Supplemental Materials:
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Supplemental Table 1. Signs on presentation. Vital signs from the first 24 hours after hospital admission among all individuals and those who developed severe disease or progressed to death. For temperature, shown are number febrile (%), for all other values, median (standard deviation) over the first 24 hours are shown. Statistics for categorical variables are by Chi-square, and by t-test for continuous variables.

	Overall cohort			Severe/death cohort		
	All ages			All ages		
	Females N=1280	Males N=1346	P value	Females N=360	Males N=483	P value
Temp >38.1 °C	383 (31%)	566 (42%)	<0.001	141 (39%)	263 (55%)	<0.001
Pulse beats/ minute	85 (15)	86 (15)	>0.9	88 (17)	89 (17)	0.05
Respiratory rate breaths/minute	20.4 (4.3)	21.1 (5.0)	<0.001	23.2 (5.9)	24.1 (6.2)	0.03
FiO_2	0.30 (0.17)	0.33 (0.20)	<0.001	0.45 (0.25)	0.49 (0.26)	0.03
SpO_2:FiO_2 ratio	384 (119)	364 (130)	<0.001	275 (129)	257 (132)	0.05

Abbreviations: Temp: temperature; FiO2: fraction of inspired oxygen; SpO2: oxygen saturation.

Supplemental Table 2. WHO category at 6 hours and 24 hours after admission stratified by age and sex. Cells are the absolute number of events at each time and the within-sex percentage of that status. Distribution of WHO status was significantly different by sex at both timepoints when all ages were considered together, p<0.001 by Fisher's exact at 6 hours and p<0.001 at 24 hours by Chi-square. Age stratified data is shown to illustrate the numbers and distribution of status across the cohort. Abbreviations. Mod: moderate.

Age group, years	WHO status at 6 hours						WHO status at 24 hours					
	Females, n (%)			Males, n (%)			Females, n (%)			Males, n (%)		
	Mild/ Mod	Severe	Death	Mild/ Mod	Severe	Death	Mild/ Mod	Severe	Death	Mild/ Mod	Severe	Death
18-49	414 (96%)	17 (3.9%)	0 (0%)	370 (90%)	43 (10%)	0 (0%)	407 (94%)	23 (5.3%)	1 (0.2%)	348 (84%)	64 (15%)	1 (0.2%)
50-64	267 (89%)	33 (11%)	0 (0%)	352 (84%)	67 (16%)	1 (0.2%)	244 (81%)	54 (18%)	2 (0.7%)	316 (75%)	101 (24%)	3 (0.7%)
65-74	177 (86%)	29 (14%)	1 (0.5%)	218 (81%)	51 (19%)	0 (0%)	159 (77%)	46 (22%)	2 (1.0%)	196 (73%)	65 (24%)	8 (3.0%)
>75	301 (88%)	38 (11%)	3 (0.9%)	216 (89%)	26 (11%)	2 (0.8%)	279 (82%)	50 (15%)	13 (3.8%)	203 (83%)	34 (14%)	7 (2.9%)
All ages	1,159 (91%)	117 (9.1%)	44 (0.3%)	1,156 (86%)	187 (14%)	3 (0.2%)	1,089 (85%)	173 (14%)	18 (1.4%)	1,063 (79%)	264 (20%)	19 (1.4%)

Supplemental Table 3. Baseline comorbid conditions and health behaviors by sex. Statistics by Chi-square except for Charlson score which was done by t-test. Abbreviations: BMI: Body mass index.

	Females N=1,269	Males N=1,339	P value
BMI category*			
<30	505 (47%)	707 (63%)	<0.001
30-35	243 (23%)	235 (21%)	
35-40	156 (15%)	108 (9.6%)	
>40	163 (15%)	79 (7.0%)	
Comorbid conditions			
Congestive heart failure	241 (19%)	276 (21%)	0.3
Cardiovascular disease	489 (38%)	560 (42%)	0.08
Hypertension			
Complicated	291 (23%)	376 (28%)	0.003
Uncomplicated	682 (53%)	725 (54%)	0.8
Liver disease	143 (11%)	183 (14%)	0.07
Asthma	231 (18%)	114 (8.5%)	<0.001
Chronic pulmonary disease	389 (30%)	287 (21%)	<0.001
Chronic kidney disease	225 (18%)	311 (23%)	<0.001
Diabetes			
Type I	23 (1.8%)	24 (1.8%)	>0.9
Type II	462 (36%)	509 (38%)	0.4
Cancer	140 (11%)	138 (10%)	0.7
Transplant	29 (2.3%)	40 (3.0%)	0.3
HIV	14 (1.1%)	25 (1.9%)	0.2
Health behaviors			
Alcohol use#	209 (19%)	391 (34%)	<0.001
Smoking status%			
Current Smoker	44 (3.8%)	112 (9.5%)	<0.001
Former Smoker	246 (21%)	295 (25%)	
Never Smoker	868 (75%)	773 (66%)	

Supplemental Table 4. Laboratory values. Initial values (median of all values for each individual from -48 to +48 hours around the time of admission) and the peak (or nadir for ALC) values for the entire hospital course shown by sex for all individuals with values available. Number of samples for each measure (n) is indicated below the median value. Statistics with Wilcoxon rank sum tests, median and interquartile ranges for all values are shown.

	Median initial values		P value	Peak or nadir values		P value
	Females N=1,258	Males N=1,340		Females N=1,267	Males N=1,343	
Laboratory measure	Median (IQR)	Median (IQR)		Median (IQR)	Median (IQR)	
Absolute lymphocyte count, × 10^3 cells/μL	1.1 (0.82, 1.6)	1.0 (0.71, 1.4)	<0.001	0.87 (0.53, 1.3)	0.74 (0.45, 1.1)	<0.001
	n=1238	n=1330		n=1255	n=1339	
CRP, mg/dL	6 (2, 11)	8 (4, 15)	<0.001	8 (3, 16)	11 (6, 20)	<0.001
	n=1032	n=1093		N=1110	n=1204	
ESR, mL/hour	48 (30, 71)	47 (28, 77)	0.8	59 (36, 93)	62 (32, 95)	0.9
	n=282	n=297		n=377	n=424	
Neutrophil:lymphocyte ratio	4.1 (2.5, 7.0)	4.9 (3.0, 8.4)	<0.001	3.9 (2.5, 6.2)	4.7 (3.0, 7.3)	<0.001
	n=1,238	n=1330		n=1255	n=1339	
D-dimer, mg/L FEU	0.91 (0.51, 2.0)	0.88 (0.50, 1.9)	0.8	1 (1, 3)	1 (1, 4)	0.06
	n=1042	1105		n=1128	1209	
Ferritin, ng/mL	348 (156, 735)	767 (413, 1,362)	<0.001	463 (200, 945)	954 (510, 1,739)	<0.001
	n=989	n=1046		n=1083	n=1169	
IL-6, pg/mL	33 (15, 74)	53 (22, 122)	<0.001	39 (17, 99)	60 (23, 154)	<0.001
	n=468	n=504		n=570	n=641	

Supplemental Table 5. Laboratory values for individuals who had severe disease or death. Initial values (median of all values for each individual from -48 to +48 hours around the time of admission) and the peak (or nadir for ALC) values for the entire hospital course shown by sex for individuals with severe disease with values available. Number of samples for each measure (n) is indicated below the median value. Statistics with Wilcoxon rank sum tests, median and interquartile ranges for all values are shown.

Laboratory measure	Median initial values (Severe Only)		P value	Peak or nadir values (Severe Only)		P value
	Females N=358	Males N=482		Females N=360	Males N=483	
	Median (IQR)	Median (IQR)		Median (IQR)	Median (IQR)	
Absolute lymphocyte count, × 10³ cells/µL	0.91 (0.63, 1.34)	0.86 (0.59, 1.17)	0.03	0.55 (0.33, 0.86)	0.50 (0.28, 0.75)	0.004
	n=354	n=481		n=360	n=483	
CRP, mg/dL	10 (5, 18)	13 (8, 21)	<0.001	16 (8, 24)	19 (12, 27)	<0.001
	n=296	n=406		n=329	n=449	
ESR, mL/hour	52 (34, 91)	66 (40, 93)	0.2	68 (42, 109)	82 (50, 111)	0.2
	n=94	n=115		n=144	n=182	
Neutrophil:lymphocyte ratio	6 (4, 11)	8 (5, 12)	0.02	5.9 (3.8, 10.2)	6.4 (4.1, 9.9)	0.3
	n=354	n=481		n=360	n=483	
D-dimer, mg/L FEU	1.3 (0.7, 3.0)	1.3 (0.7, 2.9)	>0.9	4 (2, 8)	4 (2, 9)	0.4
	n=287	n=413		n=325	n=452	
Ferritin, ng/mL	570 (282, 1,135)	979 (556, 1,613)	<0.001	895 (434, 1,608)	1,344 (768, 2,735)	<0.001
	n=286	n=397		n=323	n=450	
IL-6, pg/mL	84 (36, 183)	116 (57, 221)	0.04	118 (42, 271)	134 (70, 420)	0.02
	n=137	n=215		n=197	n=291	