

On-line Table 1: Summary of demographics and clinical diagnostic and treatment characteristics of patients with Moyamoya phenomenon^a

	Patients from Derdeyn et al. ¹¹ 2017	Patients Technically Adequate for Current Study	Patients with Increased Regional OEFR	Exclusions	Regional Cortical Thickness (mm)		Regional OEFR		Age at Scanning (yr)		Sex		Time from Onset to Scanning (m)	
					Mean	SD	Mean	SD	Mean	SD	No. (Male)	No. (Female)	Mean	SD
Total	50	35	30		2.49	0.46	1.076	0.135	44	12	12	23	22.2	24.1
Race/ethnicity														
White	36	28	23		2.49	0.47	1.082	0.142	44	12	10	18	21.6	22.3
Black	11	6	6		2.43	0.44	1.041	0.103	49	13	2	4	14.4	18.9
Asian	2	1	1		2.6	0.38	1.095	0.069	37	0	0	1	87.2	0
Hispanic	1	0	0											
Presentation														
Ischemic stroke	23	11	11		2.41	0.48	1.103	0.159	46	15	4	7	22.5	24.3
TIA	11	11	9		2.44	0.45	1.089	0.147	45	13	3	8	23.5	30.7
Hemorrhage	6	5	4		2.49	0.45	1.035	0.116	51	6	2	3	21.0	16.7
Other	10	8	6		2.63	0.44	1.055	0.090	37	6	3	5	21.0	21.7
Vasculopathy on angiography														
Unilateral	10	10	9		2.59	0.43	1.068	0.100	41	9	3	7	26.6	29.1
Bilateral	40	25	22		2.44	0.47	1.080	0.150	46	13	9	16	20.5	22.3
Lesions on MRI														
Any cortical	NA	9	9	9										
Any white matter	NA	4	4		2.46	0.48	1.159	0.166	47	18	2	2	16.6	19.9
Any basal ganglia	NA	3	3	3										
Surgical treatment	16	3	2	2	2.09	0.42	1.107	0.088	72	0	0	1	13.2	0

Note:—NA indicates not applicable.

^a The first column of data recalls results from Derdeyn, et al.¹¹ a broader superset of patients with Moyamoya phenomenon from a prospective natural history study. The second data column compares patients from this study. The third data column counts numbers of patients with an increased regional OEFR in this study. The fourth data column marks exclusions for lesions on MRI and surgical revascularization as detailed in Materials and Methods. All results for this table are from Destrieux et al.¹⁷ FreeSurfer regions within MCA territories satisfying the inclusion and exclusion criteria. Identifying ethnicity and sex are important for the study of Moyamoya, which has high prevalence in children in eastern nations, but high prevalence for adult females in western nations.

On-line Table 2: Results from mixed-effects models for measurements with granularity for Destrieux et al¹⁷ FreeSurfer regions within MCA territories for hemispheres and patients^a

	FreeSurfer Regions: Thickness, 1 + OEFR + Age + Sex + Time + (1 + OEFR Patient) (95% CI)		Hemispheres: Thickness, 1 + OEFR + Age + Sex + Time + (1 patient) (95% CI)		Patients: Thickness, 1 + OEFR + Age + Sex + Time + (1 Patient) (95% CI)	
Thickness intercept (mm)	3.50 (3.16–3.83)	P < .001	3.18 (2.78–3.58)	P < .001	3.30 (2.63–3.97)	P < .001
OEFR	–0.597 (–0.867 to –0.327) ^b	P < .001 ^b	–0.313 (–0.674–0.0484)	P = .09	–0.437 (–1.08–0.211)	P = .2
Age (yr)	–0.00765 (–0.0108 to –0.00448) ^b	P < .001 ^b	–0.00792 (–0.0115 to –0.00437) ^b	P < .001 ^b	–0.00767 (–0.0114 to –0.00399) ^b	P = .002 ^b
Sex	–0.0671 (–0.140–0.00607)	P = .07	–0.0381 (–0.128–0.0518)	P = .4	–0.0377 (–0.129–0.0539)	P = .4
Symptom onset to scanning (mo)	0.000771 (–0.000878–0.00242)	P = .4	0.000767 (–0.00108–0.00261)	P = .4	0.000902 (–0.00103–0.00284)	P = .3

^a The best models, by the Akaike and Bayesian information criteria, from exploratory analyses are described in the Wilkinson Notation for covariates: OEFR, age, sex, time from symptom onset to scanning, and patient: identity. Models for measurement of granularities are arranged by columns. Fitting results for covariates are arranged by rows. The Indicator value for men is 0; for women, it is 1.

^b Significant covariates.