Table S1: Associations between PCSK9 and stroke recurrence at 12 months according to TOAST etiological subtype

| PCSK9 level | Events (%) | Model 1 | Model 2 | Model 3 |
|------------|------------|---------|---------|---------|
|            | HR         | 95% CI  | P       | HR      | 95% CI  | P       | HR      | 95% CI  | P       |
| LAA Q1     | Ref.       | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    |
| Q2         | 0.87       | 0.66–1.16 | 0.35  | 0.87    | 0.65–1.15 | 0.32  | 0.87    | 0.65–1.15 | 0.32  |
| Q3         | 0.68       | 0.50–0.93 | 0.02  | 0.67    | 0.49–0.92 | 0.01  | 0.67    | 0.48–0.91 | 0.01  |
| Q4         | 0.78       | 0.57–1.06 | 0.11  | 0.77    | 0.57–1.05 | 0.10  | 0.78    | 0.57–1.06 | 0.12  |
| Per 1 ng/mL| 0.97       | 0.93–1.01 | 0.15  | 0.97    | 0.93–1.01 | 0.13  | 0.97    | 0.93–1.01 | 0.14  |
| Per 1-SD   | 0.92       | 0.82–1.03 | 0.15  | 0.92    | 0.82–1.03 | 0.13  | 0.92    | 0.82–1.03 | 0.14  |
| CE Q1      | Ref.       | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    |
| Q2         | 1.12       | 0.63–1.97 | 0.71  | 1.09    | 0.62–1.92 | 0.77  | 1.10    | 0.62–1.94 | 0.75  |
| Q3         | 1.14       | 0.65–2.01 | 0.64  | 1.16    | 0.65–2.05 | 0.62  | 1.16    | 0.65–2.06 | 0.61  |
| Q4         | 0.52       | 0.25–1.07 | 0.08  | 0.52    | 0.25–1.10 | 0.09  | 0.53    | 0.25–1.11 | 0.09  |
| Per 1 ng/mL| 0.93       | 0.85–1.01 | 0.09  | 0.93    | 0.85–1.01 | 0.09  | 0.93    | 0.85–1.01 | 0.10  |
| Per 1-SD   | 0.82       | 0.66–1.03 | 0.09  | 0.82    | 0.66–1.03 | 0.09  | 0.83    | 0.66–1.04 | 0.10  |
| SAO Q1     | Ref.       | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    |
| Q2         | 0.79       | 0.51–1.21 | 0.27  | 0.79    | 0.51–1.21 | 0.29  | 0.79    | 0.51–1.21 | 0.28  |
| Q3         | 0.67       | 0.43–1.05 | 0.08  | 0.66    | 0.42–1.04 | 0.08  | 0.66    | 0.42–1.04 | 0.08  |
| Q4         | 0.59       | 0.38–0.94 | 0.03  | 0.61    | 0.38–0.96 | 0.03  | 0.61    | 0.38–0.96 | 0.03  |
| Per 1 ng/mL| 0.95       | 0.89–1.01 | 0.13  | 0.96    | 0.90–1.02 | 0.17  | 0.96    | 0.90–1.02 | 0.17  |
| Per 1-SD   | 0.88       | 0.74–1.04 | 0.13  | 0.89    | 0.75–1.05 | 0.17  | 0.89    | 0.75–1.05 | 0.17  |
| SOE Q1     | Ref.       | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    |
| Q2         | 0.42       | 0.03–4.65 | 0.48  | 0.40    | 0.04–4.69 | 0.47  | 0.60    | 0.04–8.17 | 0.70  |
| Q3         | 0.0 (0.0)  | –       | –       | –       | –       | –       | –       | –       | –       |
| Q4         | 3.79       | 0.81–17.64 | 0.10  | 4.06    | 0.76–21.79 | 0.10  | 7.12    | 0.99–51.43 | 0.051 |
| Per 1 ng/mL| 1.24       | 1.06–1.44 | 0.0058 | 1.29    | 1.07–1.57 | 0.01  | 1.32    | 1.08–1.62 | 0.01  |
| Per 1-SD   | 1.77       | 1.18–2.66 | 0.0058 | 1.99    | 1.18–3.34 | 0.01  | 2.12    | 1.24–3.63 | 0.01  |
| SUE Q1     | Ref.       | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    | Ref.    |
| Q2         | 1.08       | 0.83–1.42 | 0.56  | 1.09    | 0.83–1.42 | 0.56  | 1.07    | 0.82–1.41 | 0.61  |
| Q3         | 0.93       | 0.70–1.23 | 0.60  | 0.97    | 0.74–1.28 | 0.83  | 0.96    | 0.73–1.27 | 0.80  |
| Q4         | 0.89       | 0.67–1.17 | 0.40  | 0.93    | 0.70–1.23 | 0.59  | 0.92    | 0.69–1.21 | 0.54  |
| Per 1 ng/mL| 0.98       | 0.95–1.02 | 0.35  | 0.99    | 0.95–1.03 | 0.55  | 0.99    | 0.95–1.02 | 0.51  |
| Per 1-SD   | 0.96       | 0.87–1.05 | 0.35  | 0.97    | 0.88–1.07 | 0.55  | 0.97    | 0.88–1.07 | 0.51  |

Model 1: adjusted for age and sex; Model 2: adjusted for age, sex, NIHSS and medical histories (diabetes mellitus, dyslipidemia, known atrial fibrillation, previous ischemic stroke and previous coronary artery disease); Model 3: adjusted for age, sex, NIHSS, medical histories (diabetes mellitus, dyslipidemia, known atrial fibrillation, previous ischemic stroke and previous coronary artery disease) and pre-hospitalization medication (antihypertensive drugs, lipid-lowering drugs, antiplatelet drugs, hypoglycemic drugs). PCSK9, protein convertase subtilisin/kexin type 9; LAA, large artery atherosclerosis; CE, cardioembolism; SAO, small artery occlusion; SOE, stroke of other determined etiology; SUE, stroke of undetermined etiology; HR, hazard ratio; OR, odds ratio; CI, confidence interval.
| PCSK9 SNP   | Minor allele | Minor allele frequency-N (%) | HWE-P value |
|------------|--------------|------------------------------|-------------|
| rs2479394  | T            | 39                           | 0.1285      |
| rs11206510 | C            | 6                            | 0.299       |
| rs2479415  | T            | 15                           | 0.3051      |
| rs2149041  | G            | 34                           | 0.2274      |
| rs2479409  | A            | 31                           | 0.06619     |
| rs11591147 | T            | 0                            | 1.000       |
| rs11583680 | T            | 11                           | 0.3397      |
| rs10888897 | T            | 19                           | 0.3309      |
| rs7552841  | T            | 16                           | 0.8653      |
| rs562556   | G            | 1                            | 1.000       |
| rs505151   | G            | 6                            | 0.1508      |

PCSK9, protein convertase subtilisin/kexin type 9; SNP, single-nucleotide polymorphism.
| Genotype | Patients (n) | PCSK9 level (95%CI) | P   | F test | $R^2$ |
|----------|-------------|---------------------|-----|--------|-------|
| rs2479394 | CC          | 3,247               | (372.84, 382.01) | 0.12   | 4.04  | 0.000931 |
|          | CT          | 4,051               | (367.92, 376.12) |        |       |        |
|          | TT          | 1,365               | (358.48, 372.62) |        |       |        |
| rs11206510 | TT         | 7,726               | (372.80, 378.74) | <0.001 | 14.56 | 0.003353 |
|          | TC          | 901                 | (342.83, 360.21) |        |       |        |
|          | CC          | 34                  | (293.43, 382.92) |        |       |        |
| rs2479415 | CC          | 6,224               | (371.09, 377.72) | 1.71   | 0.1816| 0.000394 |
|          | CT          | 2,250               | (363.30, 374.33) |        |       |        |
|          | TT          | 192                 | (361.05, 398.81) |        |       |        |
| rs2149041 | CC          | 3,716               | (380.78, 389.32) | <0.001 | 32.95 | 0.007553 |
|          | CG          | 3,867               | (363.50, 371.87) |        |       |        |
|          | GG          | 1,079               | (343.28, 359.12) |        |       |        |
| rs2479409 | GG          | 4,049               | (375.31, 383.50) | <0.001 | 20.32 | 0.004679 |
|          | GA          | 3,781               | (367.90, 376.38) |        |       |        |
|          | AA          | 819                 | (337.95, 356.18) |        |       |        |
| rs11591147 | GG         | 8,701               | (370.38, 375.99) | 0.36   | 0.84  | 0.000097 |
|          | GT          | 3                   | (292.94, 594.90) |        |       |        |
| rs11583680 | CC         | 6,885               | (376.83, 383.09) | <0.001 | 51.14 | 0.011629 |
|          | CT          | 1,700               | (343.13, 355.73) |        |       |        |
|          | TT          | 110                 | (279.66, 329.19) |        |       |        |
| rs10888897 | CC         | 5,629               | (377.93, 384.86) | <0.001 | 42.39 | 0.009723 |
|          | CT          | 2,670               | (355.86, 365.92) |        |       |        |
|          | TT          | 338                 | (313.26, 341.54) |        |       |        |
| rs7552841 | CC          | 6,153               | (369.60, 376.27) | 0.58   | 0.54  | 0.000124 |
|          | CT          | 2,302               | (366.65, 377.55) |        |       |        |
|          | TT          | 221                 | (364.25, 399.42) |        |       |        |
| rs562556  | AA          | 8,560               | (369.98, 375.63) | 0.13   | 2.35  | 0.000271 |
|          | GA          | 121                 | (367.77, 415.30) |        |       |        |
| rs505151  | AA          | 7,668               | (369.20, 375.17) | 0.19   | 1.68  | 0.000388 |
|          | AG          | 950                 | (370.93, 387.89) |        |       |        |
|          | GG          | 22                  | (343.86, 455.30) |        |       |        |

PCSK9, protein convertase subtilisin/kexin type 9; CI, confidence interval.