Supplemental material

Supplemental material includes sensitivity analyses focusing on high-volume centers that performed more than 500 interventions per relevant thrombectomy method. This resulted in a single center employing aspiration-based thrombectomy compared to two centers employing stent retriever. We also performed a sensitivity analysis stratifying patients into anterior and posterior circulation stroke, respectively. Finally, we carried out a propensity score matched analysis where treatment groups were matched on variables with SMD > 0.1 at baseline. Matching was conducted with a caliper of 0.1 which resulted in post-matching SMD of < 0.2 for all relevant variables. A two-sided p-value of ≤ 0.05 was considered significant. Patients with missing data were omitted from analysis.

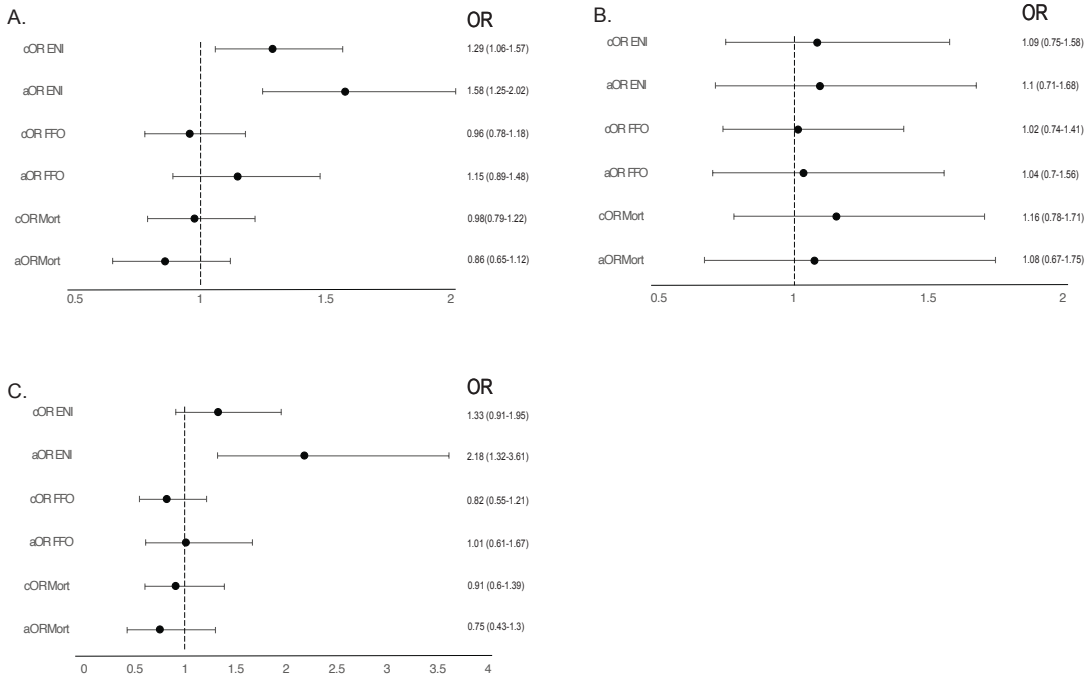
High-volume center analysis

Supplemental Table S1. Odds ratio (OR) for FPR per method, crude (t-test) and adjusted data (ANCOVA). ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR	ASP
FPR n/N (%)	524/1381 (38)	328/861 (38)
FPR OR	reference	cOR 1.06 (0.85-1-20), 0.943
		aOR 1.23 (0.99-1.52), 0.062

Supplemental Table S2. Procedural time in minutes per group, crude and adjusted data. ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR, Mean (SD)	ASP, Mean (SD)	Mean Diff (95% CI)	P-value
cFPR	33.3 (20.0)	28.3 (27.3)	5.0 (1.8-8.2)	0.002
aFPR			7.8 (-0.7-16.2)	0.101
cMPR	68.8 (40.4)	57.6 (53.7)	11.2 (3.6-18.8)	0.004
aMPR			21.0 (11.0-30.9)	<0.001



Supplemental Figure S1. Clinical outcomes per grade displayed as odds ratio crude/adjusted cOR/aOR (95% confidence interval); A, Entire studied cohort; B, First pass reperfusion; C, Multiple pass reperfusion; ENI, early neurological improvement; FFO, favorable functional outcome; Mort, Mortality at 3 months.

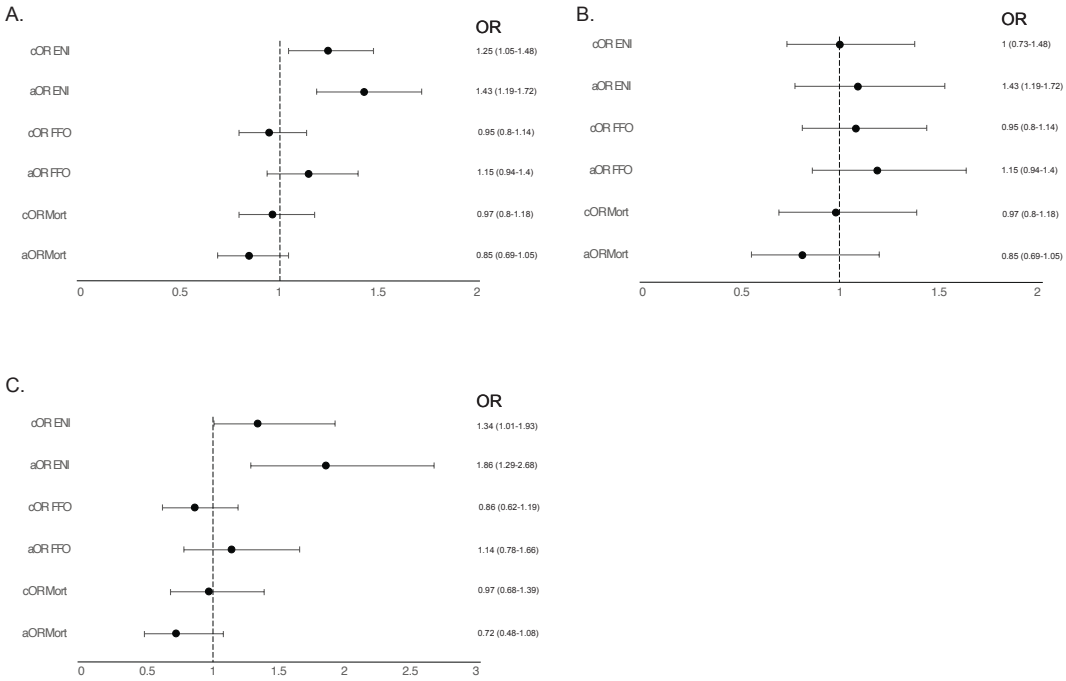
Anterior circulation analysis

Supplemental Table S3. Odds ratio for FPR per method, crude (t-test) and adjusted data (ANCOVA). ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR	ASP
FPR n/N (%)	677/1807 (37)	387/1064 (36)
FPR OR	ref	cOR 1.03 (0.881-1.209), 0.698
		aOR 1.08 (0.91-1.28), 0.38

Supplemental Table S4. Procedural time in minutes per group, crude and adjusted data. ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR, Mean (SD)	ASP, Mean (SD)	Mean Diff (95% CI)	P-value
cFPR	34.2 (22.0)	27.4 (27.2)	6.8 (3.8-9.8)	<0.001
aFPR			7.8 (0.5-15.0)	0.026
cMPR	68.3 (39.3)	57.0 (38.8)	11.2 (5.6-16.8)	<0.001
aMPR			17.0 (8.8-25.2)	<0.001



Supplemental Figure S2. Clinical outcomes per grade displayed as odds ratio crude/adjusted cOR/aOR (95% confidence interval); A, Entire studied cohort; B, First pass reperfusion; C, Multiple pass reperfusion; ENI, early neurological improvement; FFO, favorable functional outcome; Mort, Mortality at 3 months.

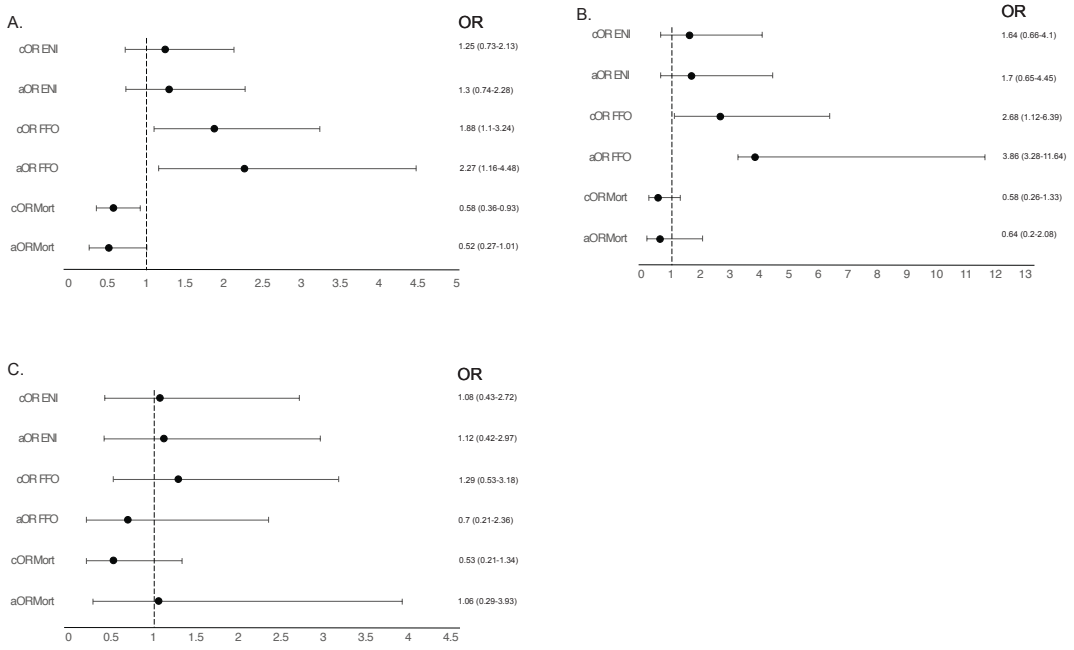
Posterior circulation analysis

Supplemental Table S5. Odds ratio for FPR per method, crude and adjusted data. ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR	ASP
FPR n/N (%)	56/149 (38)	74/202 (37)
FPR OR	ref	cOR 0.96 (0.62-1.488), 0.855
		aOR 0.81 (0.47-1.41), 0.46

Supplemental Table S6. Procedural time in minutes per group, crude and adjusted data. ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR, Mean (SD)	ASP, Mean (SD)	Mean Diff (95% CI)	P-value
cFPR	48.0 (32.1)	33.4 (30.0)	14.7 (3.8-25.6)	0.009
aFPR			20.8 (-5.5-47.2)	0.298
cMPR	80.7 (60.0)	60.0 (37.6)	20.8 (4.3-37.3)	0.014
aMPR			25.9 (-3.3-55.1)	0.136



Supplemental Figure S3. Clinical outcomes per grade displayed as odds ratio crude/adjusted cOR/aOR (95% confidence interval); A, Entire studied cohort; B, First pass reperfusion; C, Multiple pass reperfusion; ENI, early neurological improvement; FFO, favorable functional outcome; Mort, Mortality at 3 months.

Propensity score matched analysis

Supplemental Table S7. Baseline data post propensity score matching. Continuous measures are reported as median (interquartile range), number of patients with available data. ASP, aspiration based thrombectomy; SR, stent retriever.

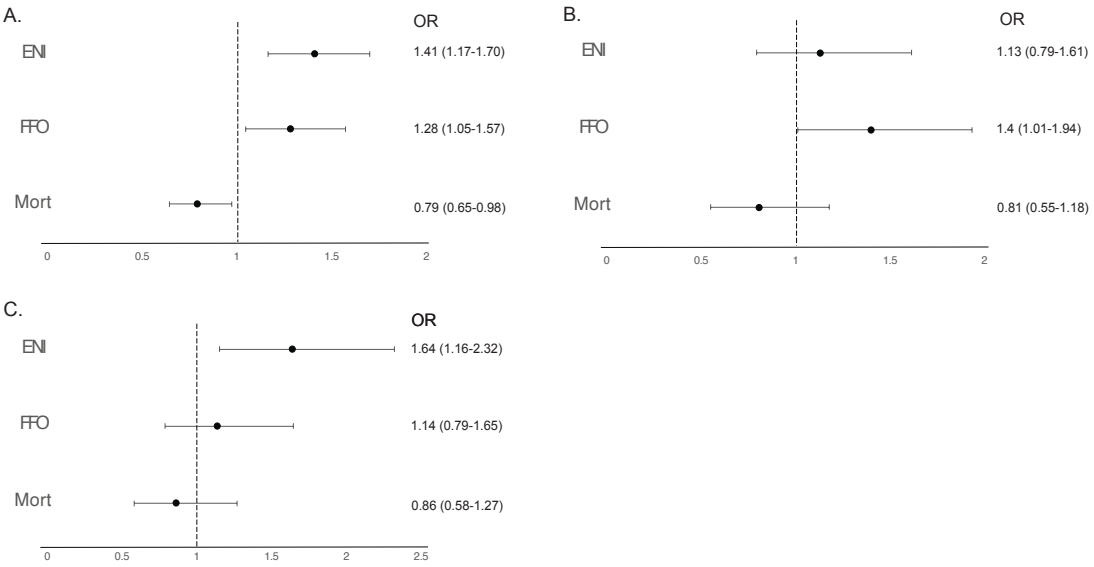
	SR n = 1104	ASP n = 1104	SMD
NIHSS pre-intervention	16 (11-20), 1104	16 (11-20), 1104	0.011
General Anesthesia	543/1104 (49)	614/1104 (56)	0.129
Transfer from primary center	531/1104 (48)	508/1104 (46)	0.042
Tandem occlusion	105/1104 (10)	136/1104 (12)	0.090
Dense Vessel	581/1104 (53)	563/1104 (51)	0.033
Location			0.089
M1	492/1104 (45)	499/1104 (45)	
M2	231/1104 (21)	201/1104 (18)	
ICA	258/1104 (23)	214/1104 (19)	
Extracranial ICA	28/1104 (3)	49/1104 (4)	
Posterior circulation	95/1104 (9)	141/1104 (13)	

Supplemental Table S8. Odds ratio for FPR per method. ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR	ASP
FPR n/N (%)	401/1104 (36)	411/1104 (37)
FPR OR	ref	OR 1.04 (0.875-1.236), p = 0.659

Supplemental Table S9. Procedural time in minutes per group. ASP, aspiration based thrombectomy; FPR, first pass reperfusion; MPR, multiple pass reperfusion; SR, stent retriever.

	SR, Mean (SD)	ASP, Mean (SD)	Mean Diff (95% CI)	P-value
FPR	37.9 (25.9)	26.7 (24.9)	11.2 (7.7-14.7)	<0.001
MPR	72.3 (42.4)	56.6 (36.9)	15.7 (9.6-21.8)	<0.001



Supplemental Figure S4. Clinical outcomes per grade displayed as odds ratio; A, Entire studied cohort; B, First pass reperfusion; C, Multiple pass reperfusion; ENI, early neurological improvement; FFO, favorable functional outcome; Mort, Mortality at 3 months.

Method of thrombectomy per center

Supplemental Table S10. Thrombectomy method per center. ASP, aspiration based thrombectomy; SR, stent retriever.

Center		N	%
Akademiska sjukhuset	SR	232	60.4%
	ASP	152	39.6%
Karolinska Universitetssjukhuset	SR	698	90.8%
	ASP	71	9.2%
Norrlands Universitetssjukhus	SR	152	74.5%
	ASP	52	25.5%
Sahlgrenska Universitetssjukhuset	SR	115	11.8%
	ASP	861	88.2%
Skånes Universitetssjukhus i Lund	SR	683	86.6%
	ASP	106	13.4%
Universitetssjukhuset i Linköping	SR	97	69.3%
	ASP	43	30.7%
Universitetssjukhuset Örebro	SR	13	27.7%
	ASP	34	72.3%