EMBARGO: 21 May 2025 - 11:15 CEST

EuroPCR 2025 – The FAITAVI trial: angiography versus physiology-guided PCI in patients undergoing TAVI – 12-month follow-up data

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Paris, France, 20-23 May 2025. *The EuroPCR Course Directors have selected 3 major late-breaking trials that will be presented for the first time during the 2025 edition of EuroPCR. These trials were selected because of their design, results, and potential to impact practice, among them is the FAITAVI randomised clinical trial (RCT).*

Background

The optimal management of patients with intermediate coronary artery disease (CAD) and severe aortic stenosis (AS) who are candidates for TAVI remains unclear. Recent trials comparing percutaneous coronary intervention (PCI) with conservative management of CAD patients undergoing TAVI yielded conflicting results leaving the question of how to manage these patients open until now.

To determine whether fractional flow reserve (FFR)-guided management improves clinical outcomes compared with angiography-guided revascularisation in stable TAVI patients the Functional Assessment In TAVI (FAITAVI) trial[1] enrolled 320 patients who were randomised 1:1 between FFR-guided PCI and angiography-guided PCI.

In the angio-guided arm all lesions ≥50% in a vessel >2.5 mm were treated while in the physiology-guided arm lesions with FFR ≤0.80 were treated and >0.85 were deferred. For all FFR values between 0.81 and 0.85, repeating the measurement after TAVI implantation was recommended as FFR can change due to improved hyperaemic coronary flow after TAVI.

The primary endpoint was major adverse cardiac and cerebrovascular events (MACCE) at 12-months follow-up including all-cause death, myocardial infarction, ischaemia-driven target vessel revascularisation, disabling stroke or major bleeding.

Results

The mean age – 86 years – and low SYNTAX scores – a median of 7 – was similar between the two groups.

FFR-guided PCI was associated with a lower rate of MACCE at 12-month follow-up in patients with intermediate CAD undergoing TAVI.

The primary endpoint occurred in 14 (8.5%) in the FFR-guided PCI group and in 25 patients (16.0%) in the angiography-guided PCI group, a finding primarily driven by lower rates of any-cause death and ischaemia-driven target vessel revascularisation.

Key learnings

These findings are of particular interest when facing the clinical challenges of managing a bystander coronary lesion identified during diagnostic evaluation for a valve intervention especially as CAD is present in over 50% of patients undergoing TAVI.

The recent NOTION-3 study demonstrated in patients with CAD undergoing TAVI that PCI was associated with a lower risk of events (any cause death, MI or revascularisation) at 2 years when compared with conservative treatment. However, unlike the NOTION-3 study[2], the FAITAVI trial focused on intermediate coronary lesions, while angiographically severe lesions (DS >90%) were excluded. Furthermore, the study compared angiography vs physiology guidance and did not include an arm for conservative treatment.

The FAITAVI trial hypothesised that the management of coronary lesions according to their functional significance could be beneficial in the decision-making process of TAVI candidates with concomitant, stable CAD. The risk of a MACCE was significantly lower in patients allocated to the physiology-guided PCI strategy, mainly driven by a lower risk of death from any cause and ischaemia-driven TVR, further highlighting the potential advantages of FFR-guided PCI in patients undergoing complex interventions, including TAVI.

Conclusions and PCR recommendations
In this first study comparing FFR-guided PCI with angiography-guided PCI in patients with intermediate CAD and severe symptomatic AS undergoing TAVI, FFR-guided PCI was associated with a lower rate of MACCE at 12 months of follow-up.

This trial provides data that can impact clinical decision-making when dealing with patients who are candidates for TAVI and who present with intermediate coronary stenosis. Future studies are needed to further understand the impact of functional guided revascularisation on TAVI patients and its potential advantages versus conservative treatment.

References

1. Ribichini F, Pesarini G, Fabris T, et al. A randomised multicentre study of angiography-versus physiology-guided percutaneous coronary intervention in patients with coronary artery disease undergoing TAVI: design and rationale of the FAITAVI trial. EuroIntervention. 2024;20:e504-e510. doi: 10.4244/EIJ-D-23-00679. PMID: 38629420

2. Lønborg J, Jabbari R, Sabbah M, et al. PCI in Patients Undergoing Transcatheter Aortic-Valve Implantation. *N Engl J Med*. 2024;391:2189-2200. doi: 10.1056/NEJMoa2401513. Epub 2024 Aug 31. PMID: 39216095.

NOTES TO EDITORS
Key information
• Session: Hotline /Late-Breaking Trials: Major Late-Breaking Trials from EuroPCR 2025
• Presentation: Angiography versus physiology-guided PCI in patients undergoing TAVI: the functional assessment in TAVI (FAITAVI) trial
• Presenter: Flavio Luciano Ribichini
• Palais des Congrès Porte Maillot – Paris, France
• 21 May 2025 / 11:15 - 12:15 / Theatre Bleu

Available on Replay/Livestreamed on the Course platform.

NOTES TO EDITORS

About EuroPCR 2025
The World-Leading Course in interventional cardiovascular medicine and the official annual meeting of the European Association of Percutaneous Cardiovascular Interventions (EAPCI) will take place from 20 to 23 May 2025, onsite at the Palais des Congrès, Paris, France. A digital package is also available for those unable to join in person.

The detailed Course Programme is available on:
https://www.pcronline.com/Courses/EuroPCR/Programme

About PCR
The mission of PCR is to serve the needs of each individual patient by helping the cardiovascular community to share knowledge, experience and practice. PCR offers a large range of many other educational meetings and resources for the continuing education of the interventional cardiovascular community. These include major annual Courses across the globe, e-Learning with high-profile PCR Webinars, Courses specifically dedicated to valvular heart disease, tailor-made PCR Seminars on specific topics, online resources and medical publications such as EuroIntervention, the official journal of the EAPCI.

Gateways to all PCR activities are available on www.pcronline.com.

For further information, please contact Sally Collingridge: scollingridge@europa-group.com

About the EAPCI
The European Association of Percutaneous Cardiovascular Interventions (EAPCI) is a branch of the European Society of Cardiology. Its mission is to reduce the burden of cardiovascular disease through percutaneous cardiovascular interventions. This dynamic association represents a large community of over 8K EAPCI associates and over 1K full EAPCI members by helping them remain up to date in the constantly evolving field of PCI by publishing research and providing educational, training and certification programmes. The EAPCI also advocates for the best possible access to life saving treatments for patients through data-based advocacy at a European level.

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