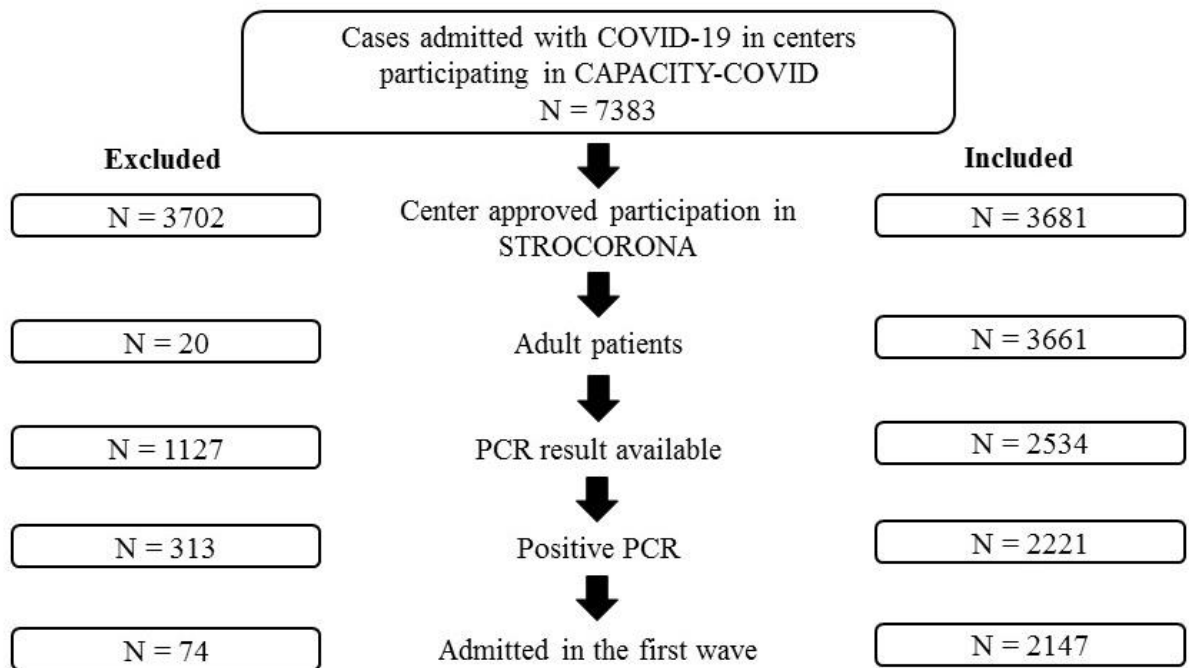# SUPPLEMENTARY MATERIAL

Risk, clinical course and outcome of ischemic stroke in patients hospitalized with COVID-19: a multicenter cohort study
Sluis WM, Linschoten M, Buijs JE et al

Figure I. Flowchart of patient inclusion

Excluded		Included
	Cases admitted with COVID-19 in centers participating in CAPACITY-COVID N = 7383	
N = 3702	Center approved participation in STROCORONA	N = 3681
N = 20	Adult patients	N = 3661
N = 1127	PCR result available	N = 2534
N = 313	Positive PCR	N = 2221
N = 74	Admitted in the first wave	N = 2147

Table I. Missing data

Characteristics	Missing values (%)
Age, years (mean; SD)	0
Sex (female)	0
BMI, kg/m^2 (mean; SD)	359 (16.7)
Ethnicity	358 (16.7)
Platelet count	278 (12.9)
D-dimer	1771 (82.5)
Medical history	
Hypertension	48 (2.2)
Diabetes	16 (0.7)
Hyperlipidemia	181 (8.4)
Peripheral artery disease	179 (8.3)
Coronary artery disease	184 (8.6)
Valvular heart disease	0
Heart failure	0
Atrial fibrillation	0
Venous thromboembolism	184 (8.6)
Chronic kidney disease	6 (0.3)
Inflammatory disease	5 (0.2)
COPD	4 (0.2)
TIA and/or Ischemic stroke	0
Intracerebral hemorrhage	1 (<0.1)
Subarachnoid hemorrhage	1 (<0.1)
Baseline medication	
Betablockers	3 (0.1)
Anti-arrhythmic drugs	3 (0.1)
Digoxin	3 (0.1)
Diuretics	3 (0.1)
Calciumchannel blockers	3 (0.1)
ACE inhibitors	3 (0.1)
Angiotensin receptor blocker	3 (0.1)
Aldosteron antagonists	3 (0.1)
Coumarins	3 (0.1)
DOAC	3 (0.1)
Lipid lowering medication	3 (0.1)
Insulin	3 (0.1)
Oral anti diabetics	3 (0.1)
Anti-platelet therapy[*]	5 (0.2)
Dual platelet therapy[†]	2 (0.3)
In-hospital complications	
Deep venous thromboembolism	0
Pulmonary embolism	0
Atrial fibrillation	0
Cardiac ischaemia	0
Endocarditis	0
Acute ischemic stroke	0
In-hospital mortality	0

* usage of anti-platelet therapy in general. † usage of more than one anti-platelet drug.

Abbreviations: SD = standard deviation, BMI = body mass index, COPD = chronic obstructive pulmonary disease, TIA = transient ischemic attack, ACE = angiotensin converting enzyme, DOAC = direct oral anticoagulant, AIS = acute ischemic stroke.

Table II. RECORD and STROBE statement for observational studies using routinely collected health data.

	It e m N o.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscri pt where items are reported
Title and abstract					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 1, title page and Page 3, methods of abstract	RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included.	Page 3, methods of abstract
				RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract.	Page 3, methods of abstract
				RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	Page 3, methods of abstract (STROCO RONA is substudy of the CAPACIT Y-COVID registry)
Introduction					
Backgrou nd rationale	2	Explain the scientific background and rationale for the investigation being reported	Page 6		

Objectives	3	State specific objectives, including any prespecified hypotheses	Page 6		
Methods					
Study Design	4	Present key elements of study design early in the paper	Page 7		
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Page 7		
Participants	6	*(a) Cohort study -* Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study* - Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study* - Give the eligibility criteria, and the sources and methods of selection of participants	Page 7	RECORD 6.1: The methods of study population selection (such as codes or algorithms used to identify subjects) should be listed in detail. If this is not possible, an explanation should be provided. RECORD 6.2: Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided. RECORD 6.3: If the study involved linkage of databases, consider	Page 7 Not applicable Figure 1 of the

			Not applicable	use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.	Suppleme ntary Material
		(b) Cohort study - For matched studies, give matching criteria and number of exposed and unexposed *Case-control study* - For matched studies, give matching criteria and the number of controls per case			
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	Page 8	RECORD 7.1: A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.	Page 8 The codebook of the CAPACIT Y-COVID case report form can be found online at capacity-covid.eu
Data sources/ measurem ent	8	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Page 8		
Bias	9	Describe any efforts to address	Page 9		

		potential sources of bias			
Study size	10	Explain how the study size was arrived at	Page 7		
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Page 8		
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) *Cohort study* - If applicable, explain how loss to follow-up was addressed *Case-control study* - If applicable, explain how matching of cases and controls was addressed *Cross-sectional study* - If applicable, describe analytical methods taking account of sampling strategy	Page 8 and 9		

		(e) Describe any sensitivity analyses			
Data access and cleaning methods		..		RECORD 12.1: Authors should describe the extent to which the investigators had access to the database population used to create the study population. RECORD 12.2: Authors should provide information on the data cleaning methods used in the study.	Page 8 Page 8
Linkage		..		RECORD 12.3: State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	Not applicable
Results					
Participants	13	(a) Report the numbers of individuals at each stage of the study (*e.g.*, numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed) (b) Give reasons for non-participation at each stage.	Figure 1 of the supplementary material	RECORD 13.1: Describe in detail the selection of the persons included in the study (*i.e.,* study population selection) including filtering based on data quality, data availability and linkage. The selection of included persons can be described in the text and/or by means of the study flow diagram.	Figure 1 of the Supplementary Material

		(c) Consider use of a flow diagram			
Descriptive data	14	(a) Give characteristics of study participants (*e.g.*, demographic, clinical, social) and information on exposures and potential confounders	Page 10 and Table 1 of the manuscript		
		(b) Indicate the number of participants with missing data for each variable of interest	Table 1 of the supplement		
		(c) *Cohort study* - summarise follow-up time (*e.g.*, average and total amount)	Not applicable		
Outcome data	15	*Cohort study* - Report numbers of outcome events or summary measures over time *Case-control study* - Report numbers in each exposure category, or summary measures of exposure *Cross-sectional study* - Report numbers of outcome events or summary measures	Page 10		
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95%	Page 10		

		confidence interval). Make clear which confounders were adjusted for and why they were included	Table 2 of the manuscript		
		(b) Report category boundaries when continuous variables were categorized	Not applicable		
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period			
Other analyses	17	Report other analyses done— e.g., analyses of subgroups and interactions, and sensitivity analyses	Page 10 and 11		
Discussion					
Key results	18	Summarise key results with reference to study objectives	Page 12		
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Page 14	RECORD 19.1: Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	Page 14

Interpreta tion	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Page 12, 13 and Page 14		
Generalis ability	21	Discuss the generalisability (external validity) of the study results	Page 15		
Other Information					
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Page 17		
Accessibi lity of protocol, raw data, and program ming code		..		RECORD 22.1: Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	Page 7

*Reference: Benchimol EI, Smeeth L, Guttmann A, Harron K, Moher D, Petersen I, Sørensen HT, von Elm E, Langan SM, the RECORD Working Committee. The REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) Statement. *PLoS Medicine* 2015; in press.

Table III. Baseline characteristics stratified according to the need of ICU treatment

Characteristics*	ICU treatment n=586	No ICU treatment n=1561	p-value
Age, years (median; IQR)	66.0 (58.0-72.3)	73.0 (60.0-80.0)	**p <0.001**
Sex (female)	157 (26.8)	612 (39.2)	**p <0.001**
BMI, kg/m^2 (mean; SD)	28.5 (4.8)	27.7 (5.1)	**p = 0.002**
Platelets (median; IQR)	221.0 (168.0-280.0)	195.0 (150.0-256.0)	**p <0.001**
Medical history			
Hypertension	240 (41.0)	794 (50.9)	**p <0.001**
Diabetes	141 (24.1)	427 (27.4)	p = 0.293
Hyperlipidemia	200 (34.1)	662 (42.4)	**p <0.001**
Peripheral artery disease	32 (5.8)	100 (7.1)	p = 0.301
Coronary artery disease	95 (16.2)	353 (22.6)	**p = 0.001**
Valvular heart disease	18 (3.1)	120 (7.7)	**p <0.001**
Heart failure	17 (2.9)	137 (8.8)	**p <0.001**
Atrial fibrillation	52 (8.9)	230 (14.7)	**p <0.001**
Venous thromboembolism	20 (3.4)	71 (4.5)	**p <0.001**
Chronic kidney disease	44 (7.5)	236 (15.1)	**p <0.001**
Inflammatory disease	48 (8.2)	210 (13.5)	**p = 0.003**
COPD	47 (8.0)	204 (13.1)	**p = 0.005**
TIA and/or Ischemic stroke	52 (8.9)	225 (14.4)	**p <0.001**
Intracerebral hemorrhage	4 (0.7)	13 (0.8)	p = 0.248
Subarachnoid hemorrhage	2 (0.3)	4 (0.3)	p = 0.249

*Numbers are n (%) unless otherwise stated.

Abbreviations: ICU = critical or intensive care unit, IQR = interquartile range, SD = standard deviation, BMI = body mass index, COPD = chronic obstructive pulmonary disease, TIA = transient ischemic attack.

Table IV. Baseline medication in patients with and without acute ischemic stroke

Baseline medication*	Total cohort n=2147	No ischemic stroke n=2109	Ischemic stroke n=38	p-value
Betablockers	653 (30.4)	642 (30.4)	11 (28.9)	p = 0.953
Anti-arrhythmic drugs	91 (4.2)	90 (4.3)	1 (2.6)	p = 0.860
Digoxin	47 (2.2)	47 (2.2)	0	p = 0.631
Diuretics	523 (24.4)	515 (24.4)	8 (21.1)	p = 0.866
Calciumchannel blockers	348 (16.2)	345 (16.4)	3 (7.9)	p = 0.362
ACE inhibitors	422 (19.7)	416 (19.7)	6 (15.8)	p = 0.808
Angiotensin receptor blocker	312 (14.5)	306 (14.5)	6 (15.8)	p = 0.950
Aldosteron antagonists	71 (3.3)	71 (3.4)	0	p = 0.501
Coumarins	163 (7.6)	160 (7.6)	3 (7.9)	p = 0.971
DOAC	201 (9.4)	197 (9.3)	4 (10.5)	p = 0.944
Lipid lowering medication	839 (39.1)	823 (39.0)	16 (42.1)	p = 0.906
Insulin	183 (8.5)	181 (8.6)	2 (5.3)	p = 0.746
Oral anti diabetics	377 (17.6)	371 (17.6)	6 (15.8)	p = 0.932
Anti-platelet therapy	639 (29.8)	629 (29.8)	10 (26.3)	p = 0.852
Dual platelet therapy	57 (8.9)	55 (8.8)	2 (20.0)	p = 0.217

*Numbers are n (%).
Abbreviations: ACE = angiotensin converting enzyme, DOAC = direct oral anticoagulant.

Table V. Baseline characteristics stratified according to age groups

Characteristics*	Age <50 years		Age 50-69 years		Age ≥70 years	
	No ischemic stroke	Ischemic stroke	No ischemic stroke	Ischemic stroke	No ischemic stroke	Ischemic stroke
	n= 202	n= 2	n= 805	n= 11	n= 1102	n= 25
Medical history						
Hypertension	35 (17.3)	0	312 (38.8)	3 (27.3)	673 (61.1)	11 (44.0)
Diabetes	33 (16.3)	1 (50.0)	179 (22.2)	0	348 (31.6)	7 (28.0)
Hyperlipidemia	22 (10.9)	1 (50.0)	267 (33.2)	5 (45.5)	558 (50.6)	9 (36.0)
Peripheral artery disease	6 (3.1)	0	30 (4.0)	1 (12.5)	91 (9.3)	4 (16.7)
Coronary artery disease	4 (2.0)	0	117 (14.5)	1 (9.1)	322 (29.2)	4 (16.0)
Valvular heart disease	0	0	18 (2.2)	0	118 (10.7)	2 (8.0)
Heart failure	1 (0.5)	0	22 (2.7)	0	130 (11.8)	1 (4.0)
Atrial fibrillation	1 (0.5)	0	38 (4.7)	0	239 (21.7)	4 (16.0)
Venous embolism	2 (1.0)	0	29 (3.6)	0	57 (5.2)	3 (12.0)
Chronic kidney disease	12 (5.9)	0	52 (6.5)	1 (9.1)	213 (19.3)	2 (8.0)
Inflammatory disease	23 (11.4)	0	91 (11.3)	1 (9.1)	140 (12.7)	3 (12.0)
COPD	3 (1.5)	0	71 (8.8)	2 (18.2)	171 (15.5)	4 (16.0)
TIA / Ischemic stroke	4 (2.0)	0	59 (7.3)	2 (18.2)	208 (18.9)	4 (16.0)
Intracerebral hemorrhage	0	0	6 (0.7)	0	11 (1.0)	0
Subarachnoid hemorrhage	0	0	3 (0.4)	0	3 (0.3)	0

*Numbers are n (%) unless otherwise stated.
Abbreviations: COPD = chronic obstructive pulmonary disease, TIA = transient ischemic attack.

Table VI. Sensitivity analysis excluding centers that included patients with cardiovascular risk factors only

Characteristics*	Total cohort	No ischemic stroke	Ischemic stroke	p-value
n	1846	1810 (98.0)	36 (2.0)	
Age, years (median; IQR)	70.0 (59.0-77.0)	70.0 (59.0-77.0)	74.0 (66.3-82.0)	**p <0.001**
Sex (female)	667 (36.1)	653 (36.1)	14 (38.9)	p = 0.728
BMI, kg/m^2 (mean; SD)	27.9 (5.1)	27.9 (5.1)	25.8 (4.4)	**p = 0.025**
Platelets (median; IQR)	204.0 (157.0-264.0)	202.0 (157.0-264.0)	252.0 (207.0-278.0)	**p = 0.016**
Medical history				
Hypertension	852 (47.3)	840 (47.6)	12 (34.3)	p = 0.119
Diabetes	480 (26.2)	473 (26.3)	7 (19.4)	p = 0.354
Hyperlipidemia	721 (39.1)	706 (39.0)	15 (41.7)	p = 0.947
Peripheral artery disease	116 (6.5)	111 (6.4)	5 (15.2)	**p = 0.043**
Coronary artery disease	352 (19.1)	347 (19.2)	5 (13.9)	p = 0.424
Valvular heart disease	112 (6.1)	110 (6.1)	2 (5.6)	p = 0.897
Heart failure	128 (6.9)	128 (7.1)	0 (0.0)	p = 0.098
Atrial fibrillation	242 (13.1)	239 (13.2)	3 (8.3)	p = 0.391
Venous thromboembolism	82 (4.4)	79 (4.4)	3 (8.3)	p = 0.456
Chronic kidney disease	224 (12.1)	222 (12.3)	2 (5.6)	p = 0.469
Inflammatory disease	223 (12.1)	220 (12.2)	3 (8.3)	p = 0.776
COPD	212 (11.5)	207 (11.4)	5 (13.9)	p = 0.648
TIA and/or Ischemic stroke	239 (12.9)	233 (12.9)	6 (16.7)	p = 0.502
Intracerebral hemorrhage	15 (0.8)	15 (0.8)	0 (0.0)	p = 0.583
Subarachnoid hemorrhage	4 (0.2)	4 (0.2)	0 (0.0)	p = 0.778

*Numbers are n (%) unless otherwise stated.

Abbreviations: ICU = critical or intensive care unit, SD = standard deviation, BMI = body mass index, COPD = chronic obstructive pulmonary disease, TIA = transient ischemic attack.

Table VII. Occurrence of other thromboembolic complications in patients with and without acute ischemic stroke stratified by etiology

Characteristics*	Total cohort (%) n=38	Cryptogenic (%) n=18	Known etiology (%) n=20
Age, years (median; IQR)	74.5 (66.8-82.0)	71.5 (64.3-81.0)	80.0 (67.0-82.0)
Female sex	16 (42.1)	8 (44.4)	8 (40.0)
Prior antiplatelet use	10 (26.3)	6 (33.3)	4 (20.0)
Prior anticoagulant use	7 (18.4)	0 (0.0)	7 (35.0)
Time to diagnosis (median; IQR)			
Symptom to stroke[†]	14.0 (7.5-26.3)	23.0 (8.5-30.0)	11.5 (7.5-15.8)
Stroke symptoms as presenting complaint	4 (10.5)	1 (5.5)	3 (15.0)
Treatment at ICU	16 (42.1)	10 (55.6)	6 (30.0)
NIHSS (median; IQR)	8.5 (3.0-23.8)	16.5 (4.5-30.0)	5.0 (2.3-20.0)
Hemisphere			
Left	17 (44.7)	6 (33.3)	11 (55.0)
Right	12 (31.6)	7 (38.9)	5 (25.0)
Both	6 (15.8)	4 (22.2)	2 (10.0)
Infratentorial	3 (7.9)	1 (5.6)	2 (10.0)
Large vessel occlusion			
Yes	10 (26.3)	4 (22.2)	6 (30.0)
No	11 (28.9)	5 (27.8)	6 (30.0)
No CT angiography	17 (44.7)	9 (50.0)	8 (40.0)
Reperfusion therapy			
IVT	2 (5.3)	1 (5.6)	1 (5.0)
EVT	5 (13.2)	3 (16.7)	2 (10.0)
Occurrence of another TE event	10 (26.3)	6 (33.3)	4 (20.0)
Unfavorable outcome[‡]	27 (71.1)	14 (77.8)	13 (65.0)
In-hospital mortality	20 (52.6)	10 (55.6)	10 (50.0)

* All numbers are N (%) unless otherwise stated.

† Days from first COVID symptoms to diagnosis of ischemic stroke;

‡ Defined as death or dependency, modified Rankin scale 3 or higher

Abbreviations: IQR = interquartile range, NIHSS = national institute of health stroke scale, IVT = intravenous therapy, EVT = endovascular therapy, TOAST = trial of ORG 10172 in acute stroke treatment. TE=thromboembolic.

Table VIII. Diagnostic work-up in patients with acute ischemic stroke

	Laboratory		Cerebral imaging				Telemetry	Other work-up	
	Platelets*	D-dimer†	CT A	CT P	Carotid echo	MRI	Cardiac monitoring	Cardiac echo	Other findings
Large artery atherosclerosis (n=3)									
Patient 1	292	908	No LVO	Deficit	-	-	No AF detected	-	-
Patient 2	-	-	M1 occlusion + Ipsilateral ACI atherosclerosis	Deficit	-	-	No AF detected	-	-
Patient 3	210	-	Ipsilateral ACI stenosis	-	-	-	Known AF with INR in range	-	-
Cardioembolism (n=11)									
Patient 1	207	-	-	-	-	-	Known AF	-	Patient had a vertebrobasilar stroke based upon clinical findings, no CTA or carotid ultrasound was performed because of a lack of clinical consequences
Patient 2	330	-	ACI-T occlusion	-	-	-	Known AF	-	-

Patient 3	448	22000	No LVO	Normal	-	-	AF detected	-	-
Patient 4	224	-	No LVO	Normal	-	-	Known AF with subtherapeutic INR	-	-
Patient 5	-	-	-	-	-	-	Known AF with subtherapeutic INR	-	-
Patient 6	156	-	-	-	-	-	AF detected	-	-
Patient 7	255	-	Ipsilateral ACI stenosis	-	-	-	Known AF for which anticoagulation was discontinued due to hemorrhage	-	-
Patient 8	220	-	M2 occlusion	-	-	-	Known AF with subtherapeutic INR	-	-
Patient 9	160	-	-	-	-	-	Known AF and ischemia in multiple vascular territories	-	-
Patient 10	458	-	M1,M2 and bilateral ACI occlusion	-	-	-	Known AF and thrombus in thoracic aorta	-	-
Patient 11	252	-	M1 occlusion	-	-	-	AF detected	-	-
Small-vessel occlusion (n=4)									
Patient 1	260	-	-	-	-	-	No AF detected	-	Clinically a lacunar syndrome
Patient 2	123	-	-	-	Normal	-	No AF detected	-	Clinically a lacunar syndrome

Patient 3	263	-	No LVO	-	-	-	No AF detected	-	Clinically a lacunar syndrome
Patient 4	111	-	-	-	-	-	No AF detected	-	Clinically a lacunar syndrome
Other etiology (n=2)									
Patient 1	233	-	-	-	-	-	Known AF	-	Ischemic lesions in watershed area
Patient 2	239	-	Pre-existent ACI occlusion	No deficit	-	-	No AF detected	-	Ischemic lesions in watershed area after prolonged hypotension due to sepsis
Undetermined etiology (n=18)									
Patient 1	878	-	No LVO	Deficit	-	-	No AF detected	Normal	-
Patient 2	210	-	-	-	-	-	-	-	Early withdrawal of care
Patient 3	278	853	No LVO	-	Normal	DWI lesion	No AF detected	-	-
Patient 4	238	-	-	-	Normal	-	No AF detected	-	-
Patient 5	160	-	-	-	Normal	-	No AF detected	Normal	-
Patient 6	114	-	No LVO	-	Normal	DWI lesion	No AF detected	Normal	-
Patient 7	261	-	No LVO	No deficit	-	DWI lesion	No AF detected	Normal	-
Patient 8	260	1197	-	-	Normal	No DWI lesion	No AF detected	Normal	-

Patient									
Patient 9	275	-	-	-	-	-	No AF detected	-	Early withdrawal of care
Patient 10	422	1751	-	-	-	-	-	-	Early withdrawal of care
Patient 11	592	-	M1 occlusion	Deficit	-	-	No AF detected	-	Died before cardiac ultrasound could be performed
Patient 12	160	-	M1 occlusion	Deficit	-	-	No AF detected	-	-
Patient 13	252	-	M1 occlusion	Deficit	-	-	No AF detected	-	-
Patient 14	268	-	-	-	-	-	No AF detected	-	Early withdrawal of care
Patient 15	210	-	-	-	-	-	No AF detected	-	Possible PFO was seen on CT of the chest, but no ultrasound was performed due to withdrawal of care
Patient 16	1100	-	-	-	-	-	-	-	Early withdrawal of care
Patient 17	100	-	P2 occlusion	Deficit	-	-	No AF detected	-	Early withdrawal of care
Patient 18	217	-	No LVO	-	-	DWI lesion	No AF detected	-	-

* All platelets are *10^9/L; † All d-dimers are in ug/L.

Abbreviations: CTA = CT angiography, CTP = CT perfusion, MRI = magnetic resonance imaging, LVO = large vessel occlusion, AF = atrial fibrillation, M1 = first segment of middle cerebral artery, ACI = internal carotid artery, INR = international normalized ratio, ACI-T = tandem occlusion of internal carotid artery and first segment of middle cerebral artery, M2 = second segment of middle cerebral artery, DWI = diffusion-weighted imaging, P2 = second segment of posterior cerebral artery.

Table IX. Occurrence of other cardiovascular complications in patients with and without ischemic stroke stratified by age and sex

	Total (n)	DVT (%)		PE (%)		AF (%)		Cardiac ischemia (%)		Endocarditis (%)	
		No AIS	AIS	No AIS	AIS	No AIS	AIS	No AIS	AIS	No AIS	AIS
Overall	2147	11 (0.5)	0	160 (7.6)	8 (21.1)	145 (6.9)	4 (10.5)	36 (1.7)	2 (5.3)	2 (0.1)	0
Stratified by sex											
Females	769	2 (0.3)	0	35 (4.6)	4 (25.0)	44 (5.8)	2 (12.5)	7 (0.9)	29 (2.1)	1 (0.1)	0
Males	1378	9 (0.7)	0	125 (9.2)	4 (18.2)	101 (7.4)	2 (9.1)	29 (2.1)	2 (9.1)	1 (0.1)	0
Stratified by age											
<50 years	204	1 (0.5)	0	10 (5.0)	1 (50.0)	2 (1.0)	0	0	0	0	0
50-69 years	816	8 (1.0)	0	93 (11.6)	5 (45.5)	53 (6.6)	1 (9.1)	18 (2.2)	1 (9.1)	1 (0.1)	0
≥70 years	1127	2 (0.2)	0	57 (5.2)	2 (8.0)	90 (8.2)	3 (12.0)	18 (1.6)	1 (4.0)	1 (0.1)	0

*Numbers are n (%).

Abbreviations: AIS = acute ischemic stroke, DVT = deep vein thrombosis, PE = pulmonary embolism, AF = atrial fibrillation.

Table X. In-hospital mortality in patients with COVID-19 with an ischemic stroke according to the need of ICU treatment and stratified by age and sex

	Total cohort (%; 95%CI)	ICU treatment (%; 95%CI)	General ward (%; 95%CI)
Total	20/38 (52.6; 37.3-67.5)	7/16 (43.8; 0.23-0.67)	13/22 (59.1; 0.39-0.77)
Stratified by sex			
Female	7/16 (43.8; 0.23-0.67)	1/6 (16.7; 3.0-56.4)	6/10 (60.0; 31.1-83.2)
Male	13/22 (59.1; 0.39-0.77)	6/10 (60.0; 31.1-83.2)	7/12 (58.3; 32.0-80.7)
Stratified by age			
<50 years	1/2 (50.0; 9.5-90.6)	1/2 (50.0; 9.5-90.6)	0
50-69 years	4/11 (36.4; 15.2-64.6)	3/9 (33.3; 12.1-64.6)	1/2 (50.0; 9.5-90.6)
≥70 years	15/25 (60.0; 40.7-76.6)	3/5 (60.0; 23.1-88.2)	12/20 (60.0; 38.7-78.1)

Numbers are n (%; 95%CI).
Abbreviations: CI = confidence interval

Figure II. Timeline of admissions and in-hospital mortality in STROCORONA during the first wave for the participating centers in the Netherlands
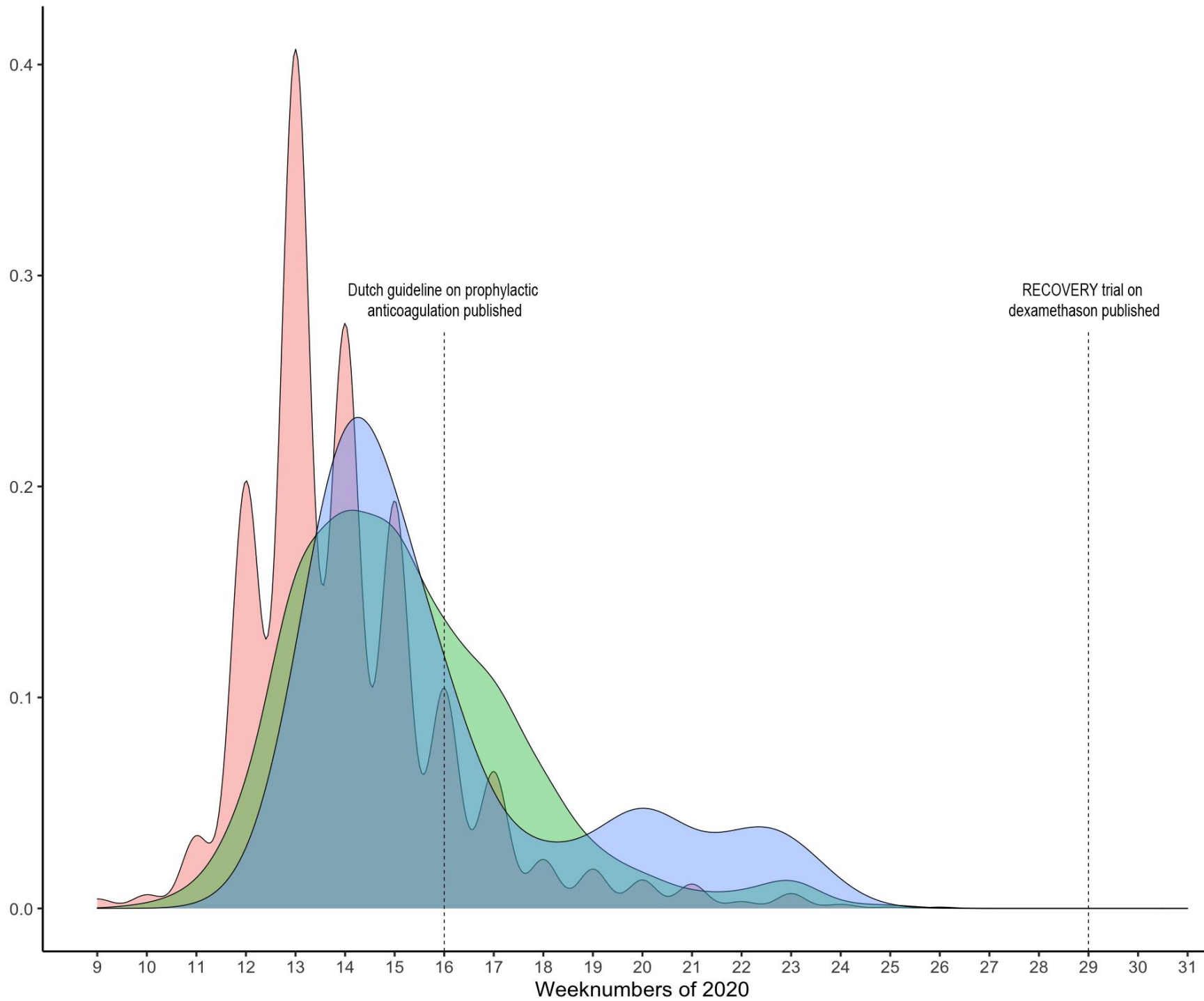
Legend
Density plot with week numbers of 2020 starting in week 9 when the first patient was diagnosed in the Netherlands. *Red* = admission date of patients included in STROCORONA. *Green* = date of occurrence of ischemic stroke in patients in STROCORONA *Blue* = date of occurrence of in-hospital mortality of all patients who died and were included in STROCORONA.
The dotted lines represent 1) publication date of the guideline on anticoagulants in COVID-19 patients in the Netherlands[37] and 2) the publication date of the RECOVERY trial on dexamethasone as treatment for COVID-19.[38]

Table XI. Acknowledgement of participating organizations in the CAPACITY-COVID consortium