Supplemental material

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Table S1. Univariable logistic regression models

	Regression coefficients	SE	OR (95% CI)	P-value
Basic characteristics				
Sex – men (ref. women)	0.395	0.096	1.48 (1.23; 1.79)	**< 0.001**
Age 40–49 years (ref. < 40 years)	1.260	0.464	3.52 (1.42; 8.75)	**0.007**
Age 50–59 years (ref. < 40 years)	2.553	0.413	12.84 (5.72; 28.85)	**< 0.001**
Age 60–69 years (ref. < 40 years)	3.716	0.396	41.09 (18.93; 89.20)	**< 0.001**
Age 70–79 years (ref. < 40 years)	4.584	0.391	97.92 (45.52; 210.66)	**< 0.001**
Age 80–89 years (ref. < 40 years)	5.096	0.392	163.44 (75.80; 352.40)	**< 0.001**
Age 90+ years (ref. < 40 years)	5.555	0.418	258.59 (113.92; 586.98)	**< 0.001**
History				
Hypertension	1.729	0.098	5.64 (4.65; 6.83)	**< 0.001**
Atrial fibrillation	1.990	0.147	7.32 (5.48; 9.76)	**< 0.001**
History of stroke	1.949	0.169	7.02 (5.05; 9.77)	**< 0.001**
History of MI or PCI	1.569	0.208	4.80 (3.19; 7.21)	**< 0.001**
Chronic heart failure	2.346	0.142	10.45 (7.90; 13.81)	**< 0.001**
Chronic kidney disease	2.143	0.133	8.52 (6.57; 11.06)	**< 0.001**
Diabetes mellitus	1.544	0.114	4.68 (3.75; 5.85)	**< 0.001**
Chronic obstructive pulmonary disease	1.020	0.119	2.77 (2.19; 3.51)	**< 0.001**
Acid-related disorders	1.562	0.099	4.77 (3.93; 5.80)	**< 0.001**
Recent history of cancer (≤ 5 years)	1.536	0.171	4.65 (3.32; 6.50)	**< 0.001**
Rheumatoid arthritis	1.052	0.295	2.86 (1.60; 5.10)	**< 0.001**
Treatment				
ACE inhibitors	1.412	0.101	4.10 (3.37; 5.00)	**< 0.001**
ARBs	0.977	0.128	2.66 (2.07; 3.41)	**< 0.001**
Calcium channel blockers	1.350	0.114	3.86 (3.08; 4.83)	**< 0.001**
Beta-blockers	1.756	0.100	5.79 (4.76; 7.04)	**< 0.001**
Diuretics	1.867	0.100	6.47 (5.31; 7.87)	**< 0.001**
Anticoagulants / antithrombotic agents	1.747	0.111	5.74 (4.62; 7.13)	**< 0.001**
Statins	1.375	0.103	3.95 (3.23; 4.84)	**< 0.001**

Table S2. Characteristics of COVID-19 patients in comparison to general population of the Czech Republic

	COVID-19 patients N = 7,455	General population N = 10.6 million	P-value
Basic characteristics			
Men	46.7%	49.1%	**< 0.001**
Age, mean ± SD	47.2 ± 21.1	42.5 ± 23.1	**< 0.001**
Medical history			
Hypertension	20.4%	17.5%	**< 0.001**
Atrial fibrillation	3.4%	2.3%	**< 0.001**
History of stroke	2.5%	1.4%	**< 0.001**
History of MI or PCI	1.9%	1.5%	**0.011**
Chronic heart failure	3.3%	1.6%	**< 0.001**
Chronic kidney disease	4.2%	2.4%	**< 0.001**
Diabetes mellitus	8.7%	7.2%	**< 0.001**
Chronic obstructive pulmonary disease	10.0%	8.4%	**< 0.001**
Acid-related disorders	16.2%	11.7%	**< 0.001**
Recent history of cancer (≤5 years)	2.9%	2.1%	**< 0.001**
Rheumatoid arthritis	1.2%	0.9%	**0.003**
Treatment			
ACE inhibitors	15.1%	14.5%	0.100
ARBs	8.4%	7.6%	**0.009**
Calcium channel blockers	9.5%	8.8%	0.066
Beta-blockers	14.7%	12.0%	**< 0.001**
Diuretics	13.8%	11.6%	**< 0.001**
Anticoagulants / antithrombotic agents	8.7%	6.1%	**< 0.001**
Statins	14.1%	13.9%	0.701

P-value of binomial test (categorical variables) and P-value of one-sample t-test (continuous variables).

ACE = angiotensin converting enzyme, ARB = angiotensin II receptor blockers, MI = myocardial infarction, PCI = percutaneous coronary intervention
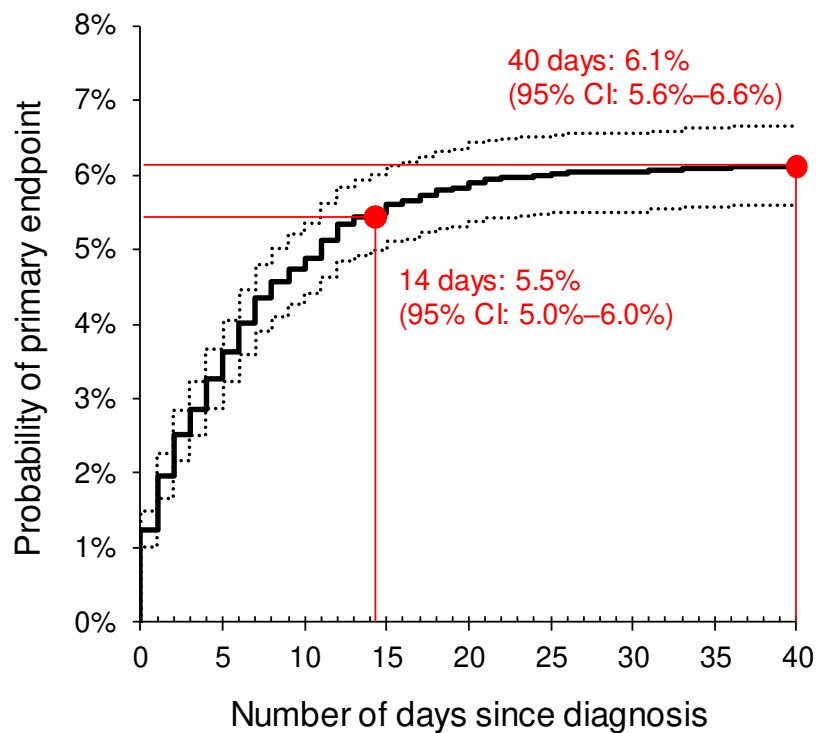
Table S3. Characteristics of COVID-19 patients by using drugs for acid-related disorders

	Using drugs N = 1,205	Not using drugs N = 6,250	P-value
Basic characteristics			
Men	524 (43.5%)	2 957 (47.3%)	0.015
Age, mean ± SD	62.6 ± 18.3	44.2 ± 20.2	< 0.001
Medical history			
Hypertension	542 (45.0%)	982 (15.7%)	< 0.001
Atrial fibrillation	125 (10.4%)	129 (2.1%)	< 0.001
History of stroke	91 (7.6%)	95 (1.5%)	< 0.001
History of MI or PCI	69 (5.7%)	69 (1.1%)	< 0.001
Chronic heart failure	138 (11.5%)	109 (1.7%)	< 0.001
Chronic kidney disease	158 (13.1%)	156 (2.5%)	< 0.001
Diabetes mellitus	222 (18.4%)	424 (6.8%)	< 0.001
Chronic obstructive pulmonary disease	271 (22.5%)	474 (7.6%)	< 0.001
Recent history of cancer (≤5 years)	93 (7.7%)	124 (2.0%)	< 0.001
Rheumatoid arthritis	39 (3.2%)	50 (0.8%)	< 0.001
Treatment			
ACE inhibitors	348 (28.9%)	781 (12.5%)	< 0.001
ARBs	217 (18.0%)	411 (6.6%)	< 0.001
Calcium channel blockers	253 (21.0%)	452 (7.2%)	< 0.001
Beta-blockers	422 (35.0%)	674 (10.8%)	< 0.001
Diuretics	399 (33.1%)	629 (10.1%)	< 0.001
Anticoagulants / antithrombotic agents	270 (22.4%)	375 (6.0%)	< 0.001
Statins	369 (30.6%)	682 (10.9%)	< 0.001

P-value of Fisher's exact test (categorical variables) and P-value of Mann-Whitney U test (continuous variables).

ACE = angiotensin-converting enzyme, ARBs = angiotensin II receptor blockers, MI = myocardial infarction,

PCI = percutaneous coronary intervention

Figure S1. Time to analysed endpoint (severe condition)

Figure S2. Calibration curves of the multivariable logistic regression model (A) and its simplified version (B)