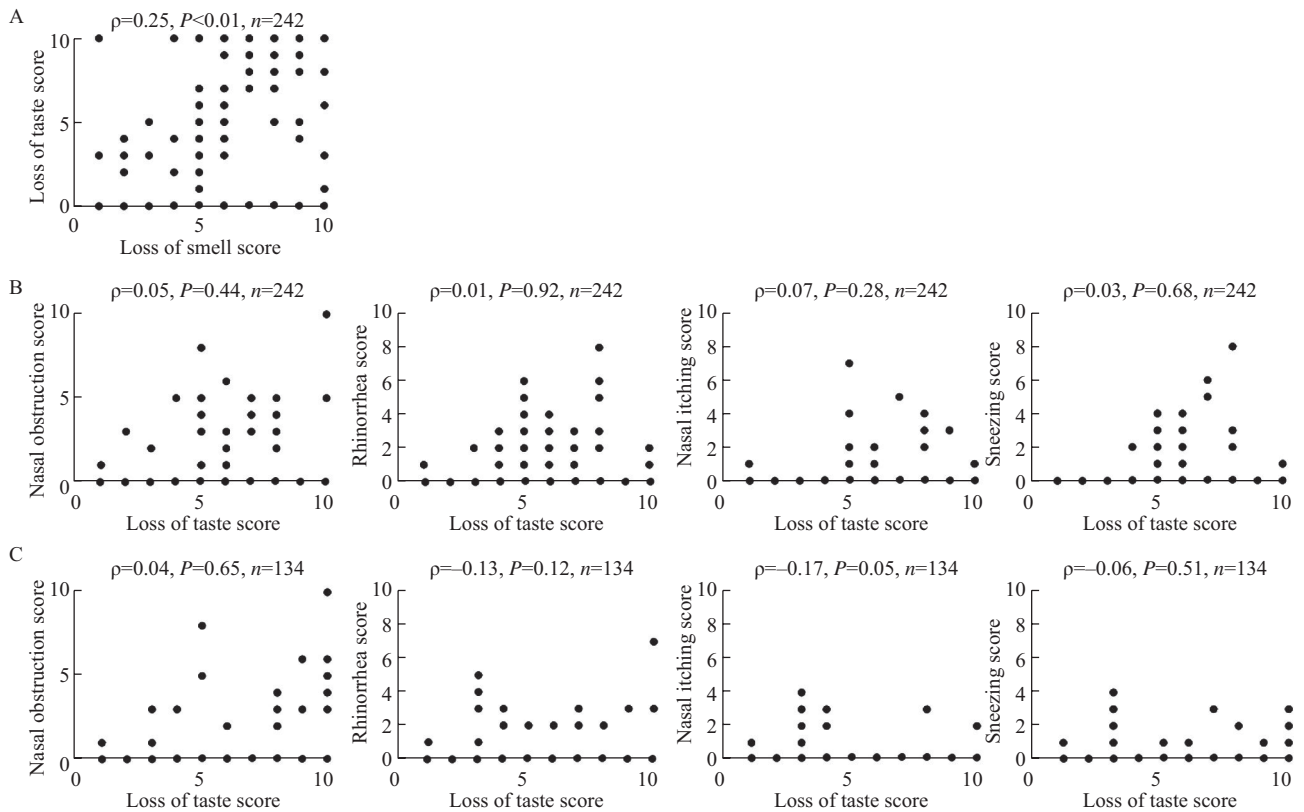


Fig. E1 Correlations between different upper airway tract symptom severity

A: Self-reported loss of taste scores correlate with loss of smell scores in patients reporting taste disorder. B: the correlations between self-reported loss of taste scores and scores of other self-reported nasal symptoms in patients reporting taste disorder. C: the correlations between self-reported loss of smell scores and scores of other self-reported nasal symptoms in patients reporting smell disorder. Severity of self-reported nasal symptoms was scored by patients on a numerical rating scale of 0–10, with 0 being “no complaint whatsoever” and 10 being “the worst imaginable complaint”.