European Atherosclerosis Journal
www.eathj.org

EAJ 2024;3:Special Issue
https://doi.org/10.56095/eaj.v3iSpecial_Issue.87

Heart in Venice: From Atherosclerosis to the Management of Coronary Artery Diseases

The Heart in Venice meeting brought together leading experts to address the evolving landscape of atherosclerotic cardiovascular disease (ASCVD) and its management. In recent years, ASCVD had increasingly affected younger individuals, often with a modest burden of traditional risk factors. This shift challenged the existing prevention strategies and raised the question of whether previous guidelines had remained adequate. Furthermore, significant advances in both non-invasive and invasive diagnostic tools had called for a more interdisciplinary approach to patient care, ensuring that diagnostic and therapeutic strategies were tailored to individual risk profiles. This meeting aimed to critically assess the role of past guidelines, explore novel risk prediction models, and integrate emerging diagnostic and therapeutic approaches to provide a more comprehensive and effective strategy for patient care.

Understanding the evolving nature of atherosclerosis and its direct connection to cholesterol metabolism had been fundamental to cardiovascular risk management. Large-scale epidemiological studies, including the Seven Countries Study and the Framingham Heart Study, had established a clear relationship between plasma cholesterol levels and cardiovascular risk [Catapano AL, *Eaj.* 2024; 2: 54-56]. However, recent analyses suggested that this association was not purely linear, prompting a re-evaluation of cholesterol management strategies. Insights from the Cholesterol Treatment Trialists' (CTT) Collaboration reaffirmed the substantial benefits of LDL-C reduction, with a 22-23% decrease in coronary heart disease risk per 1 mmol/L LDL-C reduction. These findings emphasized the importance of optimizing lipid management to mitigate cardiovascular risk.

Despite the well-documented role of cholesterol in cardiovascular disease, traditional cardiovascular risk prediction models, which estimated 10-year risk based on middle-aged cohort studies, had reached their limits. The need for earlier and more individualized risk assessment had become evident, considering the lifelong progression of atherosclerosis. Future models should have incorporated novel biomarkers, genetic predisposition, and advanced imaging techniques to provide a more precise, personalized risk estimation. The integration of artificial intelligence and big data analytics into risk assessment had represented a promising frontier, allowing for improved accuracy and more targeted preventive strategies [Graham IM, *Eaj.* 2024; 1: 1-3].

As risk prediction evolved, so too had the approaches to lipid lowering. Despite aggressive lipid-lowering strategies, residual cardiovascular risk had remained a challenge. The advent of next-generation lipid-lowering therapies offered new hope in addressing this gap. In addition to statins, ezetimibe, bempedoic acid, and PCSK9 inhibitors, novel approaches targeting Lp(a), CETP inhibition (Obicetrapib), and gene-editing strategies for PCSK9 modulation had emerged as promising therapies. These novel interventions had the potential to complement existing treatments, further reducing the incidence of cardiovascular events in high-risk populations [Averna M, *Eaj.* 2024; 2: 51-53].

With advances in lipid management and risk stratification, the role of imaging in assessing coronary artery disease had become increasingly crucial. SPECT and PET imaging had been essential tools in evaluating coronary artery disease (CAD), particularly in patients with intermediate-risk profiles or inconclusive initial assessments. By integrating these imaging modalities into routine clinical practice, clinicians achieved more accurate risk assessment and optimal therapeutic decision-making, ultimately improving patient outcomes [Pedretti RFE et al., *Eaj.* 2024; 1: 4-6].

The Heart in Venice meeting served as a platform to discuss cutting-edge research and innovations in ASCVD management. By re-examining existing guidelines, refining risk prediction models, and integrating novel therapies and imaging techniques, this meeting aimed to shape the future of cardiovascular care, ensuring that patients received the most effective, personalized treatments available. Through a multidisciplinary exchange of knowledge and expertise, this gathering contributed to refining best practices and advancing patient-centered approaches in cardiovascular medicine and set the stage for the activity of a group of researcher to develop independent guidance on how to approach this central issue for population and individual prevention of cardiovascular disease.

We wish to acknowledge the Menarini Fundation for organizing the meeting and for all the support received.

Alberico L. Catapano
Chair of the meeting

Corresponding Author
Alberico L. Catapano: alberico.catapano@unimi.it

Heart in Venice:

From atherosclerosis to the management of coronary artery diseases

26th-28th October 2023, Venice, Italy

Friday, 27th October 2023

Opening and Welcome - Fondazione Internazionale Menarini

Co-Presidents of the Meeting:
A.L. Catapano (Milan, IT), *F. Rigo* (Venice, IT)

SESSION I
From risk factors to atherosclerostic vascular disease

Chairpersons:
A.L. Catapano (Milan, IT), *F. Visseren* (Utrecht, NL)

When, what, why and to whom to propose a diagnostic preclinical screening to personalize the future clinical cardio-vascular risk • *I. Graham* (Dublin, IE)

What the Guidelines in cardiovascular prevention say and don't say • *F. Visseren* (Uthrecth, NL)

Atherosclerosis and cholesterol: what we should know • *A.L. Catapano* (Milan, IT)

Panel Discussion

SESSION II
Preclinical approach to vascular atherosclerosis

Chairpersons:
I. Graham (Dublin, IE), *F. Visseren* (Utrecht, NL)

Preclinical carotid atherosclerosis as an indicator of polyvascular disease? • *P. Poredos* (Ljublijana, SI)

Is cardiac ultrasound feasible in pre-clinical assessment of atherosclerosis? • *Q. Ciampi* (Naples, IT)

A novel multimodality ultrasound pre-clinical study in Venice • *F. Rigo* (Venice, IT)

Personalized approach to atherosclerotic vascular disease in 2023 • *F. Crea* (Rome, IT)

SESSION III
Preclinical approach to vascular atherosclerosis

Chairpersons:
J. Davies (London, UK), *F. Rigo* (Venice, IT)

Role of Nuclear medicine assessing patients with suspected vascular disease • *R. Pedretti* (Milan, IT)

Role of CT Scan for assessing patients with suspected artery disease: when, to whom and how? • *G. Pontone* (Milan, IT)

Role of coronary angiography and the latest technologies in weighing the burden of coronary plaque • *J. Davies* (London, UK)

Panel discussion

Saturday, 28th October 2023

Chairpersons:
A.L. Catapano (Milan, IT)

Gender and ACVD where we stand?
E. Prescott (Copenhagen, DK)

SESSION IV
From diagnosis of vessels disease to therapy

Chairpersons:
M. Arca (Rome, IT), *L. Mazzolai* (Losanna, CH)

New non-invasive approach to coronary artery disease • *Q. Ciampi* (Naples, IT)

Role of antithrombotic therapy in vascular disease • *L. Mazzolai* (Losanna, CH)

Current approaches to lipid lowering • *M. Arca* (Rome, IT)

Novel approaches to lipid lowering • *M. Averna* (Palermo, IT)

Panel Discussion

SESSION V
New approaches in CV risk assessment

Chairpersons:
A.L. Catapano (Milan, IT) *M. Ostojic* (Belgrade, RS)

Clonal hematopoiesis and CV risk • *G. Condorelli* (Milan, IT)

Proteomics in CVD prediction • *N. Nurmohamed* (Amsterdam, NL)

Integrated approaches to CV risk evaluation
B. Ference (Cambridge, UK)

Closing remarks

Co-presidents
Alberico L. Catapano, Fausto Rigo

Scientific committee
Marcello Arca, Maurizio Averna, Quirino Ciampi, Gianluigi Condorelli, Filippo Crea, Justin Davies, Brian Ference, Ian Graham, Lucia Mazzolai, Nick Nurmohamed, Miograd Ostojic, Roberto Pedretti, Gianluca Pontone, Pavel Poredos, Eva Prescott, Frank Visseren.

Co-organized by:
Fondazione Internazionale Menarini
Centro Direzionale Milanofiori
Rozzano (Milan, Italy)