

European Heart Journal Open (2025) **5**, oeaf016 https://doi.org/10.1093/ehjopen/oeaf016

The 2024 European Society of Cardiology guidelines for chronic coronary syndromes: good news for angina and non-obstructive coronary artery (ANOCA)/ischaemia and non-obstructive coronary artery (INOCA) patients?

Carolyn M. Webb (b) 1,*, Maria George², and Peter Collins (b) 1

¹National Heart & Lung Institute, Imperial College London, and Royal Brompton Hospital, Sydney Street, London SW3 6NP, UK; and ²INOCA International, Glasgow, UK Received 27 November 2024; revised 28 January 2025; accepted 12 February 2025; online publish-ahead-of-print 26 February 2025

Keywords

Chronic coronary syndromes • Chest pain • Angina • Ischaemia • Unobstructed coronary arteries • Guidelines

We welcome the publication of the 2024 European Society of Cardiology (ESC) guidelines for the management of chronic coronary syndromes (CCS). The 2019 guidelines advanced the definition of stable coronary disease, bringing in the terminology CCS to acknowledge advancements in the understanding of the pathophysiology of coronary artery disease (CAD) to encompass structural and/or functional alterations to the wider coronary circulation, including not only epicardial coronary arteries but also the coronary microcirculation.² The 2024 guidelines go further, embracing the broadening of current concepts in structural and functional abnormalities of the coronary circulation such that coronary microvascular dysfunction is recognized as an individual entity that may or may not co-exist with obstructive epicardial coronary atherosclerosis and that 'different mechanisms of ischaemia may act concomitantly'. For the first time, angina and non-obstructive coronary arteries (ANOCA) and ischaemia and nonobstructive coronary arteries (INOCA) are recognized by an eminent international cardiological society as a continuum of coronary heart disease. The guidelines acknowledge that CCS does not always present as classical angina—the terms 'typical' and 'atypical' to describe symptoms of angina have been extinguished, replaced by a detailed description of symptoms—and that clinical presentation does not always reflect the underlying mechanism(s). The new stepwise approach to the initial management of suspected CCS emphasizes careful history taking, initial evaluation using echocardiography or exercise electrocardiogram, and then a confirmatory non-invasive test such as computed tomography

coronary arteriography, if required, to confirm the presence or absence of obstructive coronary artery stenoses. If myocardial ischaemia or/and dysfunction is suspected, then functional testing with cardiac magnetic resonance imaging or positron emission tomography is proposed. Invasive angiography is suggested only if there is very high likelihood of CAD or severe myocardial ischaemia. This is all great news for patients who present with angina but in whom no obstructive epicardial coronary disease is found. In the not-too-distant past, and we suspect in some practices still, these patients would have been discharged from cardiology departments having been told that their chest pain is non-cardiac, with no alternative explanation or evaluation of the cause of their symptoms. Yet their symptoms continued, often resulting in repeat admissions and repeat investigations at tremendous medical resource consumption and cost.

What is needed now is education, an awareness campaign, and upskilling of current health professionals likely to come into contact with ANOCA/INOCA patients. The cardiology community, in its widest sense, must recognize and communicate that these patients should be taken seriously and should know how to manage them (or to whom to refer) when they present. In addition, any centre where an ANOCA/INOCA patient is likely to seek medical help and reassurance needs to be informed, general practices and emergency departments in particular. Awareness needs to extend to medical, nursing, and allied health professional education to inform young health professionals at the beginning of their career. Governing authorities should be lobbied

^{*} Corresponding author. Tel: +44 20 7351 8860, Email: c.webb@imperial.ac.uk

[©] The Author(s) 2025. Published by Oxford University Press on behalf of the European Society of Cardiology.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (https://creativecommons.org/licenses/by-nc/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact reprints@oup.com for reprints and translation rights for reprints. All other permissions can be obtained through our RightsLink service via the Permissions link on the article page on our site—for further information please contact journals.permissions@oup.com.

2 Correspondence

to combat any resource and funding constraints to implementing awareness training of healthcare providers.

INOCA International is a patient support group who partner with international health professionals experienced in INOCA to help improve awareness and bring clearer global understanding of INOCA. At the 2024 INOCA summit, there was a loud call for angina clinics with ANOCA/INOCA expertise that encompass a multidisciplinary group of healthcare professionals including medics, specialist nurses, and psychologists. The patient attendees had experienced the 'pre 2024 ESC CCS guidelines' type of treatment of ANOCA/INOCA, often involving years of shuttling from one health professional to another to find relief from their symptoms, an often lonely and demoralizing experience.³ They value being taken seriously, being listened to, and being understood. These clinics would provide a place for these patients to be referred following a visit to a rapid chest pain clinic or emergency department, a place that provides continuity of care (stated as very important by the patient group) and a point of contact. The clinics could provide a cost-effective treatment strategy by reducing expensive urgent care visits and admissions.

For years, patients with angina and non-obstructive coronary arteries have been sitting on the periphery of cardiology. Thanks to the advances in the understanding of coronary pathophysiology and diagnostic testing, which we should continue to improve, the 2024

ESC guidelines for CCS have brought ANOCA/INOCA into the mainstream, we hope to the benefit of all patients with anginal symptoms.

Funding

This work was supported by the Victor Phillip Dahdaleh Charitable Foundation.

Conflict of interest: None declared.

References

- Vrints C, Andreotti F, Koskinas KC, Rossello X, Adamo M, Ainslie J, Banning AP, Budaj A, Buechel RR, Chiariello GA, Chieffo A, Christodorescu RM, Deaton C, Doenst T, Jones HW, Kunadian V, Mehilli J, Milojevic M, Piek JJ, Pugliese F, Rubboli A, Semb AG, Senior R, Ten Berg JM, Van Belle E, Van Craenenbroeck EM, Vidal-Perez R, Winther S; ESC Scientific Document Group. 2024 ESC guidelines for the management of chronic coronary syndromes. Eur Heart J 2024;45:3415–3537.
- Knuuti J, Wijns W, Saraste A, Capodanno D, Barbato E, Funck-Brentano C, Prescott E, Storey RF, Deaton C, Cuisset T, Agewall S, Dickstein K, Edvardsen T, Escaned J, Gersh BJ, Svitil P, Gilard M, Hasdai D, Hatala R, Mahfoud F, Masip J, Muneretto C, Valgimigli M, Achenbach S, Bax JJ; ESC Scientific Document Group. 2019 ESC guidelines for the diagnosis and management of chronic coronary syndromes. Eur Heart J 2020;41:407–477.
- Gulati M, Khan N, George M, Berry C, Chieffo A, Camici PG, Crea F, Kaski J-C, Marzilli M, Merz CNB. Ischemia with no obstructive coronary artery disease (INOCA): a patient self-report quality of life survey from INOCA international. *Int J Cardiol* 2023;371:28–39.