

# CARDIOLOGY

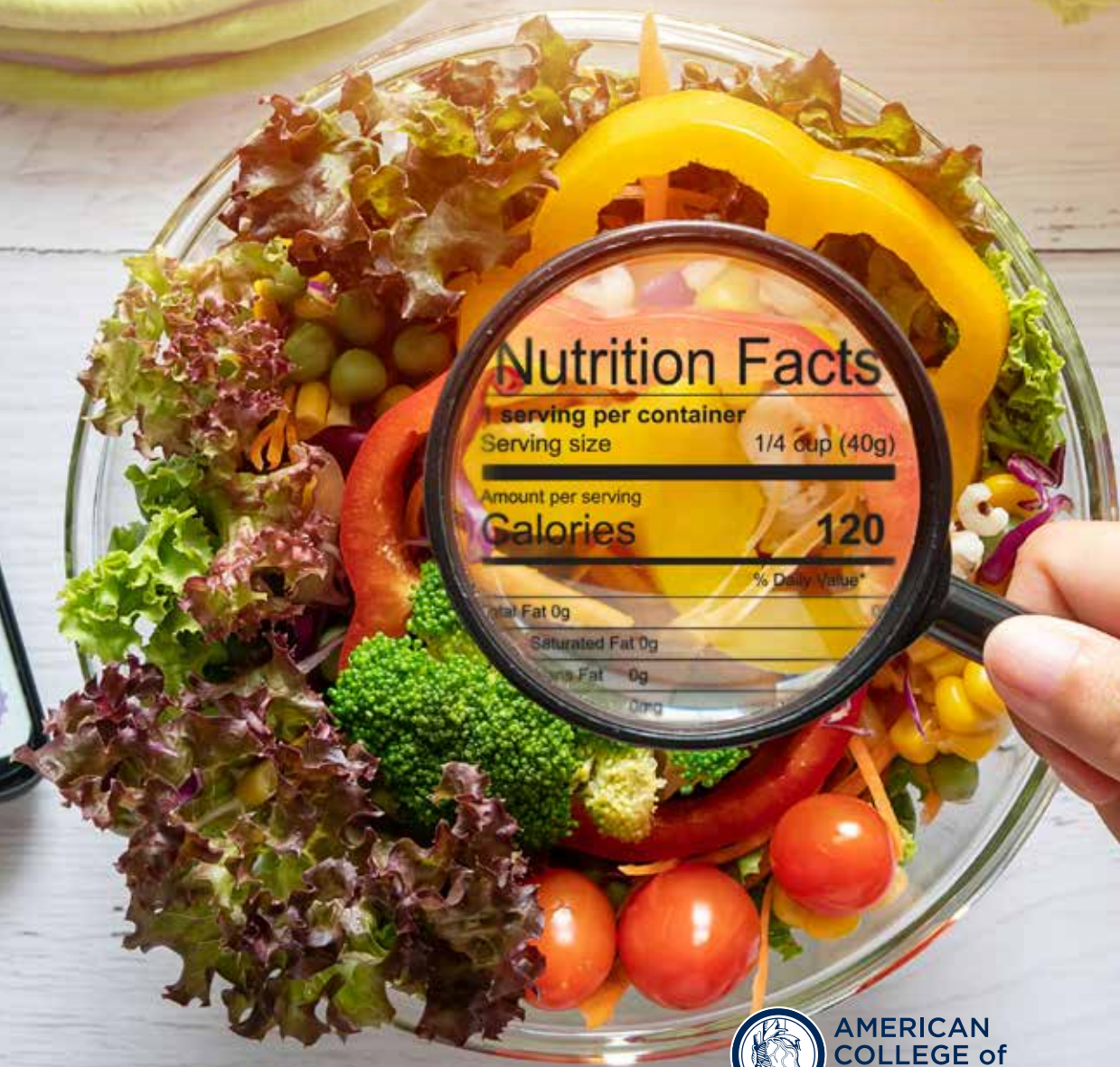


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## AI-ENABLED CLINICIAN



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Explore the technologies transforming CV care with the AI-Enabled Clinician podcast series, hosted by ACC Chief Innovation Officer **Ami Bhatt, MD, FACC**. Through conversations with leading clinicians, researchers and innovators, each episode examines emerging technologies, including AI, virtual care and remote patient monitoring, and their real-world applications in clinical practice.

**Scan the QR code** to find out more and subscribe now.

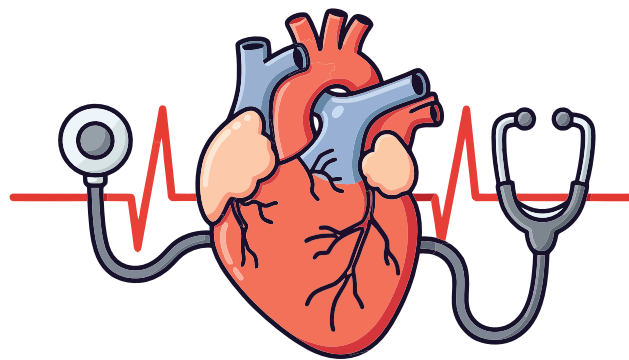
Visit **ACC.org/AI** for ACC's AI Resource Center.



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# Turning Prevention Into Practice: ACC's Coordinated Approach



The ACC's work in cardiovascular disease (CVD) prevention is entering an important new phase – one that reflects both the urgency of the challenge and the opportunity to deliver lasting impact. While the science of prevention continues to advance, the gaps in care do not lie with science and evidence, but rather with access and execution. As a result, the College is sharpening its focus on how to translate what we know into action that improves outcomes, starting “upstream” in childhood.

A cornerstone of this effort is a four-point plan developed by the Comprehensive CVD Prevention Task Force and approved this past Spring by the Board of Trustees. The plan is designed to coordinate all prevention efforts across content, advocacy, training, education and long-term strategy, ensuring alignment across the College, amplifying the reach of its work. These priorities are deeply connected to the ACC's Strategic Pillars of delivering actionable knowledge, transforming care delivery, and advancing organizational sustainability in service of our Mission to transform cardiovascular care and improve heart health for all.

Importantly, this strategy is already being brought to life through new and evolving initiatives. In June, the College welcomed the first cohort of Fuster Prevention Forum participants to Heart House to build practical skills in community education. (See ACC Mission in Action, Page 32). In May, the virtual PRIME Heart Roundtable convened a diverse group of stakeholders to reframe prevention around lifetime benefit rather than short-term risk, underscoring the need to act earlier and more intentionally across the care continuum.

Together, these efforts reflect a broader shift: moving prevention from a series of initiatives to a coordinated, sustained strategy embedded across the College's work. Achieving meaningful progress will require alignment across disciplines, continued innovation in education and digital health, and a commitment to influencing policy and care transformation. Above all, it will require a shared understanding that prevention is not a single intervention, but a lifelong commitment to improving cardiovascular health for every patient, in every community. ■



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The American College of Cardiology (ACC) is a global leader dedicated to transforming cardiovascular care and improving heart health for all. For more than 75 years, the ACC has empowered a community of over 60,000 cardiovascular professionals across more than 140 countries with cutting-edge education and advocacy, rigorous professional credentials, and trusted clinical guidance. From its world-class JACC Journals and NCDR registries to its Accreditation Services, global network of Chapters and Sections, and CardioSmart patient initiatives, the College is committed to creating a world where science, knowledge and innovation optimize patient care and outcomes. Learn more at [www.ACC.org](http://www.ACC.org) or connect on social media using @ACCinTouch.

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# Top 5 Takeaways From First-Ever CKM Syndrome Guideline

The new **2026 AHA/ACC/ADA/ASN Guideline for the Prevention, Detection, Evaluation, and Management of Cardiovascular-Kidney-Metabolic (CKM) Syndrome** is the first to address the “interrelated condition characterized by the interconnections among metabolic risk factors (including obesity and type 2 diabetes), chronic kidney disease (CKD) and cardiovascular disease.”

The Guideline outlines the four stages of CKM syndrome, highlights major risk factors and provides comprehensive recommendations for screening, prevention and treatment. Top five key takeaways include:

- 1 Improved risk assessment** using **new PREVENT equations** to estimate 10- and 30-year risk for cardiovascular disease.



Scan the QR code to read a new ACC/AHA Scientific Statement outlining the rationale for using the equations.

- 2 Screening for social drivers of health**, including food insecurity, housing instability and financial strain.

- 3 Coordinated interdisciplinary care that involves a CKM coordination point person** to facilitate patient-centered care and adherence to guidelines.

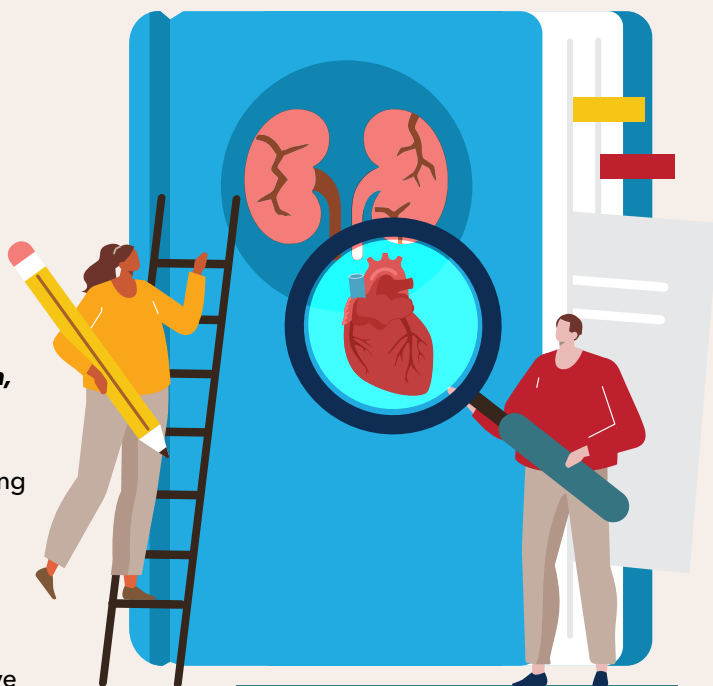
- 4 Reinforcement of healthy lifestyle behaviors**, including physical activity, nutrition, weight, blood pressure, blood sugar and cholesterol.

- 5 Additional treatment options include medications and surgical therapies in conjunction with lifestyle management** to address blood pressure, cholesterol, blood sugar, weight and to protect the heart and kidneys. For the first time, GLP-1-based therapies are recommended for select individuals with obesity and/or type 2 diabetes, and other cardiovascular risk factors. The guideline also recommends use of both eGFR and UACR “to characterize CKD and guide the use of kidney-protective agents to confer both cardiovascular and kidney benefits.”



Scan the QR code to download the ACC CKM Syndrome Guideline-at-a-Glance for more highlights.

Read and cite the full guideline in **JACC**.



## From Publication to Practice

The ACC has developed a suite of tools and resources to help translate the CKM Syndrome Guideline into everyday clinical practice. Find these and other tools in the Guideline Hub:

- CVD Risk Estimator Plus App
- CardioSmart “Your Kidneys and Your Heart” Patient Education
- Lipid Manager
- Slide Set
- More!



Scan the QR code to access the Guideline Hub.



## In Memoriam: William W. Parmley

**W**illiam W. Parmley, MD, MACC, a transformative leader in cardiovascular medicine whose impact on the ACC spanned decades, passed away peacefully on May 23 at the age of 90, surrounded by his family.

Parmley served as ACC President from 1985 to 1986 and as the second Editor-in-Chief of *JACC* from 1992 to 2002, succeeding **Simon Dack, MD, MACC**. Through his leadership, scholarship and vision for the future of cardiovascular medicine, he helped shape both the College and its flagship journal during periods of significant growth and innovation in the field.

"He was an extraordinary cardiologist and an even better human being," says **Anthony N. DeMaria, MD, MACC**, who, like Parmley, served as ACC President, as well as Editor-in-Chief of *JACC* and chair of ACC's Annual Scientific Session. "He was a spectacular editor of *JACC* and set an example for me and, indeed, all subsequent editors. His commitment to service served as a perfect model for our profession. He will clearly be missed."

Born Jan. 22, 1936, in Salt Lake City, Utah, Parmley earned his medical degree from Johns Hopkins Medical School in 1963 and completed internship and residency training in internal medicine before finishing his fellowship at Peter Bent Brigham Hospital.

Following his fellowship, he went on to serve as associate director of cardiology at Cedars-Sinai Hospital in Los Angeles, before joining the faculty of the University of California, San Francisco (UCSF), School of Medicine in 1974. Over his 30 years at UCSF, Parmley helped build one of the nation's premier cardiology programs and rose to the rank of endowed professor. He also served as chief of the Division of Cardiology for 25 years, mentoring generations of physicians and investigators.

"Bill was one of the giants of American cardiology, embodying the very best of our profession through his scientific excellence, editorial leadership and unwavering dedication to patient care," says ACC Past President **John Gordon Harold, MD, MACC**. "He was a leader of remarkable integrity and grace whose influence will endure for generations."

A prolific scholar, Parmley authored nearly 600 journal articles and edited or co-authored four books, including



*Cardiology*, a widely used textbook. Among his many scientific contributions, Parmley helped shape public understanding of secondhand smoke and cardiovascular risk. In 1985, his landmark *JAMA* review, co-authored with **Stanton A. Glantz, MD**, titled "Passive Smoking and Heart Disease: Mechanisms and Risk," drew national attention.

"He was an extraordinary physician, educator and human being," says **Valentin Fuster, MD, PhD, MACC**, former Editor-in-Chief of *JACC*. "As a cardiologist, he stood among the finest clinicians of his generation; as an educator and editor-in-chief, he elevated *JACC* to extraordinary prominence; and as a human being, he led with profound empathy, unwavering faith, and a consummate commitment to his patients, colleagues and family."

Parmley retired from UCSF in February 2003. In retirement, he devoted himself to full-time volunteer service for the Church of Jesus Christ of Latter-day Saints. He is survived by his wife, Shanna Parmley, and their four children."

"I remember him as the most incredible, caring physician, who taught many how to care for patients with eloquence and deep empathy," says ACC President **Roxana Mehran, MD, FACC**. "He was a tremendous mentor and volunteer, and his brilliance in teaching goes beyond words. He will be dearly missed but never forgotten."

At the ACC, Parmley's legacy will continue to live on through the **William W. Parmley Young Author Achievement Award** - one of the distinguished *JACC* awards given out each year at ACC's Annual Scientific Session and a fitting tribute to a man who devoted so much of his life to advancing science and supporting the next generation of cardiovascular leaders. ■

## May BOT Meeting Focuses on Workforce, Health Equity, Prevention and More

The College's May Board of Trustees (BOT) meeting focused on advancing strategic priorities across education, science, membership, registries, advocacy and more.

A central theme discussed was **workforce culture and engagement**, including candid dialogue around perceptions of toxicity, accountability and the importance of embedding inclusive leadership. The BOT also received updates from the **Health Equity Committee**, highlighting ongoing efforts to integrate health equity across all ACC activities and eliminate disparities in cardiovascular care.

Prevention also emerged as a major priority, and the BOT approved a four-part strategic plan by the **Comprehensive CVD Prevention Task Force**. Additional updates included progress within the **NCDR**, including expansion of its registry portfolio and development of new tools such as the Renal Denervation Module and CV Shock Designation - which will complement ACC's Chest Pain Center Accreditation program. The **Science and Quality Committee** reported on new clinical guidance and digital tools, while **Advocacy** efforts highlighted key policy wins and ongoing priorities in telehealth, reimbursement and regulatory policy.



In addition to strategic updates, this meeting also provided space for **"Blue Sky" discussion about AI** and its implications for hospitals, patients and clinicians, potential new revenue opportunities, and ACC's role in defining clear rules of engagement for use in practice. This is a big topic at the BOT's summer retreat in July, so stay tuned! ■

Scan the QR code to read more about the meeting from ACC President **Roxana Mehran, MD, FACC**.



## ACC President Receives Andreas Grüntzig Ethica Award

ACC President **Roxana Mehran, MD, FACC**, was awarded the Andreas Grüntzig Ethica Award on May 21 during EuroPCR in Paris.

The award, named after **Andreas Grüntzig, MD**, the pioneering German cardiologist who developed the first balloon angioplasty, is the highest honor presented by the Percutaneous Cardiovascular Registry (PCR). It recognizes individuals and teams who have made outstanding contributions to the field of interventional cardiology by improving patient outcomes, advancing interventional techniques, and inspiring collaboration and innovation.

"It is incredibly special to be recognized with the Andreas Grüntzig Ethica Award by the peers with whom I began my journey," says Mehran. "It is a huge and unexpected honor, and I feel so humbled and grateful



beyond words. I also hope this award empowers other women to continue pursuing a career in interventional cardiology." ■



## Semaglutide Delivers Consistent Kidney Benefit in T2D/CKD Across CVD Status

**S**emaglutide improved kidney and survival outcomes in patients with type 2 diabetes (T2D) and chronic kidney disease (CKD), including those with established ASCVD, heart failure (HF) and high total CVD risk, according to a subgroup analysis of the FLOW trial published in an obesity-focused issue of *JACC*.

A total of 3,533 patients were randomized to once-weekly subcutaneous semaglutide 1.0 mg or placebo. They were 67 years old and a third were women; their mean estimated glomerular filtration rate (eGFR) was 47.0 mL/min/1.73 m<sup>2</sup> and median urine albumin-to-creatinine ratio (UACR) was 568 mg/g.

Of the participants, 34% had ASCVD (prior myocardial infarction, stroke or peripheral artery disease), 20% had HF and 67% were at high cardiovascular risk (PREVENT score  $\geq 20\%$ ) without existing CVD.

Results in the overall cohort showed that semaglutide reduced the risk of the primary outcome ( $\geq 50\%$  eGFR decline, eGFR  $< 15$  mL/min/1.73 m<sup>2</sup>, dialysis, transplantation and kidney or cardiovascular death) by 24% and all-cause death by 20%.

This benefit was consistent within the groups with and without ASCVD (hazard ratio [HR], 0.80 vs. 0.74), with and without HF (HR, 0.67 vs. 0.79) and with and without high total CVD risk (HR, 0.73 for both).

Numbers needed to treat to prevent one primary kidney outcome at three years were 22, 13 and 17, within the ASCVD, HF and high-risk groups, respectively.

Similarly, semaglutide reduced the risk of all-cause death in patients with and without ASCVD (HR, 0.82 vs. 0.78), with and without HF (HR, 0.75 vs. 0.81) and with and without high total CVD risk (HR, 0.71 vs. 0.82).

“Considering the high absolute rates of major adverse kidney events and death across subgroups with [CVD] or at high total [CVD] risk, the clinical impact of semaglutide treatment is especially important for these individuals,” write **Katherine R. Tuttle, MD**, et al.

“Taken together, the results from this analysis represent a key opportunity to intensify [cardiovascular] kidney therapies in real-world practice in high-risk CKD even without overt [CVD] being present, given comparable event rates and benefits from therapies,” write **Janani Rangaswami, MD**; **James L. Januzzi, MD, FACC**; and **Roy O. Mathew, MD**, in an accompanying editorial comment. “Implementing therapies that demonstrate [cardiovascular]-kidney benefits, and especially those that can change the trajectory of kidney function decline must be prioritized as a primary CVD optimization strategy.” ■

Tuttle KR, Bakris GL, Baeres FMM, et al. *JACC*. 2026;87(21):2996-3012.



Scan the QR code to read the full Obesity Focus issue of *JACC*.

## Micro- and Nanoplastics and Structural Plaque Vulnerability

**C**irculating levels of micro- and nanoplastics (MNPs) were associated with structural plaque vulnerability in acute coronary syndrome (ACS), based on optical coherence tomography (OCT), according to research published in *JACC: Cardiovascular Imaging*.

In the single-center observational study, **Yunxiao Yang, MD, PhD**, et al., using pyrolysis-gas chromatography-mass spectrometry, found circulating MNPs in blood samples from all 80 patients with ACS, with a total MNP concentration of 108.41  $\mu\text{g/g}$  blood.

On OCT, plaque rupture was observed in 49%,

thin-cap fibroatheroma in 39% and macrophage infiltration at the site of culprit plaques in 56%. Notably, these patients had significantly higher total MNP levels than those with none of these findings.

“The detection of MNPs in all enrolled patients and their association with vulnerability phenotypes raise the possibility that chronic plastic exposure may be associated with alterations in plaque biology,” write the authors. ■

Yang Y, Cui H, Wang L, et al. *JACC Cardiovasc Imag*. 2026;May 20: doi: 10.1016/j.jcmg.2026.04.008.

# Late Pericardial Effusions After LAAO Implantation

Late pericardial effusion (LPE) post left atrial appendage occlusion (LAAO) was associated with negative patient outcomes, including mortality, suggesting the need for long-term surveillance, according to an analysis of the Manufacturer and User Facility Device Experience (MAUDE) Registry published in *JACC: Advances*.

Through the MAUDE database, study investigators **Sneha S. Limaye, MD**, et al., identified 290 cases of PE with the Amulet device, of which 66% were acute (APE) and 34% were LPE, and 33 cases with the Watchman device (94% APE; 6% LPE).

Results among Amulet cases showed that 65% of patients with APE and 55% of those with LPE required an intervention, defined as pericardiocentesis, pericardial window or exploratory sternotomy. Furthermore, 8.4% and 8.0% of patients with APE and LPE died, respectively.

Pulmonary artery (PA) injury was the suspected cause of PE in 10 patients with APE and two patients with LPE; five patients died, “underscoring the high mortality rate associated with PA injury-related PEs,” the authors write.

Results among Watchman cases showed that 77% of those with APE and one of the two patients with LPE required an intervention. Two patients with APE and one patient with LPE died; no PA injury was observed.

The authors note the potential to obtain “meaningful large registry information for a low frequency complication between devices” through ACC’s NCDR LAAO Registry.

The authors write the “finding are novel and in contrast” to no reports of morbidity and mortality associated with postprocedural PE from the randomized trials of LAAO. “Further studies are needed to fully understand the incidence of LPE and that of PEs caused by PA injury following LAAO.” ■

Limaye SS, Schwarz KQ, Aktas MK, et al. *JACC Adv*. 2026;May 15: doi:10.1016/j.jacadv.2026.102789.



## Deferring Further Testing Rising in Low-Risk Chest Pain

In the evaluation of patients with low-risk chest pain, a rise in deferring additional testing has been observed, with lower rates of functional testing and invasive coronary angiography (ICA), and significant variation at the site level in the proportion of patients who underwent further noninvasive testing, according to a study published in *JACC: Cardiovascular Imaging*.

Using data from ACC’s Chest Pain - MI Registry, **Riyad Yazan Kherallah, MD**, et al., included 167,220 patients from 327 sites admitted with troponin-negative chest pain between Jan. 1, 2019, and March 31, 2023. Seeking to explore trends in evaluation strategies before and after the 2021 ACC/AHA Chest Pain Guideline, patients were stratified by initial ischemic evaluation.

Overall, 11% of patients underwent ICA as initial testing; 21% underwent anatomical or functional noninvasive testing (CCTA in 9%); and 68% had no further testing.

An increase in deferring further testing from 58% to 73% was observed for the first quarter of 2019 and 2023, respectively. Rates of functional testing and ICA decreased over the study period. In patients who underwent further testing, the rate of CCTA increased from 6% to 12%, “predominately because of a decline in functional testing rather than an increase in the absolute number of [CCTAs] performed.”

“The observed rise in deferral of further testing occurred with increased adoption of high-sensitivity troponin and faster rule out clinical decision pathways, alongside updates in professional guidelines,” note Kherallah and colleagues. “It has implications for delivery of health care, clinical throughput and health care costs.” ■

Kherallah R, Smilowitz N, Ahmad A, et al. *JACC Cardiovasc Imag*. 2026;May 12: <https://doi.org/10.1016/j.jcmg.2026.03.012>.



## ACC QI.PI Grant Recipient Develops PAD Screening Biomarker

A quick, noninvasive toe-based light measurement combined with artificial intelligence effectively screened for peripheral artery disease (PAD), according to a recent study by a recipient of an ACC Accreditation Services' Quality Improvement/Process Improvement (QI.PI) Project Grant, published in *npj Digital Medicine*.


The novel technique, developed and validated by a multidisciplinary team of researchers at the University of California San Diego, shows promise in improving access to diagnosis and helping identify high-risk patients sooner.

**Mattheus Ramsis, MD**, et al., analyzed over 5,200 waveforms from 2,362 patients to explore whether photoplethysmography (PPG), the technology used in pulse oximeters and smartwatches, paired with a machine learning model could detect PAD, noting significant correlations between multiple PPG features and ankle-brachial index (ABI).

This model for PPG-based PAD detection performed well, with an AUC of 0.831. Adding smoking status improved the model's performance.

"When we built the model using only the PPG data, it demonstrated strong performance in distinguishing

Scan the QR code to learn about the QI.PI grants from ACC Accreditation Services.



patients with PAD (defined by an abnormal ABI) from those without the disease, correctly distinguishing PAD cases approximately 83% of the time, compared with the roughly 60-65% performance typically achieved using traditional clinical risk factor assessment alone," said Ramsis. "Importantly, the signal reflects physiologic blood flow changes in the toes, providing information beyond conventional clinical evaluation."

No statistically significant differences in model performance across racial or ethnic groups were noted, while it performed consistently across key clinical subgroups such as patients with end-stage renal disease and diabetes.

"Based on the robustness of short-duration signal acquisition, feature interpretability and performance consistency observed in this study, this framework is now the foundation for prospective studies designed to assess performance across clinical workflows and complementary reference standards," write the authors. ■

Ramsis M, Fascetti AJ, Naguib MH, et al. *npj Digital Medicine*. 2026;May 12: <https://doi.org/10.1038/s41746-026-02655-w>.

## Racial and Sex Disparities in M-TEER Outcomes

Black patients undergoing mitral transcatheter edge-to-edge repair (M-TEER) were more likely to present with more advanced disease, had lower procedural success and higher heart failure (HF) readmission rates vs. White patients, according to a study published in *Structural Heart*. Female patients also had lower procedural success rates compared with male patients.

Using data from the STS/ACC TVT Registry, **Kyeeun Park, MD**, et al., included 9,441 patients who underwent M-TEER for functional mitral regurgitation (FMR) - 58% were male, 80% White, 16% Black and 3% Asian. They compared 30-day and 12-month all-cause and HF hospitalizations and mortality by race and sex to determine disparities in outcomes.

Overall, Black patients exhibited lower LVEF and larger LV dimensions compared with White patients, and 30-day procedural success rates were 49% among Black

patients vs. 57% for White patients ( $p < 0.001$ ). The authors also observed greater odds of HF hospitalization at 12 months among Black patients (adjusted hazard ratio, 1.35; 95% CI, 1.09-1.67;  $p = 0.006$ ). Asian patients had comparable outcomes to White patients.

Looking at outcomes by sex, there was lower 30-day procedural success in female vs. male patients (48% vs. 61%;  $p < 0.001$ ); however, disparities were not seen in adjusted outcomes at one year. "[F]emales experienced higher rates of all-cause and HF readmissions within 30 days, although the findings were not adjusted for confounding factors and a small overall incidence difference; this makes the clinical implication uncertain," note the authors. ■

Park K, Stebbins A, Han S, et al. *Structural Heart*. 2026;March 2:doi 10.1016/j.shj.2026.100831.

## Food Preservatives Increase HTN, CVD Incidence

Consuming preservative food additives widely used in packaged foods was associated with a higher incidence of hypertension or CVD, according to results from the NutriNet-Santé study published in *EHJ*.

**Anaïs Hasenböhler, PhD student, Mathilde**

**Touvier, PhD, MPH, MSc**, et al., analyzed dietary intake among 112,395 participants in France (mean age 42 years; 79% women) from 2009 to 2024. In this prospective cohort study, participants completed repeated 24-hour dietary records (up to 96), including commercial brand names. Researchers then estimated additive exposure using multiple compositional databases and ad hoc laboratory assays of food matrices.

Associations between cumulative, time-dependent preservative exposure and study outcomes were assessed. Total preservative exposure was defined as the sum of 58 substances consumed by at least one participant.

Over eight years of follow-up, 99.5% of participants consumed at least one food preservative within the first two years. Higher vs. lower intake of total nonantioxidant

preservatives was associated with a 29% higher risk of hypertension and a 16% higher risk of CVD.

Of the 17 preservative additives consumed by at least 10% of participants, eight were linked to increased hypertension risk and one to increased CVD risk.

"These findings may have important public health implications as consumers are exposed to these compounds via thousands of foods and drinks," write the authors. "These results need to be confirmed by other epidemiological studies, and additional experimental data are needed to depict the mechanisms underlying potential adverse CVD- and hypertension-related effects of these substances." ■

Hasenböhler A, Javaux G, Payen de la Garanderie M, et al. *EHJ*. 2026;May 20: <https://doi.org/10.1093/eurheartj/ehag308>.



## BP Drug Discontinuation Varies By Class, Regimen

A combination of an angiotensin receptor blocker (ARB) and calcium channel blocker (CCB) was the best tolerated treatment for lowering blood pressure (BP), based on a meta-analysis published in *JAMA* that assessed the discontinuation of blood pressure (BP)-lowering medications due to adverse drug effects (AEs).

The meta-analysis included 716 short-term trials comprising nearly 160,000 adults who received placebo or antihypertensive therapy from five major classes: ACE inhibitors, ARBs, beta-blockers, CCBs and diuretics, and their combinations, over four to 26 weeks. Patients were 55 years old and 44% were women; mean baseline BP was 158/100 mm Hg.

Over nearly nine weeks, two treatment regimens were associated with a lower risk of AE-related treatment discontinuation: ARB + CCB [odds ratio [OR], 0.61] and ARB monotherapy [OR, 0.73], vs. placebo. In contrast, three treatment regimens, vs. placebo, were associated with a higher risk of AE-related treatment discontinuation: CCB monotherapy (OR, 1.43), ACE + CCB (OR, 1.46) and beta-blocker + thiazide diuretics (OR, 1.58).

Ranked in order, the five best tolerated drug classes and combinations were: ARB + CCB, ARB + beta-blocker,

ARB monotherapy, CCB + thiazide diuretic and ARB + thiazide diuretic - with all ARB-containing regimens associated with less treatment discontinuation.

All treatment regimens significantly increased dizziness vs. placebo, with greater risk with combination vs. monotherapy. All but CCBs significantly decreased headache vs. placebo.

"Results from the study ... can help inform clinicians' selection of antihypertensive therapies for patients initiating medications for hypertension, particularly when comorbidities, such as the presence of diabetes with microvascular disease, do not warrant a specific therapy," write **Mary M. McDermott, MD**, and **Stephen D. Persell, MD, MPH**, in an accompanying editorial comment. ■

Wang N, Van Der Hoorn S, Pant R, et al. *JAMA*. 2026;March 28: doi: 10.1001/jama.2026.6214.

Scan the QR code for the ACC/AHA High Blood Pressure Guideline and related resources, including a JACC Focus Issue on the guideline.



# Postpartum Cardiovascular Care

## Focus of ACC Decision Pathway

A new ACC Expert Consensus Decision Pathway (ECDP) addressing "Optimization of Postpartum Care for Patients With and at Risk for Premature and Long-Term Cardiovascular Disease" provides recommended strategies for successful postpartum cardiovascular care, which should begin before birth and continue through the first year after delivery.

Published in *JACC*, the ECDP acknowledges the many barriers to care during the postpartum period and emphasizes the importance of following a structured approach for optimized maternal cardiovascular health care that begins immediately after delivery and extends through the first year.

"The postpartum period is a critical opportunity to engage in collaborative patient care that is focused on improving short- and long-term cardiometabolic outcomes," said **Kathryn J. Lindley, MD, FACC**, chair of the ECDP writing committee and associate professor of medicine at Vanderbilt University Medical Center's Division of Cardiovascular Medicine.

"Understanding and following a structured approach to the provision of postpartum care for all individuals with or at risk for cardiovascular disease is a crucial first step toward eliminating excess maternal morbidity and mortality and reducing inequities," she noted.

The ECDP recommends comprehensive postpartum cardiovascular care visits, along with early outpatient follow up for cardiovascular symptom monitoring; effective management of postpartum cardiovascular emergencies; and noncardiovascular aspects of care like lactation, mental health and contraception.

It also recommends patient involvement in decision-making, along with early blood pressure management and cardiovascular symptom screening, plus comprehensive cardiovascular risk factor modification and "effective transition to longitudinal preventative care before the end of the first year after delivery."

Looking ahead, the authors note that "significant knowledge

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gaps remain" and urge continued research to better understand "optimal blood pressure goals, cardiometabolic screening timing and modality, implementation of lifestyle modification and cardiovascular medication safety during breastfeeding.

They also highlight the need for implementation research around how best to scale and sustain effective postpartum care models and underscore the importance of advocacy for policies that promote patient access to necessary cardiovascular care.

The ECDP was developed in collaboration with and is endorsed by the American College of Nurse-Midwives, the American College of Obstetricians and Gynecologists and the Society for Maternal-Fetal Medicine. ■

### TURN GUIDANCE INTO ACTION

Use ACC's Key Takeaways to put the decision pathway on postpartum cardiovascular care into everyday clinical practice.

Identify patients at elevated risk, act earlier to reduce postpartum cardiovascular events, and apply pregnancy history to guide prevention, follow-up and long-term heart health.

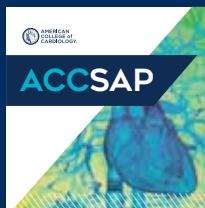
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HEART DISEASE



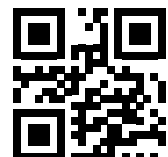
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## Catheter-Based Intervention in Intermediate-Risk PE

Until the ACC/AHA guideline on the management of acute pulmonary embolism (PE) was published in February, more than a decade had passed since the last one. During this interval, catheter-based interventions have expanded substantially, reshaping management of intermediate-risk PE. The optimal role of catheter-based therapies in this population, however, remains an area of active debate.<sup>1</sup>

The 2026 ACC/AHA guideline attempts to further refine risk stratification within intermediate-risk PE, a category that encompasses a broad spectrum of clinical presentations. The updated framework introduces a five-tier risk stratification scheme (categories A through E).

Patients previously categorized as intermediate-risk now fall primarily into category C and D, whereas patients with high-risk PE are classified as category E.<sup>2</sup>

At the time of guideline development, evidence supporting catheter-based therapies for hard clinical outcomes was limited, with most studies relying on surrogate endpoints, such as improvement in right ventricular (RV)/left ventricular (LV) ratio after intervention.<sup>3-5</sup> Data directly comparing catheter-based therapies with anticoagulation alone – the longstanding standard of care – were sparse.

Consequently, the PE guideline does not provide strong recommendations for routine catheter-based intervention. Instead, they suggest considering catheter-based therapy in selected higher-risk patients, particularly those corresponding to group D with transient hypotension or evidence of malperfusion.<sup>2</sup>

Since the writing of the 2026 PE guideline, two randomized trials have compared catheter-based therapy with anticoagulation alone in this population: STORM-PE and HI-PEITHO.

### STORM-PE: First RCT of Mechanical Thrombectomy vs. Anticoagulation Alone

The STORM-PE trial evaluated catheter-directed mechanical thrombectomy using the Penumbra Indigo Aspiration System compared with anticoagulation alone in patients with intermediate-risk PE.

Patients undergoing thrombectomy experienced greater improvement in RV/LV ratio at 48 hours and earlier normalization of vital signs with similar rates of major bleeding and adverse events between groups.

Although the study enrolled only 100 patients and was underpowered to evaluate major clinical outcomes, two PE-related deaths occurred in the thrombectomy arm vs. none in the anticoagulation arm. At 90 days, exploratory endpoints suggested greater six-minute walk distance and return to pre-PE functional status with thrombectomy.

### HI-PEITHO: CDT vs. Anticoagulation Alone

The larger HI-PEITHO trial more directly evaluated whether catheter-based therapy improves clinically meaningful outcomes. A total of 544 patients with intermediate-risk PE (using prior ESC classification scheme) were randomized to ultrasound-facilitated catheter-directed fibrinolysis (CDT) plus anticoagulation vs. anticoagulation alone. Participants had additional

concerning clinical features, including tachycardia, tachypnea or borderline hypotension.

The primary composite outcome of PE-related death, cardiorespiratory decompensation or recurrent PE within seven days occurred less frequently in the CDT group (4.0% vs. 10.3%;  $p=0.005$ ). Importantly, this difference was driven largely by worsening clinical status, particularly persistent or worsening National Early Warning Scores (NEWS), rather than differences in cardiogenic shock, cardiac arrest, intubation or PE-related death.

Major bleeding was numerically higher with CDT (4.1% vs. 2.2%;  $p=0.32$ ), with no intracranial hemorrhage in either arm.

Additional findings warrant emphasis. There was no difference in RV/LV ratio on follow-up imaging between treatment arms, contrasting with earlier catheter-based therapy studies.<sup>3-5</sup> Subgroup analyses showed no benefit in patients older than 75 years or with RV/LV ratio  $<1.5$ , paralleling findings from the original PEITHO trial of systemic thrombolysis.

Notably, 87% of screened patients were not enrolled, underscoring the highly selected study population. In addition, the protocol mandated randomization within six hours of diagnosis with intervention within two hours thereafter – timelines that may not reflect typical practice.

### Clinical Implications and Evidence Gaps

These trials advance the evidence base but do not yet establish catheter-based therapy as standard of care for most intermediate-risk PE. In particular HI-PEITHO also provides

Practice Pearls
<b>Actionable Clinical Recommendations</b>
The 2026 ACC/AHA guideline introduces a five-category risk stratification system (A-E); intermediate-risk PE corresponds to Categories C (elevated severity scores ± RV dysfunction/biomarkers) and D (pre-cardiopulmonary failure states including normotensive shock, transient hypotension).
Anticoagulation remains the cornerstone of therapy for intermediate-risk PE. LMWH is preferred for initial parenteral therapy; DOACs (rivaroxaban, apixaban) are preferred for oral anticoagulation unless contraindicated.
Hospitalize all intermediate-risk PE patients for close monitoring during the first 24-72 hours; escalate to advanced therapies only for clinical deterioration (progression to Category D or E), ideally in consultation with a multidisciplinary PE response team.
HI-PEITHO demonstrated that US-facilitated catheter-directed fibrinolysis reduced the 7-day composite endpoint (4.0% vs. 10.3%; RR 0.39; p=0.005), driven by reduced cardiorespiratory decompensation, not mortality. Benefit was absent in patients >75 years or with RV/LV ratio <1.5.
STORM-PE showed greater RV/LV ratio reduction with CAVT at 48 hours (difference 0.27; p<0.001) with comparable adverse event rates, but two PE-related deaths occurred in the intervention arm and the trial was underpowered for clinical outcomes.
<b>Future Research Priorities</b>
Ongoing trials (PE-TRACT, PEERLESS II, PEITHO-3) will evaluate patient-centered outcomes including exercise capacity, NYHA class, and quality of life at 3-12 months.
Improved risk stratification tools incorporating dynamic variables (e.g., serial NEWS2, lactate) are needed to identify which intermediate-risk patients benefit from advanced therapies.
Comparative effectiveness and cost-effectiveness studies across catheter platforms are needed to inform device selection and resource allocation.



Scan the QR code for the PE Guideline Hub to download the document and reader expert commentaries in a JACC Spotlight Issue.

important insight into the natural history of patients treated with anticoagulation alone.

Patients managed conservatively with rescue escalation for deterioration did not experience higher rates of cardiogenic shock, cardiac arrest or respiratory failure, supporting watchful waiting with close monitoring for many patients.<sup>7</sup>

The management of acute PE continues to evolve rapidly. Several ongoing trials will further inform practice: PE-TRACT is evaluating CDT with primary endpoints of peak VO<sub>2</sub> at three months and NYHA class at 12 months;<sup>9</sup> PEERLESS II is comparing large-bore mechanical thrombectomy with anticoagulation alone;<sup>10</sup> and PEITHO-3 is testing reduced-dose systemic fibrinolysis.<sup>11</sup>

The cornerstone of care remains individualized risk assessment, balancing the likelihood of clinical deterioration against procedural risk. Current evidence suggests that catheter-based therapies may benefit carefully selected patients, while anticoagulation remains sufficient for an overwhelming majority. The critical challenge is identifying the subset of intermediate-high risk

patients (group C3 and group D based on the recent ACC/AHA guideline) who may benefit from early intervention – a question that current evidence has begun to address but not yet resolved. ■

References available with the online version of this article at [ACC.org/Cardiology](http://ACC.org/Cardiology).



This article was authored by **Brett J. Carroll, MD**, and **Christian Mewaldt, MD**, Division of Cardiovascular Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA.

# Lower Sooner: How the 2026 Dyslipidemia Guideline Changes Practice

**E**arlier intervention and lower goals for LDL-C are key recommendations in the ACC/AHA Dyslipidemia Guideline,<sup>1,2</sup> published in March – recognizing the risks of prolonged exposure to dyslipidemia leading to ASCVD. It offers a comprehensive “one-stop shop” for addressing the evaluation, management and monitoring of individuals with dyslipidemias. Here’s an overview to put this into practice now.

## The “CPR” Model: Calculate, Personalize, Reclassify

The guideline introduces the “CPR” model for approaching a patient with cardiovascular risk factors. First, **calculate** the 10- and 30-year risk with the **new PREVENT score**. Next, **personalize** risk by considering risk enhancers not included in the PREVENT calculator, such as family history of premature ASCVD, reproductive risk markers, chronic inflammatory disease or high levels of biomarkers like Lp(a) or hsCRP. Lastly, **reclassify** the patient and their treatment and potentially **reassess** based on their coronary artery calcium (CAC) score. This model helps guide patients and the care team to the best combination of lifestyle modification and lipid-lowering therapy (LLT) for their current constellation of risk factors.

## Absolute LDL-C Treatment Goals

In patients with a high ( $\geq 10\%$ ) 10-year PREVENT ASCVD risk score, LLT should be used to achieve goals of LDL-C  $< 70$  mg/dL and non-HDL-C  $< 100$  mg/dL. In adults with borderline (3-5%) or intermediate

(5-10%) risk, LLT should be used to achieve LDL-C  $< 100$  mg/dL and non-HDL-C  $< 130$  mg/dL. The guideline reintroduces specific value-based goals in place of percent-reduction-based goals.

## Lp(a): An Emerging Risk Stratifier

The 2026 guideline recommends Lp(a) measurement at least once in every adult’s lifetime, as it has emerged as a prevalent, consistent and useful marker of ASCVD risk.<sup>3</sup> This is the first time the ACC/AHA guideline has made universal screening and genetic cascade screening recommendations for Lp(a). Values of Lp(a)  $> 125$  nmol/L and  $> 250$  nmol/L are associated with 1.4-fold and  $\geq 2$ -fold increased ASCVD risk, respectively.

Lp(a) is genetically determined and relatively stable across a lifespan, thus one early measurement is sufficient and helpful to guide early preventive therapies and lifestyle changes.

Adults with elevated Lp(a) levels, regardless of LDL-C level, should be offered early options for reducing cardiovascular risk.

## Apolipoprotein B

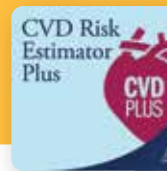
LDL-C remains the mainstay of cholesterol screening and treatment, yet the guideline recognizes measurement of apolipoprotein B (apoB) can be useful in patients with ASCVD or at high-risk. ApoB more accurately reflects ASCVD risk, therefore intensification of LLT can be considered for patients with elevated apo B, even if LDL-C or non-HDL-C are at goal. ApoB measurement may be useful in primary prevention to help refine decisions on starting LLT.



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The new CVD Risk Estimator Plus app helps estimate 10- and 30-year risks for total CVD, ASCVD and HF, using the combined strength of the PREVENT equations and the previous Pooled Cohort Equations. Visit [ACC.org/CVDPlus](https://acc.org/CVDPlus) to download it now.



Scan the QR code for the Dyslipidemia Guideline Hub to download the document and access resources to help you move from guideline to practice.



## CAC Scoring

CAC scoring was upgraded from a level 2a to a level 1 recommendation for risk stratification beyond PREVENT scores. In patients with borderline indications for LLT or for whom the intensity of treatment needed is unclear, CAC scores can help refine the choice of intervention. A score of zero can be used to defer statin therapy in a low- or intermediate-risk patient with no other cardiovascular comorbidities.

## Primary Prevention in Chronic Disease

The guideline now includes adults aged 40-75 with chronic kidney disease (CKD)  $\geq$ stage 3 or with HIV in the special patient populations for whom physicians should initiate LLT as primary prevention regardless of LDL-C or PREVENT score. This emphasizes that a diagnosis of HIV or

CKD is an independent risk factor for an ASCVD event.

## Reproductive Risk Markers

The 2026 guideline has included reproductive risk markers as important factors to support a more personalized ASCVD risk assessment. Initial evaluation should identify whether any of the following reproductive risk markers are present: adverse pregnancy outcomes (preeclampsia, gestational hypertension, gestational diabetes or preterm delivery), premature or

early menopause (age <40 and <45 years, respectively) or polycystic ovarian syndrome [PCOS]). These reproductive risk markers are associated with an increased risk of future ASCVD events and adverse cardiac outcomes. History of adverse pregnancy outcomes should guide discussions regarding prevention and initiation of LLT with patients. ■

References available with the online version of this article at [ACC.org/ Cardiology](https://www.acc.org/).

This article was authored by **Nicole Dagen, BS;** **Colleen McCarthy, MD;** and **Verity Ramirez, MD, FACC**, all at the Brown University Warren Alpert School of Medicine in Providence, RI. Interested in prevention? **Scan the QR code** to learn about and join ACC's Prevention of Cardiovascular Disease Member Section.



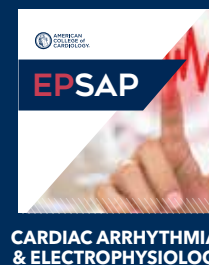
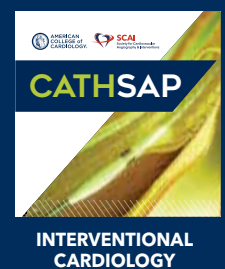
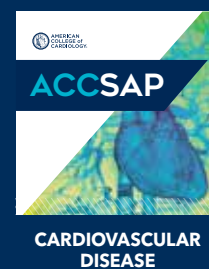
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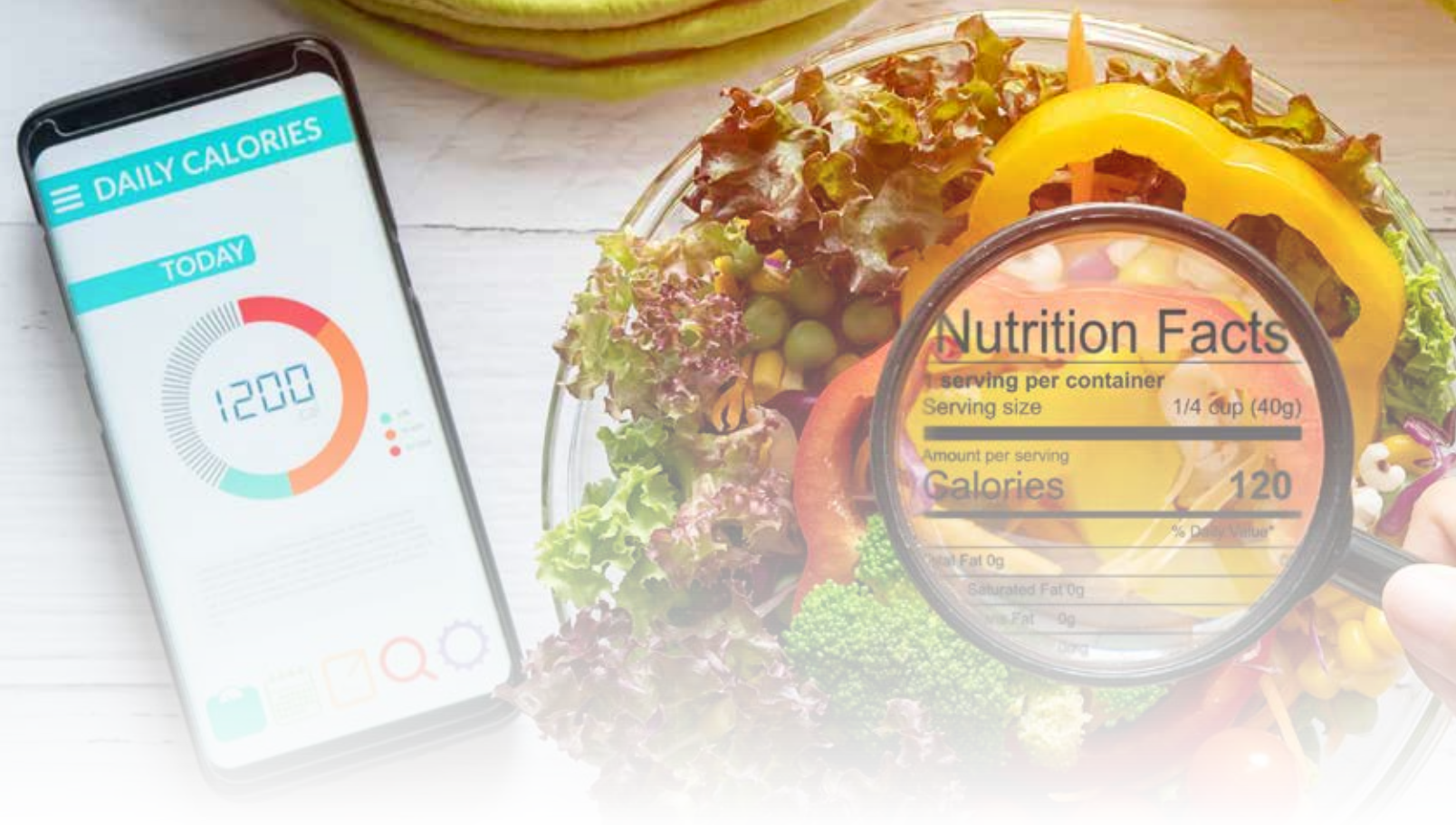
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## INTEGRATING HEART-HEALTHY NUTRITION INTO EVERYDAY CARDIOLOGY CARE

*Dishing up healthy eating guidance for CV risk reduction across every age and stage*

Hippocrates is often credited with saying, “Let food be thy medicine, and medicine be thy food.” Now, modern day research is proving there is truth to this ancient wisdom.

While tremendous advances have been made in the management of cardiovascular disease, it remains the leading cause of death worldwide. We also know that cardiovascular disease is largely preventable through modifiable risk factors, including everyday dietary choices known to influence primary and secondary cardiovascular risk and outcomes. Alarming, 45% of cardiometabolic disease, including heart disease, stroke and type 2 diabetes (T2D), is now linked to poor

diet. A leading culprit is the regular consumption of ultra-processed foods (UPFs), which are widely available and often affordable, yet typically low in nutritional value, and high in sodium, added sugars and unhealthy fats.

Today, the concept of “food as medicine” has gained renewed scientific momentum as mounting evidence demonstrates significant and measurable effects of heart-healthy dietary patterns on lipid profiles, blood pressure (BP), glycemic control and cardiovascular outcomes.

In response, contemporary cardiology guidelines including the recent ACC/AHA hypertension and dyslipidemia guidance increasingly recognize heart-healthy dietary

patterns as a cornerstone of cardiovascular risk reduction.

“We have strong nutrition recommendations across cardiology guidelines. The challenge now is implementation - getting evidence-based nutrition guidance into cardiovascular care in practical ways that help patients make sustainable changes,” says **Kim Allan Williams Sr., MD, MACC**, University of Louisville School of Medicine and past ACC President.

“Diet is upstream from nearly every major cardiovascular risk factor. Food should be viewed as a core component of preventive cardiovascular therapy, not just lifestyle counseling,” he highlights.

Yet, despite the growing emphasis on nutrition in the guidelines, most cardiology training still offers limited practical preparation for translating nutrition science into patient-centered conversations.

“Most physicians feel inadequately trained in nutrition counseling, and any existing education tends to focus on nutrient biochemistry rather than practical dietary guidance,” says **Monica Aggarwal, MD, FACC**, at University of Florida’s Division of Cardiovascular Medicine. “We’ve focused so much on treatment that we’ve forgotten prevention. Patients want to know what they can do to their diet to support their health and heal their bodies. The goal is not perfection – the goal is to start the conversation.”

Importantly, these conversations also occur amid the realities of patients’ lives, including individual’s access to healthy foods, cost, cultural food preferences, limited time for meal preparation, and hectic lifestyles that often favor convenient prepared or highly processed food options.

“Nutrition is fundamental to cardiovascular prevention and treatment, and it’s something we should be prioritizing and normalizing,” says **Amit Khera, MD, MSc, FACC**, director, Preventive Cardiology, UT Southwestern Medical Center. “At every visit, when we see a patient, we should be inquiring about dietary patterns and habits.”

Khera and others say there is an urgent need to incorporate heart-healthy nutrition across cardiology care and not limit it solely to preventive visits. The good news is that even brief conversations about healthy eating patterns, simple food swaps (olive oil instead of butter, a handful of nuts instead of chips, water instead of soda), post-visit summary reminders, and leveraging educational tools can meaningfully shift patient dietary choices over time.

## What We Know About Nutrition and CV Risk

Studies consistently show that the foods – and, in many, cases beverages – individuals consume directly affect nearly every cardiometabolic condition cardiologists help manage, including:

- Lipids and atherogenic cholesterol levels
- Blood pressure
- Glycemic control and insulin sensitivity
- Endothelial function
- Inflammation
- Body weight and adiposity
- Chronic kidney disease
- Risk of recurrent cardiovascular events

As such, experts say dietary intervention should ideally be incorporated alongside statins, antihypertensives, antiplatelet therapies and cardiac rehabilitation as an integral part of primary and secondary prevention.

As well, accumulating evidence most strongly supports whole food, plant-forward dietary patterns for reducing cardiovascular risk factors

and improving long-term outcomes. Current cardiovascular prevention guidelines increasingly emphasize plant-based dietary patterns and long-term healthy eating focused on fruits, vegetables, whole grains, lean proteins, legumes and other fiber-rich foods rather than specific nutrients for lowering cardiovascular risk along with limiting consumption of saturated fat, sodium, added sugar and alcohol.

Several well-known, evidence-based eating patterns support the goal of eating whole, minimally processed foods, and have been linked to reduced cardiovascular risk (coronary heart disease, heart attack, stroke, death). These include:

- The Mediterranean diet
- DASH diet
- Whole food, plant-forward eating patterns

## Plant-Forward, Other Healthy Protein, More, Benefit the Heart

Protein has become a major focus of nutrition trends of late. From a cardiovascular perspective, experts

Continued on the next page

## KEY COMPONENTS OF HEART-HEALTHY EATING

- Focus on nutrient-rich plant-forward foods
- Minimize/replace high-saturated-fat animal meats, UPFs
- Eat plant-based or lean proteins
- Eat fruits and vegetables: 5+ servings/day
- Eat whole grains
- Limit sodium to  $\leq 2,300$  mg/day;  $\leq 1,500$  mg/day for high-risk patients
- Minimize added sugars:  $\leq 10\%$  of calories



say protein quality and source often matter over quantity alone. Current cardiology guidance supports shifting to plant-based protein sources – including beans, lentils, edamame, peas, soy and nuts – and limiting animal protein sources high in saturated fat. Plant-based protein sources have been associated with more favorable cardiovascular outcomes, including improvements in lipids and cardiometabolic risk factors. Indeed, recent findings show those who consumed the highest vs. lowest proportion of plant vs. animal protein had a 19% lower risk of cardiovascular disease and 27% lower risk of coronary artery disease (CAD). Furthermore, a ratio of 1:2 or closer to 1:1 of plant to animal protein is best to prevent CAD.

! Urge patients to shift toward more proteins from plants and fish and choose low-fat, no sugar-added dairy products. When eating meat,

opt for lean cuts and smaller portions (palm-sized portions) and limit processed meats, such as bacon and deli meat.

! Swap saturated fats (butter, margarine, coconut oils that are solid at room temperature) for unsaturated fats.

### Whole Grains

Whole grains retain fiber and nutrients that are largely lost during refining. Studies show that compared to infrequent intake, people who regularly eat whole grain foods are more likely to have improved lipid profiles, better BP and glycemic control, greater satiety, and an overall lower risk of cardiovascular disease, stroke and T2D.

! Encourage patients to choose whole grains (oatmeal, brown rice, quinoa, whole wheat bread or pasta) in place of refined grains (white

bread, white rice, pastries, and many packaged crackers and snack foods).

### Daily sodium targets

Limiting daily sodium intake to <2,300 mg/day (about a teaspoon of salt) – and closer to 1,500 mg/day for many high-risk patients – is an evidence-based way to help lower BP, reduce vascular stiffness, prevent fluid retention and ease excess workload on the cardiovascular system. This is especially important for patients with hypertension, heart failure or elevated cardiovascular risk.

! Teach patients to read nutrition labels and limit UPFs. Most sodium comes from packaged, processed and prepared foods.

### Added Sugars

Diets high in added sugars have been linked to poor cardiovascular health and higher risks of cardiovascular disease.

! Swap sugar-sweetened beverages for water or sparkling water and check the Nutrition Facts labels for added sugar (high-fructose corn syrup, cane sugar/syrup, fruit juice concentrates).

### Focus on Fiber

Only 5% of American adults get the recommended amount of fiber. Low fiber can contribute to poor cardiometabolic health. Higher fiber intake has been shown to improve cholesterol, BP, satiety and metabolic outcomes.

! Eating five servings of fruits and vegetables, whole grains and eating beans every day will provide patients with enough fiber. “It’s easier than you think,” says Aggarwal.

### Reconsidering Alcohol

Mounting evidence suggests that even low to moderate alcohol intake

## A WORD ON ULTRA-PROCESSED FOODS

**A**larmingly, UPFs make up over half of all calories in the average U.S. diet and they are growing in popularity. Higher consumption of these foods is increasingly linked to greater risk of obesity, hypertension, T2D, cardiovascular disease and all-cause death. A recent study found that people who consumed over nine servings of UPFs a day on average were 67% more likely to suffer a major cardiac event than people consuming about one serving of such foods a day.

But experts say it’s important to distinguish between normal food processing and ultra-processing. Minimally processed foods – for example, steel-cut or rolled oats, whole grains, frozen vegetables, canned no-salt beans, tofu and low-fat yogurt – can be part of a healthy diet. Many UPFs, however, are high in sodium, added sugars and saturated fats, all of which have been tied to hypertension, dyslipidemia, obesity and cardiovascular disease.

“The processing and prepping of food isn’t a bad thing. The concern is with UPFs that have been heavily altered, stripped of fiber and nutrients, and loaded with additives and preservatives,” explains Aggarwal, adding that many are engineered to be highly palatable, contributing to overeating and excess caloric intake. ■



## MAKE IT A HABIT

**M**aking time to talk about heart-healthy eating reaps dividends for patients. “If the cardiologist mentions healthy eating, patients will then recognize it’s important,” says Khera.

Engaging the entire team – physicians, nurses, PAs, nutritionists and behavioral health specialists – helps reinforce the cardioprotective benefits of healthy eating and support contemporary guidance about and attention to the role of nutrition.

The good news is that simple strategies – asking one open-ended question, using a brief questionnaire, providing a food prescription, or sharing nutrition-related educational materials and visuals at the point of care – can help start the conversation and, more importantly, help patients connect everyday choices to their long-term health, function and quality of life.

Here are eight practical ways to integrate and prioritize heart-healthy nutrition as part of routine cardiovascular care. ■

may raise BP and contribute to adverse cardiovascular outcomes with no clear threshold for any cardioprotective benefit.

❗ New guidelines emphasize limiting alcohol to reduce health risks. “We are no longer recommending alcohol for cardiovascular benefits. The focus is on limiting intake. And for those who don’t drink, don’t start” says Khera.

### Still Evolving Research

Questions remain about the cardiovascular effects of certain foods. Research is looking into the role of full-fat vs. low-fat dairy products, if there is an ideal amount of protein, as well as the long-term effects of highly processed foods.

Newer research is also testing whether food-as-medicine interventions, such as tailored meal programs, are cardioprotective and

1. **Consider using a brief, validated dietary questionnaire**, ahead of time or while patients are waiting to quickly assess eating patterns and identify opportunities for change.
2. **Start each visit with an open-ended lifestyle question** before discussing medications or symptoms. This helps engage patients about what matters most (staying active, having more energy and time with family, avoiding another stent) and connect dietary recommendations that match personal goals. For example: “Walk me through what dinner looked like yesterday.” “What are your go-to meals most weeks?”
3. **Write a “food prescription”** as with a medication order. “Aim for 5+ servings of fruits and vegetables a day, beans regularly and whole grains.”
4. **Display and share printable education tools** from **CardioSmart.org** and other reputable sources to spark discussion and reinforce heart-healthy eating patterns.
5. **Use a patient’s health measures** – elevated BP, dyslipidemia, elevated glucose or weight trends – **as teachable moments** to connect dietary habits with cardiovascular risk.
6. **Carefully use AI with appropriate prompts to help generate heart-healthy recipe ideas** for patients tailored to their individual food preferences, culture and budget.
7. **Use follow-up visits to check in, celebrate successes** and reinforce achievable heart-healthy habits.
8. **Automate registered dietitian referrals**, when appropriate.

Visit [ACC.org/Guidelines](https://www.acc.org/Guidelines) for the latest ACC Clinical Guidance, including new guidelines on High Blood Pressure, Dyslipidemia and CKM Syndrome and ACC Scientific Statements and Concise Clinical Guidance on obesity.

may reduce barriers to heart-healthy eating patterns and support long-term cardiovascular risk reduction.

### Translating Nutrition Science Into Practice

It's not easy to change dietary behaviors and clinicians have limited time for nutrition counseling. But there are some strategies to help make dietary guidance stick.

#### Simple Messages Matter

Keep the message simple and actionable, say the experts.

"Patients can quickly feel overwhelmed by broad recommendations, such as "eat better" without any specific guidance. Yet, overly detailed instructions about nutrient targets, daily percentages, grams of specific nutrients, can be hard to follow," says **Viet Le, DMSc, MPAS, PA-C, FACC**, editor of CardioSmart, ACC's patient engagement program.

"Patients don't need complicated nutrition science," says Aggarwal. "Keep the focus on the person's overall eating patterns and practical changes that fit their life."

#### Avoid Leading With Restrictions

"Patients do better when they are not just told 'avoid this,' but helped to build a repeatable pattern," says Williams.

He advises patients to add healthy foods - for example, a rainbow of colorful fruits and vegetables, beans, intact whole grains (such as oats and barley), nuts, seeds, and unsaturated plant oils - and gradually replace foods high in saturated fat such as butter, processed meats and fried foods.

#### Meet Patients Where They Are

This is important in terms of their readiness, lived experience and motivation to make dietary changes. Tailor recommendations to personal and cultural preferences and daily life - making dietary changes feel

practical and sustainable within their daily routines.

### Simple Visuals, Tools Support Conversations

"Conversations about nutrition don't have to start when the clinician enters the room," says Le. "Simple visuals in the waiting and exam rooms help patients start making sense of what they're seeing in their own lives. This creates a more natural, shared starting point for a conversation about heart-healthy eating."

CardioSmart's patient-facing Healthy Living resources and other reputable tools, including the *My Healthy Plate* visual, can help busy practices deliver nutrition and lifestyle counseling, and help translate evidence into something patients can see, understand and act on at home.

Le adds these materials can help reinforce the message that nutrition is an integral part of cardiovascular care. ■

## CARDIOSMART'S HEALTHY LIVING RESOURCES

Visit [CardioSmart.org/HealthyLiving](https://www.CardioSmart.org/HealthyLiving) to download and print these free resources and more to start and support conversations with patients.

The collage features several key resources:

- Heart-Healthy Eating:** A visual guide titled "To protect your heart, focus on..." listing categories like Fruits, Veggies, Healthy fats, Whole grains, and Lean proteins. It includes a "DASH eating plan" section with specific recommendations like "Eat more fruits, vegetables, whole grains, nuts" and "Limit salt to less than 1,500 mg/day".
- SUGARS & SWEETENERS:** An infographic titled "SUGAR" stating "ON AVERAGE, Americans consume 17 teaspoons of ADDED SUGAR each day." It lists sources like soft drinks, candy, and baked goods.
- 5 Ways Regular Physical Activity Benefits Your Heart:** A circular infographic listing benefits such as "Strengthens your heart muscle", "Lowers blood pressure", "Improves cholesterol levels", "Helps with weight management", and "Reduces stress".
- 8 Tips to Move More Every Day:** A checklist of practical tips like "Walk about 10 minutes each day", "Take the stairs", and "Park further away from the store".
- Knowing Your Salt Intake:** A guide titled "COMMON NAME FOR ADDED SUGAR" and "Knowing Your Salt Intake" that explains how to read nutrition labels and understand sodium content.
- Move More for Your Heart and Health:** A general infographic with a heart character and tips on increasing daily activity.

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# 3 Meetings, 5 Trends Impacting EP Practice

Cardiac electrophysiology (EP) is evolving quickly and data presented this year at ACC.26, European Heart Rhythm Association (EHRA 2026) and Heart Rhythm Society (HRS 2026) suggest practice may change just as fast. Across stroke prevention, ablation, pacing, ventricular arrhythmias and site-of-service decisions, five themes emerged as most likely to shape EP in the near term.

## 1 Stroke prevention in AFib has become more nuanced.

Oral anticoagulation (OAC) remains first-line for stroke and systemic embolism (SE) prevention in atrial fibrillation (AFib). OCEAN and ALONE-AF, however, suggest AFib ablation and/or left atrial appendage occlusion (LAAO) may be reasonable alternatives to continuing OAC.<sup>1</sup>

However, an OCEAN substudy presented at EHRA 2026 revealed a 6% annual AFib recurrence rate after ablation. These episodes were brief, infrequent and not associated with an increased risk of stroke.<sup>2</sup>

CLOSURE-AF raised concerns that physician-directed standard care (primarily with OAC) was superior to LAAO for a composite endpoint of stroke, SE, cardiovascular or unexplained death, or major bleeding.<sup>1</sup> Yet, LAAO was shown to be noninferior to OAC for a composite endpoint of stroke, SE and cardiovascular death in CHAMPION-AF.<sup>3</sup> Of note, a higher, nonsignificant rate of ischemic stroke was observed in the LAAO arm (3.2% vs. 2.0%).

A subsequent CHAMPION-AF substudy, presented at HRS 2026, determined that patients with prior AFib ablation and LAAO had the lowest rate of ischemic stroke/SE (1.9%), vs. prior ablation with OAC (2.4%), no prior ablation with OAC (2.1%) and no prior ablation with LAAO (4.5%).<sup>4</sup>

## 2

### PFA to become the new standard for ablation.

Pulsed field ablation (PFA) quickly moved from promising alternative to likely new standard in catheter ablation (CA) over thermal energy sources.

The PFA Live Summit at HRS 2026 showcased over a dozen new or existing PFA catheters for the treatment of novel ablation targets in AFib, atrial flutter, ventricular tachycardia (VT) and concomitantly with LAAO. And, six late-breaking clinical trials featured PFA performance in the treatment of paroxysmal AFib (variable loop circular catheter), persistent AFib (AVANT GUARD), and VT (Sphere-9 catheter), as a dual-energy ablation catheter for AFib (FlexPulse IDE Study) and for VT (Sphere-9 catheter), and as nanosecond delivery catheter (CellFX nsPFA-360 catheter).<sup>5</sup>

Similarly, the PFA Summit at EHRA 2026 highlighted the technology, foundation, clinical evidence and application of PFA, and late-breaking clinical trials showed its safety and efficacy against cryoablation in paroxysmal AFib (FACIL-AF, PERFECT-AF, SINGLE SHOT CHAMPION) and radiofrequency ablation in persistent AFib (BEAT PERS-AF).<sup>2,6</sup>

## 3

### Conduction system pacing continues to gain momentum.

A similar shift is underway in conduction system pacing (CSP), which has evolved from His-bundle pacing to left bundle

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branch area pacing (LBBAP) with dedicated implantation tools to address technical challenges.

LBBAP has become preferred over right ventricular pacing, supported by trials such as LBBP-FAVOUR, presented at HRS 2026, and as an acceptable substitute for CRT with biventricular pacing, supported by trials such as LECART and LEFT-BUNDLE-CRT, presented at EHRA 2026.<sup>5,7</sup> Furthermore, CSP has been adopted in ICD implants and is undergoing evaluation in leadless pacemakers, supported by ASCEND CSP and LEAP2, respectively, presented at HRS 2026.<sup>5</sup>

## 4

### CA favored in ventricular arrhythmias.

Ventricular arrhythmias have become more amenable to treatment with CA given advances in ablation technique. This was best illustrated by multiple LBCTs at HRS 2026. Radiofrequency (RF) catheter ablation was superior to antiarrhythmic drug therapy to reduce recurrent VT in ischemic or nonischemic cardiomyopathy (51% vs. 71%,  $p=0.054$ ) in CAAD-VT.<sup>5</sup> A more provocative study suggested a single CA could potentially obviate

the need for ICD implant in patients with VT and structural heart disease with LVEF  $\geq 40\%$ .<sup>8</sup>

Other notable trials

included use of ultra-low temperature cryoablation system to treat VT (FULCUM-VT); intramural RF ablation guidewire to treat intramural VT (VINTAGE VT); and dual energy (PF/RF) lattice-tip catheter to treat VT and premature ventricular contractions.<sup>5</sup>

## 5

### ASCs provide new location for ablation procedures.

The landmark decision this year by the Centers for Medicare and Medicaid Services (CMS) to approve cardiac ablation in ambulatory surgical centers (ASCs) is expected to shift a portion of outpatient hospital-based AFib ablation procedures there. Substantial debate remains on safety and quality of ASC workflow, whether additional EP credentialing for ASCs should be considered and uncertainty on how to incentivize EP involvement.

The joint ACC/HRS Scientific Statement: *Guiding Principles on the Performance of Intracardiac Ablation Procedures in Ambulatory Surgical Centers* provides guidance. ■

References available with the online version of this article at [ACC.org/Cardiology](https://www.acc.org/Cardiology).

Scan the QR code to download the full document.



This article was authored by **Edward Chu, MD, FACC**, (@Ed\_Chu\_MD), a cardiac electrophysiology attending physician in Miami, FL.

## Multimodality Imaging: Harnessing Growing Opportunities

A middle-aged man with volume overload, diabetes and elevated transferrin saturation. An elderly woman with severe tricuspid regurgitation, worsening abdominal bloating and dyspnea on exertion. An elderly man with left ventricular hypertrophy, carpal tunnel syndrome and hypotension despite guideline-directed medical therapy.

These are just a few of the clinical scenarios where multimodality cardiovascular imaging plays an increasingly vital role in diagnosis, patient management and procedural planning. For fellows, the growth in advanced imaging continues to open promising new career trajectories; however, these opportunities require a necessary shift in training.

Our new generation must learn both how to effectively select an ever-expanding array of sophisticated imaging modalities as well as develop the skills to optimally interpret and communicate their findings. Together, these new capabilities will drive better outcomes for patients with cardiovascular disease.

### The Many Faces Of Multimodality Imaging

For decades, echocardiography and nuclear imaging techniques have been central to evaluating patients with suspected cardiovascular disease. Clinical echocardiography dates to the 1950s, while stress testing with nuclear myocardial

perfusion imaging has been a cornerstone of chest pain evaluation since the 1970s.<sup>1-3</sup>

Today, multimodality imaging has expanded to include cardiac CT, cardiac MRI and an ever-growing armamentarium of nuclear radiotracers. This evolution parallels advances in structural interventional cardiology and heart failure, where advanced imaging is essential for preprocedure planning and assessment of various etiologies of nonischemic cardiomyopathies such as amyloidosis and sarcoidosis. Simultaneously, operational efficiency demands thoughtful use of stress testing and coronary CT angiography for expeditious evaluation of patients with acute chest pain.<sup>4</sup>

### Training In Multimodality Imaging

To fully leverage these modalities, training must evolve. For noncardiac imagers, whether general cardiologists or subspecialists, a baseline familiarity with various modalities, including the indications, contraindications, strengths and limitations, is crucial to ensure appropriate test selection for the right patient in the right clinical context. There is a growing need for cardiologists with advanced cardiac imaging expertise who can not only interpret the expanding array of imaging modalities but also serve as consultants to guide clinicians in this



Scan the QR code for the Advanced Training Statement.

increasingly complex test selection process.

The Core Cardiovascular Training Statement (COCATS) 4 training documents for Task Forces 4 to 8 provide guidance for multimodality imaging training within the context of general cardiovascular disease training. These documents focus on a baseline level of training for the general cardiologist (Levels I and II) and cover competencies within echocardiography, nuclear cardiology, cardiac CT and cardiac MR.<sup>5</sup>

While COCATS 4 provides guidance for basic training, the specific requirements for cardiovascular disease fellowships have been set forth by the Accreditation Council for Graduate Medical Education (ACGME). Completion of these requirements is necessary for trainees to sit for the board examination in cardiology, administered by the American Board of Internal Medicine (ABIM).

Although largely aligned, differences exist between these frameworks, such as training time requirements across imaging modalities. Importantly, COCATS 4 does not offer a unified competency framework necessary for advanced multimodality imagers with respect to gaining knowledge and skills across all four main imaging modalities.

In November 2025, the ACC, in collaboration with the AHA and major imaging societies, published an Advanced Training Statement (ATS) on Advanced Cardiovascular Imaging to address this gap.<sup>6</sup> This document outlines not only the role of advanced cardiac imagers, but also the key components of training in each modality.

While core education occurs during general cardiovascular disease fellowship, aspiring advanced cardiovascular imagers will need additional training and be expected to have foundational knowledge in all modalities with deeper expertise in one or two areas.

The ACC Imaging Member Section lists advanced imaging training programs and serves as a valuable resource for fellows considering additional training in multimodality imaging. Still, there is a lack of standardization across programs in terms of modalities covered, duration of training and respective application timelines. Although the ATS may aid in standardization, the lack of ACGME accreditation and variability of funding mechanisms across institutions will remain barriers to coordinated adoption of these recommendations.<sup>7</sup>

Additionally, it is not clear at this time how ACGME, ABIM or imaging board certification requirements will incorporate the ATS guidance. Within this variable landscape, mentorship from experienced multimodality cardiovascular imagers and program directors is critical - not only to

learn the technical skills of image acquisition and interpretation but also for navigating the diverse training pathways aligned to one's career goals. These individuals can provide guidance regarding the optimal use of elective time during general fellowship, board certification requirements and whether to pursue advanced imaging training.

### Different Career Paths

Upon completion of cardiovascular imaging training, fellows encounter a growing array of career opportunities. Large tertiary medical centers may have sufficient volume to support dedicated cardiovascular imagers specializing in specific modalities, while smaller practices often expect cardiologists to interpret imaging alongside other clinical duties.

Moreover, day-to-day workflows will continue to evolve as artificial intelligence facilitates image protocoling, acquisition, interpretation and reporting. Regardless of the ultimate practice environment, demand for expert practitioners with unique skills in advanced imaging modalities will

certainly grow. Working side-by-side with multimodality advanced imaging cardiologists during fellowship is critical for trainees to envision a future career path in this relatively new discipline, overcoming a familiarity gap that may dissuade some from pursuing these exciting and expanding roles.

Trainees today can capitalize on these developments by engaging with multimodality imaging during general cardiovascular disease fellowship and by pursuing advanced subspecialty training. Those who do will acquire a valuable skillset they can bring to multidisciplinary cardiovascular teams caring for patients across the disease spectrum. The new ATS on multimodality imaging provides a framework for further evolution of training across these disciplines, complementing efforts within each imaging modality. Now is the time for institutions, programs and trainees to embrace these growing opportunities. ■

*References available with the online version of this article at [ACC.org/CARDIOLOGY](https://www.acc.org/CARDIOLOGY).*



This article was authored by **Matthew R. Carey, MD, MBA**, a third-year fellow at Brigham & Women's Hospital, in imaging and clinical operations. He thanks **Ron Blankstein, MD, FACC**, **Yee-Ping Sun, MD, FACC**, and **Kenneth Guber, MD**, for their helpful comments and feedback for this article.



Interested in imaging? Are you a FIT? **Scan the QR code** to learn about and join these ACC Member Sections and more.

# Transcatheter Treatment of Mitral Annular Calcification: Where Do We Stand?

**M**itral annular calcification (MAC), which can produce mitral regurgitation (MR), mitral stenosis or both, is among the most challenging conditions to manage in cardiovascular medicine due to anatomic and patient complexity. Therapeutic options for patients with MAC have been medical therapy or surgery, but transcatheter therapies have opened the door to minimally invasive management.

Initially, the SAPIEN valve was promising as a transcatheter therapy for MAC given the ease and familiarity of use as operators have experience with these systems for the treatment of aortic stenosis. However, broad uptake has been limited by variable technical success and inconsistent durability of these valves in the treatment of MAC.

In the valve-in-MAC arm of the MITRAL trial, for instance,<sup>1</sup> transcatheter mitral valve replacement (TMVR) using the

SAPIEN valve (**Figure**) demonstrated procedural feasibility in patients with MAC at high surgical risk and was associated with improvements in NYHA functional class. But procedural success was achieved in only approximately half of treated patients, highlighting the technical challenges of anchoring aortic balloon-expandable valves within heavily calcified mitral annuli.

Moreover, there were substantial risks postprocedure, including a 34.5% risk of mortality at one year. Early mortality was driven largely by

left ventricular outflow tract (LVOT) obstruction, the most dreaded complication of TMVR in which the anterior mitral leaflet is displaced into the LVOT, reducing cardiac output, particularly in patients with small or hyperdynamic LV cavities.

Late mortality, in contrast, was due primarily to comorbidity burden and overall poor health substrate.

The ongoing MITRAL II trial (NCT04408430) is studying a larger cohort of patients with MAC being treated with the SAPIEN valve, but at present, the use of the SAPIEN valve

In the SUMMIT-MAC trial, ... there were significant improvements in heart failure symptoms, with 87.5% of patients having NYHA class I/II symptoms after treatment.

**Figure.** Transcatheter Mitral Valve Replacement Devices



SAPIEN 3 Ultra RESILIA



SAPIEN M3



AltaValve



Careful patient selection is crucial when considering transcatheter therapies for the treatment of MAC.

for the treatment of MAC remains an off-label procedure.

In contrast, Tendyne and M3 (**Figure**) are dedicated TMVR devices which are now approved by the U.S. Food and Drug Administration for use in patients with MAC.

In the SUMMIT-MAC trial, TMVR with Tendyne, a transapical transcatheter device, was feasible and technically successful in 94.2% of patients with mitral valve disease due to MAC.<sup>2</sup> There were significant improvements in heart failure symptoms, with 87.5% of patients having NYHA class I/II symptoms after treatment.

Additionally, quality of life metrics as evaluated by the Kansas City Cardiomyopathy Questionnaire improved substantially.

### Dedicated Mitral Devices

The ENCIRCLE trial evaluated the transeptal mitral-specific system, M3, for the treatment of patients with MR. Although the trial did not have a dedicated MAC arm, 24% of enrolled participants had comorbid MAC. The M3 device was associated with a significant reduction in MR severity, a lower mortality rate (13.9%) than was observed in MITRAL, and substantial improvements in functional status and quality of life.<sup>3</sup>

Despite the development of dedicated mitral devices, many patients (upwards of 70%) are not

candidates for these devices due to anatomic limitations including mitral annulus size and the potential risk for LVOT obstruction. Careful patient selection is crucial when considering transcatheter therapies for the treatment of MAC.

Computed tomography is necessary when planning TMVR as it allows operators to gain a detailed understanding of annular calcium distribution and to obtain an accurate estimation of the neo-LVOT after TMVR.<sup>4</sup>

Such planning also helps the heart team understand a patient's risks and benefits for TMVR and guides adjunctive therapies that may facilitate procedural success, including septal reduction (i.e., with alcohol septal ablation or SESAME) or preemptive leaflet modification (i.e., with the LAMPOON procedure).<sup>5-7</sup>

### In the Pipeline

Other devices are in development to potentially overcome the concern

for LVOT obstruction, including the AltaValve. AltaValve consists of a supra-annular left atrial anchored system (**Figure**) which avoids LV anchoring altogether, lessening the risk of LVOT obstruction and ventricular device migration.

In an early feasibility study, AltaValve saw a 96% procedural success rate, and the device was safe and associated with good valve function at six months in patients requiring mitral valve replacement for MR.<sup>8</sup> Randomized data and longer term follow-up in patients with MAC are required to definitively understand the efficacy of the device.

### Looking Ahead

Treatment of MAC is an ongoing challenge. Nonetheless, the future of transcatheter therapy for MAC is bright as advances in dedicated, mitral-specific, TMVR platforms offer promising treatment options for this historically undertreated, high-risk patient population. ■

*References available with the online version of this article at [ACC.org/CARDIOLOGY](https://www.acc.org/CARDIOLOGY).*



This article was authored by **Prakriti Gaba, MD, MPH**, a structural/interventional cardiology fellow, and **Pinak B. Shah, MD, FACC**, director of cardiac catheterization lab and section chief of interventional cardiology, both at Mass General Brigham and Harvard Medical School in Boston, MA.

## NEW CARIOGENIC SHOCK DESIGNATION Addresses Deadly Gap in Chest Pain Care

The ACC has announced a new Cardiogenic Shock Designation to improve outcomes for one of the most life-threatening complications of myocardial infarction. The new designation builds on the success of the ACC Chest Pain Center Accreditation, which has helped hospitals standardize and improve care for patients presenting with acute coronary syndrome (ACS), but has not previously addressed cardiogenic shock.

“The Cardiogenic Shock Designation is not just another layer of accreditation – it is a structured approach to improving survival in one of the highest-mortality conditions in cardiovascular medicine,” says **Michael C. Kontos, MD, FACC**, chair-elect of ACC’s Accreditation Oversight Committee. “The program clarifies roles,

reduces variation, and strengthens coordination across the emergency department, cath lab, cardiac intensive care unit, and advanced heart failure teams.”

Affecting nearly one in 10 patients suffering from STEMI, cardiogenic shock contributes to roughly 27,000 deaths each year in the U.S., and mortality remains disproportionately high in part due to lack of standardized protocols, performance measures and regional coordination.

The new designation has been developed in alignment with ACC’s 2025 Concise Clinical Guidance (CCG) report on the evaluation and management of cardiogenic shock, and includes essential components, performance measures and system-of-care expectations that reinforce evidence-based practice.



Scan the QR code to access the CCG published in JACC.





## Pairs with NCDR Chest Pain - MI Registry®

Currently, care for patients with cardiogenic shock varies widely across hospitals as many lack clear pathways to recognize the condition early, escalate care quickly or obtain access to advanced therapies like temporary mechanical circulatory support. These gaps can lead to delays in treatment or failure to urgently transfer patients to other facilities, significantly worsening outcomes.

To address these disparities, particularly in underserved areas, the ACC is partnering with Johnson & Johnson's Abiomed on a grant program to support rural hospitals implementing the new ACC Chest Pain Center Accreditation with Shock Designation.

The program will fund 10 rural hospitals for one year, covering accreditation fees and participation in the NCDR Chest Pain - MI Registry, which supports ongoing data measurement and quality improvement. The initiative aims to extend lifesaving cardiogenic shock care to communities with limited access to advanced cardiac resources.

"ACC Chest Pain Center Accreditation has helped hospitals deliver faster, more consistent, evidence-based care for heart attack patients, but cardiogenic shock remains an unacceptably deadly gap in our systems of care," says ACC CEO **Cathleen C. Gates**. "By introducing a dedicated Cardiogenic Shock Designation and supporting rural hospitals, we are creating a framework that brings structure, accountability, and data-driven improvement to some of the highest risk patients in cardiovascular care, no matter where they live, with the goal of saving lives and improving long-term outcomes."

### New Registry Enhancements Coming This Summer

The NCDR Chest Pain - MI Registry offers hospitals and care teams a comprehensive view of how patients with chest pain or ACS symptoms are managed across the entire care continuum.

Through a series of dashboards - including facility-level, professional-

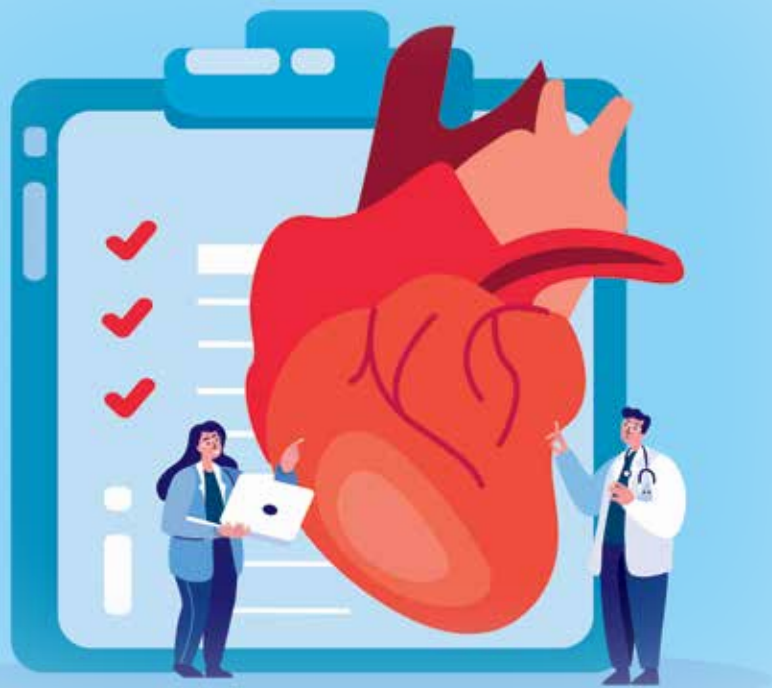
level, population analytics and intersystem care delivery - the registry provides participating organizations with the data-driven insights, analysis and research needed to inform clinical and operational decisions.

This summer, the registry is introducing new enhancements to streamline workflows, add targeted new features, strengthen coordination with emergency medical services and ensure full alignment with current national guidelines. The changes will also include updated shock-related data elements to be used for the new Cardiogenic Shock Designation.

"The updated Chest Pain - MI Registry includes new data points for cardiogenic shock patients that track shock identification, hemodynamic profiling and early escalation metrics," notes Kontos. "These additions create a shared data backbone for both the registry and the Cardiogenic Shock Designation, allowing teams to track performance, benchmark outcomes and close treatment gaps." ■

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## ACC Urges Changes as Ambulatory Specialty Model Approaches

**W**ith the mandatory Ambulatory Specialty Model (ASM) for Heart Failure (HF) slated to begin Jan. 1, 2027, the ACC is prioritizing member awareness and education, while pressing the Centers for Medicare and Medicaid Services (CMS) to address key issues with the model's design and requirements.

ACC's primary concerns regarding the current model include:

- Focusing on the cardiologist as an individual, contrary to the ACC-endorsed standard of the team-based approach to HF treatment.
- Adding administrative and reporting burden.
- Failing to account for specialist and workforce distribution.

- Lacking timely and actionable data for clinicians to improve patient care and outcomes.
- Creating a win-lose-draw structure for all participants.
- Requiring an HF episode cost measure new to MIPS reporting and lacking data transparency for the intended ASM usage.

In response, the College has made the following recommendations to CMS in meetings with agency staff and through formal written comments:

- Limit ASM downside and upside risk at +/-2% using a phased-in approach tied to the model's stability and participant readiness.
- Require at least one dedicated educational and testing year before financial accountability begins.

## MORE ASM NEWS: INCORRECT SPECIALTY CLASSIFICATIONS IDENTIFIED IN PARTICIPANT LIST

An ACC analysis of the preliminary participant list for the ASM for HF found that up to 20% of selected cardiologists may be incorrectly classified under the specialty cardiovascular disease/ cardiology. Because the model is intended to include only general cardiology, these discrepancies could result in some clinicians being inappropriately included in the mandatory payment program. **Scan the QR code** to learn more about these discrepancies and what action may be required.



- Provide participants with actionable, near-real-time cost and quality data to support timely clinical decision-making.
- Replace individual-clinician attribution with a team-based methodology that reflects the multidisciplinary nature of HF care.
- Establish a built-in goal score based on guideline-directed clinical care that protects participants achieving meaningful improvement from financial penalties.
- Incorporate risk-adjustment for clinical complexity, comorbidities and social determinants of health.

Looking for more information on how to prepare for the ASM for HF? Visit **ACC.org/ASMForHF** to access resources developed by ACC's Payer and Care Delivery Policy Team. ■

## Join **ACC Advocacy** on Capitol Hill This Fall

It's time to register for **ACC Legislative Conference 2026**, happening Oct. 4-6 in Washington, DC! Grab a front-row seat to the decisions shaping the future of cardiovascular care, connect with ACC leaders and fellow clinicians dedicated to advocacy, and make your voice heard on Capitol Hill.

Last year, more than 400 cardiovascular clinicians, including 100 young professionals and 50 cardiovascular team members, joined ACC Advocacy to advocate for their patients on the Hill. Attendees participated in close to 300 meetings with congressional offices, increasing co-sponsorships for several ACC priority bills such as the *Creating Opportunities Now for Necessary and Effective Care Technologies (CONNECT) For Health Act*, the *Resident Education Deferred Interest (REDI) Act* and the *Improving Seniors' Timely Access to Care Act*.

Throughout 2026, ACC Advocacy staff have been working to educate lawmakers, strengthen relationships with health policy champions and continue to advance the College's priorities. A strong showing from the cardiology community is



essential so that Congress understands the real-world impact policy decisions have on patient care.

According to **Samuel O. Jones IV, MD, MPH, FACC**, "Now more than any other time we've got to be engaged. I really appreciate the ACC letting me, and 400 of my closest colleagues from around the cardiovascular care team, come up and advocate for those issues that are important to us and our patients."

Don't miss ACC's most impactful advocacy event of the year! Learn more and register at [ACC.org/LegislativeConference](https://www.acc.org/LegislativeConference). ■



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## Inaugural Fuster Prevention Forum: Local Action. Stronger Hearts.

The ACC's inaugural Fuster Prevention Forum last month is part of the College's longer-term efforts to sharpen the focus on early cardiovascular disease prevention. The first cohort of nearly 50 clinicians was equipped with training and practical tools to drive meaningful change in their communities.

Centered on a life-course approach, the two-day Forum underscored the importance of early risk identification, sustained risk reduction, and coordinated care across clinical and community settings. Sessions also highlighted practical lessons for impact, with faculty providing actionable ways to translate evidence into action.

Among the key takeaways, **Jorge Baxter, PhD**, reinforced seven guiding principles for community-based prevention: 1) start early; 2) communicate in ways patients understand; 3) incorporate play, interaction and movement; 4) acknowledge the role of environment; 5) take multidimensional approaches; 6) prioritize training; and 6) continuously monitor and adjust interventions.

**Neha J. Pagidipati, MD, FACC**, also emphasized the importance of theories, models and frameworks in designing programs that are both effective and enduring. "They help keep track of the many components of implementing, evaluating and sustaining an intervention," she said.

Across all discussions, a clear message emerged: prevention succeeds when it becomes embedded in culture, not treated as a standalone project. "Beyond our professional responsibilities, contributions to society are always possible; what matters most is choosing to contribute, whether at a small scale or at a large one," said **Valentin Fuster, MD, PhD, MACC**. ■



Visit [ACC.org/FusterPreventionForum](https://acc.org/FusterPreventionForum) for more information.



Scan the QR code to watch a video with Fuster and Baxter about the broader Fuster Heart Movement.



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