



## Abdominal aortic aneurysms: advances in endovascular repair

Abdominal Aortic Aneurysm (AAA) is typically a disease of older males with increasing prevalence after the 6th decade of life and an incidence of 6.5 per thousand person years. 10% of the population older than 65 years presents an AAA.

The endovascular aneurysm repair (EVAR) is considered nowadays the mainstay treatment of AAA compared to open repair due to its minimal invasive nature and its lower perioperative mortality and morbidity. The fundamental philosophy of the stent-graft technology is focused on the exertion of a radial force continuously applied by a Nitinol skeleton, over-sized with regard to the diameter of the healthy infrarenal aortic segment. This sealing technology, often coupled with suprarenal fixation mechanisms, carries certain limitations with respect to minimum anatomical requirements of angulation, diameter and length of the infrarenal and iliac sealing zones.

The sealing and fixation mechanisms, the accuracy of deployment and the profile of the delivery devices have evolved rapidly over the last decade with newer endografts recruited to widen the eligibility for EVAR at no cost to safety and efficacy. Moreover, sophisticated and technically demanding endovascular techniques (branched-, fenestrated- or chimney EVAR) were developed to manage pararenal, juxtarenal and thoracoabdominal AAA, while modified designs were introduced to address simultaneously the presence of iliac aneurysms accompanying AAA. However, despite the initial enthusiasm, certain queries remain still unanswered, such as the mid- and long-term clinical success of the newer endografts, the competitive efficacy of fenestrated- and chimney EVAR in the treatment of complex AAA and the management of technical failures of the new endograft designs.

Aim of this issue is to present the current status of endovascular treatment of AAA, describe the technical improvements and modifications of previous and newer endograft designs, compare the critical issues related to the advanced treatment modes of complex AAA and address the challenges to treatment of failures of the new endograft designs.

### Guest Editor(s):



**Prof. Dr. Efstratios Georgakarakos**

**[efstratiosgeorg@gmail.com](mailto:efstratiosgeorg@gmail.com)**

University Hospital of Alexandroupolis, Democritus University of Thrace, Alexandroupolis, Greece



## Message from the Editor-in-Chief

Reviews in Cardiovascular Medicine was launched in 2000 by MedReviews, LLC, in New York, NY. This journal was conceived to fill a critical gap for clinicians who were struggling with a rapidly expanding knowledge base in cardiovascular medicine with the convergence of basic science, clinical epidemiology, and therapeutic clinical trials. The founding co-editors were David P. Faxon, MD, past president of the American Heart Association, and Norman E Lepor, MD, who is considered a luminary in interventional cardiology. The contributing editorial board grew over time and Dr. Peter A. McCullough, MD, MPH ascended from contributing, to associate, to co-editor of the Journal. In 2018, the Journal took its next big step under the leadership of Dr. McCullough as editor-in-chief to become a truly international publication. Its offices moved to IMR Press in Hong Kong, and the editorial board was made more inclusive and representative of the world-wide contributors in academic cardiology. Additionally, the journal brought on expertise in translational medicine to help face the future of molecular medicine and its role in cardiovascular disease. Today Reviews in Cardiovascular Medicine is considered a top tier journal in cardiology with timely and comprehensive reviews covering all aspects of cardiovascular medicine including atherosclerosis, myocardial disease, arrhythmias, and valvular heart disease. The scope of papers ranges from population science, applied basic investigation, in-vitro diagnostics, and evidence-based strategy and therapeutic trials involving both pharmacologic intervention and interventional devices. The highly integrative style of the Journal anchored with evidence tables and instructive figures has garnered many citations over the years and many guidelines documents have relied upon works published in Reviews in Cardiovascular Medicine. Supplement and focus issues have been very popular among the readership and often are viewed as the most up-to-date compilations of new knowledge in cardiology and related specialities. The future is bright for academic cardiovascular medicine and Reviews in Cardiovascular Medicine is well positioned along side the clinician-investigator in the years to come as a trusted source of critical information and analysis.

## Editor-in-chief:



**Peter A. McCullough, MD, MPH**

[peteramccullough@gmail.com](mailto:peteramccullough@gmail.com)

Baylor University Medical Center, Baylor Heart and Vascular Institute, Baylor Jack and Jane Hamilton Heart and Vascular Hospital, Dallas, TX, United States

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**Contact us:** [RCMeditorial@imrpress.org](mailto:RCMeditorial@imrpress.org)

