

Supplementary Table 2. Study characteristics

Study	Study design	Total no.	Male:female (case/control)	Age (case/control, yr) <sup>a)</sup>	Nation	Number (COVID-19-positive/control)	Assessment tool	Assessed symptom
Beltran-Corbellin (2020) [10]	Case-control	119	48:29/ Not defined	61.6 (17.4)/61.1 (17.1)	Spain	79/40 influenza	Brief questionnaire	Smell and/or taste disorder
Hornuss (2020) [16]	Cohort	90	Not defined	56 ± 16.9/54 ± 18.3	Germany	45/45 heterogenous (healthy, ill, etc.)	Burghart Sniffin' sticks	Smell and/or taste disorder
Menni (2020) [9]	Cross-sectional	76,260	Not defined	Not defined	UK	13,863/62,397 COVID-19-negative	Self-reported symptom data	Smell and/or taste disorder
Zayet (2020) [2]	Prospective	217	32:185	39.8 (18–73)	France	95/122 COVID-19-negative	Self-reported symptom data	Smell and/or taste disorder
Zayet (2020) [2]	Prospective	217	32:185	39.8(18–73)	France	95/122 COVID-19-negative	Self-reported symptom data	General symptom
Benezit (2020) [6]	Cross-sectional	257	Not defined	Not defined	France	68/189 heterogenous (random persons)	Self-reported symptom data	Smell and/or taste disorder
Tostmann (2020) [21]	Cohort	269	Not defined	Not defined	Netherlands	79/190 COVID-19-negative	Online anonymous questionnaire	Smell and/or taste disorder
Tostmann (2020) [21]	Cohort	803	141:661	Not defined	Netherlands	90/713 COVID-19-negative	Online anonymous questionnaire	General symptom
Roland (2020) [5]	Cohort	302	88:114	40 (13)	USA	145/157 COVID-19-negative	Anonymous self-reported symptom	Smell and/or taste disorder
Roland (2020) [5]	Cohort	302	88:114	40 (13)	USA	145/157 COVID-19-negative	Anonymous self-reported symptom	General symptom
Menni (2020) [9]	Cross-sectional	1,702	179:400/297:826	40.79 (11.84)/41.22 (12.04)	UK	579/1,123 COVID-19-negative	Anonymous self-reported symptom	Smell and/or taste disorder
Boudjema (2020) [12]	Cohort	3,497	1,801:1,696	42.5 (15.16)	France	673/2,824 heterogenous (healthy, ill, etc.)	Brief questionnaire	Smell and/or taste disorder
Wee (2020) [22]	Cross-sectional	870	Not defined	Not defined	Singapore	153/716 COVID-19-negative	Self-reported olfactory & taste disorders	Smell and/or taste disorder
Moein (2020) [19]	Case-control	120	80:40	46.55 ± 12.17/46.55 ± 12.07	Iran	60/60 heterogenous (healthy, ill, etc.)	UPSIT	Smell and/or taste disorder
Clemency (2020) [13]	Observational	961	Not defined	Not defined	USA	225/736 heterogenous (healthy, ill, etc.)	Standardized checklist	Smell and/or taste disorder
Clemency (2020) [13]	Observational	961	Not defined	Not defined	USA	225/736 heterogenous (healthy, ill, etc.)	Standardized checklist	General symptom
Jiang (2020) [17]	Retrospective	54	35/19	41 (30–55)/34 (25–48)	China	36/18 adenovirus pneumonia	Clinical examination	General symptom
Just (2020) [11]	Cross-sectional cohort	374	154:217	47.0 (20.2)/46.4 (19.7)	Germany	334/40 common cold	Self-reported	Smell and/or taste disorder
Just (2020) [11]	Cross-sectional cohort	374	154:217	47.0 (20.2)/46.4 (19.7)	Germany	334/40 common cold	Self-reported	General symptom
Dixon (2020) [14]	Community-based cohorts	8,214	3,647:4,566	Not defined	USA	368/7,846 heterogenous (healthy, ill, etc.)	Standardized checklist	Smell and/or taste disorder

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Dixon (2020) [14]	Community-based cohorts	8,214	3,647/4,565	Not defined	USA	3687,846 heterogenous (healthy, ill, etc.)	Standardized checklist	General symptom
Sayin (2020) [4]	Comparative study	128	48/80	38.63±10.08	Turkey	64/64 common cold	AAO-HNS Anosmia Reporting Tool	Smell and/or taste disorder
Sayin (2020) [4]	Comparative study	128	48/80	38.63±10.08	Turkey	64/64 common cold	AAO-HNS Anosmia Reporting Tool	General symptom
Joffily (2020) [1]	Cross-sectional observational	179	55/124	Not defined	Brazil	159/20 common cold	AAO-HNS Anosmia Reporting Tool	Smell and/or taste disorder
Joffily (2020) [1]	Cross-sectional observational	179	55/124	Not defined	Brazil	159/20 common cold	AAO-HNS Anosmia Reporting Tool	General symptom
Menni (2020) [9]	Cohort	15,638	3,983/11,655	41.25 (12.18)/41.87 (12.14)	UK	6,452/9,186 heterogenous (random persons)	Smartphone-based app	Smell and/or taste disorder
Menni (2020) [9]	Cohort	15,638	3,983/11,655	41.25 (12.18)/41.87 (12.14)	UK	6,452/9,186 heterogenous (random persons)	Smartphone-based app	General symptom
Menni (2020) [9]	Cohort	2,763	527/2,236	44.65 (14.31)/47.25 (13.80)	USA	726/2,037 heterogenous (random persons)	Smartphone-based app	Smell and/or taste disorder
Menni (2020) [9]	Cohort	2,763	527/2,236	44.65 (14.31)/47.25 (13.80)	USA	726/2,037 heterogenous (random persons)	Smartphone-based app	General symptom
Haehner (2020) [15]	Cross-sectional controlled	500	225/275	41.3 (18-86)	Germany	34/466 COVID-19-negative	VAS (self-reported)	Smell and/or taste disorder
Feng (2020) [36]	Cross-sectional	132	5:2/69:56	39.0 (37.0-41.5)/NR	China	71/25 suspicious	Self-reported symptom data	General symptom
Ai (2020) [39]	Cross-sectional	53	10:10/17:16	37 (33.75-50.5)/39 (30.5-43)	China	20/33 pneumonia	Self-reported symptom data	General symptom
Liang (2020) [41]	Cross-sectional	88	11:10/67	42.0 (24-65)/NR	China	21/67 pneumonia	Self-reported symptom data	General symptom
Cheng (2020) [25]	Cross-sectional	33	11/22	50.36±15.50/43.59±16.02	China	11/22 pneumonia	Self-reported symptom data	General symptom
Song (2020) [37]	Cross-sectional	304	46:27/104:127	53.0 (43.5-62.0)/34.0 (29.0-49.0)	China	73/231 heterogenous (healthy, ill, etc.)	Self-reported symptom data	General symptom
Peng (2020) [28]	Cross-sectional	86	5:6/34:40	40.73±11.32/NR	China	11/75 suspicious	Self-reported symptom data	General symptom
Zhu (2020) [24]	Cross-sectional	116	15:17/41:48	NR	China	32/84 heterogenous (healthy, ill, etc.)	Self-reported symptom data	General symptom
Sun (2020) [26]	Cross-sectional	788	29:251/351:382	34/42	Singapore	54/734 suspicious	Self-reported symptom data	General symptom
Zhao (2020) [23]	Case-control	34	11:8/6:9	48 (27-57)/35 (27-46)	China	19/15 pneumonia	Self-reported symptom data	General symptom
Chen (2020) [30]	Cross-sectional	136	41:29/43:23	12.93±13.32/46.73±25.00	China	70/66 pneumonia	Self-reported symptom data	General symptom

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Supplementary Table 2. Continued

Study	Study design	Total no.	Male:female (case/control)	Age (case/control, yr) <sup>a)</sup>	Nation	Number (COVID-19-positive/control)	Assessment tool	Assessed symptom
Yang (2020) [46]	Case-control	121	41:32/30:18	41.92±14.11/40.38±27.31	China	73/48 influenza	Self-reported symptom data	General symptom
Tolia (2020) [27]	Cross-sectional	283	13:16/120:134	NR	USA	29/254 suspicious	Self-reported symptom data	General symptom
Rentsch (2020) [40]	Cross-sectional	3,789	27:558/345:2,859	66.1 (60.4–71.0)/65.6 (60.5–70.7)	USA	585/3,204 heterogenous	Extracted from health record database	General symptom
Nobel (2020) [29]	Case-control	516	145:133/108:130	NR	USA	278/238 suspicious	Self-reported symptom data	General symptom
Carignan (2020) [32]	Case-control	268	70:64/81:53	57.1 (41.2–64.5)/57.2 (42.6–64.4)	Canada	134/134 heterogenous (random persons)	Standardized checklist	Smell and/or taste disorder
Carignan (2020) [32]	Case-control	268	70:64/81:53	57.1 (41.2–64.5)/57.2 (42.6–64.4)	Canada	134/134 heterogenous (random persons)	Standardized checklist	General symptom
Rojas-Lechuga (2020) [35]	Cross-sectional	304	72:125/50:57	46.5±14.5/50.6±16.6	Spain	197/107 common cold or flu like	VAS (self-reported)	Smell and/or taste disorder
Boscolo-Rizzo (2020) [31]	Cross-sectional	121	NR	NR	Italy	54/67 heterogenous	Standardized checklist	Smell and/or taste disorder
Boscolo-Rizzo (2020) [31]	Cross-sectional	121	NR	NR	Italy	54/67 heterogenous	Standardized checklist	General symptom
Chung (2020) [33]	Cross-sectional	36	7:11/5:13	NR	China	18/18 health care worker	Standardized checklist	Smell and/or taste disorder

COVID-19, coronavirus disease 2019; AAO-HNS, American Academy of Otolaryngology–Head and Neck Surgery; app, application; VAS, visual analog scale; NR, not reported.

<sup>a)</sup>Values are presented as number (%), mean±standard deviation, or median (range).