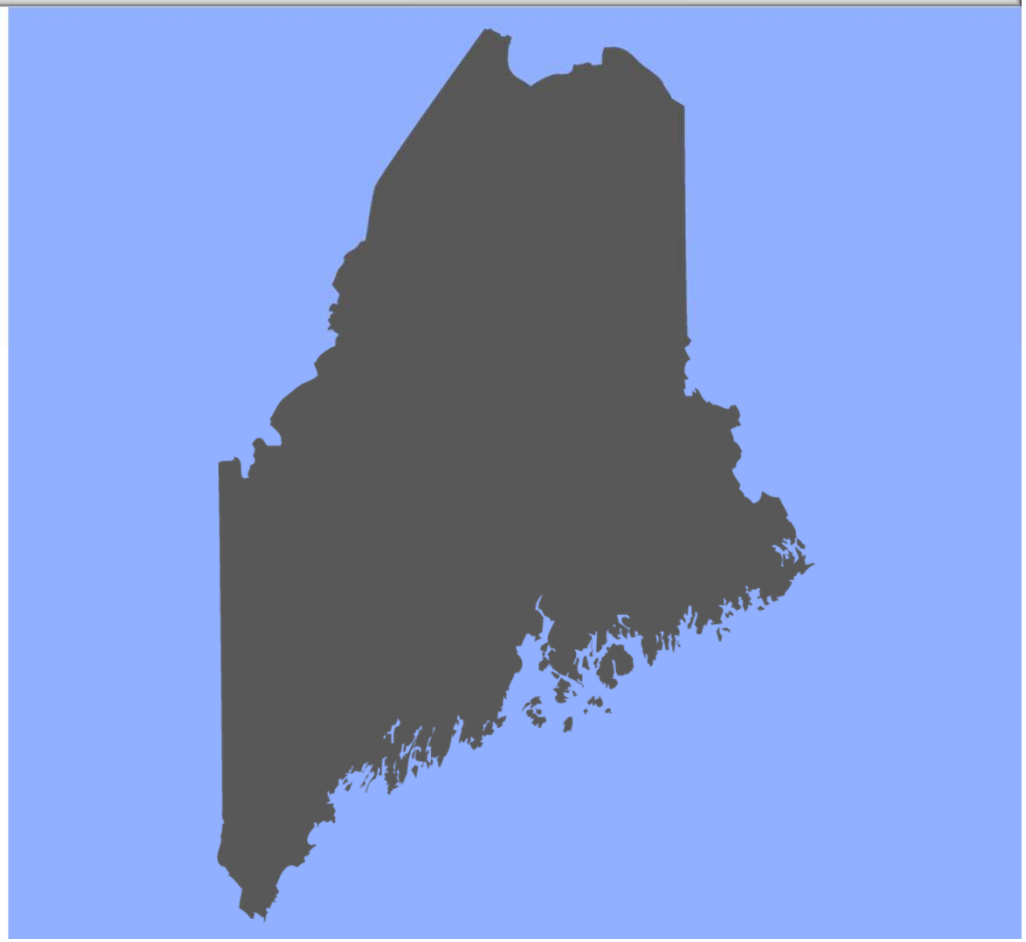
Indicators of Severe COVID-19 Illness



February 26, 2021

Overview

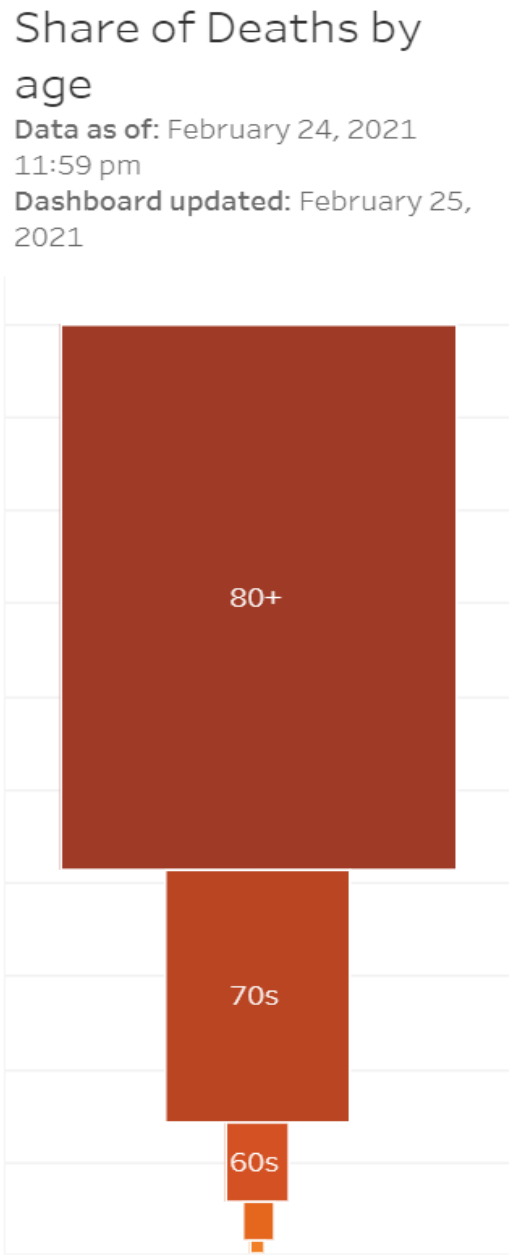
- Maine has focused on vaccinating those at the highest risk of death or severe disease.
- Scientific data suggest that age is a stronger indicator of death or severe disease than most underlying medical conditions.
- An age-based approach to COVID-19 vaccination also has operational benefits.
- This science-based approach means that 201,000 higher-risk Maine people (60+) will be eligible for COVID-19 vaccines next week.

Nationwide, older adults are more likely to require hospitalization and/or die from COVID

	Hospitalization[1]	Death[2]
18-29 years	Comparison Group	Comparison Group
30-39 years	2x higher	4x higher
40-49 years	3x higher	10x higher
50-64 years	4x higher	30x higher
65-74 years	5x higher	90x higher
75-84 years	8x higher	220x higher
85+ years	13x higher	630x higher

Source: U.S.CDC

Older Mainers account for the majority of COVID deaths



Source: Maine CDC

Age is a stronger indicator of mortality than most medical conditions

Variable	OR (95% CI)
Age, y	
18-44	1 [Reference]
≥75	35.72 (22.99-55.52)
65-74	16.54 (10.60-25.82)
55-64	7.74 (4.95-12.10)
45-54	3.89 (2.40-6.30)
Schizophrenia spectrum disorder	2.67 (1.48-4.80)
Male sex	1.69 (1.43-2.00)
Heart failure	1.60 (1.24-2.06)
Other race vs White race[b]	1.47 (1.19-1.80)
White race vs Black race	1.41 (1.10-1.81)
Hypertension	1.38 (1.12-1.70)
Asian race vs White race	1.28 (0.94-1.75)
Diabetes	1.27 (1.07-1.51)
Never smoker vs current smoker	1.27 (0.84,1.93)
Chronic kidney disease	1.23 (0.98-1.55)
Mood disorder diagnosis	1.14 (0.87-1.49)
White race vs mixed race	1.08 (0.60-1.97)
Cancer	1.01 (0.85-1.22)
Former smoker vs never smoker	1.00 (0.93-1.22)
Myocardial infarction	1.00 (0.81-1.22)
Anxiety disorder	0.96 (0.65-1.41)
Chronic obstructive pulmonary disease	0.93 (0.77-1.12)

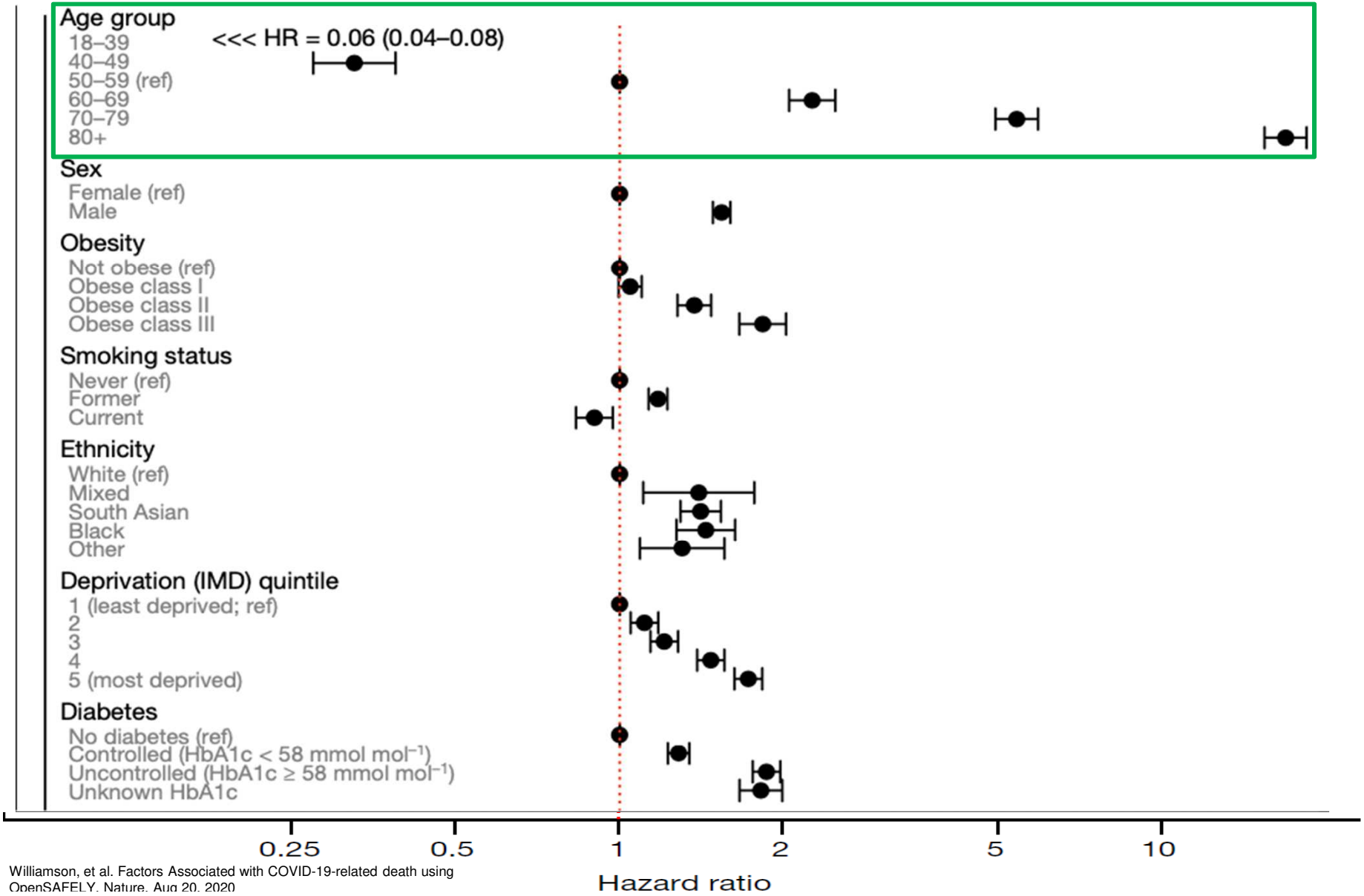
Nemani et al. "Association of Psychiatric Disorders With Mortality Among Patients With COVID-19" *JAMA Psych*, Jan 27, 2021

Compared to other conditions, age is a stronger indicator of death

Age (Years)[a]		
20 – 39	0.21 (0.17 - 0.27)	<0.001
40 – 49	0.47 (0.39 - 0.57)	<0.001
50 – 59	REF	REF
60 – 69	1.72 (1.53 - 1.94)	<0.001
70 – 79	2.70 (2.40 - 3.03)	<0.001
80+	4.26 (3.82 - 4.75)	<0.001
Elixhauser Comorbidities, Present-on-Admission[b]		
Congestive heart failure	1.16 (1.11 - 1.21)	<0.001
Pulmonary circulation disorders	1.04 (0.93 - 1.16)	0.48
Chronic pulmonary disease	1.02 (0.99 - 1.06)	0.21
Liver Disease	1.09 (1.01 - 1.18)	0.03
Renal failure	1.12 (1.07 - 1.17)	<0.001
Malignancy[c]	1.30 (1.22 - 1.38)	<0.001

Goodman, et al. "Impact of Sex and Metabolic Comorbidities on COVID-19 Mortality Risk Across Age Groups: 66,646 Inpatients Across 613 U.S. Hospitals."

Age is a strong indicator of mortality compared to other medical conditions



Williamson, et al. Factors Associated with COVID-19-related death using OpenSAFELY. Nature. Aug 20, 2020

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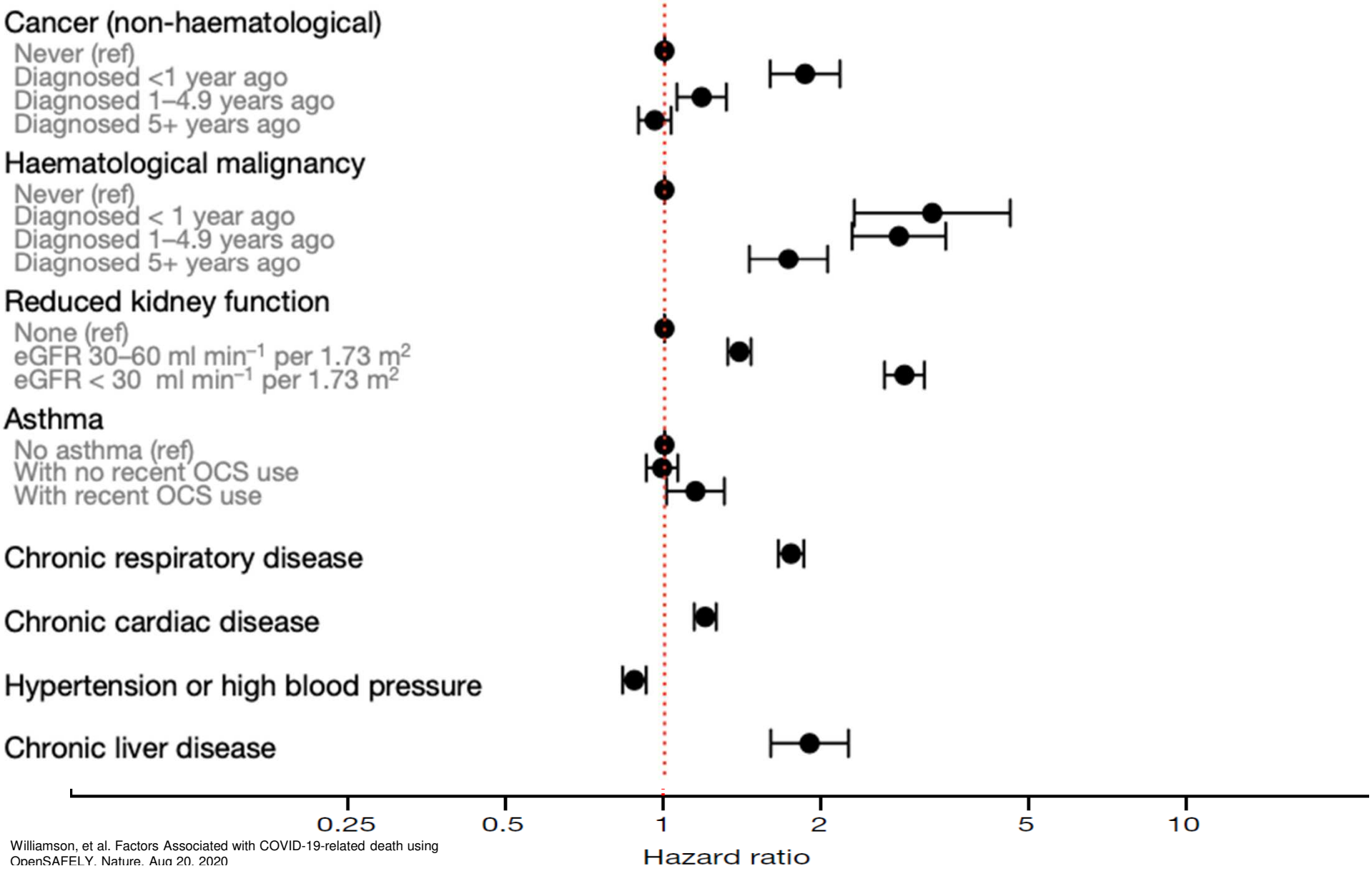
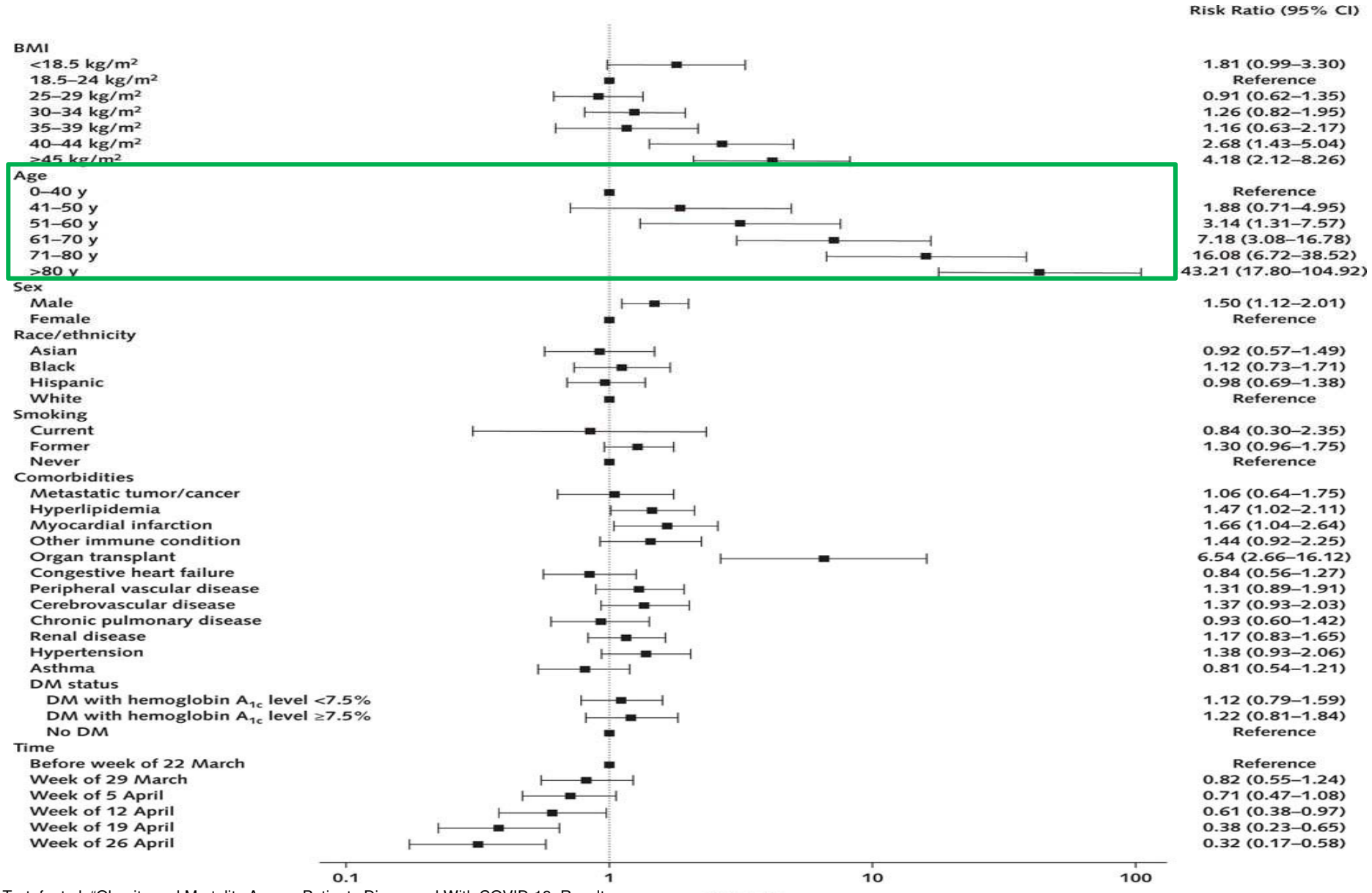


Williamson, et al. Factors Associated with COVID-19-related death using OpenSAFELY. Nature. Aug 20, 2020

Age is a strong indicator of death from COVID



Tartof, et al. "Obesity and Mortality Among Patients Diagnosed With COVID-19: Results From an Integrated Health Care Organization." Annals of Int Med. Nov 17, 2020.