

Supplemental material

ALTERNATIVE ARTERIAL ACCESS ROUTES FOR ENDOVASCULAR THROMBECTOMY IN PATIENTS WITH ACUTE ISCHEMIC STROKE: A STUDY FROM THE MR CLEAN REGISTRY

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Figure S1. Flowchart of included patients

Figure S2. Distribution of the propensity score before and after matching

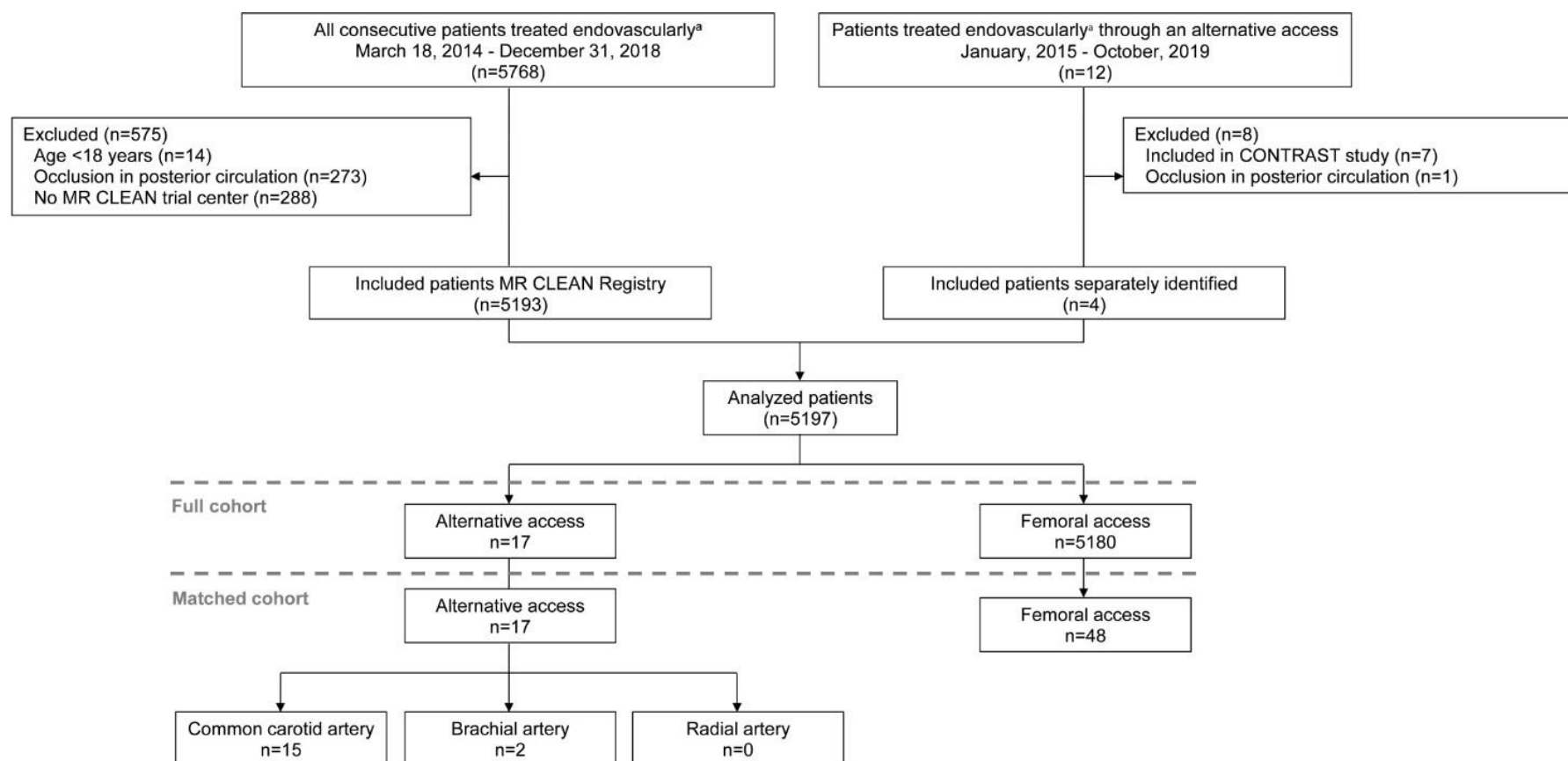
Figure S3. Distribution of the standard deviation before and after matching

Table S1. Baseline characteristics full cohort

Table S2. Procedural variables full cohort

Supplemental File. MR CLEAN Registry Investigators – group authors

Figure S1. Flowchart of included patients

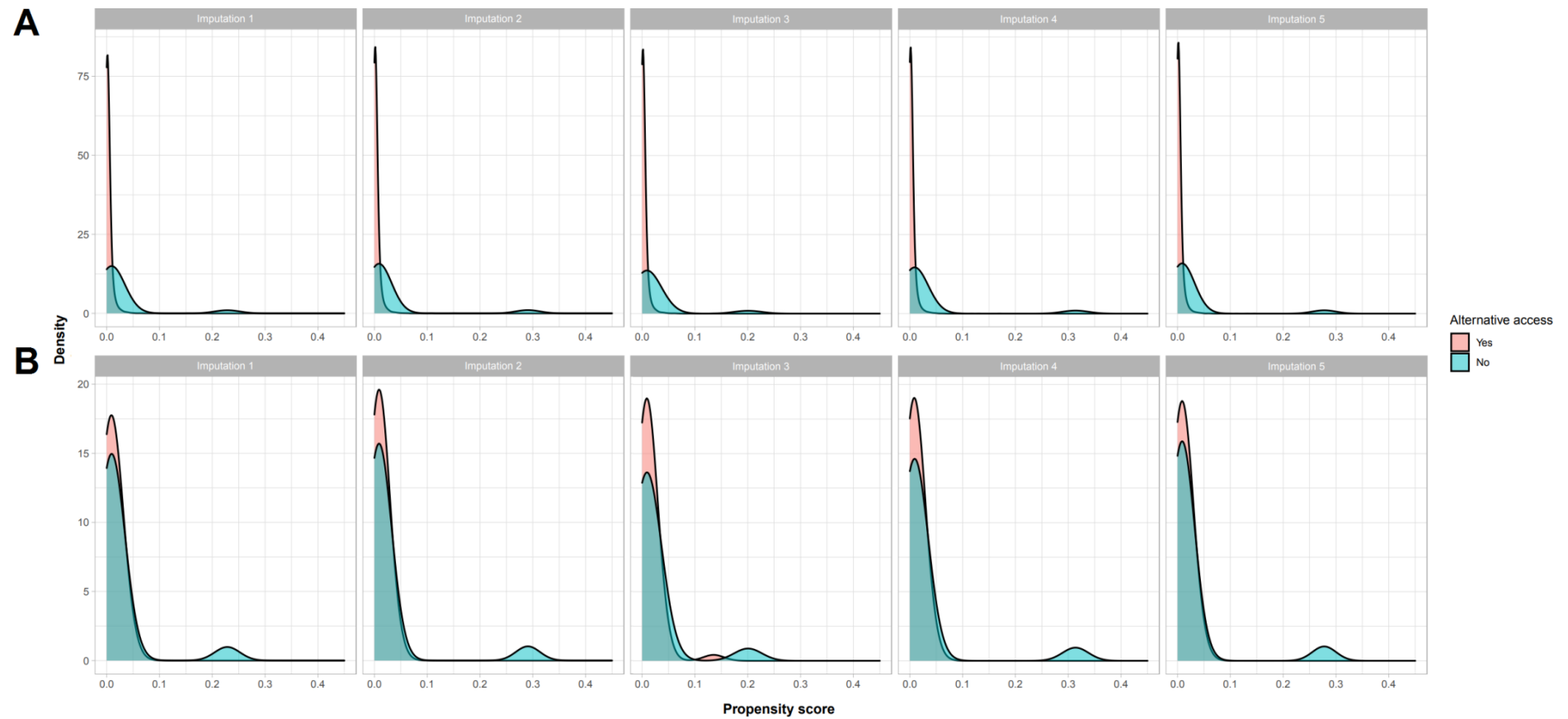


CONTRAST, Collaboration for New Treatments of Acute Stroke; MR CLEAN, Multicenter Randomized Clinical Trial of Endovascular Treatment for Acute Ischemic Stroke in the Netherlands.

n, number.

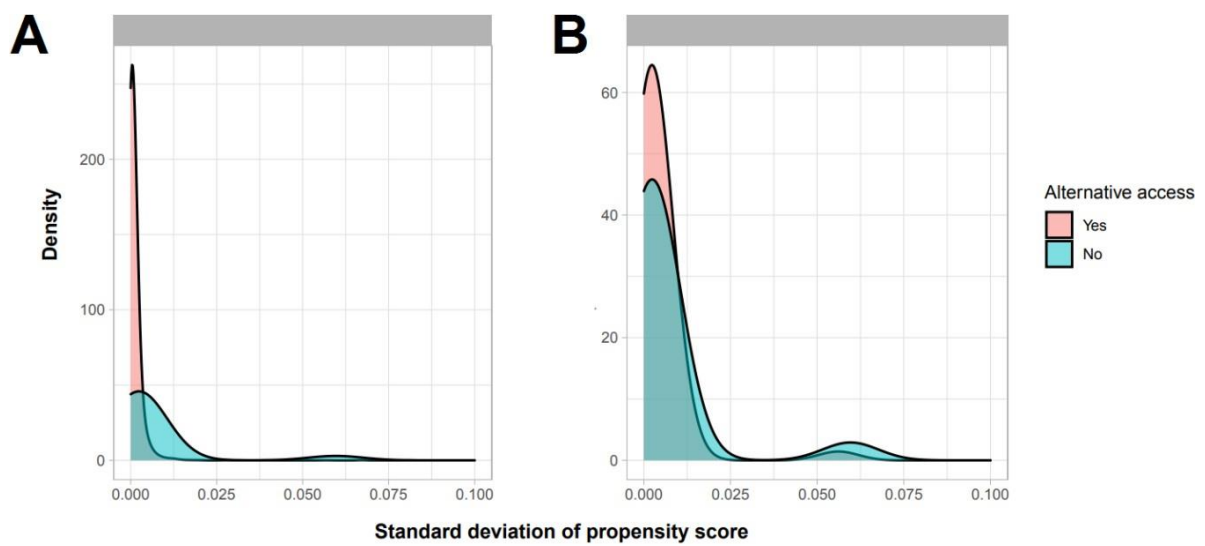
^aEndovascular thrombectomy was defined as any procedure with a performed arterial puncture in the angiography suite with the aim to remove the intracranial occlusion.

Figure S2. Distribution of the propensity score before and after matching



The distribution of the propensity score is displayed on a different scale for the **(A)** full cohort and **(B)** matched cohort to increase readability.

Figure S3. Distribution of the standard deviation before and after matching



The distribution of the standard deviation of the propensity score is displayed on a different scale for the (A) full cohort and (B) matched cohort to increase readability.

Table S1. Baseline characteristics full cohort

Characteristics	Alternative access (n=17)	Femoral access (n=5180)	P value
Age, <i>median (IQR)</i> , years	85 (80-89)	72 (63-81)	<.001
Female, <i>n (%)</i>	12/17 (71)	2479/5180 (48)	.06
Medical history, <i>n (%)</i>			
Atrial fibrillation	3/16 (18.8)	1227/5112 (24.0)	.78
Diabetes mellitus	4/17 (23.5)	868/5149 (16.9)	.51
Hypercholesterolemia	7/17 (41.2)	1541/4972 (31.0)	.37
Hypertension	12/17 (70.6)	2706/5085 (53.2)	.15
Myocardial infarction	2/15 (13.3)	726/5083 (14.3)	>.99
Peripheral artery disease	1/17 (5.9)	466/5084 (9.2)	>.99
Previous stroke	3/15 (20.0)	917/5141 (17.8)	.83
Current smoker, <i>n (%)</i>	3/9 (33.3)	1078/3892 (27.7)	.72
Current medication use, <i>n (%)</i>			
Antiplatelets	8/15 (53.3)	1593/5116 (31.1)	.90
Anticoagulants	2/15 (13.3)	1009/5149 (19.6)	.75
Antihypertensives	10/15 (66.7)	2809/5080 (55.3)	.38
Statins	8/15 (53.3)	1826/5069 (36.0)	.18
Pre-stroke mRS score >2, <i>n (%)</i>	6/14 (42.9)	655/5041 (13.0)	<.01
NIHSS score, <i>median (IQR)</i>	16 (11-19)	15 (10-19)	.91
Location occlusion on CTA, <i>n (%)</i>			
Left hemisphere	10/17 (58.8)	1742/3272 (53.2)	.87
Intracranial ICA	6/17 (35.3)	1218/4957 (24.6)	<.01
M1	9/17 (52.9)	2774/4957 (56.0)	
M2	1/17 (5.9)	940/4957 (19.0)	
M3/M4	1/17 (5.9)	9/4957 (0.2)	
A1	0/17 (0)	7/4957 (0.1)	
A2	0/17 (0)	9/4957 (0.2)	
ICA lesion, <i>n (%)</i>			
Stenosis \geq 50%	0/13 (0)	431/5180 (8.3)	.62
Occlusion	0/13 (0)	492/5180 (9.5)	.63
Dissection	0/12 (0)	79/4495 (1.8)	>.99
ASPECTS, <i>median (IQR)</i>	9 (8-10)	9 (8-10)	.60
Collateral filling, <i>n (%)</i>			.11
Absent collaterals	0/14 (0)	258/4891 (5.3)	
<50% of occluded territory	9/14 (64.3)	1750/4891 (35.8)	
50-99% of occluded territory	2/14 (14.3)	1890/4891 (38.6)	
100% of occluded territory	3/14 (21.4)	993/4891 (20.3)	
Intravenous thrombolysis, <i>n (%)</i>	11/15 (73.3)	3575/5150 (69.4)	>.99

A1, anterior cerebral artery, first segment; A2, anterior cerebral artery, second segment;

ASPECTS, Alberta Stroke Program Early CT Score; CTA, computed tomography

angiography; ICA, internal carotid artery; M1, middle cerebral artery, first segment; M2,

middle cerebral artery, second segment; M3, middle cerebral artery, third segment; M4, middle cerebral artery, fourth segment; mRS, modified Rankin Scale; NIHSS, National Institutes of Health Stroke Scale.

IQR, interquartile range; n, number.

Table S2. Procedural variables full cohort

Characteristics	Alternative access (n=17)	Femoral access (n=5180)	P value
General anesthesia, n (%)	9/14 (64.3)	1149/4888 (23.5)	<.01
Alternative access, secondary attempt, n (%)	14/16 (87.5)	N/A	
Closure technique, n (%) ^{a,b}			
Angioseal	11/13 (84.6)	2096/2240 (93.6)	.20
Mynx	0/13 (0)	131/2240 (5.8)	>.99
Starclose	0/13 (0)	8/2240 (0.4)	>.99
Exoseal	0/13 (0)	1/2240 (0.04)	>.99
Surgical closure	2/13 (15.4)	4/2240 (0.2)	<.01
Compression	1/13 (7.7)	45/2240 (2.0)	.24
Intracranial treatment, n (%)	16/17 (94.1)	4409/5180 (85.1)	.72
EVT technique, n (%) ^a			
Stent retriever	7/13 (53.8)	3112/4212 (73.9)	.12
Aspiration	11/13 (84.6)	1962/4212 (46.6)	<.01
Intra-arterial thrombolytics	0/13 (0)	94/4147 (2.3)	>.99
Carotid artery PTA, n (%)	0/9 (0)	287/4319 (6.6)	>.99
Carotid artery stenting, n (%)	0/12 (0)	302/4770 (6.3)	>.99
Total revascularization attempts, n (%)			.36
1	2/11 (18.2)	1536/3784 (40.6)	
2	4/11 (36.4)	926/3784 (24.5)	
3	3/11 (27.3)	554/3784 (14.6)	
≥4	2/11 (18.2)	768/3784 (20.3)	
Time from onset to first arterial puncture attempt, median (IQR), minutes ^c	195 (150-255)	195 (148-265)	.87
Time from first arterial puncture attempt to recanalization, median (IQR), minutes ^d	90 (58-136)	55 (35-80)	<.01

EVT, endovascular thrombectomy; N/A, not applicable; PTA, percutaneous transluminal angioplasty.

IQR, interquartile range; n, number.

^aSum may exceed 100% due to a combination of techniques.

^bThe variable included all closure techniques during EVT (i.e., for both alternative and femoral access).

^cTime from onset to first arterial puncture attempt was defined as the duration from stroke onset to the first arterial puncture attempt in the femoral, radial, carotid or brachial artery in minutes.

^dTime from first arterial puncture attempt to recanalization was defined as the duration of the EVT procedure in minutes, i.e., from the first arterial puncture attempt in the femoral, radial, carotid or brachial artery to the digital subtraction angiography run immediately after EVT.

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