

Table S7 represents the main clinical and pathological characteristics of the included patients.

Study ID	Study design	Number of patients	Age (years)	Gender	Main signs and symptoms	Onset of facial palsy	Type of vaccine	Number of doses	Diagnostic tool	Result of diagnosis	Comorbidities	Treatment	Follow up	Prognosis
Cellina 2022 (1)	Case report	1	35	Female	left facial droop, left laterocervical pain and stiffness, slight difficulty in eating and speaking, inability to close ipsilateral eye, not holding liquids properly in mouth	26 hours after her first dose	mRNA-1273 (Moderna)	1	CN examination confirmed by contrast-enhanced brain MRI	Isolated left LMN facial nerve palsy (Bell's palsy)	None	50 mg/day prednisone for two weeks	19 days	Complete resolution of symptoms after 19 days

Cirillo 2022 / Colella 2021 (2,3)	Case report	1	37	Male	Flattening of labial-buccal sulcus ipsilaterally, forehead skin, and nasolabial fold, left-sided facial droop and paresis, moderate Bell's sign, Lagophthalmos , and labial weakness	5 days after his first dose	BNT162b2 (Pfizer- BioNTech)	1	CN examination and EMG	Bell's palsy	None	50 mg/day prednisone Eye treatment	17 months	Clinical signs progressed to full paralysis with pain in the first two weeks (worse symptoms) Pain and facial weakness improvement with lagophthalmos gone after 8 months. Complete recovery after 14 months
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Manea 2022 (4)	Case report	1	29	Male	Diplopia and facial nerve palsy	6 days after his first dose	BNT162b2 (Pfizer-BioNTech)	1	CN examination and Gadolinium-enhanced brain MRI	On examination: Bell's palsy in addition to partial oculomotor (III) and abducent (IV) palsies, as well as hypoesthesia in V2 and V3 of trigeminal (V) nerve distribution. MRI showed diffuse Gadolinium enhancement in labyrinthic and intracanalicular portions of facial nerve and in the intracisternal canals of oculomotor and left trigeminal nerves	None	1 g/day methylprednisolone for 5 days	2 months	Improvement of symptoms one month later with persistence of minimal left facial palsy
Martin-Villares 2022 (5)	Case report	1	34	Women	Facial pain and palsy, H/O right bell's palsy during pregnancy 9 years ago	2 days after her first dose	mRNA-1273 (Moderna)	1	MRI and nerve conduction studies	No relevant findings on MRI but nerve conduction studies showed axonal facial neuropathy	None	Deflazacort 30 mg/day, eye support and facial rehabilitation	20 days	Improvement of symptoms started after 10 days and reached full recovery after 20 days
Mussatto 2022 (6)	Case report	1	60	Male	Inability to close his left eye completely lagophthalmos, and left facial droop and weakness	42 hours after his first dose	BNT162b2 (Pfizer-BioNTech)	2	CN examination	Exposure keratopathy and uncomplicated left-sided bell's palsy	Stage 3 CKD, HIV, and pre-diabetic	Prednisone 60 mg/day for 6 days. valacyclovir 1000 mg 3 times/day for 7 day and eye support	90 days	Significant improvement of symptoms after 15 days and complete resolution after 90 days

Poudel 2022 (7)	Case report	1	17	Female	Inability to close her left eye in addition to blurry vision, left-sided facial muscle weakness	24 hours after her vaccine dose	mRNA-1273 (Moderna)	NA	CN examination	Isolated right facial nerve palsy (Bell's palsy)	None	Prednisolone	>2 weeks	Excellent improvement of symptoms after 2 weeks and no weakness in the last follow up
Shalabi 2022 (8)	Case report	1	41	Male	Hoarseness and pain on the right shoulder, dysphagia, right hearing loss, dizziness, vertical diplopia, and right facial weakness	After a week of his first dose	BNT162b2 (Pfizer-BioNTech)	1	CN examination, chest and neck CT, audiogram, MRI, and a LP	On examination: right facial paresthesia and palsy, mild hoarseness, right 4th cranial nerve palsy, and right vocal cord paralysis. CT showed swollen right supraventricular LN. left sensorineural hearing impairment and right severe mixed hearing impairment on audiogram. MRI showed enhancement in the right auditory canal involving 7th and 8th cranial nerves. LP revealed increased proteins and CSF leukocytosis	None	IV methylprednisolone 1000 mg/day for 5 days	NA	Gradual improvement in all symptoms and resolution of the swollen lymph node

Zhang 2022 (9)	Case report	1	38	Female	Tongue numbness, right facial droop H/O Bell's palsy 10 years ago	7 days after her first dose	BNT162b2 (Pfizer-BioNTech)	1	CN examination	Bell's palsy	None	Prednisone for a week	NA	Slow improvement in symptoms
Burrows 2021 (10)	Case report	1	61	Male	Two different episodes of Bell's palsy after the first and the second doses of the vaccine First episode: incomplete eye closure, right-sided facial weakness, and no forehead movement Second episode: incomplete left eye closure, more severe left-sided facial palsy, dysphagia, and dribbling	5 hours after his first dose. 2 days after his second dose	BNT162b2 (Pfizer-BioNTech)	2	Head CT and CN examination	Nothing remarkable on CT scan Two episodes of facial nerve palsy (Bell's palsy)	insulin-dependent type 2 diabetes, hypercholesterolemia, and hypertension	60 mg prednisolone for the first episode. Another 60 mg prednisolone for 7 days for the second episode	8 weeks	Complete recovery of the first episode. Almost returned to normal after 2 weeks of the second episode

Censcak 2021(11)	Case report	1	42	male	Unsteady gait, paresthesia of soles, right-sided muscle weakness, weak knees, right-sided lagophthalmos, and lumbalgia	2 weeks after his first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination, LP, MRI, nerve conduction studies, and EMG	Acute demyelinating polyneuropathy (Guillan-Barré syndrome)	Bronchial asthma	IVIG 2 g/Kg for 5 days and rehabilitation	NA	All symptoms improved but mild facial weakness persisted
Ercoli 2021 (12)	Case report	1	41	Male	Difficulty to blink and move facial muscles after the first dose. respiratory impairment, swollen tongue, right-sided weakness, and left-sided facial hypoesthesia after the second dose	A few minutes after his first dose. A couple of weeks after his second dose	NA	2	Neurological examination, head CT, and MRI	Normal CT and MRI. Diagnosed as functional neurological disorder (FND)	None	None	≥2 weeks	Resolution of all symptoms spontaneously after 40 minutes of the first episode Sensory disturbance disappeared after 2 weeks of the second episode.

Finsterer, 2021 (13)	Case report	1	32	Male	Dysphagia, paresthesia of foot soles and hand palms, bilateral muscle weakness, bilateral frontal and nuchal headache, sensory disturbance of tongue tip, and abnormal reflexes H/O GBS	8 days after his first dose	Vector based vaccine	1	Neurological examination, urine toxicology, MRI, LP, and nerve conduction studies	Examination showed right-sided peripheral facial palsy. Urine toxicology was positive for cannabinoids. MRI showed nonspecific T2-hyperintensities in the white matter. Slowed nerve conduction. Diagnosed as GBS.	NA	IVIG 0.4 g/Kg and plasmapheresis	>34 days	Facial palsy slightly improved after 13 days but other complications occurred after nosocomial infection due to prolonged hospital admission
Iftikhar 2021 (14)	Case report	1	36	Male	Inability to close his left eye completely, left-sided facial weakness, numbness and weakness of his left arm, and difficulty in eating and speaking	After 1 day of his second dose	mRNA-1273 (Moderna)	2	CN examination, CT, and MRI	Isolated LMN palsy of the facial nerve on examination (Bell's palsy) CT and MRI findings were unremarkable	None	60 mg/day oral prednisolone for one week and eye support	2 weeks	Facial symptoms improved but still present and arm completely recovered

Introna 2021 (15)	Case report	1	62	Male	Bilateral facial weakness, visual discomfort, distal paresthesia, urinary retention, proximal ascending tetraparesis, and dysphagia	13 days after his first dose	CHAdOx1 (AstraZeneca)	1	Neurological examination, fundoscopy, LP, and electrophysiological studies	CSF showed high opening pressure and albumin-cytologic dissociation. Fundoscopy showed severe bilateral optic disc edema. Diagnosed as GBS	Hypertension	IVIG 2 g/Kg for 5 days and rehabilitation	>4 weeks	Neurological symptoms improved after 7 days of IVIG, but the bilateral facial weakness persisted The patient was bedridden after 4 weeks
Ish 2021 (16)	Case report	1	50	Male	Lagophthalmos , loss of forehead wrinkling, difficulty closing his right eye associated with redness and watering, conjunctival congestion, lower lid ectropion, and drooping of right mouth angle.	NA	Bharat Biotech (COVAXIN)	2	CN examination	Right LMN palsy of the facial nerve (Bell's palsy)	None	Oral prednisolone 1 mg/kg for 2 weeks and eye treatment	>10 days	Improvement of all symptoms after 10 days

Mason 2021 (17)	Case report	1	35	Female	First episode: inability to close her right eye, right-sided facial weakness, mild right arm weakness, occipital headaches, and difficulties in speech and swallowing Second episode: inability to close her eyes bilaterally, left- sided facial weakness, worsening of dysphagia and dysarthria, and inability to raise eyebrows or smile	4 weeks after her vaccine dose for the first episode. 4 days after treatmen t for the second episode	mRNA-1273 (Moderna)	NA	MRI, CTA, LP, EMG, nerve conduction studies, and neurological examination	MRI and CTA were unremarkable. EMG and nerve conduction: 70% axonal loss of the left facial nerve when compared to right facial nerve	Migraine	500 mg of IV methylprednisolon e twice daily for 3 days and 400 mg of acyclovir 4 times/day for her first episode Another 500 mg IV methylprednisolon e twice daily and 400 mg of acyclovir 4 times/day after her second episode	>1 week	Remarkable improvement after 3 days of the second treatment
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Mousquer 2021 (18)	Case report	1	78	Female	Instability, malaise, nausea, pain in auditory canal, decrease right-sided facial mobility, vesicles and crusted lesions on concha of right ear, left horizontal rotatory nystagmus, gait instability, right sensorineural hearing loss	5 days after her vaccine dose	BNT162b2 (Pfizer-BioNTech)	NA	Neurological examination	Right peripheral facial paralysis due to reactivation of Varicella-zoster virus (Ramsy Hunt syndrome)	Untreated atrial hypertension and H/O childhood poliomyelitis with lower limb sequelae and	NA	>2 weeks	After 2 weeks, slight improvement of the facial paralysis while the other symptoms persisted
Nasuelli 2021 (19)	Case report	1	59	Male	bilateral facial palsy, global areflexia, gait ataxia, and distal paresthesia in all limbs	16 days after his vaccine dose	CHAdOx1 (AstraZeneca)	NA	Neurological examination, LP, EMG, and MRI	GBS	Hyperuricemia and hypertension	IVIG of 0.4 mg/Kg for 5 days and physiotherapy	>10 days after treatment	Slow improvement after 5 days of treatment while worsening of electrophysiological signs after 10 days
Nishizawa 2021 (20)	Case report	1	62	Female	Significant right-sided facial paralysis, right facial droop, incomplete eye closure	20 days after his vaccine dose	Ad26.COV2.S (Johnson & Johnson)	1	Neurological examination, CT, and MRI	MRI and CT findings were unremarkable while the examination showed right-sided Bell's palsy	Hypertension, hyperlipidemia, and type 2 DM	NA	NA	NA

Obermann 2021 (21)	Case report	1	21	Female	Facial muscle paralysis	2 days after her first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination and MRI	MRI was unremarkable but examination revealed right-sided Bell's palsy	NA	Oral prednisolone 100 mg/day for 5 days and eye ointment	>3 days	After 3 days, lid closure returned but without improvement of her lower facial muscles
Pothiawala 2021(22)	Case report	1	46	Male	Tinnitus of right ear, loss of taste sensation, loss of right naso-labial fold, right-sided facial droop, and inability to close his right eye completely	10 to 13 days after his second dose	mRNA-1273 (Moderna)	2	Neurological examination	Isolated right LMN facial nerve palsy (Bell's palsy)	None	Acyclovir and prednisone	NA	NA
Repajic 2021 (23)	Case report	1	57	Female	Facial droop, loss of taste sensation, inability to close her left eye completely, soreness behind left ear above her jaw, and hyperacusis. H/O three previous Bell's palsies treated with corticosteroids	<36 hours after her second dose	BNT162b2 (Pfizer-BioNTech)	2	CN examination	Isolated left facial nerve palsy (Bell's palsy)	Corticosteroid-induced hypertension	Prednisone and an antiviral agent	>14 days	Symptoms started to improve after 14 days

Yu 2021 (24)	Case report	1	36	Female	Inability to close her eye completely, eye discomfort, right-sided facial weakness, and forehead wrinkles disappearance. H/O Bell's palsy 18 years ago	2 days after his first dose	Sinovac Life Science vaccine	1	CN examination	Isolated right facial nerve palsy (Bell's palsy)	None	Prednisone 40 g/day for one week and eye support	54 days	Symptoms began to improve after 14 days and completely resolved after 54 days
Rahman 2022) (25)	Case series	53	50.1±15.2*	Male: 27 (50.9%) Female: 26 (49.1%)	Bell's palsy	NA	BNT162b2 (Pfizer-BioNTech): 27 (50.9%) Sinovac Life Science vaccine: 21 (39.6%) CHAdOx1 (AstraZeneca): 5 (9.4%)	One dose: 33 (62.3%) Two doses: 20 (37.7%)	NA	Bell's palsy	Hypertension: 18 (34%) Diabetes: 15 (28.3%) Heart disease: 5 (9.4%)	NA	21 days after vaccine	NA

Andreozzi 2022) (26)	Case series	Case 1	59	Female	Lower back pain, complete facial diplegia, bell's phenomena, bilateral facial weakness, lagophthalmos, abnormal limb reflexes, mild dysarthria, paresthesia, and inability to raise both eyebrows, whistle, and smile	15 days following her dose	CHAdOx1 (AstraZeneca)	1	Neurological examination, LP, CT, and electrophysiological studies	LP: CSF albuminocytologic dissociation. Electrophysiological studies and examination were consistent with GBS with bifacial weakness with paresthesia	Hashimoto thyroiditis (acquired hypothyroidism)	IVIG of 0.4 mg/Kg for 5 days	2 days	Improvement of symptoms started 2 days after the treatment
		Case 2	43	male	Facial pain and numbness, lower limb and hand paresthesia, weakness of eye closure, left-sided facial paralysis, and lower limb hyporeflexia	7 days after his first dose	CHAdOx1 (AstraZeneca)	1	Neurological examination, LP, and electrophysiological studies	LP: CSF albuminocytologic dissociation. Electrophysiological studies and examination were consistent with GBS with bifacial weakness with paresthesia	None	IVIG of 0.4 mg/Kg for 5 days	8 days	Excellent improvement of facial weakness and paresthesia
Castiglione 2022 (27)	Case series	Case 1	56	Female	Distal paresthesia in all limbs and bilateral facial weakness	19 days after her first dose	Sputnik V	1	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	IVIG	>8 days	Symptom improvement

		Case 2	55	Male	Distal paresthesia in all limbs, bilateral facial palsy, and reduced patellar and bicipital reflexes	28 days after his first dose	Sputnik V	1	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	IVIG	>28 days	Symptom improvement
		Case 3	87	Male	Hyporeflexia and distal paresthesia in all limbs and bilateral facial weakness	17 days after his first dose	Sputnik V	1	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	None	3 days	Death after 3 days due to sudden arrhythmia prior to treatment
		Case 4	50	Male	General areflexia and paresthesia and bilateral facial palsy	20 days after his first dose	CHAdOx1 (AstraZeneca)	1	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	IVIG	>18 days	Symptom improvement
		Case 5	39	Male	Paresthesia in both feet, altered taste, and severe bilateral facial weakness	10 days after his first dose	Sputnik V	1	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	IVIG	>23 days	Symptom improvement
		Case 6	42	Male	Generalized hyporeflexia, paresthesia, radicular pain, and bilateral facial weakness	28 days after his first dose	CHAdOx1 (AstraZeneca)	1	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	IVIG	>10 days	Symptom improvement

		Case 7	52	Female	Paresthesia in all limbs, absent tendon reflexes, and bilateral facial weakness	13 days after her first dose	CHAdOx1 (AstraZeneca)	1	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	Plasma exchange	>20 days	Symptom improvement
		Case 8	43	Male	Reduced deep tendon reflexes, radicular pain, paresthesia, and bilateral facial weakness	13 days after his second dose	Sputnik V	2	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	IVIG	>53 days	Symptom improvement
		Case 9	65	Male	Numbness in hands and feet, leg cramping pain, and severe bilateral facial weakness	13 days after his second dose	CHAdOx1 (AstraZeneca)	2	Neurological examination, LP, electrophysiological studies, and MRI	Bilateral facial palsy with paresthesia variant of GBS	NA	IVIG	>7 days	Symptom improvement
Hamid 2022 (28)	Case series	Case 1	23	Male	Headache, lagophthalmos, and right facial muscle weakness	Same day of his first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination, LP, and MRI	<p>MRI: diffuse contrast enhancement in mastoid, tympanic, and labyrinthine portions of right facial nerve.</p> <p>Diagnosed as right-sided Bell's palsy</p>	None	Prednisolone	>2 months	NA

		Case 2	27	Male	Left-sided cervicogenic headache, drooping of mouth, and facial droop	2 months after his first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination and MRI	<p>MRI: non-mass-like and linear gadolinium enhancement in internal auditory canal portion of left facial nerve.</p> <p>Diagnosed as left-sided Bell's palsy</p>	None	Oral prednisone	>18 days	Incomplete response without returning to normal
		Case 3	20	Female	Headache, binocular diplopia, lateral gaze limitation in right eye, and right facial muscle weakness	5 days after her second dose	BNT162b2 (Pfizer-BioNTech)	2	Neurological examination and MRI	<p>MRI: non-nodular and vivid gadolinium enhancement in labyrinth portion of right facial nerve reaching the geniculate ganglion</p> <p>Diagnosed as right-sided Bell's palsy and right lateral rectus palsy</p>	None	IV prednisolone 1 g/day for 10 days	>5 days	Full symptomatic resolution
Mirmosayyeb 2022 (29)	Case series	Case 1	27	Female	SCM pain, upper left lip shifting to the right, inability to close her left eye completely	5-6 days after her first dose	Sputnik V	1	Neurological examination and MRI	MRI was normal but examination revealed left-sided Bell's palsy	None	Prednisolone 50 mg/day for one week Virabex and valacyclovir 1000 mg 2 times/day	10 days	Symptoms resolved with persistence of mild pain in the SCM area

		Case 2	58	Male	Left-sided mouth droop, drooling, slurred speech, left-sided facial weakness, decreased taste sensation, inability to close his left eye, and tearing	9-10 days after his first dose	Sputnik V	1	Neurological examination	Left-sided Bell's palsy	Controlled DM	Prednisolone 50 mg for a week\ Valacyclovir 1000 mg 2 times/day	1 week	Complete recovery
Correa 2021 (30)	Case series	Case 2 (other cases do not involve facial nerve)	42	Male	Left lagophthalmos, forehead muscle paresis, labial weakness, left facial muscle weakness	7 days after his first dose	CHAdOx1 (AstraZeneca)	1	Neurological examination and MRI	MRI showed gadolinium enhancement in labyrinth and canalicular portions of left facial nerve reaching the geniculate ganglion diagnosed as left-sided Bell's palsy	None	Oral prednisone 60 mg/day for 7 days	7 days	Complete resolution of symptoms
James 2021 (31)	Case series	case 1 (other cases do not involve facial nerve)	60	Male	LMN Bilateral palsy, numbness of fingers and toes, proximal weakness in all limbs, and absent lower limb reflexes	11-14 days after his first dose	CHAdOx1 (AstraZeneca)	1	Neurological examination, nerve conduction study, LP, and MRI	Sensorimotor axonal neuropathy (GBS)	COPD	IGIV of 2g/Kg for 5 days	3 weeks	The progression of the disease stopped, and some symptoms showed improvements

Shemer 2021 (32)	Case series	Case 1	86	Female	Facial weakness, asymmetrical smile, corneal erosion on left eye, and inability to close his left eye completely	14 days after her first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination	Left peripheral facial palsy (Bell's palsy)	Hypertension	Oral steroids and eye support	NA	NA
		Case 2	78	Female	Left facial weakness, ear pain, and tinnitus	5 days after her second dose	BNT162b2 (Pfizer-BioNTech)	2	Neurological examination	Left peripheral facial palsy (Bell's palsy)	Cardiac pacemaker	Conventional treatment	NA	Development of periauricular rash and sensorineural hearing loss bilaterally 2 days after hospital discharge treated with an antimicrobial
		Case 3	79	Male	Right-sided herpes zoster ophthalmicus after first dose, inability to close his right eye completely and asymmetrical smile after his second dose	2 days after second dose	BNT162b2 (Pfizer-BioNTech)	2	NA	Right peripheral facial palsy (Bell's palsy)	Asthma and hypertension	Oral steroids	NA	NA
		Case 4	69	Female	Asymmetry in the face	3 days after her first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination	Right peripheral facial palsy (Bell's palsy)	None	Steroidal treatment and eye support	NA	NA

		Case 5	73	Female	Asymmetry in the face	12 days after her first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination	Left peripheral facial palsy (Bell’s palsy)	Dyslipidemia	Steroidal treatment and eye support	NA	NA
		Case 6	77	Male	Asymmetry in the face	22 days after first his dose/ 1 day after second dose	BNT162b2 (Pfizer-BioNTech)	2	Neurological examination	Left peripheral facial palsy (Bell’s palsy)	Stroke, prostate cancer, and hypertension	Steroidal treatment and eye support	NA	NA
		Case 7	64	Male	Asymmetry in the face	7 days after his first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination	Left peripheral facial palsy (Bell’s palsy)	None	Steroidal treatment and eye support	NA	NA
		Case 8	51	Male	Asymmetry in the face	30 days after his first dose/ 9 days after second dose	BNT162b2 (Pfizer-BioNTech)	2	Neurological examination	Right peripheral facial palsy (Bell’s palsy)	Obstructive apnea, Meniere’s disease, and hypertension	Steroidal treatment and eye support	NA	NA
		Case 9	35	Male	Asymmetry in the face	4 days after his first dose	BNT162b2 (Pfizer-BioNTech)	1	Neurological examination	Left peripheral facial palsy (Bell’s palsy)	None	Steroidal treatment and eye support	NA	NA

Abbreviations: CN = cranial nerve, MRI = Magnetic resonance imaging, LMN = lower motor neuron, EMG = Electromyography, H/O = history of, GBS = Guillan-Barré syndrome, CSF = cerebrospinal fluid, CKD = chronic kidney disease, IVIG = intravenous immunoglobulins, HIV = human immunodeficiency virus, CT = computed tomography, LP = lumbar puncture, LN = lymph node, DM = diabetes mellitus, CTA = Computed tomography angiography, NA = not available.

Table S8 represents the characteristics of cohort, case-control, cross-sectional studies, and self-controlled case series included our systematic review

Study ID	Location	Group age	Period	Study design	Source of data
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Bardenheier 1 2021 (33)	US	Adults	December 2020 till February 2021	Cohort study	Registry
Bardenheier 2 2021 (34)	US	Adults	December 2020 till March 2021	Cohort study	Registry
Clemens 2022 (35)	Brazil	Adults	April 2021 till September 2021	Cohort study	Hospital records
El-Shitany 2021 (36)	Saudi Arabia	Adults	December 2021 till February 2022	cross-sectional study	Online survey
El-Shitany 2022 (37)	Saudi Arabia	Adults	January 10, 2021, till January 21 2021	cross-sectional study	Online survey
Frontera 2021 (38)	US	Adults	January 2021 till June 2021	Retrospective cohort study	US Vaccine Adverse Event Reporting System (VAERS)
Huh 2021 (39)	Korea	All ages	Up to June 2020	Cohort study	Registry
Kant 2022 (40)	Netherlands	Adolescents and adults	February 2021 till August 2021	Prospective cohort study	Online questionnaires
Koh 2021 (41)	Singapore	Adults	December 2020 till April 2021	Prospective cohort study	Registry
Li 2022 (42)	UK and Spain	Adults	December 2020 till June 2021	Cohort study	Registry
Mohammed 2021 (43)	Saudi Arabia	Adults	February 2021 till March 2021	Cross- sectional study	Online survey

Nasreen 2022 (44)	Canada	All ages	Up to December 2020	Cohort study	Registry
Noseda 2021 (45)	NR	Adults	Up to May 2021	Case-control study	VigiBase (WHO)
Patone 2021 (46)	UK	Adults	December 2020 till May 2021	self-controlled case series	Registry
Shibli 2021 (47)	Israel	Adults	December 2020 till April 2021	Retrospective cohort study	Registry
Tsun Lai 2022 (48)	Hong Kong	Adolescents (12-18y)	Up to September 2021	Retrospective cohort study	Registry
Walker 2022 (49)	UK	Adults	July 2020 till July 2021	self-controlled case series	Registry
Wong 2021 (50)	Hong Kong	Adults	February 2021 till September 2021	Retrospective cohort study	Registry
Xu 2022 (51)	US	All ages	Up to December 2020	Retrospective cohort study	Registry
Yuk Fai Wan1 2022 (51)	Hong Kong	Adults	February 2021 till May 2021	Nested case-control study	Registry
Yuk Fai Wan2 2022 (52)	Hong Kong	Adults	March 2021 till July 2021	Nested case-control study	Registry

NR: Not reported

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