SUPPLEMENTAL APPENDIX

Association Between Antecedent Statin Use and Decreased Mortality in Hospitalized Patients with COVID-19

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Supplemental Table 1. Mortality rate among patients discharged within 24 hours

Among 1508 patients who were in the hospital for less than 24 hours, 267 patients died. Differences in mortality rates by statin use in this excluded population.

	Statin Users	Non-Statin Users
Death	60/397 (15.1%)	207/1111 (18.6%)

Chi-squared p-value = 0.13

Supplemental Table 2. ICD-10-CM codes used to classify baseline conditions

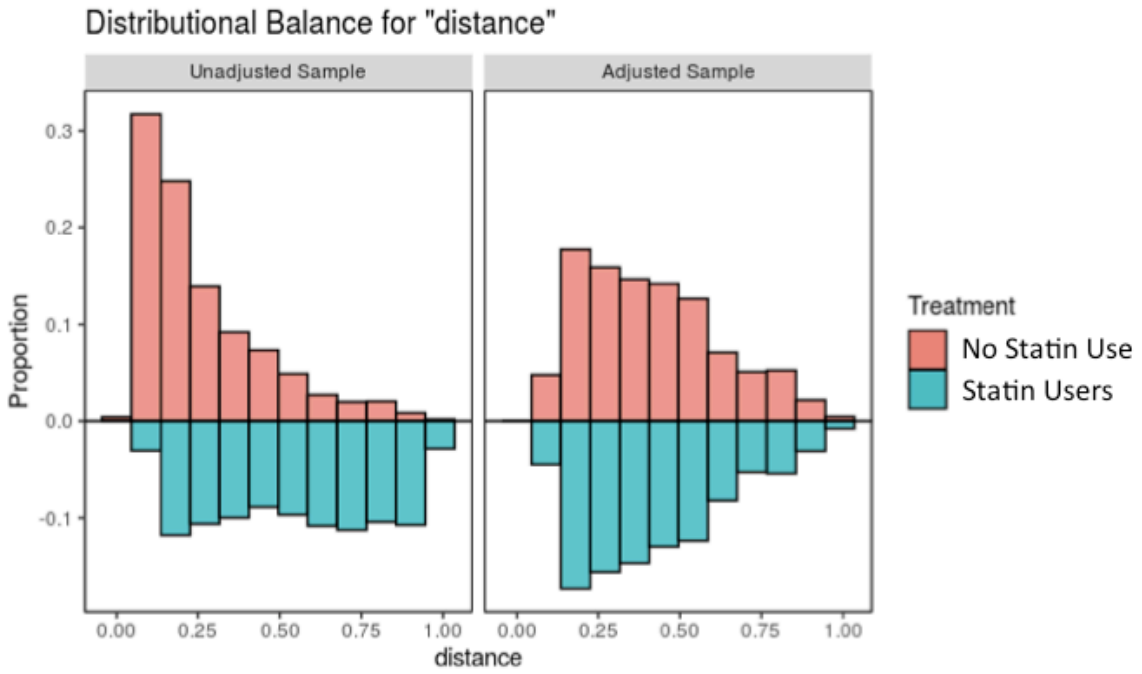
Comorbidity	**ICD-10-CM codes**
Hypertension	I10-13, I15-16, O10.1-10.4, O10.9
Diabetes	E08 -11, E13, O24.4
Coronary Artery Disease	I21-25, Z98.61, Z95.1
Heart Failure	I09.81, I11.0, I13.0, I50, I42
Chronic Lung Disease	J40-47, J60, J66, J67.2, J67.8-67.9, J68.4, J84, G47.3
Stroke/transient ischemic attack	I60-64, I69, H34.1, G45
Atrial arrhythmias	I47.1, I47.9, I48.0-48.4, I48.91, i48.92, I49.9
Chronic Kidney Disease	N03, N07-08, N11, N14, N18-19, N29, I12, I13, Z99.2, E10.22, E11.22, E13.22, E08.22, O10.3, D63.1
Chronic Liver Disease	K70 – K77

Supplemental Table 3. Missing laboratory markers in the propensity-matched cohort

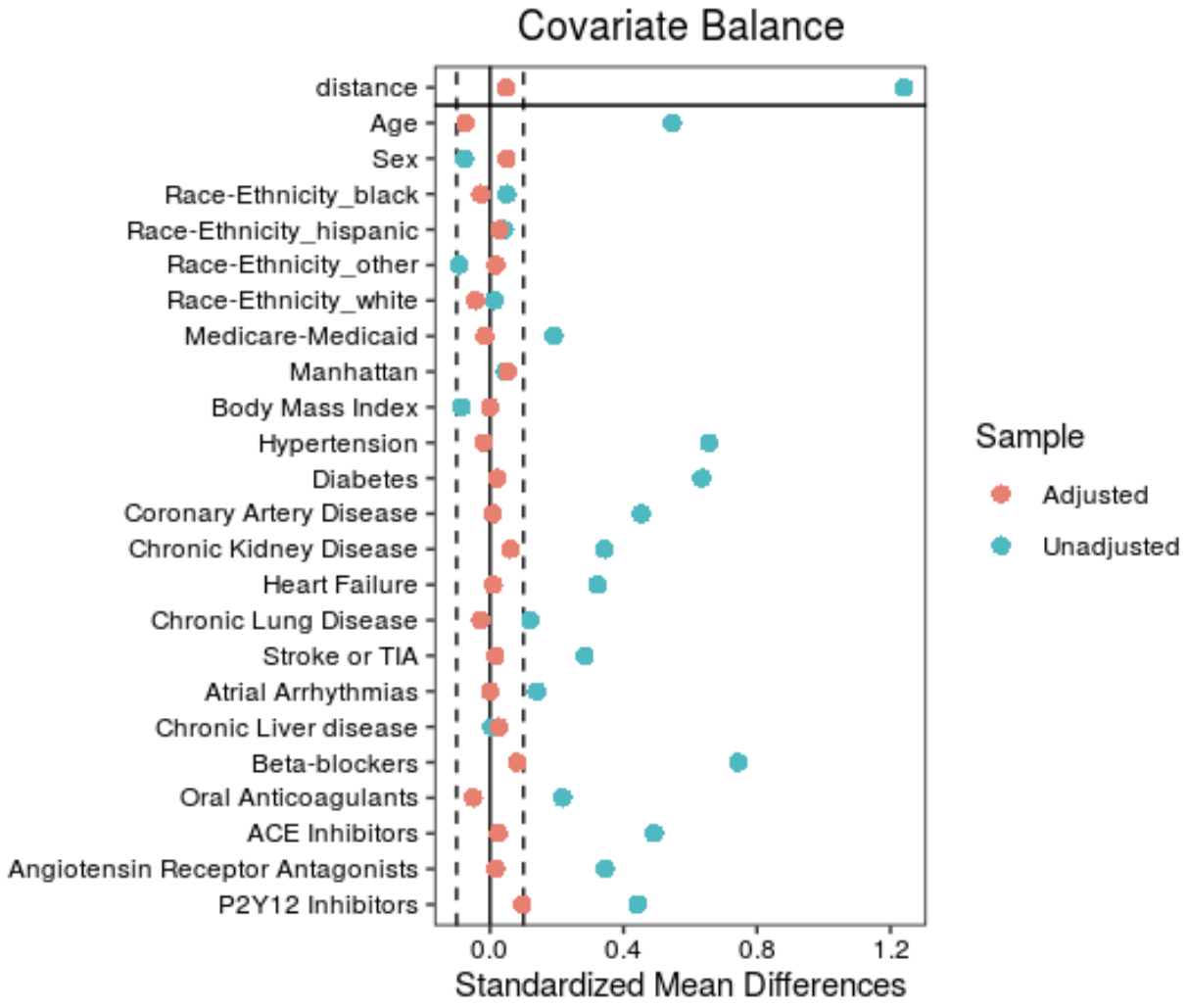
Laboratory marker	Statin Users (648)	Non-statin Users (648)
White blood cell count	1 (0.1%)	4 (0.6%)
Platelet count	6 (0.9%)	8 (1.2%)
Creatinine	0	0
AST	7 (1.0%)	10 (1.5%)
ALT	11 (1.7%)	12 (1.9%)
Hs-Troponin	34 (5.2%)	47 (7.3%)
Albumin	5 (0.8%)	11 (1.7%)
D-dimer	92 (14.2%)	111 (17.1%)
Ferritin	38 (5.9%)	59 (9.1%)
ESR	80 (12.3%)	74 (11.4%)
CRP	38 (5.9%)	43 (6.6%)

ALT = alanine aminotransferase; AST = aspartate aminotransferase; CRP = C-reactive protein; ESR = erythrocyte sedimentation rate; hs-Troponin = high sensitivity Troponin T; IQR = interquartile range

Supplemental Figure 1. Distribution of the estimated propensity score for antecedent statin use, among patients who did and did not actually receive the treatment

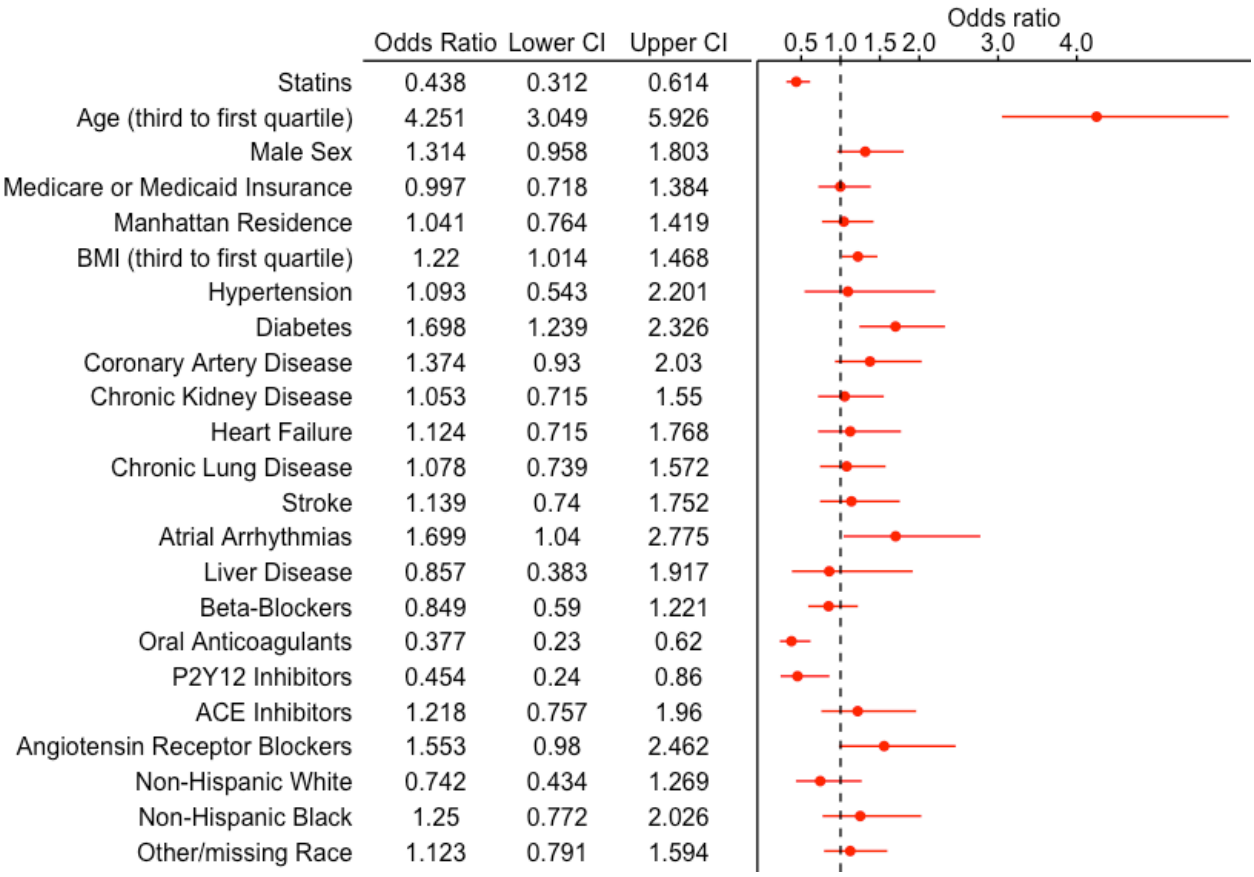


Supplemental Figure 2. Standardized mean differences in the unmatched and matched sample

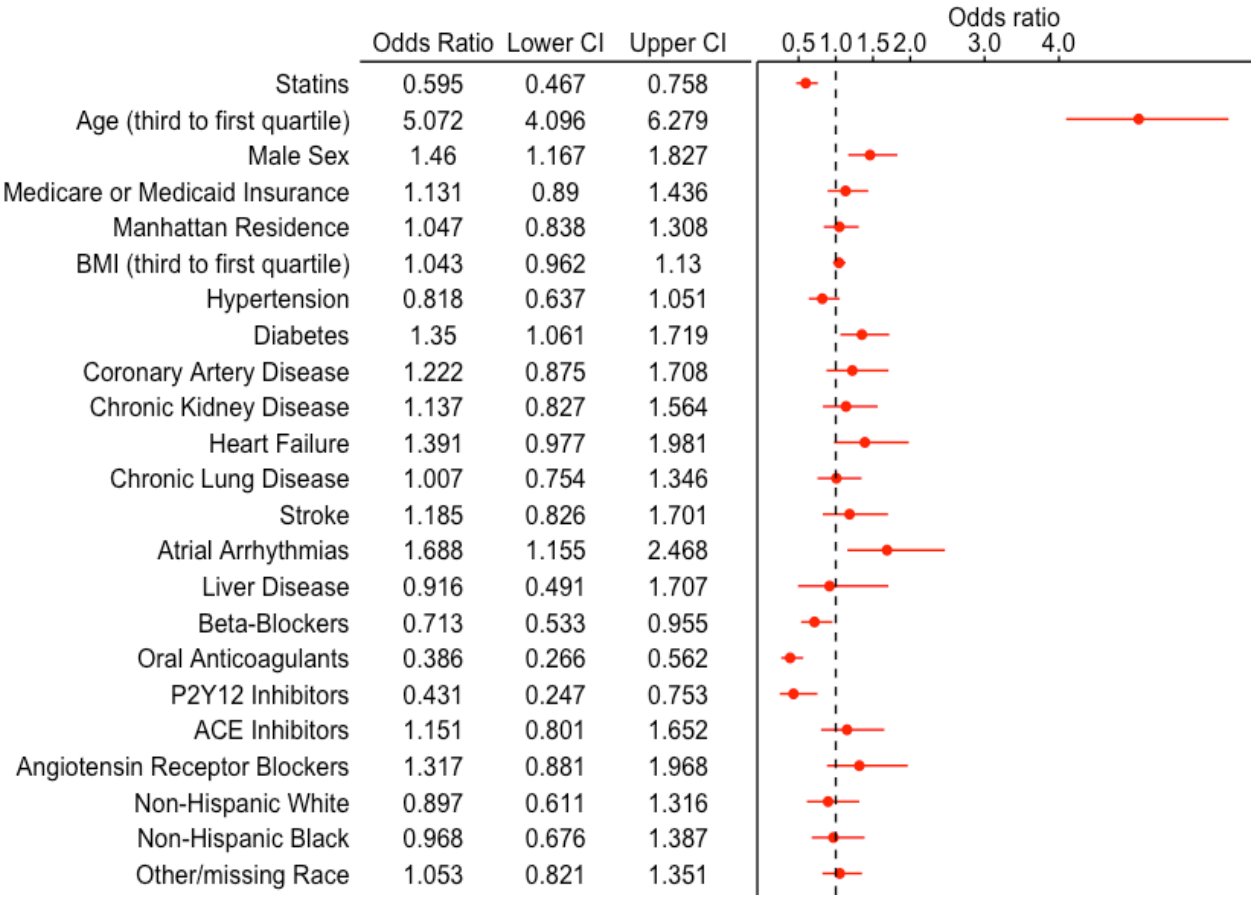


Supplemental Figure 3. Multivariable regression to examine association of antecedent statin use with primary endpoint (in-hospital mortality within 30 days) in study sample restricted to patients with history of hypertension, coronary artery disease and stroke or transient ischemic attack

Forest plot demonstrating the odds ratio (OR) and 95% confidence interval (CI) (N = 1516 independent patients)



Supplemental Figure 4. Multivariable regression to examine association of statin use (modified definition)* with primary endpoint (in-hospital mortality within 30 days)
Forest plot demonstrating the odds ratio (OR) and 95% confidence interval (CI) (N = 2626 independent patients)



*In this analysis, patients were classified as statin users if they were either prescribed outpatient statin use per the electronic medical record or received statins during hospitalization

Supplemental Figure 5. Multivariable regression to examine association of inpatient statin use with primary endpoint (in-hospital mortality within 30 days)
Forest plot demonstrating the odds ratio (OR) and 95% confidence interval (CI) (N = 2626 independent patients)