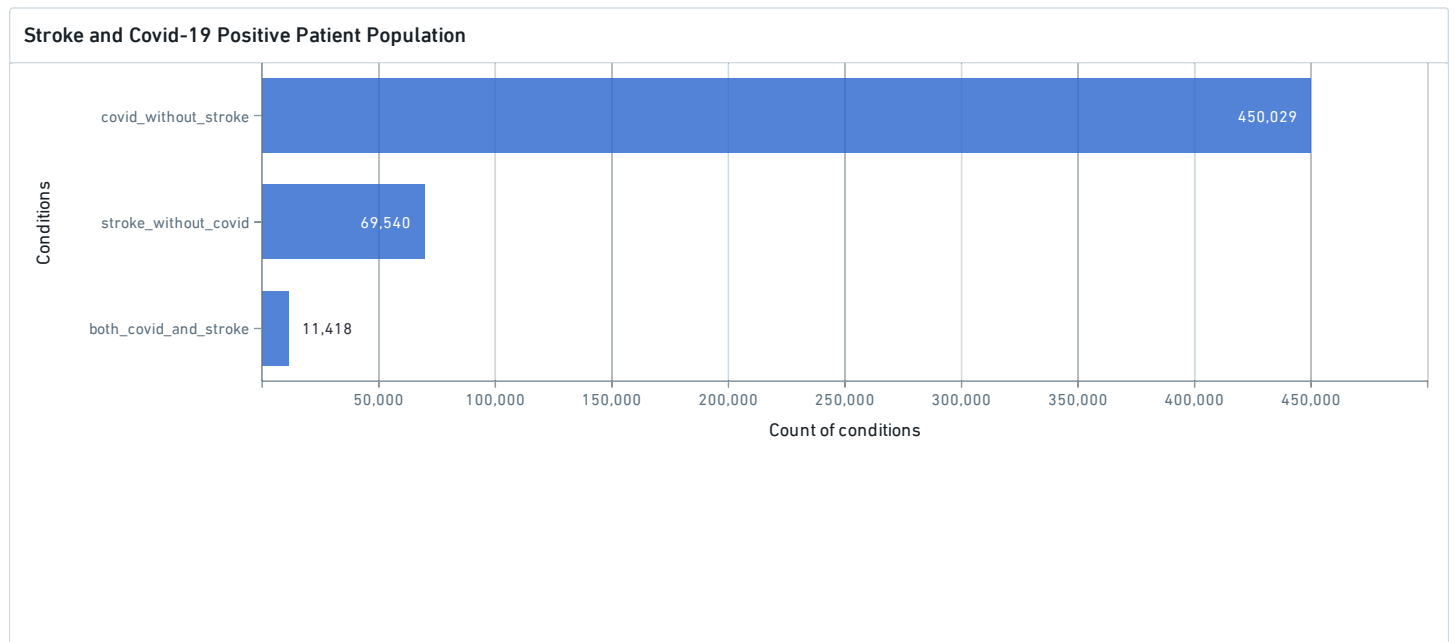
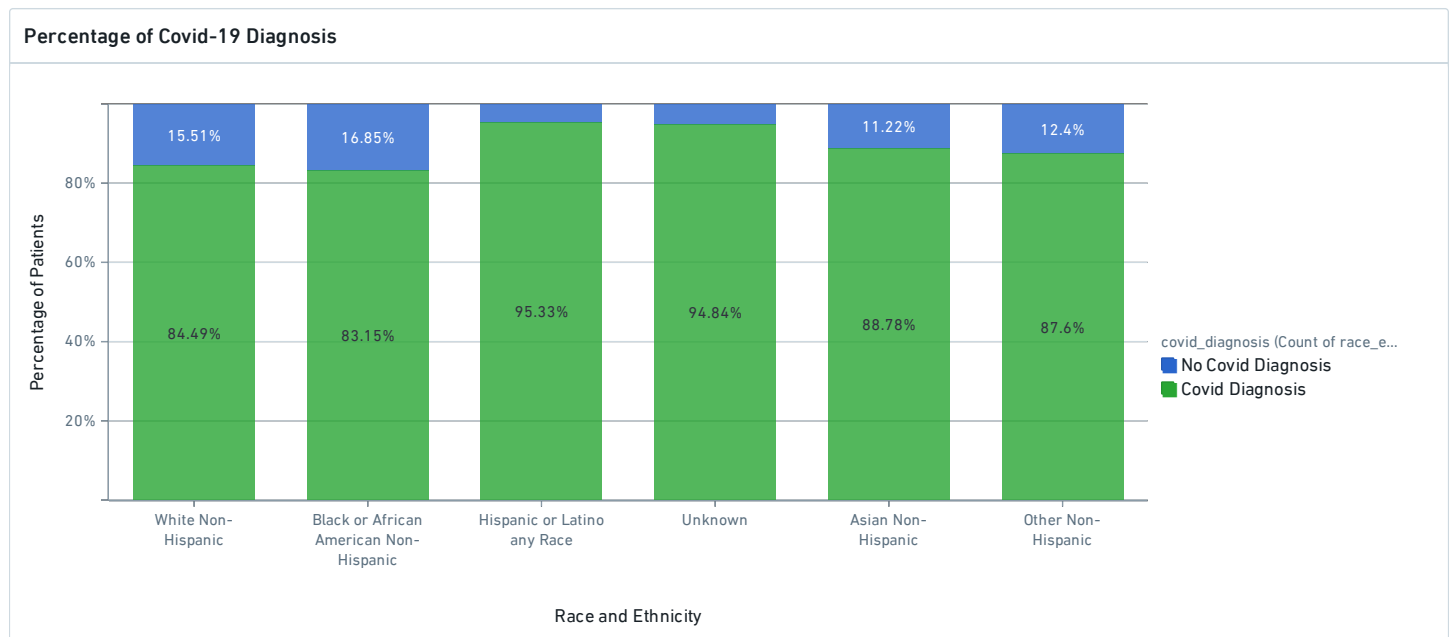


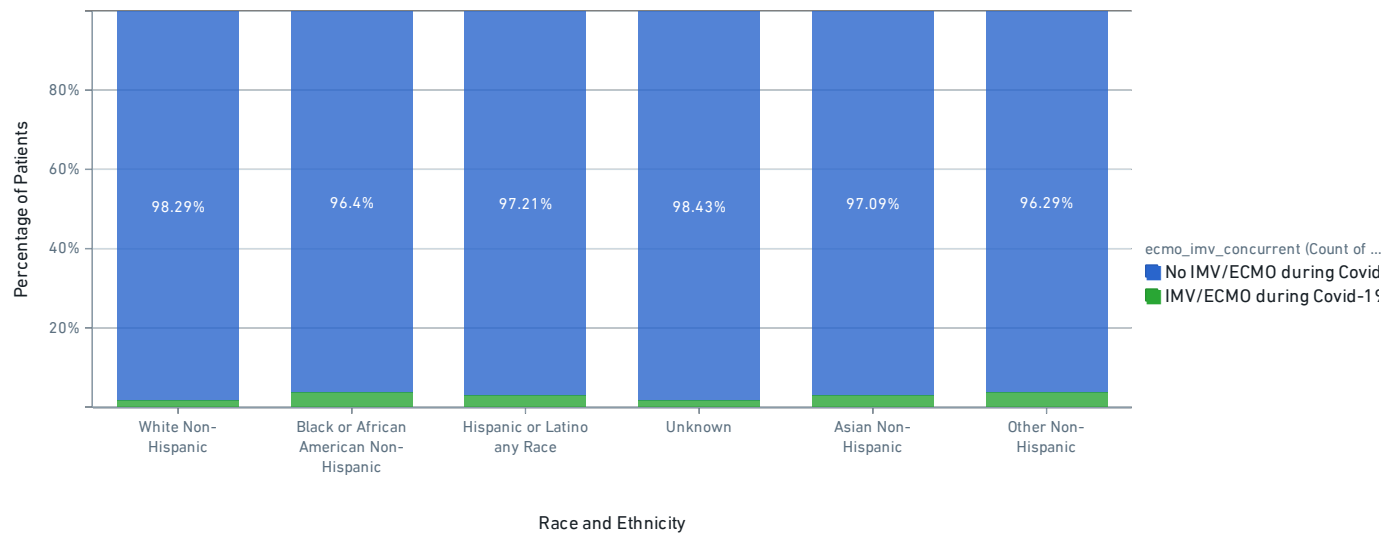


This dataset is a subset of all N3C data and consists of 530,987 patients, all of which had either been diagnosed with Covid-19, had a stroke, or both.



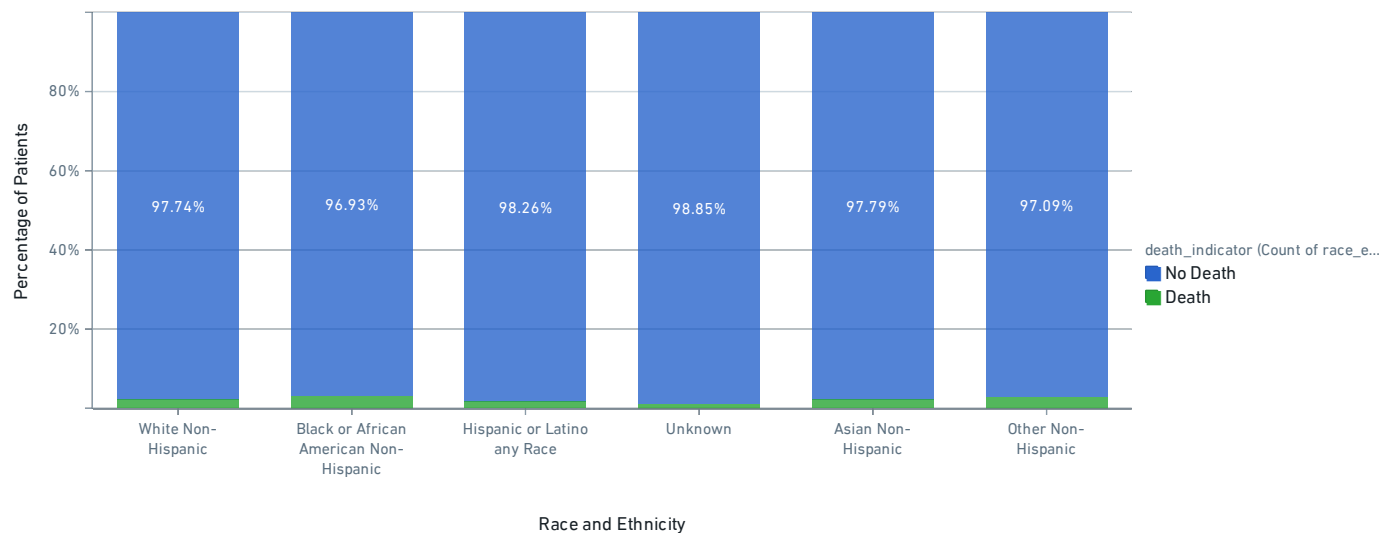
In this stroke and Covid-19 dataset, this graph shows the percentage of Covid-19 diagnosis within each race and ethnicity group.

IMV/ECMO Procedure Percentage in Covid-19 Population



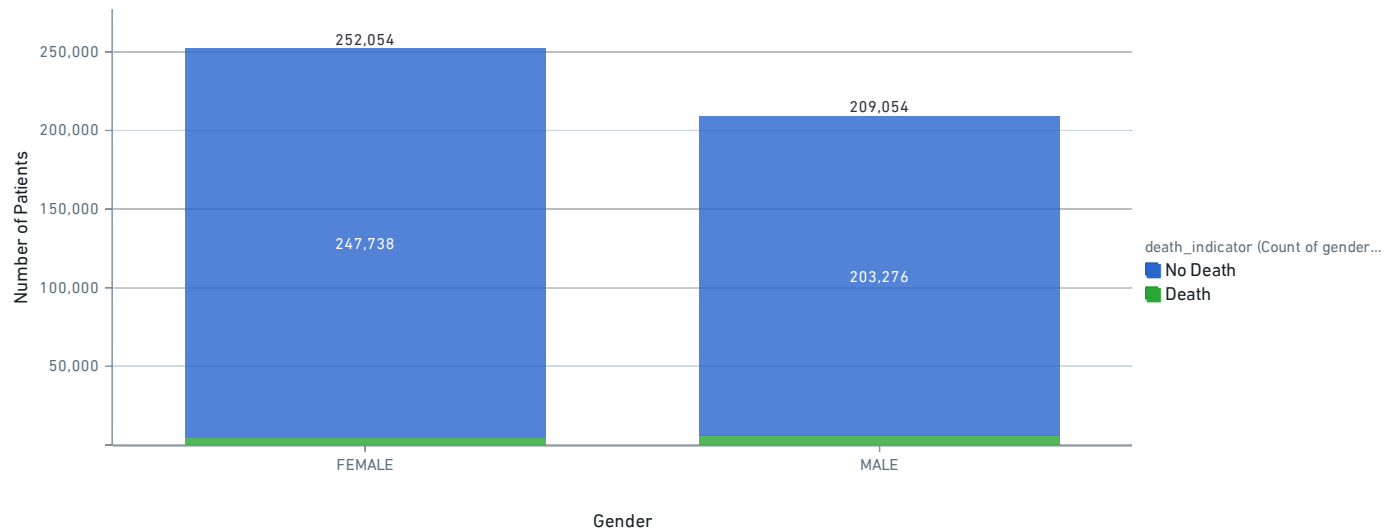
Out of the 530,987 patients in this dataset, 461,447 have had at least 1 Covid-19 diagnosis. The group of Covid-19 diagnosed patients are charted here. The green portion of each bar shows the percentage of patients that received IMV/ECMO within 2 days before or 6 weeks after their initial Covid-19 diagnosis for each race and ethnicity.

Death in Covid-19 Population in each Race and Ethnicity



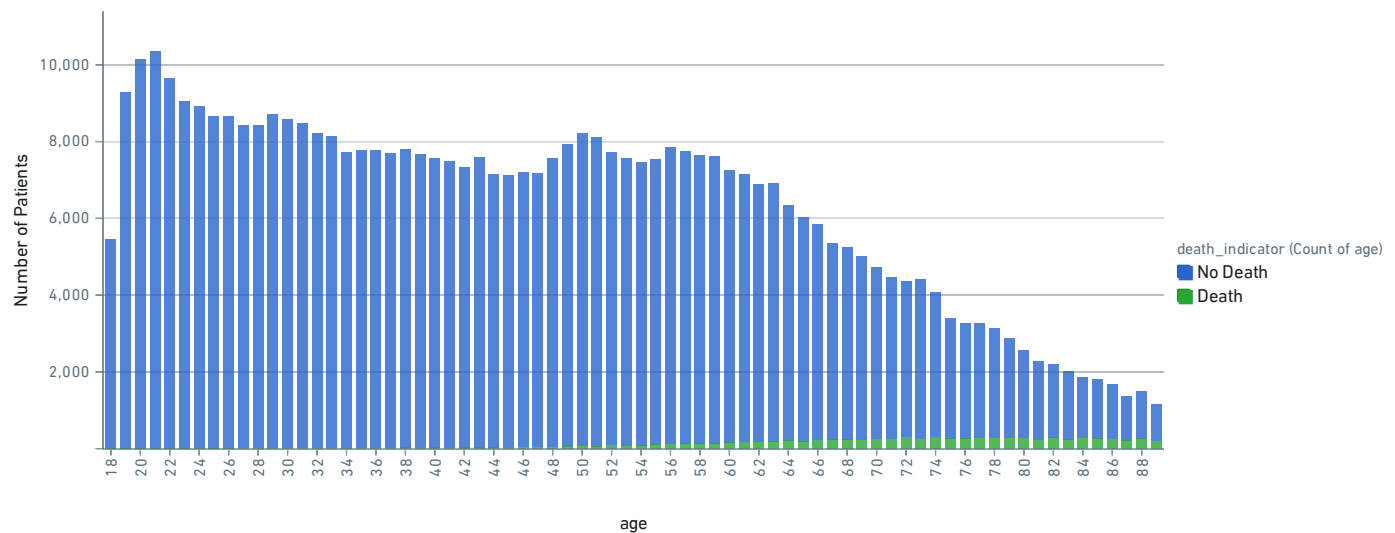
Out of the 530,987 patients in this dataset, 461,447 have had at least 1 Covid-19 diagnosis. The green portion of each bar shows the percentage of patients that died in each race and ethnicity.

Death in Covid-19 Population in each Gender



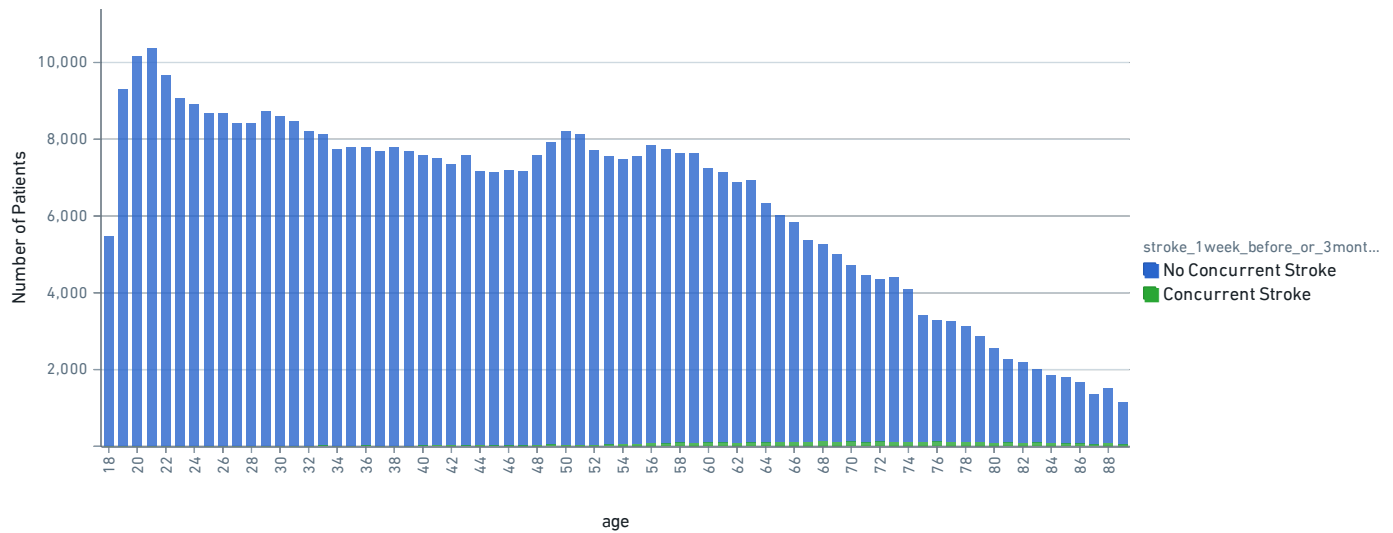
Out of the 530,987 patients in this dataset, 461,447 have had at least 1 Covid-19 diagnosis. Patients without gender recorded are left out of this chart. The green portion of each bar shows the number of patients that died in each gender.

Age Distribution of Death in Covid-19 Population



The age distribution of the Covid-19 population is plotted here where green portion of the bars indicate patients who have died.

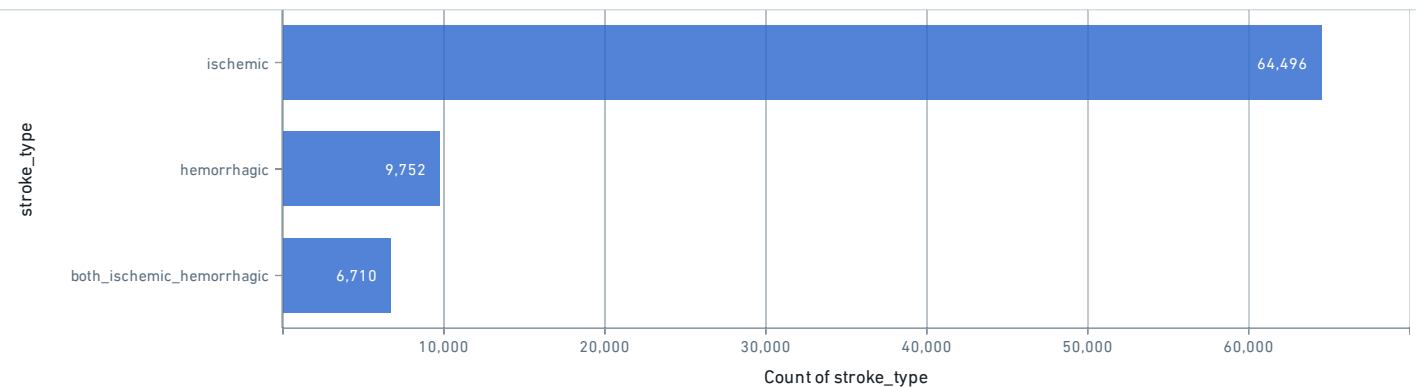
Age Distribution of Concurrent Stroke in Covid-19 Population



The age distribution of the Covid-19 population is plotted here where green portion of the bars indicate patients who had a stroke concurrent* with their covid-19 diagnosis.

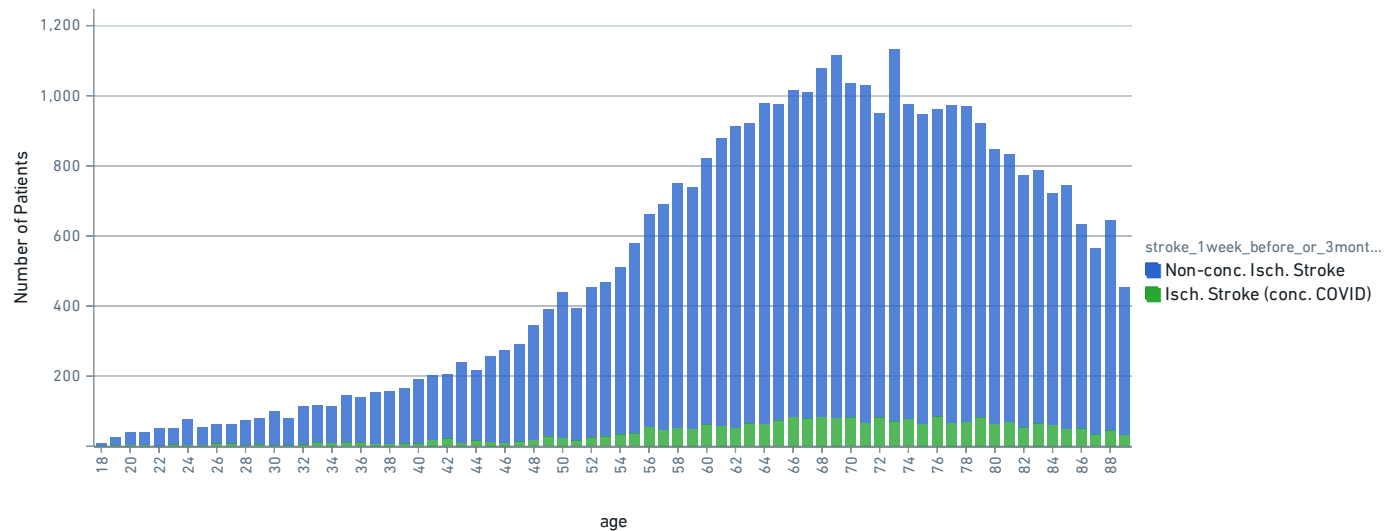
*Concurrent is defined as having a stroke 1 week before or 3 months after their first Covid-19 diagnosis.

Type of Stroke in Stroke Patient Population



Of the 530,987 patients in the dataset, 450,029 of them had at least 1 Covid-19 diagnosis, but no instance of a stroke. The remaining 80,958 are broken down in this chart by type of stroke.

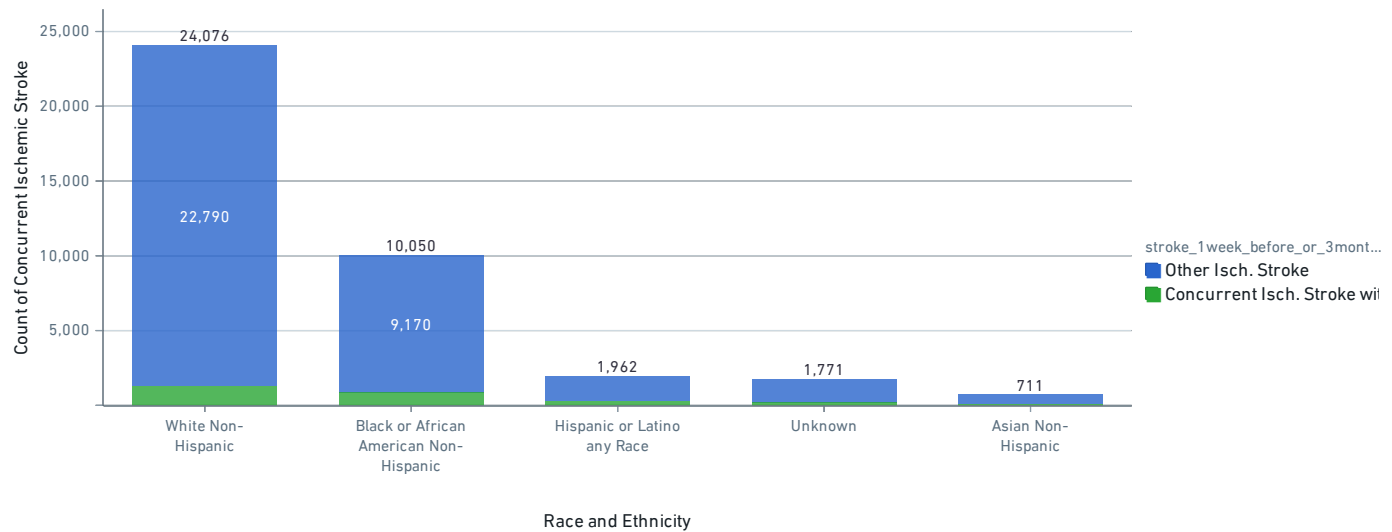
Age Distribution of Ischemic Stroke Patients



The dataset is subsetting by patients who had an ischemic stroke and had any stroke admission. For each age, the green part of the bar indicates the number of patients with ischemic stroke concurrent* with a Covid-19 diagnosis. The blue portion of the bar indicates the number of nonconcurrent ischemic stroke patients.

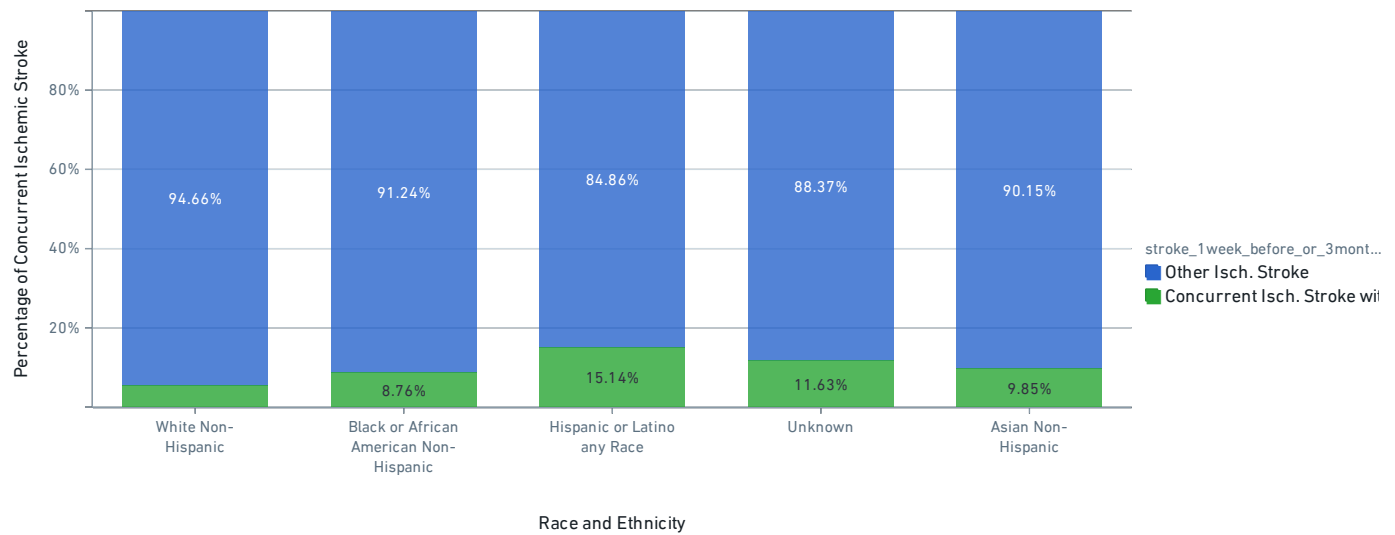
*Concurrent is defined as having a stroke 1 week before or 3 months after their first Covid-19 diagnosis.

Count of Ischemic Stroke Concurrent with Covid by Race and Ethnicity



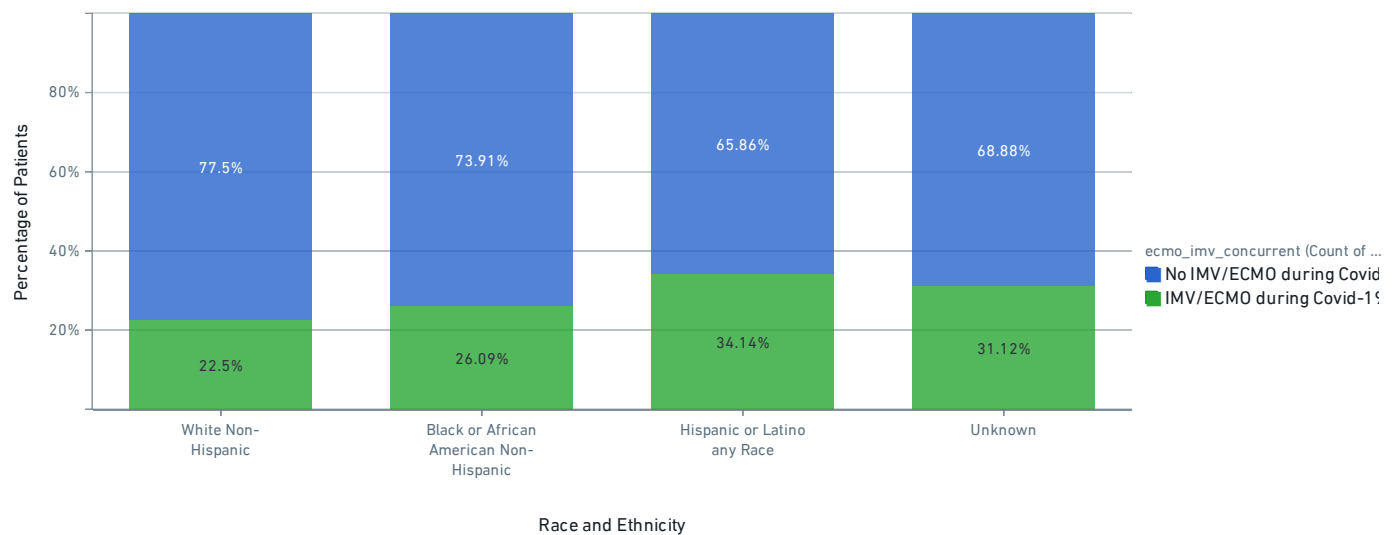
For each race and ethnicity category, ischemic stroke patients are split by whether their stroke was concurrent with Covid-19 (green) or not (blue).

Percentage of Ischemic Stroke Patients Concurrent with Covid-19



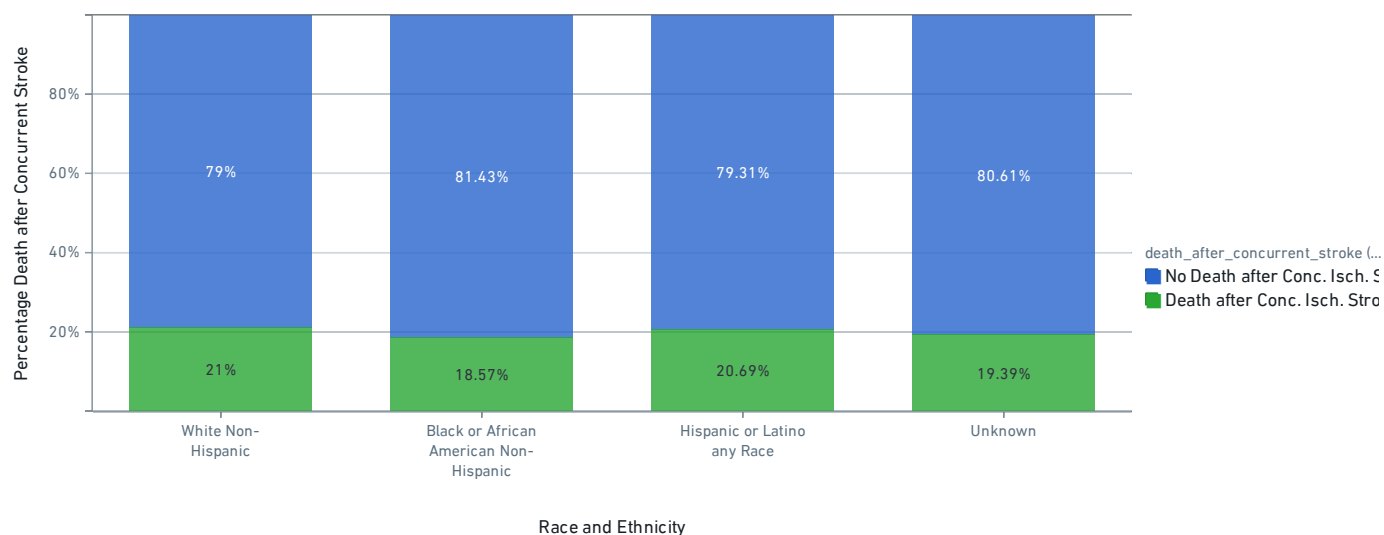
For each race and ethnicity category, percentages are shown for concurrent ischemic stroke patients (green) and non-concurrent ischemic stroke (blue).

Percentage of Patients on IMV or ECMO during Covid-19 Concurrent Ischemic Stroke



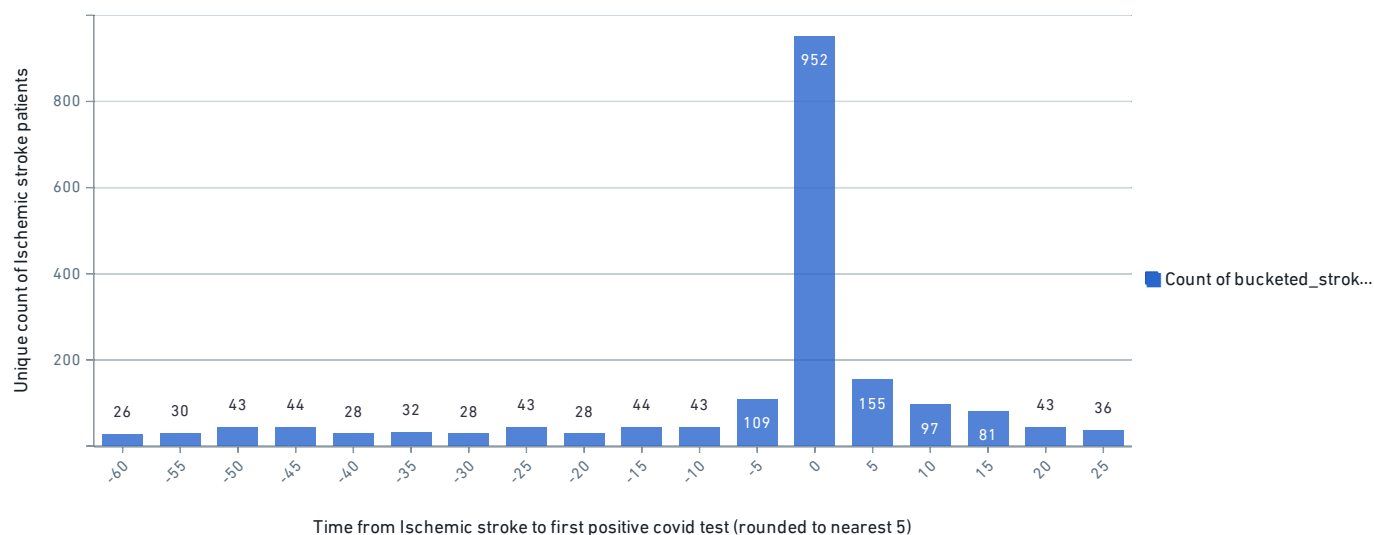
Of the concurrent ischemic stroke patients, percentages of those on IMV/ECMO are highlighted in green while blue indicates concurrent ischemic stroke patients not having been on IMV/ECMO. IMV/ECMO procedures are counted if they occurred within 2 days or 6 weeks after their first Covid-19 diagnosis.

Percentage of Patient Death after Concurrent Ischemic Stroke



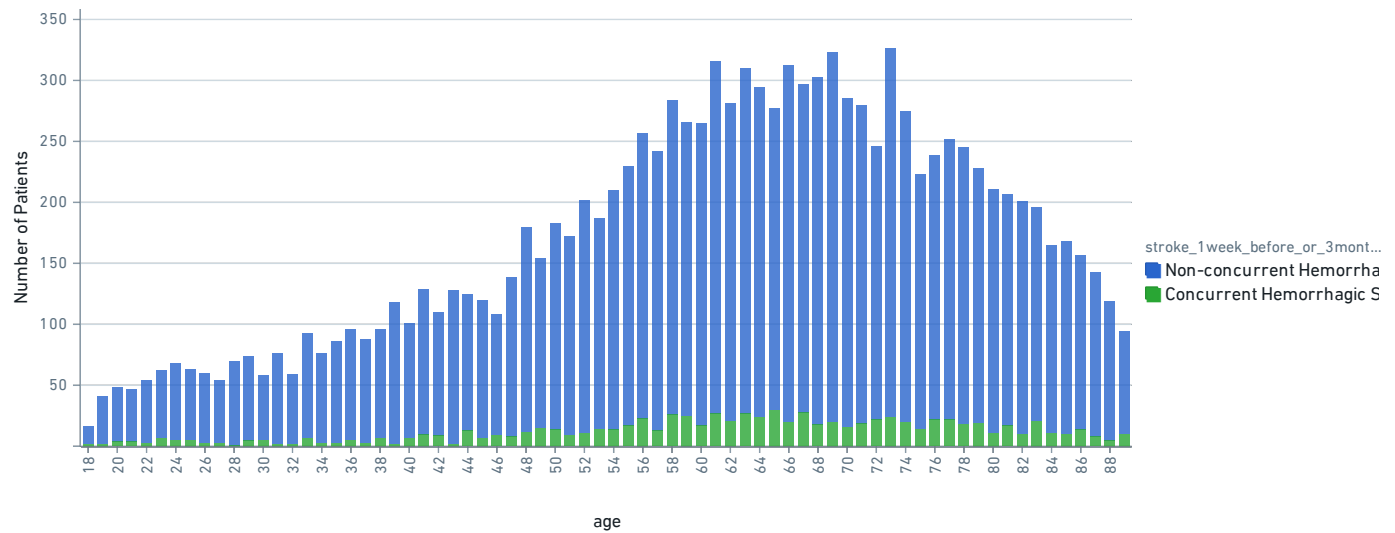
This shows the percentage of death after having a ischemic stroke concurrent with Covid-19 within each race and ethnicity category. Green represents death after concurrent stroke while blue represents no death after concurrent stroke.

Time between First Covid Diagnosis and First Ischemic Stroke



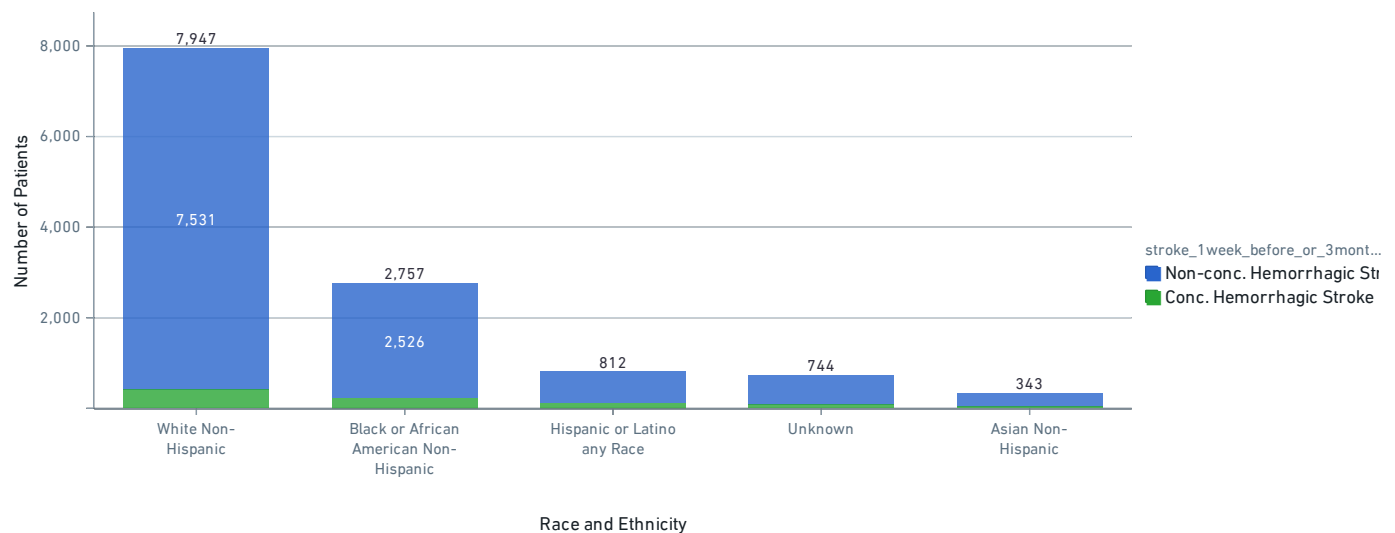
This is a time distribution of days between patients' first stroke and their Covid-19 diagnosis. A time difference of 0 indicates both events occurring on the same day. If a patient had their first stroke 1-5 days after their Covid-19 diagnosis, they are included in the 5 bucket. If a patient had their first stroke 1-5 days before their Covid-19 diagnosis, they are included in the -5 bucket.

Age Distribution of Hemorrhagic Stroke Patients



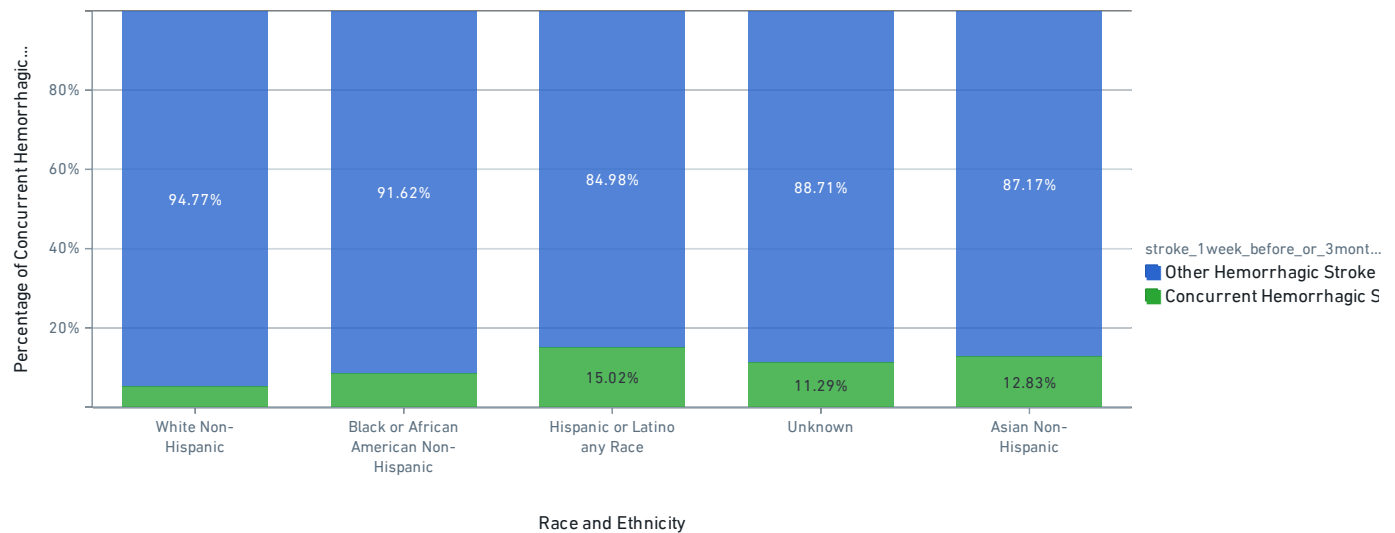
For each age, the green part of the bar indicates the number of patients with hemorrhagic stroke concurrent with a Covid-19 diagnosis. Concurrent is defined as having a stroke 1 week before or 3 months after their first Covid-19 diagnosis. The blue portion of the bar indicates the number of nonconcurrent hemorrhagic stroke patients.

Count of Hemorrhagic Stroke Concurrent with Covid-19 by Race and Ethnicity



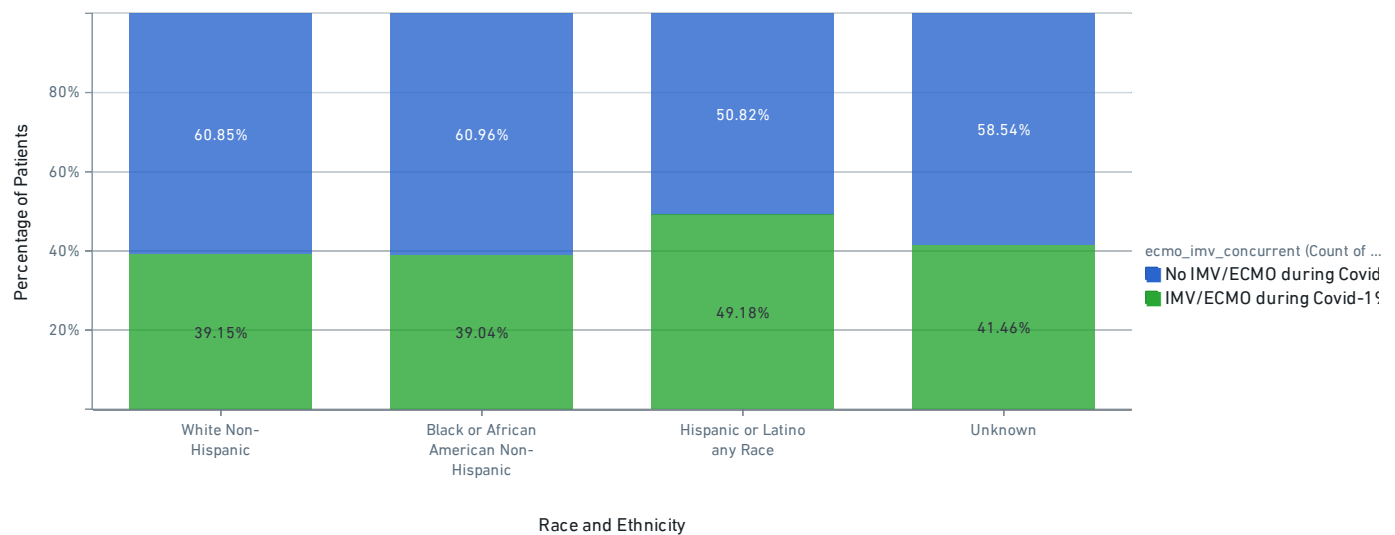
For each race and ethnicity category, hemorrhagic stroke patients are split by whether their stroke was concurrent with Covid-19 (green) or not (blue).

Percentage of Concurrent Hemorrhagic Stroke by Race and Ethnicity



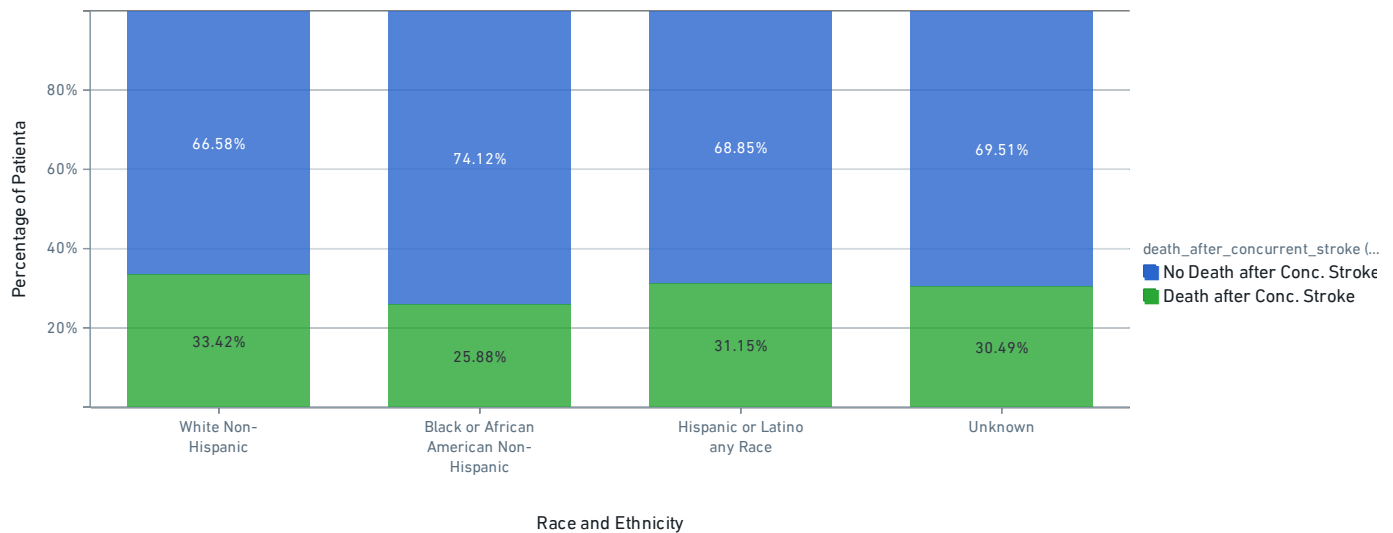
For each race and ethnicity category, percentages are shown for concurrent hemorrhagic stroke patients (green) and non-concurrent hemorrhagic stroke (blue).

Percentage of Patients on IMV or ECMO during Covid-19 Concurrent Hemorrhagic Stroke



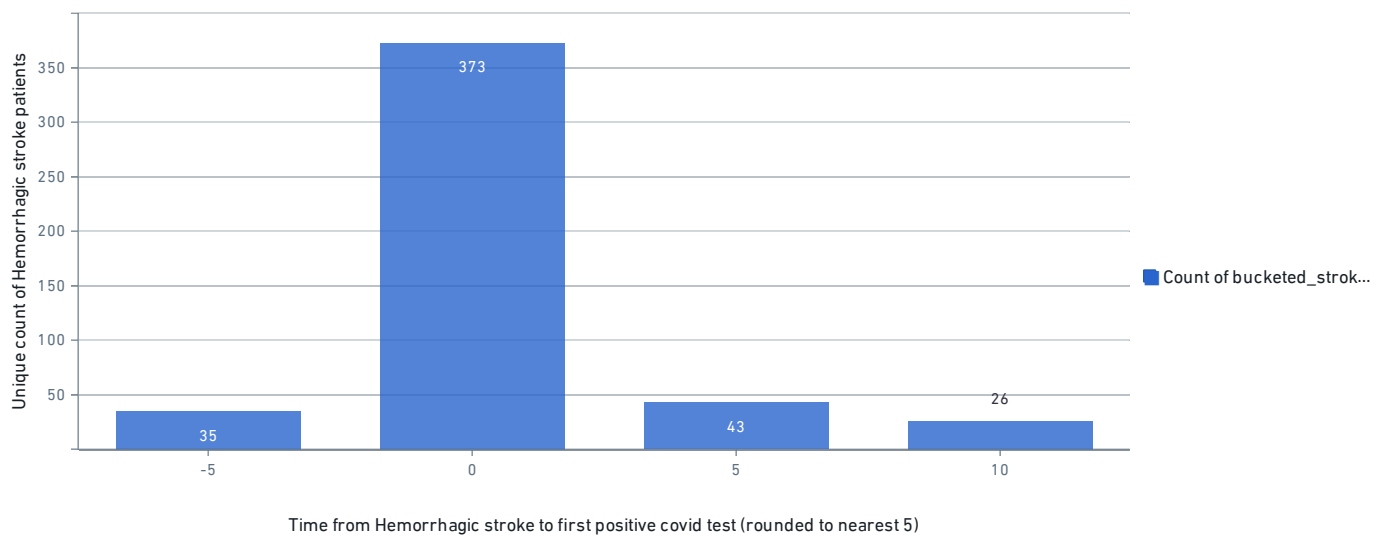
Of the concurrent hemorrhagic stroke patients, percentages of those on IMV/ECMO are highlighted in green while blue indicates concurrent hemorrhagic stroke patients not having been on IMV/ECMO. IMV/ECMO procedures are counted if they occurred within 2 days or 6 weeks after their first Covid-19 diagnosis.

Percentage of Patient Death after Concurrent Hemorrhagic Stroke



This shows the percentage of death after having a hemorrhagic stroke concurrent with Covid-19 within each race and ethnicity category. Green represents death after concurrent stroke while blue represents no death after concurrent stroke.

Time between First Covid Diagnosis and First Hemorrhagic Stroke



This is a time distribution of days between patients' first hemorrhagic stroke and their Covid-19 diagnosis. A time difference of 0 indicates both events occurring on the same day. If a patient had their first stroke 1-5 days after their Covid-19 diagnosis, they are included in the 5 bucket. If a patient had their first stroke 1-5 days before their Covid-19 diagnosis, they are included in the -5 bucket. The graph is cropped to exclude any categories with counts less than 20.

Logistic Regression: Death in all Covid-19 Positive Patients

	Variables	coeff	odds_ratios	pvals	conf_lower	conf_higher
1	stroke_1week_before_or_3months_after_covid	1.253	3.502	0.000	1.165	1.342
2	Hispanic_or_Latino_any_Race	0.520	1.682	0.000	0.452	0.588
3	Other_Non_Hispanic	0.859	2.361	0.000	0.608	1.110
4	intercept	-8.947	0.000	0.000	-9.060	-8.834
5	Black_or_AA_Non_Hispanic	0.584	1.794	0.000	0.532	0.637
6	Asian_Non_Hispanic	0.360	1.433	0.000	0.222	0.498
7	female	-0.550	0.577	0.000	-0.593	-0.506
8	age	0.086	1.089	0.000	0.084	0.087

Number of observations in regression: 407,853

Dataset: All Covid-19 positive patients (missing values dropped)

Dependent Variable: Death

Independent Variables: Gender, Age, race and ethnicity, and Occurrence of a concurrent* stroke

*Stroke occurrence within 1 week before or 3 months after initial Covid-19 diagnosis

Logistic Regression: Death in Non-Stroke Covid-19 Positive Patients

	Variables	coeff	odds_ratios	pvals	conf_lower	conf_higher
1	Black_or_AA_Non_Hispanic	0.637	1.891	0.000	0.580	0.694
2	female	-0.570	0.566	0.000	-0.616	-0.523
3	Other_Non_Hispanic	0.931	2.538	0.000	0.667	1.196
4	Asian_Non_Hispanic	0.364	1.438	0.000	0.215	0.512
5	Hispanic_or_Latino_any_Race	0.575	1.778	0.000	0.503	0.647
6	age	0.089	1.093	0.000	0.087	0.091
7	intercept	-9.222	0.000	0.000	-9.343	-9.100

Numbers of Observations in Regression: 397,200

Dataset: Covid-19 Positive Patients without any occurrence of stroke (missing values dropped)

Dependent Variable: Death

Independent Variables: Gender, Age, race and ethnicity

Logistic Regression: Death in Non-concurrent Ischemic Stroke Patients

	Variables	coeff	odds_ratios	pvals	conf_lower	conf_higher
1	intercept	-4.292	0.014	0.000	-4.448	-4.136
2	female	-0.261	0.770	0.000	-0.314	-0.208
3	age	0.031	1.032	0.000	0.029	0.033
4	Other_Non_Hispanic	0.479	1.614	0.004	0.157	0.801
5	Hispanic_or_Latino_any_Race	-0.206	0.814	0.004	-0.346	-0.066
6	Asian_Non_Hispanic	0.037	1.037	0.697	-0.148	0.222
7	Black_or_AA_Non_Hispanic	0.004	1.004	0.909	-0.062	0.070

Number of Observations in Regression: 64,484

Dataset: All Non-concurrent Ischemic Stroke Patients (missing values dropped)

Dependent Variable: Death

Independent Variables: Gender, Age and race and ethnicity

Logistic Regression: Death in Concurrent Ischemic Stroke Patients

	Variables	coeff	odds_ratios	pvals	conf_lower	conf_higher
1	age	0.027	1.028	0.000	0.020	0.034
2	intercept	-3.443	0.032	0.000	-3.968	-2.918
3	female	-0.299	0.741	0.001	-0.479	-0.120
4	Hispanic_or_Latino_any_Race	0.302	1.352	0.039	0.015	0.588
5	Asian_Non_Hispanic	0.372	1.451	0.155	-0.141	0.886
6	Other_Non_Hispanic	0.438	1.550	0.445	-0.687	1.563
7	Black_or_AA_Non_Hispanic	0.076	1.079	0.463	-0.127	0.279

Number of Observations: 3,571

Dataset: Concurrent Ischemic Stroke patients (missing values dropped)

Dependent Variable: Death

Independent Variables: Gender, Age, race and ethnicity

Logistic Regression: Death in Concurrent Hemorrhagic Stroke Patients

	Variables	coeff	odds_ratios	pvals	conf_lower	conf_higher
1	intercept	-1.917	0.147	0.000	-2.600	-1.233
2	age	0.018	1.018	0.000	0.008	0.027
3	female	-0.396	0.673	0.008	-0.689	-0.104
4	Other_Non_Hispanic	0.707	2.029	0.286	-0.591	2.006
5	Asian_Non_Hispanic	0.348	1.417	0.291	-0.297	0.994
6	Black_or_AA_Non_Hispanic	-0.135	0.874	0.449	-0.484	0.214
7	Hispanic_or_Latino_any_Race	0.067	1.069	0.762	-0.367	0.500

Number of Observations: 966

Dataset: All Concurrent Hemorrhagic Stroke Patients (missing values dropped)

Dependent Variables: Death

Independent Variables: Gender, Age, race and ethnicity

Logistic Regression: Death in Non-concurrent Hemorrhagic Stroke Patients

	Variables	coeff	odds_ratios	pvals	conf_lower	conf_higher
1	intercept	-2.825	0.059	0.000	-3.024	-2.627
2	female	-0.206	0.814	0.000	-0.294	-0.117
3	age	0.021	1.021	0.000	0.018	0.024
4	Hispanic_or_Latino_any_Race	-0.254	0.775	0.015	-0.460	-0.049
5	Black_or_AA_Non_Hispanic	-0.065	0.937	0.260	-0.178	0.048
6	Asian_Non_Hispanic	0.078	1.082	0.560	-0.185	0.341
7	Other_Non_Hispanic	0.031	1.032	0.912	-0.526	0.589

Number of Observations: 14,563

Dataset: All Non-concurrent Hemorrhagic Stroke Patients (missing values dropped)

Dependent Variables: Death

Independent Variables: Gender, Age, race and ethnicity

Logistic Regression: Concurrent Stroke Occurrence in Covid-19 Positive Patients						
	Variables	coeff	odds_ratios	pvals	conf_lower	conf_higher
1	Black_or_AA_Non_Hispanic	0.863	2.371	0.000	0.792	0.935
2	female	-0.358	0.699	0.000	-0.421	-0.295
3	Hispanic_or_Latino_any_Race	0.373	1.452	0.000	0.271	0.475
4	intercept	-8.259	0.000	0.000	-8.399	-8.120
5	Asian_Non_Hispanic	0.531	1.700	0.000	0.343	0.718
6	age	0.062	1.064	0.000	0.060	0.063
7	Other_Non_Hispanic	0.471	1.602	0.027	0.054	0.889

Number of Observations: 407,853

Dataset: All Covid-19 positive patients (missing values dropped)

Dependent Variable: Concurrent Stroke

Independent Variables: Gender, Age, race and ethnicity