CARDIOLOGY

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ADIPOKINE HYPOTHESIS:
A New Framework For Understanding HFpEF

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MARCH 2026
Vol. 55 No. 2

WHAT'S INSIDE

Honoring Excellence: ACC's 2026 Distinguished Awards

Richard A. Chazal, MD, MACC, Awards Committee Chair | John Gordon Harold, MD, MACC, Cardiology Editor-in-Chief

Honoring excellence has always been at the heart of the ACC's Mission, and each year the Distinguished Awards remind us just how many remarkable individuals shape the future of cardiovascular medicine. More than ceremonial acknowledgments, these awards are a living record of the people whose work, leadership and vision elevate our profession and improve lives worldwide.

Since their inception, the Distinguished Awards have evolved alongside the field itself. What began as a small set of recognitions has grown into a robust portfolio spanning clinical excellence, scientific discovery, education, service and global impact. Today, up to 18 awards are presented annually, along with Master of the ACC (MACC).

This year, the Awards Committee reviewed nearly 70 nominations, including a record number for MACC. This growth reflects the dedication of ACC members who invest time and care to capture a colleague's achievements and character, ensuring each nomination tells a complete, compelling story of impact and commitment.

The Committee's work begins even before the call for nominations opens, ensuring categories remain aligned with the ACC's Mission and responsive to the evolving landscape of cardiovascular care. Some awards, like the Distinguished Scientist Award, have expanded to recognize basic, clinical and translational science. Others, such as the education honors, have been refined to better reflect the breadth of teaching and mentorship in our community. And new awards added over the past decade highlight emerging areas of influence across the profession.

The deliberation process is both joyful and challenging. With so many exceptional nominees, selecting just one honoree per category is never easy. Yet the result is a slate of awardees whose work inspires all of us. As we celebrate this year's recipients (see page 24), we also encourage every member to continue nominating colleagues whose contributions deserve recognition. These thoughtful nominations sustain a tradition that strengthens our community and elevates our shared Mission.

While we honor the past and present through the Distinguished Awards, this month's cover story turns our attention to the future. We take an inside look at the Adipokine Hypothesis proposed by **Milton Packer, MD, FACC** – a provocative framework that could reshape how we understand heart failure and open new pathways for treatment and management.

Also in this issue, get a sneak peek at the exciting program planned for ACC.26 in New Orleans later this month. We hope to see many of you there as we celebrate excellence, explore new science and chart the next steps for cardiovascular care. ■

Scan the QR code to learn more about the Distinguished Awards Program nomination process and award criteria. Special thanks to Robyn Snyder, ACC staff liaison to the Awards Committee.

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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* or connect on social media using @ACCinTouch.

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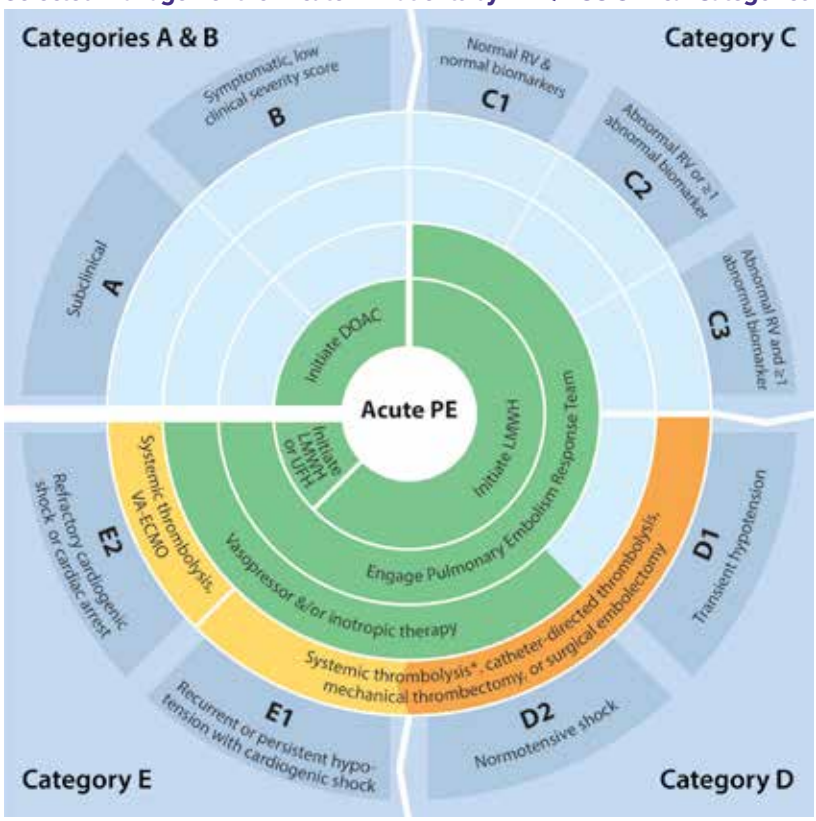
A Blueprint For Modern Acute PE Management

The just-released ***ACC/AHA Guideline for the Evaluation and Management of Acute Pulmonary Embolism (PE) in Adults*** is a de novo document offering comprehensive, evidence-based recommendations for the evaluation, management and follow-up of adults with acute PE. Collaborated on and endorsed by an additional eight societies, the new guideline recognizes that management of patients with acute PE "is uniquely multidisciplinary and crosses emergency department, inpatient settings and outpatient clinics." ■

5 The number of new "PE Clinical Categories" (A-E) and subcategories that are central to the new guideline and provide a framework designed to sharpen severity classification, improve prognostic accuracy, and guide therapeutic decision-making across the acute and early post-acute phases of care.

E1 The AHA/ACC PE Category in which it is reasonable to consider advanced therapies, including systemic thrombolysis, catheter-based thrombolysis, mechanical thrombectomy and surgical embolectomy.

Selected Management for Acute PE Patients by AHA/ACC Clinical Categories



Dudzinski DM, et al. JACC. 2026;10.1016/j.jacc.2025.12.023

Table **11**

The last table in the guideline outlining where significant evidence gaps persist across multiple domains of care. "Current challenges include refining risk stratification tools – such as validating the AHA/ACC clinical categories and integrating novel predictors like thrombus burden and [right ventricular] enlargement metrics – to better guide therapeutic decisions," write the authors.

Class **1**

The recommendation level for use of low-molecular-weight heparin over unfractionated heparin in patients with acute PE who require initial parenteral anticoagulant therapy.

1 Year

The minimum duration that patients who have had acute PE should be asked about PE-related symptoms and functional limitations at every visit in order to screen for chronic thromboembolic pulmonary disease or other causes of dyspnea and functional limitation.

7 The number of benefits associated with PE Response Teams (PERTs), which are recommended in the guideline to improve timeliness of care. The guideline also outlines **13** possible members of a PERT, including vascular medicine, pharmacy, nursing, emergency medicine, the patient and/or family members, cardiac surgery and more.

Scan the QR code to access the Acute PE Guideline Hub, including the Guideline-At-A-Glance. Access all of the ACC's current clinical guidance at ***JACC.org/Guidelines.***

Guidelines Galore at ACC.26

8 The number of guidelines (including the Acute PE Guideline, and the brand new Dyslipidemia Guideline slated for release in the coming weeks) featured in dedicated education sessions during ACC.26. Plus, test your overall guideline knowledge with the return of the Guideline Goldmine Gameshow and a Heart2Heart Stage discussion with experts involved in the creation of ACC Clinical Policy. **Scan the QR code** for more details.

In Memoriam: Raymond D. Bahr, MD, FACC

Raymond D. Bahr, MD, FACC, renowned cardiologist, leader and advocate, passed away on Jan. 14 at the age of 90.

Many of those who knew Bahr heard his story about Jack, the local tailor, who had come by the pharmacy where Bahr was working when he was 22, complaining about mild chest discomfort and who ultimately died of a heart attack later that day. That moment, according to Bahr, is what inspired him to become a cardiologist and jumpstarted his lifelong commitment to improving heart attack care in the hospital and in the community.

Bahr received his medical degree from the University of Maryland School of Medicine and completed his residency at Johns Hopkins Bayview Medical Center and St. Agnes Hospital, both in Baltimore. Among his many accomplishments, Bahr was instrumental in creating the first-ever Chest Pain Center in the Emergency Room at St. Agnes in 1981. He was also behind the creation of the Society of Chest Pain Centers in 1998, which later became the Society of Cardiovascular Patient Care (SCPC), and ultimately transitioned to ACC Accreditation Services in January 2016. Still troubled by the number of heart attack patients who didn't even make it to the hospital, Bahr also created the Early Heart Attack Care (EHAC) educational program.

When he wasn't saving lives and educating people, Bahr was busy spending time with his wife and family and was a tireless advocate for social justice and the environment, a passionate fan of the Orioles and Ravens, and an avid historian of Canton, MD.

"Dr. Bahr leaves behind a 50-year legacy dedicated to stopping heart attacks before they occur. Starting with the Paul Dudley White Coronary Care Unit at St. Agnes Hospital to what we know today as ACC Accreditation Services, he impacted the lives of countless fellows and mentees, while also reaching millions through EHAC," says **ACC CEO Cathleen Gates**. "It was a true privilege to know him, and we are honored to continue carrying on his work." ■

Global CV Society Statement Urges Action on Environmental Threats to CV Health

A joint statement released by the ACC, European Society of Cardiology, American Heart Association and World Heart Federation calls for urgent action to address environmental stressors as major, yet preventable, causes of cardiovascular disease.

The statement focuses on key environmental stressors, including noise/light pollution, climate change, chemical pollution, soil pollution, and air and water pollution, and outlines the following six overarching priority areas where a unified approach to prevention and policy can drive change.

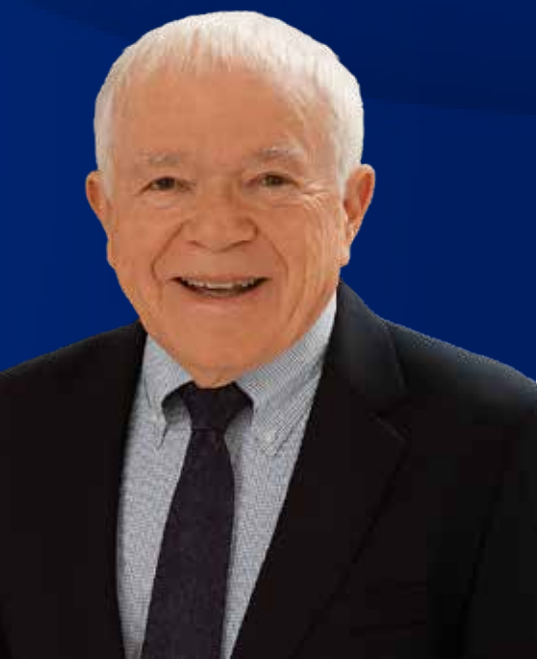
1. Global advocacy and policy alignment that prioritizes environmental effects on cardiovascular health.
2. Investment in research on the impacts of environmental risk factors to inform targeted action.
3. Education and increased awareness among health care professionals and the public on environmental risk factors.
4. Urban planning and policies promoting clean transport, green space and noise control.
5. Sustainable health care to reduce emissions and pollution within medical systems.
6. Climate-resilient health systems to protect vulnerable populations.

"Research has shown the negative health impacts of pollution, noise, rising temperatures and other environmental stressors," says ACC President **Christopher M. Kramer, MD, FACC**. "The time for action on addressing the impact of the environment on cardiovascular health is now and essential to reducing the burden of cardiovascular disease around the world."

Scan the QR code to read the full statement.

Headed to ACC.26? Explore the program planner or meeting app for sessions addressing social drivers of health like the environment and their impacts on cardiovascular health. ■

Scan the QR code to read more about Bahr and his many contributions.



New Partnership to Leverage Registry Data For Cardiac Certification

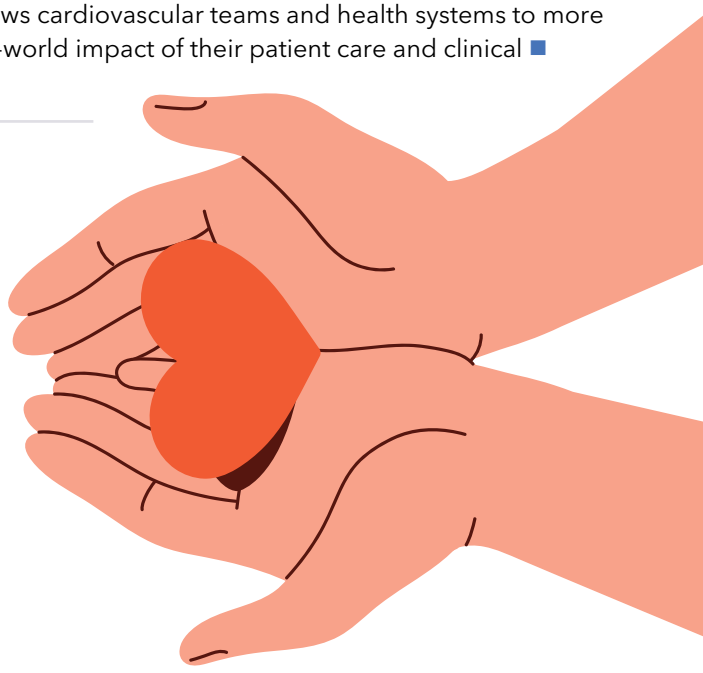
The Joint Commission has partnered with the ACC and the Society of Thoracic Surgeons (STS) to leverage clinical performance data for a new cardiac care certification driven by measures of patient outcomes. The upcoming cardiac certification will be informed by the ACC's CathPCI Registry, STS/ACC TVT Registry and STS Adult Cardiac Surgery Database.

"At a time of both rapid advancement in medicine and increasing complexity in health care, we must ensure that patients not only have access to quality care, but also that they can have confidence in the care they are getting," says **Jonathan B. Perlin, MD, PhD**, president and CEO of the Joint Commission. "By harnessing registries from trusted specialty societies like STS and ACC, we can do both."

ACC Chief Medical Officer **Richard Kovacs, MD, MACC**, describes the CathPCI Registry as "a cornerstone for advancing the quality of cardiovascular care and generating high-quality evidence that informs clinical decision-making in the cath lab."

"Integrating CathPCI Registry data into the Joint Commission's new cardiac certification allows cardiovascular teams and health systems to more clearly quantify the real-world impact of their patient care and clinical ■

Women's Health in the Spotlight



JACC's newest spotlight issue turns its focus to women's cardiovascular health – an area long shaped by gaps in representation and research. The issue features content from across the *JACC* journals and illustrates how science, training and care improve when systems are intentionally designed with women in mind.

Featured content includes:

- Menopausal Status Associated With Docetaxel-Induced Vascular Dysfunction in Breast Cancer Patients
- Microaxial Flow Pump Use in Women With STEMI-CS. What's Age Got to Do With It?
- Sex Differences in Efficacy of Multidomain Rehabilitation Among Older Adults With Acute HF: The REHAB-HF Trial
- Race- and Sex-Associated Electrocardiographic Repolarization Characteristics in Young American Athletes in the Digital Age
- Rethinking Cholesterol Management in Women: From Short-Term Risk Estimation to Lifecourse Cardiovascular Health

"The next phase of progress asks something more demanding than inclusion alone. It asks whether the systems through which evidence is generated, clinicians are trained, and careers are built can be designed to serve women as fully and routinely as men," writes **Harlan M. Krumholz, MD, SM, FACC**, in a related editorial.

Scan the QR code for the full issue. ■

PCI May Lead to Greater Symptom Relief in Older Adults

Age had no effect on PCI success in reducing angina frequency, but older adults may experience greater symptom relief, according to a post-hoc analysis of ORBITA-2 published in *JACC*.

ORBITA-2 reported lower angina scores, lower daily angina frequency and improved treadmill time with PCI vs. placebo procedure in 301 patients (mean age 64 years) with stable coronary artery disease.

In this secondary analysis, results showed that baseline angina symptom severity or stenosis severity were similar across age groups. While PCI improved angina across all age groups, it was more effective for symptom relief in older (>70 years) than younger (<50 years) patients (odds ratio 2.03; pr>0.99 vs. 1.70).

However, the effect of PCI on treadmill exercise time was greater in younger than older patients, with a 50-year-old seeing an improvement of 125 seconds (pr>0.99) vs. 32 seconds (pr>0.92) in a 70-year-old.

"For symptom improvement, the results challenge the notion that PCI should be withheld based solely on age," write study authors **Florentina A. Simader, MD**, et al. "Importantly, symptom and quality of life improvement are desirable to patients at any age."

In an accompanying editorial comment, **Michael G. Nanna, MD, FACC**, et al., write that "one of cardiology's enduring questions is how, and how much, age should influence clinical decision-making."

"Although age has long served as a marker of risk in cardiovascular care, these data reinforce the idea that chronological age alone should not be the gatekeeper to symptom-relieving therapies," they add. "Age does not negate the potential for benefit; it reframes how we interpret that benefit and what it means in the broader context of a patient's life." ■

Simader F, Rajkumar C, Foley M, et al. *JACC*. 2026;87:253-65.

JACC JETS TO THE JAZZ CITY FOR ACC.26

The *JACC* family is coming together in New Orleans, uniting authors (current and future), researchers, and editors for a full slate of events designed to strengthen the scientific community.

Be sure to join the *JACC* Journals Reception and Award Ceremony, stop by office hours, and take part in opportunities to meet editors, ask questions, and explore how *JACC* can support your work all year long. In addition, be sure to stop by ACC Central to grab copies of *JACC* and learn more about the journals.

Scan the QR code for the *JACC* Journals ACC.26 event page for details on these and other activities, as well as a complete list of simultaneous publications. Plus, follow @JACCJournals on X, Facebook,Bluesky, Instagram, and LinkedIn for real-time highlights throughout ACC.26.

Patient-Led Smartwatch ECG Monitoring
Effective Post AFib Ablation

Implementing a patient-led smartwatch ECG follow-up strategy within an existing clinical pathway after ablation for atrial fibrillation (AFib) is feasible and provides accurate data for evaluation, according to trial findings published in *JACC: Advances*.

Nikhil Ahluwalia, MBBS, PhD, et al., randomized 168 patients (half with persistent AFib) undergoing their first ablation to an Apple Watch-based protocol or standard follow-up.

Results showed that a median 170 ECGs were recorded in the smartwatch cohort over 12 months, transmitting a median 1.9% for review. Symptom-annotated ECGs had a greater likelihood of showing AFib than unannotated ECGs (odds ratio 16.1; p<0.001).

Watch-derived labels for AFib and sinus rhythm had positive predictive values of 0.96 and 0.95, respectively. However, one-third of ECGs were unclassified, meaning the smartwatch labeled them as high heart rate, low heart rate, poor recording or inconclusive.

"This trial demonstrates that a structured, patient-led smartwatch ECG workflow can be operationalized and systematically evaluated within routine, post-ablation care using commercially available technology," write the authors.

They expand on primary clinical outcomes in an accompanying report published in *JACC*, noting that patients in the smartwatch cohort had a greater chance of AFib recurrence detection post ablation and exhibited a shorter time to first detection. Hospitalization was less likely in patients in the smartwatch cohort. ■

Ahluwalia N, Abbass H, Hussain A. et al. *JACC Adv.* 2026;Jan 2:102534./*JACC*. 2026;Jan 16:1097(25)10579-2.

To access the ACC's tool to help leverage Apple Watch data in clinical practice, visit ACC.org/AppleTool.

CV Effects of Early HRT By Race/Ethnicity

Early initiation of hormone replacement therapy (HRT) may benefit all racial and ethnic groups except Chinese women, and Chinese women with metabolic syndrome or elevated triglycerides may have increased risk of adverse cardiovascular outcomes with HRT, according to research from the MESA study published in *JACC: Advances*.

In this substudy of 2,427 postmenopausal women (mean age 64 years) without baseline cardiovascular disease, researchers assessed all-cause mortality and major adverse cardiovascular events (MACE). Based on self-reporting, 304 patients were Chinese, 934 White, 648 Black and 541 Hispanic. Nearly half had prior HRT use.

Results at a median of 14 years showed that HRT use within five years of menopause was associated with decreased MACE (hazard ratio [HR] 0.72; p=0.021) and all-cause mortality (HR 0.62; p<0.001) among all patients, with no benefit from initiation beyond five years.

A significant reduction in mortality was seen in White, Hispanic and Black participants (HR 0.65, 0.50 and 0.52 respectively) and in MACE in Black participants (HR 0.65).

Chinese participants experienced an increased rate of MACE (HR 2.27; p=0.035) and a nonsignificant trend towards increased mortality (HR 1.34). MACE and mortality were even higher in Chinese participants with metabolic syndrome (HR 3.45 and 2.28, respectively) and with triglycerides ≥150 mg/dL (HR 4.38 and 3.20, respectively), regardless of when HRT was started.

"To our knowledge, this finding has not been shown before," write authors **Spencer Flynn, MD**, et al., calling for additional analyses in East Asian cohorts. ■

Flynn S, Haidar A, Liang I, et al. *JACC Adv.* 2026;5(2):102561.

Is Exercise SBP Associated With Increased CV Risk?

A higher systolic blood pressure (SBP) during exercise, relative to an individual's fitness level, was associated with an increased risk of cardiovascular events and mortality, according to findings from the EXERTION study published in *EHJ*.

In what the authors describe as the first study to examine a hypertensive response to exercise based on fitness to discriminate cardiovascular risk, **Martin G. Schultz, MD**, et al., analyzed records from 12,743 patients (mean age 53 years, 40% women) who completed a standard, clinically indicated exercise stress test at six hospitals in Australia.

Over a median 51 months of follow-up after exercise testing, there were 1,349 combined fatal and nonfatal cardiovascular events. No association was found between exercise SBP and cardiovascular events when fitness was not considered. In contrast, after adjusting for age, sex and pre-exercise SBP, researchers found a stepwise increase in cardiovascular events across quartiles of SBP/METPeak at stages 1-3 and at peak (fourth quarter hazard ratios [HR] 2.54, 2.05, 1.60 and 2.43, respectively).

Furthermore, an increased risk of 55-94% for cardiovascular events was associated with an SBP/METPeak ≥90th percentile vs. <90th percentile (stages 1-3 and peak, $p<0.001$). In both men and women, thresholds from 15 to 24 mm Hg/METPeak were associated with cardiovascular events ($p<0.001$, stages 1-3 and peak). Results were consistent across subgroups.

The authors write these findings provide a clinically actionable marker to increase targeted intervention of hypertension-related cardiovascular risk, while noting the need for more studies of methods to account for the influence of fitness on exercise SBP. ■

Schultz MG, Otahal P, Roberts-Thomson P, et al. *EHJ*. 2026;ehaf1082.

Long-Term Wildfire Smoke Exposure Increases Stroke Risk

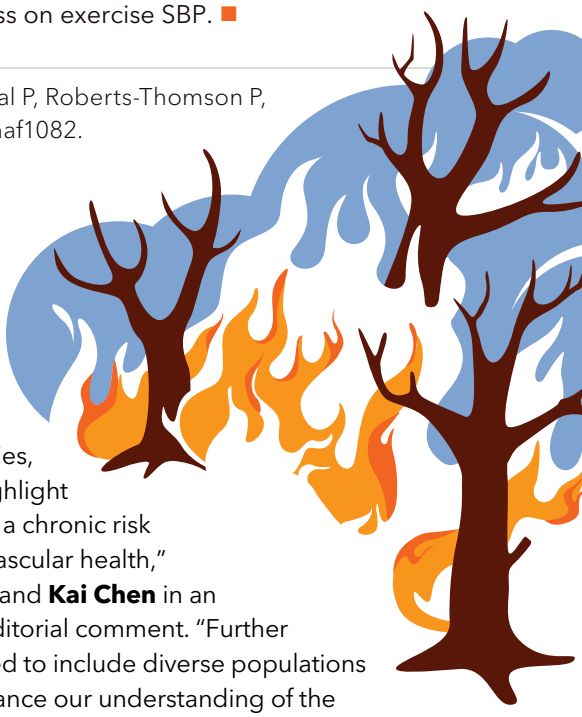
Chronic exposure to high levels of fine particulate matter ($PM_{2.5}$) from wildfire smoke increases the risk of stroke in U.S. adults, according to a national open cohort study published in *EHJ*.

In this study led by **Hua Hao, MPH**, et al., wildfire smoke $PM_{2.5}$ exposure was estimated at a 1 km^2 resolution using a machine learning model distinguishing smoke-specific $PM_{2.5}$ from other ambient sources.

Using validated Medicare claims from 2007 to 2018 among some 25 million Medicare Fee-for-Service beneficiaries (88% White, 54% women), about 2.9 million cases of incident stroke were identified.

Researchers found a significant association between long-term wildfire exposure and increased stroke risk, along with a dose-response relationship: a 1.3% increase in stroke risk for each 1 $\mu g/m^3$ increase in three-year average wildfire smoke $PM_{2.5}$ exposure. Associations for wildfire smoke $PM_{2.5}$ were stronger than for nonsmoke $PM_{2.5}$ per unit of exposure.

In what they believe is the first study on long-term effects of wildfire smoke $PM_{2.5}$ in this setting, they write the findings reflect "increasing cumulative concentrations and more frequent or intense smoke days over time."



"Along with other recent studies, these findings highlight wildfire smoke as a chronic risk factor for cardiovascular health," write **Siqi Zhang** and **Kai Chen** in an accompanying editorial comment. "Further research is needed to include diverse populations and regions, enhance our understanding of the underlying mechanisms, and evaluate the effectiveness of protective measures." ■

Hao H, Xu K, Zhang D, et al. *EHJ*. 2026;ehaf875.

Scan the QR code to read a new joint statement from the ACC and partners calling for urgent action to address environmental stressors as preventable causes of cardiovascular disease.

Semaglutide Reduces Hospitalizations, Length of Stay

Semaglutide was associated with reduced hospital admissions and shorter hospital stays in patients with established cardiovascular disease and overweight or obesity without diabetes, according to an exploratory analysis of SELECT published in *JAMA Cardiology*.

The study included 17,604 patients (median age 61, 28% women, median BMI 32) from 804 global centers, randomized to subcutaneous semaglutide 2.4 mg weekly or placebo between October 2018 and March 2021. The primary outcomes were rates of hospitalization and total days hospitalized over a median of 42 months.

Hospitalization rates for any indication were lower with semaglutide than placebo (18.3 vs. 20.4 per 100 patient-years; mean ratio 0.90; $p<0.001$). Days spent in the hospital were also reduced (157.2 vs. 176.2 days; rate ratio 0.89; $p=0.01$). Similar reductions were observed for hospitalizations related to adverse events, including fewer admissions (15.2 vs. 17.1 per 100 patient-years) and fewer days hospitalized (137.6 vs. 153.9).

Authors noted reductions across multiple causes, including cardiac, respiratory, infection, and surgical and medical admissions, extending semaglutide's known cardiovascular benefits to broader health care outcomes. ■

Nicholls SJ, Ryan DH, Deanfield J, et al. *JAMA Cardiol*. 2025; Dec 23:e254824

How Do the 2025-2030 Dietary Guidelines Measure Up For Cardiovascular Health?

The Dietary Guidelines for Americans (DGA), released every five years by the U.S. Department of Health and Human Services and U.S. Department of Agriculture, are a major driver of U.S. food policy, diet quality and cardiovascular health. Given their reach, the DGA significantly influences dietary practices nationwide.

The Nutrition and Lifestyle Work Group of ACC's Prevention of Cardiovascular Disease Member Section reviewed the 2025-2030 DGA (available at *dietaryguidelines.gov*) and the 2025 DGAC report and summarized key points.

A Focus on the Diet-Driven Health Crisis

The 2025-2030 DGA emphasize that most U.S. health care spending is devoted to chronic diseases, much of it diet related. Of U.S. adults, 70% have overweight or obesity, one in three has prediabetes and 45% of cardiometabolic deaths – from heart disease, stroke and diabetes – are linked to poor diet.[3] Overconsumption of calorie-dense, nutrient-poor, ultra-processed foods high in added sugars and sodium plays a major role.[3]

The DGA confronts this crisis by identifying what should be removed (most added sugars, refined grains and highly processed foods) and what should be emphasized ("real foods"). The guidelines reinforce recommendations to prioritize fruits, vegetables and whole grains, while introducing new guidance on protein and fat intake.

New Protein Recommendations

The DGA recommend increasing protein intake to 1.2-1.6 g/kg/day, beyond the National Academy of Sciences Recommended Daily Allowance of 0.8 g/kg/day for adults under age 75, and a change not included in the 2025 DGAC recommendations.

They also encourage consuming a variety of proteins, listing first and graphically displaying animal sources (red meat, eggs, poultry, whole milk, seafood) before plant-based sources (beans, lentils, peas, nuts, seeds, soy). However, evidence consistently shows that plant proteins are associated with better cardiovascular outcomes than red and processed meats,[2] which are also linked to gut dysbiosis and inflammation, as well as diabetes and some cancers.[4,5] These findings support emphasizing to patients the health benefits of plant proteins, as well as seafood and unsweetened dairy foods, over red and processed meats.

Saturated Fat and Fat Source Recommendations

The new DGA continue with recommendations to limit saturated fatty acids (SFA) to <10% of daily calories. They advise consuming "healthy fats" from red meat, whole-fat dairy, eggs, omega-

Front-of-package food labeling can be a catalyst for improving diet quality and reducing CVD risk. **Scan the QR code** to read ACC's Concise Clinical Guidance report.

DGA RECOMMENDATIONS SUPPORTED BY CURRENT EVIDENCE

- Eat an appropriate amount of calories
- Prioritize high-quality, nutrient-dense protein with no additives
- Choose dairy products without added sugars
- Eat mostly whole grains, limit refined grains and refined carbohydrates
- Consume vegetables and fruits throughout the day
- Incorporate foods with healthy fats and liquid oils (e.g., olive oil), limit saturated fat to <10% of daily calories
- Limit highly processed foods and added sugars to <10 g/meal, <2.5-5 /product and <10% of daily calories
- Limit sodium to <2,300 mg/day
- Limit alcoholic beverages

Extensive evidence supports promoting dietary patterns high in unprocessed, fiber- and nutrient-dense plant foods, including vegetarian, whole-food plant-based, Mediterranean and DASH diets, for cardiovascular health, cancer prevention and longevity.

3-rich seafood, nuts, seeds, olives, avocados and olive oil, with butter and beef tallow as options.

Some of these recommendations are not evidence-based and supported by science. For example, feeding trials and cohort studies show that butter and, to a lesser extent, beef tallow, raise LDL-C compared with olive oil, and that replacing healthier fats with butter increases total and cardiovascular mortality.[6,7]

Regarding milk, cheese and yogurt, while cheese raises LDL-C compared to unsaturated fat sources, these dairy foods have not been associated with higher cardiovascular risks,[8] and may have potential benefits. However, increasing dairy fat and other animal fats will push SFA intake above the recommended limit of 10% of daily calories.

The Nutrition and Lifestyle Work Group encourages discussions with patients about the strengths of the DGA and areas of uncertainty. **Scan the QR code** for CardioSmart patient tools.

Scan the QR code to read ACC's official statement from President **Christopher Kramer, MD, FACC**, regarding the new guidelines.

A New Food Graphic

The new DGA food graphic, intended as a symmetric triangle, may be misinterpreted as an inverted food pyramid. Animal protein foods appear prominently at the top alongside fruits and vegetables, potentially shifting perceptions toward an animal-protein–dominant diet. Legumes and nuts are visually de-emphasized and soy foods are absent. Without clear explanatory materials, this graphic may confuse the public.

Extensive evidence supports promoting dietary patterns high in unprocessed, fiber- and nutrient-dense plant foods, including vegetarian, whole-food plant-based, Mediterranean and DASH diets, for cardiovascular health, cancer prevention and longevity.[9,10]

Counseling Patients and Peers

The ACC Nutrition and Lifestyle Work Group encourages open discussions with patients and colleagues about both the strengths of the DGA and areas of uncertainty.

Rotating the food pyramid counterclockwise graphically emphasizes more whole, minimally processed plant foods. The "Healthy Eating Plate," available in 21 languages from the Harvard T.H. Chan School of Public Health,[11] can also convey evidence-based foods and dietary patterns.

Together, these approaches can help translate the DGA into meaningful improvements in cardiovascular health for patients and the population. ■

References available with the online version of this article at ACC.org/Cardiology.

This article was authored by **Monica Aggarwal, MD, FACC**; **Karen Aspry, MD, MS, FACC**; **Penny Kris-Etherton, PhD, RDN**; **Andrew Freeman, MD, FACC**; **Kim Allan Williams Sr., MD, MACC**; and **Eugenia Gianos, MD, FACC**, all members of ACC's Nutrition and Lifestyle Work Group - part of the broader Prevention of Cardiovascular Disease Member Section. **Scan the QR code** to learn more and join.

TO ANTICOAGULATE OR NOT ANTICOAGULATE: That is the Question

In patients with atrial fibrillation (AFib), the most feared consequence is not the arrhythmia itself but the associated risk of stroke. Although decision-making tools to assess stroke risk in nonvalvular AFib have become more nuanced, the threshold to recommend oral anticoagulation (OAC) for stroke prevention has become lower over time. This is reflected in the 2023 ACC/AHA/ACCP/HRS guideline for managing AFib, which assigned a class I recommendation for OAC for a CHA_2DS_2-VASc score ≥2 in men and ≥3 in women, and a class IIa recommendation for OAC for a CHA_2DS_2-VASc score of 1 in men and 2 in women. Importantly, use of aspirin and other antiplatelets as an alternative to OAC was deemed harmful (class III recommendation).

Often OAC is prescribed lifelong as AFib is considered a progressive condition without a cure. Although patients can be asymptomatic or minimally symptomatic during the arrhythmia, they are advised to adhere to long-term OAC. Over time, patients tend to become weary of OAC due to bleeding risk, drug interactions, side effects, adherence challenges and cost. For many years, AFib patients with elevated stroke risk had no alternative to long-term OAC and either accepted the associated consequences or accepted the increased risk of stroke if they discontinued it against medical advice. Not surprisingly, AFib patients likened the need for long-term OAC as "managing a necessary evil."[1]

An alternative to long-term warfarin use – left atrial appendage occlusion (LAAO) – was approved for these patients in 2025 by the U.S. Food and Drug Administration, guided by the PROTECT-AF and PREVAIL trials that demonstrated noninferiority of LAAO for stroke prevention and significant reductions in long-term bleeding risks. Subsequently, PRAGUE-17 similarly demonstrated noninferiority of LAAO for a composite endpoint of stroke prevention, clinically significant bleeding and cardiovascular death vs. direct oral anticoagulants (DOACs).

Gradually, the threshold has become lower for recommending LAAO in place of long-term OAC. This was also reflected in the 2023 guideline, which assigned a class 2a recommendation for LAAO in patients with a CHA_2DS_2-VASc score ≥2 and a contraindication to long-term OAC due to a nonreversible cause, and a class 2b recommendation for LAAO for a CHA_2DS_2-VASc score ≥2 and a preference to avoid long-term OAC use.

Despite explicit guidelines advocating for anticoagulation or LAAO in well-defined AFib patient populations, real-world practice patterns have been discordant. Indeed, of 647 AFib patients from the PINNACLE Registry deemed appropriate for OAC (CHA_2DS_2-VASc score ≥2), the primary cardiologist or physician concurred on the need for OAC for only 27% in a 2023 study.[2]

The top reasons cited (not mutually exclusive) for avoiding OAC were patient refusal (39%), low AFib burden or successful rhythm control therapy (33%), fall risk (30%), low perceived risk of stroke (24%) and already receiving aspirin for another condition (23%). A separate 2023 study surveyed 2,000 physicians (500 each of general cardiologists, interventional cardiologists, electrophysiologists and vascular neurologists) and determined the top four reasons for not recommending LAAO included concerns about procedure risks or complications (60%), limited efficacy vs. DOACs (43%), logistical issues related to insurance, billing or reimbursement (33%) and safety vs. DOACs (30%).[3]

The role of LAAO continues to receive mixed reviews in recent clinical trials. OPTION, presented at AHA 2024, showed that concomitant AFib ablation and LAAO, vs. AFib ablation with continued OAC, was associated with a lower risk of nonprocedure-related major or clinically relevant nonmajor bleeding (8.5% vs. 18.1%, p<0.001) and noninferior for a composite of death from any cause, stroke or systemic embolism (SE) at 36 months.[4] Notably, patients who underwent concomitant AFib ablation and LAAO were switched from DOAC to low-dose aspirin three months post procedure.

However, CLOSURE-AF, presented at AHA 2025, questioned the safety and efficacy of LAAO vs. DOACs, conflicting with results from PRAGUE-17. CLOSURE-AF randomized 912 AFib patients with elevated stroke risk (CHA_2DS_2-VASc score ≥2) and increased bleeding risk (HAS-BLED score ≥3, history of bleeding or chronic kidney disease) to LAAO or physician-directed standard care (primarily anticoagulation with DOAC).[5] At a median of three years, standard care was superior to LAAO for the composite endpoint of stroke, SE, cardiovascular/unexplained death or major bleeding (hazard ratio, 1.28, 95% CI, 1.01-1.62).

Making Sense of Mixed Results

Is it possible that successful AFib ablation can reduce stroke risk and obviate the need for long-term OAC and LAAO? Although the 2023 ACC/AHA guideline acknowledged a distinct AFib stage (3D) for patients who have undergone "successful AFib ablation," defined as "freedom from AFib after percutaneous or surgical interventions to eliminate AFib," it stopped short of recommending cessation of OAC after a successful AFib ablation. However, two recent clinical trials, ALONE-AF and OCEAN, have indicated that OAC may not be necessary for stage 3D AFib patients.

Both trials randomized AFib patients with elevated stroke risk who had successful AFib ablation, defined as no atrial arrhythmias >30 sec within one year after ablation.

In ALONE-AF with 840 patients, at two years, the composite endpoint of stroke, SE and major bleeding was significantly lower in the no OAC group vs. the DOAC group (0.3% vs. 2.2%).[6] This was driven by a significantly higher rate of major bleeding in the OAC group (1.4% vs. 0%). Rates of ischemic stroke or SE did not differ significantly (0.3% vs 0.8%).

Among the 641 patients in OCEAN randomized to rivaroxaban or low-dose aspirin, no significant difference was seen at three years in the composite endpoint of stroke, SE or new covert embolic stroke (0.8% vs 1.4%) or in fatal or major bleeding (1.6% vs 0.6%).[7]

As we begin 2026, the lingering question remains for AFib patients at elevated stroke risk: to anticoagulate or not anticoagulate? The short answer is yes for now, but perhaps not forever as multiple procedural options exist to mitigate long-term stroke risk. If successful AFib ablation can be reasonably achieved, then the duration of OAC can be as short as a year. If concomitant AFib ablation and LAAO can be performed, then the duration of OAC can be as short as three months. If standalone LAAO is performed then OAC could be stopped immediately afterwards, assuming patient tolerance to short-term dual antiplatelet use.

With all these options, the new consideration is no longer *if* a patient can stop anticoagulation, but *when*. ■

References available with the online version of this article at ACC.org/Cardiology.

This article was authored by **Edward Chu, MD, FACC** (@Ed_Chu_MD), an electrophysiology attending physician in Miami, FL.

Mammography as a Window Into CV Health

Most women over 40 years old in the U.S. undergo annual or biennial screening mammography, and these images often reveal more than malignancy alone.[1] A common incidental finding is breast arterial calcifications (BAC) – calcium deposition within the medial layer of small- to medium-sized arteries, also referred to as Mockenberg medial calcific sclerosis.[2]

The prevalence of BAC increases steadily with age, from about 10% of women at age 40 to 50% by age 80.[3] Unlike coronary artery calcifications (CAC), BAC do not cause luminal narrowing.[2,4]

Although they are not obstructive, BAC are increasingly recognized as a clinically meaningful marker of cardiovascular risk.[5,6] Strong associations between BAC and cardiovascular disease (CVD) have been shown, including a threefold increase in coronary artery disease (CAD) and a fivefold increase in stroke over 10 years.[7,8]

The highest diagnostic accuracy of 93% for detecting CAC was shown in women <60 years.[9] Quantification of BAC is relevant, with moderate to severe BAC a greater predictor of CAD than mild BAC.[10]

BAC have been associated with increased incidence of CAD, stroke, heart failure, diabetes and cardiovascular mortality.[2,4,7,11]

Its presence has been independently associated with increased risk of atherosclerotic cardiovascular disease (ASCVD) and global CVD.[8] After adjusting for traditional cardiovascular risk factors, BAC were most predictive of CVD and all-cause mortality in women <60.[3]

As BAC become increasingly common with advanced age, its prognostic discriminatory value diminishes. Conversely, evidence suggests BAC may develop at an earlier age than traditional CVD risk factors, further demonstrating its potential as an early marker of CVD in younger patients.[3] Together, these findings highlight the potential role of BAC as a clinically meaningful biomarker of cardiovascular risk in women with particular relevance in early risk identification.

Practical Approaches For Clinicians

In the absence of definitive guidelines, clinicians must take a pragmatic approach when BAC are identified on screening mammography. Although current primary prevention guidelines do not classify BAC as a formal risk-enhancing factor, emerging data suggest an association with outcomes.[8] Moderate to severe BAC, particularly when identified in women <60 years, could be a cost-effective measure of CVD risk, if routinely reported and documented.

Shared decision-making with the patient is essential, emphasizing the uncertainty of the evidence while acknowledging the potential implications for increased cardiovascular risk, similar with other extracoronary calcifications.

For patients with BAC, it is reasonable to reinforce lifestyle-based risk reduction and, in select cases, CAC evaluation to further inform primary prevention strategies.

Future Directions

While BAC is a promising cardiovascular risk marker, standardized reporting and integration into risk assessment are needed, particularly given most radiologists observe BAC and most women wish to be informed of this.[12,13]

Studies are also needed to determine whether BAC-guided prevention improves outcomes. Advances in AI may enable consistent, scalable implementation.

Additionally, targeted clinician education, aimed at primary care physicians, gynecologists and preventive cardiologists, will be essential to ensure appropriate interpretation and patient-centered use of BAC in preventive care. ■

References and limitations available with the online version of this article at ACC.org/Cardiology.

This article was authored by **Rachel Drummey, MD**, and **Lily Dastmalchi, DO, MA, FACC**, at Inova Schar Heart and Vascular Institute, Inova Health System, Falls Church, VA, and members of ACC's Prevention of Cardiovascular Disease Member Section. **Scan the QR code** to learn more and join.

6 Advocacy Wins Secured:
Congress Passes Critical Health Funding Bill

Congress has passed an appropriations package funding Labor, Health and Human Services, Education and Related Agencies for the remainder of fiscal year (FY) 2026, and the President has signed the bill into law. The legislation includes several high-priority provisions championed by the ACC that will strengthen cardiovascular care, support clinicians and improve patient access.

Key victories in the final bill include:

01 Extending telehealth flexibilities through Dec. 31, 2027.

02 Reestablishing in-home cardiac and pulmonary rehabilitation services through Jan. 1, 2028.

03 Authorizing support for state-based maternal mortality review committees through FY 2030.

04 Increasing funding for the National Institutes of Health and maintaining funding for the Centers for Disease Control and Prevention.

05 Reauthorizing clinician well-being programs through FY 2030.

06 Boosting funding for valvular heart disease research and awareness initiatives.

These wins showcase the direct impact of member engagement in ACC's annual Legislative Conference, grassroots alerts, advocacy days and practice visits. Together, these efforts helped ensure that ACC priorities remained front and center throughout the legislative process.

"As we navigate the next 10 months with this Congress, I am optimistic about our potential to achieve even greater progress together," says ACC Health Affairs Committee Chair **William A. Van Decker, MD, FACC**. "Let us build on this momentum and work collaboratively to address other key ACC policy priorities."

ACC Advocacy will continue to advance policies that support clinicians, expand access to care and drive better patient outcomes.

Visit ***ACC.org/Advocacy*** for the latest policy updates. ■

POLICY PERSPECTIVES SHAPING CARDIOLOGY AT ACC.26

Several sessions at ACC.26, taking place March 28-30 in New Orleans, LA, promise to deliver useful insights and meaningful discussions on a range of advocacy and policy topics.

Don't miss conversations on the Heart2Heart Stage diving into issues like:

- The payment reform landscape.
- Health equity and access in rural areas.
- The impact of private equity and noncompete agreements.
- Examples of advocacy at work in sports cardiology, maternal health and vascular medicine.

Scan the QR code to explore the ACC.26 program planner for more advocacy sessions.

Engage With HeartPAC

Between sessions, drop by the HeartPAC Lounge to get your policy questions answered by the experts, connect with other advocacy enthusiasts, and learn more about the Annual HeartPAC Reception, held Sunday, March 29. Learn more at ***HeartPAC.org***. ■

THE ADIPOKINE HYPOTHESIS: A New Framework For Understanding HFpEF

Fourteen hours a day, nearly every day for a year. That's how long it took **Milton Packer, MD, FACC**, to write his groundbreaking hypothesis connecting adipokines and visceral adiposity to heart failure with preserved ejection fraction (HFpEF).[1] It marks the pinnacle of his extraordinary career and bookends his neurohormonal hypothesis for heart failure with reduced ejection fraction (HFrEF), published 33 years ago.[2]

The adipokine hypothesis is a 105-page paper with more than 1,800 references and 28,000 words published in *JACC* in October 2025, with an entire issue subsequently devoted to the topic.

The paper assembles and synthesizes decades of evidence, Packer says, incorporating countless threads that link adiposity and HFpEF. "I didn't do that because I had plenty of spare time on my hands," he says of the massive number of references the paper contains. "It was important to show this was not just a crazy idea that came out of thin air. This is a formal proposal of a hypothesis with incredibly diverse components that were developed over decades. It was so important to put hundreds of pieces of the puzzle together in one place."

The hypothesis offers a unifying framework that could revolutionize

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>
> Milton Packer, MD, FACC

how clinicians conceptualize and treat HFpEF. At its core is the understanding that HFpEF is not a disorder of cardiomyocytes or comorbidity-driven pathways. Instead, it is a disease of dysfunctional visceral adipose tissue, long thought of as merely a storage vehicle for triglycerides. However, visceral fat – the kind that surrounds internal organs – is now widely recognized as a metabolically active endocrine organ that secretes signaling molecules, i.e., adipokines, which transmit the biological state of adipose tissue to other organs.

Adipose tissue in a lean, healthy person exerts cardioprotective, anti-inflammatory and antifibrotic effects, Packer explains. But as visceral adipose tissue mass increases, the biology changes. It becomes proinflammatory, prohypertrophic, profibrotic and antinatriuretic. "The heart is particularly sensitive to the effect of these adipokines," he says.

Studies show that higher levels of proinflammatory adipokines increase the risk and severity of HFpEF, as well as convey a worse prognosis.

This altered adipokine milieu explains the defining features of HFpEF, his hypothesis contends. Sodium retention leads to plasma volume expansion; systemic and myocardial inflammation promotes coronary microvascular dysfunction and cardiac fibrosis; and prohypertrophic signaling drives pathological ventricular remodeling.

HFpEF is the cumulative result of years of adipokine-mediated injury. Adipokines progressively remodel the heart, altering its structure and distensibility long before overt clinical HF appears. The disease emerges slowly, molecule by molecule, signaling cascade by signaling cascade.

Supporting the Hypothesis

The adipokine hypothesis is built on 12 mutually reinforcing lines of evidence, including:

- Obesity and HFpEF exhibit numerous parallels in their molecular, pathophysiological and clinical features, including neurohormonal activation, sodium retention, plasma volume expansion, cardiac hypertrophy and systemic inflammation.
- Mendelian randomization studies link visceral adiposity with HFpEF.
- Changes in visceral adiposity and circulating adipokines are observed years before diagnosis, predicting HFpEF but not HFrEF.
- 85-95% of people with HFpEF have abdominal obesity and excess visceral adiposity.
- Adipokines have established effects on cardiac structure and function that can lead to HFpEF. The adipokine imbalance parallels the severity of the disease.
- Bariatric surgery or drug treatments for HFpEF that shrink visceral fat simultaneously increase Domain I adipokines and reduce Domain III adipokines.
- Excess adiposity appears to identify patients most likely to respond to current HFpEF treatments.

The most powerful evidence supporting the adipokine hypothesis comes from experimental studies showing that signaling molecules secreted specifically from adipose tissue cause HFpEF.

A high-fat diet is sufficient to cause HFpEF in animal models, in which adipose tissue secretes exceptionally high levels of proinflammatory adipokines. However, if the secretion of only one adipokine is silenced only in

Continued on the next page

UNDERSTANDING ADIPOKINES

Packer groups adipokines into three domains:

- **Domain I Adipokines:** Cardioprotective molecules such as adiponectin, which protect against inflammation and fibrosis.
- **Domain II Adipokines:** Cardioprotective molecules that are upregulated by adiposity as a compensatory response mechanism – the body's attempt to counteract the damage caused by visceral fat.
- **Domain III Adipokines:** Proinflammatory, prohypertrophic, profibrotic and antinatriuretic proteins whose secretion is heightened in adiposity.

"HFpEF results from an adiposity-driven imbalance that promotes domain III adipokines but suppresses domain I adipokines, with domain II adipokines unable to completely counter this imbalance," he writes.

Continued from previous page

adipose tissue – but not in the heart, kidney or any other organ – the animal does not develop HFpEF. Such silencing studies have been carried out for at least seven different adipokines providing causal proof that deleterious molecular signals secreted and transmitted from dysfunctional fat causes HFpEF.

The adipokine hypothesis appears to explain why current HFpEF therapies are effective. SGLT2 inhibitors, mineralocorticoid receptor antagonists and incretin-based therapies can reduce visceral fat mass and normalize the dysfunctional biological state of adipose tissue.

The hypothesis also helps explain why the condition predominantly affects older patients and women.

"As people age, their subcutaneous fat is redistributed to visceral adipose tissue depots," Packer says. "This phenomenon is particularly pronounced in women after menopause."

It seems likely that many people with obesity may have undiagnosed HFpEF, Packer notes. Importantly, addressing visceral adiposity before HFpEF develops may prevent the development of the disease.

Many physicians attribute the exertional dyspnea seen in people with obesity to their high BMI, says Packer, thus these patients never get a proper workup. "That's just not right. These patients deserve a diagnosis since we have effective treatments for HFpEF."

The Road Ahead

The most important feature of the adipokine hypothesis is that it makes falsifiable predictions, Packer says, a critically important requirement for any valid scientific framework. "Some may be right, some may be wrong, some may need to be modified in some way. But the adipokine hypothesis paper presents a highly detailed roadmap for future research."

New drugs called adipokine modulators are being developed for the treatment of HFpEF. "For almost every adipokine that I identify in my paper, there is a new pharmacological modulator that specifically addresses it," he says. Early results are encouraging, particularly with drugs that antagonize activin A, a key proinflammatory adipokine.

"If we learn that targeting adipokines, rather than body weight, has an impact on HFpEF, then the adipokine hypothesis will have been fulfilled," he says.

Packer's paper required 15 reviews and three cycles of revision before *JACC* finally accepted it. But it was worth it. "Isn't it important to read a paper that changes how you think about things?" he asks. "A paper that changes your whole perspective of the universe of a certain disease. It may be right; it may be wrong; and it may be half right. But to be worth someone's time, a paper should stimulate readers to think. There is no more joyful human experience than that." ■

"Up to now, there has been no unifying hypothesis to explain HFpEF. That has resulted in significant misunderstanding and a lack of direction in both diagnosis and therapy," said Packer, who first presented the hypothesis at ESC Congress 2025. "This bold new framework helps to identify the true cause of HFpEF in most people. That should make an enormous difference in guiding effective treatments."

Scan the QR code for Packer's State-of-the-Art Review and don't miss a video presentation where Packer introduces the adipokine hypothesis.

Scan the QR code for *JACC*'s Adipokine Explorer, an interactive tool to navigate the evidence to support clinical decisions.

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>
> Milton Packer, MD, FACC

Future Directions: Putting the Hypothesis to the Test

Across 10 *JACC* Viewpoints in a special focus issue of *JACC*, experts outlined a road map to interrogate and validate the adipokine hypothesis, highlighting key questions and research priorities to advance the understanding of the pathophysiology of HFpEF and ultimately its diagnosis and management – and perhaps even prevention.

"Bold hypotheses require rigorous scrutiny," writes *JACC* Editor-in-Chief **Harlan M. Krumholz, MD, SM, FACC**. "...We did not publish this work because it is definitive. We published it because it is generative. It provokes new questions, offers a coherent structure for scientific exploration, and invites rigorous challenge."

While most of the authors agreed that dysfunctional adiposity, especially visceral fat and adipokine signaling, is a significant contributor to HFpEF, some noted it's not a universal driver, with HFpEF pathways that extend beyond fat-driven pathways that should not be overlooked in the research arena. Calls for deeper mechanistic research and targeted clinical trials with inclusion that evolves with the expanding understanding of adiposity-related HFpEF to validate the hypothesis and guide personalized therapy were encouraged as next steps.

A shift beyond BMI was also deemed essential. Measures such as waist circumference, visceral fat quantification, imaging-based adiposity and biomarker profiles are needed to develop a multidimensional adiposity assessment to identify patients most likely to benefit from metabolic therapies.

Key sex-based differences also remain unresolved. Open questions include whether adipokine-driven mechanisms differ between men and women, how sex hormones and reproductive transitions affect disease mechanisms, and why weight-loss therapies produce different degrees of weight loss but similar HF outcomes across sexes.

Additionally, rigorous translational research was urged to test causal links between adiposity, adipokines and HpEF, along with phenotypic stratification and biomarker identification of adipokine signatures and drug targets, as well as defining "responder" phenotypes for refining therapeutic targeting. Interventional trials of adipokine-targeted therapies beyond weight loss, and epidemiological studies of lean HFpEF and diverse ethnic populations should also be prioritized. ■

Scan the QR code to read more about the Viewpoints from the *JACC* Focus Issue.

NEW SEASON:
JACC THIS WEEK PODCAST

Tune into the new season of the *JACC* This Week podcast. Listen each week as *JACC* Editor-in-Chief **Harlan M. Krumholz, MD, SM, FACC**, and *JACC* Senior Consulting Editor **Carolyn S.P. Lam, MBBS, PhD**, share highlights from each new issue, break down the latest trends and share practical tips that are changing the way heart care works globally.

Scan the QR code to bookmark the page and start listening.

CONNECTIONS THAT POWER PROGRESS START AT ACC.26

MARCH 28 – 30, 2026 NEW ORLEANS

The countdown is on and the buzz is building! From career-making connections to can't miss conversations with experts spanning the global cardiovascular landscape, the stage is set for ACC.26 to deliver the best in science, innovation and community engagement.

"New Orleans is known for its heart, its rhythm and its deep sense of community and it's especially fitting that the ACC will be there, carrying forward the legacy of connection and innovation that defines both the city and our Annual Scientific Session," says ACC Scientific Session Chair **Katie Berlacher, MD, MS, FACC**. Explore not-to-miss highlights and planning tips in the accompanying pages! ■

INSIDER SCOOP: WHAT'S COOKIN' ONSITE

*Cardiology asked ACC.26 Chair **Katie Berlacher, MD, MS, FACC**, Vice Chair **Julie Damp, MD, FACC**, and CV Team Lead **Kristen Campbell, PharmD, CPP, FACC**, about some of the newer aspects of ACC.26 they are most excited about. Here are their top picks:*

An INTENSIVE Look at AI

Back by popular demand, the ACC.26 Intensive will focus on artificial intelligence (AI). Intensive sessions will address practical implementation of AI in daily patient care, as well as essential approaches to AI financing and AI governance. New this year the AI Intensive will also go beyond standard sessions and extend to both the After Chat area and the Personalized Skills Zone, where attendees can speak with AI experts leading efforts across the field and get hands-on practice to learn the best ways to prompt generative AI models. Check out the ACC's online AI Resource Center at *ACC.org/AI* in the meantime.

CHAT WITH THE EXPERTS

Meet-Up Zone 1 in the Lounge & Learn Pavilion will be the home for a series of "After Chats," allowing for more informal discussions and interactions with faculty, trialists, guideline authors and other experts. Highlights include:

- 'Meet the Trialists' sessions where attendees can ask follow-up questions and dive deeper into the science behind the LBCTs.
- 'Meet the Experts' sessions where attendees can discuss the nuances of recent guidelines with the authors who developed them.
- 'Between Hope and Harm' where attendees will be able to explore challenges of guiding patients and families through urgent, value-driven choices with critical care cardiologists and palliative care specialists.

IMMERSIVE LEARNING AT ITS BEST

One of the hottest and most active areas of the conference, the Personalized Skills Zone is a "can't miss" spot that is sure to enhance learning for everyone. Interactive simulation stations and dynamic expert-led cases will offer hands-on learning for cardiac and pulmonary POCUS, cardiopulmonary exercise testing, transvenous pacing as well as TEE use in the setting of structural interventions. Attendees can also practice pulmonary artery catheter interpretation and VA ECMO use, cheer on their favorite team in the STEMI Smackdown competition, or compete themselves in this year's Escape Room where teams race against the clock to manage a simulated pulmonary embolism or a cardiac arrest.

YOU VOTED, WE DELIVERED

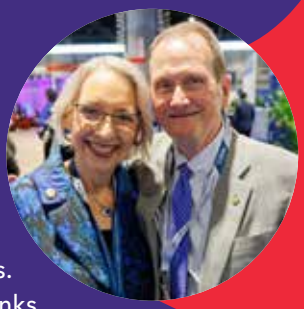
For the second year in a row, we are excited to bring back the crowd-sourced session – built from a topic suggested and voted on by ACC members. This year's pick dives into one of the most talked about trends in medicine: concierge and direct reimbursement models. A panel of clinicians who live this work every day will break down what's really involved, giving attendees a candid look at the opportunities, challenges, and real-world impact for both patients and practitioners.

KEYS TO INSPIRATION

Get ready to be inspired. ACC.26 brings together visionary leaders whose ideas, research and innovation are redefining what's possible in cardiovascular care. This year's Keynote lineup spans the cutting-edge of AI, the evolution of adult congenital heart disease, the power of team-based care, and the future of translating discovery into practice. The ACC.26 lineup, which includes **Mintu Turakhia, MD, MS**; **Carole A. Warnes, MD, FACC**; **Cathleen Biga, MSN, MACC**; **Rohan Khera, MD, MS, FACC**; and **Paul A. Friedman, MD**, promises to challenge, motivate and spark new thinking across the profession. **Scan the QR code** for dates and times and to learn more, or search "Keynotes" in the ACC.26 App.

FIRST TIME TIPS!

Start with the ACC.26 App. It's your personal GPS for building your schedule, finding your sessions and never missing a moment.



FACC, AACC OR MACC?
Swing by the FAM Lounge to grab your special lanyard, enjoy coffee or lunch, and attend exclusive sessions. It's our way of saying thanks for being part of the family.

COMFORT IS KEY. Pack your comfiest shoes and something blue for Monday's "Wear Blue" day. Don't have blue? No worries – the ACC Central store has your back.

DON'T MISS THE BOOKENDS. Kick off your weekend with the Opening Showcase and first LBCT session on Saturday, and then close it out with the Closing Ceremony and Convocation on Monday.

READY FOR HANDS ON FUN? Try the Escape Rooms in the Personalized Skills Zone or test your trivia chops in the Gameshow Room – think Family Feud and Who Wants to Be a Millionaire, ACC style.

EXPLORE THE EXPO. With 250+ companies and organization, ACC Central, puppies, pickleball, and Learning Destinations like the Future Hub and Health Equity Hub, it's a can't miss experience.

MAKE CONNECTIONS THAT MATTER. The Lounge & Learn Pavilion is your go to spot for meet ups, Member Section events, the Heart2Heart Stage, the HeartPAC Lounge and more.

Most importantly, **HAVE FUN**. You're part of something big here. Enjoy every minute.

GIVING DAY AT ACC.26: HELP UNLOCK A $25,000 MATCHING GIFT

Stop by the ACC Foundation Mardi Gras Booth just outside of Lounge & Learn to help unlock a $25,000 matching gift – every $100 becomes $200 to support educational travel grants for up-and-coming cardiovascular professionals, thanks to a generous gift from ACC member and donor **Harvey J. White Jr., MD, FACC**.

Travel costs shouldn't stand between rising leaders and life-changing education – and on Giving Day, you can help close that gap. Snap a photo inside the ACC seal, spin the prize wheel for fun swag, and make a real impact on the future of cardiovascular care. Can't wait? Text **ADVANCING** to **41444** to give instantly.

BEHIND THE SCENES: THE PEOPLE WHO MAKE ACC.26 POSSIBLE

A meeting of this scale doesn't happen by chance. It's the result of vision, collaboration and hundreds of hours of planning.

The ACC.26 Annual Scientific Session Program Committee, made up of more than 100 members and led by Chair **Katie Berlacher, MD, MS, FACC**, Vice Chair **Julie Damp, MD, FACC**, and CV Team Lead **Kristen Campbell, PharmD, CPP, FACC**, has spent more than a year working with a talented and creative team of ACC staff to plan and deliver a program that pushes boundaries, rethinks care, brings science to life and meaningfully advances heart health for all.

The Lifelong Learning Oversight Committee, along with thousands of faculty and abstract presenters, are also critical – bringing leadership, expertise and diverse perspectives to the program. Additionally, partner cardiovascular societies, industry partners and educational grant supporters all play an important part in moving the Mission of the College forward.

A FINALE YOU WON'T WANT TO MISS

The newly reimagined Closing Ceremony and Convocation promises to send ACC.26 out on a high note. This year's celebration brings the entire community together to reflect on the top takeaways from three days of groundbreaking science, honor the global society leaders, presidents and partners who help drive progress year round, and celebrate the remarkable achievements of the 2026 Distinguished Award winners and all newly elected FACC and AACC members.

We'll also proudly welcome ACC's incoming president, **Roxana Mehran, MD, FACC**, as she steps into her leadership role.

And the celebration doesn't end there – stick around afterward for a lively reception where you can congratulate ACC's newest members, connect with colleagues, and wrap up your time in New Orleans on a perfectly jazzy note.

CELEBRATING ACC'S **2026 DISTINGUISHED AWARD RECIPIENTS**

The recipients of this year's ACC 2026 Distinguished Awards represent an exceptional group of individuals whose past and ongoing efforts have made meaningful contributions to advancing the College's Vision of a world where science, knowledge and innovation improve cardiovascular care and patient outcomes worldwide. Plan to celebrate their achievements during sessions and events throughout ACC.26, as well as at the Closing Ceremony and Convocation on Monday, March 30.

2026 Bernadine Healy Leadership in Women's Cardiovascular Disease
Sharonne N. Hayes, MD, FACC

Find Hayes at a special Mentorship session in the Lounge & Learn Education Zone, Theater 1 on Monday, March 30 at Noon.

2026 Distinguished Cardiovascular Team Member
Kim Guibone, APRN, DNP, FACC

Find Guibone at a Fireside Chat about Leadership on Monday, March 30 at 10:45 a.m.

2026 Distinguished Educator
Jeffrey T. Kuvin, MD, FACC

Find Kuvin at the Late-Breaking Clinical Trials session on Monday, March 30 at 8:30 a.m.

2026 Distinguished Fellow
Laxmi S. Mehta, MD, FACC

Find Mehta at a Heart2Heart Stage session focused on the Power of Service on Monday, March 30 at Noon.

2026 Distinguished Mentor
Michael R. Zile, MD, FACC

Find Zile at a special Mentorship session in the Lounge & Learn Education Zone, Theater 1 on Monday, March 30 at Noon.

2026 Distinguished Scientist (Basic Domain)
Joseph C. Wu, MD, PhD, FACC

Celebrate Wu at the Closing Ceremony and Convocation on Monday, March 30.

2026 Distinguished Scientist (Clinical Domain)
Allan L. Klein, MD, FACC

Celebrate Klein at the Closing Ceremony and Convocation on Monday, March 30.

2026 Distinguished Scientist (Translational Domain)
Partho P. Sengupta, MD, FACC

Celebrate Sengupta at the Closing Ceremony and Convocation on Monday, March 30.

2026 Distinguished Service
Rakesh Gopinathannair, MD, MA, MBA, FACC

Find Gopinathannair at a Heart2Heart Stage session focused on the Power of Service on Monday, March 30 at Noon.

2026 Douglas P. Zipes Distinguished Young Scientist
Rohan Khera, MD, MS, FACC

Find Khera at the Douglas P. Zipes Distinguished Young Scientist Keynote on Sunday, March 29 at 8:30 a.m. and at a Fireside Chat about Leadership on Monday, March 30 at 10:45 a.m.

2026 Gifted Teacher
Binh An P. Phan, MD, FACC

Celebrate Phan at the Closing Ceremony and Convocation on Monday, March 30.

2026 Lifetime Achievement
Zohair Y. Alhalees, MBBS, FACC

Celebrate Alhalees during the Opening Showcase on Saturday, March 28.

2026 Navin C. Nanda International Service
Kian Keong Poh, MBBChir, MA, MMed, FACC

Find Poh at a Heart2Heart Stage session focused on the power of service on Monday, March 30 at Noon.

2026 Pamela S. Douglas Award For Leadership in Diversity and Inclusion
Stephen C. Cook, MD, FACC

Find Cook at the DEI Town Hall on Friday, March 27 starting at 5 p.m. at the Hilton Riverside.

2026 Presidential Citation
Thad F. Waites, MD, MACC

Celebrate Waites during the Opening Showcase on Saturday, March 28.

2026 Valentin Fuster Award For Innovation in Science
Helen H. Hobbs, MD

Celebrate Hobbs at the Closing Ceremony and Convocation on Monday, March 30.

2026 MASTERS OF THE ACC (MACC)

Christopher M. Kramer, MD, FACC

John E. Brush Jr., MD, FACC

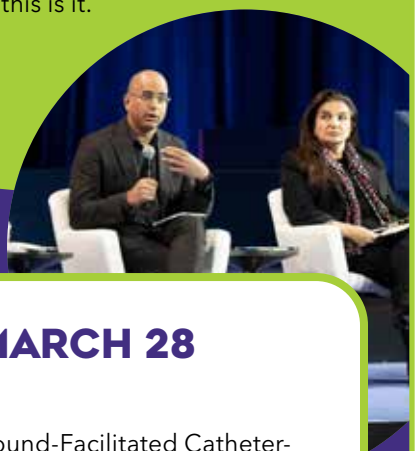
Harlan M. Krumholz, MD, SM, FACC

Carole A. Warnes, MD, FACC

THE SCIENCE EVERYONE WILL BE TALKING ABOUT

Want to be the first to know about the hottest science poised to transform cardiovascular care? The seven Late-Breaking Clinical Trial (LBCT) sessions, five Featured Clinical Research sessions and three Investigative Horizons sessions taking place during ACC.26 are where practice-changing science makes its debut.

These high impact sessions are packed with the breakthroughs everyone will be talking about long after the meeting ends. If you're looking for the pulse of what's next in cardiology, this is it.



SATURDAY, MARCH 28

LBCT I (Session 102)

- **HI-PEITHO:** Ultrasound-Facilitated Catheter-Directed Thrombolysis vs. Anticoagulation Alone for Acute Intermediate-High-Risk Pulmonary Embolism
- **CHAMPION-AF:** Outcomes in Patients With Atrial Fibrillation Randomized to Receive Left Atrial Appendage Closure or Oral Anticoagulation
- **STEMI-Door to Unload:** Primary Left Ventricular Unloading in Anterior STEMI Without Cardiogenic Shock

LBCT II (Session 105)

- **Kardinal:** Tonlamarsen for the Treatment of Uncontrolled Hypertension
- **VESALIUS-CV:** Evolocumab in Patients Without Significant Atherosclerosis
- **Intensive LDL-C Targeting** in Patients With Atherosclerotic Cardiovascular Disease
- **GoFreshRx:** DASH-Patterned Groceries to Reduce Blood Pressure Among Adults With Treated Hypertension

SUNDAY, MARCH 29

LBCT III (Session 106)

- **CHIP-BCIS3:** High-Risk Coronary Intervention With Percutaneous Left Ventricular Unloading
- **Coronary Physiology** Derived from Conventional Angiography vs. Invasive Pressure Wire-Based Approach to Guide PCI
- **ORBITA-CTO:** Chronic Total Occlusion PCI in Stable Angina
- **The Fast III Trial:** Fractional Flow Reserve or 3D-Quantitative Coronary Angiography-Based Vessel-FFR Guided Revascularization

LBCT IV (Session 107)

- **Spironolactone** in the Treatment of Heart Failure
- **Cadence:** Efficacy and Safety of Sotatercept in Combined Post- and Pre-Capillary Pulmonary Hypertension Associated With Heart Failure With Preserved Ejection Fraction
- **Lung Impedance-Guided Therapy** in Heart Failure With Preserved Ejection Fraction
- **Scout-HCM:** Mavacamten in Symptomatic Adolescent Patients With Obstructive Hypertrophic Cardiomyopathy

LBCT V (Session 110)

- **SURVIV:** Redo-Surgery vs. Transcatheter Valve-In-Valve for Mitral Bioprosthetic Dysfunction
- **Transcatheter Aortic Valve** Implantation Without Routine PCI
- **Protect the Head To Head:** Emboliner Embolic Protection Catheter vs. Sentinel Cerebral Protection System During TAVR
- **Tri-Fr:** Two-Year Outcomes After Transcatheter Tricuspid Repair Without Cross-Over

MONDAY, MARCH 30

LBCT VI (Session 111)

- **Thrive Pilot:** Effects of a Food-is-Medicine Intervention on Blood Pressure Among Black and Hispanic Adults With Hypertension in Healthy Food Priority Areas
- **Digoxin** in Rheumatic Heart Disease
- **Discontinuation of β-blocker** Therapy in Stabilized Patients After AMI
- **Essence-TIMI 73b (A Coronary CTA Substudy):** Effect of Intensive Triglyceride Lowering With Olezarsen on Progression of Coronary Atherosclerosis

LBCT VII (Session 112)

- **SirPAD:** Primary Efficacy and Safety of Sirolimus-Coated Balloon for Infra-Inguinal Peripheral Arterial Disease
- **IVUS Chip:** Intravascular Ultrasound Guidance for Complex High-Risk Indicated Procedures
- **Optimal:** Intravascular Ultrasound-Guided vs. Angiography-Guided PCI in Unprotected Left Main Coronary Artery Disease
- **IVUS or Angiography Guidance** for PCI in Complex Coronary Bifurcation Lesions

Scan the QR code for more information, including a complete list of Featured Clinical Research and Investigative Horizons sessions. Plus, look for live coverage of major LBCT results, *JACC* Journals simultaneous publications and key scientific trends on the ACC.26 App and at *ACC.org/ACC2026*.

STAY IN TOUCH DURING #ACC26

Follow the ACC on X, Facebook, Instagram, LinkedIn, BlueSky and YouTube for highlights from ACC.26. Be sure to tag *@ACCinTouch* and *@JACCJournals* and use the hashtag **#ACC26** in your posts. A special thanks to this year's Social Media Ambassadors who will be sharing their insights and perspectives throughout the meeting. **Scan the QR code** to learn more about who to follow and to access ACC's official Hashtag Guide.

NOT ON SOCIAL MEDIA? *ACC.org* will be providing comprehensive daily news coverage from the meeting, including summaries on the hottest Late-Breaking Clinical Trials and trends, video wrap-ups and more. Bookmark *ACC.org/ACC2026* for all the meeting news coverage. In addition, in-person attendees can pick up a copy of the *ACC.26 Daily* newspaper located throughout the Convention Center each morning to read all about the day's highlights.

Global Scholar and Research Awards: Showcasing the Power of Investment, Mentorship and Mission

Each year, programs like the Hani Najm Global Scholar Awards and the William A. Zoghbi Global Research Initiative open doors and accelerate careers for the next generation of cardiovascular leaders.

The Hani Najm Global Scholar Awards offer early career cardiologists from low- to middle-income countries a rare chance to elevate their training through participation in the ACC Annual Scientific Session and a U.S.-based Observership Program. For many, it is a pivotal experience that reshapes their clinical perspective, expands their professional networks and strengthens their ability to take new knowledge back to their home.

The William A. Zoghbi International Research Initiative serves a different but equally vital purpose: fueling innovative research with the potential to improve outcomes for patients living with or at risk for cardiovascular disease. Supported by **William A. Zoghbi, MD, MACC**; Bayer; **Wael Al Mahmeed, MD, FACC**, and a generous gift from Raghib Hussain in honor of **Jamal S. Rana, MD, PhD, FACC**, the effort provides recipients with grant support for one year of focused research.

Cardiology reconnected with several of last year's recipients to see where their journeys have taken them to date. Their stories underscore why these programs matter, not just to individual clinicians and researchers, but to the future of cardiovascular care worldwide.

A Heart Surgeon's Mission

Born and raised in Dar es Salaam to an Asian family with decades-long roots in East Africa, **Khuzeima Khanbhai, MD**, says it was his late grandfather's dream for him to pursue medicine. "The day I graduated he was the happiest man," he says.

A self-described team player, Khanbhai practices at the Jakaya Kikwete Cardiac Institute, the largest cardiac facility in East Africa, where he is considered one of the country's leading interventional cardiologists.

Through his observership at the Cleveland Clinic, Khanbhai hopes to improve and expand his technical skills with the goal of being able to train other doctors and help to address the critical shortage of specialists in the region.

From Sudan to Cleveland

Fellowship programs in heart failure (HF) in Sudan are few, contributing to a severe shortage of specialists. Other challenges include limited access to advanced technologies and prohibitive medication costs, significantly impacting patient outcomes.

During his four-week observership in Cleveland Clinic's advanced HF unit, **Ahmed Mohamedkhair Ahmed Mohamed, MD**, experienced for the first time what he describes as a "state-of-the-art advanced HF service."

He saw first-hand the benefits of a multidisciplinary heart team, optimizing medical therapy and coordinating seamless transitions from hospital to home – elements often fragmented in resource-limited settings like Sudan. He also gained practical insights into routine patient follow-up at the HF clinic, while time in the catheterization laboratory highlighted the importance of interventional procedures in HF management. Perhaps most impactful was the transplant/VAD clinic.

"I hope this award will provide me with the knowledge and experience to become a leader in HF care in my country, he says.

A Mission to Complete the Picture

Opeyemi Olalekan Oni, MD, practices in the heart of Nigeria's Oyo state at LAUTECH Teaching Hospital in Ogbomoso, a regional tertiary health care center. He is just one of two cardiologists in the region.

Working in what he describes as "an indigent part of the country," Oni recognized that many patients couldn't afford the basic examinations needed for proper diagnosis and optimal care. In 2018, he and colleagues created the Ogbomoso Cardiovascular Disease Registry. To

date, roughly 1,000 patient records are in the registry, but only about 25-30% have echocardiographic data, <10% have EKG data, and 12-32% have lab values for blood glucose, cholesterol and serum creatinine.

Addressing these data gaps and performing full workups for indigent patients visiting cardiology clinics is the focus of Oni's project funded by the Zoghbi initiative. The end goal: ensuring prompt diagnosis and initiation of appropriate care. His vision also extends beyond data collection to informing policymakers about disease patterns, facilitating proper health care planning and possibly creating a template for other regional centers to develop similar databases for nationwide health planning.

A Fight to Improve Maternal Heart Health

The Dominican Republic (DR) faces cardiovascular challenges that parallel many resource-limited settings but with unique characteristics shaped by the region's demographics and health care infrastructure. For **Jenniffer Mateo Soto, MD**, who lives in Santo Domingo, the underdiagnosis and undertreatment of cardiovascular disease in women, especially during pregnancy and perimenopause, is particularly concerning.

Through her Zoghbi award, Mateo is developing an educational program in cardio-obstetrics throughout the DR. This goal is personal. During her own pregnancy, she experienced a cardiovascular complication she initially failed to recognize, despite being a physician. Thanks to the timely action of the medical team around her, the damage was minimized.

"By strengthening education in cardio-obstetrics, we can help reduce preventable maternal deaths, increase awareness among health care providers, and offer safer outcomes for mothers and their babies nationwide," she says. In addition, by documenting cardiovascular complications in Dominican pregnant women and evaluating effective educational interventions, she hopes her work will contribute valuable data for developing Caribbean-specific guidelines and protocols. ■

CONGRATULATIONS TO THE 2026 AWARDEES

The following awardees will be recognized during the Closing Ceremony and Convocation during ACC.26. See page 32 for more information on 2027 award deadlines.

HANI NAJM GLOBAL SCHOLARS

Ivana Purnama Dewi, MD
Abraha Weldegerima, MD
Mohammed Mosaad El Zalaawy, MD, D-Card, CCST, MBBCH

WILLIAM ZOGHBI GLOBAL RESEARCH INITIATIVE

William A. Zoghbi Global Research Award
Ihsan Ullah, MD
Marwan Refaat, MD, FACC

Wael Al Mahmeed Global Research Award
Yi Xu, MD, PhD, FACC

Jamal S. Rana Cardiometabolic Health Global Research Award
Seid Getahun Abdela, MD, ACS
Jamol Uzokov, MS

Global Research Award Supported by Bayer
Mohammad A. El Tahlawi, MD
Luisa Caldeira Brant, MD, MS, PhD

Special thanks to longtime ACC leaders **Hani Najm, MD, FACC**, and **William A. Zoghbi, MD, MACC**, for their vision and generosity in creating these dedicated programs. Visit ***ACC.org/Support*** to learn more about ways to help sustain and expand these programs and/or others like them — or text ADVANCING to 41444 to make a donation to the ACC Foundation now.

WELLNESS DURING CV TRAINING:
The Role of the Adaptive Mindset

Cardiology is a field requiring discipline, dedication, sacrifice and patience. The journey to being a cardiologist spans over a decade of rigorous education and training. The path is longer when pursuing advanced subspeciality fellowships, creating what feels like a marathon with no clear finish line. Amidst this demanding professional landscape, we must also navigate personal lives – hobbies, families and the human connections that enrich us.

In a field so demanding and with such high stakes, the risk of burnout is ever-present. According to a recent national survey, workload size was consistently associated with burnout, and an alarming 23-45% of respondents expressed an intent to leave their current roles.[1] Those who felt valued were significantly less likely to consider leaving.

These findings prompt a critical question: In a specialty so prone to burnout, how can trainees cultivate resilience and a sense of value? The answer is complex and the path to resilience is not easy. However, I believe that understanding how mindset shapes our capabilities brings us closer to that answer.

What is Burnout?

Burnout is defined as a state of emotional exhaustion, depersonalization and a significantly reduced sense of accomplishment.

Strategies to prevent burnout are essential to guard against erosion of our well-being by the intensity of schedules, emotional toll of patient care and pressure to excel academically and clinically. Otherwise, over time, clinical performance and empathy are likely to decline, increasing the risk of medical errors, lower patient satisfaction and lower overall outcomes.

Achieving a sustainable balance between professional obligations and personal fulfillment and developing an adaptive mindset are key to maintaining the energy and empathy required to care for others.

The Power of an Adaptive Mindset

Measurable health and performance benefits of an adaptive mindset have been shown in randomized trials.

In one, participants viewing videos framing the COVID-19 pandemic as an opportunity for growth showed significantly lower C-reactive protein levels and fewer depressive symptoms three months after the intervention vs. controls.[2] Another showed that promoting a "stress is enhancing" mindset led to improved physical health symptoms and better work performance.[3] Adopting evidence-based strategies like these to navigate stress and set a foundation for long-term success can have tangible benefits on clinician well-being.

Physical Wellness and Perception

Physical wellness is deeply intertwined with mental resilience. Improved physical health fosters greater energy, motivation and capacity to care for patients. Interestingly, perception plays a critical role. Epidemiological data show that individuals who perceive themselves as less active than their peers have a 72% higher mortality risk vs. those who view themselves as more active.[4] This exemplifies the impact of mindfulness and self-perception in shaping health outcomes.[1]

Simple interventions such as wearing fitness trackers can enhance engagement with personal health. Participants in related studies reported adopting healthier diets and experiencing improved mental health when they perceived their activity levels as adequate.[5] Empowering fellows to monitor and positively interpret their wellness behaviors can produce lasting benefits. Clinicians who maintain their own well being also model healthy behaviors for patients, reinforcing adaptive mindsets and promoting healthier communities.

Institutional Strategies For Wellness

Institutions also play a pivotal role in fostering a culture of wellness. Educational programs that highlight the potential of mindset as a catalyst for growth can be powerful. Resiliency training, group physical activities, stress management workshops and peer support initiatives should be readily accessible to trainees and culturally supported.

Notably, optional programs are most effective. Prescribing a lower volume of wellness activities may promote greater engagement and self-motivation.[5,6] Even brief interventions, such as a 15-minute wellness challenge, increase physical activity and improve fitness, energy, sleep quality and mood.[7]

Peer relationships and community have a substantial positive impact. Social isolation and loneliness are catalysts for anxiety and depression and are linked to significant morbidity and increased risk of heart attack and stroke. Social connection is a protective factor, with one meta-analysis showing

it was associated with a 50% higher likelihood of survival.[8]

Wellness initiatives should be organized with this evidence in mind, supporting peer programs, wellness rounds and social events that allow fellows to engage in shared vulnerability and connections that serve as an emotional lifeline.

Mindset in Cardiology Fellowship

How do these concepts apply to the realities of our training? Consider a typical 24-hour call managing STEMI alerts, ventricular tachycardia storms and cardiogenic shock. These high-pressure scenarios are mentally and physically taxing. However, by priming ourselves to view these challenges as opportunities for growth, we can foster an adaptive mindset that enhances performance and resilience.

Incorporating a brief mindfulness exercise, such as expressing gratitude before starting the day, can also shift perspectives from dread to purpose. Similarly, setting small, achievable goals (e.g., taking the stairs, walking 10,000 steps) can reinforce a sense of control and well-being and overall improve our physical health.

Leadership and Psychological Safety

Creating a psychologically safe environment in the workplace is essential for wellness. As future leaders, we have a responsibility to model behaviors that promote trust, communication and peer support. The P6 framework is a systematic approach to foster this environment in health care by focusing on policy, planning, promotion, prevention, process and persistence.[9]

Incorporating these principles can cultivate environments where team members feel valued and empowered to contribute. Importantly, when fellows lead others by example, it reinforces adaptive behaviors and perpetuates a sense of togetherness within a team. This culture of safety enhances learning and mitigates burnout and promotes retention.

Habit Formation and Long-Term Resilience

Habits sustain the journey toward wellness. In its essence, habit formation is the product of an adaptive mindset. The importance of systems goals is emphasized in the book *Atomic Habits* by James Clear.[10] When behaviors are made obvious, attractive, easy and satisfying, they become sustainable. This approach aligns perfectly with the demands of fellowship, where consistency and adaptability are key.

Habit formation in structured learning can augment clinical mastery of key material. For example, a habitual brief daily review of high-yield EKGs, echocardiograms or catheterization images enhances automatic skill reinforcement, which compounds with as little as 15-20 minutes a day. This habit becomes attractive and satisfying because it helps augment our skill to save lives but is also easy when starting small and repeating often. These behaviors pair our learning with purpose and further strengthen the positive feedback loop for habit formation.

A key concept of the book is the importance of one's identity and, by extension, mindset. Clear emphasizes that habits are not just about performance; they are about identity formation and strengthening the mindset of an able and confident cardiologist. For example, consistently making a habit of reviewing EKGs begins to shift your mindset from "trainee" to "a cardiologist who can confidently see patterns others may miss." This creates a cycle of positive reinforcement as our adaptive behaviors produce good patient outcomes.

Similarly, this concept can be applied to other wellness activities such as exercise, journaling and meditation. When fellows make a habit of prioritizing wellness, they are modeling that behavior for others, especially their own patients. Every effort towards a productive habit is a vote for the kind of cardiologist you want to become.

Reconnecting With Our Purpose

As we reflect on our journey, we should revisit the purpose that initially drew us to this field. When we combine passion with purpose, our work becomes life-enhancing rather than depleting – reducing stress, building resilience and fostering gratitude.

Research supports this connection: a meta-analysis demonstrated that individuals with a greater sense of purpose experienced significantly lower levels of depression and anxiety, with the association being even stronger for those in health care.[11]

When cardiologists maintain their mental and physical well-being, they gain the clarity to reconnect with their core purpose. This re-connection, in turn, reduces burnout and expands the capacity to cultivate an adaptive mindset. ■

References available with the online version of this article at ACC.org/Cardiology.

Alejandro Maldonado, MD, is a fellow at Stony Brook University Hospital in New York, and a member of the Fellows in Training Member Section. **Scan the QR code** to learn more and join.

FUELING DISCOVERY:
Learn More About 2027 Research Awards and Fellowships

Research is the engine that drives progress in cardiovascular medicine, opening the door to new prevention strategies, breakthrough therapies and innovative technologies. Equally essential is the global exchange of knowledge – sharing best practices across institutions, regions and countries to elevate and improve care and outcomes for every patient, everywhere.

The ACC has long recognized that transforming cardiovascular care requires sustained investment in people as much as in science. Through the philanthropic support of its members and longstanding collaborations with industry and cardiovascular society partners, the College has built a portfolio of programs designed to empower researchers, especially those early in their careers, to pursue bold ideas, strengthen international collaboration and accelerate discovery. These initiatives ensure that talented investigators have the resources, visibility and support needed to shape the future of cardiovascular care.

Award season kicks off soon! Learn more about some of these programs and get ready to apply or nominate a candidate. ■

ACC/ABC MERCK RESEARCH FELLOWSHIP AWARDS

These awards support advanced research fellowship training in adult cardiology to encourage the development of careers in clinical investigation by cardiology trainees.

Scan the QR code to learn more.

DOUGLAS P. ZIPES DISTINGUISHED YOUNG SCIENTIST AWARD

This award recognizes a young physician scientist who has made outstanding contributions to the field of cardiovascular disease and amassed an impressive body of scientific research in the basic or clinical domain.

Scan the QR code to learn more and nominate a candidate from March 24 to May 28.

HANI NAJM GLOBAL SCHOLAR AWARD

This award encourages the sharing of knowledge between international cardiology professionals to combat the devastating effects of cardiovascular disease worldwide. The program is an opportunity for early career cardiologists in the Middle East and Africa to shadow practicing cardiologists at a U.S. hospital.

Scan the QR code to learn more and apply from April 13 to June 8.

WILLIAM A. ZOGHBI GLOBAL RESEARCH INITIATIVE

This initiative aims to provide a springboard for innovative new research in countries outside of the U.S. that hold potential to improve the care and outcomes of patients living with cardiovascular disease. Seven awards will be given to support one year of research across the spectrum of cardiovascular care.

Scan the QR code to learn more and apply from April 13 to June 8.

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