### Supplementary

**Table S1** Spearman’s rank correlation coefficient among EPVS, lacunes, and WMH

| BG-EPVS       | CS-EPVS       |
|---------------|---------------|
| BG-EPVS       | -             | 0.243*        |
| Lacunes       | 0.237*        | 0.035         |
| cWMH          | 0.526*        | 0.065         |
| PWMH          | 0.515*        | 0.024         |
| DWMH          | 0.450*        | 0.086         |

BG-EPVS: basal ganglia enlarged perivascular spaces; CS-EPVS: centrum semiovale enlarged perivascular spaces; cWMH: total cerebral white matter hyperintensity; PWMH: periventricular white matter hyperintensity; DWMH: deep white matter hyperintensity. *P<0.001.

**Table S2** Imaging characteristics of patients with and without PH

| Imaging characteristics | Without PHN=456 | With PHN=38 | P  |
|-------------------------|-----------------|-------------|----|
| Total EPVS, median (IQR)| 4 (3-5)         | 4 (3-5)     | 0.407 |
| BG-EPVS, median (IQR)   | 1 (1-2)         | 1 (1-2)     | 0.660 |
| Moderate to severe BG-EPVS, n (%) | 223 (48.9) | 16 (42.1) | 0.420 |
| CS-EPVS, median (IQR)   | 2 (2-3)         | 2 (2-3)     | 0.324 |
| Moderate to severe CS-EPVS, n (%) | 401 (87.9) | 34 (89.5) | 0.984 |
| Lacunes, n (%)          | 89 (19.5)       | 6 (15.8)    | 0.575 |
| PWMH, median (IQR)      | 1 (0-2)         | 1 (0-1)     | 0.583 |
| Extensive PWMH, n (%)   | 38 (8.3)        | 1 (2.6)     | 0.348 |
| DWMH, median (IQR)      | 1 (0-1)         | 1 (0-1)     | 0.443 |
| Extensive DWMH, n (%)   | 84 (18.4)       | 6 (15.8)    | 0.686 |
| cWMH, median (IQR)      |                |             | 0.354 |
| No cWMH, n (%)          | 119 (26.1)      | 9 (23.7)    |  |
| Mild cWMH, n (%)        | 206 (45.2)      | 22 (57.9)   |  |
| Moderate cWMH, n (%)    | 90 (19.7)       | 6 (15.8)    |  |
| Severe cWMH, n (%)      | 41 (9.0)        | 1 (2.6)     |  |
| Total CSVD burden, median (IQR)| 1 (0-1) | 0 (0-1) | 0.298 |
| Score 0, n (%)          | 199 (43.6)      | 20 (52.6)   | 0.627 |
| Score 1, n (%)          | 146 (32.0)      | 11 (28.9)   |  |
| Score 2, n (%)          | 79 (17.3)       | 4 (10.5)    |  |
| Score 3, n (%)          | 32 (7.0)        | 3 (7.9)     |  |

PH: parenchymal hematoma; BG-EPVS: basal ganglia enlarged perivascular spaces; CS-EPVS: centrum semiovale enlarged perivascular spaces; PWMH: periventricular white matter hyperintensity; DWMH: deep white matter hyperintensity; cWMH: total cerebral white matter hyperintensity; CSVD: cerebral small vessel disease; IQR: interquartile range.

**Figure S1** Flowchart of patients’ enrollment.

627 patients admitted within 24 hours of stroke onset

133 patients excluded:
  • Without MRI scans (n=108)
  • Poor MRI quality (n=25)

494 patients included in the final analysis

81 experienced HT during hospitalization

413 did not experience HT during hospitalization