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The special EuroPCR 2024 issue

The special EuroPCR 2024 issue with the VARC-HBR consensus document; a debate on systematic OCT use in PCI; outcomes by sex from the ISCHEMIA trial; the DECISION QFR trial; CART in contemporary CTO PCI; SAPIEN 3 Ultra RESILIA; predictors of late lumen loss after DCBs for *de novo* lesions; new-onset atrial fibrillation after TAVI; and more...

Davide Capodanno, *Editor-in-Chief*

Artificial intelligence (AI) is here to stay and, by now, this should be clear to everyone. There are several aspects of AI relevant to our journal that we'd like to take a moment to consider before introducing the specific articles that make up this special EuroPCR 2024 print and online edition of the Journal. The first of these aspects concerns the increasing attention we are paying to the articles we receive. It is probably impossible to recognise texts written by humans and corrected by AI. Therefore, in line with the editors of other international journals, we rely on authors' common sense and transparency, asking them to declare the use of these tools where applicable. However, it is quite possible to recognise texts entirely generated by AI, and we intend to pay closer and closer attention to this because social media abounds with examples of articles that have escaped the scrutiny of reviewers in other journals, including completely nonsensical and artificial extracts.

The second aspect concerns what AI can do in terms of simplifying procedures and editorial work. In this sense, EuroIntervention, in line with its avant-garde vocation, intends to equip itself with the most modern systems for simplifying the editorial process. Of course, I am not referring to the peer-review of articles, but rather to a series of improvements to our website that may already be clear to our regular visitors. For example, content indexing and the concatenation "of related contents" have certainly already benefited from the use of AI.

While these technical improvements are not exactly visible, there is a major innovation that we are launching with this edition. This is the third aspect and concerns Cory, the personal AI assistant that will now accompany the reader on our website. It is an extraordinary chatbot that can respond in any language and with any level of simplicity or

complexity to all questions relevant to the article it is consulted on. It is truly difficult to list all the things this system can do because the limit lies in the creativity of the questioner. We hope that this assistant can be helpful to those approaching our articles, and we invite readers to subscribe and experience this as a unique technical development that positions our journal at the forefront in terms of innovations and reader services.

But enough about us for now. Let's proceed to the review of this special EuroPCR issue.

After ILUMIEN IV and OCTOBER, is it time to incorporate optical coherence tomography (OCT) into daily percutaneous coronary intervention (PCI) practice? Our invited authors tackle this question in this issue's debate. **Ziad A. Ali and Doosup Shin**, after a brief tour of the evidence, trials and procedural considerations, ask, "How can we justify not using it?", whereas **Ron Waksman and Abhishek Chaturvedi** find that the current limitations warrant further study and data before OCT becomes the first choice of intravascular imaging tools.

Despite the complexity of bleeding pathophysiology and the uniqueness of transcatheter aortic valve intervention (TAVI)-related bleeding risk compared to other intervention-related bleeding risks, there is currently no standardised definition for high bleeding risk (HBR) in TAVI patients. A consensus document from the **Valve Academic Research Consortium for High Bleeding Risk** addresses this absence. The authors provide a consistent definition of HBR for TAVI patients that covers risk stratification, devices, drug regimens, as well as the safety and efficacy of procedures.

Certain landmark trials may merit re-examination as we become more knowledgeable about the differences in the pathophysiology and clinical presentation of coronary artery disease (CAD) between sexes. **Mario Gaudino, Bjorn Redfors and colleagues** do just this in analysing the outcomes of the ISCHEMIA trial by participant sex. The authors find that women randomised to an invasive treatment strategy were less likely to undergo revascularisation and that women had fewer procedural myocardial infarctions. **Roxana Mehran and Mauro Gitto** discuss the undertreatment of women with CAD in an accompanying editorial.

In the next original research article from the randomised, multicentre DECISION QFR trial, **Taku Asano, Hitoshi Matsuo, and colleagues** study whether providing either quantitative flow ratio (QFR)- or fractional flow reserve (FFR)-based data affected Heart Team decision-making on the mode of revascularisation for patients with multivessel disease. Both approaches agreed generally on treatment recommendations, further paving the way for non-invasive assessments. This article is accompanied by an editorial from **Patrick W. Serruys and Pruthvi C. Revaiah**.

Silvia Moscardelli, Lorenzo Azzalini and colleagues present their analysis of indications, procedural characteristics and outcomes of using controlled antegrade and retrograde subintimal tracking (CART) in chronic total occlusion PCI. This potential alternative to reverse CART involves retrograde ballooning of the occlusion, followed by antegrade wiring of the distal true lumen, and facilitates the recanalisation of very complex occlusions with low complication rates.

Masaya Yamamoto, Yukio Hiroi and colleagues investigate lesion characteristics that predict late lumen enlargement using serial optical frequency domain imaging following drug-coated balloon angioplasty for *de novo* coronary artery lesions. Among the coronary atherosclerotic plaques, layered plaques were associated with a higher occurrence of

late lumen loss and, among the procedure-related factors, extensive medial dissection was an independent predictor as well. This article is accompanied by an editorial from **Fernando Alfonso and Fernando Rivero**.

Masanori Yamamoto, Kentaro Hayashida and colleagues share the clinical outcomes of the SAPIEN 3 Ultra RESILIA transcatheter heart valve from the OCEAN-TAVI registry. Although the procedural complication rates were similar to the earlier-generation SAPIEN 3, the paravalvular leak rate was lower and valve performance was better, particularly in the smaller sizes.

Jorge Nuche, Josep Rodés-Cabau and colleagues examine the incidence, predictors and clinical impact of subclinical new-onset atrial fibrillation (NOAF) after TAVI. They found that this condition affects up to 7% of TAVI patients without a previous history of atrial fibrillation, and a greater severity of aortic stenosis increased the risk for developing NOAF. This article is accompanied by an editorial from **George Siontis and Stephan Windecker**.

This issue also has several research correspondence articles and viewpoints. Looking at the two research correspondences, the first is from **Parham Sadeghipour, Alain Fraise and colleagues**, who summarise the three-year results of their trial on balloon-expandable versus self-expanding stents in native coarctation of the aorta. Next, **William B. Earle, Eric A. Secemsky and colleagues** examine procedure- and event-related trends in a population with severe renovascular hypertension and high morbidity and mortality. We then turn to the viewpoints; one from **Holger Thiele and Divaka Perera** examining current evidence and data on Impella-assisted PCI, and another from **Sheldon Heitner**, which pays close attention to the evolution of the Journal itself at this time of technological change... the perfect moment to turn to the articles themselves!



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1. Pijls NH, et al. Fractional flow reserve versus angiography for guiding percutaneous coronary intervention in patients with multivessel coronary artery disease: 2-year follow-up results of FAME study. *J Am Coll Cardiol.* 2010;56:177-184. **2.** Ford, T.J., et al. 1-year outcomes of angina management guided by invasive coronary function testing (CorMicA). *J Am Coll Cardiol Interv.* 2020;13:33-45. **3.** CoroFlow[‡] Cardiovascular System Instructions for Use (IFU). Refer to IFU for additional information. **4.** PressureWire[™] X Guidewire Instructions for Use (IFU). Refer to IFU for additional information. **5.** Data on file at Abbott.

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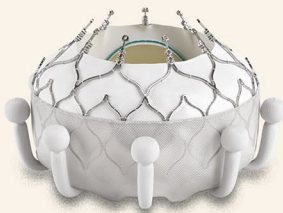


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