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.
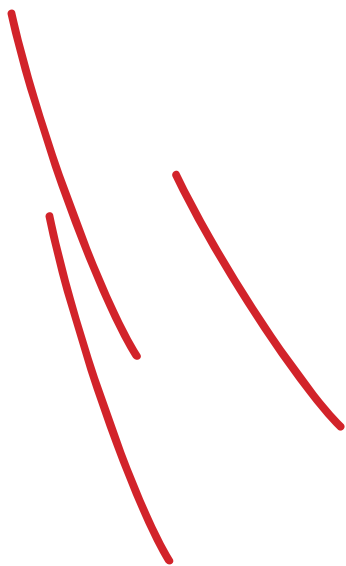
It is now widely accepted that rupture of atherosclerotic plaques—particularly in the coronary and carotid arteries—plays a fundamental role in triggering acute events such as myocardial infarction and ischemic stroke. Recent progress in imaging technologies has significantly enhanced our ability to 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.

PROGRAM

PROGRAM DAY 1:

13.45 Welcome from the conference directors

SESSION 1
Advancement in Imaging technology in carotid and neurovascular imaging ()
14.00 PCCT the impact of the resolution
14.15 Imaging of Hypertension?
14.30 Spectral Imaging and Plaque Imaging: what we know and where are we going
14.45 Magnetic Resonance: 4D flow?
15.00 US with microbubble and plaque imaging
15.15 Expert panel challenge: What should be the target of the technological evolution ?

SESSION 2
The fundamentals for the stroke
15.30 The changing landscape of epidemiology of stroke
15.45 Primary and secondary stroke: physiopathology and differences
16.00 Near occlusion from physiopathology to imaging
16.15 Blood biomarkers: what we know and what is the impact
16.30 The calcium mystery what we have understood
16.45 Expert panel challenge: Old and new concepts: what are the barriers ?

17.00-17.15 Break

SESSION 3
17.15 – 18.45 Stroke and the Trials: where we are what are we planning for the next future?

18.45 – 19.15 Lecture of the first day

19.15 Conclusion of the first day

PROGRAM DAY 2:

08.00 Welcome second day - morning

SESSION 4
Coronary Artery and PCCT: what is the current level of evidence
08.15 PCCT and coronary: CT in patients with native and revascularized CAD
08.30 Impact of PCCT on calcium scoring scanning
08.45 PCCT and CAD: impact on research activity and trial design
09.00 Expert panel challenge: Is PCCT mere evolution or a revolution?

SESSION 5
The Artificial Intelligence impact
09.30 Use of AI in Cardiac CT and MRI: understanding the Statement from the ESCR,
      EuSoMII, NASCI, SCCT, SCMR, SIIM, and RSNA
09.45 AI prognostication in myocardial Ischemia / infarct ( )
10.00 Coronary imaging and AI information
10.00 Carotid imaging and AI: should new AI metric used ?
10.15 Expert panel challenge: How do we bridge the gap between
      AI development and implementation?

SESSION 6
Carotid therapy in primary and secondary stroke
10.30 Carotid drug therapies: state of the art
10.45 Endarterectomy indications at the level of evidence in 2025
11.00 Carotid Artery Stenting: when and why?
11.15 Carotid based prevention: more than stroke. The impact of cognition
11.30 Expert panel challenge: The "cognition impact" could change the indications?

SESSION 7
Stroke and intracranial arteries
12.00 Differentiating between Intracranial Arterial Dissection
      and Intracranial Atherosclerotic Disease
12.15 The Concept of Cerebral Small Vessel Disease Activity
12.30 Photon counting CTA of intracranial stents and flow diverters
12.45 Discussion

PROGRAM DAY 2:

14.10 Welcome second day afternoon

SESSION 8
The current knowledge in pathology and biology
14.15 Fundamental Pathobiology and Physiology of carotid Atherosclerosis and implications
14.30 key concepts of Pathobiology and Physiology of coronary Atherosclerosis
14.45 Peri-coronary fat alterations: current knowledge and potential implications
       for the clinical practice
15.00 What are the missing points we do not understand in the pathobiology ?
15.15 Q/A session

SESSION 9
Flow - composition - geometry
15.30 Interaction between flow – composition and geometry in carotid artery vulnerability
15.45 Wall shear stress/flow and coronary plaque
16.00 The relationship of FFR/flow and myocardial perfusion
16.15 From Research to clinical practice:
       what we know from research we should move to clinical practice
16.30 Q/A session

SESSION 10
17.00 Prevention and therapy: what we know and we think will happen in the next future
17.15 Carotid artery and stroke. What is the best approach: Revascularization when ?
17.30 Carotid artery and stroke. What is the best approach: BMT when? Counterpoint
17.45 Expert panel challenge: following the clues
18.00 Coronary artery and ischemic heart disease:
       What is the best approach: invasive when ?
18.15 Coronary artery and ischemic heart disease: what is the best approach:
       BMT ? Counterpoint
18.30 Expert panel challenge: following the clues

18.45 The honorary Lecture of the Fil Rouge (45 minutes):

19.30 Conclusion of the second day

PROGRAM DAY 3

8.15 Welcome third day

SESSION 11

Two years after the Plaque-RADS: where we are?
8.30 Two year of Plaque-RADS introduction
8.40 Evidence from the published literature
8.50 Application on the road in CT
9.00 Application on the road in MRI
9.10 Application on the road in US
9.20 Q/A session
9.30 Expert panel challenge: what next ?

SESSION 12

10.00 CAD and the Trials: where we are what are we planning for the next future?
10.50 Expert panel challenge: Clinical trials in CT what we see in the next two years

SESSION 13

Coronary vulnerability what are the top features?
11:00 Invasive imaging of plaques (IVUS/OCT)
11.15 High risk plaque characteristic
11.30 Plaque Characteristic and Ischemia
12.00 Plaque burden
12.15 Expert panel challenge: what CT target should be used to assess therapy response?

12.30 Best poster/presentation
(first second and third) will be awarded (To be confirmed)

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

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President and Chair
Luca Saba

Conference Organizer Secretariat

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