

DOCUMENTO DE ACEPTACIÓN DE POSTER MODERADO

CONGRESO EUROPEO DE CARDIOLOGÍA PREVENTIVA (EAPC) 2026, LIUBLJANA-SLOVENIA

Dear Miss Sestayo Fernandez,

Congratulations again for having your abstract accepted for presentation at ESC Preventive Cardiology 2026 in Ljubljana, Slovenia.

We thank you for having confirmed the presentation and submitted your agreement form.

Time to finalise and upload your presentation has come. We are pleased to inform you the upload services are now open.

All ePosters must be uploaded via our online services by Thursday 26 March 2026. Please note this is a strict deadline which will not be extended. Content not uploaded at this date will be withdrawn from the scientific programme and all related publications.

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Declaration of Interest -

It is mandatory for all presenters to disclose any conflict of interest related to their presentation. When you have submitted your agreement form, you have been asked to declare any potential conflict(s) of interest. The information collected will be automatically inserted on your ePoster by our technicians. Please do not insert again your DOI on your ePoster.

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You will receive a confirmation email for each upload. Our technical service will get back to you, only in case an issue is identified.

We also take this opportunity to remind you, if not already done, to [register for the Congress](#).

23 February 2026 is the early fee registration deadline - [register now](#) for best savings.

Do not hesitate to contact us for any additional information you may need.

We thank you in advance for your valuable contribution to ESC Preventive Cardiology 2026 and we look forward to seeing you in Ljubljana!

Best regards,

Sent by

ESC Preventive Cardiology 2026 Scientific Programme Department

escprevcscientific@escardio.org

Useful Links -

Presenter Guidelines - <https://www.escardio.org/events/congresses/esc-preventive-cardiology/scientific-programme/faculty-presenters/presenters-guidelines/>

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Registration - <https://www.escardio.org/Congresses-Events/Preventive-Cardiology/Registration>

Dear Miss Sestayo Fernandez,

Congratulations!

On behalf of the ESC Preventive Congress Programme Committee, we are delighted to inform you that at least one of your abstracts has been accepted for presentation at **ESC Preventive Cardiology 2026 in Ljubljana, taking place from Thursday 23 April to Saturday 25 April.**

We kindly remind you that all presenters are required to present their abstract(s) in person at the congress at the scheduled day and time, as indicated on their agreement form(s) – and that your abstract is now under the regulations of the ESC Embargo policy (as detailed at the bottom of this email).

NEXT STEP is for you to assign a presenter to your accepted abstract as soon as possible and at the latest by 23 February* – Sign in [here](#) to see the day and time of the presentation, as well as the format of the session your abstract has been accepted in.

We will then contact the assigned presenter with further information and instructions to confirm the presentation and submit the related agreement form.

The assigned presenter must be one of the co-authors – no changes can be made to the authors list. Please make sure to enter the valid email address of the presenter.

***23 February 2026 is the early fee [registration deadline](#)** – by confirming early you allow sufficient time for the presenter to benefit from the early fee.

We kindly remind you that all presenters must upload and register to the congress by the deadline shown on the agreement form.

Failure to upload and register by the set deadline will lead to the withdrawal of the abstract from the Congress Programme and Publications (Research Gateway, Abstract book online supplement, ESC 365).

In addition to the on-site presentation, all abstracts will be featured on the online congress platform Research Gateway, the dedicated section to abstracts and clinical cases. Your research will benefit from great visibility throughout the congress and will be showcased to a wide international audience.

After the congress, your abstract will be published in the online abstract supplement of the European Journal of Preventive Cardiology; and both the abstract and the presentation will be available on **ESC 365, the cardiology knowledge hub**.

We thank you for your valuable contribution to the programme. Make the most of having your abstract accepted **at ESC Preventive Cardiology 2026** by sharing the good news on social media and using the official hashtags #ESCPrev2026

Do not hesitate to contact the team for any additional information you may need.

Best regards,

ESC Preventive Cardiology 2026 Scientific Programme Department
escprevscientific@escardio.org

Event	Number	Title				Submission Date	Status	
ESC Preventive Cardiology 2026	11507	Changes in functional capacity after a contemporary cardiac rehabilitation program: results from the ReCardio national registry >> Click here to upload your ePoster <<				20 Nov 2025	Accepted Moderated Poster Presentation	Agreement Form Submitted 10 Feb 2026
ESC Preventive Cardiology 2026	11501	Current control of patient body composition after a contemporary cardiac rehabilitation program: the ReCardio registry >> Click here to upload your ePoster <<				20 Nov 2025	Accepted Moderated Poster Presentation	Agreement Form Submitted 10 Feb 2026
ESC Preventive Cardiology 2026	11521	Current control of diabetes after cardiac rehabilitation program: the ReCardio registry >> Click here to upload your ePoster <<				20 Nov 2025	Accepted Moderated Poster Presentation	Agreement Form Submitted 10 Feb 2026
ESC Preventive Cardiology 2026	11473	Current control of lipid profile after a contemporary cardiac rehabilitation program: insights from interim analysis of the spanish national ReCardio registry >> Click here to upload your ePoster <<				20 Nov 2025	Accepted Moderated Poster Presentation	Agreement Form Submitted 10 Feb 2026

Cardiopulmonary Exercise Testing Refines Clinical Decision-Making in Severe Asymptomatic Valvular Heart Disease: A Case Series Experience

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2. Centro de Investigación Biomédica en Red de Enfermedades Cardiovasculares, Instituto de Salud Carlos III, Spain.
3. Cardiology department, Hospital Clínico Universitario de Santiago de Compostela, Spain.
4. Faculty of medicine, Universidad de Santiago de Compostela, Spain.

Background:

Cardiopulmonary exercise testing (CPET) provides objective assessment of functional capacity, yet remains underused despite potential to guide intervention timing when clinical-imaging discordance exists in valvular heart disease (VHD).

Purpose:

Following 2025 ESC Guidelines for management of VHD, which support earlier intervention for severe aortic stenosis, we evaluated whether CPET influences management beyond echocardiographic assessment in severe asymptomatic VHD.

Methods:

We performed a prospective descriptive analysis of 70 consecutive patients with severe asymptomatic VHD undergoing CPET (January-September 2025). Trained cardiologists classified tests as clinically normal/abnormal. Pathological VO_2 was defined as peak $\text{VO}_2 \leq 80\%$ predicted. VE/VCO_2 slope differences between groups were assessed.

Results:

The cohort included 14 patients with mitral regurgitation (MR), 4 with aortic regurgitation (AR), 47 with aortic stenosis (AS; mean gradient 46.2 ± 11.4 mmHg, aortic valve area 0.81 ± 0.2 cm²), 4 with tricuspid regurgitation (TR), and 1 with mitral stenosis (MS).

The median age 70.0 years (Q1 62.5, Q3 76.8), and 41% were female. Overall, CPET results were clinically normal in 64% of patients, abnormal in 32%, and non-conclusive in 4%. Patients with clinically normal tests had significantly lower VE/VCO_2 slope (31.0 ± 5.3 %) compared with those with clinically abnormal tests (36.0 ± 5.9 %; $p < 0.001$).

Among regurgitant lesions, functional performance was largely preserved: 93% of MR and 100% of AR patients had clinically normal CPETs, with no pathological VO_2 values. In contrast, functional capacity was reduced in TR, where only 50% had clinically normal CPEs and 75% displayed a pathological VO_2 . Among stenotic lesions, AS patients, representing two-thirds of the cohort, showed the lowest functional capacity: 55% has clinically normal CPETs, while 38% were abnormal. 57% of AS patients had a pathological $\text{VO}_2 \leq 80\%$ of predicted. The single MS patient had a clinically abnormal CPET but displayed a normal VO_2 . After CPET, the management plan changed in 24% of patients, predominantly shifting from conservative to interventional approaches, most notably in AS.

Conclusions:

In this prospective case series of 70 patients with severe asymptomatic VHD, CPET provided objective physiological insight and guided intervention decisions through individualized assessment of patient performance, influencing management in nearly one in four patients. The test was particularly informative in severe AS, where it confirmed functional limitation and supported early intervention. The observed discrepancy between clinically normal CPETs and pathological VO_2 values underscores the need to define which CPET parameters should serve as key pathological thresholds in this population, as some patients with apparently normal exercise responses may still demonstrate subclinical functional impairment.

Severe asymptomatic VHD	Aortic stenosis (n=47, 67%)	Mitral regurgitation (n=14, 20%)	Aortic regurgitation (n=4, 6%)	Tricuspid regurgitation (n=4, 6%)	Mitral stenosis (n=1, 1%)
DEMOGRAPHICS					
Age (years)	71.7±9.4	60.2±11.8	61.3±15.8	70.3±10.6	73.0
Female	n=19, (40.4%)	n=5, (35.7%)	n=1, (25%)	n=4, (100%)	n.a.
CPET PARAMETERS					
Peak oxygen uptake (ml/kg/min)	15.6 [11.9–17.4]	20.3±6.8	30.7±15.8	16.3±8.9	19.2
Percentage of predicted peak oxygen uptake (%)	80.4±16.3	79.5 [73.5–83.8]	116±19.9	73.0 [69.8–88.5]	92.0
Peak load (watts)	74.6±37.5	126±48.0	175±110	54.5 [52.3–75.5]	90.0
Percentage of predicted peak load (mean±SD)	80.8±30.3	94.0 [88.3–104]	137±30.9	116±28.7	85.0
Respiratory exchange ratio (RER)	1.18 [1.09–1.22]	1.2±0.1	1.17±0.1	1.19±0.1	1.21
Slope of minute ventilation/carbon dioxide production (VE/VCO ₂ , %)	33.6±6.20	28.5±3.17	31.6±3.35	33.0±8.02	35.6

Table 1. Clinical, and CPET parameters, expressed as mean ± SD or median (IQ1, IQ3), as appropriate, stratified by main VHD diagnosis. n.a.=not available.

Cardiopulmonary Exercise Test (CPET) Results by Type of Severe Asymptomatic Valvular Heart Disease

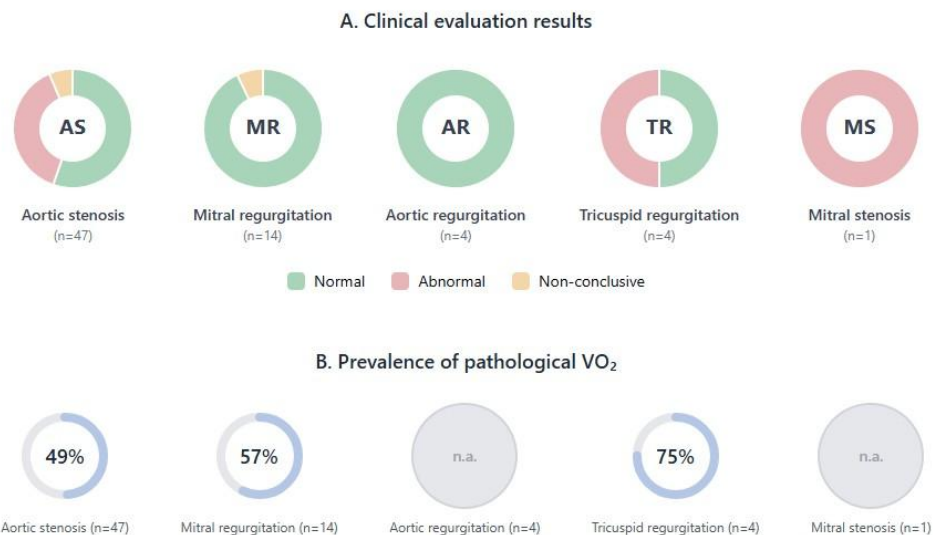


Figure 1. Distribution of CPET findings in severe asymptomatic VHD: Clinical Assessment, and Pathological VO₂. n.a.=not available.

Current Control Of Lipid Profile After A Contemporary Cardiac Rehabilitation Program: Insights From Interim Analysis Of The Spanish National ReCardio Registry

Author

M. Sestayo Fernandez¹, C. Pena-Gil², A. Albaladejo³, C. Contreras Lorenzo³, M. Sandin Rollan⁴, A. Lopez Lozano⁵, A. Lopez Suarez⁵, R. Campuzano Ruiz⁶, E. Barrenada Copete⁶, MM. Rodrigo Cuadrado⁶, F. Garza⁷, L. Matute-Blanco⁸, C. De Pablo Zarzosa⁸, A. Castro Conde³ - (1) Health Research Institute of Santiago de Compostela, Santiago De Compostela, Spain (2) University Hospital of Santiago de Compostela, Santiago De Compostela, Spain (3) La Paz University Hospital, Madrid, Spain (4) General University Hospital Doctor Balmis of Alicante, Alicante, Spain (5) Complex Public Hospital Virgen del Rocio Regional, Sevilla, Spain, Spain (6) Fundacion Hospital Alcorcon, Alcorcon, Spain (7) UNIVERSITY HOSPITAL MIGUEL SERVET, Zaragoza, Spain (8) Ramon and Cajal University Hospital, Madrid, Spain

Objective

The objective of this study is to evaluate the clinical characteristics and lipid control of patients completing contemporary cardiac rehabilitation (CR) programs across Spain, using data from the prospective, multicentre ReCardio national registry.

Methods

We conducted a prospective, multicentre, cross-sectional registry including consecutive adult patients with ischaemic heart disease (acute coronary syndrome, chronic coronary syndrome, or prior coronary revascularization) who completed a cardiac rehabilitation program in seven participating Spanish centres between October 2024 and October 2025. Each centre included the first five consecutive eligible patients attending their discharge visit every month.

Data were pseudonymized and recorded using a unified web-based platform (NaeviaMedical®), allowing structured data capture, semantic interoperability through SNOMED CT, and optional natural-language processing for automated variable extraction.

An interim analysis was conducted using data from the first 244 patients included in the ReCardio registry. Statistical analysis and descriptive evaluation were performed by an independent external company. Continuous variables were summarized as mean $\pm$ standard deviation (SD) or median and interquartile range (IQR), according to data distribution, while categorical variables were expressed as absolute frequencies and percentages. A bivariate analysis was conducted for paired data comparing start of CR and end of CR measurements, a Wilcoxon paired-samples test was used to study differences among groups.

Baseline data at start of CR (such as total cholesterol) refers to the recorded value upon first visit to CR, that is, after the patient has been discharged from hospital and medical treatment has been optimised post acute event of ischaemic heart disease.

Results

A total of 244 patients were included in the study, of whom 82% were male, with a mean age of 61.3 ± 10.3 years. Contact with tobacco (ex-smokers and active smokers) was reported in 67% of the cohort. The majority of patients (94%) presented with acute coronary syndrome, comprising 53% with STEMI and 40% with NSTEMI. 56% of patients had hypertension, 24% had diabetes mellitus, and 26% had pre-diabetes. Dyslipidaemia was present in 84% of patients, 20% had a normal body mass index (BMI $18.5\text{--}24.9$ kg/m²), 50% were overweight (BMI $25\text{--}29.9$ kg/m²), and 30% were classified as obese (BMI > 30 kg/m²).

Significant improvements in lipid parameters were observed during the cardiac rehabilitation (CR) program. Mean total cholesterol decreased from 141.8 ± 48.9 mg/dL at start of CR to 113.8 ± 21.9 mg/dL, corresponding to a mean reduction of -28.0 ± 51.4 mg/dL, ($p < 0.001$). Median LDL cholesterol dropped from 70.5 mg/dL (Q1–Q3: 46.5–114.2) at start of CR to 52.0 mg/dL (Q1–Q3: 41.2–60.0) at end of CR. The median change was -12.9 mg/dL (Q1–Q3:

-60.7 to -0.2), ($p < 0.001$). Triglycerides also improved, decreasing from a mean of 123.9 ± 50.7 mg/dL at start of CR to 101.2 ± 78.8 mg/dL at end of CR, with a mean reduction of -22.6 ± 70.4 mg/dL, ($p < 0.001$). Lipoprotein(a), measured in mg/dL had a median concentration of 31.5 mg/dL (IQR 73), of which 40.4% were over 50mg/dL. Lipoprotein (a) values measured in nmol/L were 85 nmol/L (IQR 157.2), of which 32.7% had values above 150 nmol/L.

At the end of the CR program, the vast majority of patients were receiving intensive lipid-lowering therapy. Statins were prescribed in 96% of the cohort, and ezetimibe in 83%. Additional lipid-modifying agents included, icosapent ethyl in 5%, PCSK9 inhibitors in 4% of patients, and inclisiran in 1%.

Conclusions

This preliminary assessment of a contemporary cohort of patients that participate in CR in Spain, shows a significant improvement in lipid profile, underscoring the value of CR as a comprehensive tool for achieving lipid-management goals and optimizing treatment in patients with ischaemic heart disease. The use of new lipid lowering therapies remains low.

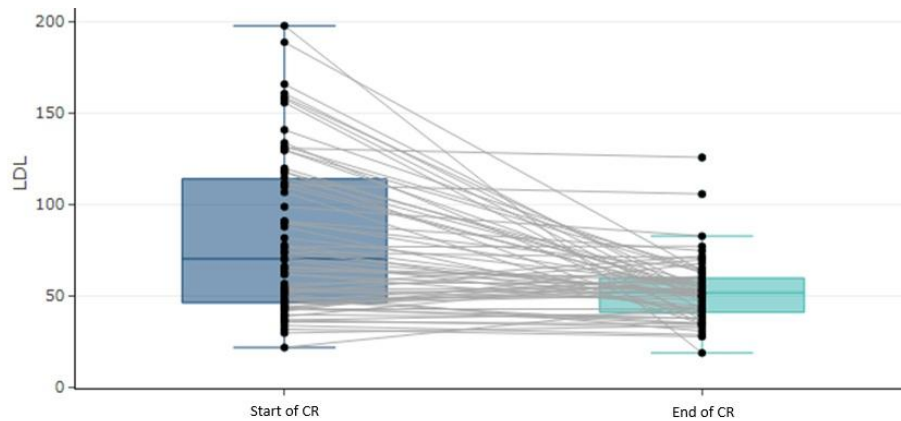


Figure 1. Graphical representation of LDL cholesterol at start and at end of CR.

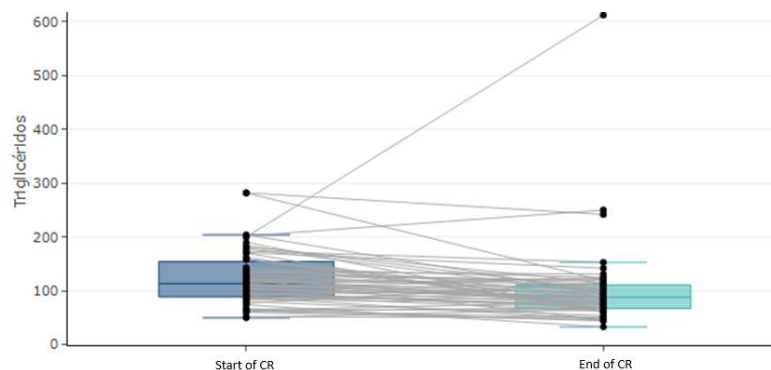


Figure 2. Graphical representation of triglycerides at start and at end of CR.

**Current Control Of Diabetes After A Contemporary Cardiac Rehabilitation Program:
Insights From Interim Analysis Of The Spanish National ReCardio Registry**

Author

M. Sestayo Fernandez¹, C. Pena-Gil², A. Albaladejo³, C. Contreras Lorenzo³, M. Sandin Rollan⁴, A. Lopez Lozano⁵, A. Lopez Suarez⁵, R. Campuzano Ruiz⁶, E. Barrenada Copete⁶, MM. Rodrigo Cuadrado⁶, F. Garza⁷, L. Matute-Blanco⁸, C. De Pablo Zarzosa⁸, A. Castro Conde³ - (1) Health Research Institute of Santiago de Compostela, Santiago De Compostela, Spain (2) University Hospital of Santiago de Compostela, Santiago De Compostela, Spain (3) La Paz University Hospital, Madrid, Spain (4) General University Hospital Doctor Balmis of Alicante, Alicante, Spain (5) Complex Public Hospital Virgen del Rocío Regional, Sevilla, Spain, Spain (6) Fundacion Hospital Alcorcon, Alcorcon, Spain (7) UNIVERSITY HOSPITAL MIGUEL SERVET, Zaragoza, Spain (8) Ramon and Cajal University Hospital, Madrid, Spain

Objective

The objective of this study is to evaluate the current control of diabetes in patients that have completed contemporary cardiac rehabilitation (CR) programs across Spain, using data from the prospective, multicentre ReCardio national registry.

Methods

We conducted a prospective, multicentre, cross-sectional registry including consecutive adult patients with ischaemic heart disease (acute coronary syndrome, chronic coronary syndrome, or prior coronary revascularization) who completed a CR program in seven Spanish centres between October 2024 and October 2025. Each centre enrolled the first five consecutive eligible patients attending their discharge visit every month. Data were pseudonymized and captured in a unified web-based platform (NaeviaMedical®), enabling structured data entry, semantic interoperability through SNOMED CT, and optional natural-language processing for automated variable extraction.

This interim analysis included the first 244 patients. An external independent company performed the statistical analysis. Continuous variables were summarized as mean $\pm$ SD or median (IQR), and categorical variables as frequencies and percentages. Paired comparisons between baseline and discharge metrics were conducted using the Wilcoxon paired-samples test.

Results

Among patients with diabetes (n=53, 21.5%), mean fasting glucose showed no significant change from start of CR to end of CR (116.5 ± 27.1 vs. 117.0 ± 9.3 mg/dL). In the overall cohort, fasting glucose remained within the normal range (99.8 ± 20.1 vs. 99.1 ± 24.6 mg/dL, p = no significant difference). Median HbA1c also did not vary between the start and end of CR in the diabetic subgroup (5.9 [5.6–6.4] vs. 5.9 [5.6–6.2]) or in the general population (5.8 [IQR 0.8] vs. 5.9 [IQR 0.7]). Blood pressure improved during CR, with reductions in both systolic (134.6 ± 17.4 to 123.5 ± 17.3 mmHg) and diastolic values (81.8 ± 9.5 to 74.4 ± 9.5 mmHg). Renal function remained stable, with no significant changes in creatinine (0.9 ± 0.2 at start of CR to 1.1 ± 1.9 mg/dL at end of CR) or in glomerular filtration rate CKD-EPI (93.3 ± 18.0 at start of CR to 91.8 ± 15.0 at end of CR). Regarding treatment, 46.7% of the total cohort were receiving at least one antidiabetic agent. Among individuals with diabetes, antidiabetic therapy was widely prescribed (89.3%). SGLT2 inhibitors were the most frequently used agents (82.1%), predominantly empagliflozin (37.5%) and dapagliflozin (16.1%). Metformin was prescribed in more than half of diabetic patients (55.4%), followed by GLP-1 receptor agonists (30.4%), primarily semaglutide (21.4%). DPP-4 inhibitors were prescribed in 10.7% of diabetic patients, and insulin in 8.9% of the diabetic population.

Conclusions

Patients with diabetes completing contemporary CR programs in Spain show good overall glycaemic control, with stable fasting glucose and HbA1c levels throughout the CR program. These findings suggest that while current CR frameworks support maintenance of acceptable diabetes control, further strategies—such as targeted metabolic interventions or closer glucose-focused follow-up—may be required to achieve additional glycaemic optimization within CR pathways.

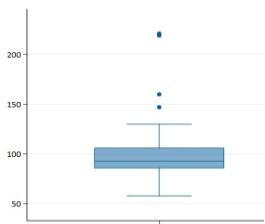


Figure 1. Glucose (mg/dL) at end of CR in the general CR population

Current Control Of Patient Body Composition After A Contemporary Cardiac Rehabilitation Program: Insights From Interim Analysis Of The Spanish National ReCardio Registry

Author

M. Sestayo Fernandez¹, C. Pena-Gil², A. Albaladejo³, C. Contreras Lorenzo³, M. Sandin Rollan⁴, A. Lopez Lozano⁵, A. Lopez Suarez⁵, R. Campuzano Ruiz⁶, E. Barrenada Copete⁶, MM. Rodrigo Cuadrado⁶, F. Garza⁷, L. Matute-Blanco⁸, C. De Pablo Zarzosa⁸, A. Castro Conde³ - (1) Health Research Institute of Santiago de Compostela, Santiago De Compostela, Spain (2) University Hospital of Santiago de Compostela, Santiago De Compostela, Spain (3) La Paz University Hospital, Madrid, Spain (4) General University Hospital Doctor Balmis of Alicante, Alicante, Spain (5) Complex Public Hospital Virgen del Rocio Regional, Sevilla, Spain, Spain (6) Fundacion Hospital Alcorcon, Alcorcon, Spain (7) UNIVERSITY HOSPITAL MIGUEL SERVET, Zaragoza, Spain (8) Ramon and Cajal University Hospital, Madrid, Spain

Objective

The objective of this study is to evaluate the clinical characteristics and body composition profile of patients completing contemporary cardiac rehabilitation (CR) programs across Spain, using data from the prospective, multicentre ReCardio national registry.

Methods

We conducted a prospective, multicentre, cross-sectional registry including consecutive adult patients with ischaemic heart disease (acute coronary syndrome, chronic coronary syndrome, or prior coronary revascularization) who completed a CR program in seven Spanish centres between October 2024 and October 2025. Each centre enrolled the first five consecutive eligible patients attending their discharge visit every month. Data were pseudonymized and captured in a unified web-based platform (NaeviaMedical®), enabling structured data entry, semantic interoperability through SNOMED CT, and optional natural-language processing for automated variable extraction.

This interim analysis included the first 244 patients. An external independent company performed the statistical analysis. Continuous variables were summarized as mean ± SD or median (IQR), and categorical variables as frequencies and percentages. Paired comparisons between baseline and discharge metrics were conducted using the Wilcoxon paired-samples test.

Results

Our findings show significant improvements across all evaluated body composition parameters. Mean body weight decreased from 82 ± 14 kg at baseline to 80 ± 13 kg at discharge (−1.9 kg, p < 0.001), paralleled by a reduction in BMI from 28.9 ± 4.5 to 28.2 ± 4.1 kg/m² (−0.63 kg/m², p < 0.001). Waist circumference also improved, decreasing from 102.8 ± 17 cm to 99.1 ± 11 cm (−3.6 cm, p < 0.001). Body fat percentage declined as well, from 30.8 ± 9.4% to 28.6 ± 8.7% (−2.2%, p < 0.001). Despite these positive changes in body composition, 30% of patients remained with a BMI > 30 kg/m². Only 9.3% of our population was receiving treatment with GLP-1 receptor agonists. This finding underscores a meaningful opportunity for improvement and highlights the need for extended follow-up to optimize obesity management in Phase III CR.

Conclusions

CR programs evaluated in Spain, enabled patients to significantly improve their body composition, underscoring the value of CR as a comprehensive tool for achieving weight-management goals as a cornerstone of secondary prevention in patients with ischaemic heart disease.

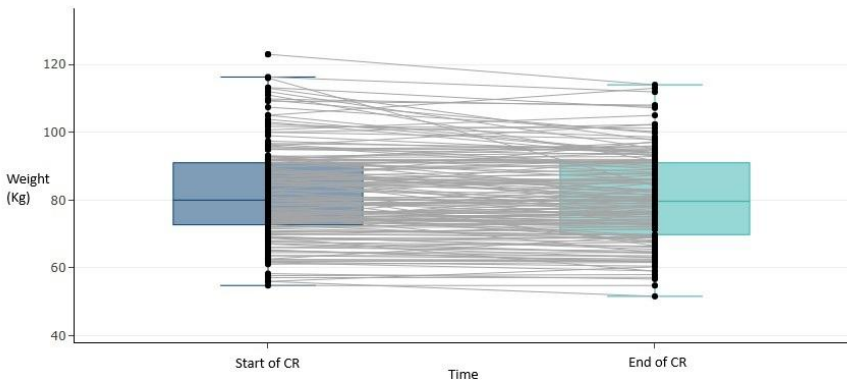


Figure 1. Boxplot for weight (Kg) between start of CR and end of CR

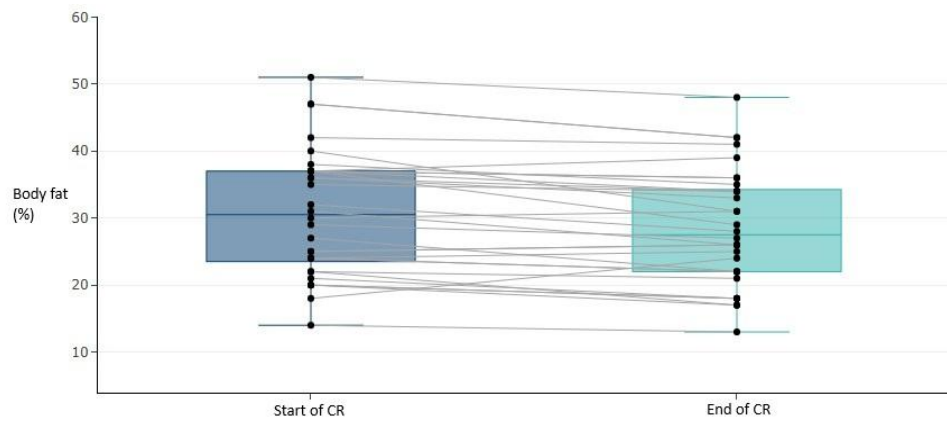


Figure 2. Boxplot for body fat (%) between start of CR and end of CR

Changes in Functional Capacity After A Contemporary Cardiac Rehabilitation Program: Insights From Interim Analysis Of The Spanish National ReCardio Registry

Authors

M. Sestayo Fernandez¹, C. Pena-Gil², A. Albaladejo³, C. Contreras Lorenzo³, M. Sandin Rollan⁴, A. Lopez Lozano⁵, A. Lopez Suarez⁵, R. Campuzano Ruiz⁶, E. Barrenada Copete⁶, MM. Rodrigo Cuadrado⁶, F. Garza⁷, L. Matute-Blanco⁸, C. De Pablo Zarzosa⁸, A. Castro Conde³ - (1) Health Research Institute of Santiago de Compostela, Santiago De Compostela, Spain (2) University Hospital of Santiago de Compostela, Santiago De Compostela, Spain (3) La Paz University Hospital, Madrid, Spain (4) General University Hospital Doctor Balmis of Alicante, Alicante, Spain (5) Complex Public Hospital Virgen del Rocio Regional, Sevilla, Spain, Spain (6) Fundacion Hospital Alcorcon, Alcorcon, Spain (7) UNIVERSITY HOSPITAL MIGUEL SERVET, Zaragoza, Spain (8) Ramon and Cajal University Hospital, Madrid, Spain

Objective

The objective of this study is to evaluate the clinical characteristics and changes in functional capacity of patients completing contemporary cardiac rehabilitation (CR) programs across Spain, using data from the prospective, multicentre ReCardio national registry.

Methods

We conducted a prospective, multicentre, cross-sectional registry including consecutive adult patients with ischaemic heart disease (acute coronary syndrome, chronic coronary syndrome, or prior coronary revascularization) who completed a CR program in seven Spanish centres between October 2024 and October 2025. Each centre enrolled the first five consecutive eligible patients attending their discharge visit every month. Data were pseudonymized and captured in a unified web-based platform (NaeviaMedical®), enabling structured data entry, semantic interoperability through SNOMED CT, and optional natural-language processing for automated variable extraction.

This interim analysis included 77 patients that performed a cardiopulmonary exercise test. An external independent company performed the statistical analysis. Continuous variables were summarized as mean $\pm$ SD or median (IQR), and categorical variables as frequencies and percentages. Paired comparisons between baseline and discharge metrics were conducted using the Wilcoxon paired-samples test.

Results

Participation in a comprehensive CR program resulted in significant improvements in functional capacity. Mean peak oxygen consumption (VO_2 peak) increased from 23.4 ± 5.8 at start of CR to 25.6 ± 6.1 ml/kg/min at end of CR, reflecting a mean gain of $+2.1$ ml/kg/min ($p < 0.001$). This gain is equivalent to nearly 1 MET, representing a clinically relevant enhancement in aerobic capacity. The percentage of predicted VO_2 also improved significantly, rising from $97.4 \pm 21.0\%$ at start of CR to $102.0 \pm 25.1\%$ at end of CR (mean change $+4.6\%$, $p < 0.001$). Among patients who began CR with a predicted $\text{VO}_2 < 80\%$, 50% improved above this threshold at end of CR, highlighting the capacity of CR programs to reverse low-baseline functional performance. RER and VE/VCO_2 slope values were recorded at both time points, with trends indicating physiological improvement, although between-time differences did not reach statistical significance.

Conclusions

Patients participating in contemporary CR programs in Spain already show a generally preserved baseline functional capacity as assessed by VO_2 peak during maximal cardiopulmonary exercise testing at start of CR. Despite these favourable starting values, participation in a comprehensive, exercise-based CR program was associated with additional clinically meaningful improvements in aerobic fitness, including an improvement in VO_2 peak approaching 1 MET at end of CR. These results highlight the sustained value of exercise based CR in enhancing functional capacity even among patients with good initial performance.

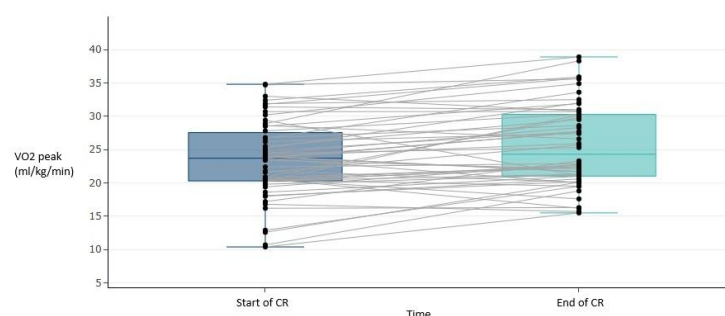


Figure 1. Boxplot for VO_2 peak between start of CR and end of CR