Supplementary material

Supplementary Table 1. Distribution of ABO blood groups among SARS-CoV-2 infected individuals classified according to job in the healthcare sector, age or cardiovascular disease.

Blood group	Healthcare personnel N (%)		Age N (%)		Cardiovascular disease N (%)		N
	Yes	*No*	≥ *60 years*	< 60 years	Yes	No	
O	721 (38.85)	2,130 (38.27)	978 (37.44)	1,873 (38.94)	290 (35.02)	2,561 (38.84)	2,851
A	833 (44.88)	2,463 (44.25)	1,207 (46.21)	2,089 (43.43)	389 (46.98)	2,907 (44.09)	3,296
B	220 (11.85)	677 (12.16)	301 (11.52)	596 (12.39)	110 (13.29)	787 (11.94)	897
AB	82 (4.42)	296 (5.32)	126 (4.82)	252 (5.24)	39 (4.71)	339 (5.14)	378
Sum	1,856	5,566	2,612	4,810	828	6,594	7,422
	7,422		7,422		7,422		

N = number.

Supplementary Table 2. Adjustment of the reference population to account for over-representation of non-western immigrants among COVID-19 patients in Denmark.

	O	A	B	AB	RhD pos	RhD neg
Pakistan[1]	35.60%	24.10%	33.10%	7.20%	91.10%	8.90%
Morocco[2]	46.22%	33.82%	15.43%	4.53%	90.50%	9.50%
Somalia[3]	58.78%	26.28%	12.52%	2.42%	82.33%	17.67%
Turkey[4]	33.70%	42.50%	15.80%	8.00%	89.00%	11.00%
Iraq[5]	37.16%	32.47%	23.84%	6.53%	91.73%	8.27%
Weighted distribution[a]	39.51%	33.44%	20.64%	6.41%	89.31%	10.69%
Reference population	41.70%	42.38%	11.46%	4.47 %	84.31%	15.69%
Adjusted reference population[b]	41.45%	41.49%	12,40%	4.66%	84.81%	15.19%
Confirmed SARS-CoV-2 infected	38.41%	44.41%	12.09%	5.09%	84.92%	15.08%
Relative risk for SARS-CoV-2 when compared with adjusted reference population	0.88	1.13	0.97	1.10	1.01	

[a]*Weighted by the representation (number of cases) of the respective nationalities among COVID-19 patients in Denmark as given in reference [6]. The five nationalities accounted for 49% of all registered COVID-19 cases among non-western immigrants and first generation descendants and the weighted distribution was used as representative for all non-western immigrants.*

[b]*Weighted by the total representation of non-western immigrants among COVID-19 patients and the total representation of the rest of the population (non-immigrants and western immigrants) after correction of the Danish patient blood group distribution for the presumed contribution (9%) from non-western immigrants.*[6]
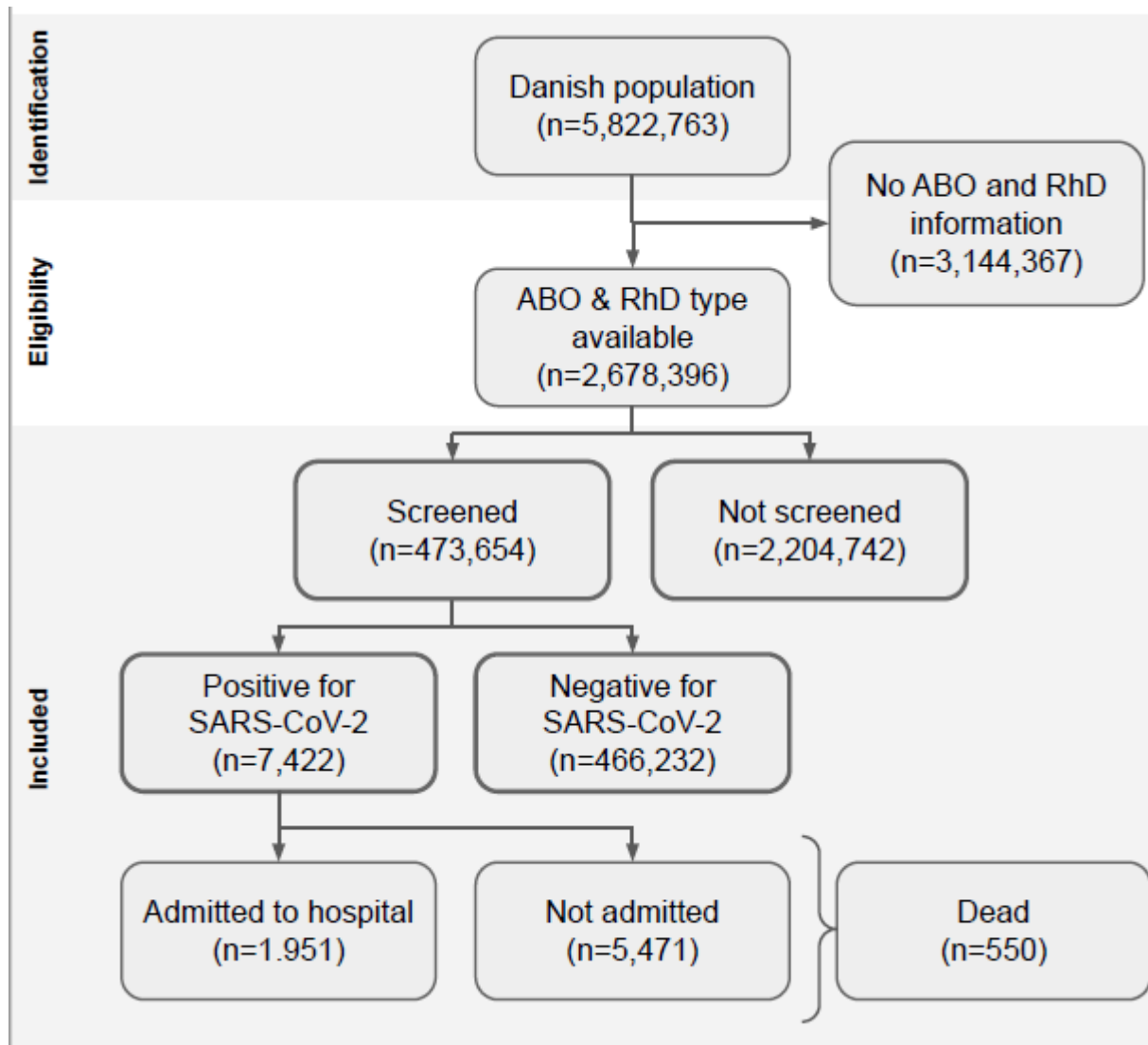
Supplementary Figure 1.

Test strategy and individuals tested for SARS-CoV-2 in Denmark till August 2020
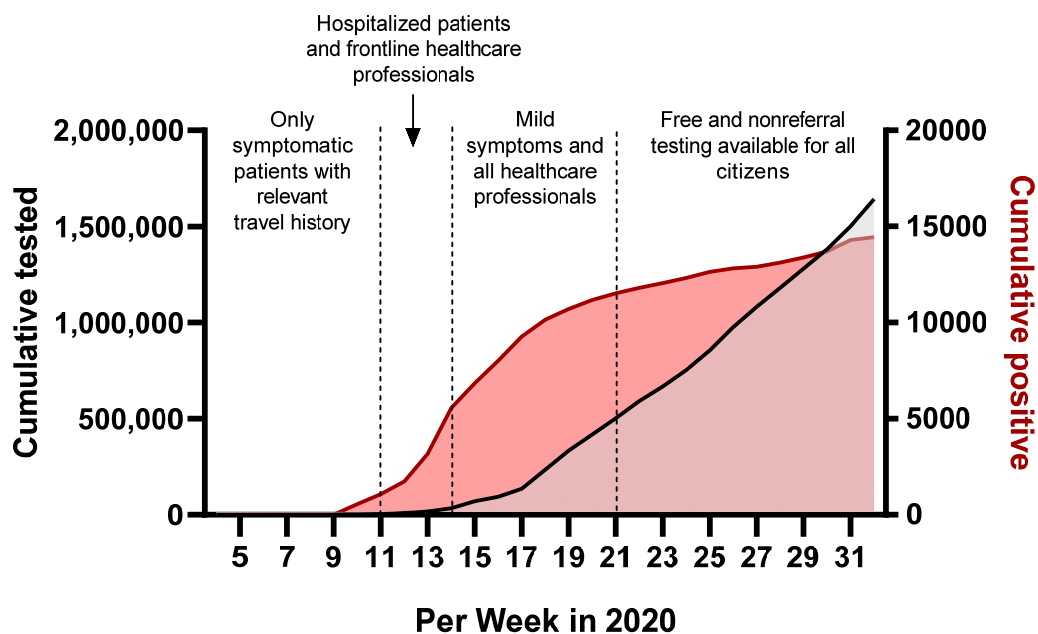

Supplementary Figure 1. Test strategy and individuals tested for SARS-CoV-2 in Denmark until 10th of August 2020. Data from https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning.

Supplementary Figure 2.

Supplementary Figure 2. Flow chart of included cases.

Supplementary Figure 3.

Tested individuals with ABO blood type stratified by age, and sex
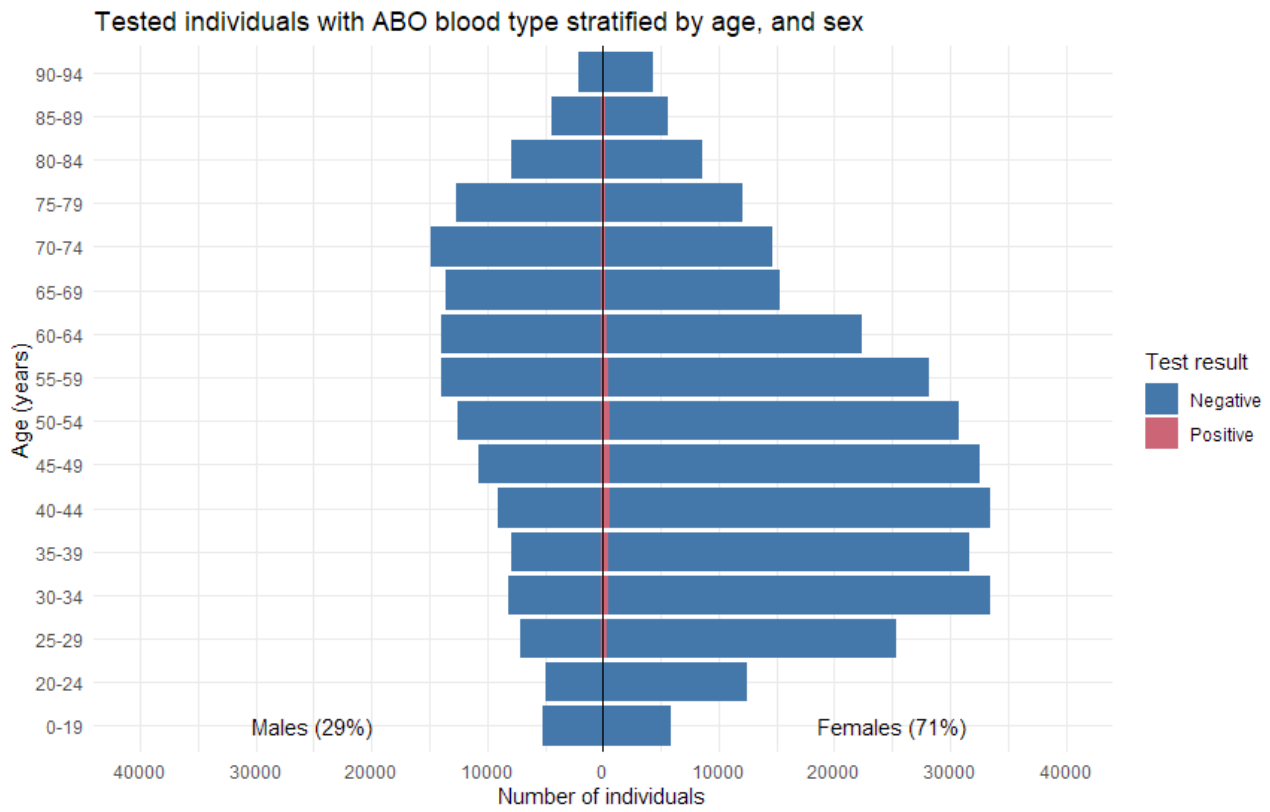
Supplementary Figure 3. SARS-CoV-2 tested individuals with known ABO blood group stratified by age and sex.

References

1. Ahmed M, Memon A, Iqbal K. Distribution pattern of ABO and Rhesus blood groups among different ethnic population of Karachi. *J Pak Med Assoc*. 2019;69(10):1474-1478.

2. Habti N, Nourichafi N, Benchemsi N. [ABO polymorphism in blood donors in Morocco]. *Transfus Clin Biol*. 2004;11(2):95-97. doi:10.1016/j.tracli.2004.01.002

3. Sistonen P, Koistinen J, Aden Abdulle O. Distribution of blood groups in the East African Somali population. *Hum Hered*. 1987;37(5):300-313. doi:10.1159/000153722

4. Kangrubu.com. Kan Gruplar. Accessed July 22, 2020. https://web.archive.org/web/20100529080457/http://www.kangrubu.com/default.asp?sayfa=kan_gruplari

5. Jaff MS. ABO and rhesus blood group distribution in Kurds. *J Blood Med*. 2010;1:143-146.

6. Statens Serum Institut. Epidemiologisk trend og fokus: Herkomst (etnicitet). Published online May 7, 2020. Accessed May 26, 2020. https://files.ssi.dk/COVID19-epi-trendogfokus-07052020-4eu7