

Supplementary

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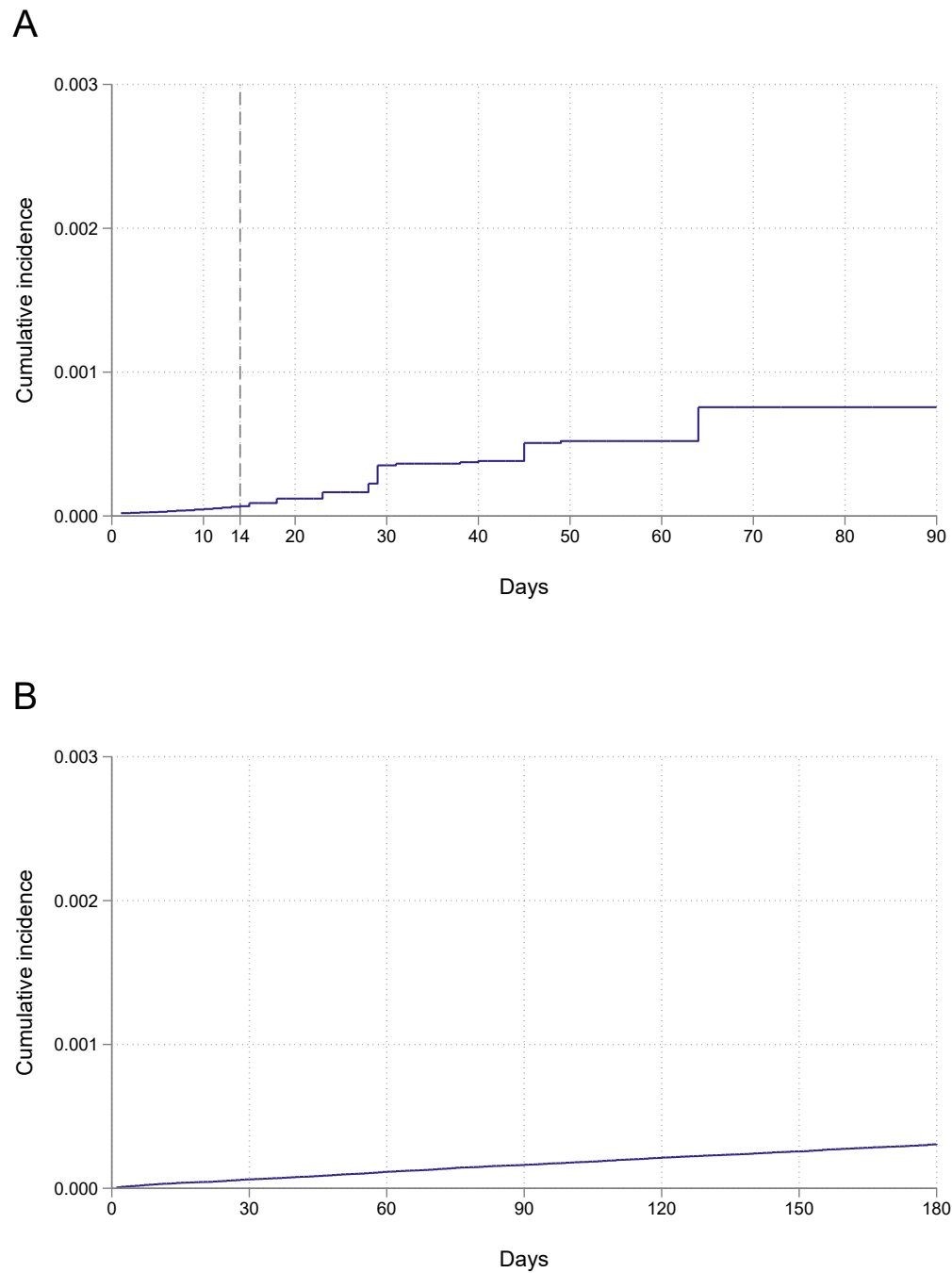
eTable 1: ICD-codes and ATC codes used for identification of comorbidities and type of medication.

Codes used in the propensity score model		
Comorbidity	Description	ICD-10 codes
Hypertension		I10-I13, I15
Atrial fibrillation or flutter		I48
Congestive heart failure		I09.9A, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5-I42.9, I43, I50, P29.0
Ischemic cardiac disease		I20-I21, I23-I25
Peripheral vascular disease	Atherosclerosis, ischemic disease, arterial embolism, or thrombosis	I70, I73.9, I74
Venous thromboembolism	Deep vein thrombosis, pulmonary embolism	I26, I801, I802, I803, I808, I809, I822, I823, I829, O223, O871
Diabetes mellitus	Type 1 and 2 diabetes	E10-E14
Chronic kidney disease		N03, N05, N18-19, N25.0, I12.0, I13.1, I13.2, Z49.0-Z49.2, Z94.0, Z99.2
Dyslipidemia		E78
Cancer		C00-C97, excluding C44
Alcohol related disorder		F10.2-F10.9, E24.4, E52.9A, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, L27.8A, O35.4, P04.3, T50.0A, Z71.4, Z72.1, Z50.2
Markers of smoking		J41-J44, F17, Z71.6, Z72.0
Obesity		E66
Stroke		
- Ischemic attack		I63.0, I63.1, I63.2, I63.3, I63.4, I63.5, I63.8, I63.9, I64.9
- Transient Ischemic attack		G45.9
Type of medication		ATC codes
Anticoagulants	Vitamin-K antagonists, direct-acting anticoagulant, and Low Molecular Weight Heparin.	B01AA03, B01AA04, B01AF01, B01AF02, B01AF03, B01AE07, B01AB04, B01AB10, B01AB05
Platelet inhibitors		B01AC06, B01AC07, B01AC22, B01AC24, B01AC30, N02BA01, B01AC04
Antidiabetic drugs		A10
Antihypertensives		C08, C03A, C07, C09
Loop diuretics		C03CA, C03CB
Lipid lowering drugs		C10AA, C10AB

eTable 2: SKS-codes and SOR-codes used for identification of patients admitted to the ICU and those who arrived at a neurological department.

Codes used for identification of specific units at the hospital		
Intensive care unit	Description	SKS-codes
	Patients admitted to the ICU are identified by at least one of these codes.	NABB, NABE, BGDA0, BGDA1, BJFD0, BGXA2, BFHC92, BFHC93, BFHC95
Neurological departments	Description	SOR codes
	Patients who arrived at a neurological department were identified by these codes.	1024281000016001, 219961000016004, 240141000016000, 240151000016002, 253091000016003, 253191000016004, 289381000016005, 365701000016008, 367461000016007, 367471000016002, 367481000016000, 368221000016001, 371191000016005, 393911000016008, 447241000016006, 451371000016003, 480431000016007, 531451000016007, 577291000016009, 587121000016005, 588361000016001, 588381000016008, 607171000016001, 607251000016004, 610511000016002, 655421000016008, 931341000016005, 932951000016000, 932961000016002, 969561000016007, 976571000016001

eFigure 1: Cumulative incidence functions for the acute phase (A) and for the post-infection period (B). The analyses are propensity score weighted.



eTable 3: Time-restricted (Marts 1 2020 to October 31 2020) absolute and relative risk estimations for incident ischemic stroke in SARS-CoV-2 positive tested individuals compared with SARS-CoV-2 negative tested individuals in the acute phase of infection, and in the post-infection period.

	Events (n)	Absolute risk (%)	Incident rate (95% CI) ^a	Unweighted SHR (95% CI)	PS-weighted SHR (95% CI)
Acute phase of SARS-CoV-2					
SARS-CoV-2 test-negative (n= 181,431)					
- Ischemic stroke	20	0.011	2.9 (1.8-4.4)	1.0 (ref.)	1.0 (ref.)
SARS-CoV-2 test-positive (n=40,659)					
Overall	29	0.071	18 (12-26)	6.02 (3.26-11.1)	6.61 (3.67-11.9)
- Ischemic stroke					
Hospitalized, no ICU stay (n= 3,438)	19	0.553	181 (113-268)	19.0 (8.70-41.5)	17.8 (8.29-38.4)
- Ischemic stroke					
Hospitalized, ICU stay (n= 513)	10	1.949	323 (167-514)	46.7 (14.5-150)	48.4 (17.9-131)
- Ischemic stroke					
Post-infection period after a positive SARS-CoV-2					
SARS-CoV-2 test-negative (n=180,503)					
- Ischemic stroke	197	0.109	2.3 (2.0-2.7)	1.0 (ref.)	1.0 (ref.)
SARS-CoV-2 test-positive (n= 39,931)					
Overall					
- Ischemic stroke	47	0.118	2.4 (1.8-3.2)	1.22 (0.89-1.68)	1.23 (0.89-1.69)
Community managed (n= 36,769)					
- Ischemic stroke	24	0.065	1.3 (0.9-2.0)	0.83 (0.55-1.27)	0.88 (0.58-1.35)
Hospitalized, no ICU stay (n= 2,826)					
- Ischemic stroke	21	0.743	16 (9.9-24)	2.37 (1.49-3.75)	2.27 (1.43-3.60)
Hospitalized, ICU stay (n= 336)					
- Ischemic stroke	n<5	-	-	-	-

^aIncident rate per 1000 person-years at risk.

Abbreviations. SHR = Subdistribution hazard ratio. PS = Propensity score.

eTable 4: Absolute and relative risk estimations for ischemic stroke in SARS-CoV-2 positive tested individuals compared with SARS-CoV-2 negative tested individuals in the acute phase of infection, and in the post-infection period. Individuals with a recent stroke are included.

	Events (n)	Absolute risk (%)	Incident rate (95% CI) ^a	Unweighted SHR (95% CI)	PS-weighted SHR (95% CI)
Acute phase of SARS-CoV-2					
SARS-CoV-2 test-negative (n= 3,067,824)					
- Ischemic stroke	682	0.022	5.8 (5.4-6.3)	1.0 (ref.)	1.0 (ref.)
SARS-CoV-2 test-positive (n=356,453)					
Overall					
- Ischemic stroke	122	0.034	8.9 (7.4-11)	2.05 (1.68-2.50)	2.10 (1.72-2.56)
Hospitalized, no ICU stay (n= 14,868)					
- Ischemic stroke	83	0.558	191 (155-231)	8.55 (6.62-11.0)	8.11 (6.36-10.3)
Hospitalized, ICU stay (n= 1,838)					
- Ischemic stroke	24	1.306	224 (149-315)	15.2 (8.04-28.8)	18.1 (11.7-28.2)
Post-infection period after a positive SARS-CoV-2					
SARS-CoV-2 test-negative (n=3,047,919)					
- Ischemic stroke	3,363	0.110	2.3 (2.2-2.4)	1.0 (ref.)	1.0 (ref.)
SARS-CoV-2 test-positive (n= 353,765)					
Overall					
- Ischemic stroke	290	0.082	1.7 (1.5-1.9)	1.10 (0.97-1.24)	1.12 (0.99-1.26)
Community managed (n= 339,713)					
- Ischemic stroke	219	0.086	1.3 (1.1-1.5)	0.96 (0.84-1.11)	1.01 (0.88-1.16)
Hospitalized, no ICU stay (n= 12,819)					
- Ischemic stroke	66	0.570	11 (8.5-14)	1.93 (1.51-2.46)	1.85 (1.45-2.37)
Hospitalized, ICU stay (n= 1,233)					
- Ischemic stroke	5	0.568	8.7 (2.8-20)	1.91 (0.79-4.59)	1.64 (0.67-3.99)

^a Incident rate per 1000 person-years at risk.

Abbreviations: SHR = Subdistribution hazard ratio. PS = Propensity score.

eTable 5: Absolute and relative risk estimations for ischemic stroke in SARS-CoV-2 positive tested individuals compared with SARS-CoV-2 negative tested individuals in the acute phase of infection, and in the post-infection period. Individuals who initially arrived at a neurological department are excluded.

	Events (n)	Absolute risk (%)	Incident rate (95% CI) ^a	Unweighted SHR (95% CI)	PS-weighted SHR (95% CI)
Acute phase of SARS-CoV-2					
SARS-CoV-2 test-negative (n= 3,067,456)					
- Ischemic stroke	314	0.010	2.7 (2.4-3.0)	1.0 (ref.)	1.0 (ref.)
SARS-CoV-2 test-positive (n=356,403)					
Overall					
- Ischemic stroke	72	0.020	5.2 (4.1-6.6)	2.43 (1.85-3.20)	2.61 (1.99-3.42)
Hospitalized, no ICU stay (n= 14,853)					
- Ischemic stroke	49	0.330	113 (85-147)	11.4 (7.91-16.5)	12.4 (8.88-17.2)
Hospitalized, ICU stay (n= 1,837)					
- Ischemic stroke	23	1.252	215 (141-305)	30.4 (14.0-66.1)	36.4 (22.6-58.5)

^a Incident rate per 1000 person-years at risk.

Abbreviations: SHR = Subdistribution hazard ratio. PS = Propensity score.

eTable 6: Absolute and relative risk estimations for ischemic stroke in SARS-CoV-2 positive tested individuals compared with SARS-CoV-2 negative tested individuals in the acute phase of infection, and in the post-infection period. Individuals with a diagnose of transient ischemic attack (ICD-10 code: G45*) are included in the analysis.

	Events (n)	Absolute risk (%)	Incident rate (95% CI) ^a	Unweighted SHR (95% CI)	PS-weighted SHR (95% CI)
Acute phase of SARS-CoV-2					
SARS-CoV-2 test-negative (n= 3,067,376)					
- Ischemic stroke	414	0.013	3.5 (3.2-3.9)	1.0 (ref.)	1.0 (ref.)
SARS-CoV-2 test-positive (n=356,415)					
Overall					
- Ischemic stroke	95	0.027	6.9 (5.6-8.4)	2.50 (1.98-3.17)	2.64 (2.10-3.34)
Hospitalized, no ICU stay (n= 14,853)					
- Ischemic stroke	72	0.485	166 (132-204)	13.5 (10.1-18.3)	14.2 (10.8-18.6)
Hospitalized, ICU stay (n= 1,837)					
- Ischemic stroke	23	1.252	215 (141-305)	21.9 (10.5-47.7)	27.5 (17.2-43.7)
Post-infection period after a positive SARS-CoV-2					
SARS-CoV-2 test-negative (n=3,047,738)					
- Ischemic stroke	4,355	0.143	3.0 (2.9-3.0)	1.0 (ref.)	1.0 (ref.)
SARS-CoV-2 test-positive (n= 353,754)					
Overall					
- Ischemic stroke	373	0.105	2.2 (1.9-2.4)	1.08 (0.97-1.20)	1.09 (0.98-1.22)
Community managed (n= 339,706)					
- Ischemic stroke	293	0.086	1.8 (1.6-2.0)	0.98 (0.87-1.10)	1.01 (0.90-1.14)
Hospitalized, no ICU stay (n= 12,815)					
- Ischemic stroke	73	0.570	12 (9.6-15)	1.69 (1.34-2.14)	1.73 (1.37-2.18)
Hospitalized, ICU stay (n= 1,233)					
- Ischemic stroke	7	0.568	12 (5.0-25)	2.10 (1.00-4.41)	1.89 (0.88-4.04)

^a Incident rate per 1000 person-years at risk.

Abbreviations: SHR = Subdistribution hazard ratio. PS = Propensity score.