



From Editor-in-Chief: On current issue, acknowledging the best in 2025, new guidelines and statements

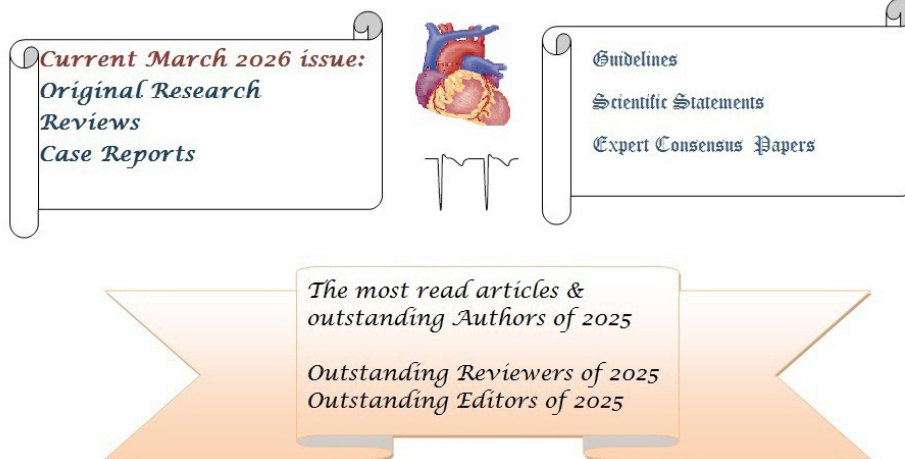
Graphical abstract



Heart, Vessels and Transplantation

From Editor-in-Chief: On current issue, acknowledging the best in 2025, new guidelines and statements

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Dear readers,

In current March 2026 our 10th year 1st issue, you can find original research articles on; review articles, and case reports cardiovascular (CV) medicine, including cardiology, arrhythmia, ablation, imaging, vascular diseases, surgery, neurovascular diseases, surgery and internal medicine. We published original research articles on: on morphological characteristic of brain glial tumors, on relation of obesity and diabetic nephropathy, on factors determining mortality in stroke-related hematoma of supratentorial region, on risk factors of congenital heart disease development in children, and treatment of endotoxemia associated with peritonitis. Review articles may be of interest for you as they multidisciplinary: preparation of medical staff for work in industrial zones located in extreme conditions of high altitudes, on frailty assessment and effects of national sports on development of children and adolescents and effect of oxidative stress, nitric oxide signaling hypoxia inducible factor in chronic lower limb ischemia. You can find very rare interesting case on ablation of atrioventricular tachycardia in a young man with genetically confirmed Williams Beuren syndrome and supra-aortic stenosis and case report on concealed changes in myocardium detected by strain imaging in an otherwise healthy woman with right bundle branch block.

I have an honor to announce the outstanding articles and their authors published in 2025 and the most read and most downloaded:

Original research article: Conflict resolution style in professional activities of nurses by Aigul S. Abdyzhalieva, Victor E. Savin, Tologon Ch. Chubakov, Kalima T. Mamatova, Raikhan S. Rozyeva, Bishkek, Kyrgyzstan

Review article: Mechanistic relationship between obesity-induced inflammation triggering endothelial dysfunction and the initiation of atherosclerosis development. Richard L. Jayaraj, Elhadi H. Aburawi, Al-Ain, United Arab Emirates; Guangzhou, China

Case report: Atypical acute myocardial infarction presenting as papillary muscle rupture and pulmonary edema: A case report. Irina A. Akhmedova, Azat K. Turgunov, Inamullah, Areeba Sarfraz, Rakhmat S. Kalieva, Sultanmurat A. Jumabaev, Daniyar Ch. Cholponbaev, Bishkek, Kyrgyzstan

Editorial: AHA 2025 guidelines for acute coronary syndromes: latest evidence and comparison with ESC guidelines

Dario Mafrica, Giuseppe Franculli, Antonio Rossi, Antonio Esposito, Giuseppe Biondi-Zoccai, Marco Bernardi, Pierre Sabouret, Rome, Latina, Cotignola, Italy; Paris, France

We have to acknowledge that among 20 top read and downloaded articles we have 50% original research, 20% review articles, 25% editorials and 5% case reports. The articles are from: Egypt, Ethiopia, France, India, Italy, Kazakhstan, Kyrgyzstan, Mexico, Spain, Ukraine, United Arab Emirates/ China. Topics include CV medicine, surgery, internal medicine, and public health.

I am obliged to announce outstanding reviewers and editors who contributed the most (performing 3 and more evaluation of manuscripts) to the peer-review process and make possible selection of best content in 2025.

2025 outstanding reviewers are: Vitaliy Petrov from Ukraine – 8 manuscripts, Kaigeldy Aikimbaev, Turkey – 6, Luca Beghetto, Italy – 4, Juan Guzman Olea, Mexico – 4, Marco Bernardi, Italy – 3, Giangiuseppe Cappabianca, Italy – 3, Christian Heeger, Germany – 3, Gabrielle Martelli, Italy – 3, Marianna Mirchuk, Ukraine – 3, Uliana Pidvalna, Ukraine – 3.

2025 outstanding editors are: Kuat Abzaliev, Kazakhstan – 6 manuscripts, Nirmal J. Kaur, USA – 6, Salvatore Scianna, Italy – 4,

Andrea Lorenzo, Brazil – 4, Fabio Massimo Oddi, Italy – 3, Dileep Kumar R. Regalla, USA – 3, Cristiane Lamas, Brazil – 4, Mykhaylo Sorokivskyy, Ukraine – 3, and Federico Tacconi, Italy – 3.

All our best authors, reviewers and editors will receive certificates.

Recently ACC/AHA published several new guidelines, scientific statements and expert consensus documents (1-7) of interest for our readers and some of them will be introduced to you by our Editors.

The scientific statement for use of multimodality imaging for coronary ischemic testing in pediatric patients has been released recently (1). The children with the following spectra of diseases involving coronary vessels: Kawasaki disease, multisystem inflammatory syndrome, associated with development of coronary aneurysm, anomalous aortic origin of coronary arteries, surgically repaired congenital heart disease and cardiac allograft vasculopathy need as adults the ischemic testing.

Among imaging modalities stress echocardiography (echo), stress cardiac magnetic resonance imaging (cMRI), nuclear stress and invasive coronary testing are being used. In this document detailed concise protocols for use exercise and stress imaging testing and coronary imaging (coronary angiography, intravascular ultrasound, fractional flow reserve, optical coherence tomography) in children with specific for age groups and doses for pharmacological stress and imaging techniques and considerations in children are provided. This statement document is of interest for pediatric cardiology, congenital heart surgeons and pediatricians.

Another concise scientific statement released by ACC/AHA at the end of 2025 (2) is on management of pericarditis: the new concept is based on multimodality imaging (echo, cMRI, computed tomography, CT) and imaging-guided therapy for effusion constriction or inflammation, including now colchicine and antiinterleukin agents, radical pericardectomy. You can find detailed description of clinical symptoms, diagnostic and treatment procedures in details with easy to comprehend schemas and tables. The differences and similarities between ESC 2025 guidelines on pericarditis and ACC/AHA scientific statement will be presented by our Editor in forthcoming issue.

The ACC/AHA statement on management of obesity in heart failure patients also attracts attention (3).

The statement provides definitions to heart failure (HF) classification and stages, as well as the definition of obesity with its degrees and overweight based on body mass index (BMI), and also definition and grades of adiposity that is assessed by measuring waist circumference, the derivatives as waist-hip ratio and waist – height ratio. Then the entities clinical and pre-clinical obesity obtained based on BMI and adiposity measures. Statement provides diagnostic procedures to assess the adiposity – measurements, or spectroscopy, X-Ray absorptiometry, MRI and CT. For clinical decision making on treatment of obesity not only the stages of HF and type of HF is taken in consideration but also comorbidities accompanying obesity as diabetes mellitus type 2, sleep apnea, hypertension and atrial fibrillation.

For diagnosis of HF there is notion that natriuretic peptides have lower values in obese patients, therefore lower threshold should be used. Main principles of management include lifestyle modification (5-10% weight reduction), antiobesity drugs (10-20% reduction in weight) and surgery (10-30% of weight reduction).

For patients with HF with preserved ejection fraction based on trials semaglutide or tirzepatide are indicated to reduce the weight and also improve outcomes of HF. For semaglutide to reduce symptoms and improve functional status, reduce hospitalizations for HF and major cardiovascular events (MACE); tirzepatide – additionally to CV death and HF related events. Metabolic and bariatric surgery also improves outcomes for HF.

Of special notice, GLP1 (glucagon like peptide 1) receptor agonist (semaglutide) and GLP1/GIP (glucose-dependent insulinotropic peptide) agonist (tirzepatide) hormone based medications are not studied in HF with reduced ejection fraction (HFrEF), therefore there is caution not to use in patients with $\leq 45\%$ EF, with type 1 diabetes, patients receiving insulin, pancreatitis and hypoglycemia. Contraindications are family or personal history of endocrine neoplasia, thyroid neoplasia, type 1 diabetes mellitus. Drugs must be started in small doses with weekly titration up – that is well described.

This document is of interest for interdisciplinary team for cardiologists, endocrinologists, internal medicine specialists.

The ACC/AHA also published statement of quantitative coronary plaque analysis (QCPA) (5) of interest for cardiologists, imaging and interventionists. This is used in patients who undergo CT angiography (CTA), it provides insights into the plaque volume, its calcification and other features that can be monitored in time for plaque progression. Document provides details how to assess and standardizes physician report on plaque characteristics: total plaque volume (TPV), noncalcified (NTPV) and calcified plaque volume (CPV), atheroma volume, stenosis severity, vessel and segment analysis and age adjusted risk scores. It is recommended for patients in whom plaque is visible on CTA for risk stratification and guiding of preventive strategies. As this is relatively new indicator, the evidence is limited for serial measurements that is not recommended routinely yet but in 2-5 years repeat CTA plaque analysis can be done as serial measurement QCPA: it is accepted plaque progression if $TPV \geq 10-20 \text{ mm}^3$ per year, $NTPV \geq 5-10 \text{ mm}^3$ /year.

Another ACC/AHA expert consensus document on use cardiac imaging – CT in evaluation of prosthetic valve was published in late 2025 (5). Consensus document describes in detail indications for current imaging techniques (echo, TEE, PET scan) and introduces the guidance for use of CT in evaluation of prosthetic valves and their dysfunction in detailed manner including techniques, imaging, interpretation and recommendation for clinical use and advantages or complementary value in comparison with echo.

The authors provided guidance for evaluation of valve dysfunction: obstruction, thrombus, pannus, paravalvular leakage, valve thickening, prosthetic valve endocarditis, etc. The document is of interest for wide range of our readers including CV imaging specialists, cardiologists, cardiac surgeons and physicians. The Editorial summarizing for you a new knowledge is being prepared by our Editors.

Finally two ACC/AHA guidelines were published in 2026: on adult congenital heart disease (ACHD) and acute pulmonary embolism (APE) (6, 7). I briefly share what is new in these guidelines, as we will try to bring to your attention in Editorials prepared by invited experts or our editors.

A guidelines on ACHD as compared to 2018 version updated many recommendations and has entirely new recommendations in sections of patent ductus arteriosus, heart failure and cyanosis. What is new is that the patients will benefit now care at ACHD centers where specialists will provide guidelines-directed care and work with multidisciplinary teams. For example, patients with moderate ACHD before undergoing cardiac or noncardiac procedures should be consulted by ACHD specialist who will guide care during and after procedures. Again, pregnant women with ACHD can undergo vaginal delivery with proper monitoring and risk stratification. Patients with repaired tetralogy of Fallot after should be referred for pulmonary valve replacement, if right ventricular (RV) end-systolic volume is >80 ml/m²; also these patients can undergo ablation for ventricular tachycardia and new approaches for are recommended arrhythmia management. Patients with secundum atrial septal defect, pulmonary hypertension, significant left-to-right shunt, and pulmonary vascular resistance of 2 Woods units or >2 less than 5 Wood units should undergo closure of defect. In patients with complex ACHD as systemic RV and Fontan circulation with atrial arrhythmias, rhythm control is preferred strategy over rate control. Guideline –directed medical therapy for HF treatment is indicated in patients with systemic right or left ventricle and the pacing strategies should be sought for patients with systemic RV and Fontan circulation. Patients with Eisenmenger syndrome can be treated with pulmonary vasodilators as phosphodiesterase -5 inhibitors or endothelin receptor antagonist as initial strategy. Patients with Fontan circulation should undergo screening for liver disease annually.

Guidelines on APE management (7) presents a new clinical classification of APE based on clinical categories (5 categories A-E) and subcategories to guide prognosis and treatment decision –making. Asymptomatic patients with ACC/AHA APE category A can be discharged from emergency room and do not need hospitalization. Symptomatic patients in category B with low severity score can be discharged early and patients with APE and higher severity score with increased biomarkers and RV dysfunction (category C), emergent cardiopulmonary failure (category D) and those with accompanying above symptoms persistent hypotension (category E) should be hospitalized to optimize treatment. In patients with APE category E1, advanced therapies as systemic or catheter-based thrombolysis, mechanical or surgical embolectomy are reasonable strategies. These therapies could be considered in D1-2 category of patients. In APE patients who require unfractionated heparin, low molecular weight heparin is recommended over heparin. Patients eligible for oral anticoagulation, direct oral antiticoagulants are recommended over vitamin K antagonists to prevent venous thromboembolism and reduce major bleeding. Patient with first APE and those with persistent risk factors, anticoagulation beyond 3-6 months is recommended. Patients should be monitored at least 1year for development

of chronic thromboembolic pulmonary disease. To improve care, formation of PE response teams is recommended.

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