



Le fil rouge

Cagliari, October **9 | 11**, 2025

The fil rouge of atherosclerosis: from brain to heart imaging

President and Chair: **Luca Saba**

FOURTH EDITION

Hotel Regina Margherita, Cagliari

Atherosclerotic disease is the underlying process behind the two leading causes of death worldwide: ischemic stroke and myocardial infarction. Its prevalence is remarkably high in Western populations, affecting up to 75% of men and 62% of women aged 65 and older. Despite advances in therapy, current screening and diagnostic strategies remain insufficient to identify high-risk individuals before an event occurs. However, over the past decade, increasing recognition of the concept of the "vulnerable plaque" has opened new and promising perspectives in cardiovascular medicine.

It is now widely accepted that rupture of atherosclerotic plaques—particularly in the coronary and carotid arteries—plays a fundamental role in triggering acute events such as myocardial infarction and ischemic stroke. Recent progress in imaging technologies has significantly enhanced our ability to investigate plaque morphology and composition, providing compelling evidence that specific imaging features are associated with a higher risk of rupture, thrombosis, or embolization.

At the same time, the advent of lipid-lowering and anti-inflammatory therapies has introduced a new dimension to the management of atherosclerosis, raising important questions about how best to integrate medical therapy and revascularization strategies. Although coronary and carotid atherosclerosis share a common pathological basis, they differ in several key aspects—biological behavior, clinical presentation, therapeutic response—which call for a more nuanced, disease-specific approach.

This conference aims to address these complexities through a multi-specialty dialogue that brings together leading experts from Europe, Asia and the United States. Cardiologists, neurologists, vascular surgeons, radiologists, and imaging scientists will engage in an open exchange to explore both the shared principles and the distinctive features of atherosclerosis in the heart and brain.

Our primary goal is to highlight recent innovations in the early imaging of atherosclerotic disease and to understand how such imaging can guide more tailored, effective prevention strategies—ultimately aiming to reduce the burden of myocardial infarction and ischemic stroke through individualized care.

A) – Tematiche :

Imaging e prevenzione dello stroke ischemico cerebrale e dell'evento ischemico del miocardio con particolare riferimento alle strategie di imaging nell'ottica di una visione traslazionale che legghi tutte le moderne tecniche di diagnostica

Approcci multi-livello per lo studio dell'aterosclerosi, intracranica, carotidea e coronarica definendo i fattori che rendono più probabile la vulnerabilità.

Definire come le metodiche più avanzate di imaging (Tomografia Computerizzata, Risonanza Magnetica, Ultrasuoni con mezzo di contrasto, Medicina Nucleare e Molecolare) riescano a monitorare l'effetto di progressione e regressione in rapporto alla presenza o meno di terapie farmacologiche.

Identificare le terapie migliori, allo stato dell'arte (farmacologiche e chirurgiche) nei pazienti con patologia aterosclerotica.

B) – Finalità, motivazioni e obiettivi culturali e formativi:

L'aterosclerosi è il processo patologico alla base delle due principali cause di morte a livello mondiale: l'infarto miocardico e l'ictus ischemico. La sua prevalenza è estremamente elevata nei Paesi occidentali, con valori che raggiungono il 75% negli uomini e il 62% nelle donne di età pari o superiore ai 65 anni. Nonostante i progressi terapeutici, le attuali strategie di screening e diagnosi si sono dimostrate insufficienti per identificare precocemente i soggetti ad alto rischio, prima che si verifichi l'evento clinico. Tuttavia, il riconoscimento crescente del concetto di "placca vulnerabile" ha aperto, nell'ultimo decennio, nuove e promettenti prospettive in ambito cardiovascolare.

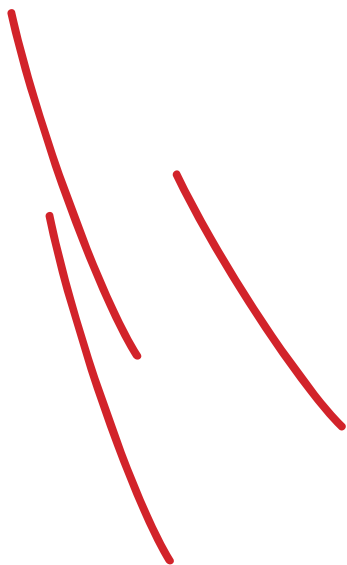
È ormai ampiamente accettato che la rottura della placca aterosclerotica — in particolare nelle arterie coronarie e carotidi — svolga un ruolo fondamentale nell'innescare eventi acuti come l'infarto miocardico e l'ictus ischemico. I recenti progressi nelle tecniche di imaging hanno migliorato in modo significativo la nostra capacità di analizzare morfologia e composizione della placca, fornendo evidenze sempre più solide del fatto che alcune caratteristiche di imaging siano associate a un rischio aumentato di rottura, trombosi o embolizzazione.

Parallelamente, l'introduzione di terapie ipolipemizzanti e anti-infiammatorie ha aggiunto una nuova dimensione alla gestione dell'aterosclerosi, sollevando interrogativi fondamentali su come integrare al meglio il trattamento medico con le strategie di rivascularizzazione. Sebbene l'aterosclerosi coronarica e quella carotidea condividano una base patologica comune, esse divergono per numerosi aspetti chiave — comportamento biologico, manifestazione clinica, risposta terapeutica — che richiedono un approccio più raffinato e specifico per sede.

Questo congresso intende affrontare tali complessità attraverso un dialogo multi-specialistico, coinvolgendo esperti di fama internazionale provenienti da Europa e Stati Uniti. Cardiologi, neurologi, chirurghi vascolari, radiologi e specialisti in imaging si confronteranno apertamente per esplorare sia i principi condivisi, sia le peculiarità dell'aterosclerosi a livello cardiaco e cerebrale.

L'obiettivo principale è quello di mettere in luce le innovazioni più recenti nell'imaging precoce dell'aterosclerosi e comprendere come queste possano guidare strategie di prevenzione più personalizzate ed efficaci, con l'obiettivo finale di ridurre l'incidenza di infarti miocardici e ictus ischemici attraverso una cura individualizzata.

PROGRAM



PROGRAM DAY 1:

13.45 Welcome from the conference directors

SESSION 1

ADVANCEMENT IN IMAGING TECHNOLOGY IN CAROTID AND NEUROVASCULAR IMAGING

J.K. De Marco, E. Kooi, L.Politi

14.00 PCCT the impact of the resolution

N. Anzalone

14.15 Spectral Imaging and Plaque Imaging: what we know and where are we going

L. Saba

14.30 Magnetic Resonance: 4D flow?

S. McNally

14.45 US with microbubble and plaque imaging

V. Rafailidis

15.00 Expert panel challenge: What should be the target of the technological evolution?

C. Yuan, C. Godi, J. Song

SESSION 2

THE FUNDAMENTALS FOR THE STROKE

S. Holmin, B. A. Wasserman, Q. Yang, M. Caulo

15.30 The changing landscape of epidemiology of stroke

D. Bos

15.45 Primary and secondary stroke: pathophysiology and differences

J. Meschia

16.00 Near occlusion from pathophysiology to imaging

E. Johnsson

16.15 The calcium mystery what we have understood

J. Song

16.30 Expert panel challenge: Old and new concepts: what are the barriers?

E. Johnsson, J. Meschia, D. Bos

17.00-17.15 Break

SESSION 3

STROKE AND THE TRIALS: WHERE WE ARE WHAT ARE WE PLANNING FOR THE NEXT FUTURE?

M. Mossa Basha, S. Masala, C. Cadeddu

17.15 Carotid News from the trials what are we expecting

M. Porcu

17.30 Coronary News from the trials what are we expecting

R. Cau

17.45 Expert panel: which the next trials we need in the next future

A. Kopcak, R. Vergallo

18.45 Lecture of the first day:

Intraplaque Haemorrhage and Inflammation in Atherosclerosis: from Pathophysiology to Imaging **E. Kooi**

19.15 Conclusion of the first day

PROGRAM DAY 2:

MORNING

08.00 Welcome second day

SESSION 4

Coronary Artery and PCCT: what is the current level of evidence

L. D'Errico, S. Marcia, R. Salgado

08.30 PCCT and coronary: CT in patients with native and revascularized CAD

F. Cademartiri

08.45 Impact of PCCT on calcium scoring scanning

F. Pontana

09.00 PCCT and CAD: impact on research activity and trial design

A. Esposito

09.15 Expert panel challenge: Is PCCT mere evolution or a revolution?

F. Cademartiri, F. Pontana, A. Esposito

SESSION 5

The Artificial Intelligence impact

S. McNally, B.A. Wasserman

09.45 Use of AI in Cardiac CT and MRI: understanding the Statement from the ESCR, EuSoMII, NASCI, SCCT, SCMR, SIIM, and RSNA

D. Mastrodicasa

10.00 AI prognostication in myocardial Ischemia / infarct

R. Marano

10.15 Coronary imaging and AI information

G. Muscogiuri

10.30 Carotid imaging and AI: should new AI metric used?

M. Mossa Basha

10.45 Expert panel challenge:

How do we bridge the gap between AI development and implementation?

R. Marano, C. Yuan

11.00-11.15 break

SESSION 6

Carotid therapy in primary and secondary stroke

U.Hedin, A. Falini, G. Pratesi, A. Scuteri

11.15 Carotid drug therapies: state of the art

J. Meschia

11.30 Endarterectomy indications at the level of evidence in 2025

K. Paraskevas

11.45 Moving the boundaries the Mayo Experience 2025

G. Lanzino

12.00 Carotid Artery Stenting: when and why?

P. Montorsi

12.15 Carotid based prevention: more than stroke. The impact of cognition

J. Mc Cabe

12.30 Expert panel challenge: The "cognition impact" could change the indications?

J. Meschia, J. Mc Cabe, E. Johnsson

12.45-14.00 break

PROGRAM DAY 2:

AFTERNOON

14.00 Welcome second day afternoon

SESSION 7

THE CURRENT KNOWLEDGE IN PATHOLOGY AND BIOLOGY

L. Saba, G. Lanzino, M. Franconeri

14.30 Fundamental Pathobiology and Physiology of carotid and coronary Atherosclerosis and implications V. Nardi

14.45 Peri-coronary fat alterations: current knowledge and potential implications for the clinical practice

M. Guglielmo

15.00 What are the missing points we do not understand in the pathobiology?

G. Ntaios

15.15 Q/A session

15.30 The Lecture of the Fil Rouge:

P. Libby

SESSION 8

FLOW - COMPOSITION - GEOMETRY

R. Salgado, S. Seitunm, G. Pontone

16.15 Interaction between flow– composition and geometry in carotid artery vulnerability

F. Pontana

16.30 Wall shear stress/flow and coronary plaque

M. Francone

16.45 The relationship of FFR/flow and myocardial perfusion

N. Galea

17.00 From Research to clinical practice: what we know from research we should move to clinical practice

R. Salgado

17.15 Q/A session

17.30 - 17.45 Break

SESSION 9

PREVENTION AND THERAPY: WHAT WE NOW AND WE THINK WILL HAPPEN IN THE NEXT FUTURE

A. Esposito, A. Boi, R. Sanfilippo

17.45 Carotid artery and stroke. What is the best approach: TCAR and Revascularization when?

M. Schaller

18.00 Carotid artery and stroke. What is the best approach: BMT when? Counterpoint

F. Romana Pezzella

18.15 Coronary artery and ischemic heart disease: What is the best approach: invasive when ?

R. Vergallo

18.30 Coronary artery and ischemic heart disease: what is the best approach: BMT ? Counterpoint

F. Costa

18.45 Expert panel challenge: Following the clues

19.00 Q/A session

19.15 Conclusion of the second day

PROGRAM DAY 3:

08.15 Welcome third day

SESSION 10

TWO YEARS AFTER THE PLAQUE-RADS: WHERE WE ARE?

J.K. de Marco – Bruce A. Wasserman

08.30 Two year of Plaque-RADS introduction

L. Saba

08.45 Evidence from the published literature

A. Kopcak

09.00 Application on the road in CT

D. Bos

09.15 Expert panel challenge: Open discussion the research lines in the next future?

SESSION 11

STROKE, INTRACRANIAL ARTERIES AND HYPERTENSION

D. Mandell, J. Song

09.30 Plaque Remodelling of Intracranial Arteries

B. A. Wasserman

10.50 Plaque Evolution of Intracranial Arteries

C. Yuan

10.10 The Concept of Cerebral Small Vessel Disease Activity

D. Mandell

10.30 Imaging of Hypertension?

G. Roditi

10.50 Q/A session

11.00 -11.30 break

SESSION 12

CORONARY VULNERABILITY WHAT ARE THE TOP FEATURES?

L. Natale, T. d'Angelo, R. Marano

11:30 Invasive imaging of plaques (IVUS/OCT)

R. Vergallo

11.45 High risk plaque characteristic

T. Villines

12.00 Plaque Characteristic and Ischemia

G. Pontone

12.15 Plaque burden

S. Seitun

12.30 Q/A session

12.45 Best poster/presentation (first second and third) will be awarded

To be confirmed

13.00 Remarks – summary – final points and next meeting information (October- 2027)

FACULTY



NICOLETTA ANZALONE
ALBERTO BOI
DANIEL BOS
CHRISTIAN CADEDDU
FILIPPO CADEMARTIRI
MASSIMO CAULO
RICCARDO CAU
FRANCESCO COSTA
TOMMASO D'ANGELO
LUIGIA D'ERRICO
JAMES KEVIN DE MARCO
ANTONIO ESPOSITO
ANDREA FALINI
MARCO FRANCONI
CLAUDIA GODI
MARCO GUGLIELMO
NICOLA GALEA
ULF HEDIN
STAFFAN HOLMIN
ELIAS JOHNNASSON
ELINE KOOI
ANNA KOPCZAK
GIUSEPPE LANZINO
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JOHN MC CABE
SCOTT MCNALLY
DANNY MANDELL
RICCARDO MARANO
STEFANO MARCIA
SALVATORE MASALA
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JAMES MESCHIA
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GIUSEPPE MUSCOGIURI
LUIGI NATALE
VALENTINA NARDI
GEORGE NTAIOS
KOSMAS PARASKEVAS
FRANCESCA ROMANA PEZZELLA
LETTERIO POLITI
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GIANLUCA PONTONE
FRANCOIS PONTANA
GIOVANNI PRATESI
YANG QI
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LUCA SABA
RODRIGO SALGADO
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SARA SEITUN
JAE SONG
BRUCE A. WASSERMAN
ROCCO VERGALLO
TODD VILLINES
CHUN YUAN

FOURTH EDITION

UNDER THE AUSPICES OF

WITH THE UNCONDITIONAL SUPPORT OF

POSTER

AND ORAL PRESENTATION SUBMISSION

DEADLINE

September 15th, 2025

fratherosclerosis@gmail.com

REGISTRATION FEE

In person "face to face"

Physicians: € 250,00 (VAT 22% included)

In-person details

Admission to all scientific sessions Access to sponsor
exhibition area

A name badge

A certificate of attendance (by email)

Lunch

Ticket coffee

Rates are inclusive of VAT

ECM (only italian physicians)

BADGE

Badge will be given upon registration.
You are kindly required to wear your name
badge during all sessions

PROGRAMME MODIFICATIONS

The Scientific Secretariat and The Organizing Secretariat reserve the right to make any changes to the programme that will be deemed necessary for organizational and/or scientific reasons.



President and Chair

Luca Saba

Conference Organizer Secretariat

Metasardinia srls

via dell'Abbazia 33, Cagliari

r.loddo@metasardinia.it

www.metasardinia.it



President and Chair

Luca Saba

Scientific Directors

Scientific Committee

Conference Organizer Secretariat

Metasardinia srls

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