

Supplemental online content for:

## Outcomes of COVID-19 in Patients With a History of Cancer and Comorbid Cardiovascular Disease

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**eTable 1. Biomarkers**

	Total Cohort				Cancer Cohort		
	Total n (%)	History of Cancer		P Value	History of CVD		P Value
		Yes n (%)	No n (%)		Yes n (%)	No n (%)	
Patients	2,476 (100)	195 (8)	2,281 (92)		82 (42)	113 (58)	
Nadir WBC count, median (range), K/ $\mu$ L	0.42 (0.01–1.80)	0.33 (0.01–1.25)	0.43 (0.01–1.80)	.76 <sup>a</sup>	0.26 (0.01–1.09)	0.47 (0.01–1.25)	.2 <sup>a</sup>
Missing	1,689 (68)	90 (46)	1,599 (70)		32 (39)	58 (51)	
Lymphopenia, n (%)	5 (0)	1 (1)	4 (0)	.51 <sup>b</sup>	—	1 (1)	>.99 <sup>b</sup>
Missing	1,583 (64)	75 (38)	1,508 (66)		24 (29)	51 (45)	
Peak D-dimer, median (range), $\mu$ g/mL	885 (200–20,000)	865 (200–18,630)	898 (200–20,000)	.92 <sup>a</sup>	840 (200–18,630)	890 (200–3,908)	.76 <sup>a</sup>
Missing	1,960 (79)	125 (64)	1,835 (80)		49 (60)	76 (67)	
Peak ferritin, median (range), ng/mL	730 (16–30,506)	786 (24–11,202)	728 (16–30,506)	.54 <sup>b</sup>	795 (76–11,202)	786 (24–4,240)	.50 <sup>a</sup>
Missing	1,885 (76)	111 (57)	1,774 (78)		40 (49)	71 (63)	
Peak CRP, median (range), mg/mL	116.3 (0.8–620.9)	118.6 (3.6–410.5)	116.0 (0.8–620.9)	.90 <sup>a</sup>	120.6 (20.6–410.5)	112.0 (3.6–408.1)	.63 <sup>a</sup>
Missing	1,799 (73)	96 (49)	1,703 (75)		34 (41)	62 (55)	
Peak troponin, median (range), ng/mL	0.03 (0.01–230.19)	0.04 (0.01–230.19)	0.02 (0.01–34.28)	<.001 <sup>a</sup>	0.04 (0.01–230.19)	0.03 (0.01–1.41)	.21 <sup>a</sup>
Missing	1,816 (73)	103 (53)	1,713 (75)		36 (44)	67 (59)	
Peak IL-6, median (range), pg/mL	19.5 (3.2–577.0)	14.5 (5.0–445.0)	19.5 (3.2–577.0)	.75 <sup>a</sup>	445 (445–445)	6 (5–30)	.29 <sup>b</sup>
Missing	2,388 (96)	187 (96)	2,201 (96)		80 (98)	107 (95)	
Peak creatinine, median (range), mg/dL	1.2 (0.5–20.5)	1.3 (0.6–9.8)	1.1 (0.5–20.5)	.058 <sup>a</sup>	1.6 (0.7–9.8)	1.2 (0.6–5.6)	.011 <sup>a</sup>
Missing	1,571 (63)	74 (38)	1,497 (66)		24 (29)	50 (44)	

Abbreviations: CRP, C-reactive protein; CVD, cardiovascular disease.

<sup>a</sup>Wilcoxon rank-sum test.

<sup>b</sup>Fisher exact test.

<b>eTable 2. Presence of Severe Disease Based on Cancer Characteristics</b>				
	Total n (%)	Severe Disease <sup>a</sup>		P Value <sup>b</sup>
		Yes n (%)	No n (%)	
Patients	195 (100)	39 (20)	156 (80)	
Lung cancer				.02
Yes	22 (11)	9 (41)	13 (59)	
No	173 (89)	30 (17)	143 (83)	
Active cancer or therapy within last 6 mo				.001
Yes	48 (25)	18 (37.5)	30 (62.5)	
No	147 (75)	21 (14)	126 (86)	
Metastatic disease				.29
Yes	25 (13)	7 (28)	18 (72)	
No	170 (87)	32 (19)	138 (81)	
Hematologic cancer				.78
Yes	22 (11)	5 (23)	17 (77)	
No	173 (89)	34 (20)	139 (80)	
History of radiation therapy				.24
Yes	58 (30)	15 (26)	43 (74)	
No	137 (70)	24 (18)	113 (82)	
History of cardiotoxic anticancer therapy				.11
Yes	17 (9)	6 (35)	11 (65)	
No	178 (91)	33 (19)	145 (81)	

<sup>a</sup>Severe disease is defined as the composite of need for mechanical ventilation, shock, or death. Cardiotoxic anticancer therapies included anthracyclines, trastuzumab, and androgen deprivation therapy.

<sup>b</sup>Fisher exact test.

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## **eAppendix 1. Definitions of Individual Endpoints**

Shock was defined as vasopressor use  $\geq 3$  hours to maintain organ perfusion. Cardiac troponin I  $> 0.08$  ng/mL was considered abnormal. Encephalopathy was defined as acute or subacute global, functional alteration of mental status due to systemic factors. Arrhythmia was defined as either new-onset arrhythmia (supraventricular tachycardia, atrial fibrillation, ventricular arrhythmia) requiring intervention or worsening of preexisting arrhythmia that required additional intervention. Chronic kidney disease was defined as kidney damage or glomerular filtration rate  $< 60$  mL/min/1.73 m<sup>2</sup> for  $\geq 3$  months irrespective of cause, and/or the presence of albuminuria, defined as albumin-to-creatinine ratio  $> 30$  mg/g in 2 of 3 spot urine specimens or history of kidney transplant.