ACC 2026 Clinical and AI / ML Preview

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ACC 2026 – General Overview

- **Practice-Changing Trial Focus:** ACC 2026 will emphasize randomized and primary-result studies with near-term relevance for treatment decisions across atrial fibrillation, coronary disease, heart failure, hypertension, and structural interventions
- **Broad Cardiometabolic Integration:** The meeting will frame cardiology through a cardio-kidney-metabolic lens, linking obesity, diabetes, hypertension, kidney disease, and atherosclerotic risk
- **Technology-Led Clinical Care:** The program will showcase AI, digital diagnostics, wearable monitoring, and imaging-enhanced decision support as increasingly practical tools rather than exploratory concepts
- **Shift Toward Earlier Intervention:** Many presentations will support earlier identification of disease, earlier escalation of therapy, and earlier procedural treatment in high-risk cardiovascular populations
- **Real-World Evidence Expansion:** Registry, claims, and propensity-matched analyses will complement trials and strengthen evidence around effectiveness, safety, and disparities in routine practice
- **Precision and Subgroup Medicine:** ACC 2026 will increasingly segment evidence by sex, race, age, comorbidity, and phenotype to refine cardiovascular treatment strategies for specific populations

ACC 2026– Conference Themes

- **Atrial Fibrillation Transformation:** AF care will move toward integrated pathways combining ablation, left atrial appendage occlusion, anticoagulation refinement, and recurrence prediction
- **Heart Failure Phenotyping and Expansion:** Heart failure discussions will expand across HFrEF, HFpEF, hypertrophic cardiomyopathy, and amyloidosis, with a stronger focus on phenotype-specific treatment selection
- **Coronary and PCI Optimization:** Coronary sessions will prioritize physiology-guided PCI, IV imaging, STEMI systems of care, plaque characterization, and revascularization strategies
- **Hypertension and Lipid Innovation:** The meeting will highlight novel blood pressure and lipid-lowering platforms, including RNA approaches, aldosterone synthase inhibition, and PCSK9 evolution, and triglyceride/Lp(a) targeting
- **Structural and Valvular Maturation:** Structural heart data will extend beyond feasibility toward durability, cognition, thrombosis, imaging guidance, and comparative outcomes across transcatheter valve and closure therapies

Noteworthy Scientific presentations at ACC 2026

Key Topics From Notable Presentations (1/5)

- **Arrhythmias, AF, and Electrophysiology:** ACC 2026 will position AF care toward a more selective, technology-enabled model, where safer ablation platforms, earlier rhythm control, and data-guided anticoagulation decisions increasingly shape electrophysiology practice

  - Next-Generation AF Rhythm Control and Ablation: Sessions will emphasize pulsed field ablation as a faster workflow platform with favorable safety, while questioning incremental lesion strategies such as posterior wall isolation and highlighting expanding outpatient, same-day ablation pathways

  - Precision AF Management, Monitoring, and Stroke Prevention: Discussions will center on AI-enabled AF prediction, wearable and consumer monitoring, rapid cardioversion with inhaled flecainide, optimized DOAC selection and timing, and evolving LAAO-versus-anticoagulation strategies after ablation

Key Topics From Notable Presentations (2/5)

- **Coronary Artery Disease, ACS, and Interventional Cardiology:** Sessions will position coronary care toward more individualized, imaging-informed, and procedure-optimized management, where better lesion characterization and smarter PCI strategy may drive the next gains in ACS outcomes

  - Coronary Risk Stratification and Imaging-Guided Precision: Sessions will emphasize plaque phenotype, inflammation, and CCTA-based risk tools, showing how hepatic steatosis, CT-FFR, FAI, and LA strain may sharpen prognosis beyond traditional coronary assessment

  - PCI Optimization and Acute Coronary Intervention: Discussions will focus on refining revascularization strategy through IVUS/OCT guidance, bifurcation stenting, STEMI timing decisions, CKD-sensitive physiology guidance, and early zalunfiban to reduce stent thrombosis and infarct size

Key Topics From Notable Presentations (3/5)

- **Heart Failure, Cardiomyopathy, and Amyloidosis:** Experts will discuss about heart failure and cardiomyopathy care toward earlier disease recognition, tighter phenotype targeting, and more selective adoption of novel therapies, with strongest momentum in HCM, HFpEF/HFmrEF, and ATTR-CM

- Disease-Modifying Therapy and Phenotype-Specific Treatment: Sessions will highlight rapid real-world mavacamten benefit in oHCM, expanding CMI competition, broader inpatient SGLT2 use, finerenone consistency in HFmrEF/HFpEF, and growing caution around vericiguat, CSP, and IASDs in selected phenotypes

- Risk Stratification, Monitoring, and Amyloidosis Detection: Discussions will emphasize deeper phenotyping through HCM strain markers, AI-enabled ATTR-CM screening, wearable alert-guided HF monitoring, CK-based risk layering, and early transthyretin change as a potential acoramidis response marker

Key Topics From Notable Presentations (4/5)

- **Prevention, Lipids, Hypertension, and Cardiometabolic Risk:** Discussions will frame prevention as increasingly mechanism-driven and longitudinal, where lipid lowering, obesity-diabetes therapy, and resistant hypertension management increasingly extend beyond surrogate control toward harder cardiovascular risk reduction

- Next-Generation Risk Reduction and Lipid Innovation: Sessions will highlight durable RNAi and APOC3 targeting, expanding CETP and PCSK9 evidence, and stronger cardiometabolic prevention with oral semaglutide, including recurrent event reduction and broad projected U.S. population impact

- Resistant Hypertension and Long-Term BP Control: Discussions will emphasize device-based and endocrine-targeted strategies, with renal denervation showing durable urgency reduction, while aldosterone synthase inhibition and AGT silencing will advance more selective, longer-acting blood pressure control

Key Topics From Notable Presentations (5/5)

- **Structural Heart, Valvular, Pulmonary Vascular, and Congenital Disease:** The conference will frame structural and congenital cardiovascular care around durability, selective device use, earlier pulmonary vascular recognition, and more individualized long-term follow-up after valve and septal interventions

- Structural and Valvular Intervention Durability: Sessions will emphasize long-term consequences of transcatheter and closure therapies, with focus on cognition after TAVI, limited support for routine cerebral embolic protection, and next-generation biodegradable septal occluders

- Earlier Detection and Long-Term Management in Pulmonary Vascular and Congenital Disease: Discussions will highlight alert-based screening after pulmonary embolism, global positioning of macitentan in PAH, real-world PFO closure follow-up, and supportive care approaches for congenital heart disease survivors

Focus of Key Industry-Sponsored Sessions at ACC 2026 (1/5)

- **Abbott:**
  - Focus Areas: Advancing Cardiovascular Care from Diagnosis to Therapy
  - Sessions will highlight integrated cardiovascular management across the care pathway, spanning earlier diagnosis, imaging-guided assessment, procedural precision, and translation of diagnostic insights into therapeutic decision-making
- **Medtronic:**
  - Focus Areas: Resistant Hypertension & Renal Denervation
  - Discussions will focus on uncontrolled and resistant hypertension, with emphasis on the Symplicity™ blood pressure procedure, patient selection, procedural adoption, and the role of device-based therapy beyond pharmacologic escalation
- **Alnylam:**
  - Focus Areas: hATTR Amyloidosis & AMVUTTRA® Positioning
  - Presentations will center on transthyretin amyloidosis management, including the role of AMVUTTRA, disease recognition, treatment integration, and evolving expectations for outcomes in ATTR-related cardiovascular disease

Focus of Key Industry-Sponsored Sessions at ACC 2026 (2/5)

- **Novartis:**
  - Focus Areas: Lp(a) Risk Integration & LEQVIO® Implementation
  - Sessions will emphasize earlier identification of residual lipid risk through Lp(a) testing and practical use of LEQVIO® (inclisiran), linking biomarker-driven prevention with implementation in routine ASCVD care
- **Cytokinetics:**
  - Focus Areas: Obstructive HCM Therapeutic Innovation
  - Discussions will address new treatment options for obstructive hypertrophic cardiomyopathy, focusing on symptom reduction, disease-directed therapy, and how emerging agents may reshape management beyond traditional pharmacology
- **BMS:**
  - Focus Areas: CAMZYOS® Evidence in Symptomatic Obstructive HCM
  - Presentations will combine pivotal-trial findings and real-world experience with CAMZYOS®, highlighting effectiveness in symptomatic NYHA class II–III obstructive HCM and practical considerations for adoption in specialty care

Focus of Key Industry-Sponsored Sessions at ACC 2026 (3/5)

- **Amgen:**
  - Focus Areas: ASCVD Prevention, High-Risk Outcomes & Elevated Lp(a)
  - Sessions will connect implementation gaps in ASCVD prevention with outcome evidence from VESALIUS-CV and growing recognition of elevated Lp(a) as a major residual risk factor requiring earlier assessment
- **AstraZeneca:**
  - Focus Areas: Health Disparities in hATTR
  - Discussions will examine inequities in hereditary ATTR recognition and management, with emphasis on diagnostic delays, access barriers, and the need to improve equity in amyloidosis care pathways
- **Merck:**
  - Focus Areas: Adult PAH Treatment Evidence
  - Sessions will focus on pulmonary arterial hypertension in adults, highlighting current clinical evidence, treatment optimization, and how available therapies fit into modern PAH management strategies

Focus of Key Industry-Sponsored Sessions at ACC 2026 (4/5)

- **Pfizer:**
  - Focus Areas: Contemporary ATTR-CM Diagnosis and Management
  - Presentations will explore the journey from clinical suspicion to treatment strategy in ATTR-CM, with focus on improving diagnosis, streamlining referral patterns, and strengthening real-world management approaches
- **Ionis:**
  - Focus Areas: TRYNGOLZA Performance & Patient Experience
  - Discussions will center on TRYNGOLZA, combining efficacy results with real-patient experience to illustrate how therapy is performing in practice and where it may fit within lipid-disorder management
- **Novo Nordisk:**
  - Focus Areas: Cardiovascular Inflammation, Weight & Dual Risk Reduction
  - Sessions will link cardiometabolic risk reduction with obesity care, emphasizing inflammation, weight management, and integrated strategies to address both cardiovascular risk and excess adiposity

Focus of Key Industry-Sponsored Sessions at ACC 2026 (5/5)

- **Eli Lilly:**
  - Focus Areas: Tirzepatide and Cardiometabolic Risk
  - Discussions will explore Zepbound® (tirzepatide) through a cardiometabolic lens, emphasizing obesity treatment, weight reduction, and the broader implications of metabolic therapy for cardiovascular risk management
- **GE Healthcare:**
  - Focus Areas: CAD Imaging Innovation with Flyrcado
  - Sessions will focus on CAD diagnosis using Flyrcado, highlighting how advanced imaging may improve detection, refine ischemic assessment, and strengthen confidence in diagnostic decision-making.
- **Milestone Pharmaceuticals:**
  - Focus Areas: Acute PSVT Management with Intranasal Therapy
  - Discussions will center on the first FDA-approved nasal spray for PSVT in adults, emphasizing rapid outpatient rhythm control, convenience, and its potential role in acute arrhythmia management pathways

Notable Presentations And Late-breaking Sessions At ACC 2026

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (1/10)

Date	Title	Author	Summary
28 March 2026	COMPARATIVE EFFICACY AND SAFETY OF PULSED FIELD ABLATION VERSUS CRYOBALLOON ABLATION FOR PULMONARY VEIN ISOLATION IN ATRIAL FIBRILLATION: A META-ANALYSIS	Prutha R. Pathak	• **Introduction:** Atrial fibrillation is the most common sustained arrhythmia, and first-time PVI remains central to rhythm control. This analysis evaluates whether non-thermal PFA improves procedural efficiency and safety versus cryoballoon ablation. • **Methodology:** PRISMA-compliant meta-analysis of seven comparative studies identified through August 2025, pooling MDs and ORs across procedural, efficacy, and complication endpoints. • **Results:** PFA significantly reduced procedure time, improved arrhythmia-free survival, and lowered phrenic nerve palsy, while tamponade, repeat ablation, fluoroscopy time, and vascular complications were similar. • **Conclusions:** PFA appears faster, safer, and potentially more effective, but stronger randomized evidence is still needed.
28 March 2026	INHALED FLECAINIDE FOR ACUTE CONVERSION OF ATRIAL FIBRILLATION: A SYSTEMATIC REVIEW	Sergio Fausto Girón	• **Introduction:** Recent-onset AF often requires rapid cardioversion, but oral and IV flecainide are less suited to convenient outpatient use; inhaled flecainide was evaluated as a fast, non-invasive alternative. • **Methodology:** PRISMA-guided systematic review of Phase 2–3 interventional trials through August 2025; three studies (n=285) assessed 90-minute sinus rhythm restoration and short-term safety, with RoB 2/NIH bias appraisal. • **Results:** Active-arm conversion reached 33%–54%; placebo-controlled efficacy was 53.9% versus 10.3%. Median conversion was 8–16 minutes. Adverse events were mild; no deaths or sustained proarrhythmia occurred. • **Conclusions:** Inhaled flecainide shows promising rapid-conversion potential, but evidence remains immature and insufficient for routine clinical adoption.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (2/10)

Date	Title	Author	Summary
28 March 2026	APIXABAN VERSUS RIVAROXABAN IN ATRIAL FIBRILLATION PATIENTS RECEIVING CONCOMITANT DILTIAZEM	Isadora Guarino	• **Introduction:** Diltiazem can elevate DOAC exposure via CYP3A4/P-glycoprotein inhibition, making comparative safety and effectiveness of apixaban versus rivaroxaban clinically important in AF. • **Methodology:** TriNetX-based retrospective cohort (2012–2023) of AF patients initiating either DOAC during overlapping diltiazem therapy; 1:1 propensity matching produced 48,769 patients per arm with 5-year outcome assessment. • **Results:** Apixaban reduced major bleeding, driven by less GI bleeding, with similar ICH. It also lowered stroke/TIA, VTE, and all-cause hospitalization versus rivaroxaban • **Conclusions:** In diltiazem-treated AF, apixaban showed a more favorable long-term benefit-risk profile and appears the preferred DOAC option.
28 March 2026	POSTERIOR WALL ISOLATION AND PULMONARY VEIN ISOLATION BY PULSED-FIELD ABLATION FOR ATRIAL FIBRILLATION	Thitiphan Srikulmontri	• **Introduction:** PFA has improved safety for AF ablation, but whether adding posterior wall isolation to PVI improves outcomes in persistent AF remains uncertain. • **Methodology:** Systematic review and random-effects meta-analysis of PubMed/Embase studies through September 2025 comparing PWI+PVI versus PVI alone with PFA; primary endpoint was post-blanking atrial tachyarrhythmia recurrence. • **Results:** Across five studies (n=730), recurrence was similar between strategies. PWI+PVI did not reduce fluoroscopy time and showed only a nonsignificant tendency toward longer procedures, with substantial heterogeneity for workflow endpoints. • **Conclusions:** Adjunctive PWI adds no clear efficacy benefit in PFA-based AF ablation and may modestly prolong procedures.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (3/10)

Date	Title	Author	Summary
28 March 2026	LEFT ATRIAL APPENDAGE OCCLUSION VS LONG-TERM ANTICOAGULATION IN PATIENTS WITH ATRIAL FIBRILLATION UNDERGOING CATHETER ABLATION: A POOLED ANALYSIS OF PUBLISHED DATA	Prince Darko	• **Introduction:** Long-term stroke prevention after AF ablation remains unsettled, particularly for patients unsuitable for chronic anticoagulation; this analysis compared LAAO with continued OAC after catheter ablation. • **Methodology:** Systematic review of major databases through September 2025 identified comparative post-ablation studies; pooled ORs assessed all-cause mortality, major bleeding, and thromboembolic events. • **Results:** Two studies (n=2,964) showed similar thromboembolic protection between strategies. LAAO showed a nonsignificant trend toward lower all-cause mortality, while major bleeding and thromboembolic outcomes numerically favored OAC without statistical significance. • **Conclusions:** LAAO appears broadly comparable to OAC post-ablation, but evidence is sparse and underpowered.
28 March 2026	COMPARATIVE EFFICACY AND SAFETY OF PULSED-FIELD ABLATION VERSUS RADIOFREQUENCY ABLATION FOR PAROXYSMAL ATRIAL FIBRILLATION: A SYSTEMATIC REVIEW AND META-ANALYSIS	Mustafa Abomohsen	• **Introduction:** PFA is a nonthermal AF ablation platform with potential safety and tissue-selectivity advantages over RFA, but its role in paroxysmal AF remains incompletely defined. • **Methodology:** Systematic review and random-effects meta-analysis of randomized/comparative studies through August 2025; nine studies (n=2,601) were assessed for procedural efficiency, fluoroscopy, recurrence, 1-year success, and complications. • **Results:** PFA significantly shortened procedures but increased fluoroscopy exposure. Early recurrence outcomes favored PFA at 3 months, but 1-year arrhythmia recurrence, treatment success, and overall complication rates were not significantly different. • **Conclusions:** PFA improves workflow but not durable efficacy versus RFA.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (4/10)

Date	Title	Author	Summary
28 March 2026	INTEGRATING CLINICAL, GENETIC, AND ELECTROCARDIOGRAM-BASED ARTIFICIAL INTELLIGENCE TO PREDICT RISK OF FUTURE ATRIAL FIBRILLATION	Shaan Khurshid	• **Introduction:** AF risk prediction remains suboptimal; integrating clinical scores, genetic predisposition, and AI-derived ECG signals may enhance identification of high-risk individuals for targeted prevention. • **Methodology:** Population (UK Biobank) and hospital-based (MGBB) cohorts were analyzed using CHARGE-AF, ECG-AI, and polygenic risk scores; discrimination assessed via time-dependent AUROC and average precision for 5-year incident AF. • **Results:** Each model independently predicted AF, with clinical scores strongest overall. The combined model achieved highest discrimination (AUROC up to 0.817). Concordant high-risk classification markedly enriched AF incidence (up to 27.5%). • **Conclusions:** Multimodal integration substantially improves AF risk stratification and may enable more precise screening strategies.
28 March 2026	COMPARATIVE EFFICACY AND SAFETY OF FACTOR XIA AND XA FOR STROKE PREVENTION IN PATIENTS WITH ATRIAL FIBRILLATION: A META-ANALYSIS	Kirollos Gerges	• **Introduction:** In AF, safer anticoagulation is a major unmet need; FXIa inhibitors may reduce bleeding versus FXa inhibitors, but efficacy for ischemic protection remains uncertain. • **Methodology:** Systematic review of randomized trials through August 25, 2025 comparing FXIa and FXa inhibitors for stroke prevention in AF. • **Results:** Across 16,174 patients, FXIa inhibition significantly reduced hemorrhagic stroke and all bleeding categories. However, FXa inhibition provided superior protection against ischemic stroke and MACE, indicating a trade-off between safety and thromboembolic efficacy. • **Conclusions:** FXIa inhibitors improve bleeding safety but currently appear less effective for ischemic event prevention.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (5/10)

Date	Title	Author	Summary
28 March 2026	IMPACT OF CATHETER ABLATION VERSUS ANTI-ARRHYTHMIC DRUGS ON ALL-CAUSE MORTALITY IN ATRIAL FIBRILLATION: A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Aditi Bhanushali	• **Introduction:** AF management traditionally begins with antiarrhythmic drugs, but catheter ablation has shown superior rhythm control; its survival impact in real-world populations remains clinically important. • **Methodology:** Systematic review/meta-analysis of PubMed, Google Scholar, and EMBASE comparing all-cause mortality with catheter ablation versus AAD therapy; pooled adjusted hazard ratios were calculated using random-effects models. • **Results:** Across six studies (11,592 patients), catheter ablation was associated with a 41% lower adjusted all-cause mortality risk versus AAD (HR 0.59, 95% CI 0.43–0.83), although heterogeneity was substantial. • **Conclusions:** Catheter ablation may confer meaningful survival benefit, but variability across studies tempers certainty.
28 March 2026	TIME-TO-EVENT ANALYSIS OF EARLY VERSUS LATE START OF DIRECT ORAL ANTICOAGULANTS AFTER ACUTE ISCHEMIC STROKE IN PATIENTS WITH NONVALVULAR ATRIAL FIBRILLATION: A META-ANALYSIS	Ali Moradi	• **Introduction:** Anticoagulation timing after NVAF-related ischemic stroke is clinically challenging because clinicians must balance recurrent embolic risk against hemorrhagic transformation. • **Methodology:** Systematic review/meta-analysis of 12 studies (4 RCTs, 8 cohorts; n=7,979) comparing early DOAC initiation within 5 days versus delayed initiation beyond 5 days; reconstructed time-to-event analyses generated HRs and RMST estimates. • **Results:** Early DOAC use reduced the 30-day composite ischemic/hemorrhagic endpoint by 29% and ICH by 74%, without significantly changing recurrent AIS risk. • **Conclusions:** Early DOAC initiation appears favorable after NVAF-related AIS, though longer randomized follow-up remains necessary.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (6/10)

Date	Title	Author	Summary
28 March 2026	AN AMBULATORY ELECTRONIC HEALTH RECORD ALERT TO PROMOTE IDENTIFICATION OF UNTREATED PATIENTS WITH ATRIAL FIBRILLATION: THE SUPPORT-AF IV RANDOMIZED CLINICAL TRIAL	Alexander E. Kolomaya	• **Introduction:** Many anticoagulation-eligible AF patients remain untreated; this study tested whether a voluntary EHR alert could trigger diagnostic confirmation and specialist follow-up. • **Methodology:** Ambulatory clinicians were randomized to alert versus usual care. Eligible AF patients had elevated CHA_2DS_2-VASc scores, and post-index orders for ECG, cardiac monitoring, and cardiology referral were tracked. • **Results:** Among 2,755 patients, the alert significantly increased ECG ordering but did not meaningfully increase telemetry or cardiology consultation, indicating limited clinician engagement. • **Conclusions:** The alert mainly prompted AF verification rather than management escalation; stronger alert design is needed to influence anticoagulation pathways.
28 March 2026	RANDOMIZED TRIAL OF DIRECT-TO-CONSUMER ECG DIGITAL HEALTH TECHNOLOGY IN PATIENTS WITH NEW ONSET ATRIAL FIBRILLATION	Andrew Wilbur	• **Introduction:** Consumer ECG tools may support AF self-monitoring, but their impact on healthcare use and patient experience after new AF diagnosis is unclear. • **Methodology:** In a two-center randomized pilot, 55 patients with AF diagnosed within 6 months received KardiaMobile or standard care; healthcare utilization and modified AF satisfaction survey outcomes were assessed over 6 months. • **Results:** KardiaMobile users recorded frequent ECGs, yet cardiac clinic visits, ED visits, hospitalizations, and all satisfaction domains were similar between groups. • **Conclusions:** Remote patient-triggered ECG monitoring was feasible but did not improve short-term utilization or satisfaction.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (7/10)

Date	Title	Author	Summary
29 March 2026	PULMONARY DELIVERY OF FLECAINIDE FOR ON-DEMAND CARDIOVERSION IN ATRIAL FIBRILLATION	Damien Islek	• **Introduction:** PAF often requires rapid rhythm control, but oral flecainide is slow and IV use is resource-intensive. Inhaled flecainide was evaluated as a fast, outpatient cardioversion strategy. • **Methodology:** Evidence was synthesized across preclinical studies, phase I/II dose-finding trials, and the phase III RESTORE-1 study, assessing PK/PD, conversion rates, symptom relief, and safety. • **Results:** Peak levels occurred within 5–10 minutes, approximating IV kinetics. Conversion occurred in 30–50% within 15–30 minutes, with rapid symptom relief and mainly mild transient airway adverse events. • **Conclusions:** Inhaled flecainide appears promising for rapid, convenient cardioversion, but definitive validation requires larger randomized trials.
29 March 2026	MACHINE LEARNING FOR PREDICTION OF ATRIAL FIBRILLATION RECURRENCE AFTER CATHETER ABLATION USING ECG AND CLINICAL FEATURES	Rahel Sileshi	• **Introduction:** Predicting AF recurrence after first ablation remains suboptimal with conventional risk scores; ECG-derived machine learning may improve individualized risk stratification. • **Methodology:** Retrospective single-center study of 2,588 first-time AF ablations (2008–2022). Preprocedural 12-lead ECGs yielded reconstructed vectorcardiographic features plus autoencoder-derived latent variables. LGBM models using clinical, ECG, or combined inputs predicted 3–12-month recurrence. • **Results:** AF recurred in 26.6%. The combined model performed best (AUC 0.728), exceeding clinical-only, ECG-only, and standard scores. • **Conclusions:** Integrating clinical and ECG phenotyping with machine learning meaningfully improves post-ablation recurrence prediction.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (8/10)

Date	Title	Author	Summary
29 March 2026	SPHERE-9 SYSTEM FOR PULSED-FIELD ABLATION OF MICROREENTRANT AND FOCAL ATRIAL TACHYCARDIA: INITIAL SINGLE-CENTER RESULTS FROM AN ONGOING MULTICENTER STUDY	Jiaqi Mi	• **Introduction:** Non-pulmonary vein microreentrant and focal atrial tachycardias are technically demanding substrates; the Sphere-9 platform was evaluated as an integrated mapping, pacing, and dual-energy ablation solution. • **Methodology:** Single-center analysis from an ongoing multicenter study including 247 patients treated between August 2023 and July 2024, using primarily PFA with selective RF backup; acute success required termination, bidirectional block, or noninducibility. • **Results:** Acute success was 99.2%, with short PFA/procedure times and low radiation exposure across CTI, posterior wall, and mitral/anterior targets. • **Conclusions:** Sphere-9 enabled highly efficient, high-success acute AT ablation; durability remains to be proven.
29 March 2026	DEEP LEARNING FOR ATRIAL FIBRILLATION DETECTION USING ECG AND PPG FROM WEARABLE DEVICES: GENERALIZABILITY AND SCALABILITY IN THE HEARTBEAT STUDY	Yingshuo Liu	• **Introduction:** Passive wearable AF detection could enable scalable screening, but PPG must approach ECG-level performance while minimizing user interaction. • **Methodology:** A deep-learning ECG model trained on 211,162 DECAAF-II tracings was externally validated on smartwatch ECGs, then used to label synchronized ECG-PPG pairs. Quality-filtered PPG segments trained a 1-D EfficientNet-B0 classifier with patient-stratified cross-validation. • **Results:** ECG performance was excellent externally; the derived PPG model achieved AUC 0.94, 96% accuracy, 99% specificity, and 76% sensitivity. • **Conclusions:** ECG-guided labeling is a robust strategy for building scalable passive PPG-based AF detection tools.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (9/10)

Date	Title	Author	Summary
29 March 2026	PREDICTION OF ATRIAL FIBRILLATION FROM 10-SECOND AND 60-SECOND AMBULATORY ECG SEGMENTS USING A SELF-SUPERVISED FOUNDATIONAL MODEL	Nelson Hsieh	• **Introduction:** AF detection from routine 14-day monitoring is inefficient in unselected populations. This study tested whether self-supervised foundational ECG models can predict future AF from brief ambulatory sinus-rhythm segments. • **Methodology:** A transformer encoder pretrained on 880,000 ECGs was fine-tuned on Icentia11k. AF during up to 14 days of monitoring was predicted using only the first 10 or 60 seconds. • **Results:** Ten-second input gave AUROC 0.790 with strong NPV (0.969); 60-second input improved AUROC to 0.822 and NPV to 0.986 but markedly reduced specificity. • **Conclusions:** Short-window foundational ECG modeling can enrich AF prediction and may reduce monitoring burden.
29 March 2026	REAL-WORLD SAME-DAY DISCHARGE AFTER PULSED-FIELD VS RADIOFREQUENCY ABLATION FOR ATRIAL FIBRILLATION	Pejman Mansouri	• **Introduction:** Same-day discharge after AF ablation can improve efficiency, but real-world evidence comparing PFA with RF remains limited. • **Methodology:** Retrospective single-center study of 712 consecutive ablations (356 PFA, 356 RF) assessing same-day discharge and its predictors using multivariable logistic regression. • **Results:** Same-day discharge was higher with PFA than RF (56.2% vs 37.4%), and PFA independently doubled discharge odds. COPD, adjunctive ablations, Friday/pre-holiday scheduling, and procedure end time after 14:00 reduced same-day discharge. • **Conclusions:** PFA facilitates outpatient AF ablation, but operational workflow strongly influences discharge success.

Notable Presentations At ACC 2026
Arrhythmias, AF, and Electrophysiology (10/10)

Date	Title	Author	Summary
29 March 2026	ELECTROCARDIOGRAM-BASED DEEP LEARNING AND CLINICAL RISK FACTORS TO PREDICT ATRIAL FIBRILLATION RECURRENCE AFTER CATHETER ABLATION	Mostafa Al-Alusi	• **Introduction:** AF recurrence after catheter ablation remains common and poorly predicted. This study evaluated whether an ECG-based deep learning model for incident AF could improve post-ablation recurrence risk stratification. • **Methodology:** Consecutive ablation patients with a recent non-AF ECG were analyzed. Four models were compared: age/sex, CHARGE-AF, ECG-AI, and combined CHARGE-AF+ECG-AI, using time-dependent AUROC and average precision after a 60-day blanking period. • **Results:** Among 2,375 patients, 42% recurred. Combined CH-AI performed best, modestly exceeding CHARGE-AF alone. • **Conclusions:** Adding ECG-AI slightly improves long-term recurrence prediction, but discrimination remains only moderate.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (1/9)

Date	Title	Author	Summary
28 March 2026	RAPID IMPROVEMENT IN PATIENT-REPORTED HEALTH STATUS DURING INITIATION OF MAVACAMTEN THERAPY FOR SYMPTOMATIC, OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY: INTERIM RESULTS OF THE COMPASS-HCM STUDY	Andrew Wang	• **Introduction:** Mavacamten improves symptoms in obstructive HCM in trials, but early real-world patient-reported benefit after treatment initiation has been insufficiently characterized. • **Methodology:** COMPASS-HCM is a prospective US observational study of mavacamten-naïve oHCM patients. KCCQ and HCMSQ were measured from baseline to week 12, with mixed-model analyses adjusted for baseline covariates and background therapy. • **Results:** In 109 patients, health-status gains emerged by week 2 and persisted through week 12 across KCCQ and HCMSQ measures; treatment satisfaction rose from 56.0% to 87.5%. • **Conclusions:** Real-world mavacamten delivered rapid, meaningful symptomatic and patient-experience improvement.
28 March 2026	IMPROVING RISK STRATIFICATION FOR SUDDEN CARDIAC DEATH IN HYPERTROPHIC CARDIOMYOPATHY BY LEFT ATRIAL AND VENTRICULAR STRAIN IMAGING	Lale Dinc Asarcikli	• **Introduction:** Sudden death risk prediction in low-intermediate-risk HCM remains inadequate with current SCD scores alone; atrial and ventricular strain may refine arrhythmic risk assessment. • **Methodology:** Multicenter cohort of 989 HCM patients with baseline SCD score <6% and no prior aborted SCD. LARS and LVGLS were evaluated against a composite arrhythmic endpoint over median 61 months. • **Results:** Seventy-one events occurred. Impaired LARS and LVGLS independently predicted events and significantly improved discrimination/reclassification beyond SCD score alone. • **Conclusions:** LARS and LVGLS provide meaningful incremental prognostic value and may improve ICD decision-making in lower-risk HCM.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (2/9)

Date	Title	Author	Summary
28 March 2026	PROSPECTIVE EVALUATION OF AN ECHOCARDIOGRAPHY-BASED ARTIFICIAL INTELLIGENCE MODEL FOR DETECTING TRANSTHYRETIN CARDIAC AMYLOIDOSIS: RESULTS FROM THE SCAN-MP STUDY	Grace Ryan	• **Introduction:** ATTR-CM is an underrecognized HF cause, especially difficult to distinguish from other phenotypes; scalable echocardiographic screening could improve case finding in at-risk populations. • **Methodology:** A fully automated deep-learning model using a single apical 4-chamber echocardiographic clip was prospectively tested in 534 Black and Hispanic patients >60 years with HF from SCAN-MP, using Tc-PyP imaging/genotyping as reference. • **Results:** ATTR-CM prevalence was 8%. Model performance was strong for exclusion: sensitivity 76.7%, specificity 89.2%, AUC 87.7%, and NPV 97.8%. • **Conclusions:** This AI tool is most clinically valuable as a rule-out screen to prioritize confirmatory scintigraphy.
28 March 2026	INTERVENTION BASED ON REMOTE MONITORING AND ARTIFICIAL INTELLIGENCE ENABLED PREDICTIVE ANALYTICS IN HEART FAILURE: THE LINK-HF2 MULTICENTER RANDOMIZED TRIAL	Konstantinos Sideris	• **Introduction:** LINK-HF2 examined whether acting on wearable-derived, AI-generated alerts after acute HF discharge can improve outcomes beyond passive physiologic monitoring alone. • **Methodology:** In this multicenter randomized trial across five VA centers, 171 recently hospitalized HF patients wore sensors for up to 90 days; only intervention-arm alerts were sent to clinicians, and HF hospitalization was the primary endpoint. • **Results:** Alerts triggered rapid responses, mainly closer monitoring and medication changes. HF hospitalization was unchanged, but impending exacerbation notifications were significantly reduced, suggesting improved physiologic stability. • **Conclusions:** AI-guided monitoring improved actionable stability signals, though hospitalization benefit was not demonstrated.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (3/9)

Date	Title	Author	Summary
28 March 2026	VERICIGUAT IN HEART FAILURE: BENEFIT IN HFREF AND POTENTIAL HARM IN HFPEF BASED ON A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Chia-Hung Sze	• **Introduction:** Vericiguat augments nitric oxide–sGC–cGMP signaling and has been proposed to reduce HF events, but its benefit may differ substantially between HFrEF and HFpEF. • **Methodology:** Meta-analysis of five randomized trials (12,024 patients) including only FDA-approved 10 mg vericiguat arms versus placebo, with subgroup analyses by ejection-fraction phenotype. • **Results:** Vericiguat reduced cardiovascular mortality and showed borderline reductions in HF hospitalization, all-cause mortality, and serious adverse events. Benefit was driven by HFrEF; HFpEF showed concerning nonsignificant trends toward excess mortality. • **Conclusions:** Vericiguat appears clinically favorable in HFrEF, but not supported in HFpEF.
28 March 2026	SOTAGLIFLOZIN IMPROVES SYMPTOMS AND FUNCTIONAL CAPACITY IN NON DIABETIC PATIENTS WITH HFPEF: RESULTS FROM THE SOTA-P-CARDIA TRIAL	Juan Antonio Requena Ibanez	• **Introduction:** Non-diabetic HFpEF is marked by exertional limitation, poor quality of life, and few effective symptom-relieving therapies; this trial evaluated whether dual SGLT1/2 inhibition with sotagliflozin improves patient-centered outcomes. • **Methodology:** In SOTA-P-CARDIA, non-diabetic symptomatic HFpEF patients were randomized to sotagliflozin or placebo for 6 months; key secondary endpoints were KCCQ domain changes and 6-minute walk performance, stratified by baseline symptom burden. • **Results:** Sotagliflozin significantly improved all KCCQ domains and functional capacity, with greatest benefit in more symptomatic patients. • **Conclusions:** Sotagliflozin shows strong symptomatic and functional promise in non-diabetic HFpEF.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (4/9)

Date	Title	Author	Summary
28 March 2026	COMPARATIVE EFFICACY OF PHARMACOLOGIC THERAPIES IN OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY: A NETWORK META-ANALYSIS OF RANDOMIZED TRIALS	Mohammad Ishrak Khan	• **Introduction:** In symptomatic oHCM, conventional β-blockers/calcium channel blockers have limited randomized support, whereas cardiac myosin inhibitors (CMIs) have shown strong phase 3 efficacy. • **Methodology:** Frequentist random-effects network meta-analysis of three phase 3 RCTs (n=1,030) comparing mavacamten, aficamten, placebo, and metoprolol, with peak VO_2 as the primary endpoint. • **Results:** Aficamten ranked best, followed by mavacamten, producing the largest gains in exercise capacity. Both CMIs also improved LVOT gradients, symptoms, KCCQ/NYHA status, and NT-proBNP; safety was favorable with rare reversible LVEF decline. • **Conclusions:** CMIs appear the most effective disease-specific therapy for oHCM.
28 March 2026	SAFETY AND EFFICACY OF IN-HOSPITAL INITIATION OF DAPAGLIFLOZIN WITH AND WITHOUT CONCOMITANT MINERALOCORTICOID RECEPTOR ANTAGONISTS: FINDINGS FROM THE DAPA ACT HF-TIMI 68 TRIAL	Victorien Monguillon	• **Introduction:** Early in-hospital SGLT2 inhibitor initiation improves HF care, but uncertainty remains about combined use with MRAs, especially regarding hemodynamic, renal, and potassium safety. • **Methodology:** In DAPA ACT HF-TIMI 68, 2,401 hospitalized HF patients were randomized to dapagliflozin or placebo and stratified by baseline MRA use, including pre-existing versus newly initiated MRA therapy, with 2-month efficacy and safety assessment. • **Results:** Dapagliflozin's benefits were consistent regardless of MRA use. Although transient SBP/eGFR declines occurred, MRA users showed no excess hypotension, renal worsening, or hyperkalemia. • **Conclusions:** Concomitant MRA therapy did not diminish the short-term efficacy or safety of in-hospital dapagliflozin initiation.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (5/9)

Date	Title	Author	Summary
28 March 2026	EFFECTIVENESS AND SAFETY OF MAVACAMTEN IN A COHORT WITH HIGH BACKGROUND PREVALENCE OF ATRIAL FIBRILLATION: REAL-WORLD EXPERIENCE FROM MARVEL-HCM	Mariko Welch Harper	• **Introduction:** AF is common in oHCM and may complicate real-world mavacamten use, making post-initiation arrhythmic safety clinically important alongside hemodynamic effectiveness. • **Methodology:** MARVEL-HCM reviewed patient-level data from 8 US sites, evaluating baseline AF history, new/recurrent AF during mavacamten therapy, and parallel echocardiographic and clinical outcomes over median 66 weeks. • **Results:** Among 465 patients, 27.5% had prior AF. New-onset AF was low at 2.7%, while 72.7% with prior AF had no recurrence. Hemodynamic, NYHA, and LVEF outcomes aligned with trial experience. • **Conclusions:** Real-world mavacamten showed favorable AF safety with preserved clinical effectiveness.
28 March 2026	SERUM CREATINE KINASE CONCENTRATION AND CLINICAL OUTCOMES IN PATIENTS WITH HFMREF/HFPEF: RESULTS FROM FINEARTS-HF	Mingming Yang	• **Introduction:** In HFmrEF/HFpEF, serum creatine kinase may reflect skeletal muscle integrity and overall physiologic reserve, with potential prognostic relevance beyond conventional HF markers. • **Methodology:** In FINEARTS-HF, 5,864 of 6,001 randomized patients had baseline CK measured. Associations with total HF events/cardiovascular death and first events were modeled; ANCOVA assessed 12-month CK change with finerenone. • **Results:** Higher CK identified a lower-risk phenotype, with progressively fewer primary events across increasing CK quartiles. Finerenone's benefit was consistent regardless of CK, and it did not alter CK levels. • **Conclusions:** Higher CK is a favorable prognostic biomarker, likely reflecting better skeletal muscle health.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (6/9)

Date	Title	Author	Summary
28 March 2026	ISCHEMIC HEART DISEASE DOES NOT MODIFY THE BENEFICIAL EFFECTS OF FINERENONE IN HFMREF/HFPEF: A PRESPECIFIED ANALYSIS OF THE FINEARTS-HF TRIAL	Jawad Haider Butt	• **Introduction:** IHD is common in HFmrEF/HFpEF and confers a worse prognosis, making it important to determine whether finerenone retains benefit across ischemic and non-ischemic phenotypes. • **Methodology:** In FINEARTS-HF, 6,001 patients with NYHA II-IV HF, LVEF >40%, and elevated NT-proBNP were randomized to finerenone or placebo; outcomes were analyzed by investigator-reported IHD history. • **Results:** IHD was present in 53.9% and independently associated with higher HF events, CV death, and all-cause mortality. Finerenone reduced the primary outcome similarly in patients with and without IHD, with consistent symptom benefit. • **Conclusions:** Finerenone provides robust benefit in HFmrEF/HFpEF irrespective of ischemic status.
28 March 2026	EFFICACY OF SGLT2 INHIBITORS IN HEART FAILURE WITH OBESITY: A CONVENTIONAL AND BAYESIAN META-ANALYSIS OF RANDOMIZED TRIALS	Lina Freeman	• **Introduction:** Obesity amplifies inflammatory, metabolic, and hemodynamic stress in HF, raising the question of whether SGLT2 inhibitor efficacy differs by BMI. • **Methodology:** Meta-analysis of four randomized HF trials (21,005 patients) reporting outcomes by obesity status (BMI ≥30 vs <30 kg/m²), using both random-effects and Bayesian hierarchical models. • **Results:** SGLT2 inhibitors significantly reduced the composite of major HF events and all-cause mortality in both obese and non-obese patients, with consistent mortality/HF-event benefits, no significant subgroup interaction, and no excess adverse events. • **Conclusions:** SGLT2 inhibitors provide similarly robust HF benefit irrespective of obesity status.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (7/9)

Date	Title	Author	Summary
28 March 2026	EARLY IN-HOSPITAL INITIATION OF SGLT2 INHIBITORS IN ACUTE DECOMPENSATED HEART FAILURE: META ANALYSIS OF RANDOMIZED TRIALS	Padideh N/A Daneii	• **Introduction:** ADHF carries high early morbidity and rehospitalization, and whether SGLT2 inhibitors should be started during hospitalization has remained uncertain. • **Methodology:** Systematic review/meta-analysis of six randomized trials (~2,100 patients) comparing in-hospital SGLT2 inhibitor initiation versus placebo/standard care, evaluating worsening HF/readmission, CV death, biomarkers, symptoms, and safety. • **Results:** SGLT2 inhibitors reduced worsening HF/readmission, lowered CV death, decreased NT-proBNP, and improved KCCQ by clinically meaningful margins, without excess hypotension, renal injury, hypoglycemia, or ketoacidosis. • **Conclusions:** Early inpatient SGLT2 initiation appears effective and safe in ADHF.
28 March 2026	ASSOCIATION BETWEEN EARLY INCREASE IN SERUM TRANSTHYRETIN (STTR) WITH ACORAMIDIS AND LONG-TERM EFFECTS ON HEART FAILURE-RELATED HEALTH STATUS IN TRANSTHYRETIN AMYLOID CARDIOMYOPATHY (ATTR-CM): RESULTS FROM ATTRIBUTE-CM	Jan Griffin	• **Introduction:** In ATTR-CM, both low serum transthyretin and worsening KCCQ-OS predict mortality, but their longitudinal relationship and treatment responsiveness remain poorly defined. • **Methodology:** Post hoc analysis of ATTRibute-CM compared month-30 KCCQ-OS by early day-28 sTTR change in the modified intention-to-treat population randomized 2:1 to acoramidis or placebo. • **Results:** With acoramidis, each 5 mg/dL day-28 sTTR increase predicted a +3.17-point month-30 KCCQ-OS improvement; placebo showed no significant association. Day-28 sTTR <20 mg/dL was linked to markedly worse month-30 KCCQ-OS. • **Conclusions:** Early sTTR rise appears a meaningful surrogate of later patient-reported benefit with acoramidis.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (8/9)

Date	Title	Author	Summary
29 March 2026	EFFICACY OF MINERALOCORTICOID RECEPTOR ANTAGONISTS IN HEART FAILURE WITH PRESERVED EJECTION FRACTION: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Nimra Klair	• **Introduction:** HFpEF has limited disease-modifying therapies; this meta-analysis evaluated whether MRAs improve outcomes and reverse cardiac remodeling. • **Methodology:** Systematic review/meta-analysis of six RCTs (8,171 patients) comparing spironolactone or finerenone versus placebo in HFpEF, assessing clinical events, echocardiographic remodeling, and safety. • **Results:** MRAs reduced the CV composite, CV death/first HF hospitalization, and first HF hospitalization. They improved LV remodeling, with lower LVMi, higher LVEF, and lower E/e', but did not reduce all-cause or CV mortality. Hyperkalemia risk increased substantially. • **Conclusions:** MRAs offer symptomatic/structural benefit in HFpEF, chiefly by lowering HF hospitalizations, but require careful potassium monitoring.
29 March 2026	CONDUCTION SYSTEM PACING VERSUS RIGHT VENTRICULAR PACING IN ADVANCED HEART FAILURE: RESULTS FROM A PROPENSITY-MATCHED COHORT	David Murillo Garcia	• **Introduction:** CSP is a more physiologic pacing strategy than RV pacing, but whether QRS narrowing translates into better outcomes in advanced HFrEF is uncertain. • **Methodology:** TriNetX propensity-matched cohort study compared 229 CSP patients with QRS <120 ms versus 229 RV-paced patients with QRS >150 ms, evaluating death, HF hospitalization, arrhythmias, complications, and LVEF. • **Results:** Over >1.5 years, CSP did not reduce the composite of death/HF hospitalization, all-cause mortality, HF admissions, arrhythmic events, or device complications, and did not improve LVEF recovery. • **Conclusions:** CSP was safe but showed no clinical or remodeling advantage over RV pacing.

Notable Presentations At ACC 2026
Heart Failure, Cardiomyopathy, and Amyloidosis (9/9)

Date	Title	Author	Summary
30 March 2026	PERCUTANEOUS INTERATRIAL SHUNT DEVICES FOR LEFT ATRIAL DECOMPRESSION IN HFPEF AND HFMREF: A SHAM-CONTROLLED META-ANALYSIS OF RANDOMIZED TRIALS ON HEMODYNAMIC, FUNCTIONAL, AND CLINICAL OUTCOMES	Moustafa Elnewishy	• **Introduction:** IASDs aim to unload the left atrium in HFpEF/HFmrEF, but whether favorable hemodynamics translate into clinical benefit remains uncertain. • **Methodology:** PROSPERO-registered meta-analysis of three sham-controlled RCTs (~1,178 patients), using inverse-variance pooling, RoB 2, GRADE, and trial sequential analysis. • **Results:** IASDs did not improve the primary hierarchical outcome, quality of life, or functional capacity. In HFpEF, they were associated with higher recurrent HF events and increased all-cause mortality; evidence remained underpowered for modest benefit exclusion. • **Conclusions:** IASDs show no proven clinical benefit and possible harm in HFpEF, arguing against routine use.

Notable Presentations At ACC 2026
Coronary Artery Disease, ACS, and Interventional Cardiology (1/7)

Date	Title	Author	Summary
28 March 2026	NONCALCIFIED CORONARY PLAQUE BURDEN MEDIATES THE ASSOCIATION OF HEPATIC STEATOSIS WITH MAJOR ADVERSE CARDIOVASCULAR EVENTS: INSIGHTS FROM THE PROMISE TRIAL	Jan Michael Brendel	• **Introduction:** Hepatic steatosis may amplify cardiovascular risk beyond traditional factors, but its relationship with coronary plaque phenotype and outcomes remains incompletely defined. • **Methodology:** In 3,637 PROMISE CT-arm participants, core-lab non-contrast CT identified hepatic steatosis, while coronary CTA quantified plaque volume/composition; multivariable and mediation analyses assessed associations with MACE. • **Results:** Hepatic steatosis was present in 25.5% and independently associated with higher noncalcified plaque burden and higher MACE risk (aHR 1.69). Noncalcified plaque burden mediated 11% of this excess risk. • **Conclusions:** Hepatic steatosis is an independent marker of vulnerable coronary biology and adverse cardiovascular prognosis.
28 March 2026	A NOVEL CCTA-BASED VASCULAR RISK SCORING SYSTEM PREDICTS CARDIOVASCULAR EVENTS IN NON-OBSTRUCTIVE CORONARY ARTERY DISEASE: RESULTS FROM THE CHINA CT-FFR STUDY-2	Haixin Liu	• **Introduction:** Risk stratification in non-obstructive CAD remains limited; integrating age-sensitive CCTA markers may better identify patients at elevated event risk. • **Methodology:** In 8,683 China CT-FFR Study-2 participants across 29 centers, CCTA-derived CAD-RADS, CT-FFR, CACS, and FAI were entered into a multivariable Cox model to build a composite vascular risk score. • **Results:** Four imaging variables independently predicted MACE, with CT-FFR ≤0.80 the strongest signal. The score showed moderate discrimination (AUC 0.666) and clearly separated outcomes, with highest risk in patients aged >65 with scores >3. • **Conclusions:** This practical CCTA-based score improves prognostic stratification in NOCAD.

Notable Presentations At ACC 2026
Coronary Artery Disease, ACS, and Interventional Cardiology (2/7)

Date	Title	Author	Summary
28 March 2026	THE EFFECT OF COLCHICINE ON PERICORONARY ADIPOSE TISSUE ATTENUATION BY SERIAL CORONARY CT ANGIOGRAPHY: INSIGHTS FROM THE EKSTROM TRIAL	Joshua Colasurdo	• **Introduction:** PCAT attenuation is an emerging CCTA marker of coronary inflammation and risk; whether colchicine favorably modifies this imaging phenotype in stable CAD is uncertain. • **Methodology:** In the EKSTROM randomized trial, serial CCTA quantified proximal LAD, LCx, and RCA PCAT attenuation at baseline and 12 months in 71 stable CAD patients assigned to colchicine or placebo. • **Results:** Mean PCAT attenuation changed minimally in both groups, with no significant between-group difference in overall or vessel-specific attenuation at follow-up. • **Conclusions:** Colchicine did not measurably alter coronary perivascular inflammatory imaging signals over 12 months in this small cohort.
28 March 2026	NO-TOUCH VERSUS CONVENTIONAL VEIN HARVESTING IN CORONARY BYPASS SURGERY: A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Taizo Yoshida	• **Introduction:** Saphenous vein graft failure limits CABG durability; no-touch harvesting may preserve conduit biology and improve patency versus conventional harvesting, but clinical benefit remains uncertain. • **Methodology:** Systematic review/meta-analysis of 10 randomized trials (4,251 patients; 4,848 grafts) comparing no-touch versus conventional harvesting, using random-effects pooling for graft and clinical outcomes. • **Results:** No-touch harvesting significantly reduced graft occlusion and graft failure at patient and graft levels. However, death, myocardial infarction, repeat revascularization, and recurrent angina were unchanged, while leg wound complications increased significantly. • **Conclusions:** No-touch harvesting improves graft durability but not mid-term clinical outcomes, with a wound-healing trade-off.

Notable Presentations At ACC 2026
Coronary Artery Disease, ACS, and Interventional Cardiology (3/7)

Date	Title	Author	Summary
28 March 2026	ENHANCED EXTERNAL COUNTERPULSATION IMPROVES CT-DERIVED FRACTIONAL FLOW RESERVE IN PATIENTS WITH INTERMEDIATE-RISK CHRONIC CORONARY SYNDROME: A PROSPECTIVE, MULTICENTER RANDOMIZED CONTROLLED TRIAL	Yanlong Leng	• **Introduction:** In intermediate-risk chronic coronary syndrome, conventional medical therapy seldom improves coronary physiology, prompting evaluation of EECP as a non-invasive functional revascularization strategy. • **Methodology:** Prospective multicenter randomized trial across 9 centers assigned 81 patients to EECP or control; analyses assessed FFRCT, ΔFFRCT, wall shear stress, symptoms, and 1-year outcomes. • **Results:** EECP significantly improved FFRCT by 5.9%, reduced ΔFFRCT by 27.1% and wall shear stress by 9.5%, and improved Seattle Angina Questionnaire scores. One-year MACE did not differ significantly. • **Conclusions:** EECP improved coronary function and symptoms, supporting its role as a promising adjunct in intermediate-risk CCS.
28 March 2026	ANGIOGRAPHY-DERIVED FRACTIONAL FLOW RESERVE VERSUS INTRAVASCULAR ULTRASOUND TO GUIDE PERCUTANEOUS CORONARY INTERVENTION IN PATIENTS WITH OR WITHOUT CHRONIC KIDNEY DISEASE: A POST HOC ANALYSIS OF THE RANDOMIZED FLAVOUR II TRIAL	Jun Jiang	• **Introduction:** CKD substantially worsens prognosis in CAD and may influence the performance of physiology- versus imaging-guided PCI strategies. • **Methodology:** Post hoc FLAVOUR II analysis of 1,782 randomized CAD patients stratified by renal function compared AngioFFR- versus IVUS-guided PCI using MACCE as the primary endpoint. • **Results:** CKD was associated with stepwise higher MACCE risk. AngioFFR reduced PCI rates versus IVUS in non-CKD and mild CKD, with similar overall outcomes. In moderate-to-severe CKD, PCI rates were similar and AngioFFR showed a nonsignificant numerical excess in MACCE. • **Conclusions:** AngioFFR appears efficient in preserved/mildly impaired renal function, but caution is warranted in advanced CKD.

Notable Presentations At ACC 2026
Coronary Artery Disease, ACS, and Interventional Cardiology (4/7)

Date	Title	Author	Summary
28 March 2026	IMMEDIATE VERSUS STAGED COMPLETE REVASCULARIZATION IN PATIENTS WITH ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION: A COMPREHENSIVE META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Atef Akoum	• **Introduction:** In multivessel STEMI, the timing of complete revascularization remains unresolved, with uncertainty over whether immediate treatment improves outcomes versus a staged strategy. • **Methodology:** Systematic review/meta-analysis of 10 randomized trials (n=4,879) comparing immediate versus staged complete revascularization; risk ratios were pooled with random-effects models, with all-cause mortality as the primary endpoint. • **Results:** Immediate revascularization increased 1-year all-cause mortality and cardiac death. Myocardial infarction, repeat revascularization, and MACCE were not significantly different. • **Conclusions:** Staged complete revascularization appears safer than immediate complete revascularization in STEMI.
28 March 2026	SYSTEMATIC TWO-STENT VERSUS PROVISIONAL STENTING IN PATIENTS WITH TRUE CORONARY ARTERY BIFURCATION LESIONS: A POOLED INDIVIDUAL PATIENT-LEVEL META-ANALYSIS OF RANDOMIZED TRIALS (DKCRUSH X TRIAL)	Shaoliang Chen, SR	• **Introduction:** Provisional stenting is the standard bifurcation PCI strategy, but its long-term adequacy in true bifurcation disease, especially complex anatomy, remains debated. • **Methodology:** Individual patient-level meta-analysis of randomized DES trials comparing provisional versus upfront two-stent strategies, with independently adjudicated 6-year target lesion failure (TLF). • **Results:** Among 1,573 patients, upfront two-stent PCI significantly reduced 6-year TLF versus provisional stenting (18.2% vs 24.7%; HR 0.71). Benefit persisted in complex bifurcation lesions (HR 0.68), supporting durable superiority. • **Conclusions:** In true bifurcation PCI, upfront two-stent strategies, particularly DK-crush, provide superior long-term lesion outcomes.

Notable Presentations At ACC 2026
Coronary Artery Disease, ACS, and Interventional Cardiology (5/7)

Date	Title	Author	Summary
28 March 2026	IVUS-GUIDED VERSUS ANGIOGRAPHY-GUIDED PCI IN DIABETIC PATIENTS WITH ACUTE CORONARY SYNDROMES: THE IVUS-ACS TRIAL	Shaoliang Chen, SR	• **Introduction:** Diabetic patients with ACS carry high ischemic risk after PCI, yet the incremental value of IVUS guidance over angiography alone in this subgroup has been uncertain. • **Methodology:** Pre-specified subgroup analysis of the randomized IVUS-ACS trial including 1,105 diabetic ACS patients assigned to IVUS-guided or angiography-guided PCI; 1-year target vessel failure was the primary endpoint. • **Results:** IVUS significantly reduced target vessel failure (3.6% vs 8.3%), mainly through less clinically driven repeat revascularization, and also lowered non-procedural events and all-cause mortality without increasing bleeding or stent thrombosis. • **Conclusions:** IVUS guidance materially improves 1-year PCI outcomes in diabetic ACS.
28 March 2026	LONG-TERM CLINICAL OUTCOMES OF INSTANTANEOUS WAVE-FREE RATIO VERSUS FRACTIONAL FLOW RESERVE GUIDED PCI: A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Abdul Mueez Alam Kayani	• **Introduction:** In stable coronary disease, physiology-guided PCI improves lesion selection; whether resting iFR matches long-term outcomes of hyperemic FFR remains clinically important. • **Methodology:** Systematic review/meta-analysis of two trials (n=4,529; 5-year follow-up) comparing iFR- versus FFR-guided PCI, with pooled risk ratios for mortality and ischemic outcomes. • **Results:** iFR guidance was associated with higher all-cause mortality (RR 1.33), while MACE, cardiovascular death, myocardial infarction, and unplanned revascularization were not significantly different from FFR. • **Conclusions:** iFR showed similar nonfatal outcomes but a concerning mortality signal versus FFR, warranting cautious interpretation and further validation.

Notable Presentations At ACC 2026
Coronary Artery Disease, ACS, and Interventional Cardiology (6/7)

Date	Title	Author	Summary
29 March 2026	PRE-HOSPITAL ZALUNFIBAN REDUCES ACUTE STENT THROMBOSIS IN PATIENTS WITH ST ELEVATION MYOCARDIAL INFARCTION. RESULTS FROM THE CELEBRATE TRIAL	Arnoud van 't Hof	• **Introduction:** Acute stent thrombosis after primary PCI is uncommon but highly lethal in STEMI, making earlier pre-hospital platelet inhibition an important therapeutic target despite contemporary antithrombotic pretreatment. • **Methodology:** CELEBRATE was an international, double-blind randomized trial comparing pre-hospital or early in-hospital subcutaneous zalunfiban versus placebo, added to aspirin, ticagrelor, and heparin; this analysis focused on ARC-defined acute stent thrombosis within 24 hours. • **Results:** Among 2,467 patients, mostly randomized in ambulances, zalunfiban significantly reduced acute stent thrombosis (0.2% vs 1.0%; p=0.007). Acute stent thrombosis carried 50% mortality. • **Conclusions:** Very early zalunfiban meaningfully reduced acute thrombotic failure despite modern background therapy.
29 March 2026	LEFT ATRIAL STRAIN ENHANCES RISK PREDICTION IN ACUTE CORONARY SYNDROME:INTEGRATION WITH GRACE AND SYNTAX SCORES	Anuj Darak	• **Introduction:** LA strain reflects atrial compliance and contractile function and may refine early risk stratification in ACS beyond conventional clinical and angiographic scores. • **Methodology:** In this prospective cohort of 142 consecutive ACS patients, 2D speckle-tracking quantified LA reservoir, conduit, and contractile strain, which were correlated with GRACE, SYNTAX, Killip class, and comorbidities. • **Results:** All LA strain components were markedly reduced, worsening with higher GRACE/SYNTAX risk, STEMI, Killip III-IV, and diabetes plus hypertension. Reservoir strain <18% predicted high-risk GRACE, and adding LA strain improved Killip III-IV discrimination. • **Conclusions:** LA strain is a strong adjunctive prognostic marker in ACS.

Notable Presentations At ACC 2026
Coronary Artery Disease, ACS, and Interventional Cardiology (7/7)

Date	Title	Author	Summary
29 March 2026	INTRAVASCULAR IMAGING-GUIDED VS ANGIOGRAPHY-GUIDED PCI: UNIFIED EVIDENCE FROM 11 RANDOMIZED TRIALS	Mrinal Bhandari	• **Introduction:** Angiography can underestimate lesion complexity and stent under-expansion; this analysis evaluated whether intravascular imaging improves PCI outcomes in the DES era. • **Methodology:** Pooled meta-analysis of 11 randomized trials (>10,000 patients) comparing IVUS- or OCT-guided PCI versus angiography, with target vessel failure (TVF) as the primary endpoint. • **Results:** IVUS and OCT each significantly reduced TVF. Overall imaging guidance lowered TVF by 18%, reduced stent thrombosis by about 40%, and decreased repeat revascularization, especially in complex PCI, without added procedural harm. • **Conclusions:** Intravascular imaging confers class-wide outcome benefit and should be integrated more routinely, particularly in complex PCI.
29 March 2026	ZALUNFIBAN REDUCES SIZE OF ST SEGMENT ELEVATION MYOCARDIAL INFARCTION: THE CELEBRATE TRIAL	James L. Januzzi	• **Introduction:** In STEMI, reducing infarct size is central to improving outcomes; this prespecified analysis examined whether early subcutaneous zalunfiban favorably modifies biomarker-estimated myocardial injury. • **Methodology:** Core-lab hs-cTnT concentrations at 24 hours were compared between zalunfiban-treated patients (n=1,671) and placebo (n=796), assessing distributions across multiple ULN thresholds. • **Results:** Zalunfiban significantly lowered 24-hour median hs-cTnT and shifted the entire biomarker distribution toward smaller infarcts, including fewer very large MIs at high ULN multiples. • **Conclusions:** Early zalunfiban appears to reduce STEMI infarct size, supporting its mechanistic and clinical benefit.

Notable Presentations At ACC 2026
Prevention, Lipids, Hypertension, and Cardiometabolic Risk (1/7)

Date	Title	Author	Summary
28 March 2026	REDUCING HYPERTENSIVE URGENCY WITH RADIOFREQUENCY RENAL DENERVATION THROUGH THREE YEARS: INSIGHTS FROM THE SPYRAL HTN-ON AND OFF MED TRIALS	Michael Boehm	• **Introduction:** Renal denervation is an established BP-lowering strategy; this analysis examined whether it also decreases hypertensive urgency, a clinically important manifestation of uncontrolled hypertension. • **Methodology:** Pooled randomized SPYRAL HTN-ON/OFF MED data compared radiofrequency renal denervation versus sham. Eligible patients had office SBP 150-180 mmHg and DBP ≥90 mmHg. Hypertensive urgency was defined as SBP ≥180 or DBP ≥120 mmHg; 3-year events were assessed by Cox models. • **Results:** Among 703 patients, renal denervation reduced mean urgencies (0.21 vs 0.39; HR 0.60, p=0.014), a 40% relative reduction; NNT was 6. Medication burden was also lower at 3 years. • **Conclusions:** Renal denervation provided durable protection against hypertensive urgency despite less antihypertensive therapy, supporting clinically meaningful long-term BP stabilization.
28 March 2026	SUSTAINED REDUCTIONS IN ANGIOTENSINOGEN AND BLOOD PRESSURE WITH AN RNA INTERFERENCE THERAPEUTIC: INTERIM RESULTS FROM A FIRST-IN-HUMAN PHASE 1 STUDY OF GW906 IN CHINA	Haiyan Li	• **Introduction:** GW906 is a subcutaneous RNA interference therapy targeting angiotensinogen, designed to suppress the renin-angiotensin pathway and provide durable BP control after a single dose. • **Methodology:** In this randomized, placebo-controlled, single ascending-dose study, 24 healthy or hypertensive participants were assigned 2:1 to GW906 50-600 mg or placebo. BP was assessed by automated office and ambulatory monitoring. • **Results:** GW906 reduced serum AGT by >90% and produced sustained BP lowering; the 300 mg dose achieved the largest effect, with -26/-15 mmHg at Week 12. No hypotension, serious adverse events, or meaningful creatinine/potassium increases occurred. • **Conclusions:** Early data support potent, durable, and well-tolerated AGT silencing.

Notable Presentations At ACC 2026
Prevention, Lipids, Hypertension, and Cardiometabolic Risk (2/7)

Date	Title	Author	Summary
28 March 2026	PLOZASIRAN ACROSS A SPECTRUM OF HYPERTRIGLYCERIDEMIA: FINAL LONG-TERM EFFICACY AND SAFETY RESULTS FROM AN OPEN-LABEL EXTENSION STUDY	Christie M. Ballantyne	• **Introduction:** Hypertriglyceridemia drives pancreatitis and ASCVD risk via TRL/RC; APOC3 inhibition is a key therapeutic target. • **Methodology:** Phase 2 MUIR and SHASTA-2 participants entered an open-label extension with plozasiran 25 mg SC every 12 weeks; long-term lipids and safety assessed. • **Results:** TGs fell 52–74% in double-blind phases; sustained reductions of 69–81% and RC reductions of 62–70% persisted to 18 months. Discontinuation due to AEs was 4.8%, with no HbA1c signal • **Conclusions:** Plozasiran delivers durable, clinically meaningful TG lowering with favorable long-term safety across HTG phenotypes.
28 March 2026	SELECTIVE ALDOSTERONE SYNTHASE INHIBITORS IN RESISTANT OR UNCONTROLLED HYPERTENSION: A SYSTEMATIC REVIEW AND META ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Mariana Marques Seixas	• **Introduction:** Resistant/uncontrolled hypertension remains difficult to manage; selective aldosterone synthase inhibitors (ASIs) target aldosterone biosynthesis to improve BP control. • **Methodology:** Meta-analysis of five phase II/III RCTs (n=2,637) comparing ASIs vs placebo; random-effects models evaluated systolic BP and safety outcomes. • **Results:** ASIs significantly reduced systolic BP (MD -8.44 mmHg; $p<0.0001$). However, risks increased for hyperkalemia (RR 9.45), hyponatremia (RR 2.12), and hypotension (RR 2.72). No significant impact on mortality or eGFR decline. • **Conclusions:** ASIs provide meaningful BP reduction but require careful monitoring due to electrolyte and hypotension risks; long-term outcome data remain needed.

Notable Presentations At ACC 2026
Prevention, Lipids, Hypertension, and Cardiometabolic Risk (3/7)

Date	Title	Author	Summary
28 March 2026	EFFECT OF BAXDROSTAT ON CORTISOL RESPONSIVENESS IN PARTICIPANTS WITH UNCONTROLLED HYPERTENSION: A PHASE II RANDOMIZED CONTROLLED TRIAL	Naomi D.L. Fisher	• **Introduction:** ASIs may treat uncontrolled hypertension, but off-target cortisol suppression remains a major selectivity concern. • **Methodology:** In an 8-week, double-blind phase II trial, 48 patients with uncontrolled hypertension were randomized 2:1 to baxdrostat 2 mg or placebo. ACTH-stimulated cortisol was measured at baseline and week 8, with repeat confirmatory testing for abnormal results. • **Results:** All evaluable patients had normal stimulated cortisol responses at study end. Adverse events were similar between groups; no serious events occurred. One baxdrostat-treated patient developed reversible moderate hyperkalemia. • **Conclusions:** Baxdrostat preserved adrenal cortisol reserve, supporting favorable CYP11B2 selectivity.
28 March 2026	EFFECT OF ORAL SEMAGLUTIDE VERSUS PLACEBO ON FIRST AND TOTAL MACE IN SOUL TRIAL PARTICIPANTS WITH T2D AND ASCVD AND/OR CKD	Sharon L. Mulvagh	• **Introduction:** SOUL previously showed oral semaglutide reduced 3-point MACE by 14%; this analysis assessed whether benefit extended to recurrent cardiovascular events. • **Methodology:** In SOUL, 9,650 participants were randomized to oral semaglutide or placebo and followed for a mean 47.5 months. Aalen-Johansen and Ghosh-Lin models evaluated first and total 3P, 4P, and 5P MACE. • **Results:** Recurrent events comprised 15.4%-34.3% of total events. Oral semaglutide significantly reduced total 3P, 4P, and 5P MACE (MR 0.86, 0.87, 0.83). • **Conclusions:** Oral semaglutide lowered both initial and recurrent cardiovascular event burden.

Notable Presentations At ACC 2026
Prevention, Lipids, Hypertension, and Cardiometabolic Risk (4/7)

Date	Title	Author	Summary
28 March 2026	CETP INHIBITION WITH OBICETRAPIB PRESERVED KIDNEY FUNCTION IN PATIENTS AT HIGH CARDIOVASCULAR RISK: RESULTS FROM THE BROADWAY TRIAL	John Kastelein	• **Introduction:** CKD progression is common in cardiovascular disease, and HDL dysfunction may contribute; CETP inhibition could improve HDL functionality and renal protection. • **Methodology:** In BROADWAY, 2,530 patients with HeFH or ASCVD on maximal lipid-lowering therapy were randomized double-blind to obicetrapib 10 mg daily or placebo for 365 days; renal metrics were serially assessed. • **Results:** Obicetrapib slowed annualized eGFR decline versus placebo (0.27 vs 1.19 mL/min/1.73m²; p=0.023), with numerically less advanced CKD, moderate eGFR decline, and albuminuria progression. • **Conclusions:** Obicetrapib showed modest but significant renoprotective potential in high-risk cardiovascular patients.
28 March 2026	LONG-TERM EFFICACY AND SAFETY OF LERODALCIBEP, A NOVEL THIRD GENERATION PCSK9 INHIBITOR, IN THE OPEN-LABEL 72-WEEK EXTENSION STUDY OF SUBJECTS COMPLETING THE PHASE 3 STUDIES	David Kallend	• **Introduction:** Lerodalcibep, a monthly subcutaneous PCSK9 inhibitor, was evaluated for durability of LDL-C lowering and long-term tolerability after phase 3 base trials. • **Methodology:** In a 72-week open-label extension, 2,246 participants received lerodalcibep 300 mg monthly, initially clinic-administered then home-dosed; efficacy was assessed against original baseline, alongside target attainment and safety. • **Results:** Completion was high (90.8%). LDL-C fell rapidly in switchers and remained ~60% lower through Week 72. Safety was favorable; no treatment-related serious adverse events occurred, and injection-site events rarely caused discontinuation (0.2%). • **Conclusions:** Lerodalcibep showed durable efficacy with strong long-term tolerability.

Notable Presentations At ACC 2026
Prevention, Lipids, Hypertension, and Cardiometabolic Risk (5/7)

Date	Title	Author	Summary
28 March 2026	BEMPEDOIC ACID AND INCIDENCE OF STROKE AMONG STATIN-INTOLERANT PATIENTS: AN ANALYSIS OF THE CLEAR OUTCOMES TRIAL	Carolina Pires Zingano	• **Introduction:** Stroke prevention is central to lipid lowering, but bempedoic acid's stroke-specific effects remained uncertain despite prior MACE benefit. • **Methodology:** CLEAR Outcomes randomized 13,970 statin-intolerant, high-risk or established cardiovascular disease patients to bempedoic acid 180 mg or placebo; Cox models assessed total stroke and subtype-specific incidence. • **Results:** Overall stroke reduction was nonsignificant (1.9% vs 2.3%; HR 0.85). Ischemic stroke risk fell significantly (HR 0.78), while hemorrhagic stroke was numerically higher (HR 2.21). Benefit appeared greater without prior stroke history. • **Conclusions:** Bempedoic acid may preferentially reduce ischemic, but not total, stroke burden.
29 March 2026	EFFICACY AND SAFETY OF LERODALCIBEP IN CHINESE PATIENTS WITH HYPERCHOLESTEROLEMIA:A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED PHASE 3 TRIAL	Yong Huo	• **Introduction:** Chinese ASCVD patients often remain above LDL-C targets despite statins; this phase 3 trial evaluated monthly lerodalcibep/HST101 as add-on therapy. • **Methodology:** In a 12-week, randomized, double-blind phase 3 trial across 29 Chinese sites, 213 patients on statins were assigned 2:1 to HST101 300 mg monthly or placebo. Co-primary endpoints were LDL-C percent change at Week 12 and mean Weeks 10/12. • **Results:** Placebo-adjusted LDL-C reduction exceeded 65%; >94% achieved guideline LDL-C targets. Completion was 96.7%. Safety was favorable, with mainly mild-moderate injection-site reactions (7%). • **Conclusions:** HST101 delivered potent short-term LDL-C lowering with good tolerability.

Notable Presentations At ACC 2026
Prevention, Lipids, Hypertension, and Cardiometabolic Risk (6/7)

Date	Title	Author	Summary
29 March 2026	SAFETY OF OBICETRAPIB: AN INTEGRATED POOLED PHASE III SAFETY ANALYSIS	Adam J. Nelson	• **Introduction:** Obicetrapib, an oral CETP inhibitor, lowers LDL-C and raises HDL-C, but broader phase III safety characterization remains essential for clinical positioning. • **Methodology:** Pooled safety analysis of two 365-day phase III trials in HeFH/ASCVD compared obicetrapib 10 mg daily with placebo, assessing TEAEs, discontinuations, and prespecified events of special interest. • **Results:** Among 2,880 participants, overall TEAEs were similar with obicetrapib versus placebo (60.2% vs 62.0%); discontinuations were lower (4.1% vs 5.3%). Dizziness, headache, hypertension, myalgia, macular degeneration were infrequent; glycemic worsening and eGFR decline were less frequent. • **Conclusions:** Obicetrapib demonstrated a favorable phase III tolerability profile.
29 March 2026	PROJECTED REDUCTION IN MAJOR ADVERSE CARDIOVASCULAR EVENTS AMONG HIGH-RISK U.S. ADULTS WITH TYPE 2 DIABETES ELIGIBLE FOR ORAL SEMAGLUTIDE: A SOUL TRIAL BASED ANALYSIS USING NHANES 1988-2018 CYCLES	Mustafa Al-jarshawi	• **Introduction:** SOUL showed oral semaglutide reduced MACE in high-risk type 2 diabetes; this analysis quantified its potential U.S. population impact. • **Methodology:** Investigators applied SOUL eligibility criteria to NHANES 1988-2018 data, then modeled 4.5-year MACE outcomes using SOUL-derived event rates and hazard ratios • **Results:** About 6.1 million U.S. adults were eligible. Treatment was projected to prevent 118,664 MACE events, including 28,430 cardiovascular deaths, 83,489 myocardial infarctions, and 24,521 strokes; benefit remained consistent across subgroups. • **Conclusions:** Oral semaglutide could deliver substantial population-level cardiovascular prevention if uptake and access improve.

Notable Presentations At ACC 2026
Prevention, Lipids, Hypertension, and Cardiometabolic Risk (7/7)

Date	Title	Author	Summary
29 March 2026	Oral semaglutide could deliver substantial population-level cardiovascular prevention if uptake and access improve.x	Alaa A. Sayed	• **Introduction:** Resistant hypertension remains difficult to control despite multidrug therapy; aldosterone synthase inhibitors (ASIs) may offer targeted BP reduction. • **Methodology:** Frequentist network meta-analysis of 8 randomized trials (n=3,310) identified through four databases to August 2025; random-effects models estimated mean BP changes and safety risks. • **Results:** Baxdrostat, lorundrostat, and osilodrostat significantly reduced SBP (-6.78 to -8.81 mmHg) and DBP (-2.58 to -3.23 mmHg). Baxdrostat and lorundrostat increased serum potassium, but serious adverse events were not increased. • **Conclusions:** ASIs show meaningful antihypertensive efficacy, with potassium monitoring remaining essential.

Notable Presentations At ACC 2026
Structural Heart, Valvular, Pulmonary Vascular, and Congenital Disease (1/4)

Date	Title	Author	Summary
28 March 2026	PRESERVATION OF COGNITIVE FUNCTIONING ONE YEAR AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION: RESULTS FROM THE CAPITA STUDY	Kimberley Hemelrijk	• **Introduction:** As TAVI expands into younger, lower-risk severe AS populations, defining its long-term neurocognitive impact is increasingly important. • **Methodology:** In the prospective CAPITA substudy, 148 patients underwent serial neuropsychological testing at baseline, 3 months, and 1 year; the primary endpoint was change in global cognitive z-score from baseline to 1 year. • **Results:** Global cognition improved at 3 months, then remained stable at 1 year. Overall, 84% showed preserved/improved cognition; those with lowest baseline cognition improved most. No baseline predictors of decline emerged. • **Conclusions:** TAVI preserved cognition at 1 year, with greatest benefit in initially cognitively vulnerable patients.
28 March 2026	RANDOMIZED CONTROLLED TRIAL OF ELECTRONIC ALERT-BASED COMPUTERIZED DECISION SUPPORT TO INCREASE DETECTION OF CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION (CTEPH-DETECT)	Sina Rashedi	• **Introduction:** CTEPH after pulmonary embolism is rare but often diagnosed late; earlier screening may improve recognition of post-PE pulmonary hypertension. • **Methodology:** In this randomized trial, 400 symptomatic outpatients ≥6 months after PE were assigned to alert-based computerized decision support prompting echocardiography or usual care. Primary endpoint was echocardiographic screening within 90 days. • **Results:** Alerts significantly increased echocardiography ordering (32.5% vs 17.5%; OR 2.27) and new PH identification (10.5% vs 5.0%; OR 2.23). No formal CTEPH diagnoses occurred. • **Conclusions:** Automated alerts improved screening uptake and PH detection in at-risk post-PE patients.

Notable Presentations At ACC 2026
Structural Heart, Valvular, Pulmonary Vascular, and Congenital Disease (2/4)

Date	Title	Author	Summary
28 March 2026	PHARMACOKINETICS (PK) AND SAFETY OF MACITENTAN 75 MG: PHASE I DATA FROM CHINESE AND WHITE HEALTHY ADULTS	Gwen Macdonald	• **Introduction:** PAH remains a high-unmet-need disease; this analysis examined whether macitentan 75 mg shows ethnic PK or safety differences relevant to global Phase 3 use. • **Methodology:** PK/safety were compared across two Phase I single-dose studies under fed conditions: 9 Chinese male volunteers in a randomized placebo-controlled trial and 23 White volunteers in an open-label study. • **Results:** PK profiles were broadly similar; Chinese participants showed only slightly higher Cmax. TEAE rates were nearly identical (56% vs 55%), mainly headache, with no serious TEAEs. • **Conclusions:** Macitentan 75 mg demonstrated no clinically meaningful ethnic PK differences and showed consistent short-term tolerability
28 March 2026	COMPARISON OF BIODEGRADABLE VERSUS METAL OCCLUDER DEVICES FOR ATRIAL SEPTAL DEFECT CLOSURE: EARLY EVIDENCE AND FUTURE IMPLICATIONS	Manav Mohanty	• **Introduction:** Permanent nitinol ASD/PFO occluders are effective but have drawbacks including nickel hypersensitivity, erosion risk, and impaired future trans-septal access; biodegradable devices aim to address these limitations. • **Methodology:** This review synthesized preclinical and early human studies of PLLA and PDO biodegradable occluders, examining closure, endothelialization, resorption, and device-related complications versus nitinol devices. • **Results:** PLLA devices endothelialized by 3 months and were nearly resorbed by 36 months; PDO devices showed ~95% 1-year closure, 6% thrombus, and declining residual shunts. • **Conclusions:** Biodegradable occluders are feasible and promising, but long-term randomized data remain lacking.

Notable Presentations At ACC 2026
Structural Heart, Valvular, Pulmonary Vascular, and Congenital Disease (3/4)

Date	Title	Author	Summary
28 March 2026	REMOTE SOPHROLOGY IN CONGENITAL HEART DISEASE: THE SOPHROCARE RANDOMIZED CONTROLLED TRIAL	Alyssia Venna	• **Introduction:** Youth with congenital heart disease often experience accelerated fitness decline and poorer quality of life; mind-body strategies such as sophrology may address unmet psychosocial needs. • **Methodology:** In this multicenter randomized trial, 200 patients aged 13-25 years received either eight remote individual sophrology sessions or standard care. Primary outcome was 12-month change in VO2max; secondary endpoints included HRQoL and mental health. • **Results:** Sophrology did not improve VO2max. However, in young adults aged 18-25 years, mental HRQoL, mental health, and vitality improved significantly. • **Conclusions:** Remote sophrology improved psychosocial well-being, not cardiopulmonary fitness.
29 March 2026	THREE-YEAR REAL-WORLD OUTCOMES OF TRANSCATHETER PFO CLOSURE IN JAPAN: STROKE, ATRIAL FIBRILLATION, AND ANTITHROMBOTIC MANAGEMENT	Teiji Akagi	• **Introduction:** Although PFO closure prevents recurrent cryptogenic stroke in trials, long-term real-world safety and antithrombotic management remain insufficiently defined. • **Methodology:** This nationwide surveillance enrolled 500 patients after PFO closure; 403 completed 3-year follow-up. Investigators tracked ischemic stroke, atrial fibrillation, thromboembolism, and evolving antithrombotic use. • **Results:** Three-year ischemic stroke risk was low at 1.8%, confined to older, higher-risk patients. AF occurred in 3.0%, mainly early and paroxysmal. Antithrombotic use progressively declined, and many younger patients discontinued therapy without recurrent stroke. • **Conclusions:** PFO closure showed durable real-world safety, while long-term antithrombotic strategies warrant better risk stratification.

Notable Presentations At ACC 2026
Structural Heart, Valvular, Pulmonary Vascular, and Congenital Disease (4/4)

Date	Title	Author	Summary
29 March 2026	THE EFFICACY AND SAFETY OF CEREBRAL EMBOLIC PROTECTION DEVICES IN PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE REPLACEMENT: A SYSTEMATIC REVIEW AND META-ANALYSIS WITH TRIAL SEQUENTIAL ANALYSIS OF RANDOMIZED CONTROLLED TRIALS	Bijay Mukesh Jeswani	• **Introduction:** TAVR carries embolic stroke risk, but whether cerebral embolic protection devices (CEPD) improve clinical outcomes remains uncertain. • **Methodology:** Systematic review/meta-analysis of 9 randomized TAVR trials (n=11,876) comparing CEPD versus no CEPD; Trial Sequential Analysis tested robustness for stroke, disabling stroke, MACCE, and death. • **Results:** CEPD did not significantly reduce all-cause stroke (RR 0.93), disabling stroke (RR 0.77), MACCE (RR 1.13), or mortality (RR 1.04). TSA reinforced the lack of conclusive benefit. • **Conclusions:** Current randomized evidence does not support routine CEPD use during TAVR.

Key Industry Sponsored Sessions Information

ACC 2026 Key Industry Sponsored Sessions Information (1/4)

Date	Sponsor	Title
28 March 2026	Abbott	Advancing Cardiovascular Care from Diagnosis to Therapy
28 March 2026	Medtronic	Breaking Barriers: Tackling Uncontrolled and Resistant Hypertension - The Symplicity™ blood pressure procedure
28 March 2026	Alnylam	Introduction to AMVUTTRA® (vutrisiran)
28 March 2026	Novartis	Make It Standard: Lp(a) Integration For CV Risk Impact
28 March 2026	Cytokinetics	A New Option for Patients With Obstructive Hypertrophic Cardiomyopathy (oHCM)
28 March 2026	BMS	Groundbreaking Pivotal Trial and Growing Real-World Experience With CAMZYOS® in Patients With Symptomatic NYHA Class II–III Obstructive HCM
28 March 2026	Amgen	Implementation in Action: Closing the Gap in ASCVD

ACC 2026 Key Industry Sponsored Sessions Information (2/4)

Date	Sponsor	Title
28 March 2026	Astrazeneca	Health Disparities in hATTR
28 March 2026	Merck	Treatment Spotlight for Adult PAH Patients: Clinical Evidence and Insights
29 March 2026	Pfizer	From Suspicion to Strategy: Contemporary ATTR-CM Management in Clinical Practice
29 March 2026	Novartis	Act When It Matters Most: When to Consider LEQVIO® (inclisiran)
29 March 2026	Ionis	TRYNGOLZA: proven results and real-patient experiences
29 March 2026	Amgen	Cardiovascular Outcomes in Patients at High CV Risk: Evidence from the VESALIUS-CV Study
29 March 2026	Novo Nordisk	Unlocking CV inflammation in clinical practice

ACC 2026 Key Industry Sponsored Sessions Information (3/4)

Date	Sponsor	Title
29 March 2026	Kiniksa	Evidence-Based Strategies for the Treatment of Recurrent Pericarditis, Recurrent Pericarditis Panel Case Study and Q&A
29 March 2026	Boston Scientific	CHAMPION Insights: Advancing Stroke Protection in AF Management
29 March 2026	Amgen	Elevated Lp(a): Implications For Patient Risk Assessment
29 March 2026	Eli Lilly	Exploring Zepbound® (tirzepatide) Injection with a Clinical Expert
30 March 2026	Corcept Therapeutics	Cracking the Code: Uncover a Hidden Driver of Resistant Hypertension
30 March 2026	Novo Nordisk	A Dual Focus: Managing CV Risk and Weight
30 March 2026	Corcept Therapeutics	Cracking the Code: Managing Hypercortisolism-Driven Resistant Hypertension in the Modern Era

ACC 2026 Key Industry Sponsored Sessions Information (4/4)

Date	Sponsor	Title
30 March 2026	Boston Scientific	AFib and Stroke Protection: Contemporary Management, Trials, and Practice Integration
30 March 2026	GE Healthcare	Uncovering the Unseen: How Flyrcado Is Changing the Game in CAD Diagnosis
30 March 2026	Milestone Pharmaceuticals	Discover the First and Only FDA- Approved Nasal Spray to Treat PSVT in Adults

Noteworthy AI / ML presentations at ACC 2026

Themes from key AI / ML presentations at ACC 2026 (1/3)

- **ACC 2026 will show AI/ML moving from proof-of-concept to clinically actionable deployment, with strongest momentum in AI-echo and AI-ECG for scalable screening, risk stratification, and earlier detection of underdiagnosed disease**
- Check out the key AI / ML themes at ACC 2026 below:
- **AI-Echocardiography Screening Expansion:**
  - EchoFocus-CHD will anchor pediatric imaging advances, using >2 million videos from 27,603 echos to detect critical CHD with AUROC 0.93 and HLHS with 0.99
- **Valve Disease Detection at Scale:**
  - AI-enabled 2D echo will push scalable valve screening, with aortic stenosis detection reaching AUROC 0.99 internally and 0.98 in handheld cohorts, including novice-acquired scans
- **ATTR-CM Identification and Triage:**
  - ATTR-CM algorithms will stand out through multimodal performance; AgentAttr will screen 1,828 HF patients at 80.9% sensitivity, while AI-Echo triage will deliver PPV 79% versus AI-ECG 49%.

Themes from key AI / ML presentations at ACC 2026 (2/3)

- **Tafamidis-Era Amyloidosis Prognostics:**
  - Machine learning will redefine ATTR-CM risk prediction; in 245 tafamidis-treated patients, ML will outperform Columbia scoring for mortality, AUC 0.93 versus 0.75, over 4.1 years
- **AI-ECG as a Risk Platform:**
  - AI-ECG will evolve from detection to biology-based risk mapping, identifying elevated LV filling pressure with AUC 0.868 internal and 0.850 external from 225,737 ECGs
- **Arrhythmia Prediction Beyond Conventional Scores:**
  - AF risk modeling will deepen, with AI-ECG in PAH reaching AUC 0.77 and HR 8.2 for 5-year AF, while GBM stroke models will exceed CHA_2DS_2-VASc
- **Wearables and Image-Based ECG Democratization:**
  - Consumer-facing AI will gain translational credibility; wearable PPG screening across >1.06 million participants will show PPV 0.92, and photo-based pediatric AI-ECG will achieve AUROC up to 0.95
- **Coronary Imaging Intelligence:**
  - Coronary AI will shift toward plaque-level precision; PET MPI models will reach AUC 0.82 across 11 sites, and pre-plaque CCTA radiomics will predict nearly threefold higher 5-year risk

Themes from key AI / ML presentations at ACC 2026 (3/3)

- **Real-Time Cath Lab Automation:**
  - Interventional AI will move closer to procedural deployment; lightweight OCT segmentation will cut processing from 0.22 to 0.002 seconds/frame while preserving calcium and lipid performance
- **Multimodal Prognostic Modeling:**
  - Outcome prediction will increasingly integrate imaging, EHR, and clinical metadata; HF models in 135,372 adults will achieve c-index 0.86 and mean time-dependent AUC 0.90
- **Structural and Right-Sided Disease Phenotyping:**
  - AI will strengthen under-addressed structural phenotypes; in significant TR, AI-derived RV function will add independent mortality discrimination beyond TRIO across 630 patients
- **Implementation and Behavior-Support AI:**
  - ACC 2026 will also highlight practical generative AI; the Hello Heart pilot will show 189 conversations from 32 users, with satisfaction 4.3/5 and early adherence behavior shifts

Noteworthy AI / ML presentations at ACC 2026

Notable Presentations At ACC 2026
AI / ML (1/20)

Date	Title	Author	Summary
28 March 2026	ECHOFOCUS-CHD: AUTOMATED ECHOCARDIOGRAPHIC DETECTION OF CONGENITAL HEART DISEASE USING ARTIFICIAL INTELLIGENCE	Platon Lukyanenko	• **Introduction**: CHD diagnosis depends on expert echocardiography, but specialist interpretation remains scarce globally; this study addresses whether AI can extend expert-level detection in pediatric CHD. • **Methodology:** EchoFocus-CHD enhanced the PanEcho multi-task, view-agnostic framework by adding a transformer layer to prioritize clinically relevant echo views. It was trained/tested on first-study echoes from a large single-center dataset using an 80/20 split. • **Results:** Across >2 million videos from 27,603 echos, the model detected critical CHD with strong discrimination (AUROC 0.93), including near-perfect performance for hypoplastic left heart syndrome (AUROC 0.99). Non-critical CHD detection was slightly lower (AUROC 0.88; lesion range 0.70–0.95). • **Conclusions:** EchoFocus-CHD shows strong translational promise for triage, resource prioritization, and broader access to equitable pediatric cardiology care.
28 March 2026	PROGNOSTIC VALUE OF ARTIFICIAL INTELLIGENCE MODEL FOR ECHOCARDIOGRAPHY BASED DIAGNOSIS OF CARDIAC AMYLOIDOSIS	Maria Kaufman	• **Introduction**: AI echocardiographic models detect cardiac amyloidosis accurately, but the prognostic meaning of low or indeterminate AI probability in confirmed CA is unclear. • **Methodology:** A validated 3D convolutional neural network was applied to single apical 4-chamber echocardiograms from 649 guideline-confirmed ATTR or AL-CA patients in a global multiethnic cohort; survival was assessed with Kaplan-Meier and multivariable Cox analyses. • **Results:** Low AI probability identified a subgroup with significantly better survival, independent of demographics. This association was strongest in AL-CA, while ATTR-CA showed a nonsignificant favorable trend. • **Conclusions:** The model appears prognostic as well as diagnostic in CA.

Notable Presentations At ACC 2026
AI / ML (2/20)

Date	Title	Author	Summary
28 March 2026	MACHINE LEARNING/DEEP LEARNING MODELS PREDICTING ACUTE CARDIOVASCULAR RISK IN HYPERTROPHIC CARDIOMYOPATHY: A SYSTEMATIC REVIEW AND META-ANALYSIS	Sidhartha Gautam Senapati	• **Introduction**: HCM carries major risks including SCD, AF, stroke, and HF. This study assessed whether AI-based prognostic models can improve risk stratification beyond conventional approaches. • **Methodology:** PubMed and Google Scholar were searched through June 2025 for peer-reviewed HCM studies using ML/DL to predict MACE, AF, HF, stroke, or SCD. Four studies using XGBoost, Random Forest, SVM, and LightGBM with CMR, proteomics, and clinical data were meta-analyzed using random-effects pooling of AUC. • **Results:** Pooled discrimination was good (AUC 0.79, 95% CI 0.78–0.80) with no heterogeneity (I^2=0%). Proteomic and multimodal models performed robustly; SHAP and ensemble methods improved interpretability. • **Conclusions:** AI supports personalized HCM prognostication, but prospective validation remains essential.
28 March 2026	A MACHINE LEARNING MODEL TO ESTIMATE THE RISK OF REQUIRING A PERMANENT PACEMAKER IN PATIENTS WITH RIGHT BUNDLE BRANCH BLOCK	Jack Goodman	• **Introduction**: RBBB may reflect bilateral conduction disease rather than isolated right-sided pathology. This study translates prior evidence that a lead I S/QRS ratio <0.5 predicts pacemaker need into a clinician-facing risk tool. • **Methodology:** Investigators built an R Shiny dashboard using logistic regression/ML and Cox proportional hazards modeling. Inputs included QRS width, S-wave duration, age at RBBB recognition, left axis deviation, hypertension, and hyperlipidemia. • **Results:** The platform successfully generated individualized estimates of pacemaker risk and time-to-event using readily available ECG and clinical variables, improving bedside usability of the prior prognostic model. • **Conclusions:** This accessible calculator may support earlier counseling and risk stratification for progressive conduction disease in RBBB.

Notable Presentations At ACC 2026
AI / ML (3/20)

Date	Title	Author	Summary
28 March 2026	MACHINE LEARNING IMPROVES PREDICTION OF ALL-CAUSE MORTALITY AND CARDIOVASCULAR HOSPITALIZATION COMPARED TO THE CONVENTIONAL SYSTEM AMONG PATIENTS WITH TRANSTHYRETIN AMYLOID CARDIOMYOPATHY RECEIVING TAFAMIDIS	Midori Nagai	• **Introduction**: Existing ATTR-CM prognostic scores were developed before tafamidis and may not reflect outcomes in the treated era; this study evaluated whether ML could improve risk prediction. • **Methodology:** In 245 tafamidis-treated ATTR-CM patients, investigators split data into training (70%) and test (30%) cohorts. An ML model using 12 clinical variables was compared with the Columbia score for death and death/cardiovascular hospitalization; a simplified 5-variable model was also tested. • **Results:** Over 4.1 years, ML markedly outperformed Columbia for death (AUC 0.93 vs 0.75) and composite events (0.83 vs 0.67). High-risk groups had significantly worse survival; the 5-variable model remained superior (AUC 0.92). • **Conclusions:** ML provides substantially better tafamidis-era ATTR-CM prognostication than legacy scoring.
28 March 2026	SEX-BASED DIFFERENCES IN PREVENT RISK, CORONARY CALCIUM, AND NONCALCIFIED PLAQUE BY AI QUANTITATIVE CORONARY CT	Amr Idris	• **Introduction**: CCS, AI-derived noncalcified plaque burden, and PREVENT-ASCVD each estimate coronary risk, but their interplay, especially by sex, is insufficiently defined. • **Methodology:** This cross-sectional study evaluated 667 CTA patients without prior revascularization. Investigators categorized CCS, NCAP%, and PREVENT-ASCVD risk, then examined correlations and sex-specific discordance between calcified and noncalcified plaque measures. • **Results:** NCAP% correlated moderately with CCS (ρ=0.78). Among CCS=0 patients, women more often had no detectable NCAP than men (40.5% vs 23.6%). However, overall CCS-NCAP discordance was higher in women (54% vs 47%), particularly at intermediate PREVENT risk (49% vs 37%). • **Conclusions:** CCS alone may miss sex-specific plaque-risk patterns, especially in women; integrating PREVENT with AI plaque quantification may improve risk stratification.

Notable Presentations At ACC 2026
AI / ML (4/20)

Date	Title	Author	Summary
28 March 2026	ARTIFICIAL INTELLIGENCE FOR RHEUMATIC HEART DISEASE DETECTION IN LOW- AND MIDDLE-INCOME COUNTRIES: BRIDGING GAPS IN GLOBAL HEALTH - A SYSTEMATIC REVIEW	Gina Singh	• **Introduction**: RHD remains highly prevalent in LMICs, where shortages of expert echocardiography delay diagnosis; this review examined whether AI can close this screening gap. • **Methodology:** Using PRISMA, authors searched PubMed, Scopus, and Embase through April 2025 for studies applying AI to RHD detection, extracting design, population, model type, and diagnostic performance metrics. • **Results:** Five studies (1,122 participants), mainly pediatric, were included. Methods spanned ML, DL, and CNNs. Performance was strong: one ML model combining clinical and echo variables achieved AUC 90.1%, a CNN view-classification model reached 99.8% accuracy, and AI guidance enabled novices to obtain diagnostic-quality echocardiograms with 89% accuracy. • **Conclusions:** AI shows strong translational promise for scalable, cost-saving RHD screening in resource-limited settings.
28 March 2026	MACHINE LEARNING PREDICTION OF 24-HOUR HYPERTENSION USING 30-MINUTE AMBULATORY BLOOD PRESSURE MONITORING	Chau Thi Minh Dang	• **Introduction**: Although 24-hour ambulatory blood pressure monitoring is the diagnostic standard for hypertension, it is burdensome; this study tested whether ML applied to 30-minute monitoring can improve triage for definitive testing. • **Methodology:** In 99 adults with paired 30-minute and 24-hour recordings, investigators evaluated 12 ML algorithms using blood pressure means, individual readings, variability, and demographics, with nested cross-validation against clinical threshold rules. • **Results:** Hypertension prevalence was 60.6%. Dual-marker logistic regression performed best (AUROC 0.852, sensitivity 82.1%, specificity 77.8%, balanced accuracy 0.798), outperforming random forest and standard or bias-corrected thresholds, with strong calibration (Brier 0.186). • **Conclusions:** ML-enabled 30-minute monitoring can efficiently triage patients for 24-hour confirmation while preserving diagnostic performance.

Notable Presentations At ACC 2026
AI / ML (5/20)

Date	Title	Author	Summary
28 March 2026	SIMULATION- AND ARTIFICIAL INTELLIGENCE-ASSISTED TRAINING FOR CORONARY ANGIOGRAPHY AND PCI: A SYSTEMATIC REVIEW AND META-ANALYSIS	nimra shafi	• **Introduction**: PCI training is increasingly challenged by procedural complexity, limited case exposure, and patient safety constraints; this study evaluated whether simulation and AI-assisted training improve operator competence versus conventional apprenticeship. • **Methodology:** A systematic review/meta-analysis searched studies through September 2025. Twenty-two trials (n=1,534) comparing VR, benchtop, hybrid, and AI-assisted PCI training were analyzed using random-effects, subgroup, and network meta-analysis. • **Results:** Training interventions reduced procedure duration, fluoroscopy time, contrast use, and error scores, while improving global performance ratings. Network analysis ranked AI-assisted VR highest, followed by hybrid simulators, then VR and benchtop platforms; heterogeneity was moderate and publication bias was not evident. • **Conclusions:** AI-augmented simulation appears most effective for accelerating PCI competency and improving procedural safety.
28 March 2026	AUTOMATED INTERPRETATION OF PEDIATRIC ECG PRINTOUTS USING ARTIFICIAL INTELLIGENCE	Jacob Weiser	• **Introduction**: Most AI-ECG tools require digital waveform files, limiting deployment where only paper ECGs are available. This study evaluated whether AI can accurately interpret smartphone photos of pediatric ECG printouts. • **Methodology:** An EfficientNet-B4 CNN was trained on synthetic ECG images from 201,620 patients (90/10 split), with extensive augmentation for layout and photo-quality variation. Validation also included 100 real smartphone photographs of ECG printouts for WPW and prolonged QTc. • **Results:** Performance was consistently high on both synthetic and photographed printouts: AUROC 0.92/0.95 for WPW and 0.93/0.94 for prolonged QTc, respectively. • **Conclusions:** Photo-based AI-ECG is highly translatable and could broaden global access to automated pediatric ECG interpretation.

Notable Presentations At ACC 2026
AI / ML (6/20)

Date	Title	Author	Summary
28 March 2026	DEEP LEARNING-BASED ANALYSIS OF MEAL PHOTOGRAPHS FOR ASSESSMENT OF DIETARY INTAKE AND THEIR ASSOCIATION WITH CARDIOVASCULAR HEALTH USING THE AHA'S LIFE'S ESSENTIAL 8 FRAMEWORK	Irving Yu Le Shua	• **Introduction**: Diet is a core Life's Essential 8 component, but objective dietary assessment is difficult in routine cardiovascular care. This study tested whether meal-photo deep learning can approximate dietary quality and relate meaningfully to cardiovascular health. • **Methodology:** Participants completed LE8 scoring and submitted 7 days of meal photos. Investigators derived manual DIET Photo Scores and vision transformer-based DIET Machine Scores from pre-meal images, then assessed associations with LE8 adjusting for age and sex. • **Results:** Among 114 participants and 1,248 analyzable pre-meal photos, model performance was good (74.5% accuracy; 75% F1). Higher meat-versus-vegetable scores independently correlated with lower LE8 scores. • **Conclusions:** Deep learning meal-photo analysis is feasible and may provide a scalable objective marker of dietary quality and cardiovascular health.
28 March 2026	VALIDATION OF A DEEP LEARNING ALGORITHM THAT DETECTS A COMPOSITE OF STRUCTURAL HEART DISEASES ON ECG IMAGES IN A LARGE OPEN-SOURCE PLATFORM	Lovedeep Dhingra	• **Introduction**: AI-ECG could enable scalable SHD screening, but external-style validation on large, diverse image-based ECG datasets is critical before broad implementation. • **Methodology:** Investigators evaluated PRESENT-SHD, an ensemble of six CNNs for dilated, hypertrophic, and valvular disease, on ECG images from EchoNext (100,000 ECGs; 36,286 patients). Models were tested out-of-box without fine-tuning and compared with internally developed EchoNext models. • **Results:** SHD prevalence was 43%. PRESENT-SHD achieved AUROC 0.81, sensitivity 83%, and specificity 58%, with performance comparable to Columbia Mini and EchoNext models. Component models were strongest for LVSD (0.88), with solid valvular discrimination. • **Conclusions:** Image-based ensemble AI showed robust, deployment-ready SHD screening performance from ECG scans/photos.

Notable Presentations At ACC 2026
AI / ML (7/20)

Date	Title	Author	Summary
28 March 2026	ARTIFICIAL INTELLIGENCE BASED PREDICTION OF HEART FAILURE HOSPITALIZATION USING MULTI-DOMAIN ECHOCARDIOGRAPHIC AND ELECTRONIC HEALTH INFORMATION	Dina Labib	• **Introduction**: Predicting HF hospitalization remains difficult with conventional risk tools. This study evaluated whether integrating echocardiographic and EHR data could improve prognostic precision. • **Methodology:** A random survival forest model was developed in 135,372 adults referred for TTE, using an 80/20 train-test split. The composite endpoint was HF hospitalization, heart transplantation, or ventricular assist device implantation. • **Results:** Over median 6.5 years, 17% reached the primary outcome. Model performance was strong (c-index 0.86, mean time-dependent AUC 0.90, Integrated Brier Score 0.09). Key predictors included prior HF hospitalization, loop diuretic use, age, and major echo variables. Risk tertiles separated markedly. • **Conclusions:** Multi-domain ML enabled accurate, clinically interpretable HF risk stratification.
29 March 2026	MACHINE LEARNING MODELS FOR PREDICTING MAJOR ADVERSE CARDIOVASCULAR EVENTS AFTER LIVER TRANSPLANT	William D. Park	• **Introduction**: Cardiovascular risk prediction after liver transplantation remains inadequate, limiting targeted prevention and follow-up. This study evaluated ML approaches for post-transplant MACE risk stratification. • **Methodology:** Adults undergoing LT at a Midwest academic center (2014–2024) were split 70/30 into training/testing sets. From 115 candidate variables, five were selected by LASSO, and Cox, random survival forest, and XGBoost models were trained for MACE prediction. • **Results:** Among 268 patients, random survival forest performed best (AUROC/C-index 0.75), outperforming Cox and XGBoost. Key predictors were LV end-diastolic index, age, MASLD, diabetes, and employment status. • **Conclusions:** ML, particularly random survival forest, showed moderate utility for post-LT cardiovascular risk stratification.

Notable Presentations At ACC 2026
AI / ML (8/20)

Date	Title	Author	Summary
29 March 2026	ARTIFICIAL INTELLIGENCE: A BAYESIAN PROBABILITY/CALCULUS-BASED ALGORITHM FOR GNE MYOPATHY AND PHARMACOLOGICAL OPTIONS	Vasu Gupta	• **Introduction**: GNE myopathy is a rare autosomal recessive distal myopathy caused by impaired sialic acid biosynthesis. This abstract explores whether a Bayesian AI framework can improve diagnostic certainty and support precision therapy selection. • **Methodology:** The authors outline a Bayes' theorem-based sequential model integrating prior probability with clinical, biochemical, and genetic evidence, updating posterior diagnostic confidence as new data emerge. • **Results:** Diagnostic probability rose from extremely low pretest likelihood to near certainty after genetic confirmation. ManNAc appears the leading investigational therapy; gene therapy remains promising but early. • **Conclusions:** Bayesian AI may strengthen rare-disease diagnosis and therapeutic decision-making.
29 March 2026	DEEP LEARNING ENABLES GENETIC ANALYSIS OF CARDIOVASCULAR AGING	Ryan Choi	• **Introduction**: AI-ECG can estimate biological versus chronological cardiovascular age, enabling identification of accelerated versus resilient cardiac aging phenotypes. This study investigated the genomic and cellular basis of accelerated cardiovascular aging. • **Methodology:** In 58,034 UK Biobank participants with ECG and genomic data, AI-ECG-derived age gap classified accelerated and resilient agers. GWAS compared these groups, and significant loci were interrogated in single-cell transcriptomic datasets of young versus aged myocardium. • **Results:** Accelerated aging was identified in 12,382 individuals. GWAS found 140 significant variants mapping to 9 genes. Enrichment localized to cardiomyocytes, fibroblasts, and pericytes, with aging cardiomyocytes showing increased TTN, CAMK2D, and PTN signaling. • **Conclusions:** Integrated AI-ECG and multi-omics analyses reveal plausible genetic and cellular drivers of accelerated cardiac aging.

Notable Presentations At ACC 2026
AI / ML (9/20)

Date	Title	Author	Summary
29 March 2026	A MULTIDIMENSIONAL MACHINE LEARNING MODEL INTEGRATING PCAT RADIOMICS AND CLINICAL RISK FOR PREDICTING INCIDENT CORONARY PLAQUE FORMATION: A LARGE CHINESE, MULTICENTER, COHORT STUDY	Li Suyu	• **Introduction**: CAD prevention usually starts after plaque is already present. This study addressed the unmet need to identify asymptomatic individuals prone to new plaque formation before overt disease develops. • **Methodology:** In 4,761 plaque-free asymptomatic patients undergoing serial CCTA across 13 Chinese centers, investigators derived a peri-coronary adipose tissue radiomic signature from 1,688 features and integrated it with clinical and longitudinal data using XGBoost; external validation and robustness analyses were performed. • **Results:** Clin-FRS outperformed QRISK3 and clinical-only models (AUC 0.806 vs 0.625/0.646), validated externally (AUC 0.755–0.773), improved reclassification, and identified patients with nearly 3-fold higher 5-year plaque risk. • **Conclusions:** This model meaningfully advances precision primary prevention by repurposing routine CCTA for pre-plaque risk detection.
29 March 2026	ARTIFICIAL INTELLIGENCE-ENABLED ELECTROCARDIOGRAM FOR PREDICTING ATRIAL FIBRILLATION AND MORTALITY IN PULMONARY ARTERIAL HYPERTENSION	Thanaboon Yinadsawaphan	• **Introduction**: AF is common in PAH and doubles mortality risk, yet tools to predict incident AF at diagnosis are limited. This study evaluated AI-ECG for early AF risk stratification in PAH. • **Methodology:** In a retrospective cohort of 327 PAH patients in sinus rhythm at diagnosis, baseline ECGs were analyzed with an established AI-ECG model. ROC/Youden analysis defined a 10% risk cutoff; 5-year AF incidence and mortality were assessed with Cox models. • **Results:** AI-ECG showed good discrimination (AUC 0.77; sensitivity 80.0%; specificity 70.2%). High-risk patients had markedly higher 5-year AF incidence (19.0% vs 2.3%; HR 8.2) and mortality (19.4% vs 7.6%; HR 2.6). • **Conclusions:** AI-ECG may enable practical early AF surveillance in PAH.

Notable Presentations At ACC 2026
AI / ML (10/20)

Date	Title	Author	Summary
29 March 2026	CLINICAL COMPARISON OF AI TOOLS TO GUIDE 99MTC-PYP REFERRAL FOR CARDIAC AMYLOIDOSIS	Jose James	• **Introduction**: Cardiac amyloidosis is frequently underdiagnosed in heart failure, creating need for better triage tools before confirmatory imaging. This study compared AI-Echo, AI-ECG, and the Mayo ATTR score for prioritizing PYP imaging. • **Methodology:** In 716 referred patients, diagnostic performance was assessed using AUROC, PPV, NPV, and decision-curve analysis. Subanalyses compared AI-Echo with AI-ECG and, in patients without light-chain disease, with Mayo ATTR. • **Results:** Among 222 CA cases, AI-Echo outperformed AI-ECG and Mayo ATTR, with higher AUROC, markedly better PPV (79% vs 49%; 78% vs 53%), similar/high NPV, and greater avoidance of unnecessary PYP scans. • **Conclusions:** AI-Echo showed the strongest clinical utility for CA imaging triage.
29 March 2026	PET-BASED AI MODEL FOR CORONARY ARTERY DISEASE DIAGNOSIS WITH CROSS-SITE VALIDATION	Shiva Mostafavi	• **Introduction**: PET MPI yields multiple quantitative biomarkers, but isolated interpretation may underuse their combined diagnostic value. This study evaluated an AI model integrating PET and clinical data for obstructive CAD detection. • **Methodology:** In 2,575 patients from 11 sites undergoing PET MPI and invasive angiography, a gradient boosting model integrated quantitative PET biomarkers with clinical variables. Generalizability was tested using repeated leave-one-site-out validation against standard PET-derived comparators. • **Results:** AI achieved the highest diagnostic performance (AUC 0.82), exceeding clinical score, ischemic TPD, MFR, and CAC. It also improved classification over clinical scoring alone (NRI 8.3%). • **Conclusions:** Multimodal AI meaningfully enhances multicenter PET-based CAD diagnosis beyond conventional single-marker assessment.

Notable Presentations At ACC 2026
AI / ML (11/20)

Date	Title	Author	Summary
29 March 2026	DEEP LEARNING-DERIVED ELECTROCARDIOGRAPHIC AGE IS ASSOCIATED WITH CARDIOVASCULAR RISK FACTORS IN CHILDREN	Dua Hassan	• **Introduction**: Cardiovascular risk originates in childhood, but scalable biomarkers remain limited. This study assessed whether AI-ECG delta-age, a marker of biological versus chronological aging, identifies pediatric cardiometabolic risk. • **Methodology:** In a single-center dataset (2000–2022), a CNN was trained/tested (75/25) to predict age from ECGs. Absolute delta-age z-scores ≥1 and ≥2 were evaluated against a composite risk endpoint and individual outcomes using logistic regression. • **Results:** Among 46,456 ECGs from 14,928 children, AI-predicted age correlated well with chronological age. Elevated delta-age was independently associated with higher odds of composite cardiovascular risk and each component outcome, even after adjustment for age and obesity. • **Conclusions:** AI-ECG delta-age may serve as an early, scalable pediatric cardiovascular risk signal.
29 March 2026	ARTIFICIAL INTELLIGENCE-ENABLED ELECTROCARDIOGRAMS PREDICT MORTALITY AND SUDDEN CARDIAC EVENTS IN FONTAN PATIENTS: A MULTI-CENTER STUDY	Joshua Mayourian	• **Introduction**: Fontan survivors remain vulnerable to mortality and sudden cardiac events, but practical, scalable risk tools are limited. This study tested whether AI-ECG can provide accessible prognostic stratification across external Fontan cohorts. • **Methodology:** An established AI-ECG 5-year mortality model was applied to ECGs from five FORCE sites. Outcomes were 5-year mortality/transplant and sudden cardiac events, with benchmarking against MRI-derived single-ventricle end-diastolic volume and Cox survival analysis. • **Results:** In 683 patients (11,759 ECGs), AI-ECG matched MRI for mortality/transplant prediction (AUROC 0.71 vs 0.70) and showed similar performance for sudden events. Added to MRI, it independently improved prognostic discrimination (c-index 0.74). • **Conclusions:** AI-ECG offers scalable, complementary Fontan risk stratification.

Notable Presentations At ACC 2026
AI / ML (12/20)

Date	Title	Author	Summary
29 March 2026	ARTIFICIAL INTELLIGENCE-ESTIMATED RIGHT VENTRICULAR FUNCTION ADDS SIGNIFICANT PROGNOSTIC VALUE IN TRICUSPID REGURGITATION	Ellen Kronzer	• **Introduction**: RV dysfunction is a key prognostic determinant in significant TR, but routine RV assessment remains challenging; this study tested whether AI-estimated RV function improves risk prediction beyond the TRIO score. • **Methodology:** In 630 patients with >moderate TR, a deep-learning model applied to apical 4-chamber echo views classified RV function from normal to severe dysfunction. Cox regression evaluated mortality associations after adjustment for TRIO score. • **Results:** Over 2.7 years, 33% died. TRIO predicted mortality, but AI-RVF remained independently prognostic, with risk rising stepwise from mild to severe dysfunction. Adding AI-RVF significantly improved model discrimination. • **Conclusions:** Automated AI-RVF provides meaningful incremental prognostic value beyond TRIO in clinically significant TR.
29 March 2026	BEYOND THE PHYSICIAN'S EYE: COMPARING MACHINE LEARNING MODELS APPLIED TO TIME-SERIES ANALYSIS FOR MYOCARDIAL INFARCTION RECOGNITION ON ELECTROCARDIOGRAM	Jose Jonathan Loayza Pintado	• **Introduction**: Physician ECG interpretation remains imperfect, with prior meta-analytic accuracy only moderate; this study evaluates whether modern deep learning can improve myocardial infarction detection from ECG time-series data. • **Methodology:** Using the cardiologist-annotated PTB-XL dataset, investigators compared ROCKET, MiniROCKET, ResNet, and Transformer models on preprocessed ECG time-series inputs, assessing classification performance and computational efficiency on CPU/GPU. • **Results:** All models classified myocardial infarction versus normal ECGs well. ResNet achieved the best overall discrimination (accuracy 93.65%, macro F1 89.73%), while ROCKET and MiniROCKET delivered the highest precision (92%). MiniROCKET was the fastest on CPU. • **Conclusions:** ResNet offered the strongest accuracy, while MiniROCKET balanced precision and speed, supporting AI as a reproducible ECG triage tool pending prospective validation.

Notable Presentations At ACC 2026
AI / ML (13/20)

Date	Title	Author	Summary
29 March 2026	ECHOFOCUS-MEASURE: A VIEW-AGNOSTIC, MULTI-TASK DEEP LEARNING MODEL FOR AUTOMATED ECHOCARDIOGRAPHIC MEASUREMENTS IN PEDIATRIC AND CONGENITAL HEART DISEASE	Platon Lukyanenko	• **Introduction**: Pediatric echocardiography is central to diagnosis, but unequal access to expert acquisition and interpretation delays care. This study evaluates whether AI can deliver scalable, accurate pediatric echo assessment. • **Methodology:** Investigators adapted the adult PanEcho multi-task, view-agnostic model by adding a transformer layer (EchoFocus-Measure) to predict 18 quantitative and 10 qualitative parameters. Performance was assessed in internal 80/20 training/testing and external validation cohorts, with comparison against PanEcho. • **Results:** Across 103,389 internal and 5,342 external echos, EchoFocus-Measure showed strong accuracy, including LVEF MAE 3.5% internally and 5.3% externally, and strong valvular disease discrimination. It outperformed PanEcho, including in CHD subgroups. • **Conclusions:** EchoFocus-Measure demonstrates robust, externally validated pediatric echo performance with strong translational potential.
29 March 2026	PROGNOSTICATION OF CHRONIC AORTIC REGURGITATION WITH ARTIFICIAL INTELLIGENCE-ENHANCED ELECTROCARDIOGRAM ASSESSMENT OF LEFT VENTRICULAR DIASTOLIC FUNCTION	Gal Tsaban	• **Introduction**: In significant aortic regurgitation, early myocardial damage may be missed when relying on conventional markers such as LVEF alone. This study assessed whether AI-ECG-derived LV diastolic dysfunction can identify higher-risk patients. • **Methodology:** Investigators analyzed 1,148 patients with echo-confirmed significant AR who had ECG and echocardiography within 7 days. AI-ECG classified myocardial damage as absent (MD-) or present (MD+); mortality during medical management was the primary endpoint. • **Results:** MD+ was common (59.2%) and independently associated with higher mortality during medical therapy and long-term follow-up, even after adjustment for comorbidities, symptoms, and LVEF. The signal appeared stronger in preserved LVEF. • **Conclusions:** AI-ECG may unmask prognostically important occult myocardial dysfunction in significant AR.

Notable Presentations At ACC 2026
AI / ML (14/20)

Date	Title	Author	Summary
29 March 2026	ARTIFICIAL INTELLIGENCE FOR AUTOMATED DETECTION OF MODERATE-TO-SEVERE AORTIC STENOSIS USING STANDARD AND HANDHELD ECHOCARDIOGRAPHY	Eunjung Lee	• **Introduction**: AS is the leading indication for valve intervention yet remains underdiagnosed because screening depends on expert image acquisition and interpretation. • **Methodology:** A deep learning model was trained on 6,753 echocardiograms using only 2D parasternal long-axis, aortic valve short-axis, and apical 3-chamber views. Validation included 4,197 external patients plus prospective handheld ultrasound cohorts scanned by experts and AI-guided novices. • **Results:** Diagnostic performance was outstanding: AUROC 0.99 internally and 0.98 in handheld cohorts. Accuracy remained robust across geographically distinct cohorts, and sensitivity exceeded 90% even in novice-acquired scans. • **Conclusions:** AI-enabled 2D echocardiography could materially expand scalable AS screening and enable earlier population-level detection.
29 March 2026	REAL-WORLD EXTERNAL VALIDATION OF ARTIFICIAL INTELLIGENCE-BASED FULL-VESSEL SEGMENTATION FOR INTRACORONARY OPTICAL COHERENCE TOMOGRAPHY	Ruben van der Waerden	• **Introduction**: AI-based OCT analysis has shown promise, but most models are trained on curated datasets and may not generalize to routine practice. This study tested real-world external validity of automated full-vessel OCT segmentation. • **Methodology:** In a retrospective external validation study, 100 consecutive patients undergoing clinically indicated OCT were analyzed. OCT-AID automated pixelwise frame-level labeling was compared against expert manual OCT interpretation. • **Results:** Across 2,560 analyzable frames, agreement was excellent for calcified plaque detection and quantification, approximating interobserver variability. Lipid plaque performance exceeded interobserver variability, while rarer features remained less robust. Mean processing time was 0.33 seconds/frame. • **Conclusions:** OCT-AID demonstrated strong real-world generalizability and rapid performance for routine OCT interpretation.

Notable Presentations At ACC 2026
AI / ML (15/20)

Date	Title	Author	Summary
29 March 2026	REAL-WORLD PILOT OF A GENERATIVE AI AGENT FOR HEART HEALTH AND MEDICATION ADHERENCE IN HYPERTENSIVE ADULTS	Quynh Pham	• **Introduction**: Poor antihypertensive adherence remains common, driven by concerns about side effects and benefit; this pilot assessed whether a clinically guided generative AI agent could support trust, engagement, and perceived value in self-management. • **Methodology:** Within Hello Heart, adults used the AI agent over 7 days; only participants active on ≥4 days were analyzed. Conversation content and depth were coded, and surveys measured satisfaction, trust, and usefulness. • **Results:** Thirty-two users generated 189 conversations, mainly on medication education and side effects. Engagement was substantial, satisfaction was high (mean 4.3/5), and many participants reported improved perceptions of AI, immediate routine changes, or planned health actions. • **Conclusions:** Clinically aligned generative AI showed strong feasibility and user acceptance for hypertension adherence support.
29 March 2026	IMPACT OF MAXIMAL LIPID LOWERING THERAPY ON THE PHYSIOLOGICAL DISEASE PATTERN USING AI BASED VIRTUAL μFR PULLBACK CURVE: INSIGHTS FROM THE YELLOW III STUDY	Pruthvi Chenniganahosahalli	• **Introduction**: Virtual FFR pullback-derived PPG objectively distinguishes focal from diffuse CAD. This study examined whether adding evolocumab to high-intensity statins alters physiological disease pattern in stable CAD with lipid-rich, non-obstructive plaques. • **Methodology:** In 110 patients, angiography, NIRS-IVUS, OCT, and μFR/PPG analyses were performed at baseline and 26 weeks. PPG was analyzed in vessels with μFR <0.95; lesions were classified as focal or diffuse using mean baseline PPG. • **Results:** Among 90 eligible vessels, both μFR and PPG improved significantly at 26 weeks. Disease-pattern conversion favored diffuse-to-focal over focal-to-diffuse, but not significantly. LCBI4mm reduction was similar by pattern, though responders were more often diffuse. • **Conclusions:** Evolocumab plus statins modestly improved coronary physiology, with stronger lipid-response signals in diffuse disease.

Notable Presentations At ACC 2026
AI / ML (16/20)

Date	Title	Author	Summary
30 March 2026	WEARABLE PHOTOPLETHYSMOGRAPHY AND AI FOR ATRIAL FIBRILLATION SCREENING: PROSPECTIVE AND RANDOMIZED EVIDENCE	Yves Najm Mrad	• **Introduction**: Wearable PPG plus AI may enable scalable AF screening, but real-world value depends on diagnostic precision, user follow-through, and impact on actionable detection. • **Methodology:** PRISMA-guided synthesis included large prospective cohorts (Apple, Fitbit, Huawei) and the randomized eBRAVE-AF trial. Outcomes included PPV of alerts, screening yield, engagement, patch-confirmed AF, and treatment-relevant AF detection. • **Results:** Across >1.06 million participants, pooled PPV was 0.92, indicating highly reliable irregular-rhythm alerts. Screening yield was low (~0.5%) and patch return modest (22%). Among notified returners, one-third had AF confirmed. In eBRAVE-AF, smartphone PPG screening more than doubled treatment-relevant AF detection. • **Conclusions:** Wearable AI screening is accurate and clinically meaningful, but pathway optimization is needed.
30 March 2026	EVALUATING THE PERFORMANCE OF A MACHINE LEARNING-BASED MODEL DEVELOPED USING CHATGPT VERSUS THE CHADS-VASC SCORE IN STROKE RISK PREDICTION	Mohammed Tiseer Abbas	• **Introduction**: Stroke prediction in AF remains imperfect with CHA_2DS_2-VASc alone. This study examined whether a ChatGPT-assisted gradient boosting machine could improve stroke/TIA risk prediction. • **Methodology:** In 7,994 AF patients from three U.S. tertiary centers, 20 clinical, laboratory, echo, and comorbidity variables were used to train, validate, and test a GBM model on 60/20/20 splits, with ROC comparison against CHA_2DS_2-VASc. • **Results:** GBM consistently outperformed CHA_2DS_2-VASc across training (AUC 0.83 vs 0.64), testing (0.72 vs 0.67), and validation (0.73 vs 0.65). Top predictors were prior stroke, LDL, and eGFR. • **Conclusions:** ML materially improved AF stroke/TIA discrimination, though retrospective design warrants external prospective validation.

Notable Presentations At ACC 2026
AI / ML (17/20)

Date	Title	Author	Summary
30 March 2026	AUTOMATED ASSESSMENT OF CORONARY ARTERY CALCIUM SCORE AND EPICARDIAL FAT VOLUME USING DEEP LEARNING FOR CARDIOVASCULAR RISK STRATIFICATION	Zainab Magomedova	• **Introduction**: Standard cardiovascular risk scores underperform in intermediate-risk patients. This study assessed whether automated deep-learning quantification of coronary calcium (Agatston score) and epicardial adipose tissue from routine non-contrast chest CT could improve risk stratification. • **Methodology:** In 1,561 patients followed for 5 years, U-Net, TransUNet, and RDU-Net were trained for calcium and EAT segmentation; prognostic value was tested using logistic regression and AUC analysis. • **Results:** RDU-Net performed best (Dice 0.80). Agatston score predicted MI, PCI, and mortality, while EAT predicted stroke, recurrent stroke, and AF. Combining both modestly improved outcome prediction. • **Conclusions:** AI-derived calcium and EAT quantify complementary vascular and arrhythmic risk, supporting scalable personalized prevention.
30 March 2026	ARTIFICIAL INTELLIGENCE-ENABLED ELECTROCARDIOGRAM FOR ELEVATED LEFT VENTRICULAR FILLING PRESSURE	Hak Seung Lee	• **Introduction**: Elevated LV filling pressure is a key marker of HF symptoms and prognosis, but noninvasive assessment remains difficult; this study evaluated whether AI-ECG can detect elevated LVFP and provide prognostic stratification. • **Methodology:** A deep learning model built on a >1 million ECG foundation model was fine-tuned using 225,737 ECGs linked to 115,982 echocardiograms; septal E/e' >15 defined elevated LVFP. Performance was tested internally, externally, and prognostically across three cohorts. • **Results:** AI-ECG showed strong diagnostic accuracy (AUC 0.868 internal; 0.850 external). Higher model output independently predicted mortality in all cohorts and was comparable or superior to conventional echo parameters. • **Conclusions:** AI-ECG is a scalable marker of elevated LVFP and meaningful cardiovascular risk.

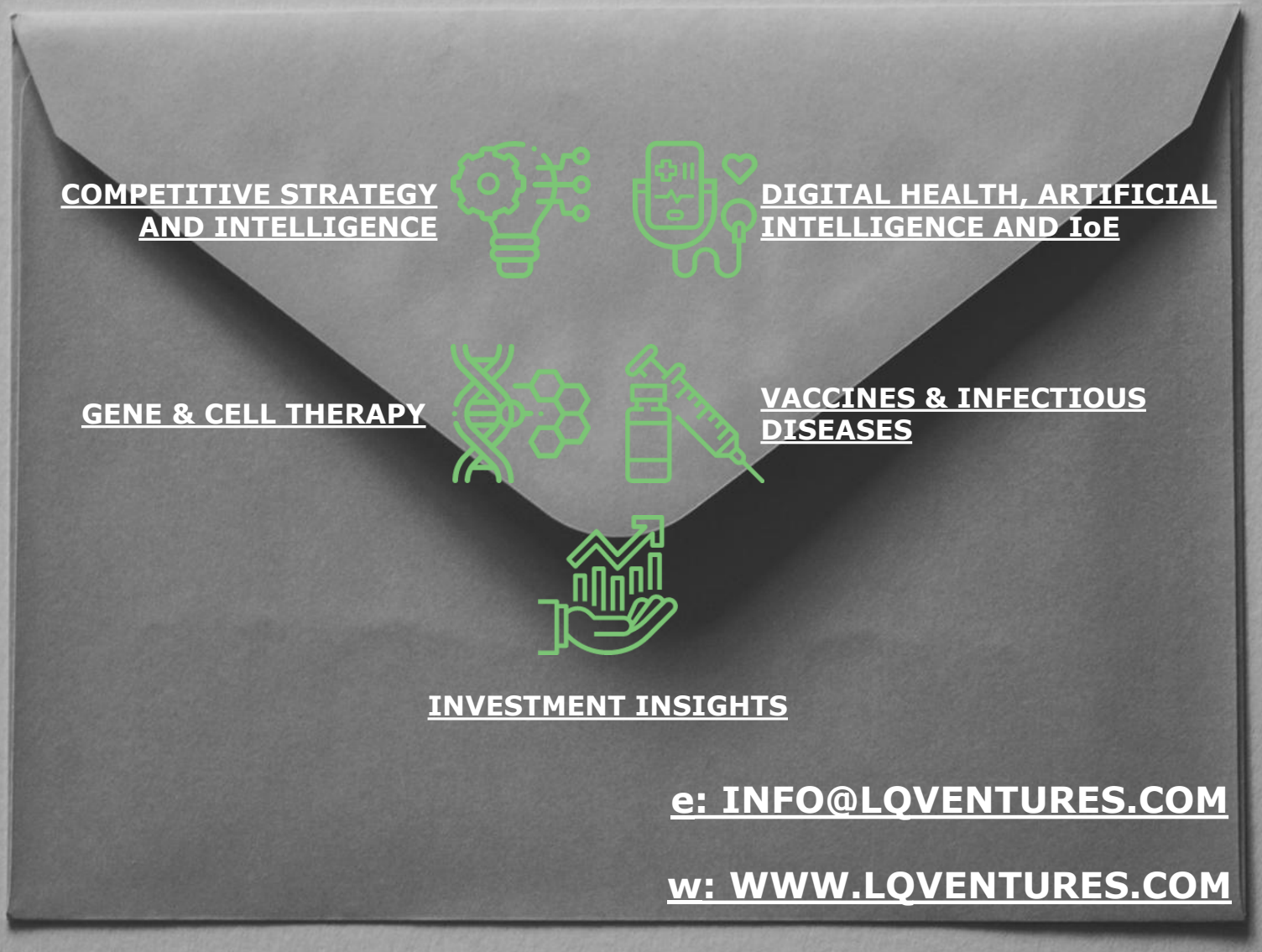
Notable Presentations At ACC 2026
AI / ML (18/20)

Date	Title	Author	Summary
30 March 2026	ARTIFICIAL INTELLIGENCE FOR INTRACORONARY OPTICAL COHERENCE TOMOGRAPHY: ENABLING REAL-TIME PLAQUE SEGMENTATION	Ruben van der Waerden	• **Introduction**: Real-time OCT plaque characterization is limited by the computational burden of current AI models, restricting intraprocedural utility in the cath lab. • **Methodology:** Using PECTUS-obs data, investigators trained a lightweight small U-net on 3,466 manually labeled and 137,961 OCT-AID-labeled frames, then compared speed and segmentation accuracy against OCT-AID in a held-out 389-frame test set from 25 patients. • **Results:** The lightweight model was dramatically faster (0.002 vs 0.22 s/frame; 0.6 vs 83 s/pullback) while preserving lipid and calcium segmentation performance, with no significant Dice score differences versus OCT-AID. • **Conclusions:** This lightweight AI model overcomes a major translational barrier, supporting feasible real-time OCT-guided plaque assessment during coronary intervention.
30 March 2026	AGENTATTR: A GPT-POWERED MULTI-AGENT AI FRAMEWORK FOR EARLY SCREENING OF TRANSTHYRETIN AMYLOID CARDIOMYOPATHY (ATTR-CM)	Akshay Arora	• **Introduction**: ATTR-CM is often diagnosed late in heart failure populations. This study evaluated whether a GPT-4-based multi-agent reasoning framework could improve prescreening for ATTR-CM from routine EHR data. • **Methodology:** In a retrospective matched HF cohort (2020–2025), AgentAttr integrated symptoms, echo findings, and clinical narratives through three specialized agents focused on triage, wild-type ATTR, and hereditary ATTR. Outputs were evidence-restricted and aggregated against chart-reviewed ATTR-CM diagnoses. • **Results:** Among 1,828 HF patients, 914 had ATTR-CM. AgentAttr achieved sensitivity 80.9%, specificity 78.2%, and PPV 62.8%, indicating solid screening performance in a high-risk cohort. • **Conclusions:** Multi-agent AI shows meaningful potential for early ATTR-CM prescreening and diagnostic prioritization.

Notable Presentations At ACC 2026
AI / ML (19/20)

Date	Title	Author	Summary
30 March 2026	ESTIMATES OF JAMAICAN TRANSTHYRETIN AMYLOID CARDIOMYOPATHY (ATTR-CM) PREVALENCE USING DUAL ARTIFICIAL INTELLIGENCE (AI) ELECTROCARDIOGRAM (ECG) AND ECHOCARDIOGRAM (ECHO) MODELS	Robert Hibbert	• **Introduction**: ATTR-CM is likely underrecognized in the Caribbean because diagnostic infrastructure is limited; this study used dual AI-echo and AI-ECG screening to estimate ATTR-CM prevalence in Jamaican patients with heart failure. • **Methodology:** Investigators analyzed 285 anonymized ECGs and echocardiograms from a tertiary Jamaican cardiology center using validated Yale ECG Vision ATTR and AI Echo ATTR models. Dual probability ≥0.15 defined screen-positive cases, and prevalence was inferred using published PPV estimates. • **Results:** Forty-three patients (15%) screened positive. Applying dual-model PPV (35%–51%) yielded an estimated ATTR-CM prevalence of 5.3%–7.7% in this HF cohort. • **Conclusions:** Dual AI screening appears feasible and offers the first pragmatic ATTR-CM prevalence estimate for Jamaica.
30 March 2026	AUTOMATED HYPERTENSIVE RETINOPATHY AND COMORBIDITY CLASSIFICATION USING RESNET101, A RESIDUAL NETWORK ARTIFICIAL INTELLIGENCE MODEL.	Sri Lakshmi Sai Meghana Adusumilli	• **Introduction**: Hypertensive retinopathy often coexists with other retinal disorders, complicating diagnosis and downstream cardiovascular risk assessment, particularly where specialist access is limited. • **Methodology:** A ResNet101-based multiclass AI model was trained on 50,000 fundus images split 60/20/20, with preprocessing, augmentation, transfer learning, and fine-tuning. Performance was evaluated using accuracy, AUROC, confusion matrices, precision-recall, and training-validation curves. • **Results:** Overall test accuracy exceeded 98%. Class performance was strongest for DR, normal, AMD, and cataract (100%), with lower but still strong accuracy for glaucoma (94.9%), pathological myopia (93.1%), and hypertensive retinopathy (88.3%). AUROC approached 1.0 with minimal overfitting. • **Conclusions:** The model shows strong potential for scalable retinal-cardiovascular screening support.

Notable Presentations At ACC 2026
AI / ML (20/20)

Date	Title	Author	Summary
30 March 2026	ELECTROCARDIOGRAM-BASED ARTIFICIAL INTELLIGENCE FOR EARLY DETECTION OF PULMONARY HYPERTENSION: A SYSTEMATIC REVIEW AND META-ANALYSIS	Johann Alexandre Chafa Edjimbi	• **Introduction**: PH is progressive and often diagnosed late because definitive right heart catheterization is invasive, while echocardiography is unsuitable for broad screening. This meta-analysis evaluated whether AI-enhanced 12-lead ECG can provide scalable PH detection. • **Methodology:** A systematic search through September 2025 identified studies assessing AI-ECG for PH using echocardiography as reference. Five studies (97,561 participants) were pooled with a bivariate random-effects model. • **Results:** AI-ECG showed strong pooled diagnostic performance: sensitivity 0.83, specificity 0.80, and summary AUC 0.88. Leave-one-out analyses confirmed stability, supporting robustness despite the small study count. • **Conclusions:** AI-ECG appears to be a promising noninvasive PH screening tool with meaningful translational potential.
30 March 2026	TRANSFORMING THE UNPREDICTABLE: ADVANCED MACHINE LEARNING FOR RISK PREDICTION IN COMBINED CARDIAC SURGERY AND LIVER TRANSPLANT	Laura Batista de Oliveira	• **Introduction**: Combined liver transplantation plus cardiac surgery is a rare option for ESLD with major cardiac disease, but long-term prognostic data are limited; this study evaluated outcomes and refined LT-CS risk scores. • **Methodology:** Forty-six single-stage LT+CS patients (2005–2023) with ≥1-year follow-up were analyzed using Cox regression, LOOCV, and XGBoost to validate/refine LT-CS-2.0. • **Results:** One- and five-year survival were 74.2% and 50.0%. Worse 5-year survival was linked to renal dysfunction/CKD, lower GFR, and valve surgery; CKD had the strongest multivariable effect. LT-CS-2.0 predicted 5-year survival and separated low- versus high-risk groups. High-risk patients also had more complications. • **Conclusions:** LT-CS-2.0 improves long-term risk stratification after combined LT+CS.

Strategic Insights and Strategy Development is our focus