Supplementary Table 1. MRI parameters of the PRECISE study

Contrast	Orientation	Voxel size (mm^3)	Parameters	Scan time
TOF MRA	3D transverse	0.34×0.34×0.70	TE=3.5 ms, TR=25 ms, flip angle=20°, 5 slabs	3:32
T1w MPRAGE	3D sagittal	1.00×1.00×1.00	TE=3.0 ms, TR=6.7 ms, TI=880 ms, shot interval=2,000 ms, flip angle=8°	4:30
fMRI	2D transverse	2.92×2.92×4.00	TE=30 ms, TR=2,100 ms, flip angle=80°, 180 scans with 8 dummy scans, SPIR fat suppression	6:35
DTI	2D transverse	1.88×1.88×2.50	TE=90 ms, TR=3,500 ms, b=0 and 1,000 s/mm^2, 32 directions, SPIR fat suppression	4:05
Intracranial T1w VWI	3D transverse	0.30×0.30×0.30	TE=20 ms, TR=800 ms, 3D TSE factor=30, refocusing angle=50°, SPIR fat suppression	6:18
Carotid T1w VWI	3D coronal	0.40×0.40×0.40	TE=31 ms, TR=600 ms, 3D TSE factor=28, refocusing angle=35°, SPIR fat suppression	3:03
SWI	3D axial	0.63×0.63×0.80	First TE=7.2 ms, echo spacing=6.2 ms, 5 echoes, flip angle=17°, TR=37 ms	2:20
FLAIR imaging	2D axial	0.53×0.53×6.50	TE=110 ms, TR=7,000 ms, TI=2,300 ms, SPIR fat suppression	2:27
T2w imaging	2D axial	0.51×0.51×6.50	TE=105 ms, TR=2,500 ms, SPIR fat suppression	1:05
DWI	2D axial	1.20×1.20×6.50	TE=98 ms, TR=2,500 ms, b=1,000 s/mm^2, ADC and eADC calculated online	0:30
Intracranial SNAP	3D transverse	0.40×0.40×0.40	TE=6.4 ms, TR=11 ms, TI=510 ms, shot interval=1,025 ms, flip angle=11°/5° (PSIR), fat suppression	6:35
Carotid SNAP	3D coronal	0.28×0.28×0.40	TE=4.8 ms, TR=10 ms, TI=510 ms, shot interval=1,025 ms, flip angle=11°/5° (PSIR), fat suppression	5:17

MRI, magnetic resonance imaging; PRECISE, PolyvasculaR Evaluation for Cognitive Impairment and vaScular Events; TOF, time-of-flight; MRA, magnetic resonance angiography; T1w, T1-weighted; MPRAGE, magnetization-prepared rapid gradient echo; fMRI, functional magnetic resonance imaging; DTI, diffusion tensor imaging; VWI, vessel wall imaging; SWI, susceptibility-weighted imaging; FLAIR, fluid-attenuated inversion recovery; T2w, T2-weighted; DWI, diffusion-weighted imaging; SNAP, Simultaneous Non-contrast Angiography and intraPlaque hemorrhage; TE, echo time; TR, repetition time; TI, inversion time; SPIR, spectral presaturation with inversion recovery; TSE, turbo spin echo; ADC, apparent diffusion coefficient; eADC, exponential apparent diffusion coefficient; PSIR, phase-sensitive inversion recovery.