ESC 2024

We have now reached a point where cardiac disease treatment can be individualised

Congress Review

Review of the European Society of Cardiology (ESC) Congress 2024

Location:	London, UK
Date:	30.08.24-02.09.24
Citation:	EMJ Cardiol. 2024;12[1]:10-25. https://doi.org/10.33590/emjcardiol/NJEA5875.

PERSONALISING cardiovascular care was the central theme at the European Society of Cardiology (ESC) Congress 2024, which took place in London, UK, between 30th August–2nd September. Home to the largest cardiac centre in Europe, London provided the perfect setting for the cardiology community to gather and explore cutting-edge updates in the field.

The Welcome Address was delivered by ESC President Franz Weidinger, who proudly emphasised how the event brings together the greatest minds in cardiovascular science and medicine. Before inviting John McMurray, Chair of the ESC Congress Programme Committee, to the stage, Weidinger highlighted that this year, there were representatives from 106 cardiac societies from around the world, with attendees from over 163 countries.

With over 1,200 sessions included in the comprehensive programme, McMurray explored the programme highlights with the audience. He noted that we have now reached a point where cardiac disease treatment can be individualised. To reflect this, several sessions within the programme were dedicated to individualised cardiac care. McMurray also spotlighted four new guidelines sessions covering the management of: elevated blood pressure and hypertension, chronic coronary syndromes, atrial fibrillation, and peripheral arterial and aortic diseases.

McMurray also drew attention to 12 Hot Line sessions that comprised of late-breaking clinical trials, including 38 new, large randomised controlled trials and 11 'Ask the trialists' sessions. The audience were signposted to the 26 late-breaking science sessions covering 162 clinical trial updates, smaller trials, clinic studies, registries, cohort/epidemiological studies, and basic science.

The 2024 programme included a new obesity track in recognition of this increasing global health concern. Digital health was also recognised as a key topic, with the Congress dedicating a special stage to digital health transformation and implementation within the field. McMurray also stressed the importance of recognising patient perspectives, noting several sessions committed to understanding patient experiences within the programme. In terms of research, this year's Congress received 8,620 abstract submissions from 117 countries, of which 4,451 were accepted. The programme itself included 130 oral abstract sessions, 400 moderated ePoster sessions, 86 clinical case sessions, and 11 award sessions in total.

The opening ceremony saw several experts receive awards. Weidinger presented the ESC gold medals to "three extraordinary individuals who have made outstanding lifetime contributions to cardiology," whose work has helped inspire and pave the way for others. The recipients of these awards were Milton Packer, Baylor University Medical Center, Dallas, Texas, USA; Peter J. Schwarz, IRCCS Italian Auxological Institute, Milan, Italy; and Karin Sipido, KU Leuven, Belgium, for their work in heart failure, long QT syndrome, and basic and translational research, respectively.

Following this, President's Awards were bestowed to Eva Prescott, Bispebjerg University Hospital, Copenhagen, Denmark, and Chair of the Clinical Practice Guidelines of the ESC; and Hector Bueno, National Centre for Cardiovascular Research (CNIC), Madrid, Spain, for their exceptional voluntary work in going above and beyond for the ESC, and their mission to reduce the burden of cardiovascular disease. Weidinger also congratulated the 750 newly elected fellows of the ESC, commenting: "Your expertise and experience are invaluable to bringing up the next generation of outstanding minds in our field."

During the Presidential Address, Weidinger emphasised the impact of heart disease, stating: "Every day, together, we fight the world's number one killer, cardiovascular disease." Whilst progress has been made, with a decline in cardiovascular disease mortality, improved control of modifiable risk factors, and better outcomes for many disease domains, he noted that many challenges remain. Moreover, new risk factors influencing cardiovascular health outcomes that result in cardiovascular disease disparities based on income, education, and geography present additional challenges. He emphasised that these risk factors are strongly related to the alarming global rise in diabetes and obesity. In addition, air and noise pollution, climate change, physical inactivity, poor nutrition, and an ageing population contribute to a picture of risk that is not amenable by medical therapy alone.

When considering how this may be approached, Weidinger commented: "This clearly calls for a more holistic, cross-sectoral, societal approach." He reflected on how the ESC has been an advocate for a European policy and regulatory environment favourable to improving cardiovascular health. He explained that the ESC has also focused on supporting member states with

their national health policies, discussing that European and national cardiovascular health plans are vital in helping to pave the way for a further decrease in cardiovascular disease within Europe and around the world. “We must keep working to make this a reality,” Weidinger stated.

The ceremony concluded by discussing advances in technology, which are already transforming medical practice, delivery of care, and scientific research. If these advances are effectively combined with evidence-based medicine, Weidinger stressed that there is a potential in the future to fundamentally change scientific research and patient management to deliver the right treatment to the right patient at the right time, which is why the theme of personalised care was chosen for 2024.

Whilst he noted the potential for combining genomics, transcriptomics, proteomics, and metabolomics with AI and digital technologies to help understand the complex mechanisms underlying cardiovascular disease and develop personalised biomarkers, he warned that addressing the pros and cons of AI will be of paramount importance to minimise potential risks to the health, safety, and rights of patients.

Noting that we are living in challenging times, Weidinger poignantly stated: “These are times in need of deliberate, resolute action, standing together while advancing our mission through collaboration and mutual support.” He emphasised that the collective strength of the cardiology community comes from the attendee’s individual passion and commitment to the field, and closed by imploring delegates to enjoy the Congress and carry the inspiration of the moment into the days and years ahead.

EMJ was delighted to attend the 2024 ESC Congress, and looks forward to next year’s event, which will take place in Madrid, Spain. Until then, read on to enjoy highlights presented during this year’s Congress.

“Addressing the pros and cons of AI will be of paramount importance to minimise potential risks to the health, safety, and rights of patients”

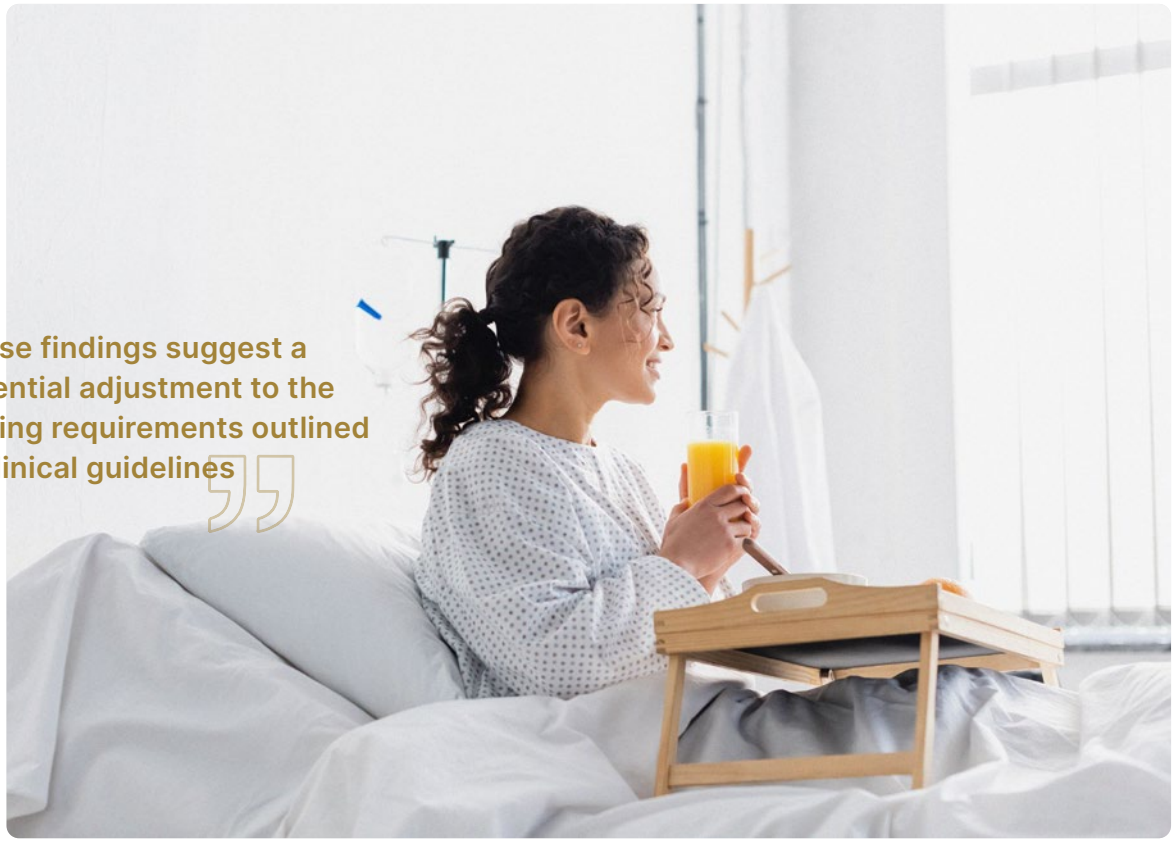
Is Fasting Necessary for Cardiac Catheterisation Laboratory Procedures?

FASTING before cardiac catheterisation procedures requiring conscious sedation does not reduce the risk of complications, according to late-breaking research presented at the ESC Congress 2024.

Patients who had been referred for coronary angiography, coronary intervention, or cardiac implantable electronic device-related procedures were recruited into the SCOFF trial. This was a randomised, prospective open-label, blinded endpoint design trial that assessed the non-inferiority of not fasting prior to cardiac catheterisation laboratory procedures requiring conscious sedation. In total, 716 patients were recruited from six sites in New South Wales, Australia. The mean age was 69 years, and 35% of participants were female. Patients in the fasting group received no solid food for 6 hours and no clear liquids for 2 hours before the procedure, whereas participants in the no-fasting group were encouraged to have regular meals as normal.

Occurrences of hypotension, aspiration pneumonia, hyperglycaemia, and hypoglycaemia were assessed as a composite outcome using a Bayesian approach. The analysis revealed that the composite outcome occurred in 19.1% of patients in the fasting group, compared to 12.0% in the no-fasting group. In an intention-to-treat analysis, the no-fasting group had 5.2% fewer primary outcome events compared to the fasting group (95% CI: -9.6 to -0.9). With a non-inferiority margin of 3%, no fasting was proven to not be inferior to fasting since the upper confidence limit (-0.9%) was lower than 3%.

This finding was accompanied by a likelihood of >99.5% that no-fasting is not worse than fasting. Moreover, the results

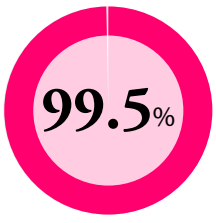


> **These findings suggest a potential adjustment to the fasting requirements outlined in clinical guidelines**

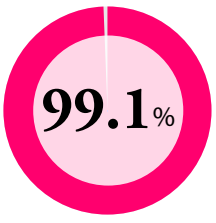
revealed a 99.1% likelihood that no-fasting is actually superior to fasting. Additionally, the absolute risk difference between the two groups was 7.1% in favour of no-fasting, with a number needed to treat 14.1 to prevent one primary outcome event in the no-fasting group. The research also demonstrated that post-procedure patient satisfaction was greater in the no-fasting group, assessed using a questionnaire where a lower score indicates greater satisfaction (11 versus 15 points; 95% CI: 3.36–4.67; Bayes factor ≥100).

However, there were no significant differences between groups in contrast-induced nephropathy, new intensive care admissions post-procedure, new ventilation requirements post-procedure, new intensive care unit admissions, 30-day readmissions, 30-day mortality, 30-day pneumonia, or pre-procedure patient satisfaction.

Overall, the results of the SCOFF trial suggest that fasting is not necessary for patients undergoing conscious sedation for cardiac catheterisation laboratory procedures, as there is not an increased risk of complications, and patient satisfaction is higher. These findings suggest a potential adjustment to the fasting requirements outlined in clinical guidelines.



likelihood that no-fasting is not worse than fasting.



likelihood that no-fasting is actually superior to fasting.

Transcatheter Versus Surgical Aortic Valve Replacement in Women with Severe Aortic Stenosis

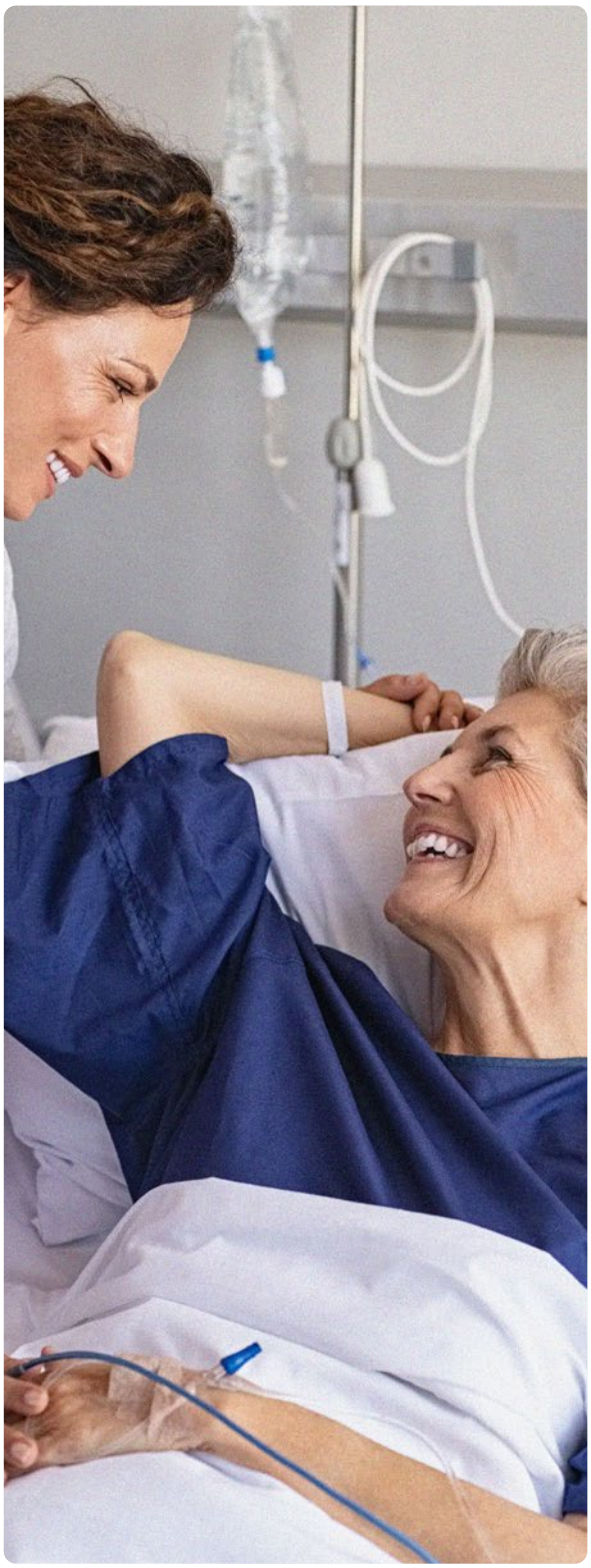
A NOVEL study focused specifically on women, the RHEIA trial, presented at the ESC Congress 2024, demonstrated the superiority of transcatheter aortic valve implantation (TAVI) over surgical aortic valve replacement in treating severe aortic stenosis.

Historically, most data comparing TAVI and surgical valve replacement have been derived from subgroup analyses of larger trials, often leaving questions about gender-specific outcomes. To address this gap, the RHEIA trial was designed as a dedicated, randomised study to compare the safety and efficacy of TAVI versus surgical replacement in women with severe symptomatic aortic stenosis.

The trial enrolled 443 women from 48 sites across 12 European countries, with a mean age of 73 years. Participants were randomised to undergo either TAVI with a third-generation balloon-expandable system, or surgical aortic valve replacement, with a follow-up period of 1 year. The primary composite endpoint was a combination of all-cause mortality, stroke, and rehospitalisation due to valve- or procedure-related symptoms or worsening heart failure.

Results showed that the incidence of the primary composite endpoint was significantly lower in the TAVI group (8.9%) compared to the surgical group (15.6%). This reduction was largely driven by fewer rehospitalisations for valve-related issues or heart failure in the TAVI group (4.8% versus 11.4%). Additionally, TAVI was associated with a lower incidence of new-onset atrial fibrillation (3.3% versus 28.8%) and a shorter median hospital stay (4 days versus 9 days).

However, TAVI did have higher rates of new permanent pacemaker implantation (8.8% versus 2.9%) and mild paravalvular aortic regurgitation (15.5% versus 2.4%) at 1 year. Despite these drawbacks, the overall findings suggest that TAVI, particularly with balloon-expandable devices, could be the preferred treatment for women with severe aortic stenosis. TAVI treatment could also reduce healthcare resource utilisation by lowering the number of hospitalisations.



No Benefit to Continuing Oral Anticoagulants with Transcatheter Aortic Valve Implantation

IN PATIENTS undergoing transcatheter aortic valve implantation (TAVI), it is not necessary to continue oral anticoagulants (OAC), as demonstrated in the POPular PAUSE TAVI trial presented at the ESC Congress 2024.

It is not well understood if OACs should be interrupted in patients undergoing TAVI, especially for those with a long-term indication, such as atrial fibrillation, or in patients who are elderly and have other health conditions. Therefore, researchers conducted the POPular PAUSE TAVI, an open-label, investigator-initiated, non-inferiority trial in patients on OAC with planned TAVI, to investigate if continuing OACs is necessary in these patients.

In total, 858 patients from 22 European sites were randomised in a 1:1 ratio to continue OAC or to stop OAC at least 48 hours before TAVI (mean age: 81 years; 34.5% female). The mean CHA2DS2-VASC score was 4.5, indicating moderate-to-high risk of stroke in the cohort. Over 80% of patients were taking direct oral anticoagulants (81.9%), and the rest were taking vitamin K antagonists (18.1%).

The primary composite endpoint, which included cardiovascular mortality, stroke of any cause, myocardial infarction, major vascular complications, and major bleeding within 30 days after TAVI, occurred in 16.5% of patients in the continued OAC group. Similarly, these events occurred in 14.8% of patients in the interrupted OAC group (risk difference: 1.7%; 95% CI: -3.1–6.6; P=0.18 for non-inferiority). The non-inferiority margin of 4% was not met, indicating that continuing OACs was not inferior to interrupting OACs in these patients, and there was no difference in thromboembolic events with continued versus interrupted OACs (8.8% versus 8.2%; risk difference: 0.6; 95% CI: -3.1–4.4). However, bleeding occurred in 31.1% of patients who continued OACs, compared to 21.3% in the interrupted group (risk difference: 9.8; 95% CI: 3.9–15.6).

The results of the study demonstrate that continuation of OACs does not decrease the risk of thromboembolic events, such as stroke, but does increase the risk of bleeding. These findings highlight the need to determine the optimal periprocedural anticoagulation strategy for patients undergoing TAVI. Additionally, patients at high risk for thromboembolism were excluded from the study, suggesting that future research should focus on this population to better understand the risks and benefits in these individuals.

Stents Outperform Balloon Angioplasty in Coronary Disease Treatment

A NEW trial, REC-CAGEFREE I, presented at the ESC Congress 2024, has confirmed that drug-eluting stents (DES) remain the most effective treatment for patients undergoing percutaneous coronary intervention (PCI) with previously untreated non-complex coronary artery disease, surpassing the effectiveness of the novel paclitaxel-coated balloon angioplasty (DCB).

As millions of people undergo PCI annually, the original goal of the trial was to reduce the rates of multiple cardiac events. Traditional PCI involves inflating a balloon inside the narrowed artery to restore blood flow, followed by DES implantation to prevent re-narrowing of the vessel. Although PCI with DES is highly effective, around 2% of patients experience restenosis annually, prompting exploration of alternatives like DCB.

The trial cohort comprised 2,272 adult patients from 43 sites in China between February 2021–May 2022, with an average age of 61 years. Participants were assigned to one of two treatment groups in a 1:1 ratio, either receiving DCB, with the option of rescue stenting, or DES.

Of the 1,133 participants who underwent treatment with DCB, 9% had to have a rescue DES due to unsatisfactory results. The study showed a combined 2-year rate of cardiac death, myocardial infarction, and revascularisation was 6.4% for DCB and 3.4% for DES, with DCB showing a higher risk of revascularisation (3.1% versus 1.2%). Additionally, the findings highlighted a discrepancy in outcomes based on vessel diameter, showing a higher incidence of repeat revascularisation in the DCB group, particularly in patients with larger arteries. In small vessel disease (≤3.0 mm), DCB performed similarly to DES; however, in larger vessels (>3.0 mm), DES was superior.

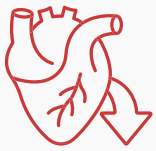
While prior studies have suggested DCBs could be effective in small vessel disease, this trial suggests their efficacy is limited to specific contexts.

> **DES remains the most effective treatment for patients undergoing PCI**

The study's lead author, Ling Tao, Xijing Hospital, Shaanxi, China, stated that the "leave nothing behind" strategy using DCBs was unsuccessful. Based on the findings, DES implantation should remain the standard treatment for patients with non-complex coronary artery disease, offering the best balance of safety and efficacy.

Cryoballoon Versus Radiofrequency Ablation: Comparing Speed and Success

GROUNDBREAKING findings from the CRABL-HF trial comparing the efficacy of cryoballoon (CB) ablation to radiofrequency (RF) ablation in treating patients with atrial fibrillation (AF) and heart failure with reduced ejection fraction (HFrEF) were presented at the ESC Congress 2024.



CB ablation was equally effective at reducing AF and atrial tachycardia recurrences compared to RF ablation

The study showed that, at 1-year follow-up, CB ablation was equally effective at reducing AF and atrial tachycardia recurrences compared to RF ablation. CB ablation also had the added benefit of shorter procedure times and less fluid usage, suggesting a lower risk of worsening heart failure.

AF, affecting over 37 million globally, often coexists with heart failure, and HFrEF affects around 60% of patients with heart failure. The presence of AF increases the risk of stroke, hospitalisation, and death. RF ablation is the most commonly used method. It uses heat to destroy heart tissue, but it is technically complex and requires longer procedure times. CB ablation, by contrast, uses cold temperatures to target problematic tissue, simplifying the procedure and shortening the time.

The study's lead investigator emphasised the need to compare RF and CF to help guide clinical decision-making for these ablation procedures.

The CRABL-HF trial was conducted across five sites in Japan and included 110 patients with HFrEF and AF aged 20–85 (79% male; median age: 69 years). Patients were evenly randomised between the two ablation techniques (55 in each), and AF episodes were monitored for 1 year using cardiac implantable devices or daily ambulatory electrocardiographs.

Both CB and RF ablation showed similar results, with 21.8% of patients in the RF group and 22.2% in the CB group experiencing atrial tachyarrhythmias lasting 30 seconds or more. Importantly, CB ablation procedures were significantly shorter (median: 101 versus 165 minutes), with reduced fluid volumes used without increasing left atrial pulse pressure, potentially reducing heart failure risks.

Heart function improved in both groups, with significant increases in left ventricular ejection fraction and decreases in left atrial volume index. Safety profiles were comparable, with only one procedure-related complication in each group and no procedure-related deaths. Quality of life, measured by the Atrial Fibrillation Effect on Quality of Life questionnaire (AFEQT), improved similarly in both groups after ablation, demonstrating the efficacy of both treatments.

In conclusion, CB ablation proved to be a faster, simplified alternative to RF ablation, with similar clinical outcomes, suggesting it is a viable option for treating AF in patients with HFrEF.

Complete Revascularisation in Older Patients with ST-Elevation Myocardial Infarction

NOVEL research presented at the ESC Congress 2024 confirmed that complete coronary revascularisation significantly reduces cardiovascular events in older patients with myocardial infarction and multivessel disease compared to culprit-only revascularisation.

The findings, based on data collected in seven different clinical trials, suggest that treating both culprit and non-culprit lesions improves outcomes, particularly within the first 4 years following a heart attack.

The EARTH-STEMI study focused on patients aged ≥75 years who had experienced ST-segment elevation myocardial infarction (STEMI). While complete revascularisation has been the standard treatment for patients with STEMI and multivessel disease, its application in older patients has remained underused. This study aimed to address this knowledge gap, and provide insights into its efficacy in this age group.

The meta-analysis pooled data from 1,733 patients across seven major trials, including COMPLETE, FIRE, FULL REVASC, and DANAMI-3–PRIMULTI, among others. Of these, 816 patients received complete revascularisation, while 917 underwent culprit-only revascularisation. The study found that complete revascularisation was associated with a 22% reduction in the risk of death, myocardial infarction, and ischaemia-driven revascularisation over 4 years compared to culprit-only procedures.

At the longest follow-up period, complete revascularisation also resulted in a 24% reduction in the risk of cardiovascular death or myocardial infarction. However, the team found no significant differences in all-cause mortality, cardiovascular death, or non-cardiovascular death between the two groups.

> **Further data will be required in order to assess the long-term benefits beyond 4 years**

The safety profiles of both approaches were similar, with no significant differences in adverse outcomes such as stroke, stent thrombosis, major bleeding, or acute kidney injury.

These findings support the use of complete revascularisation in older patients; however the lead author noted that further data will be required in order to assess the long-term benefits beyond 4 years. Future updates from the ongoing FIRE trial are expected to provide some necessary additional insights.

No Advantage to ‘No-Touch’ Vein Harvesting

CORONARY artery bypass grafting (CABG) is a common treatment for ischaemic heart disease, but vein graft failure occurs in up to 50% of patients within 10 years.

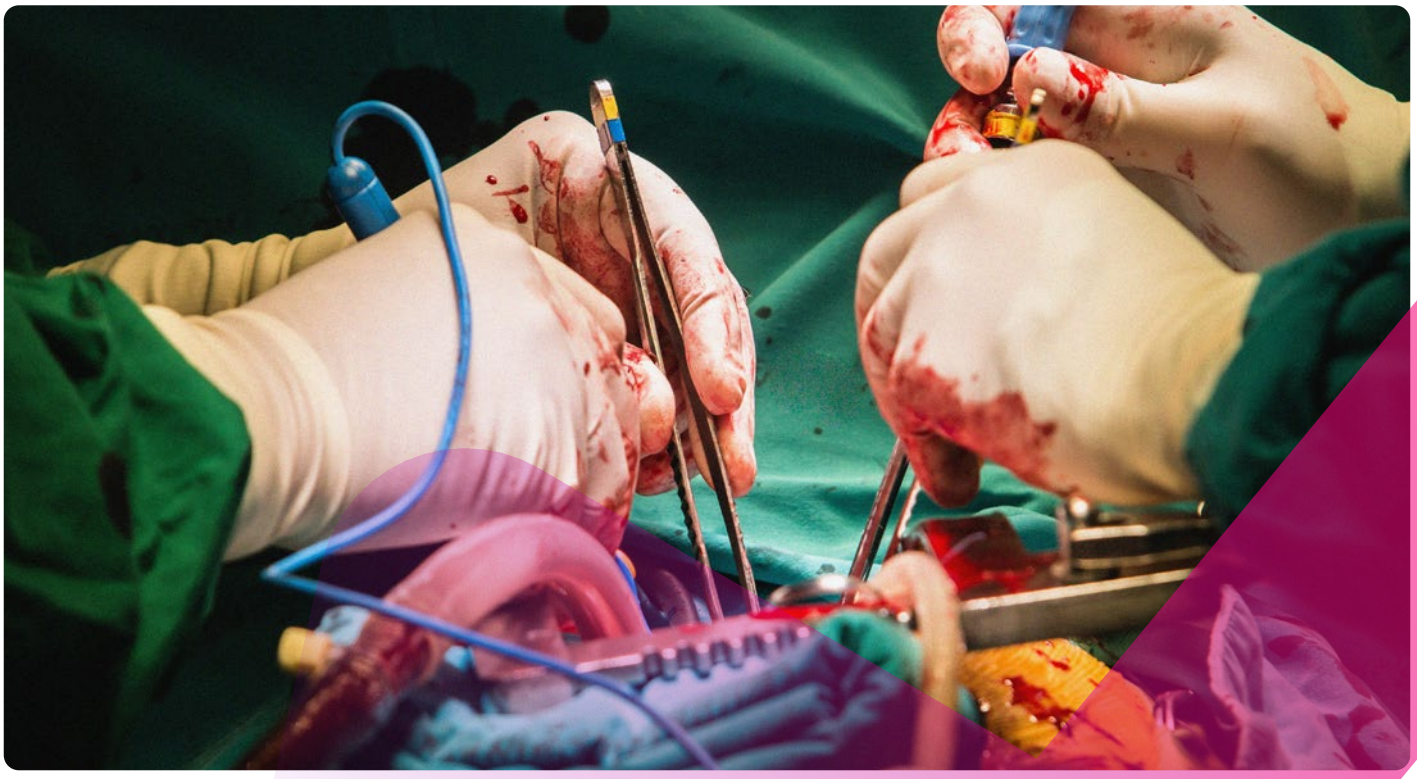
The ‘no-touch’ technique, where the saphenous vein is harvested with surrounding tissue, was hypothesised to reduce graft failure compared to the conventional method, where the vein is stripped of surrounding tissue.

The SWEDEGRAFT trial aimed to evaluate whether the ‘no-touch’ technique improved outcomes in patients undergoing CABG, with results presented at the ESC Congress 2024. The randomised study included 902 patients from Sweden and Denmark undergoing first-time, non-emergent CABG with at least one saphenous vein graft.

Participants were randomly assigned to either the ‘no-touch’ or conventional harvesting technique in a 1:1 ratio. The primary endpoint was graft failure within 2 years, defined by graft occlusion, stenosis, or death. Secondary endpoints included major adverse cardiovascular events and post-operative leg wound complications.

The trial found no significant difference in graft failure between the ‘no-touch’ (19.8%) and conventional (24.0%) groups (P=0.15). MACE incidence was similar between groups (12.6% versus 9.9%; P=0.195). However, leg wound complications were significantly higher in the ‘no-touch’ group at both 3 months (24.7% versus 13.8%) and 2 years (49.6% versus 25.2%).

The study concluded that the ‘no-touch’ technique did not reduce graft failure or improve clinical outcomes compared to the conventional method and was associated with more leg wound complications. These findings do not support the routine use of the ‘no-touch’ technique in CABG, and future guidelines should consider these results.



Beta-Blockers After Myocardial Infarction: Is it Best to Continue or Pause?

DISCONTINUING beta-blockers showed no cardiovascular safety advantages over continued use in patients with a history of myocardial infarction (MI), nor did it improve their quality of life (QoL), according to a late-breaking research presented at the ESC Congress 2024.

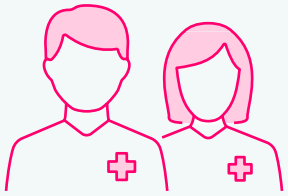
Advances in MI management and findings from observational studies have led doctors to question the need for continuing beta-blockers beyond a year after MI, as unnecessary treatment may cause side effects. Johanne Silvain, Sorbonne University, Paris, France, and colleagues conducted the ABYSS trial to provide definitive randomised data comparing beta-blocker interruption with continuation in terms of cardiovascular events and QoL. However, they were not able to demonstrate safety preservation in clinical outcomes or any improvement in QoL following beta-blocker discontinuation.

The ACTION Group conducted an open-label, non-inferiority, randomised ABYSS trial, involving patients with a history of MI who were on long-term beta-blockers, had a left ventricular ejection fraction of at least 40%, and had no cardiovascular events in the past 6 months. Participants were randomly assigned (1:1) to either discontinue or continue beta-blocker therapy. The primary endpoint was a mixture of death, non-fatal MI, non-fatal stroke, or cardiovascular hospitalisation at the longest follow-up (minimum 1 year), based on non-inferiority analysis.

> **Advances in MI management and findings from observational studies have led doctors to question the need for continuing beta-blockers beyond a year after MI**

The secondary endpoint assessed changes in QoL using the European QoL-5 Dimensions questionnaire.

A total of 3,698 patients were randomised from 49 sites in France (mean age: 64 years; 17% female). The median time between the last MI and randomisation was 2.9 years (interquartile range: 1.2–6.4 years). Over a median follow-up of 3 years,



3,698
Patients were randomised

49
Sites in France

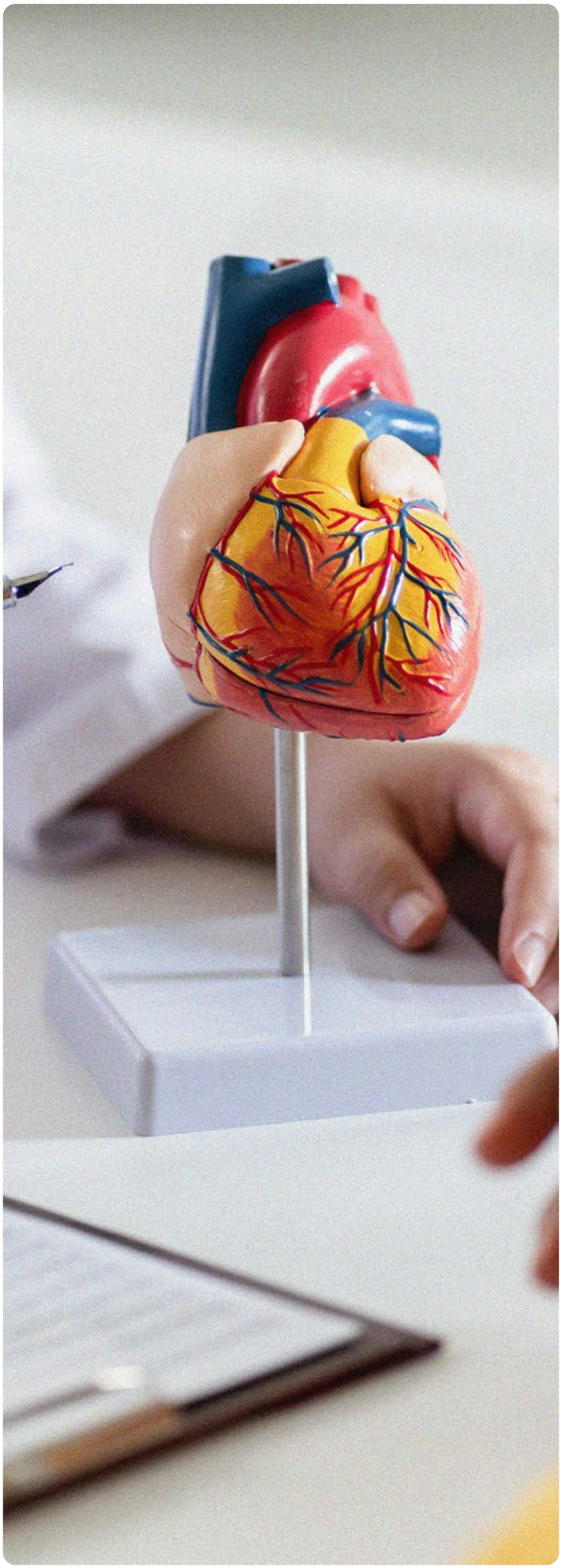
64
Mean age (years)

17%
Female

beta-blocker discontinuation was not shown to be non-inferior to continuation. In the interruption group, primary outcome events occurred in 23.8% of patients, and in the continuation group, primary outcome events occurred in 21.1% (risk difference: 2.8 percentage points; 95% CI: <0.1–5.5), with a hazard ratio of 1.16 (95% CI: 1.01–1.33; P=0.44 for non-inferiority).

In the interruption group, 4.1% of patients died compared to 4.0% in the continuation group, while MI occurred in 2.5% and 2.4%, respectively. Cardiovascular-related hospitalisations were higher in the interruption group (18.9%) than in the continuation group (16.6%). Beta-blocker discontinuation also led to increased systolic and diastolic blood pressure and heart rate at 6 months and during follow-up. No improvement in QoL was observed.

Silvain discouraged stopping chronic beta-blocker treatment in patients post-MI considering the differences in cardiovascular hospitalisations between both groups, negative effects on blood pressure, and no QoL improvements, thereby highlighting the need for further research from ongoing trials.



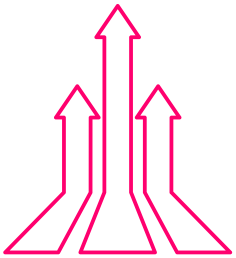
Transcatheter Edge-to-Edge Repair Improves Tricuspid Regurgitation Outcomes

NEW evidence highlights the significant benefits of transcatheter edge-to-edge repair (T-TEER) in treating secondary tricuspid regurgitation (TR), according to recent findings presented at the ESC Congress 2024.

Secondary TR, where the tricuspid valve fails to close properly, can severely impact patients' quality of life by causing symptoms like fatigue, fluid retention in the abdomen and lower limbs, and impairments in kidney and liver function.

The Tri.fr trial, led by Erwan Donal from the Hospital of Rennes, France, was designed to evaluate the efficacy of T-TEER combined with optimal medical therapy in patients with symptomatic, severe secondary TR. The trial aimed to determine whether T-TEER could offer a new treatment option to patients who were not eligible for surgical intervention due to associated risks.

This open-label, randomised trial involved 300 patients across 24 centres in France and Belgium (mean age: 78 years; 54% female), of whom 40% had been hospitalised for heart failure within 1 year before enrolment, and 15% had a cardiac implantable electronic device.



T-TEER group had a significantly higher rate of improvement in the composite endpoint compared to the control group

Participants were randomly assigned to receive either T-TEER alongside optimal medical therapy, or medical therapy alone. The primary endpoint of the trial was the Packer composite score, which combined New York Heart Association (NYHA) class, patient global assessment (PGA), and major cardiovascular events.

Results showed that the T-TEER group had a significantly higher rate of improvement in the composite endpoint compared to the control group (74.1% versus 40.6%). After 1 year, the severity of TR was markedly reduced in the T-TEER group, with a significant improvement in TR grades. Additionally, there were lower rates of hospitalisation and death in the T-TEER group, though these outcomes were not the primary focus of the trial. Quality of life, measured by the Kansas City Cardiomyopathy Questionnaire (KCCQ) score, significantly improved in the T-TEER group compared to the control group (69.9 versus 55.4).

The Tri.fr trial highlights the potential of T-TEER as an effective treatment for secondary TR, offering substantial improvements in both clinical outcomes and patient-reported quality of life. T-TEER, when combined with rigorous medical management, could be a promising option for patients with severe secondary TR.

Trial Explores Invasive Treatment for Older Patients with Myocardial Infarction

A NEW study presented at the ESC Congress 2024 found that an invasive strategy did not significantly reduce the combined risk of cardiovascular-related death or non-fatal myocardial infarction (MI) compared to a conservative approach.

The SENIOR-RITA trial is the largest study to date in older patients with a non-ST-elevation myocardial infarction (NSTEMI). The trial found that invasive strategies have no significant effect on cardiovascular death or non-fatal MI risks. However, it did result in fewer non-fatal MIs and subsequent revascularisation procedures, according to findings presented at ESC.

Older patients with NSTEMI are often treated conservatively due to concerns about procedural risks, despite guidelines recommending invasive strategies for high-risk patients. The SENIOR-RITA trial aimed to determine whether an invasive strategy combined with optimal medical therapy would outperform medical therapy alone in reducing cardiovascular death or non-fatal MI in patients aged ≥75 years.

The trial included nearly 1,520 patients from 48 National Health Service (NHS) sites in England and Scotland, with an average age of 82.4 years. The participants were randomly assigned to receive either optimal medical therapy alone or to receive an invasive strategy, including coronary angiography and potential revascularisation. The primary endpoint was the combined risk of cardiovascular death or non-fatal MI, with secondary outcomes including revascularisation rates and bleeding complications.

After a median follow-up of 4.1 years, there was no significant difference in the primary endpoint between the invasive and conservative strategy groups (25.6% versus 26.3%). However, the invasive strategy group saw a reduction in non-fatal MIs (11.7% versus 15.0%) and required fewer revascularisation procedures (3.9% versus 13.7%) compared to the conservative group.

The study authors emphasised that the results suggest invasive strategies do not reduce the overall combined risk of cardiovascular death or non-fatal MI, but it they do have some benefits, particularly in reducing recurrent MIs and the need for additional procedures.

The authors also noted that the invasive approach was generally safe, and that age should not be a barrier to individualised care, including access to angiography and interventions.