

## **SUPPLEMENTAL MATERIAL**

**Supplemental Table 1.** Primary Diagnosis Type at Index Emergency Department Visit or Hospitalization.

**Supplemental Table 2.** Baseline Characteristics of Cohort, Stratified by Diagnosis of Ischemic Stroke.

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**Supplemental Table 1.** Primary Diagnosis Type at Index Emergency Department Visit or Hospitalization\*.

<b>Diagnosis Type<sup>†</sup></b>	<b>Overall (n = 4,806,830)</b>	<b>PSVT (n = 14,121)</b>	<b>No PSVT (n = 4,792,709)</b>
Infections	87,714 (1.8)	452 (3.2)	87,262 (1.8)
Cancers	99,677 (2.1)	508 (3.6)	99,169 (2.1)
Metabolic or autoimmune disorders	110,054 (2.3)	311 (2.2)	109,743 (2.3)
Hematological disorders	21,267 (0.4)	102 (0.7)	21,165 (0.4)
Mental disorders	176,762 (3.7)	209 (1.5)	176,553 (3.7)
Central nervous system disorders	337,016 (7.0)	365 (2.6)	336,651 (7.0)
Circulatory disorders	496,327 (10.3)	6,547 (46.2)	489,780 (10.2)
Respiratory disorders	468,988 (9.8)	1,479 (10.5)	467,509 (9.8)
Digestive disorders	358,702 (7.5)	901 (6.4)	357,801 (7.5)
Genitourinary disorders	314,975 (6.6)	517 (3.7)	314,458 (6.6)
Complications of pregnancy	429,167 (8.9)	141 (1.0)	429,026 (9.0)
Disorders of skin	141,094 (2.9)	139 (1.0)	140,955 (2.9)
Musculoskeletal disorders	335,586 (7.0)	663 (4.7)	334,923 (7.0)
Congenital abnormalities	3,340 (0.1)	12 (0.1)	3,328 (0.1)
Injury and poisoning	967,731 (20.1)	1,161 (8.2)	966,570 (20.1)
Symptoms and ill-defined conditions	418,407 (8.7)	536 (3.8)	417,871 (8.7)
Other	40,023 (0.8)	78 (0.6)	39,945 (0.8)

Abbreviations: PSVT, paroxysmal supraventricular tachycardia.

\*Data are presented as Number (%) of participants.

<sup>†</sup>The primary discharge diagnosis from the index encounter was classified using the Healthcare Cost and Utilization Project's Clinical Classification Software categorization scheme.

**Supplemental Table 2.** Baseline Characteristics of Cohort Stratified by Diagnosis of Ischemic Stroke\*.

<b>Characteristic</b>	<b>Overall (n = 4,806,830)</b>	<b>Stroke (n = 14,402)</b>	<b>No Stroke (n = 4,792,428)</b>
Age, median (IQR), y	46 (30-62)	76 (62-84)	46 (30-62)
Female	2,833,725 (59.0)	8,055 (55.9)	2,825,670 (59.0)
Race/ethnicity†			
White	2,451,146 (53.8)	8,423 (60.9)	2,442,723 (53.8)
Black	441,114 (9.7)	1,569 (11.4)	439,545 (9.7)
Hispanic	1,205,595 (26.5)	2,603 (18.8)	1,202,992 (26.5)
Asian or Pacific Islander	314,120 (6.9)	967 (7.0)	313,153 (6.9)
Native American	6,074 (0.1)	11 (0.1)	6,063 (0.1)
Other	135,763 (3.0)	248 (1.8)	135,515 (3.0)
Payment source			
Medicare	1,144,318 (23.8)	10,001 (69.4)	1,134,317 (23.7)
Medicaid	708,395 (14.7)	1,256 (8.7)	707,139 (14.8)
Private insurance	1,992,935 (41.5)	2,236 (15.5)	1,990,699 (41.5)
Self-pay	662,013 (13.8)	600 (4.2)	661,413 (13.8)
Other	298,476 (6.2)	309 (2.2)	298,167 (6.2)
Vascular risk factors			
Hypertension	1,101,552 (22.9)	8,611 (59.8)	1,092,941 (22.8)
Diabetes	535,186 (11.1)	4,500 (31.3)	530,686 (11.1)
Coronary heart disease	300,321 (6.2)	3,381 (23.5)	296,940 (6.2)
COPD	200,162 (4.2)	1,540 (10.7)	198,622 (4.1)
Congestive heart failure	152,373 (3.2)	2,383 (16.6)	149,990 (3.1)
Renal insufficiency	146,031 (3.0)	1,999 (13.9)	144,032 (3.0)
PVD	67,154 (1.4)	849 (5.9)	66,305 (1.4)

Abbreviations: COPD, chronic obstructive pulmonary disease; IQR, interquartile range; PVD, peripheral vascular disease.

\*Data are presented as Number (%) of participants unless otherwise specified.

†The apparent racial/ethnic imbalances among patients with and without stroke are attenuated after accounting for age; for example, among those ≥65 years of age, 66.5% of patients with stroke and 67.8% of patients without stroke were white.

**Supplemental Table 3.** Results of Sensitivity Analyses.

	<b>Hazard Ratio (95% CI)</b>
PSVT and subsequent ischemic stroke:	
Primary analysis	2.10 (1.69-2.62)
Excluding all subsequent diagnoses of AF*	1.98 (1.58-2.49)
Controlling for overall number of diagnoses at index visit	2.03 (1.63-2.51)
Controlling for number of visits prior to stroke	1.89 (1.51-2.36)
Controlling for types of intervening illness <sup>†</sup>	1.95 (1.57-2.43)
Including patients with any diagnostic code for ischemic stroke <sup>‡</sup>	1.93 (1.57-2.37)
Excluding patients with cervical vessel stenosis or occlusion <sup>§</sup>	2.19 (1.75-2.74)
Excluding patients with any other diagnoses of cardiac disease <sup>  </sup>	2.60 (1.95-3.47)
Controlling for hospital's proportion of patients with PSVT	2.11 (1.70-2.62)
Controlling for documentation of cardiac telemetry <sup>#</sup>	2.07 (1.66-2.57)
Controlling for drug, tobacco, and alcohol abuse <sup>**</sup>	2.10 (1.69-2.61)
PSVT and subsequent ICH:	
Primary analysis	0.92 (0.53-1.58)
Excluding patients with dementia or cognitive impairment <sup>***</sup>	1.01 (0.51-2.02)

Abbreviations: AF, atrial fibrillation; CI, confidence interval; ICH, intracerebral hemorrhage; PSVT, paroxysmal supraventricular tachycardia.

\*We excluded patients diagnosed with AF even after discharge from the initial stroke hospitalization.

<sup>†</sup>To explore whether post-baseline illnesses may have resulted in both PSVT and stroke, we performed a sensitivity analysis incorporating time-varying covariates for intervening visits related to infection, cancer, cardiovascular disease, respiratory illness, autoimmune disease, and renal disease.

<sup>‡</sup>To increase sensitivity for detecting cases of ischemic stroke, we did not exclude cases with concomitant diagnosis codes for hemorrhage, trauma, or rehabilitation.

<sup>§</sup>To exclude patients with alternative etiologies of stroke besides occult cardiac embolism, we excluded those with cervical artery stenosis or occlusion, as defined by *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)* codes 433.xx.

<sup>||</sup>We excluded patients with clinically apparent sources of cardiac embolism by identifying those with any cardiac disease other than PSVT, as classified by the Healthcare Cost and Utilization Project's Clinical Classification Software categorization scheme.

<sup>#</sup>Defined by *ICD-9-CM* code 89.5x.

<sup>\*\*</sup>Defined by *ICD-9-CM* codes for cannabis (305.2x, 304.3x, and 969.6), sympathomimetic drug (304.2x, 304.4x, 305.6x, 305.7x, and 969.7), tobacco (305.1x, 989.84, and V15.82), and alcohol (305.0x and 303.xx) abuse.

<sup>\*\*\*</sup>Since patients with cognitive impairment or dementia may be more likely to have congophilic angiopathy rather than traditional vascular disease as a cause of ICH, we excluded these patients using *ICD-9-CM* codes for cognitive impairment (331.83 and 438.0) and dementia (290.x, 294.1x, 294.8, 331.1x, 331.2, and 331.82).

**Supplemental Table 4.** Association Between PSVT and Ischemic Stroke Across Decades of Age.

<b>Age</b>	<b>Hazard Ratio (95% CI)</b>
45-54 y	0.39 (0.05-2.80)
55-64 y	0.69 (0.26-1.85)
65-74 y	2.17 (1.40-3.35)
75-84 y	2.59 (1.81-3.71)
≥85 y	2.66 (1.76-4.03)

Abbreviations: CI, confidence interval; PSVT, paroxysmal supraventricular tachycardia.