

European Stroke Organisation (ESO) - European Society for
Minimally Invasive Neurological Therapy (ESMINT) Guidelines on
Mechanical Thrombectomy in Acute Ischaemic Stroke

Supplemental appendix

Supplemental Table 1: Intellectual and financial disclosures of the module working group members

Author	Discipline and affiliation	Intellectual and financial disclosures
Guillaume Turc	Neurologist, Sainte-Anne hospital, Paris, France	<p>Intellectual disclosures:</p> <ul style="list-style-type: none"> - Principal investigator of the ASPHALT (Acute Stroke: Prehospital vs. in Hospital initiation of recanalisation Therapy) trial project, funded by the French Ministry of Health. - Co-chair of the ESO Guidelines board <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Lecturing fees by Guerbet France. - Travel support by Samsung Electronics France.
Pervinder Bhogal	Interventional Neuroradiologist, The Royal London Hospital, London, U.K.	<p>Intellectual disclosures: none</p> <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Travel support by Phenox - Co-inventor and co-patent holder of Lumenate stent and stock shareholder of Neurvana medical
Urs Fischer	Neurologist, Inselspital, University Hospital Bern and University of Bern, Switzerland	<p>Intellectual disclosures:</p> <ul style="list-style-type: none"> - Principal investigator of the ELAN and SWITCH trial - Co-Principal investigator of the SWIFT DIRECT trial, supported by Medtronic. - Principal investigator of the BEYOND SWIFT registry, supported by Medtronic - Secretary general of ESO - Organiser of the ESO ESMINT ESNR Stroke Winter School <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Research support by Medtronic. - Consultant for Stryker and Covidien. - Former travel support by Neuravi
Pooja Khatri	Neurologist, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA	<p>Intellectual disclosures:</p> <ul style="list-style-type: none"> - Development of a clinical trial testing mechanical thrombectomy for patients with low NIHSS scores - Scientific advisory committee to TENSION trial

		<p>Financial disclosures:</p> <ul style="list-style-type: none"> - Research support by Genentech and Lumosa - Travel support by Neuravi
Kyriakos Lobotesis	Interventional Neuroradiologist, Imperial College Healthcare NHS Trust, Charing Cross Hospital, London, United Kingdom	<p>Intellectual disclosures: none</p> <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Consulting fees from Microvention, Medtronic and Stryker - Institutional grants by Microvention
Mikaël Mazighi	Interventional Neurologist, Rothschild Foundation Hospital and Lariboisière Hospital, Paris, France	<p>Intellectual disclosures: none</p> <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Consulting fees from Servier and Acticor
Peter D. Schellinger	Neurologist, Johannes Wesling Medical Center Minden, University hospitals of the Ruhr-University of Bochum, Germany	<p>Intellectual disclosures: none</p> <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Consulting fees from Boehringer Ingelheim, Cerevast and Medtronic
Danilo Toni	Neurologist, Hospital Policlinico Umberto I, Sapienza University of Rome, Rome, Italy	<p>Intellectual disclosures: none</p> <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Research support from Boehringer Ingelheim - Consulting fees from Boehringer Ingelheim, Bayer, Pfizer and Bristol-Myers Squibb
Joost de Vries	Neurosurgeon, Neurointerventionalist, Department of Neurosurgery, Radboud University Nijmegen, Nijmegen, The Netherlands	<p>Intellectual disclosures: none</p> <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Research support from Boehringer Ingelheim - Consulting fees from Boehringer Ingelheim, Bayer, Pfizer and Bristol-Myers Squibb

Philip White	Interventional Neuroradiologist, Institute of Neuroscience, Newcastle University, Newcastle Upon Tyne, United Kingdom	<p>Intellectual disclosures:</p> <ul style="list-style-type: none"> - Member of the following DSMBs: TENSION, PROTECT-U, MR CLEAN No IV - Member of the steering committees of PRACTISE and PISTE - Member of the executive board of the HERMES collaboration - Member of the intercollegiate Stroke working party - Chair of the ESMINT Guidelines Committee <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Research support from Microvention and Ibex Innovations - Consulting fees from Microvention, Stryker, Medtronic
Jens Fiehler	Interventional Neuroradiologist, Klinik und Poliklinik für Neuroradiologische Diagnostik und Intervention, Universitätsklinikum Hamburg-Eppendorf, Hamburg, Germany.	<p>Intellectual disclosures: none</p> <p>Financial disclosures:</p> <ul style="list-style-type: none"> - Research support from Medtronic, Microvention, Philips and Stryker - Consulting fees from Acandis, Boehringer Ingelheim, Cerenovus, Covidien, Medtronic, Microvention, Penumbra, Route92, and Stryker - Executive functions: Director Neuroradiology UKE Hamburg, Eppdata

Reperfusion rates associated with several advanced MT techniques (PICO 12)

Although there is very limited data available on the Solumbra, ARTS, SAVE and CAPTIVE techniques and even though no direct head-to-head comparisons were performed, promising results have been achieved using the SAVE technique. Maus et al. reported the results of 32 patients treated with SAVE and they achieved final mTICI $\geq 2b$ in 100% of cases with an average of 1.2 ± 0.7 attempts and mTICI 3 in 78% of cases with a maximum of 3 attempts (supplemental table 2). First-pass mTICI 3 was achieved in 72% of patients. The rate of embolization to new territories was 0% and no new downstream territory occlusions were observed.

Supplemental Table 2. Summary of available literature on Solumbra, ARTS, SAVE and CAPTIVE MT techniques

Publication	Number of patients	TICI (%)				Number of passes (mean)
		2b	3	$\geq 2b$	1st Pass TICI 3	
Solumbra ¹	105	44	44	88	37	2.3
		43	55	98	43	2.2
		22	78	100	72	1.2
		21	33	100	-	1.7

Literature search strategy

Search Terms used

PICO 1-3

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND ((large vessel) OR (large artery) OR (carotid artery) OR (internal carotid artery) OR (Middle cerebral artery) OR MCA OR (anterior cerebral artery) OR ACA OR (internal carotid artery) OR ICA OR (vertebrobasilar artery) OR (basilar artery) OR (carotid artery) OR (vertebral artery) OR (posterior cerebral artery) OR (anterior circulation)) adj5 (ischemia OR embolus OR thrombus OR block OR occlusion OR Infarct*)

OR (brain OR cerebr* OR cerebell* OR vertebrobasil* OR hemispher* OR intracran* OR intracerebral OR infratentorial OR supratentorial OR middle cerebr* OR mca* OR anterior circulation) adj5 (isch?emi* OR infarct* OR thrombo* OR emboli* OR occlus* OR hypoxi*)

AND ((thrombectomy) OR (percutaneous thrombectomy) OR (endovascular procedures) OR (mechanical thrombectomy) OR (neuro-thrombectomy) OR (embolectomy) OR (cerebral revascularization) OR (endovascular thrombectomy) OR (endovascular embolectomy) OR (intraarterial embolectomy) OR (intra-arterial thrombectomy) OR (Balloon angioplasty) OR (penumbra system) OR (stentretriever) OR (stent type retriever) OR (Angiojet) OR (stent) OR (Solitaire) OR (Merci) OR (Trevo) OR (Penumbra) OR (Revive) OR ERIC OR (3D Separator) OR Aperio OR Preset OR Solumbra OR (ADAPT technique) OR Sofia OR (mechanical thrombolysis) OR (endovascular therapy) OR (endovascular treatment) OR Catch device or Capture device OR core device OR (perfusion device) adj3 (thromb* OR embol* OR clot disruption* OR clot retrieval*)

OR (((clot* OR thromb* OR embol*)) adj3 (retriev* OR disruption* OR fragmentation)) OR (((stent*) OR (stent-assisted)) adj3 (retriev* OR stentretriever*)) OR (((Merci OR Trevo OR Penumbra OR Solitaire) adj3 (retriever* OR system* OR device*)) OR ((recanalisi* OR recanaliz* OR revascularis* OR revasculariz*) adj5 (brain OR cerebr*)) OR ((retriev* OR device OR stent OR extraction OR stentretriever) adj5 (brain OR cerebr*)) OR ((intervention OR mechanical OR proced*) adj5 (brain OR cerebr*)) OR ((Trevo OR Solitaire OR Penumbra OR penumbra system OR Merci OR Revive OR ERIC OR Catch or Capture OR 3D Separator OR Aperio OR Preset OR core OR perfusion OR ADAPT technique OR Sofia OR stent retriever) adj5 (brain OR cerebr*)) OR (mechanical) adj3 (thrombectom* OR thromboembolectom* OR thrombo-embolectom* OR thrombolytic* OR remov* OR disrupt* OR clot* OR embolectom* OR recanalisi* OR recanaliz* OR retriev*)

PICO 4: Prehospital scales

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND (stroke screen) OR (stroke score) OR (stroke scores) OR (stroke scale) OR (stroke scales) OR (stroke recognition) OR (stroke predict*) OR (stroke severity scale) OR (Belgian prehospital setting) OR (Canadian Neurological Scale) OR (Cincinnati Pre-Hospital Stroke Scale) OR (CPSS) OR (Cincinnati PreHospital Stroke Scale) OR (Cincinnati PreHospital Stroke Severity Scale) OR (Emergency medical dispatchers and paramedics–San Diego) OR (EMS) OR (emergency medical service) OR (emergency medical scale) OR (European Stroke Scale) OR (Face Arm Speech Time) OR (FAST) OR (Face Arm Speech test) OR (Field Assessment Stroke Triage for Emergency Destination) OR (FAST-ED) OR (3-Item Stroke Scale) OR (3ISS) OR (Hemispheric Stroke Scale) OR (Glasgow Coma Scale) OR (Iranian Pre-hospital Stroke Scale) OR (IPSS) OR (Kurashiki prehospital stroke scale) OR (Large vessel occlusion scale) OR (Los Angeles Motor Scale) OR (LAMS) OR (Los Angeles Pre-Hospital Stroke Screen) OR (LAPSS) OR (Maria Prehospital Stroke Scale) OR (MPSS) OR (Melbourne Ambulance Stroke Screen) OR (MASS) OR (Medic Prehospital Assessment for Code Stroke) OR (Med PACS) OR (MedPACS) OR (Matthew Stroke Scale) OR (National Institutes of Health Stroke Scale) OR (NIHSS) OR (National Institute of Health Stroke Scale) OR (Ontario Prehospital Stroke Screening Tool) OR (OPSS) OR (Orgogozo Stroke Scale) OR (Paramedic Prehospital Acute Stroke Severity Scale) OR (PASS scale) OR (Pre-Hospital Stroke Scale) OR (Pre-Hospital Stroke Severity) OR (PreHospital Stroke Scale) OR (Pre Hospital Stroke Scale) OR (Pre-Hospital Acute Stroke Severity Scale) OR (Rapid Arterial Occlusion Evaluation scale) OR (RACE scale) OR (Recognition of Stroke in the Emergency Room) OR (ROSIER) OR (Scandinavian Stroke Scale) OR (SSS) OR (Smartphone-assisted prehospital medical information system) OR (SPMIS) OR (Unassisted telestroke scale in Belgium) OR (UTSS in Belgium)

AND (sensitivity and specificity) OR (predictive value of tests) OR (Likelihood Functions) OR (Probability) OR (Area Under Curve) OR (Reproducibility of Results) OR sensitivity OR accuracy OR accurate OR reliable OR reliability OR valid OR validity OR (Likelihood ratio) OR (Area under the curve) OR (receiver operator characteristic) OR roc OR Specificity OR True positive OR (true negative) OR (false positive) OR (false negative) OR (diagnostic odds ratio) OR predict

PICO 5: Mothership vs drip and ship approach

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND ((thrombectomy) OR (percutaneous thrombectomy) OR (endovascular procedures) OR (mechanical thrombectomy) OR (neuro-thrombectomy) OR (embolectomy) OR (cerebral revascularization) OR (endovascular thrombectomy) OR (endovascular embolectomy) OR (intraarterial embolectomy) OR (intra-arterial thrombectomy) OR (Balloon angioplasty) OR (penumbra system) OR (stentriever) OR (stent type retriever) OR (Angiojet) OR (stent) OR (Solitaire) OR (Merci) OR (Trevo) OR (Penumbra) OR (Revive) OR ERIC OR (3D Separator) OR Aperio OR Preset OR Solumbra OR (ADAPT technique) OR Sofia OR (mechanical thrombolysis) OR (endovascular therapy) OR (endovascular treatment) OR Catch device or Capture device OR core device OR (perfusion device) adj3 (thromb* OR embol* OR clot disruption* OR clot retrieval*)

AND

(Drip and ship or mothership approaches)
(Drip and Ship) OR (Drip-and-Ship) OR (drip, ship) OR (Drip, and/or ship) OR
(Direct presenters) OR mothership OR (direct admission to CSC) OR (direct admission to comprehensive stroke center) OR (treated at site) OR (Bypass* nearest stroke center) OR
(Direct routing to CSC) OR (Endovascular-capable center) OR (interhospital transfer) OR (inter-hospital transfer) OR (Optimal transport destination)

PICO 6

Same as PICO 1-3

PICO 7

PICO 1 OR **Minor stroke OR TIA OR (Transient ischemic stroke)**

AND NIHSS OR (National Institutes of Health Stroke Scale)

PICO 8

AS in PICO 1

AND ASPECTS OR (Alberta Stroke Program Early CT Score) OR (infarct core volume) OR (Necrotic core volume) OR (ischemic core volume) OR (core volume)

PICO 9

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND ((thrombectomy) OR (percutaneous thrombectomy) OR (endovascular procedures) OR (mechanical thrombectomy) OR (neuro-thrombectomy) OR (embolectomy) OR (cerebral revascularization) OR (endovascular thrombectomy) OR (endovascular embolectomy) OR (intraarterial embolectomy) OR (intra-arterial thrombectomy) OR (Balloon angioplasty) OR (penumbra system) OR (stentriever) OR (stent type retriever) OR (Angiojet) OR (stent) OR (Solitaire) OR (Merci) OR (Trevo) OR (Penumbra) OR (Revive) OR ERIC OR (3D Separator) OR Aperio OR Preset OR Solumbra OR (ADAPT technique) OR Sofia OR (mechanical thrombolysis) OR (endovascular therapy) OR (endovascular treatment) OR Catch device or Capture device OR core device OR (perfusion device) adj3 (thromb* OR embol* OR clot disruption* OR clot retrieval*)

AND (Imaging-based selection) OR imaging OR (multimodal imaging) OR (Collateral imaging) OR (magnetic resonance imaging) OR (perfusion imaging) OR (diffusion imaging) OR (computed tomography) OR (Perfusion CT) OR (CT Perfusion) OR (perfusion computed tomography) OR (computed tomography perfusion) OR (dynamic CT) OR (dynamic computed Tomography) OR (perfusion Parameter) OR (perfusion parameters) OR (cerebrovascular hemodynamics) OR (PENUMBRA) OR mismatch OR (imaging selection) OR CTA OR (computed tomography angiography) OR MRA OR (vessel imaging) OR (collateral imaging)
OR (CT Perfusion) OR (CT AND quantitative assessment) OR (CT AND mean transit Time) OR (CT AND time to peak) OR (CT AND cerebral blood volume) OR (CT AND cerebral blood flow) OR ((CT) OR (computed tomography)) AND ((Perfusion) OR (quantitative assessment) OR (mean transit Time) OR (time to peak) OR (cerebral blood volume) OR (cerebral blood flow))

PICO 10

Same as PICO 1

PICO 11

As in PICO 1

AND (Thrombolysis in cerebral infarction scale) OR (TICI) OR (Modified thrombolysis in cerebral infarction scale) OR (mTICI) OR (Arterial occlusion lesion scale) OR (AOL scale) OR (TICI 3 recanalization) OR (TICI 2b recanalization) OR (TICI 3) OR (TICI 2b) OR ((Thrombolysis) AND (cerebral infarction scale)) OR (TICI Grade) OR (recanalisation TICI Grade) OR (recanalization TICI Grade)

PICO 12

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND ((thrombectomy) OR (percutaneous thrombectomy) OR (endovascular procedures) OR (mechanical thrombectomy) OR (neuro-thrombectomy) OR (embolectomy) OR (cerebral revascularization) OR (endovascular thrombectomy) OR (endovascular embolectomy) OR (intraarterial embolectomy) OR (intra-arterial thrombectomy) OR (Balloon angioplasty) OR (penumbra system) OR (stentriever) OR (stent type retriever) OR (Angiojet) OR (stent) OR (Solitaire) OR (Merci) OR (Trevo) OR (Penumbra) OR (Revive) OR ERIC OR (3D Separator) OR Aperio OR Preset OR Solumbra OR (ADAPT technique) OR Sofia OR (mechanical thrombolysis) OR (endovascular therapy) OR (endovascular treatment) OR Catch device or Capture device OR core device OR (perfusion device) adj3 (thromb* OR embol* OR clot disruption* OR clot retrieval*)

AND ((Thrombus aspiration) OR thromboaspiration OR (thrombo-aspiration) OR (aspiration and catheter) OR thrombosuction OR (thrombo-suction) OR (ADAPT technique) OR (Adapt aspiration) OR (forced arterial suction thrombectomy) OR (FAST) OR (PENUMBRA) OR (a direct aspiration first pass technique) OR (ADAPT) OR (Clot aspiration thrombectomy) OR (direct clot aspiration) OR (manual aspiration thrombectomy) OR MAT OR Sofia OR (aspiration mechanical) OR (Mechanical thrombectomy) OR (Mechanical aspiration) OR (stentriever) OR (stent retriever) OR (stent type retriever))
OR (((aspiration adj5 mechanical) OR ((Thromboaspirat*) adj5 (brain OR cerebr*)))

PICO 13

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND ((thrombectomy) OR (percutaneous thrombectomy) OR (endovascular procedures) OR (mechanical thrombectomy) OR (neuro-thrombectomy) OR (embolectomy) OR (cerebral revascularization) OR (endovascular thrombectomy) OR (endovascular embolectomy) OR (intraarterial embolectomy) OR (intra-arterial thrombectomy) OR (Balloon angioplasty) OR (penumbra system) OR (stentriever) OR (stent type retriever) OR (Angiojet) OR (stent) OR (Solitaire) OR (Merci) OR (Trevo) OR (Penumbra) OR (Revive) OR ERIC OR (3D Separator) OR Aperio OR Preset OR Solumbra OR (ADAPT technique) OR Sofia OR (mechanical thrombolysis) OR (endovascular therapy) OR (endovascular treatment) OR Catch device or Capture device OR core device OR (perfusion device) adj3 (thromb* OR embol* OR clot disruption* OR clot retrieval*)

AND Sedation OR (conscious sedation) OR Anesthesia OR Isofurane OR Propofol OR ketamine OR (General anesthesia) OR GA OR (Anesthesia, general) OR (monitored anesthesia care) OR MAC OR (regional anesthesia) OR anesthetic OR (general anesthetic) OR (General anesthetics) OR (local anesthesia) OR (local anesthetic) OR (local anesthetics) OR (Anesthesia, local) OR lidocaine OR Procaine OR Prilocaine OR Bupivacaine

PICO 14

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND ((thrombectomy) OR (percutaneous thrombectomy) OR (endovascular procedures) OR (mechanical thrombectomy) OR (neuro-thrombectomy) OR (embolectomy) OR (cerebral revascularization) OR (endovascular thrombectomy) OR (endovascular embolectomy) OR (intraarterial embolectomy) OR (intra-arterial thrombectomy) OR (Balloon angioplasty) OR (penumbra system) OR (stentriever) OR (stent type retriever) OR (Angiojet) OR (stent) OR (Solitaire) OR (Merci) OR (Trevo) OR (Penumbra) OR (Revive) OR ERIC OR (3D Separator) OR Aperio OR Preset OR Solumbra OR (ADAPT technique) OR Sofia OR (mechanical thrombolysis) OR (endovascular therapy) OR (endovascular treatment) OR Catch device or Capture device OR core device OR (perfusion device) adj3 (thromb* OR embol* OR clot disruption* OR clot retrieval*)

AND (Blood pressure) OR (Antihypertensive agents) OR (target level, BP) OR (blood pressure goal) OR (blood pressure control) OR (blood pressure target) OR (blood pressure treatment) OR (blood pressure lowering) OR (Strict blood pressure control) OR (tight control) OR (tight blood pressure)

(blood pressure adj6 target) OR (BP adj6 target) OR (blood pressure adj6 goal) OR (BP adj6 goal) OR (intensi* adj6 treatment) OR (intensi* adj6 control) OR (intensi* adj6 lowering) OR (intensi* adj6 blood pressure) OR (intensi* antihypertensive) OR (tight adj6 control) OR (tight adj6 blood pressure) OR (strict adj6 control) OR (strict adj6 blood pressure)

OR (blood pressure adj6 target) OR (BP adj6 target) OR (blood pressure adj6 goal) OR (BP adj6 goal) OR (intensi* adj6 treatment) OR (intensi* adj6 control) OR (intensi* adj6 lowering) OR (intensi* adj6 blood pressure) OR (intensi* antihypertensive) OR (tight adj6 control) OR (tight adj6 blood pressure) OR (strict adj6 control) OR (strict adj6 blood pressure)

PICO 15

(stroke) OR (brain infarct*) OR (brain ischemia) OR (brain isch?emi*) OR (cerebral infarct*) OR (cerebrovascular accident*) OR (cerebrovascular infarct*) OR (acute ischemi* stroke) OR (carotid artery thrombosis) OR (anterior cerebral artery infarction) OR (middle cerebral artery infarction) OR (posterior cerebral artery infarction) OR (anterior circulation occlusion) OR ((brain OR cerebral) adj5 (ischemia OR infarct OR hypoxia))

AND ((large vessel) OR (large artery) OR (carotid artery) OR (internal carotid artery) OR (Middle cerebral artery) OR MCA OR (anterior cerebral artery) OR ACA OR (internal carotid artery) OR ICA OR (vertebrobasilar artery) OR (basilar artery) OR (carotid artery) OR (vertebral artery) OR (posterior cerebral artery) OR (anterior circulation)) adj5 (ischemia OR embolus OR thrombus OR block OR occlusion OR Infarct*)

OR (brain OR cerebr* OR cerebell* OR vertebrobasil* OR hemispher* OR intracran* OR intracerebral OR infratentorial OR supratentorial OR middle cerebr* OR mca* OR anterior circulation) adj5 (isch?emi* OR infarct* OR thrombo* OR emboli* OR occlus* OR hypoxi*)
AND (Carotid stenosis) OR (carotid atherosclerosis)

AND ((cervical stenting) OR (carotid artery stent) OR (cervical stent) OR (cervical angioplasty) OR (cervical balloon) OR (cervical endovascular)) OR (cervical AND (angioplasty OR endovascular OR percutaneous))

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