ISC 2026 Clinical and AI / ML Preview

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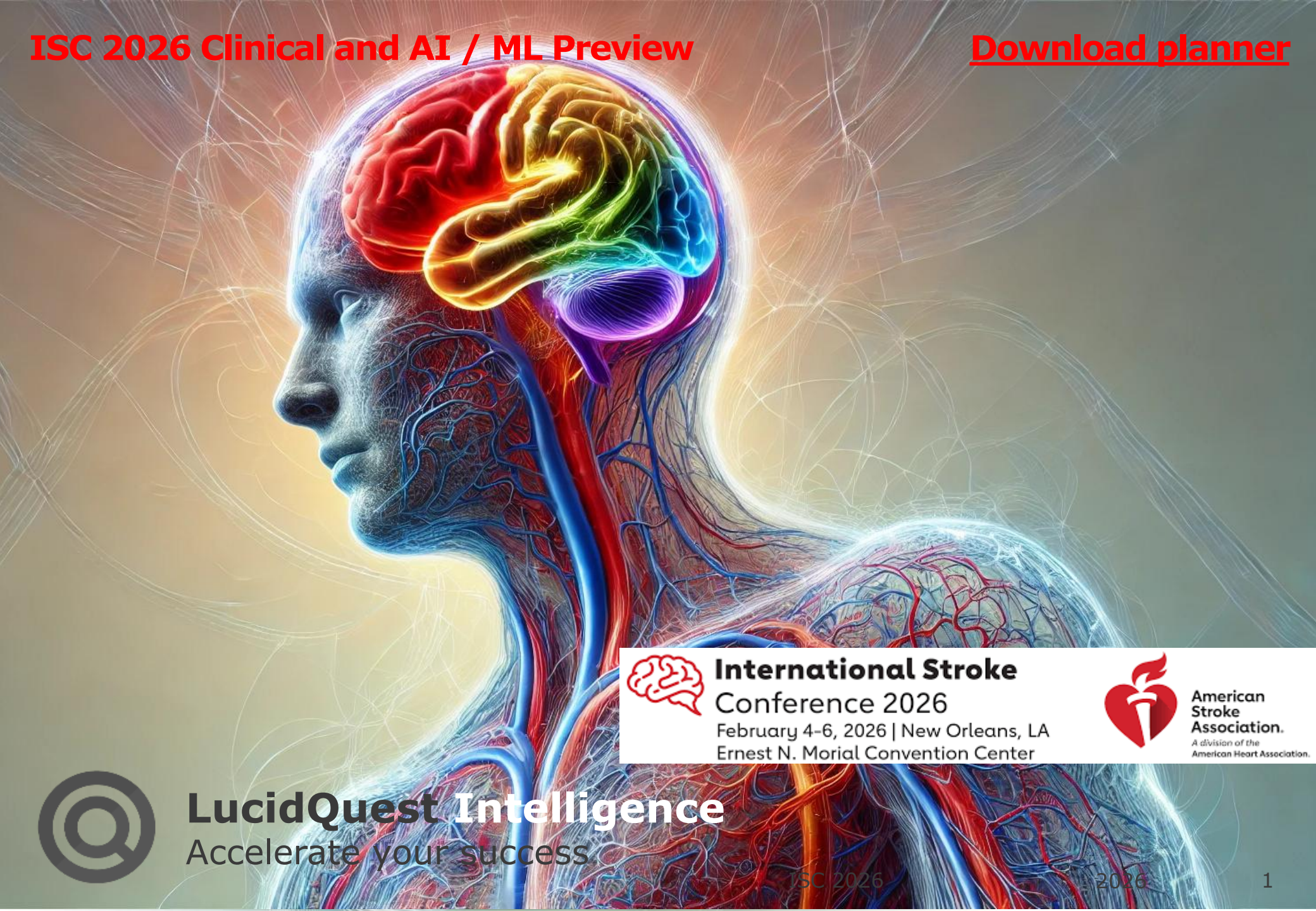

International Stroke Conference 2026
February 4-6, 2026 | New Orleans, LA
Ernest N. Morial Convention Center

American Stroke Association.
A division of the American Heart Association.

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ISC 2026 Preview – Table of Contents

ISC 2026 – General Overview

- **Global Scientific Hub:** ISC 2026 will gather top stroke researchers from over 50 countries to present groundbreaking discoveries
- **Groundbreaking Research Launchpad:** Over 1,500 presentations across 22 scientific areas, showcasing cutting-edge stroke research and advancements
- **Expanded Programming Days:** Pre-conference symposia will start the event, leading to the main sessions with diverse research themes
- **Innovative Session Formats:** New formats like Fireside Chats and digital poster theaters will encourage interactive learning and engagement
- **Late-Breaking Science Focus:** The conference will feature top clinical trials and recent stroke care developments in major sessions
- **Clinical and Translational Bridge:** Combining basic science with practical stroke treatment insights for improved clinical outcomes

ISC 2026 – Conference Themes

- **Acute Stroke Treatment Innovations:** Advancements in reperfusion and thrombectomy techniques will be featured for better acute stroke care
- **Stroke Pathogenesis Mechanisms:** Sessions will explore molecular and cellular mechanisms involved in ischemic and hemorrhagic stroke injury
- **Neurorehabilitation and Recovery:** New approaches in rehabilitation and recovery, including tech-driven solutions, will be highlighted
- **Brain Health Beyond Stroke:** Vascular contributions to cognitive decline and aging will be explored in stroke and brain health discussions
- **Health Equity and Disparities:** Sessions will focus on stroke outcomes and healthcare disparities among different populations
- **Precision and Emerging Technologies:** Genomics, advanced imaging, and AI innovations will be showcased for precision stroke treatment

Noteworthy Scientific presentations at ISC 2026

Key Topics From Notable Presentations (1/3)

- **Intracerebral Hemorrhage, Vascular Malformations & Aneurysms:** Research will focus on improving treatment safety and identifying new biomarkers for predicting recurrence and outcomes in hemorrhagic strokes
  - AT CASH EPOC trial will evaluate the rebound effect of atorvastatin discontinuation on recurrent symptomatic hemorrhages in cerebral cavernous malformations (CCM)
  - TriNetX cohort study will highlight the increased risk of intracranial hemorrhage in CCM patients on antithrombotic therapy
- **Acute Ischemic Stroke: Reperfusion, Thrombolysis & Thrombectomy:** The session will examine key factors influencing stroke outcomes, including endovascular treatments, blood pressure control, and timing for intervention, along with treatment strategies for different stroke types
  - Endovascular thrombectomy (EVT) efficacy is assessed for various occlusion types, with a focus on anterior vs. posterior circulation and timing of intervention, including the DTA approach
  - Hyperglycemia and persistent hypoperfusion will be explored as significant factors affecting functional recovery post-EVT, suggesting the need for personalized treatment adjustments

Key Topics From Notable Presentations (2/3)

- **Cerebrovascular Disease, Imaging, Small Vessel & Genetics:** Session will explore emerging diagnostic tools and treatment strategies in cerebrovascular disease, with a focus on small vessel pathology, genetic factors, and imaging advancements for better prognosis and personalized care
  - Proprotein convertase subtilisin/kexin type 9 inhibitors (PCSK9i) demonstrate potential in reducing recurrent strokes in patients with severe intracranial atherosclerosis, although cost-effectiveness remains a concern
  - Carotid web (CW) stability is highlighted, with minimal morphological changes over time, helping improve diagnostic confidence in distinguishing CW from other vascular lesions
- **Epidemiology, Health Disparities, Risk Factors & Systems of Care:** Discussions will address key health disparities, emphasizing modifiable factors and stroke recurrence risks
  - Economic instability, particularly negative wealth shocks, significantly increases stroke risk, especially among those with asset poverty
  - Social support plays a crucial role in recovery, with social constraints on sharing linked to poorer outcomes in stroke survivors

Key Topics From Notable Presentations (3/3)

- **Secondary Prevention, Antithrombotic Therapy & Atrial Fibrillation:** Session highlights evolving strategies for secondary prevention, particularly focusing on the role of antithrombotic therapies, LAAO devices, and the importance of individualized treatment strategies to reduce stroke recurrence
  - Antiplatelet therapy combined with oral anticoagulation (OAC) does not improve outcomes in AF patients and increases bleeding risk
  - Left atrial appendage occlusion (LAAO) offers an effective alternative to OAC, reducing thrombus and bleeding risks without compromising ischemic stroke prevention
- **Stroke Recovery, Rehabilitation & Neuromodulation:** This session highlights the evolving approaches to stroke rehabilitation, including digital tools, transcranial magnetic stimulation, and mindfulness interventions
  - Transcutaneous electrical stimulation (tVNS and tSCS) effectively improves cognitive and motor function post-stroke, with tVNS showing more sustained upper limb recovery
  - Mindfulness-based interventions can improve emotional regulation, self-compassion, and well-being, showing positive preliminary outcomes for stroke survivors and caregivers

Notable Presentations And Late-breaking Sessions At ISC 2026

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (1/8)

Date	Title	Author	Summary
4 Feb 2026	Mobile Low-Field 0.23 T MRI Detects Acute Ischemic Lesions in Patients with Dizziness or Vertigo – a Prospective Cohort Study	Yue Suo	• **Introduction:** Identifying stroke in patients with dizziness or vertigo is challenging due to the absence of typical warning signs. The use of mobile low-field MRI to detect cerebral infarctions or hemorrhagic lesions in minor ischemic stroke and TIA has not been fully explored in emergency settings. • **Methodology:** This prospective observational study included patients presenting with dizziness/vertigo and no focal neurological deficits, who underwent mobile low-field MRI within 7 days. MRI protocols included various sequences to identify acute infarctions and hemorrhagic lesions. Predictors of DWI positivity were identified using multivariable logistic regression. • **Results:** The study enrolled 887 patients (395 men, 490 women, mean age 59.8). MRI identified acute infarctions in 12.6% of dizziness patients and 14.0% of vertigo patients. Predictors of DWI positivity included age, NIHSS score, and sensory deficits, while female sex and coronary artery disease were negatively associated. • **Conclusions:** Mobile low-field MRI is an effective, safe, and accessible tool for evaluating dizziness/vertigo patients in emergency settings. The study suggests 12.6%–14% of such patients without focal neurological deficits have ischemic stroke, and 1%–2.4% have hemorrhagic stroke.
4 Feb 2026	Non-Contrast CT Severe Hypodensity versus Net Water Uptake in Assessing Thrombectomy Treatment Effect in Large Core Stroke: A Secondary Analysis of the SELECT2 Trial	Vignan Yogendrakumar	• **Introduction:** Severe CT-hypodensity represents blood-brain-barrier (BBB) injury and has been shown to influence endovascular therapy (EVT) outcomes in patients with large core stroke. Net water uptake (NWU), another indicator of BBB injury, is prognostic of poor outcomes, but its impact on EVT treatment effect remains unclear. • **Methodology:** This study performed a comparative analysis of severe CT-hypodensity and NWU in SELECT2 trial participants with large core stroke. Severe CT-hypodensity was defined as core voxels <26HU, and NWU was calculated as relative hypodensity compared to a contralateral region. The primary outcome was mRS 0-3 at 90 days. • **Results:** Among 318 patients (51% EVT, 49% MM), the volume of severe CT-hypodensity was associated with a lower likelihood of achieving mRS 0-3 with EVT (aOR=0.97) but not with MM (aOR=1.01). NWU showed no significant association with the primary outcome in either group. • **Conclusions:** Severe CT-hypodensity was a better predictor of EVT treatment effect and clinical outcome than NWU. These findings suggest that severe CT-hypodensity may be the preferred imaging criterion for guiding EVT treatment decisions in patients with large core stroke.

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (2/8)

Date	Title	Author	Summary
4 Feb 2026	Venous Outflow and Outcomes After Endovascular Thrombectomy: Interaction With Blood Pressure Variability in a Post Hoc Analysis of the OPTIMAL-BP Trial	Hyungjong Park	• **Introduction:** Previous studies have linked venous outflow (VO) to clinical outcomes, but the relationship between VO status and outcomes after endovascular thrombectomy (EVT), particularly with systolic blood pressure variability (BPV), remains unclear. • **Methodology:** This secondary analysis of the OPTIMAL-BP trial categorized patients based on cortical vein opacification score (CVOS) into favorable (CVOS ≥3) or unfavorable (CVOS <3) VO. Efficacy and safety outcomes were assessed, including mRS scores, NIHSS recovery, infarction volume, and hemorrhage types. BPV parameters were analyzed within 24 hours post-randomization. • **Results:** Unfavorable VO was associated with worse clinical outcomes (lower mRS, higher infarction volume) and increased risk of intracerebral hemorrhage (ICH) and other complications. Increased systolic BPV TR correlated with poorer outcomes in the unfavorable VO group. • **Conclusions:** Unfavorable VO worsens clinical and safety outcomes post-EVT. BPV modulation could improve prognosis in these patients, suggesting a potential target for treatment.
4 Feb 2026	Anterior vs Posterior Circulation Medium-vessel Occlusions and Response to Endovascular Thrombectomy– a Post-hoc Analysis of the ESCAPE MeVO Trial	Yu Hao	• **Introduction:** Endovascular thrombectomy (EVT) is effective for acute ischemic stroke from large-vessel occlusion (LVO), but recent trials found no overall benefit for medium-vessel occlusion (MeVO) compared to medical therapy. This study hypothesizes that EVT's efficacy may differ based on MeVO location (anterior vs. posterior circulation). • **Methodology:** Data from the ESCAPE-MeVO trial were analyzed, assessing the interaction between EVT and vessel occlusion location using the Mantel-Haenszel test. Logistic regression was used to compare 90-day excellent outcomes (mRS 0–1), mortality, and secondary outcomes, adjusted for various factors. • **Results:** Of 529 patients, 473 had anterior MeVOs and 56 had posterior MeVOs. No significant treatment benefit was found for either group, with adjusted odds ratios indicating no advantage for EVT over medical therapy in both anterior (aOR 0.87) and posterior (aOR 1.86) circulations. • **Conclusions:** Both anterior and posterior MeVO patients showed similar responses to EVT, with no treatment benefit. The small sample size in the posterior circulation group limits the interpretation of results.

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (3/8)

Date	Title	Author	Summary
4 Feb 2026	Thrombectomy vs Thrombolysis vs Bridging Therapy in Late-Window Stroke with Salvageable Tissue: A Network Meta-Analysis of Randomized Controlled Trials	Hung Phan Huu	• **Introduction:** Optimal treatment for acute ischemic stroke beyond the 4.5-hour window remains debated. This network meta-analysis compares EVT, alteplase, tenecteplase, and medical therapy in patients with salvageable tissue. • **Methodology:** RCTs were systematically reviewed, with network meta-analysis comparing outcomes in patients with anterior circulation large vessel occlusion based on CT/MR perfusion imaging. • **Results:** EVT reduced mortality and improved functional outcomes compared to alteplase and tenecteplase, with lower sICH risk than alteplase. Tenecteplase had lower sICH risk than alteplase but was less effective than EVT. • **Conclusions:** EVT offers superior efficacy and safety over thrombolysis and medical therapy in late-window stroke. Tenecteplase shows safety benefits over alteplase.
4 Feb 2026	Transradial versus Transfemoral Endovascular Thrombectomy for Posterior Circulation Large Vessel Occlusion: A prospective multicenter study	Hao Wang	• **Introduction:** Acute posterior circulation large vessel occlusion (LVO) is associated with high mortality and disability. Transradial artery (TRA) access may offer advantages over transfemoral artery (TFA) access for thrombectomy in these cases. This study compares the safety and efficacy of TRA versus TFA thrombectomy in posterior circulation LVO. • **Methodology:** A multicenter cohort study categorized patients by access site (TRA vs. TFA). The primary endpoint was 90-day good neurological recovery (mRS 0–2). Secondary outcomes included successful revascularization, puncture-to-recanalization time, hospital stay, and safety outcomes. • **Results:** No significant differences were found in 90-day recovery, mRS distribution, or recanalization rates. TRA showed faster recanalization (44 vs. 59 min) and shorter hospital stays (7 vs. 9 days). • **Conclusions:** TRA thrombectomy offers similar safety and efficacy to TFA, with faster recanalization and shorter hospital stays for posterior circulation LVO.

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (4/8)

Date	Title	Author	Summary
4 Feb 2026	Effectiveness of Endovascular Treatment for Acute Mild Basilar Artery Occlusion Stroke: A Multicenter Real-World Study	Yanting Chen	• **Introduction:** Endovascular treatment (EVT) has proven effective for moderate-to-severe basilar artery occlusion (BAO), but its benefit for mild BAO with a low National Institutes of Health Stroke Scale (NIHSS) remains uncertain. This study explores EVT's efficacy in patients with acute mild BAO. • **Methodology:** This multicenter, retrospective study included patients with acute BAO and NIHSS <10, hospitalized at five stroke centers in China from January 2020 to December 2023. Patients were divided into EVT and standard medical treatment (SMT) groups. Primary and secondary outcomes included 90-day functional independence and safety measures. • **Results:** Among 315 patients, EVT significantly improved 90-day functional independence (68.9% vs. 44.8%, adjusted OR 3.69, p<0.001). EVT also increased the risk of symptomatic intracerebral hemorrhage (sICH) (8.2% vs. 3.9%, adjusted OR 3.86, p=0.03), but no significant difference in 90-day mortality was observed. • **Conclusions:** In patients with acute mild BAO, EVT improves 90-day functional outcomes compared to SMT alone, though it carries a higher risk of sICH.
4 Feb 2026	Composite Arterial and Venous Collateral Score on Single-Phase CTA Predicts 90-Day Outcomes in Anterior Circulation Large-Vessel Occlusion Stroke	Hamza Adel Salim	• **Introduction:** Collateral circulation is a key factor in determining outcomes in patients with acute ischemic stroke from anterior circulation large-vessel occlusion (LVO). While arterial and venous collateral assessments on single-phase CTA are valuable, they have typically been considered separately. This study introduces the CTA Collateral Impairment Score (CCIS), a composite measure, and evaluates its impact on 90-day functional outcomes. • **Methodology:** This retrospective cohort study included 1,080 patients with anterior circulation LVO stroke across four stroke centers. Patients were assigned a CCIS score (0, 1, or 2) based on Tan and COVES scores, which assess arterial and venous collaterals, respectively. • **Results:** Patients with CCIS 0 had 66% favorable outcomes (mRS 0–2), compared to 32% for CCIS 1 and 17% for CCIS 2 (p<0.001). Higher CCIS correlated with increased mortality (11%, 25%, and 36% for CCIS 0, 1, and 2, respectively; p<0.001). CCIS scores were strong predictors of favorable outcomes and mortality. • **Conclusions:** The CCIS, combining arterial and venous collateral assessments from single-phase CTA, was strongly associated with 90-day outcomes in anterior circulation LVO stroke. Its integration into stroke imaging could improve risk stratification and therapeutic decision-making

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (5/8)

Date	Title	Author	Summary
4 Feb 2026	Intravenous thrombolysis and antiplatelet therapy of acute minor stroke: a systematic review and pairwise and bayesian network meta-analysis of randomized controlled trials	Zhigang liang	• **Introduction:** Patients with mild ischemic stroke may experience significant functional disability due to stroke progression or recurrence. The optimal treatment strategy for mild stroke remains unclear. This study aims to determine the most effective therapeutic approach for acute mild ischemic stroke. • **Methodology:** Eight randomized controlled trials (RCTs) with 7,770 mild ischemic stroke patients were included. Both pairwise meta-analysis and Bayesian network meta-analysis were performed to compare intravenous thrombolysis (IVT) with standard antiplatelet therapy (SMT). Subgroup analyses compared different antiplatelet regimens and thrombolytic agents regarding functional outcomes, symptomatic intracranial hemorrhage (sICH), and mortality. • **Results:** IVT showed no significant difference in achieving excellent or good functional outcomes compared to SMT. However, IVT significantly increased the risk of sICH (OR 5.17). DAPT was most likely to achieve excellent 90-day outcomes with a favorable safety profile. • **Conclusions:** For mild ischemic stroke, SMT is noninferior to IVT and reduces the risk of sICH. DAPT, using aspirin and clopidogrel, may be the optimal treatment for balancing efficacy and safety.
4 Feb 2026	Adjunctive Intra-arterial Thrombolysis after Thrombectomy in Large Vessel Occlusion – A Network Meta-Analysis of Randomized Controlled Trials Evaluating Agents and Dosages	Ronda Lun	• **Introduction:** Endovascular thrombectomy (EVT) improves outcomes for patients with large vessel occlusions, but the benefit of adjunctive intra-arterial thrombolysis (IAT) remains unclear. This study evaluates the relative efficacy and safety of various IAT agents and their doses after successful EVT. • **Methodology:** A network meta-analysis of seven RCTs assessed the effects of different IAT doses (tenecteplase, alteplase, urokinase) compared to controls on 90-day functional recovery and symptomatic intracranial hemorrhage (sICH). Odds ratios (OR) and surface under the cumulative ranking curve (SUCRA) probabilities were used for analysis. • **Results:** IA alteplase (0.225 mg/kg) and IA tenecteplase (0.125 mg/kg) showed higher odds of excellent functional recovery compared to controls (OR 2.03, 1.91, respectively). SUCRA rankings indicated IA alteplase had a 52.38% chance of being the most effective. No significant differences were observed for safety outcomes like sICH. • **Conclusions:** IA alteplase (0.225 mg/kg) and tenecteplase (0.125 mg/kg) likely improve functional recovery after EVT. Further head-to-head trials are needed to refine treatment strategies, as current results are limited by small sample sizes and outcome dichotomization.

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (6/8)

Date	Title	Author	Summary
5 Feb 2026	Safety and feasibility of direct-to-angio among transferred patients receiving EVT in late time window – a secondary analysis of a retrospective cohort study	Alhassin Al Mostaneer	• **Introduction:** The Direct-to-Angio (DTA) approach has been shown to reduce time to endovascular thrombectomy (EVT) and improve functional outcomes. However, its effects in late and very late time windows (≥6 hours and ≥12 hours from last known well) have not been fully explored. This study assesses the impact of DTA versus repeat imaging (RI) on functional and safety outcomes across different time windows. • **Methodology:** A secondary analysis of a retrospective cohort study was conducted. Patients who received EVT via DTA or RI were stratified based on the time from last known well (LKW) to procedure (<6hr, ≥6hr, <12hr, ≥12hr). Regression models adjusted for various factors assessed the association between treatment approach and outcomes. • **Results:** Of 1,140 patients, DTA was associated with better functional outcomes within the <12hr window (acOR 1.44, p=0.01), and a stronger benefit in the ≥12hr window (acOR 2.60, p=0.006). Symptomatic intracranial hemorrhage (sICH) rates were similar across groups, with no significant increase in safety risk, even in high NIHSS patients. • **Conclusions:** The DTA approach was associated with improved outcomes in patients with EVT in both late and very late time windows, without increased risk of symptomatic hemorrhage. These findings suggest that DTA can be extended to patients in late time windows safely.
5 Feb 2026	Association of serum glucose levels at presentation and endovascular thrombectomy outcomes in SELECT prospective cohort study	Omar Abushehadeh	• **Introduction:** Hyperglycemia at presentation is linked to worse outcomes in acute ischemic stroke patients undergoing endovascular thrombectomy (EVT). This study aims to evaluate the relationship between hyperglycemia and clinical and imaging outcomes in the SELECT cohort. • **Methodology:** Data from 9 high-volume EVT centers were analyzed. Patients with ICA/M1/M2 occlusions were stratified by serum glucose levels (<140 vs ≥140mg/dL and <170 vs ≥170mg/dL). Outcomes were compared using regression models adjusted for age, NIHSS, occlusion location, time to procedure, thrombolytics use, ischemic core, CT ASPECTS, and successful reperfusion. • **Results:** Of 281 EVT patients, 34% had glucose ≥140mg/dL. Higher glucose levels correlated with larger ischemic core and worse outcomes. Each 10mg/dL increase in glucose reduced the odds of better mRS shift by 9% (acOR 0.91). Patients with glucose ≥140mg/dL had worse mRS shift, lower mRS 0-2, and higher risk of complications • **Conclusions:** Higher serum glucose at presentation is associated with larger ischemic core, worse functional outcomes, and increased complications after EVT. Further research into glucose-related pathways may help optimize EVT outcomes.

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (7/8)

Date	Title	Author	Summary
5 Feb 2026	Hypoperfusion on Early MRI Despite Successful Thrombectomy: a Prospective Imaging and Inflammatory Biomarkers Study.	Adrien ter Schiphorst	• **Introduction:** Persistent hypoperfusion after successful endovascular treatment (EVT) for large-vessel occlusion (LVO) in acute ischemic stroke (AIS) contributes to poor outcomes. This study aimed to characterize early post-EVT perfusion abnormalities on MRI and their relationship with inflammatory biomarkers. • **Methodology:** Patients with LVO-related AIS who underwent successful recanalization and MRI perfusion (MRP) were prospectively included. Hypoperfusion was assessed using three methods, and associations with 37 inflammatory biomarkers were analyzed. • **Results:** Significant macrovascular hypoperfusion was seen in 21% of patients, with wedge-shaped deficits most common in mTICI 2b. No associations with inflammatory biomarkers survived correction. • **Conclusions:** Post-EVT hypoperfusion often reflects residual emboli, with minimal microvascular hypoperfusion. Future studies should focus on targeting microvascular reperfusion
5 Feb 2026	Endovascular Thrombectomy Enhances Functional Outcomes and Reduces Cerebral Edema in Large Core Stroke Within 24 Hours: An Observational Cohort Study	Thien Quang Le	• **Introduction:** Endovascular thrombectomy (EVT) is effective for patients with large infarct cores (LIC), but high mortality and disability persist, especially among those with cerebral edema. This study assesses EVT's impact on functional outcomes and cerebral edema in patients with large core strokes, within 24 hours of onset, using non-contrast CT (NCCT). • **Methodology:** A prospective observational study was conducted in Vietnam, enrolling patients with large-vessel occlusion in the anterior circulation, NIHSS ≥ 6, and ASPECTS < 6 at baseline. The primary outcome was functional independence at 90 days (mRS 0-3). Safety outcomes included 90-day mortality, symptomatic intracranial hemorrhage (sICH), and cerebral edema. • **Results:** 185 patients were analyzed, with EVT associated with significantly higher ambulatory outcomes (48.1% vs 20.3%; IPTW-aOR 2.30, p<0.001) and lower mortality (30.2% vs 50.6%; IPTW-aOR 0.50, p=0.004). While EVT showed a numerically higher sICH rate (11.3% vs 10.1%), it significantly reduced cerebral edema (33% vs 50.6%; IPTW-aOR 0.51, p=0.006). • **Conclusions:** EVT improved functional outcomes, reduced mortality, and decreased cerebral edema compared to medical care. Cerebral edema with mass effect was an independent predictor of poor outcomes, suggesting that part of EVT's benefit may stem from reducing edema. Further research is needed to confirm these findings.

Notable Presentations At ISC 2026
Acute Ischemic Stroke: Thrombolysis & Thrombectomy (8/8)

Date	Title	Author	Summary
5 Feb 2026	FRET Score: Predictors Of Futile Recanalization Following Endovascular Thrombectomy- A Multicenter Cohort Study From The EVATRISP Collaboration	Yoel Schwartzmann	• **Introduction:** Despite EVT being the standard treatment for LVO stroke, nearly half of recanalized patients fail to achieve functional independence, a phenomenon called futile recanalization (FR). This study aimed to identify predictors of FR and develop a predictive score. • **Methodology:** Data from the multicenter EVATRISP collaboration were used, including LVO patients treated with EVT. Predictors of FR (mRS ≥3 despite mTICI ≥2b) were identified using multivariable logistic regression and the Futile Recanalization following Endovascular Thrombectomy (FRET) score • **Results:** In 9,909 patients, 47% experienced FR. Key predictors included older age, diabetes, and higher NIHSS. The FRET score showed good discrimination (AUC 0.721). • **Conclusions:** The FRET score effectively identifies high-risk EVT candidates, aiding selective interventions and reducing futile procedures.
5 Feb 2026	Tenecteplase versus Alteplase for Acute Ischemic Stroke Beyond 4.5-Hour Window: A Bayesian Network Meta-Analysis of Randomized Controlled Trials	Gabriel Marinheiro	• **Introduction:** Intravenous thrombolysis with alteplase is the standard treatment for acute ischemic stroke (AIS) within 4.5 hours, but tenecteplase may offer potential benefits. This study aims to compare tenecteplase and alteplase in patients with AIS beyond 4.5 hours and explore treatment effectiveness and safety. • **Methodology:** A systematic search was performed across several databases to include randomized clinical trials comparing tenecteplase and alteplase, with best medical therapy (BMT) as a reference. A Bayesian network meta-analysis was conducted to compare risk ratios (RRs) and rank treatments based on the surface under the cumulative ranking curve (SUCRA) • **Results:** Tenecteplase and alteplase improved functional outcomes compared to BMT, with no significant difference between the two. Alteplase had a higher risk of symptomatic intracranial hemorrhage (sICH), while tenecteplase was safer and ranked highest for functional outcomes. 90-day mortality was similar across treatments. • **Conclusions:** Both tenecteplase and alteplase improved functional outcomes in AIS patients beyond 4.5 hours, but tenecteplase was associated with lower sICH risk and ranked highest for effectiveness. 90-day mortality was comparable across all strategies.

Notable Presentations At ISC 2026
Cerebrovascular Disease, Imaging, Small Vessel & Genetics (1/7)

Date	Title	Author	Summary
4 Feb 2026	The Effect of Antihypertensive Medication Classes on Cerebral Small Vessel Disease: A Secondary Analysis of the SPS3 Trial	Raed Hailat	• **Introduction:** Hypertensive cerebral small vessel disease (CSVD) leads to lacunar stroke, intraparenchymal hemorrhage (IPH), and cognitive decline. Blood pressure control is crucial in managing CSVD, but the efficacy of specific antihypertensive classes remains unclear. • **Methodology:** This secondary analysis of the SPS3 trial followed 2,993 patients with MRI-confirmed lacunar stroke. The primary model assessed the effect of antihypertensive class on recurrent stroke (lacunar stroke or IPH), while secondary analyses explored the impact on major adverse cardiovascular events (MACE) and cognitive decline. • **Results:** No specific antihypertensive class was linked to reduced recurrent stroke/IPH. Thiazides showed a marginal reduction in MACE (HR 0.55). Non-first-line antihypertensives were associated with improved cognition. • **Conclusions:** No class of antihypertensive showed consistent protective effects in CSVD, but thiazides reduced MACE and non-first-line medications improved cognition. Further trials are needed to explore specific antihypertensive regimens in CSVD progression.
4 Feb 2026	Association Between Lifetime Lipid Trajectories and Stroke Prevalence in the Framingham Heart Study	Riya Manchanda	• **Introduction:** Elevated low-density lipoprotein (LDL), total cholesterol (TC), and triglycerides (TRIG) levels, along with lower high-density lipoprotein (HDL) levels, are associated with cardiovascular diseases. However, the long-term impact of lipid trajectory patterns on stroke prevalence has not been well studied. • **Methodology:** This study analyzed lipid measurements from the Framingham Heart Study, spanning the original cohort (1948-2005) and offspring cohort (1971-2016). Functional principal component analysis (FPCA) modeled lipid trajectories, followed by k-means clustering. Stroke prevalence was analyzed using logistic regression models adjusted for various factors. • **Results:** Among 7,580 participants, three trajectory clusters for HDL, LDL, and TC, and four for TRIG were identified. Higher lipid levels over time were associated with increased stroke risk. For instance, high HDL and TC trajectories were linked to higher stroke risk (aOR: 1.68 for HDL, aOR: 1.23 for TC). TRIG trajectories showed a stronger association (aOR: 1.74 and 2.03). • **Conclusions:** Lifetime lipid trajectory clusters with sustained high LDL, TC, and TRIG levels were associated with increased stroke risk, while higher HDL levels were protective. These findings underscore the importance of long-term lipid management in stroke prevention.

Notable Presentations At ISC 2026
Cerebrovascular Disease, Imaging, Small Vessel & Genetics (2/7)

Date	Title	Author	Summary
4 Feb 2026	High-resolution Vessel Wall Imaging-Based Classification of Pediatric Intracranial Arteriopathies: A Multicenter Cohort Study	Haoyao Guo	• **Introduction:** Pediatric intracranial arteriopathy is a major cause of childhood arterial ischemic stroke, with conventional imaging often missing vessel wall pathology. High-resolution vessel wall imaging (HR-VWI) offers improved visualization of these pathologies, potentially aiding in diagnosis and prognosis. • **Methodology:** This retrospective multicenter study analyzed data from an HR-VWI registry across nine hospitals (2014-2025) involving patients aged 29 days to 18 years with confirmed arteriopathy. The study assessed HR-VWI classification, treatment, and outcomes. • **Results:** Among 224 patients, HR-VWI identified nine etiological phenotypes, with moyamoya arteriopathy being the most common (57.6%). Compared to the CASCADE system, HR-VWI showed greater etiological diversity. Follow-up revealed disease stability in 68%, improvement in 19%, and worsening in 13%. Stroke occurred in 5.8% of patients, primarily in moyamoya and possible vasculitis. • **Conclusions:** HR-VWI enables precise classification of pediatric arteriopathy, offering better diagnostic accuracy and supporting tailored management strategies compared to conventional imaging.
4 Feb 2026	Cost-effectiveness of theoretical benefit of PCSK9 inhibitor use in patients with stroke due to severe intracranial atherosclerosis: A post hoc analysis of the SAMMPRIS trial	James E Siegler	• **Introduction:** Proprotein convertase subtilisin/kexin type 9 inhibitors (PCSK9i) can reduce LDL levels by approximately 60%, decreasing atherosclerotic events. For patients with intracranial atherosclerosis >70%, these agents could significantly reduce recurrent stroke events. • **Methodology:** Using data from the SAMMPRIS study, we estimated the cost-effectiveness of PCSK9i for recurrent stroke prevention in patients with intracranial stenosis. Monte Carlo simulations were conducted, adjusting for LDL reduction, cost parameters, and willingness-to-pay (WTP) thresholds of <$100,000/QALY and <$50,000/QALY. • **Results:** For current prices, PCSK9i cost-effectiveness was 30.7% for alirocumab, 24.1% for evolocumab, and 19.2% for inclisiran. With lower recurrent stroke care costs, cost-effectiveness increased to 59.1%, and with a 50% efficacy increase, the probability rose to 74.3%. • **Conclusions:** Currently available PCSK9i are not cost-effective for recurrent ischemic stroke prevention in patients with severe intracranial atherosclerosis. However, their benefits for other cardiovascular events may justify further study on their cost-effectiveness.

Notable Presentations At ISC 2026
Cerebrovascular Disease, Imaging, Small Vessel & Genetics (3/7)

Date	Title	Author	Summary
4 Feb 2026	Carotid Web Morphology Over Time: A Longitudinal Imaging Study	Pargol Balali	• **Introduction:** Carotid webs (CW) are fibrous intimal projections linked to ischemic stroke, especially in younger patients. However, their natural history and potential to evolve over time are poorly understood. This study aims to assess the morphological changes of CWs over time using serial CT angiography (CTA). • **Methodology:** A retrospective review of CTA scans from two health systems (2021-2024) identified patients with confirmed CW. For those with multiple scans, the first and last were analyzed. CW features were measured by two blinded raters, and considerable change was defined as >2 SDs from baseline. • **Results:** Of 214 patients, 60 (28%) had >1 CTA. After a median follow-up of 14.4 months, most CWs (>90%) remained stable. Changes, including a web disappearance and thrombus resolution, were rare but occurred in a few cases. A weak correlation was observed between follow-up time and CW angle/length change. • **Conclusions:** CWs are largely stable structural lesions with rare morphological changes, often linked to thrombus dynamics. These findings improve diagnostic confidence in distinguishing CWs from other vascular lesions like plaques or dissections. Further research is needed to better understand CWs' genesis and natural history.
5 Feb 2026	Reduced cerebral glutamine, as a metric of ischemic risk and brain health, associates with white matter microstructural impairment in adults with sickle cell anemia: an MR spectroscopy study	Mohammed Qussay Ali Al-sabbagh	• **Introduction:** Over 50% of SCA patients experience silent or overt strokes, leading to cognitive impairment. L-glutamine supplementation has been approved for reducing vaso-occlusive crises, but its effect on stroke and cognitive function in SCA is unknown. This pilot study used a novel MRSI technique to assess the neurometabolomic profile in SCA patients compared to controls. • **Methodology:** SCA patients and healthy controls underwent 3T brain MRI using SPICEx for 3D neurometabolite mapping. Glutamine levels and white matter microstructural disruption were assessed. • **Results:** SCA patients had lower cerebral glutamine levels, especially in white matter, correlating with reduced gray matter volume and increased microstructural disruption. • **Conclusions:** Reduced cerebral glutamine in SCA may contribute to stroke and cognitive impairment. Future studies will explore the effects of L-glutamine supplementation in preventing these issues.

Notable Presentations At ISC 2026
Cerebrovascular Disease, Imaging, Small Vessel & Genetics (4/7)

Date	Title	Author	Summary
5 Feb 2026	Prevalence of Multiple Sclerosis Misdiagnosis in CADASIL Across EGFR Domain Risk Categories: A Retrospective Cohort Study	Dinith Mendis	• **Introduction:** CADASIL is often misdiagnosed as multiple sclerosis (MS). This study contrasts the demographic, clinical, neuroimaging, and genetic features of CADASIL patients with and without prior MS misdiagnosis. • **Methodology:** A retrospective cohort study was conducted at Mayo Clinic comparing CADASIL patients with and without a prior MS misdiagnosis. Patients categorized by NOTCH3 mutation location risk and disease severity assessed using the NOTCH3 Small-Vessel Disease (N3SVD) scale. Statistical analyses included independent t-tests, chi-square, and Mann–Whitney U tests. • **Results:** Of 107 CADASIL patients, 12 (11.2%) had a prior MS misdiagnosis. Misdiagnosed patients were younger, more likely to be Asian, and underwent lumbar puncture more frequently. They had a higher median modified Rankin Scale and different N3SVD stage distribution, with more patients in stage 3A. Despite MS treatment, no significant changes in neuroimaging or clinical scores occurred. • **Conclusions:** Approximately 11% of CADASIL patients were misdiagnosed with MS, particularly younger individuals without clear stroke histories. This misdiagnosis leads to diagnostic delays and unnecessary treatments. The EGFR domain risk category did not correlate with misdiagnosis.
5 Feb 2026	Plasma Biomarkers of Alzheimer's Disease, White Matter Hyperintensities, and Dementia Risk: The Atherosclerosis Risk in Communities Study	Elise Kinyanjui	• **Introduction:** Plasma biomarkers for Alzheimer's disease (AD), including amyloid-β (Aβ42/Aβ40), phosphorylated tau (p-tau181), neurofilament light (NfL), and GFAP, reliably predict dementia risk. White matter hyperintensities (WMH) are major vascular contributors to dementia. This study investigates the interaction between plasma biomarkers and WMH in influencing dementia risk. • **Methodology:** The ARIC Study assessed dementia-free participants with MRI and plasma biomarker assessments. WMH was quantified, and Cox proportional hazards models estimated dementia risk over 10 years, adjusting for demographic and vascular risk factors. • **Results:** Plasma Aβ42/Aβ40 decreased dementia risk, while p-tau181, NfL, and GFAP increased risk. WMH increased dementia risk independently of plasma biomarkers. • **Conclusions:** Both plasma biomarkers and WMH independently predict dementia risk, highlighting the need to incorporate both AD biomarkers and WMH in dementia risk profiling.

Notable Presentations At ISC 2026
Cerebrovascular Disease, Imaging, Small Vessel & Genetics (5/7)

Date	Title	Author	Summary
5 Feb 2026	The Effects of Atrial Fibrillation Burden on the Severity of Hypertensive Cerebral Small Vessel Disease and Its Effect on Cognitive Impairment	Ofer Rotschild	• **Introduction:** Atrial fibrillation (AF) is linked to clinical stroke, cognitive decline, and reduced brain perfusion, but its impact on cerebral small vessel disease (cSVD) remains unclear. This study hypothesizes that AF burden affects hypertensive cSVD, but not lobar cSVD, due to the anatomical vulnerability of lenticulostriate arteries involved in hypertensive cSVD. • **Methodology:** A retrospective analysis of 706 patients with AF who underwent brain MRI was conducted. Hypertensive cSVD was assessed using the Staals SVD score, while lobar cSVD was evaluated based on the Boston criteria for cerebral amyloid angiopathy (CAA). Multivariable regression models were used to assess associations with cognitive impairment. • **Results:** Higher AF burden was associated with increased hypertensive cSVD scores ($p=0.002$) but not with CAA-related lesions ($p=0.564$). Both higher AF burden and hypertensive cSVD were independently associated with mild cognitive impairment (MCI) or dementia ($p<0.001$). • **Conclusions:** Higher AF burden is associated with hypertensive cSVD but not with CAA-related brain lesions. Both AF burden and hypertensive cSVD burden contribute independently to cognitive impairment, suggesting that managing both factors may help prevent dementia in AF patients.
5 Feb 2026	Retinal Vessel Dysfunction in CADASIL: an Ultra-Widefield Fluorescein Angiography Study	Yonatan Serlin	• **Introduction:** CADASIL is a common inherited small vessel disease characterized by microvascular pathology due to NOTCH3 mutations. This study uses serial ultra-widefield fluorescein angiography (UW-FA) to evaluate retinal vessel dysfunction in CADASIL patients, exploring its potential as a marker for cerebral small vessel disease (cSVD) progression. • **Methodology:** 19 genetically confirmed CADASIL patients (mean age 48.4 ± 12.1 years) underwent baseline and follow-up UW-FA, while nine healthy volunteers (HVs) served as controls. Retinal vessel permeability, blood flow, and perfusion were quantified across macular, mid-peripheral, and far-peripheral zones. Longitudinal changes were assessed, and differences were analyzed by group and variant loci. • **Results:** Baseline far-peripheral permeability was higher in CADASIL patients ($p = 0.03$). Longitudinal analysis revealed significant reductions in macular and mid-peripheral blood flow, along with increased permeability in the mid-peripheral region ($p \leq 0.05$). No associations were found with genotype or stroke-onset age. • **Conclusions:** Serial UW-FA identifies progressive retinal vessel dysfunction in CADASIL, particularly in specific retinal regions. This method could serve as a non-invasive surrogate for monitoring cSVD progression.

Notable Presentations At ISC 2026
Cerebrovascular Disease, Imaging, Small Vessel & Genetics (6/7)

Date	Title	Author	Summary
5 Feb 2026	Nonstenotic cervical carotid plaque is associated with high grade white matter disease: A multicenter study	Samiksha Golani	• **Introduction:** Cerebral white matter disease (WMD) may result from silent embolic infarcts associated with non-stenotic cervical carotid atherosclerosis. This study investigates the relationship between cervical plaque thickness and WMD in patients with non-cardioembolic stroke due to cervical carotid atherosclerosis, small vessel disease, or cryptogenic causes. • **Methodology:** A retrospective cohort study was conducted involving 375 consecutive patients with stroke from cervical carotid atherostenosis or other stroke mechanisms. Logistic regression was used to assess the association between cervical plaque thickness and higher grade WMD, adjusted for relevant risk factors and clustering by site. • **Results:** Patients with higher inter-side plaque thickness (measured as axial dimensions) had significantly higher grade WMD, with adjusted odds ratios of 1.44 (Q3) and 1.85 (Q4). The association remained significant in sensitivity analyses. Younger patients showed a stronger link between plaque thickness and WMD, while older patients showed no significant relationship. • **Conclusions:** Greater cervical carotid plaque thickness is associated with greater WMD, suggesting subclinical cervical carotid atherosclerosis as a potential contributor to the accumulation of silent brain infarcts in non-cardioembolic stroke patients.
5 Feb 2026	Dual Antiplatelet versus Anticoagulant-Plus-Antiplatelet Therapy in Symptomatic Intracranial Atherosclerosis: A Multicenter Comparative Study	Muhammad Aemaz Ur Rehman	• **Introduction:** Intracranial atherosclerosis (ICAS) is a major cause of ischemic stroke with a high recurrence risk. Current guidelines recommend 90 days of dual antiplatelet therapy (DAPT) for severe symptomatic ICAS, but recurrence remains high. This study compares DAPT and single antiplatelet plus anticoagulation (SAPT+AC) therapy. • **Methodology:** The substudy from the BIORISK-ICAS trial involved patients with symptomatic ICAS from 35 centers. Recurrent ischemic stroke (IS) and severe bleeding were assessed at 90 days. • **Results:** No significant difference in recurrent IS (8.07% DAPT vs 8.17% SAPT+AC) or severe bleeding (2.26% DAPT vs 3.14% SAPT+AC). • **Conclusions:** DAPT and SAPT+AC showed similar efficacy and safety. Larger trials are needed to determine the best treatment strategy for ICAS.

Notable Presentations At ISC 2026
Cerebrovascular Disease, Imaging, Small Vessel & Genetics (7/7)

Date	Title	Author	Summary
5 Feb 2026	Characterizing PlaqueRADS Across Stroke Etiologies: A CTA and Vessel Wall Imaging Study in Unilateral Anterior Circulation Stroke.	Cristina Sanchez-Vizcaino	• **Introduction:** High-risk carotid plaque features, assessed through the PlaqueRADS system combining CTA and vessel wall imaging (VWI), may contribute to ischemic stroke beyond stenosis severity. The study explores PlaqueRADS distributions across stroke etiologies, including ESUS, to understand their potential role in identifying underlying mechanisms. • **Methodology:** The study analyzed unilateral anterior circulation ischemic stroke patients who underwent CTA+VWI. Patients were classified based on TOAST criteria (CE, LAA, and ESUS). PlaqueRADS scoring was used to evaluate plaque vulnerability, with statistical comparisons conducted using Wilcoxon tests. • **Results:** LAA and CE groups showed higher ipsilateral PlaqueRADS ≥3 compared to ESUS, with significant differences between LAA and CE versus ESUS. PlaqueRADS ≥4 was found exclusively in ESUS ipsilateral cases, suggesting an atherothrombotic phenotype in a subset of ESUS patients. • **Conclusions:** LAA showed the highest ipsilateral PlaqueRADS burden, with CE showing notable atherosclerotic findings. ESUS remains heterogeneous, but some patients with high-risk plaques may benefit from antiplatelet over anticoagulation strategies. Further validation is needed.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (1/9)

Date	Title	Author	Summary
4 Feb 2026	High Early Recurrence of Ischemic Stroke After Cranio-Cervical Artery Dissection: A Nationwide Cohort Study	Hee-Joon Bae	• **Introduction:** Cranio-cervical artery dissection (CAD) is a leading cause of ischemic stroke in young and middle-aged adults. While prognosis is often favorable, a significant proportion experiences recurrent ischemic events, particularly early after onset. • **Methodology:** A multicenter, prospective cohort study was conducted using data from the CRCS-K-NIH registry, involving patients aged ≥18 years admitted with acute ischemic stroke or TIA. CAD diagnosis occurred within 7 days of symptom onset, and recurrent ischemic events were tracked over 1 year. Analyses considered dissection location, angiographic patterns, and vascular imaging features. • **Results:** Among 711 patients, 27.9% experienced recurrent ischemic stroke, with 74.5% of events occurring within 7 days. Recurrence risk was highest on day 1. Vascular morphologic features, such as occlusion, double lumen, and dilatation without stenosis, were strongly associated with recurrence timing and risk. • **Conclusions:** Recurrent ischemic stroke after CAD is common, primarily occurring within the first week. Vascular morphologic features, not dissection location, are key predictors of recurrence. Early identification of high-risk features can guide monitoring and secondary prevention strategies.
4 Feb 2026	Asset Poverty, Negative Wealth Shock, and Incident Stroke in the Health and Retirement Study	Michelle Caunca	• **Introduction:** Economic instability, particularly sudden wealth loss, has been linked to increased mortality, but its impact on stroke risk is underexplored. This study hypothesizes that a negative wealth shock in late-middle age increases stroke risk more than baseline asset poverty without significant wealth changes. • **Methodology:** The study used data from the Health and Retirement Study (HRS), following participants for 24 years. Negative wealth shock was defined as a 75% decrease in wealth across two consecutive survey waves (1992-1998). Participants were classified into three groups based on financial status during this period, and stroke incidence was tracked. • **Results:** Among 13,572 participants, those with asset poverty or a negative wealth shock had 36% and 26% higher stroke risk, respectively, compared to those with positive wealth. Asset poverty had a larger impact on stroke risk (HR 1.36) than negative wealth shock (HR 1.26). • **Conclusions:** Both asset poverty and negative wealth shocks increase stroke risk, with asset poverty having a greater effect. Interventions to prevent economic instability in midlife could help reduce stroke burden in later life.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (2/9)

Date	Title	Author	Summary
4 Feb 2026	Incidence and Clinical Characteristics of Cervical Artery Dissection Following Chiropractic Cervical Manipulation: A Sub-Analysis of the STOP-CAD Study	Rozaleen Aleyadeh	• **Introduction:** Cervical artery dissection (CeAD) is a significant cause of stroke in young adults. Despite the high frequency of cervical chiropractic manipulations in the U.S., the relationship between these manipulations and CeAD remains controversial, with few large studies exploring the incidence and clinical features. • **Methodology:** We analyzed data from the STOP-CAD registry (n=4,023) to identify CeAD cases following chiropractic cervical manipulation. Demographics and clinical features were compared between patients with and without antecedent manipulation, and multivariable binary logistic regression was used to assess factors associated with preceding chiropractic manipulation. • **Results:** Of 4,023 CeAD cases, 228 (5.7%) were diagnosed after chiropractic manipulation. Younger age, female sex, absence of diabetes, neck pain, and isolated vertebral dissection were significantly associated with prior manipulation. Recurrent ischemic stroke rates were similar between both groups. • **Conclusions:** Although 1 in 20 CeAD cases reported prior cervical manipulation, the overall risk is very low. The profile of these cases suggests that younger women with neck pain and isolated vertebral artery involvement are more likely to present with dissection after chiropractic manipulation. The causal relationship remains unclear.
4 Feb 2026	Stroke in patients with neuro-vestibular presentation: experience from AVERT trial	Shervin Badihian	• **Introduction:** Diagnosing stroke in patients with dizziness in the emergency department (ED) is challenging, requiring time-sensitive decisions. Prospective data on disease prevalence, clinical findings, and diagnostic pitfalls are limited. This study reports on cerebrovascular patients enrolled in the AVERT trial, assessing diagnostic strategies for dizziness in the ED. • **Methodology:** The AVERT trial was a multicenter diagnostic strategy trial (2018-2020) enrolling patients with acute vestibular symptoms. Participants underwent quantitative video-oculography (VOG) and neurological assessments. Follow-ups included repeat VOG, brain MRI, and neuro-vestibular specialist exams. • **Results:** Of 130 subjects, 11% had a cerebrovascular cause. Three ischemic strokes and two TIAs were misdiagnosed initially. Most strokes had low NIHSS scores (median 0.5), and MRI-DWI falsely missed 38% of ischemic strokes. • **Conclusions:** Vestibular strokes are difficult to diagnose due to low NIHSS and false-negative early MRI. Integrating neuro-vestibular assessment into stroke pathways can reduce misdiagnosis and delays.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (3/9)

Date	Title	Author	Summary
4 Feb 2026	Pre-Stroke Cognitive Impairment is Associated with an Elevated Risk of Incident Stroke: The ARIC-Neurocognitive Study (ARIC-NCS)	Crystal Ashley	• **Introduction:** Stroke is a leading cause of death and disability, and many stroke risk factors overlap with those for cognitive impairment (CI), including mild cognitive impairment (MCI) and dementia. This study explores the relationship between pre-stroke CI and incident stroke, mortality differences, and potential modifiers. • **Methodology:** The ARIC-NCS study followed 5,434 stroke-free participants (ages 66-90) from 2011 to 2022. Cognitive status was assessed at visit 5. Incident strokes were identified through ongoing surveillance. Cox proportional hazards regression models adjusted for demographics and vascular risk factors were used to analyze associations between CI and stroke outcomes. • **Results:** Over 10 years, CI was associated with a 52% increased risk of incident stroke (HR 1.52). Among stroke patients, CI also increased the risk of death (HR 1.78). Sex modified the relationship, with men showing a stronger association between CI and stroke risk. • **Conclusions:** CI is an independent risk factor for stroke, particularly in men. This study enhances understanding of populations at higher stroke risk, aiding in targeted prevention strategies.
4 Feb 2026	When Social Interactions Undermine Stroke Recovery: Findings From the STRONG Study	Alison Holman	• **Introduction:** Social support plays a key role in stroke recovery, but unhelpful interactions may discourage survivors from sharing concerns, potentially affecting long-term recovery. The Social-Cognitive Processing model suggests that social constraints on sharing can lead to loneliness and worsen well-being. This study examines whether such constraints predict long-term disability and cognitive outcomes. • **Methodology:** Adults with a new stroke in the STRONG study were assessed at 28 US sites over one year. Social constraints, loneliness, functional disability (mRS), and cognitive disability (tMoCA) were measured. Analyses controlled for demographics, acute NIHSS score, and acute stress. • **Results:** Higher social constraints at 90 days predicted greater loneliness ($\beta = 0.27$), poorer functional ability (mRS; $\beta = 0.21$), and worse cognitive scores (tMoCA; $\beta = -0.18$) at 1 year. • **Conclusions:** Social constraints on sharing are linked to worse post-stroke outcomes. Early identification of these constraints may guide interventions to improve communication and long-term recovery.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (4/9)

Date	Title	Author	Summary
4 Feb 2026	Sex-differences in Life's Essential 8 and Ischemic Stroke Outcomes: the ARIC Cohort Study	Michela Rosso	• **Introduction:** Ischemic stroke (IS) presents with sex differences in risk factors, treatment, and outcomes. Life's Essential 8 (LE8) is a composite score of cardiovascular health (CVH), with higher scores linked to lower risks of IS and post-stroke complications. This study evaluates whether the association between midlife LE8 scores and IS outcomes at discharge differs by sex in the ARIC study. • **Methodology:** Participants from the ARIC cohort with a first-ever IS were included. LE8 components were assessed at visit 2. Logistic and ordinal regression models evaluated the association between LE8 score categories and stroke outcomes, adjusting for sex, race, age, and stroke severity. • **Results:** Among 1,285 participants, high LE8 scores were linked to lower disability (mRS shift) overall. The association was significant in women (aOR=0.35), but not in men (aOR=0.89), with a significant LE8 x sex interaction (p=0.04). Similar results were found for secondary outcomes. • **Conclusions:** High midlife CVH is associated with better IS outcomes, with a significant association in women but not men, suggesting a sex-dependent relationship between CVH and IS outcomes.
4 Feb 2026	Silent Dysphagia After Stroke: Prevalence, Risk Factors, and Clinical Implications from a Pilot Cohort Study	Brittany Krekeler	• **Introduction:** Persistent swallowing impairment (dysphagia) after stroke significantly affects morbidity, mortality, and quality of life. "Silent dysphagia," where swallowing issues occur without symptoms, often goes undiagnosed due to sensory or cognitive deficits. This study investigates the prevalence of silent dysphagia and its implications for post-stroke care. • **Methodology:** A cross-sectional sample of 45 individuals ≥3 months post-ischemic stroke completed the Eating Assessment Tool-10 (EAT-10) and underwent videofluoroscopic swallow studies. Participants were categorized into no dysphagia, overt dysphagia, and silent dysphagia groups. Descriptive and statistical analyses were performed to evaluate differences across groups. • **Results:** Silent dysphagia was identified in 16% of the cohort. The silent dysphagia group was younger (58.0 years) and all male. Lesion location and NIHSS scores did not differ significantly across groups. EAT-10 and DIGEST scores showed weak correlations. • **Conclusions:** Silent dysphagia is prevalent in post-stroke patients, potentially underdiagnosed in mildly impaired cases. Larger studies are needed to better characterize silent dysphagia and optimize follow-up imaging to prevent untreated complications like aspiration pneumonia.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (5/9)

Date	Title	Author	Summary
4 Feb 2026	Rate of Early Post-Stroke Seizures Has Not Changed Over Time: A Population-Based Study	Monica Sarkar	• **Introduction:** Post-stroke epilepsy (PSE) is increasingly common, especially among older individuals. Early post-stroke seizures (EPSS) are a risk factor for PSE, but it is unclear whether their prevalence is changing with new treatment patterns like reperfusion in ischemic stroke. This study examines the prevalence and trends of EPSS from 2005 to 2020. • **Methodology:** Data were obtained from the Greater Cincinnati Northern Kentucky Stroke Study, which tracked hospitalized strokes in 2005, 2010, 2015, and 2020. Seizures were identified via chart review, and EPSS were defined as clinical or electrographic seizures occurring during hospitalization. Logistic regression adjusted for age, sex, race, and stroke subtype. • **Results:** Among 10,312 stroke patients, 432 (4.2%) developed EPSS. The prevalence of EPSS remained stable over time (p=0.96). The highest risk of EPSS was in hemorrhagic stroke (HS) patients (OR=4.11), followed by ischemic stroke with hemorrhagic transformation (IS-HT) (OR=2.48). • **Conclusions:** EPSS prevalence remained stable over time, with the highest risk in HS patients, followed by IS-HT. The rise in IS-HT may reflect increased thrombectomy rates and MRI use. Further research on PSE is needed as its burden grows.
4 Feb 2026	Lower frequency of ischemic stroke and better functional outcome in patients with spontaneous cervical artery dissection and history of migraine: secondary analysis of the STOP-CAD study	Ana C Fonseca	• **Introduction:** Migraine is linked to an increased risk of spontaneous cervical artery dissection (sCeAD), a major cause of ischemic stroke, particularly in young adults. While migraine may heighten ischemia risk, elevated Calcitonin Gene-Related Peptide (CGRP) levels may have a protective effect. • **Methodology:** This post-hoc analysis of the STOP-CAD registry compared clinical, demographic, and imaging data between migraine and non-migraine patients with sCeAD. Statistical analyses adjusted for potential confounders, including logistic regression and survival analysis. • **Results:** Migraine patients were younger and had fewer ischemic strokes, lower NIHSS scores, and better functional outcomes (mRankin <2) at discharge. • **Conclusions:** Migraine history may influence the clinical presentation of sCeAD, reducing ischemic stroke incidence and improving outcomes, suggesting a protective role for CGRP. Further studies on underlying mechanisms are needed.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (6/9)

Date	Title	Author	Summary
5 Feb 2026	Association between the food environment and ischemic stroke risk: A population-based study	Christopher Becker	• **Introduction:** A healthy diet plays a critical role in stroke prevention, and dietary patterns are influenced by the surrounding food environment. This study evaluates the association between the modified retail food environment index (mRFEI), which reflects the ratio of healthy vs unhealthy food sources in a neighborhood, and stroke incidence. • **Methodology:** The Brain Attack Surveillance in Corpus Christi (BASIC) Project analyzed first-ever ischemic strokes from 2000-2023 in Nueces County, Texas. Stroke incidence rates were calculated using Poisson regression, adjusted for demographics, socioeconomic status, and the interaction between mRFEI and neighborhood socioeconomic status (nSES). • **Results:** Among 6,586 first-ever ischemic strokes, the unadjusted model showed a marginal association between higher mRFEI and increased stroke incidence. However, after adjustment, this association was not statistically significant. Higher nSES was associated with a lower stroke incidence, and no interaction was observed between nSES and mRFEI. • **Conclusions:** This study found no significant association between the food environment (mRFEI) and stroke incidence. Surprisingly, more affluent neighborhoods with lower stroke rates had a less healthy food mix. Further research is needed to explore the relationship between food environment, socioeconomic factors, and stroke risk.
5 Feb 2026	National Trends and Burden of Stroke in Peru: A Nationwide Population-Based Study	Meiling Milagros Carbajal Galarza	• **Introduction:** Stroke is a leading cause of mortality and disability, with increasing prevalence in low- and middle-income countries. In Peru, disparities in regional healthcare highlight the need for updated nationwide data to inform public health policies and reduce stroke's burden. • **Methodology:** A nationwide ecological analysis was conducted using ICD-10 codes to identify stroke cases from 2016 to 2024. Age-standardized incidence rates (ASIRs) were calculated, and temporal trends were analyzed using quasi-Poisson regression, adjusting for age and sex. Subgroup analyses considered factors such as sex, age, healthcare system, and region. • **Results:** A total of 73,751 cases were identified. Stroke incidence decreased slightly in the crude rates, while ASIR fluctuated, with a slight increase from 2022 to 2024. Males had consistently higher incidence, and older adults (≥60 years) were most affected. Public health systems managed over 80% of cases, with Lima, La Libertad, and Cajamarca showing the highest burden. • **Conclusions:** Stroke incidence in Peru is rising, disproportionately affecting vulnerable regions and public health systems. These findings emphasize the need for equitable access to care and targeted prevention strategies to address national disparities in stroke outcomes.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (7/9)

Date	Title	Author	Summary
5 Feb 2026	Evidence of widening racial disparities in stroke recurrence from 2015 to 2020: A population-based study	David Robinson	• **Introduction:** Stroke recurrence is a significant health issue, particularly in Black individuals. This study aims to assess whether stroke recurrence rates and related disparities decreased from 2015 to 2020. • **Methodology:** A population-based study was conducted in the Greater Cincinnati Northern Kentucky region, identifying incident TIAs and strokes from 2015 and 2020. Follow-up of 3 years considered stroke recurrence, and recurrence rates were compared using a Cox proportional hazard model adjusted for age, sex, race, and stroke subtype. • **Results:** Stroke recurrence rates slightly decreased over time but remained stable for Black individuals, while non-Black individuals experienced a decline. • **Conclusions:** Disparities in recurrent stroke risk appear to have widened, with Black individuals showing no decrease in recurrence. Further research is needed.
5 Feb 2026	Loneliness is associated with 10-year risk of Stroke/Transient Ischemic Attack: The Framingham Heart Study	Oluchi Ekenze	• **Introduction:** Identifying modifiable factors is crucial to reduce the global stroke burden. This study explores the association between loneliness and the risk of subsequent stroke or transient ischemic attack (TIA), a rising concern globally. The temporal relationship of loneliness with incident stroke/TIA is unclear. • **Methodology:** Participants from the Framingham Heart Study were included, with two assessments of loneliness prior to incident stroke/TIA. Loneliness was assessed using the CES-D scale. The study stratified participants by age and analyzed the relationship using Cox regression, adjusting for various factors like age, sex, and vascular risk factors. • **Results:** Among 4212 participants, those with a history of loneliness had a more than 2-fold increased risk of stroke/TIA, especially in those under 80 years (3-fold increase). No association was found between current loneliness and stroke/TIA. • **Conclusions:** Loneliness, particularly persistent and transient forms, is an independent, modifiable risk factor for incident stroke/TIA in community-dwelling individuals, with stronger effects seen in younger participants.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (8/9)

Date	Title	Author	Summary
5 Feb 2026	Association of Midlife and Late-life Obesity and Adiposity Measures with Late-life Brain Amyloid Deposition: An Atherosclerosis Risk in Communities Study	Yiling Dong	• **Introduction:** Obesity is a common condition in Alzheimer's disease (AD) patients and may influence brain health. However, the timing of obesity's effect on AD is unclear, particularly regarding its role in late-life. This study examines midlife and late-life obesity (BMI, WC, WHR) and their association with brain amyloid deposition, a hallmark of AD, in dementia-free adults. • **Methodology:** Using data from the ARIC study, participants were followed from midlife (ages 45-64) and received PET scans in late-life (ages 67-95). Logistic regressions assessed the relationship between obesity measures and amyloid positivity, adjusted for demographics and vascular risk factors. • **Results:** Among 803 participants, midlife obesity was associated with a 70% increase in the odds of amyloid positivity, while late-life obesity showed no significant association. No relationships were found for WC or WHR with amyloid positivity. • **Conclusions:** Midlife obesity is significantly associated with amyloid positivity in late-life, emphasizing the importance of midlife obesity in AD development. BMI may be a better marker for assessing obesity's impact on brain health compared to WC or WHR.
5 Feb 2026	Association of kidney function with risk of post-stroke seizures in the Atherosclerosis Risk in Communities (ARIC) Study	Sean Michael Kelly	• **Introduction:** Post-stroke seizure (PSS) is a significant cause of seizures in elderly adults, associated with poor clinical outcomes. This study investigates the role of chronic kidney disease (CKD), a prevalent co-morbidity in stroke survivors, on the risk of PSS, as existing models like SeLECT 2.0 do not account for CKD's impact. • **Methodology:** Participants from the ARIC cohort who were stroke-free at baseline were followed for stroke and PSS incidence. 1,287 ischemic stroke patients were included. Cox regression was used to assess the time-to-event relationship between kidney function (eGFR levels) and PSS. • **Results:** Patients with eGFR<60 had a higher risk of PSS, with a 5-year cumulative incidence of PSS higher than in those with eGFR≥60. The adjusted hazard ratio for eGFR<60 was 2.8, indicating a significantly increased risk. • **Conclusions:** CKD in ischemic stroke patients is significantly associated with an increased risk of PSS. This suggests that targeting kidney function in stroke survivors may help mitigate seizure risk, warranting further research into seizure prophylaxis.

Notable Presentations At ISC 2026
Epidemiology, Health Disparities, & Risk Factors (9/9)

Date	Title	Author	Summary
6 Feb 2026	Temporal Trends and Resource Utilization of Inter-Hospital Transfers in Acute Ischemic Stroke: A Nationwide Retrospective Cohort Study.	Andrea Loggini	• **Introduction:** This study examines the temporal trends and resource use associated with inter-hospital transfers (IHT) in patients with acute ischemic stroke (AIS). • **Methodology:** A retrospective cohort study using the National Inpatient Sample (NIS) database analyzed AIS admissions between 2012 and 2022. Propensity-score matching (PSM) was used to compare inter-hospital transfer (IHT) patients with direct admissions (DA). Primary outcomes included length of stay (LOS), hospitalization costs, and discharge disposition. • **Results:** IHT patients were younger, more likely male, and had higher private insurance rates. Over the study period, IHT increased, with transfers predominantly to teaching hospitals. IHT was linked to longer LOS, higher costs, and lower odds of discharge to home or rehab. • **Conclusions:** IHT for AIS patients increased significantly, mainly to teaching hospitals, and was associated with higher resource utilization, suggesting the need for specialized care for more complex cases.
6 Feb 2026	Retrospective Analysis of an Acute Stroke Trial's Hotline Calls – Opportunities to Optimize Clinical Trial Operations	Sai Pamula	• **Introduction:** This study evaluated the utility of a 24/7 hotline established for the Multi-arm Optimization of Stroke Thrombolysis (MOST) trial, a phase 3 study conducted across 57 U.S. sites. • **Methodology:** From October 2019 to July 2023, 514 patients were enrolled, and from June 2022, all hotline calls were recorded. Calls were categorized into six themes: eligibility, consent, study drug administration, protocol-related issues, adverse events, and others. • **Results:** Of 180 analyzed calls, 67% were about enrolled patients, with eligibility being the most frequent concern. Other common issues included study drug timing and adverse events, leading to drug discontinuation. • **Conclusions:** The hotline primarily addressed eligibility and protocol issues, providing key insights for optimizing future stroke trial operations.

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (1/9)

Date	Title	Author	Summary
4 Feb 2026	Potential Benefit of Apixaban Among Patients Without High-Risk Hypertension In Cryptogenic Stroke: A Secondary Analysis of the ARCADIA Trial	Mohamed Ridha	• **Introduction:** Previous trials showed no difference between anticoagulation and antiplatelet therapy in cryptogenic stroke. The role of hypertensive arteriopathy, often overlooked, could explain this. • **Methodology:** This secondary analysis of the ARCADIA trial evaluated whether high-risk hypertension (HRH) modifies the treatment effect of apixaban versus aspirin in patients with cryptogenic stroke and atrial cardiopathy. • **Results:** Among 945 patients, 37% had HRH. In patients without HRH, apixaban showed better outcomes (21.5 vs. 55.1 per 1000 person-years). In HRH patients, apixaban had worse outcomes (55.8 vs. 31.8 per 1000 person-years). • **Conclusions:** HRH modifies anticoagulation treatment effects, suggesting that previous trials may have included strokes due to hypertensive arteriopathy.
4 Feb 2026	Clinical outcomes of DOACs versus warfarin for ischemic stroke caused by left ventricular thrombus: a retrospective single-center study	Sophie Nguyen	• **Introduction:** Left ventricular thrombus (LVT) is a major cause of cardioembolic stroke, requiring timely anticoagulation. However, there is limited evidence comparing warfarin and direct oral anticoagulants (DOACs) in LVT patients, with therapy choice often depending on patient and physician preferences. • **Methodology:** This retrospective study reviewed LVT patients with ischemic stroke treated between 9/2017 and 12/2024, comparing warfarin and DOACs (apixaban, rivaroxaban). Follow-up cardiac imaging within 6 months was used to assess thrombus resolution. Statistical analyses included descriptive statistics and chi-square tests. • **Results:** Thrombus resolution increased over time, with 79% achieving resolution by 6 months. There were no significant differences in thrombus resolution between warfarin and DOACs (p=0.6), though DOACs showed a trend towards better resolution at 6 months. Warfarin was associated with higher complication rates (27.3% vs. 3.8%). • **Conclusions:** DOACs are non-inferior to warfarin for LVT resolution. Warfarin may pose a higher complication risk, influencing anticoagulant choice for LVT patients.

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (2/9)

Date	Title	Author	Summary
4 Feb 2026	Primary Prevention of Ischemic Stroke with Aspirin or Statins for Patients with Fibromuscular Dysplasia: A Retrospective Case-Control Study	David DiMeglio	• **Introduction:** Fibromuscular dysplasia (FMD) is a non-atherosclerotic vasculopathy affecting medium-sized arteries, linked to cerebrovascular complications such as cervical artery dissection and intracranial aneurysms. Despite guidelines recommending daily aspirin, the efficacy of aspirin and statins in preventing stroke in FMD patients remains controversial. • **Methodology:** This study assessed FMD patients from a medical center's registry, focusing on the use of aspirin and statins in the primary prevention of ischemic stroke. Multivariable logistic regression adjusted for age and sex was used to determine stroke odds associated with aspirin or statin use. • **Results:** Among 1053 eligible patients, 76.5% used aspirin, and 56.3% used statins. Aspirin use significantly reduced ischemic stroke odds (OR: 0.33), with the lowest odds in patients aged 60-69 years. Statins showed no significant effect on stroke odds (OR: 0.55). • **Conclusions:** Aspirin use significantly reduces ischemic stroke risk in FMD patients, while statin use does not show a similar benefit. Further studies are underway to validate these findings.
4 Feb 2026	Impact of Lipoprotein(a) on efficacy and safety of ticagrelor versus clopidogrel in patients with minor stroke or transient ischemic attack: A Post Hoc Analysis of the CHANCE-2 Trial	Liye Dai	• **Introduction:** Lipoprotein (a) [Lp(a)] is an independent risk factor for atherosclerotic cardiovascular disease and may enhance platelet aggregation. This study aimed to evaluate the impact of Lp(a) on the efficacy and safety of ticagrelor–aspirin compared to clopidogrel–aspirin in minor stroke or TIA patients. • **Methodology:** This post-hoc analysis of the CHANCE-2 trial involved 5,915 patients with minor stroke or TIA and the CYP2C19 loss-of-function allele. Patients were categorized based on Lp(a) levels (<30 mg/dL and ≥30 mg/dL). The primary efficacy outcome was stroke within one year, and the safety outcome was bleeding severity. • **Results:** Ticagrelor–aspirin significantly reduced stroke rates in patients with Lp(a) <30 mg/dL (HR 0.70), but not in those with Lp(a) ≥30 mg/dL (HR 1.01). No significant difference in bleeding was observed across Lp(a) groups. • **Conclusions:** Lp(a) may identify patients with CYP2C19 loss-of-function who benefit more from ticagrelor–aspirin therapy compared to clopidogrel–aspirin, suggesting Lp(a) as a potential biomarker for treatment selection.

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (3/9)

Date	Title	Author	Summary
4 Feb 2026	Predictors for Detecting Paroxysmal Atrial Fibrillation by Implanted Loop Recorders	Kimberley Pfeiffer	• **Introduction:** Extended cardiac monitoring using implanted loop recorders (ILR) enhances the detection of paroxysmal atrial fibrillation (PAF). Identifying which patients are most likely to benefit from ILR is essential. • **Methodology:** A retrospective analysis of 159 patients suspected of having cardiogenic brain embolism was conducted, assessing the predictive value of the length of monitoring interval (LMI) and several cardiac indices: P-axis, left atrial diameter (LAD), left atrial volume (LAV), and left atrial volume index (LAVI) using logistic regression. • **Results:** Of 159 patients, 12% had newly detected PAF. Cardiac indices and LMI were significant predictors of PAF detection, with z-values indicating their impact. • **Conclusions:** The study confirms the predictive value of LMI and cardiac indices in detecting PAF via ILR. Future research should focus on developing a more robust predictive model combining these variables.
4 Feb 2026	Atrial Fibrillation may be Pathogenic in Half of Patients with Cryptogenic Stroke or TIA: The ANTARCTICA Individual Patient Data Meta-analysis	Shadi Yaghi	• **Introduction:** Insertable cardiac monitoring (ICM) is effective at detecting atrial fibrillation (AF) in cryptogenic stroke, non-cryptogenic ischemic stroke, and non-stroke patients. This study investigates whether AF detection rates are higher in cryptogenic stroke or TIA (C-IS/TIA) compared to non-cryptogenic stroke or non-stroke patients, accounting for differences in study populations. • **Methodology:** An individual-participant data meta-analysis was conducted, combining data from two RCTs and 12 prospective studies. Multi-level logistic regression models assessed whether C-IS/TIA patients had higher AF detection rates. Adjusted odds ratios (aOR) were derived using multiple imputation and Rubin's rules. • **Results:** AF detection was significantly higher in C-IS/TIA patients (aOR 1.90, p=0.009). A substantial portion of detected AF in C-IS/TIA (47%) may be pathogenic. Time to AF detection was significantly shorter in C-IS/TIA patients (median 65 vs. 169 days, p<0.001). • **Conclusions:** AF detection is higher in C-IS/TIA patients with a shorter time to detection. Nearly 50% of the AF detected in C-IS/TIA may be pathogenic, suggesting the importance of ICM in this population

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (4/9)

Date	Title	Author	Summary
4 Feb 2026	Stroke After Left Atrial Appendage Occlusion: Comparative Outcomes of Amulet and Watchman Devices	Nayana Bhandari	• **Introduction:** LAAO devices, such as the Amulet and Watchman, are used for stroke prevention in atrial fibrillation patients who cannot use anticoagulation. However, ischemic stroke may still occur due to device-related thrombus (DRT) or peri-device leak (PDL). This study compares the outcomes of the Amulet and Watchman devices in these patients. • **Methodology:** A review of the Amulet IDE trial, seven meta-analyses, and 12 multicenter registries was conducted. The study assessed stroke, PDL, DRT, and long-term anticoagulation after LAAO placement, with AI assistance to improve analysis. • **Results:** Stroke and embolization rates were similar between the Amulet (2.8%) and Watchman (2.8%) devices. Amulet showed higher closure rates (98.9% vs. 96.8%, p=0.02), but more procedural complications, such as pericardial effusion (4.5% vs. 2.5%, p=0.04). DRT occurred earlier with Amulet (3.4% vs. 4.8%, p=0.03). PDL was found in 26% of patients, doubling the thromboembolic risk (RR 2.1, p<0.001). Amulet patients had higher rates of anticoagulation discontinuation (94% vs. 90.9%, p=0.01). • **Conclusions:** The Amulet device offers several advantages, including fewer DRTs and higher rates of anticoagulation discontinuation. Despite increased procedural complications, it is preferred for high-risk stroke patients.
4 Feb 2026	The Association Between Comprehensive Evaluation in ESUS and Stroke Recurrence: A secondary analysis of the Cardiac Abnormalities in Stroke Prevention and risk of Recurrence Study	Farhan Khan	• **Introduction:** The embolic stroke of undetermined source (ESUS) includes patients with diverse, often unrecognized mechanisms. This study investigates the differential recurrent stroke rates in ESUS patients based on the completeness of neurodiagnostic testing in a multicenter cohort. • **Methodology:** In a retrospective analysis of 2,281 ESUS patients across 27 sites, patients categorized into 3 groups: (1) ESUS-E (established mechanism), (2) ESUS 2.0 (comprehensive workup without etiology), and (3) ESUS-NAW (no advanced workup). The recurrence rate of ischemic stroke was compared using adjusted Cox proportional hazards models. • **Results:** The ESUS 2.0 group had a significantly lower recurrence rate (1.98 per 100 person-years) compared to both ESUS-NAW (7.7 per 100 person-years, aHR 0.27) and ESUS-E (6.10 per 100 person-years, aHR 0.35). Cancer and non-stenosing atherosclerotic disease were linked to higher recurrence risks in ESUS-E. • **Conclusions:** ESUS 2.0 patients had a lower risk of recurrent stroke, suggesting comprehensive neurodiagnostic evaluation may reduce recurrence risk. These findings should inform future ESUS study designs.

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (5/9)

Date	Title	Author	Summary
4 Feb 2026	Oral Anticoagulation after Intracranial Hemorrhage in Patients with Atrial Fibrillation: A Systematic Review and Meta-Analyses	Vaibhav Vats	• **Introduction:** Restarting oral anticoagulation in patients with atrial fibrillation (AF) after an intracranial hemorrhage (ICH) is a clinical challenge due to the competing risks of ischemic stroke and recurrent bleeding. This study evaluates the benefits and risks of resuming anticoagulation in such patients. • **Methodology:** A systematic review and meta-analysis of randomized controlled trials comparing oral anticoagulants to no anticoagulation in AF patients post-ICH was conducted. Outcomes included ischemic stroke, recurrent ICH, major adverse cardiovascular events (MACE), bleeding, cardiovascular mortality, and all-cause mortality. • **Results:** Five trials with 733 patients showed that resuming anticoagulation reduced ischemic stroke risk (RR 0.20) and MACE (RR 0.59). However, it increased the risk of recurrent ICH (RR 3.51) and major bleeding (RR 2.22). No significant differences in mortality were found. • **Conclusions:** Resuming oral anticoagulation in AF patients post-ICH reduces ischemic stroke and MACE risk but increases bleeding risks. There was no survival benefit, emphasizing the need for individualized decision-making.
4 Feb 2026	Oral Anticoagulant Monotherapy vs Oral Anticoagulant Plus Antiplatelet Therapy in Paroxysmal and Persistent Atrial Fibrillation: A Prespecified Subanalysis of the ATIS-NVAF Trial	Hiroshi Yamagami	• **Introduction:** The ATIS-NVAF trial evaluated antithrombotic strategies in patients with nonvalvular atrial fibrillation (NVAF), atherosclerotic cardiovascular disease (ASCVD), and a history of ischemic stroke or transient ischemic attack (TIA). This subanalysis explores whether adding an antiplatelet agent to oral anticoagulation (OAC) provides a net clinical benefit depending on atrial fibrillation (AF) type. • **Methodology:** Patients with NVAF, ASCVD, and prior stroke/TIA were randomized to OAC monotherapy or OAC plus antiplatelet therapy. The primary outcome was a 2-year composite of ischemic cardiovascular events and major bleeding, stratified by AF type (paroxysmal [PAF] vs. persistent [PeAF]). • **Results:** In the PAF subgroup, combination therapy did not reduce ischemic events and increased bleeding (20.9% vs. 9.1%, p=0.02). In the PeAF subgroup, no significant differences in outcomes or bleeding were found between the two treatments. There was no significant treatment-by-AF-type interaction. • **Conclusions:** In NVAF patients with ASCVD and prior ischemic stroke/TIA, combination therapy increased bleeding risk in PAF without reducing ischemic events, and showed no advantage in PeAF. OAC monotherapy may be safer for PAF patients without clear ischemic benefit.

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (6/9)

Date	Title	Author	Summary
5 Feb 2026	Unmasking Atrial Cardiopathy: A Systematic Review and Meta-Analysis of Left Atrial Strain in Embolic Stroke of Undetermined Source	Sangharsha Thapa	• **Introduction:** Embolic stroke of undetermined source (ESUS) represents up to one-third of ischemic strokes, but optimal secondary prevention remains unclear. Atrial cardiopathy, including left atrial (LA) strain, has emerged as a potential embolic risk factor in ESUS, even in the absence of atrial fibrillation (AF). LA strain, assessed by speckle-tracking echocardiography, may improve risk stratification. • **Methodology:** A systematic review of PubMed, Embase, Scopus, and Cochrane identified studies evaluating LA strain in ESUS. Eligible studies compared LA strain in ESUS vs. other ischemic stroke subtypes. Mean differences in LA strain metrics (LASr, LAScd, LASct) were calculated using a random-effects model. • **Results:** Four studies (834 patients; 413 with ESUS) were included. ESUS showed significantly impaired LASr (−5.92%) and LAScd (−3.42%) compared to non-cardioembolic ischemic strokes, with a trend toward lower LASct (−1.59%). LA strain also differentiated ESUS from large-vessel occlusion stroke. • **Conclusions:** Significant impairment of LA function in ESUS, especially reservoir strain, supporting atrial cardiopathy as a mechanism of embolic stroke independent of AF. LA strain holds promise as a biomarker to refine risk stratification
5 Feb 2026	Association Between Mental Health Disorders and Anticoagulation Adherence in Patients with Non-Valvular Atrial Fibrillation (NVAF) in Kaiser Permanente Southern California Patients	Huma Manjra	• **Introduction:** Non-valvular atrial fibrillation (NVAF) significantly increases the risk of ischemic stroke, and consistent anticoagulation adherence is crucial for prevention. This study examines the relationship between mood and psychotic disorders and anticoagulation adherence in NVAF patients. • **Methodology:** Data from 15 hospitals in Southern California were collected between 2017 and 2022. Anticoagulation adherence was quantified using proportion of days covered (PDC) and categorized into nonadherent, adequate, and optimal. Multinomial logistic regression was used to assess the association between mental health disorders and adherence. • **Results:** Out of 18,139 NVAF patients, 18.8% had documented mental health disorders. Mental health disorders were not associated with adequate adherence, but they were linked to lower odds of optimal adherence with direct oral anticoagulants (DOACs) (OR 0.87, P = 0.008). No such association was observed with warfarin. • **Conclusions:** Mental health disorders were associated with suboptimal adherence to DOACs, but not warfarin. The lack of significant impact in this integrated healthcare system suggests that support and monitoring can help mitigate these adherence challenges in NVAF patients

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (7/9)

Date	Title	Author	Summary
5 Feb 2026	Characteristics and Outcomes of the Real-World Cohort of Patients with Non-Cardioembolic Ischemic Stroke or Transient Ischemic Attack Compatible With the OCEANIC-STROKE Clinical Trial Population in Japan	Teruyuki Hirano	• **Introduction:** The study examines the effectiveness of asundexian combined with antiplatelet therapy (APT) in reducing recurrent ischemic stroke (IS) in patients with non-cardioembolic ischemic stroke (NCIS) or high-risk TIA, based on the OCEANIC-STROKE trial. • **Methodology:** A retrospective cohort study (ASTRIS Japan) analyzed 5,778 patients hospitalized for first-ever NCIS or TIA from 2015-2022. Patients were selected according to OCEANIC-STROKE trial criteria. • **Results:** High risk of recurrent IS post-discharge in the cohort; IS recurrence rate: 106.1 per 1000 patient-years. Lower major bleeding rate: 47.2 per 1000 patient-years. • **Conclusions:** The study suggests significant recurrent IS risk post-discharge, highlighting the need for improved secondary prevention strategies in real-world settings.
5 Feb 2026	Oral antithrombotic therapy for patients with stroke and active cancer: A secondary analysis of BAT 2 study	Hiroyuki Kawano	• **Introduction:** This study investigates the impact of active cancer (AC) on recurrent ischemic stroke (IS), major bleeding (MB), and mortality in patients with IS/TIA, exploring the optimal oral antithrombotic therapy for secondary stroke prevention. • **Methodology:** A prospective, multicenter, observational study was conducted from 2016-2019, enrolling patients with cerebrovascular diseases on antiplatelet and/or anticoagulant therapy. The secondary analysis focused on patients with IS/TIA and AC vs. non-cancer groups • **Results:** No significant differences in recurrent IS or MB were found between the AC and non-cancer groups. However, AC patients had significantly higher mortality (7.7% vs. 2.1%). • **Conclusions:** Patients with IS/TIA and AC face higher mortality, but antithrombotic therapy type does not influence recurrent IS, MB, or mortality outcomes.

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (8/9)

Date	Title	Author	Summary
5 Feb 2026	Oral Anticoagulation With or Without Antiplatelet Therapy After Atherothrombotic Versus Cardioembolic Stroke in Patients With Nonvalvular Atrial Fibrillation and Atherosclerotic Cardiovascular Disease	Manabu Shirakawa	• **Introduction:** Antiplatelet therapy is commonly used to prevent recurrent strokes in atherothrombotic brain infarction (ATBI), but its combined use with oral anticoagulation (OAC) in patients with nonvalvular atrial fibrillation (NVAF) and atherosclerotic cardiovascular disease (ASCVD) remains uncertain. This study compares ischemic and bleeding outcomes of OAC plus antiplatelet therapy versus OAC alone in ATBI and cardioembolic stroke (CE) patients. • **Methodology:** A post-hoc analysis of the ATIS-NVAF trial, including 175 patients with ATBI or CE, randomized to receive either OAC alone or OAC plus antiplatelet therapy. Primary and secondary outcomes were recurrent ischemic stroke, bleeding events, and all-cause mortality. • **Results:** The combination therapy showed no significant reduction in recurrent ischemic stroke in ATBI (14.8% vs. 19.1%) or CE (13% vs. 7.9%). Hemorrhagic events were higher in the combination arm, especially in ATBI patients (25.4% vs. 8.7%). • **Conclusions:** In ATBI patients with NVAF, adding antiplatelet therapy to OAC increased bleeding without reducing recurrent ischemic stroke or mortality. Routine combination therapy is not recommended for secondary prevention in this subgroup.
5 Feb 2026	Age Subgroup Analysis of Anticoagulant Monotherapy Versus Combination Therapy in Patients With Ischemic Stroke and Nonvalvular Atrial Fibrillation - ATIS-NVAF trial -	Takeshi Yoshimoto	• **Introduction:** In the ATIS-NVAF trial, anticoagulant monotherapy was compared with combination therapy (oral anticoagulant plus antiplatelet) for ischemic stroke or TIA patients with NVAF and ASCVD. The primary analysis showed no added ischemic benefit with combination therapy but increased bleeding risk. This study aims to explore whether the treatment effects differ by age subgroup. • **Methodology:** Patients (n=316) were randomized to receive either monotherapy or combination therapy. They were divided into younger (<75 years) and elderly (≥75 years) subgroups. The primary endpoint was a composite of ischemic cardiovascular events and major bleeding within 2 years. • **Results:** No significant differences in ischemic outcomes were found between subgroups. For major bleeding, risk increased in both groups, but intracranial hemorrhage risk was lower in younger patients and higher in elderly patients. • **Conclusions:** Combination therapy did not reduce ischemic events compared with monotherapy, but a significant interaction for intracranial hemorrhage risk highlights the need for personalized treatment strategies, particularly in older patients.

Notable Presentations At ISC 2026
Secondary Prevention, and Antithrombotic Therapy (9/9)

Date	Title	Author	Summary
6 Feb 2026	Stroke Prevention and Bleeding Risk with Direct Oral Anti-Coagulants (DOACs) as Compared to Dual Anti-Platelet Therapy (DAPT) after Left Atrial Appendage Closure in Patients with Atrial Fibrillation: A Systematic Review and Meta-Analysis	Abyaz Asmar	• **Introduction:** Atrial Fibrillation (AF) is a leading cause of ischemic stroke. Left Atrial Appendage Occlusion (LAAO) offers an alternative to anticoagulation therapy in high-risk patients, but thrombotic complications remain. This study compares the efficacy of DOACs versus DAPT for stroke prevention and device-related thrombus after LAAO in AF patients. • **Methodology:** A comprehensive literature search was conducted across multiple databases. Eligible studies comparing DOACs and DAPT in LAAO patients were included. Primary outcomes were thrombus formation, ischemic stroke/TIA, bleeding, and mortality. • **Results:** DOACs showed a significantly lower risk of device-related thrombus and major bleeding compared to DAPT, with no significant differences in ischemic stroke/TIA or mortality. • **Conclusions:** DOACs are safer than DAPT for LAAO patients, offering reduced thrombus and bleeding risks. Further studies are needed to confirm optimal therapy.

Notable Presentations At ISC 2026
Stroke Recovery, Rehabilitation & Neuromodulation (1/7)

Date	Title	Author	Summary
4 Feb 2026	Transcutaneous Electrical Nerve Stimulation Improves Cognitive Function and Upper Limb Motor Function after Stroke: A Randomized Controlled Trial	Nga Huen Chan	• **Introduction:** Cognitive and motor impairments, especially in the upper limbs, are common after stroke. Transcutaneous electrical nerve stimulation (tVNS) and transcutaneous spinal cord stimulation (tSCS) are potential treatments to improve cognitive and motor function by stimulating neurotransmitter systems, but evidence on their efficacy in stroke rehabilitation remains inconclusive. • **Methodology:** In this randomized controlled trial, 90 chronic stroke patients were randomly assigned to tVNS, tSCS, or sham-stimulation groups. Participants received 18 sessions of stimulation concurrent with upper limb exercises over 6 weeks. Primary outcomes were cognitive function (MoCA) and upper limb motor function (FMA-UE). • **Results:** Both tVNS and tSCS groups showed significant improvements in MoCA, FMA-UE, and memory compared to the sham group. tVNS led to greater improvement in the Wolf Motor Function Test, while tSCS improved elbow extensor muscle strength. Improvements were maintained for one month, with tVNS showing superior results in FMA-UE. • **Conclusions:** tVNS and tSCS are effective in improving cognitive and motor function after stroke, with tVNS providing more lasting benefits in upper limb motor recovery. These interventions are safe, cost-effective, and promising for clinical practice.
4 Feb 2026	Evaluating the Feasibility of an Augmented Reality System for Motor Recovery in Stroke Rehabilitation: Proof-of-Concept Study	Jose Eduardo Espindola Lima	• **Introduction:** Post-stroke rehabilitation is typically in-person, but access is limited, especially in underserved areas. Digital tools often lack personalization. This study explores a novel AI-enabled augmented reality (AR) system that generates personalized rehabilitation exercises through natural language processing. • **Methodology:** In a prospective study, 20 therapists used the AI-AR system to prescribe and monitor exercises for a standardized patient with upper extremity weakness. The system translated therapist input into software, guiding patients via AR. • **Results:** The system delivered 99.8% of instructions accurately and monitored exercise completion with 88.4% accuracy. Therapists reported high usability, with 75% interested in clinical adoption. • **Conclusions:** The AR system enables remote, personalized stroke rehabilitation with high accuracy and potential for broad clinical application.

Notable Presentations At ISC 2026
Stroke Recovery, Rehabilitation & Neuromodulation (2/7)

Date	Title	Author	Summary
4 Feb 2026	A Stroke-Tailored, Remotely Delivered Mindfulness Intervention: A Pilot Clinical Trial for Stroke Survivors and Support Persons	Jenifer G Prather	• **Introduction:** Chronic stress during stroke recovery negatively affects the well-being of both stroke survivors (SS) and their support persons (SP). This study assesses the feasibility and explores the preliminary effects of a stroke-tailored, remotely delivered mindfulness-based intervention on this population. • **Methodology:** The pilot study enrolled 58 participants in an 8-week virtual mindfulness program. Feasibility and acceptability were evaluated, with exploratory analysis of pre- and post-intervention changes in psychosocial well-being, quality of life, and mindfulness-related outcomes. • **Results:** Of 52 participants who completed the intervention, improvements were observed in emotional regulation, mindfulness, interoceptive awareness, energy, and self-compassion ($p<0.05$). There were no significant differences between SS and SP ($p>0.1$), and limited dyadic effects were noted. • **Conclusions:** The A-MAMS intervention is feasible, acceptable, and shows positive preliminary outcomes. These promising findings warrant further investigation in future clinical trials.
4 Feb 2026	Hand recovery substrates depend on the stroke phases	anne marker	• **Introduction:** Stroke survivors often experience lifelong physical disabilities, with hand impairment being a significant contributorThis study explores longitudinal MR Spectroscopy-detected biomarkers related to hand recovery in subcortical stroke survivors. • **Methodology:** Stroke survivors in subacute (21 participants) and chronic (21 participants) phases, and 26 matched controls, were included. MR Spectroscopy measured biomarkers related to neuronal metabolic depression (NAA), glial changes (mI), neuroinflammation (Cho), and excitation-inhibition (E-I) imbalance (Glx, GABA) in motor and premotor cortices. • **Results:** In the subacute phase, higher neuroinflammation and inhibition (higher GABA/lower Glx), and lower neuronal metabolic activity (NAA), were observed compared to controls. These alterations resolved in the chronic phase, but ipsilesional NAA remained low. Biomarkers correlated with hand impairment in both phases. • **Conclusions:** Neural metabolic depression, E-I imbalance, and neuroinflammation change over time after stroke, with ipsilesional NAA deficits persisting. These findings could guide targeted rehabilitation strategies, suggesting early interventions targeting increased inhibition may improve hand recovery.

Notable Presentations At ISC 2026
Stroke Recovery, Rehabilitation & Neuromodulation (3/7)

Date	Title	Author	Summary
4 Feb 2026	Physician Perspectives Towards Secondary Stroke Prevention Measures and Rehabilitation for People Living with Pre-existing Disability or Dementia: Results from the SEED Mixed-Methods Study	Raksha Ramkumar	• **Introduction:** Patients with pre-existing disability and/or dementia (PLWD) are at high risk of recurrent stroke. This study explores physicians' experiences with post-acute stroke care for PLWD, focusing on secondary prevention and rehabilitation. • **Methodology:** A mixed-methods approach was used, combining qualitative semi-structured interviews with 30 physicians and a quantitative international survey of 200 physicians. The survey assessed practices regarding anti-coagulants, carotid revascularization, rehabilitation, and follow-up in PLWD. • **Results:** Physicians expressed lower enthusiasm for post-acute stroke care with increased disability or dementia severity. Key considerations included treatment invasiveness, resource allocation, and patient factors (living situation, support systems, rehabilitation potential). Physicians advocated for more tailored rehabilitation, highlighting concerns with the physical focus of mainstream programs. • **Conclusions:** The study highlights that greater pre-existing disability and/or dementia reduces physicians' enthusiasm for treatment, particularly for more invasive or resource-intensive interventions. This underscores the need for more individualized post-stroke care strategies for PLWD.
5 Feb 2026	Development of Prognostic Models and Nomograms for Independent Ambulation After Endovascular Thrombectomy in the SELECT2 Trial	Amro Elrefaei	• **Introduction:** EVT improves outcomes for large ischemic strokes, but predicting patient prognosis remains challenging. This study aimed to develop prognostication models for predicting functional independence post-EVT. • **Methodology:** Data from the SELECT2 trial were used to create pre- and post-EVT models using clinical and imaging variables. A backward stepwise regression approach developed nomograms for predicting mRS 0-3, with internal validation through cross-validation. • **Results:** Pre-thrombectomy and post-thrombectomy models showed strong predictive performance (AUC = 0.83 and 0.92). Key predictors included tissue volume, NIHSS, and 24-hour NIHSS. Nomograms were developed for practical use in clinical settings. • **Conclusions:** The nomograms offer a promising tool for predicting post-EVT outcomes, helping with individualized patient management and decision-making.

Notable Presentations At ISC 2026
Stroke Recovery, Rehabilitation & Neuromodulation (4/7)

Date	Title	Author	Summary
5 Feb 2026	Low-Frequency REpetitive TRanscranial Magnetic Stimulation Combined with Endovascular Treatment in ACute Ischaemic StrokE (RETRACE II): a randomised double-blind controlled multicentre phase II pilot study	Lingling Ding	• **Introduction:** Despite high recanalization rates with endovascular therapy (EVT), less than half of patients achieve functional independence. This study evaluates whether adjunctive low-frequency repetitive transcranial magnetic stimulation (LF-rTMS), initiated in the hyperacute phase after EVT, improves neurological outcomes. • **Methodology:** RETRACE II is a multicenter, randomized, double-blind, sham-controlled trial. Patients receiving EVT were randomly assigned to LF-rTMS or sham stimulation. LF-rTMS was administered twice daily for three days, starting within 24 hours of stroke onset. Primary outcomes included early neurological improvement at 3 days, with secondary outcomes like infarct volume and mRS at 90 days. • **Results:** In 60 patients, early neurological improvement was similar in both groups (70%). LF-rTMS did not significantly reduce infarct volume at day 7 (p=0.82) or improve functional recovery at 90 days (p=0.12). However, LF-rTMS significantly improved recovery in patients treated within 15-24 hours (100% vs. 47.4%, p=0.002). • **Conclusions:** LF-rTMS, initiated within 24 hours post-EVT, was feasible, safe, and showed potential efficacy in improving long-term functional outcomes. Further studies with larger samples are needed to confirm these findings.
5 Feb 2026	Ischemic Postconditioning Reduces Infarct Growth and Modulates Immunothrombosis in Acute Stroke (INSPIRE): A Pilot Randomised Controlled Trial	ming wei	• **Introduction:** Ischemic postconditioning (IPostC) has shown cytoprotective effects in preclinical models. However, its effectiveness and mechanisms in humans, particularly after EVT for ischemic stroke, remain unclear. • **Methodology:** This randomized, blinded trial enrolled patients with acute ischemic stroke who underwent EVT. Participants were assigned to IPostC or control groups, with infarct volume growth, NIHSS scores, and 90-day mRS as primary outcomes. Exploratory measures included neutrophil activation, microcirculation time, and blood-brain barrier integrity. • **Results:** IPostC significantly reduced infarct volume growth and improved NIHSS scores at 24 hours. It also decreased neutrophil activation, shortened microcirculation time, and preserved peri-infarct blood-brain barrier integrity. • **Conclusions:** IPostC may offer cytoprotection post-EVT by attenuating immunothrombotic dysregulation. Larger trials are needed for validation.

Notable Presentations At ISC 2026
Stroke Recovery, Rehabilitation & Neuromodulation (5/7)

Date	Title	Author	Summary
5 Feb 2026	LT3001 Improves Functional Outcomes in Disabling Acute Ischemic Stroke: Results from Two Phase 2 Trial	Thomas Devlin	• **Introduction:** LT3001 (Odatroltide) is a novel molecule that enhances fibrinolysis and scavenges free radicals. It was tested in two Phase 2 trials for acute ischemic stroke (AIS) patients with disabling symptoms, evaluating its potential as a treatment for those not eligible for reperfusion therapies. • **Methodology:** Two randomized, placebo-controlled Phase 2 trials were conducted, with a primary endpoint of mRS score at 90 days. The trials included moderate stroke patients and subgroups enriched for large artery atherosclerosis (LAA) or mismatch-positive patients. • **Results:** LT3001 showed improvement in mRS scores (0-1 and 0-2) in both LAA-enriched and mismatch-positive subgroups, with notable benefits in moderate disabling stroke patients, though small sample size limited analysis in one trial. • **Conclusions:** LT3001 demonstrated potential benefits for AIS patients with disabling symptoms, supporting further investigation as a treatment option for patients ineligible for reperfusion therapies.
5 Feb 2026	Views of People Living with Prior Disability or Dementia and their Family Caregivers on Post-Stroke Outcomes: Results from the SEED Qualitative Study	Aravind Ganesh	• **Introduction:** Functional independence is a key outcome in stroke research, but for one-third of stroke patients living with prior disability or dementia (PLWD), this is often unattainable. This study explores the post-stroke outcome priorities of PLWD and their family caregivers to inform future research that better addresses this population's needs. • **Methodology:** PLWD aged ≥65 with dementia or disability were recruited from the Calgary Stroke Program. Patient-caregiver dyads participated in in-depth, semi-structured interviews, which were analyzed using an interpretive grounded theory approach. • **Results:** Key priorities for PLWD and caregivers included maintaining meaningful relationships, independent task performance, and engaging in valued activities. Some participants, however, expressed that quality of life can deteriorate to a point worse than death, highlighting the importance of considering these subjective perspectives in outcome measures. • **Conclusions:** PLWD and caregivers prioritize relationships and engaging in enjoyable activities post-stroke. Future research should focus on assessments that capture return to pre-stroke status and quality of life rather than relying solely on functional measures like the modified Rankin Scale.

Notable Presentations At ISC 2026
Stroke Recovery, Rehabilitation & Neuromodulation (6/7)

Date	Title	Author	Summary
5 Feb 2026	Exercise Rehabilitation Across the Sub-Acute Stroke Period Improves Functional Mobility, Vascular Health, and Reduces Assistive Device Dependency in Afro-Caribbean Stroke Survivors: A Randomized Clinical Trial	Richard Macko	• **Introduction:** Stroke burden is higher in African-Caribbean populations, particularly in low- and middle-income countries (LMICs). This randomized trial investigates whether a 6-month exercise program can improve mobility, reduce disability, and enhance vascular health in Jamaican stroke survivors. • **Methodology:** Jamaican hemiparetic sub-acute stroke survivors were randomly assigned to either an exercise group (3 sessions per week) or a control group receiving standard care. Outcomes included functional mobility (timed walks, Berg Balance, Dynamic Gait Index) and vascular health (blood pressure, cardiovascular fitness, energy cost of walking). • **Results:** The exercise group showed significant improvements in gait velocity, walking distance, balance, fitness, blood pressure, and reduced energy cost of walking compared to controls. 78% of the exercise group transitioned to no walking aid. • **Conclusions:** A 6-month exercise program improves mobility, reduces disability, and enhances cardiovascular health, offering a potential stroke rehabilitation model for LMICs.
5 Feb 2026	Responder Analysis of the TRANSPORT2 (TRANScranial direct current stimulation for Post stroke Recovery - a phase II sTudy): A post-hoc analysis	Salman Ikramuddin	• **Introduction:** The TRANSPORT2 trial tested transcranial direct current stimulation (tDCS) combined with constraint-induced movement therapy for post-stroke recovery. The study found no significant differences in motor impairment between groups at 15, 45, and 105 days. • **Methodology:** A post-hoc responder analysis was conducted to identify "always-responders" (FM-UE increase ≥6 points) and "never-responders" (FM-UE increase ≤5 points). Comparisons between these groups were made using Welch's t-tests and chi-square tests. • **Results:** Always-responders were younger, enrolled sooner, and less likely to receive the 2mA treatment. They showed better baseline Wolf Motor Function Test scores, suggesting preserved functional capacity. • **Conclusions:** Younger, more acute patients with preserved functional capacity were more likely to respond to treatment. Results are hypothesis-generating and require cautious interpretation.

Notable Presentations At ISC 2026
Stroke Recovery, Rehabilitation & Neuromodulation (7/7)

Date	Title	Author	Summary
6 Feb 2026	Post-Stroke Upper Limb Recovery after Transcranial Magnetic Stimulation Treatment Depends on the Baseline Functional Status of the Corticospinal Tract - Secondary Analyses of the B-STARS Trial	Rick M Dijkhuizen	• **Introduction:** This study explored how baseline ipsilesional corticospinal tract status and motor-evoked potentials (MEPs) affect the efficacy of inhibitory repetitive transcranial magnetic stimulation (rTMS) for upper limb recovery after stroke. • **Methodology:** Secondary outcomes from the B-STARS trial were analyzed in 60 stroke patients. Participants received active or sham contralesional continuous theta-burst stimulation (cTBS). Changes in corticospinal excitability and motor-eloquent area (MEA) remapping were measured. • **Results:** Baseline MEP status predicted treatment efficacy. Active cTBS led to significant MEA remapping, with improvements observed in upper limb function. Ipsilesional corticospinal excitability did not differ between active and sham groups. • **Conclusions:** The efficacy of contralesional cTBS depends on baseline corticospinal tract status and may be driven by MEA remapping.
6 Feb 2026	Efficacy of Strategy Training to Enhance Participation in Stroke Survivors with Cognitive Impairments: A Randomized Controlled Trial in Taiwan	Feng-Hang Chang	• **Introduction:** Participation in life activities is a key recovery goal for stroke survivors. This study evaluates the efficacy of a community-based intervention, Optimizing Participation after Stroke through Strategy Training (OPASS), for improving participation outcomes in stroke survivors with cognitive impairments. • **Methodology:** A randomized controlled trial was conducted in Taiwan with 195 adults who had post-stroke cognitive impairments. Participants were randomized to OPASS or a control intervention. Outcomes were assessed at baseline, post-intervention, and at 3-month follow-up. • **Results:** The OPASS group showed significant improvements in productivity and social participation at post-intervention, but these effects were not sustained at follow-up. No significant differences were found in secondary outcomes. • **Conclusions:** OPASS improved participation in stroke survivors with cognitive impairments, but long-term effects require further investigation.

Notable Presentations At ISC 2026
Intracerebral Hemorrhage, & Aneurysm (1/6)

Date	Title	Author	Summary
4 Feb 2026	Recurrent Symptomatic Hemorrhage after Discontinuation of Atorvastatin versus Placebo in Randomized Trial of Hemorrhagic Cerebral Cavernous Malformations	Bader Ali	• **Introduction:** This study examines the rebound effect of atorvastatin discontinuation on recurrent symptomatic hemorrhages (SH) in cerebral cavernous malformations (CCM). • **Methodology:** 80 patients from the AT CASH EPOC trial were followed for 12 months post-treatment. SH events were assessed via imaging and symptoms. • **Results:** The atorvastatin group had more recurrent SH (4 vs. 1, p=0.042), with earlier risk of recurrence. • **Conclusions:** Discontinuation of atorvastatin increased SH recurrence risk, suggesting a rebound effect. Further studies on tapering or maintenance therapy are needed.
4 Feb 2026	Antithrombotic Therapy and Risk of Intracranial Hemorrhage in Patients with Cerebral Cavernous Malformations: A Multicenter Propensity-Matched Cohort Study	Hamza Adel Salim	• **Introduction:** This study examines the safety of antithrombotic therapy in patients with cerebral cavernous malformations (CCMs) who have no prior intracranial hemorrhage (ICH), a condition with uncertain treatment risks. • **Methodology:** A retrospective, multicenter, propensity score-matched cohort study using the TriNetX Analytics Platform compared outcomes in patients receiving antithrombotic therapy (antiplatelet or anticoagulant) versus those receiving no therapy. Outcomes included ICH, seizures, inpatient readmission, and emergency department (ED) visits. • **Results:** Among 19,222 patients, antithrombotic therapy increased ICH risk (5.0% vs. 4.0%, OR 1.27), with higher rates of seizures, readmissions, and ED visits. Anticoagulants increased ICH risk (5.6% vs. 4.1%, OR 1.40), while antiplatelets did not. • **Conclusions:** In CCM patients without prior ICH, antithrombotic therapy, particularly anticoagulants, was linked to a higher risk of ICH and other adverse outcomes.

Notable Presentations At ISC 2026
Intracerebral Hemorrhage, & Aneurysm (2/6)

Date	Title	Author	Summary
4 Feb 2026	Rapid Blood Pressure Reduction In Patients with Intracerebral Hemorrhage And Chronic Hypertension: A Secondary Analysis of the ATACH-2 Trial	Mohamed Ridha	• **Introduction:** This study investigates whether untreated chronic hypertension (HTN) diminishes the benefit of intensive blood pressure (BP) reduction on early neurologic decline (END) after intracerebral hemorrhage (ICH), given the role of cerebral autoregulation. • **Methodology:** A secondary analysis of the ATACH-2 trial included patients with a history of HTN, comparing those with treated and untreated HTN. Patients were randomized to standard or intensive BP targets, with the Glasgow coma scale (GCS) recorded hourly for 24 hours. Multivariable regression was used to analyze the association between BP target, HTN treatment, and END. • **Results:** Among 694 patients, intensive BP reduction improved GCS by 0.30 points (p=0.034), but only in those with treated HTN (interaction: p=0.046). Untreated HTN patients showed less benefit from intensive BP reduction. • **Conclusions:** Chronic HTN treatment modified the effect of intensive BP reduction on END, highlighting the need for personalized BP targets in managing ICH patients. Further research is warranted.
4 Feb 2026	Pipeline Flex-Shield™ Embolization Device 60 Day Dual Antiplatelet Therapy (DAPT) Followed by 305 Day Aspirin Early Feasibility Study (EFS) 1 Year Study	Adnan H Siddiqui	• **Introduction:** Flow-diverting stents (e.g., Pipeline™ Flex) traditionally require dual antiplatelet therapy (DAPT) to prevent complications, but this regimen increases hemorrhagic risk. The Pipeline™ Flex Embolization Device with Shield Technology™ may enable reduced or single antiplatelet therapy while preventing thrombosis. • **Methodology:** A prospective, single-arm, open-label study evaluated the safety and effectiveness of PED Shield with reduced DAPT (60 days). Ten patients with intracranial aneurysms were treated with 60 days of DAPT, transitioning to lifelong aspirin monotherapy. • **Results:** All patients had complete aneurysm occlusion post-procedure. Two ischemic events occurred during follow-up, but no in-stent thrombosis. At 12-month follow-up, six of seven patients showed complete occlusion. • **Conclusions:** PED Shield with 60-day DAPT appears promising, with early safety and efficacy, suggesting potential for discontinuing DAPT earlier. Further cohort expansion is underway.

Notable Presentations At ISC 2026
Intracerebral Hemorrhage, & Aneurysm (3/6)

Date	Title	Author	Summary
5 Feb 2026	Serum Alpha-1 Antitrypsin Levels in Ruptured and Unruptured Cerebral Aneurysms: A Prospective Study	Ali Mahta	• **Introduction:** This pilot study explores the potential role of serum alpha-1 antitrypsin (AAT) levels as a biomarker for vessel wall instability in cerebral aneurysms. Previous research links AAT deficiency to aortic aneurysms, but its role in cerebral aneurysm rupture remains unclear. • **Methodology:** A prospective study measured serum AAT levels and C-reactive protein (CRP) in 75 patients with ruptured or unruptured cerebral aneurysms, and controls without aneurysms. Serum AAT levels were compared using ANOVA, and multivariable regression assessed associations with aneurysm status. • **Results:** Serum AAT levels were significantly higher in patients with ruptured aneurysms (194 mg/dl) compared to unruptured (153 mg/dl) and control groups (162 mg/dl), with a significant association (OR 1.02 per mg/dl increase, p=0.017). • **Conclusions:** Higher serum AAT levels are associated with ruptured cerebral aneurysms, potentially indicating a response to arterial wall instability. Further studies are needed to validate AAT as a biomarker for rupture risk.
5 Feb 2026	Comparison of Lattice Flow Diverter and Pipeline Embolization Device in Unruptured Intracranial Aneurysms: A Real-World, Propensity Score-Matching Study	Shuang He	• **Introduction:** This study compares the outcomes of the Lattice Flow Diverter (LFD) and Pipeline Embolization Device (PED) Flex in treating unruptured intracranial aneurysms (UIAs). LFD features innovative surface modification (MIROR) and a self-expanding balloon system, but its comparative performance remains underexplored. • **Methodology:** A propensity score matching (PSM) approach was used to adjust for variables including patient demographics, aneurysm characteristics, and treatment details. Perioperative complications, occlusion rates, and clinical outcomes were compared between 99 LFD and 187 PED-treated patients. • **Results:** After PSM, LFD showed significantly lower in-stent stenosis (1.8% vs 14.5%, p=0.037), with comparable complete occlusion rates (87.3% vs 85.5%, p>0.999) and favorable outcomes (96.4% vs 94.5%, p>0.999). • **Conclusions:** LFD demonstrated a lower rate of in-stent stenosis while offering comparable occlusion rates and clinical outcomes to PED. These results support further validation of LFD in randomized controlled trials.

Notable Presentations At ISC 2026
Intracerebral Hemorrhage, & Aneurysm (4/6)

Date	Title	Author	Summary
5 Feb 2026	Sex Disparities in Case Fatality Rate After Aneurysmal Subarachnoid Hemorrhage A Prospective Longitudinal Population-Based Cohort Study	Helena Janssen	• **Introduction:** This study investigates sex differences in 90-day case fatality rates (CFR) after aneurysmal subarachnoid hemorrhage (aSAH), addressing conflicting data on sex disparities in aSAH outcomes and aiming to identify contributing factors. • **Methodology:** A population-based cohort from the UK Biobank, including 990 participants with aSAH, was analyzed. Kaplan-Meier survival analysis and multivariate Cox regression assessed CFR differences between sexes and identified potential explanatory factors. • **Results:** Females had a higher CFR (33.8% vs. 27.5%, OR 1.34, p=0.046). Adjusted hazard ratios showed females had a slightly higher risk of fatality (HR 1.15), with age and socioeconomic status contributing to the difference. • **Conclusions:** Females exhibited higher 90-day CFR after aSAH, partially explained by age and lower socioeconomic status. Further studies are needed to explore treatment-related factors and complications contributing to these sex disparities.
5 Feb 2026	Neurovascular anomalies are a frequent cause of spontaneous childhood hemorrhagic stroke: Results of the International Pediatric Stroke Study	Laura L Lehman	• **Introduction:** This study aims to establish a global registry of children with spontaneous hemorrhagic strokes to investigate the epidemiology and outcomes. Despite hemorrhagic strokes accounting for half of all pediatric strokes, basic data remains scarce. • **Methodology:** A longitudinal cohort study within the International Pediatric Stroke Study consortium included children under 18 with spontaneous hemorrhagic stroke. Exclusions were hemorrhages due to trauma or ischemic infarction. Outcomes were measured using the Pediatric Stroke Outcome Measure (PSOM). • **Results:** 406 children were enrolled, with 72.8% having a neurovascular anomaly as the source of hemorrhage. Of neonatal survivors, 83% had a good outcome; in childhood survivors, 73% had a good outcome. Vascular anomalies, such as arteriovenous malformations, were common. • **Conclusions:** Neurovascular anomalies are frequently identified in pediatric hemorrhagic stroke cases. Most survivors had favorable outcomes. Vascular imaging is essential to identify treatable conditions and prevent recurrence.

Notable Presentations At ISC 2026
Intracerebral Hemorrhage, & Aneurysm (5/6)

Date	Title	Author	Summary
6 Feb 2026	Determination and validation of the optimal timing of minimally invasive surgery for ICH patients: a prospective, long-term follow-up, large sample, multi-center registry study	Fuxin Lin	• **Introduction:** This study evaluates the efficacy and optimal timing of early frameless robot-assisted stereotactic aspiration coupled with catheter thrombolysis (SA-CT) in improving neurological outcomes in intracerebral hemorrhage (ICH) patients. • **Methodology:** Data from two multicenter cohort studies were used to analyze ICH patients who received either conservative treatment or SA-CT. The optimal timing for SA-CT was determined using restricted cubic spline (RCS) functions, and outcomes were compared at 3, 6, and 12 months. • **Results:** Early SA-CT (1.9–10.3 hours post-onset) significantly improved 12-month prognosis (OR 0.305, $p<0.001$), reducing poor outcomes by 69.5% compared to conservative treatment. Early intervention also showed lower mortality at 3, 6, and 12 months. • **Conclusions:** Early SA-CT, performed within 2–10 hours of ICH onset, is both safe and effective, with substantial improvements in prognosis and mortality, emphasizing the need for timely intervention.
6 Feb 2026	Impact of Prehospital GFAP-Based Diagnosis of Intracerebral Hemorrhage on Functional Outcomes: A Modeling Analysis Integrating INTERACT4 Trial Data	Shayandokht Taleb	• **Introduction:** Early SA-CT, performed within 2–10 hours of ICH onset, is both safe and effective, with substantial improvements in prognosis and mortality, emphasizing the need for timely intervention. • **Methodology:** GFAP performance metrics from a systematic review were applied to data from the INTERACT4 trial, considering ICH prevalence in the US and China. Projected outcomes included functional independence (mRS 0-2) and mortality. • **Results:** GFAP-guided diagnosis with antihypertensive therapy improved functional independence by 4.9% in the US and 7.2% in China, with reduced mortality (US 2.5%, China 4.5%). • **Conclusions:** GFAP testing in the prehospital setting improves outcomes, supporting further prospective validation.

Notable Presentations At ISC 2026
Intracerebral Hemorrhage, & Aneurysm (6/6)

Date	Title	Author	Summary
6 Feb 2026	Thromboelastography Predicts Hematoma expansion and Disability in Spontaneous Intracerebral Hemorrhage – A Multi-Center Study	Kaleigh Copenhaver	• **Introduction:** Hematoma expansion (HE) is a key factor in poor outcomes after intracerebral hemorrhage (ICH). This study evaluates whether thromboelastography (TEG) can predict HE and disability outcomes, identifying patients for targeted treatments. • **Methodology:** We prospectively enrolled ICH patients across six U.S. centers (2019-2023). TEG measured global hemostasis, and correlations with HE and 3-month modified Rankin Scale (mRS) scores were assessed. • **Results:** TEG K (fibrinogen-dependent clot strength) correlated with HE (rho = 0.19, p=0.048) and mRS (tau = 0.28, p=0.04). TEG MA (platelet-dependent clot strength) also correlated with HE (tau = 0.35, p=0.01) and mRS (tau = -0.32, p=0.02). • **Conclusions:** TEG biomarkers, especially those related to clot strength and fibrin generation, predict HE and functional outcomes, offering potential for targeted therapeutic interventions.

Noteworthy AI / ML presentations at ISC 2026

Themes from key AI / ML presentations at ISC 2026 (1/2)

- **ISC 2026 is expected to showcase how AI and machine learning are transforming stroke care by enhancing prediction accuracy, treatment decision-making, and patient outcomes, particularly through automated models for mortality prediction, lesion segmentation, and EVT efficacy**
- Check out the key AI / ML themes at ISC 2026 below:
- **AI for Mortality Prediction:**
  - Transformer-based NLP models, such as Longformer and BioBERT, predict stroke mortality with AUCs of 0.81–0.85, surpassing traditional models. These offer real-time, explainable risk stratification
- **Automated PAIS Lesion Segmentation:**
  - The nnU-Netv2 model for pediatric stroke automated segmentation of lesions in 142 patients, achieving a Dice score of 0.71, enhancing clinical decision-making for pediatric stroke
- **Inflammatory Marker Panel for Stroke Prediction:**
  - AI identified CXCL9 and other immune markers as predictive of stroke risk, outperforming traditional models with improved C-index and NRI for stroke stratification

Themes from key AI / ML presentations at ISC 2026 (2/2)

- **Real-Time Social Monitoring with AI:**
  - The SocialBit AI algorithm, using smartwatch ambient audio, detected social isolation in stroke survivors, showing high accuracy (AUC: 0.94) in measuring social engagement for cognitive recovery
- **Automated Deidentification of CT Scans:**
  - An AI tool for deidentifying head CTs was developed and tested across 1,501 scans, reducing file size by 35%, enabling secure, efficient multi-institutional stroke research
- **EVT in Large-Core Stroke Patients:**
  - AI's role in EVT outcomes, using data from the Florida Stroke Registry, demonstrated lower mortality (aOR 0.29) and improved ambulation, confirming AI's clinical benefit in real-world settings
- **AI in Stroke Neurology Decision-Making:**
  - Open Evidence AI outperformed others with 95.8% accuracy, aiding stroke care decisions by synthesizing complex medical literature and guidelines with minimal response time
- **AI for Hyperperfusion Risk in CAS:**
  - AI models using CTP and TD-NIRS data provided high accuracy (ROC=0.978) for predicting hyperperfusion risk after carotid artery stenting, enhancing procedural safety and decision-making

Noteworthy AI / ML presentations at ISC 2026

Notable Presentations At ISC 2026
AI / ML (1/6)

Date	Title	Author	Summary
04 Feb 2026	Explainable natural language processing (NLP) models to predict 90-day mortality of different stroke types from clinical note	Seyedmehdi Payabvash	• **Introduction**: This study investigates deep learning-based natural language processing (NLP) to predict 90-day mortality from ICU notes across various stroke types, leveraging free-text data often overlooked in traditional structured models. • **Methodology:** Using the MIMIC-IV database, the study evaluated four NLP strategies using transformer-based models (BioBERT, Longformer) across stroke subtypes. SHAP was used to quantify model explainability and identify key contributing text tokens. • **Results:** Using the MIMIC-IV database, the study evaluated four NLP strategies using transformer-based models (BioBERT, Longformer) across stroke subtypes. SHAP was used to quantify model explainability and identify key contributing text tokens. • **Conclusions:** Transformer-based NLP models can enhance mortality prediction accuracy, offering real-time, explainable risk stratification from free-text ICU notes, bypassing traditional variable extraction
04 Feb 2026	Automated Segmentation of Acute Pediatric Arterial Ischemic Stroke using State of the Art Neural Networks	Nomazulu Dlamini	• **Introduction**: Pediatric arterial ischemic stroke (PAIS) is a leading cause of brain injury in children, with stroke risk prediction complicated by neuroimaging features. Manual lesion segmentation is labor-intensive and inconsistent, particularly for pediatric cases, underscoring the need for automated solutions. • **Methodology:** The study developed a deep learning-based automated segmentation model using an nnU-Netv2 architecture, trained on diffusion weighted imaging (DWI) and apparent diffusion coefficient (ADC) MRI data from 142 PAIS patients. Model performance was assessed through 5-fold cross-validation and ensemble inference. • **Results:** The model achieved a mean Dice score of 0.71 and IoU of 0.55, with qualitative assessments confirming high alignment with radiologist annotations and vascular territories. • **Conclusions:** The nnU-Netv2 model successfully automates PAIS lesion segmentation, aligning with radiologist reviews. This approach reduces radiologist workload and advances scalable, automated tools for stroke risk and outcome prediction.

Notable Presentations At ISC 2026
AI / ML (2/6)

Date	Title	Author	Summary
04 Feb 2026	Machine Learning Analysis of Serum Immune Markers Identifies a Panel Associated with Incident Stroke in the Northern Manhattan Study	Mohammad Nafeli Shahrestani	• **Introduction**: Inflammation plays a key role in cerebrovascular disease and stroke risk. This study utilized machine learning to identify an immune panel that may enhance stroke risk prediction beyond traditional factors, using data from the multiethnic Northern Manhattan Study (NOMAS). • **Methodology:** Serum levels of 60 immune markers were measured in 1,176 stroke-free participants aged ≥55 years. The LASSO Cox model and 5-fold cross-validation identified predictive immune markers. Model performance was assessed with C-index and continuous net reclassification improvement (NRI). • **Results:** CXCL9 and five marker interactions were identified. The immune panel improved stroke risk stratification, with significant gains in C-index and NRI, outperforming traditional stroke predictors. • **Conclusions:** The machine learning-selected immune marker panel, particularly CXCL9, offers a promising approach to enhancing stroke risk prediction and may serve as a modifiable prevention target.
04 Feb 2026	SocialBit: Validation of a Lightweight Machine Learning Algorithm for Measuring Social Interactions in Real-Time in Stroke Survivors with Diverse Neurological Abilities	Amar Dhand	• **Introduction**: Social isolation adversely affects brain recovery post-stroke. SocialBit, a privacy-preserving machine learning algorithm, detects social interactions via ambient audio on a smartwatch, offering a real-time tool for monitoring social engagement in stroke survivors. • **Methodology:** The study involved 153 hospitalized stroke survivors, accumulating 88,918 minutes of data. SocialBit's performance was compared with human-coded social interactions, with participants wearing the device during routine care for up to 8 days. • **Results:** SocialBit demonstrated high accuracy (AUC: 0.94), including for aphasic patients (AUC: 0.93). It detected decreased social interaction in patients with higher stroke severity, showing a significant correlation with NIH Stroke Scale scores. • **Conclusions:** SocialBit is a promising digital biomarker for stroke survivors, enabling real-time monitoring of social engagement and potentially supporting interventions to improve cognition and quality of life.

Notable Presentations At ISC 2026
AI / ML (3/6)

Date	Title	Author	Summary
04 Feb 2026	Development and multicentric validation of a publicly-available head CT deidentification tool to facilitate inter-institutional stroke image sharing	Seyedmehdi Payabvash	• **Introduction**: Head CTs of stroke patients contain personal health information (PHI) in both metadata and facial features, creating privacy concerns. This study developed a tool to automate deidentification of head CTs for secure multi-institutional sharing. • **Methodology:** A deidentification plug-in for 3D Slicer was created to batch process head CTs, including removing identifying DICOM metadata, redacting burnt-in text, and blurring facial features. Feasibility was tested across multiple centers and validated on the ATACH-II trial dataset. • **Results:** The tool was tested on 1,501 head CTs, reducing file size by 35% and removing facial tissue for deidentification. Processing time was 2–5 minutes per CT. • **Conclusions:** This tool enables secure, efficient, and automated deidentification of head CTs, facilitating multi-institutional data sharing and research while preserving privacy.
04 Feb 2026	Association of Endovascular Thrombectomy With Mortality and Functional Outcomes in Large Ischemic Core: Analysis of Linked RAPID AI and Florida Stroke Registry data	Aaron Rodriguez Calienes	• **Introduction**: Endovascular thrombectomy (EVT) has shown benefits in clinical trials for patients with large-core ischemic stroke, but its efficacy in routine practice remains unclear. This study evaluates in-hospital outcomes for EVT-treated patients with large ischemic cores using data from the Florida Stroke Registry (FSR) and RapidAI imaging. • **Methodology:** Data from 11,275 acute ischemic stroke cases were linked, with large-core infarcts defined by ASPECTS ≤5 or core volume ≥70 mL. Multivariable logistic regression compared mortality and discharge ambulation between EVT-treated and untreated patients. • **Results:** Of 2,212 patients, 174 had large-core infarcts, with 59% receiving EVT. EVT was associated with lower mortality (aOR 0.29) and higher ambulation at discharge (aOR 2.45). • **Conclusions:** EVT improves survival and functional outcomes in real-world large-core stroke patients, supporting its clinical benefits beyond trial settings.

Notable Presentations At ISC 2026
AI / ML (4/6)

Date	Title	Author	Summary
05 Feb 2026	Artificial Intelligence Can Revolutionize Stroke Neurology Treatment Decisions And Stroke Medical Education With Near Perfect Accuracy.	Evan D Allen	• **Introduction**: AI has the potential to enhance decision-making in stroke care by rapidly synthesizing complex information from peer-reviewed literature and ASA guidelines. However, AI's accuracy and safety remain unproven. This study evaluates AI's performance in answering complex stroke neurology questions. • **Methodology:** 729 complex stroke treatment questions from recent ASA/AHA statements and major stroke studies were posed to Google AI, CHAT-GPT 4, CHAT-GPT 5, and Open Evidence (OE). Responses were reviewed for accuracy and potential harm by experts, with harmful answers scored on the UCSF/AHRQ scale. • **Results:** OE was the most accurate (95.8%), followed by Google (90.7%) and CHAT-GPT models. The fastest AI was Google (2.7 sec), but CHAT-GPT 4 had the highest risk of permanent harm (73.1%). • **Conclusions:** OE outperformed other AI modes in accuracy, speed, and safety. Combining OE with Google achieved near-perfect accuracy (99%) in just 10.3 seconds, offering a promising tool for improving stroke care.
05 Feb 2026	Contralateral hemodynamics and hyperperfusion after carotid artery stenting: an artificial intelligence and near-infrared spectroscopy analysis	Daisuke Maruyama	• **Introduction**: Cerebral hyperperfusion after carotid artery stenting (CAS) can lead to hemorrhagic complications. This study explores an AI model combining pre-operative CTP and intra-operative TD-NIRS to assess risk and develop a CTP-free NIRS-only model for intra-operative surveillance. • **Methodology:** The study analyzed 44 CAS procedures and 15 balloon occlusion tests. The teacher model integrated CTP, TD-NIRS, and balloon test data, while a NIRS-only student model was trained via knowledge distillation. Model performance was evaluated with ROC curves, and feature attribution was assessed using SHapley Additive Explanations. • **Results:** The teacher model showed high accuracy (ROC = 0.978), while the NIRS-only student model performed well in sensitivity (1.00) but with lower specificity (0.56). Key contributors to hyperperfusion risk included contralateral cerebral blood flow and intra-occlusion StO2 drop. • **Conclusions:** The study suggests contralateral hemodynamic reserve is critical to hyperperfusion risk. The NIRS-only model may serve as a CTP-free intra-operative risk surveillance tool, though external validation is needed.

Notable Presentations At ISC 2026
AI / ML (5/6)

Date	Title	Author	Summary
05 Feb 2026	Machine Learning Applications for Stroke Sub-grouped Classification Among Asian Americans	Xueting Ding	• **Introduction**: Asian Americans (AAs) have higher intracerebral hemorrhage (ICH) rates. Early stroke subtype classification improves treatment protocols. This study explores machine learning (ML) for stroke subtype prediction among AA patients. • **Methodology:** Using EHR data from 54,948 AA stroke patients, five stroke subtypes were classified. Random forest (RF) and Classification and Regression Trees (CART) algorithms were applied, with imputation for missing data and balancing class frequencies using 10-fold cross-validation. • **Results:** RF outperformed CART with 72.8% accuracy and 0.875 AUC. Key predictors included stroke history, diastolic blood pressure variability, and HDL cholesterol. Both models showed high specificity but moderate sensitivity. • **Conclusions:** ML demonstrated good accuracy for stroke subtype classification in AAs, highlighting the importance of prior cerebrovascular events. ML's ability to capture complex interactions suggests its potential to improve clinical decision-making. Further validation is needed.
05 Feb 2026	Artificial Intelligence–Assisted Middle Meningeal Artery Embolization for Chronic Subdural Hematoma	KENICHI KONO	• **Introduction**: Middle meningeal artery (MMA) embolization is an effective therapy for chronic subdural hematoma (cSDH), but liquid embolic agents carry risks of migration leading to complications. This study evaluates a real-time AI system to detect embolic agent progression and alert operators to enhance safety. • **Methodology:** A retrospective study included 15 patients (19 cSDH lesions; 36 MMA branches). The AI software processed biplane fluoroscopy images in real-time to track n-Butyl-2-cyanoacrylate (NBCA) flow and issue alerts when the agent reached defined regions. Notifications were evaluated for precision, recall, and clinical impact. • **Results:** The AI system demonstrated a precision of 90.9% and recall of 84.9%. In 40.2% of true-positive notifications, operators paused the NBCA injection immediately. No complications or adverse events occurred during procedures. • **Conclusions:** The AI system showed feasibility, accuracy, and safety, improving intraoperative awareness and procedural safety. Larger studies are needed to assess its impact on clinical outcomes and training in cSDH management.

Notable Presentations At ISC 2026
AI / ML (6/6)

Date	Title	Author	Summary
05 Feb 2026	Association of deep learning segmented ischemic core hypodensity on non-contrast CT with endovascular treatment benefit	Henk van Voorst	• **Introduction**: Endovascular treatment (EVT) is effective for patients with large ischemic cores due to large vessel occlusion, but poor outcomes can occur despite successful EVT. Traditional automated ASPECTS tools estimate hypodensity severity on NCCT but lack accuracy in representing the ischemic core. Deep learning (DL) segmentation of hypodensity may offer improved precision in outcome prediction. • **Methodology:** A post-hoc analysis of SELECT2 trial data assessed ischemic core volume on CTP, manual segmentations, and DL-segmented hypodensity volumes on NCCT. The association with 90-day independent ambulation after EVT or medical management (MM) was evaluated using Poisson regression. • **Results:** Agreement between manual and DL segmentations was high (CCC: 0.73 for total hypodensity, 0.90 for severe hypodensity). While hypodensity volumes on NCCT were associated with lower ambulation rates after EVT, severely hypodense volumes were more strongly associated with reduced EVT benefit. • **Conclusions:** DL-segmented severe hypodensity on NCCT is comparable to manual segmentations and may help identify patients less likely to benefit from EVT, improving patient selection.

Strategic Insights and Strategy Development is our focus