



**Le fil rouge**

# **The fil rouge of atherosclerosis: from brain to heart imaging**

**CAGLIARI  
HOTEL REGINA MARGHERITA  
OCTOBER 17-18, 2019**

President and Chair  
**Luca Saba**

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# The fil rouge of atherosclerosis: from brain to heart imaging

Nowadays it is widely accepted that the rupture of the atherosclerotic plaque in coronary and carotid arteries plays a fundamental role in the development of acute myocardial infarctions or cerebrovascular events.

Atherosclerotic disease is the underlying process of the two most important causes of death worldwide: ischemic stroke and myocardial infarction. Atherosclerosis has a high prevalence in western countries with values up to 75% of men and 62% of women aged 65 years and older. Despite advances in treatment, available routinely used screening and diagnostic methods are insufficient to identify the victims before the event occurs even if in the last years the recognition of the role of the vulnerable plaque has opened new avenues of opportunity in the field of cardiovascular medicine.

In the last years, imaging techniques have explored, with a new level of detail, the atherosclerotic disease of the vessels by offering new evidences that some plaque characteristics are significantly associated to the risk of rupture and subsequent thrombosis or embolization. Moreover, the recent evidence of the anti-atherosclerotic effects determined by lipid-lowering and anti-inflammatory therapies poses a challenge for the choice of therapeutic approaches (best medical treatment – revascularization), maximized by the evidence that coronary and carotid atherosclerosis share common patterns but diverge for some important features. In this conference, we will discuss with worldwide class speakers from Europe and United States the similarities and differences between coronary and carotid artery plaque from the imaging point of view and the potential implications for systemic therapies according to the emerging evidences.

Our purpose is to present the more recent innovations in terms of early imaging of atherosclerosis and how to identify the best therapies for avoiding myocardial infarctions or cerebrovascular events.

L'aterosclerosi è il processo alla base delle due più importanti cause di morte a livello mondiale: l'ictus ischemico e l'infarto del miocardio. L'aterosclerosi ha un'alta prevalenza nei paesi occidentali con valori che raggiungono il 75% degli uomini e il 62% delle donne di età pari o superiore a 65 anni. Nonostante i progressi nel trattamento, i metodi di screening e diagnostici disponibili come routine sono attualmente insufficienti per identificare le vittime prima che l'evento si verifichi. Per l'identificazione della stratificazione del rischio fino si continua a considerare come parametro di riferimento il grado di stenosi carotidea sebbene negli ultimi anni il riconoscimento del ruolo della vulnerabilità della placca abbia aperto nuove opportunità nel campo della medicina preventiva cardiovascolare.

Negli ultimi anni, le tecniche di imaging hanno esplorato, con un nuovo livello di dettaglio, la malattia aterosclerotica offrendo forti evidenze di come alcune caratteristiche della placca siano significativamente associate al rischio di rottura e conseguente trombosi o embolizzazione distale. Inoltre, la recente evidenza degli effetti anti-aterosclerotici determinati dalle terapie ipolipemizzanti e antinfiammatorie pone una sfida per la scelta degli approcci terapeutici (miglior trattamento medico - rivascolarizzazione), massimizzata dall'evidenza che l'aterosclerosi coronarica e carotidea condividono modelli comuni sebbene divergano per alcune caratteristiche importanti. In questa conferenza discuteremo con i maggiori esperti al mondo, provenienti da Europa e Stati Uniti, Australia e Asia le somiglianze e le differenze tra la placca coronarica e carotidea dal punto di vista dell'imaging e le potenziali implicazioni per le terapie sistemiche secondo le emergenti evidenze.

Il nostro scopo è presentare le più recenti innovazioni in termini di imaging precoce dell'aterosclerosi e come identificare le migliori terapie per evitare infarti miocardici o eventi cerebrovascolari.



## FACULTY

Anne Abbot, Melbourne  
Nicoletta Anzalone, Milano  
Pierpaolo Bassareo, Cagliari  
Gavin Blake, Dublin  
Alberto Boi, Cagliari  
Christian Cadeddu, Cagliari  
Filippo Cademartiri, Monselice  
Paolo Camici, Milano  
Alessandro Carriero, Novara  
Gavino Casu, Nuoro  
Carlo Catalano, Roma  
Cesare Colosimo, Roma  
Simone Comelli, Cagliari  
Maria Assunta Cova, Trieste  
Giovanni De Fazio, Cagliari  
Kevin De Marco, Michigan  
Antonio Esposito, Milano  
Gavino Faa, Cagliari  
Andrea Falini, Milano  
Marco Francone, Roma  
Jonathan Gillard, Cambridge  
Ajay Gupta, New York  
Eline Kooi, Maastricht  
Giuseppe Lanzino, Rochester - Minnesota  
Tim Leiner, Maastricht  
Christian Loewe, Vienne

Bruno Loi, Cagliari  
Rolf Jager, Londra  
Riccardo Marano, Roma  
Maurizio Melis, Cagliari  
Luigi Meloni, Cagliari  
Giuseppe Mercurio, Cagliari  
Roberto Montisci, Cagliari  
Alan Moody, Toronto  
Roberto Sanfilippo, Cagliari  
Stefano Marcia, Cagliari  
Gianluca Pontone, Milano  
Maurizio Porcu, Cagliari  
Francesco Prati, Roma  
Stefano Profili, Sassari  
Vasileios Rafailidis, Londra  
Tobias Saam, Monaco  
David Saloner, San Francisco  
Luca Saba, Cagliari  
Paolo Siotto, Cagliari  
Daniel Staub, Basel  
Sara Seitun, Genova  
Rodrigo Salgado, Antwerp  
Aad van der Lugt, Rotterdam  
Yang Qi, Beijing  
Bruce Allan Wasserman, Baltimore  
Max Wintermark, Stanford

## PROGRAM

**OCTOBER 17TH, 2019**

### **Intra and extracranial**

- 08.00 Registration
- 08.45 Authorities
- 08.50 Welcome from the conference directors  
**Luca Saba, Marco Francone, Ajay Gupta, Max Wintermark**
- 09.00 **SESSION 1 · Intra-cranial Imaging**  
**Max Wintermark, Maurizio Conti, Andrea Falini, Cesare Colosimo**
- 09.00 CT and MR: technical requisites and prerequisites  
**Bruce A Wasserman**
- 09.30 Computed Tomography (with DECT and dose): is it possible to go beyond the lumen?  
**Aad van der Lugt**
- 10.00 Magnetic Resonance (no functional imaging); intra-cranial plaque imaging  
**Nicoletta Anzalone**
- 10.30 Round Table and Discussion: intracranial wall imaging: is possible at the current level of technology?  
**David Saloner, Bruce A Wasserman, Tobias Saam, Kevin Demarco**
- 10.15 Coffe break
- 11.00 **SESSION 2 · Extra-cranial Imaging**  
**Ajay Gupta, Alessandro Carriero, Maria Cova, Paolo Siotto, Stefano Marcia**
- 11.00 Ultrasound: role and potentialities in carotid artery imaging  
**Daniel Staub**
- 11.30 Computed Tomography (with DECT and dose) and plaque imaging: limits and potentialities  
**Ajay Gupta**
- 12.00 Magnetic Reasonance (no functional imaging): how to image the targets of plaque's Vulnerability  
**Tobias Saam**
- 12.30 Nuclear Medicine and functional imaging: atherosclerosis analysis  
**Eline Kooi**
- 12.20 Discussion
- 13.00 Stop Lunch

- 14.40 **SESSION 3 · Regression and plaque variation after pharmacological therapy (atherosclerosis monitoring) with imaging**  
Nicoletta Anzalone, Cesare Colosimo, Daniel Staub, Tobias Saam
- 14.40 Monitoring with Ultrasound  
Daniel Staub
- 15.00 Monitoring with Computed Tomography  
Aad van der Lugt
- 15.20 Monitoring with Magnetic Resonance  
Allan Moody
- 16.00 **Round Table**  
Limits and potentialities in monitoring plaque regression and progression with imaging. Expert panel  
Yang Qi, Allan Moody, Kevin Demarco, Roberto Montisci
- 16.20 Coffee break
- 16.45 **SESSION 4 · Imaging and therapies: guidelines and current insights. What is the correct therapeutical approach best medical treatment, interventional radiology, carotid endarterectomy?**  
Giovanni De Fazio, Maurizio Melis, Simone Comelli, Allan Moody, Roberto Sanfilippo
- 16.40 Best Medical Treatment - current Guidelines and future options  
Anne Abbott
- 17.00 Endovascular Therapy  
Simone Comelli
- 17.20 Carotid Endarterectomy  
Giuseppe Lanzino
- 17.40 **Round Table**  
Guidelines, potentialities and information from imaging and advanced imaging. What is the right strategy ?  
Cesare Colosimo, Maurizio Melis, Giuseppe Lanzino, Stefano Profili, Giovanni Defazio, Roberto Montisci, Jonathan Gillard
- 18.00 **Main Lecture Day 1:**  
From NASCET to vulnerable plaque. The evolution of supra-aortic imaging  
Jonathan Gillard
- 18.30 Stop
- 20.00 Dinner

**OCTOBER 18TH, 2019**

## **Coronary**

- 08:30 **SESSION 5 · Coronary plaque assessment: imaging predicting histology**  
Christian Cadeddu, Riccardo Marano, Bruno Loi, Alessandro Carriero
- 09.00 Coronary Atherosclerosis pathology revisited: what's new from clinical research?  
Gavino Faa
- 09.30 Selective coronary angiography beyond vessel "luminography"  
Gavin Blake
- 10.00 CT: non-invasive evaluation of coronary atherosclerosis "in vivo"  
Christian Loewe
- 10:30 CT Perfusion and FFR: how far from effective invasive measurements?  
Gianluca Pontone
- 10:40 **Round Table**  
Bruno Loi, Gavino Casu, Giuseppe Mercurio, Marco Francone
- 11:10 Coffee break
- 11.40 **SESSION 6 · From vulnerable plaque to vulnerable patient**  
Giuseppe Mercurio, Sara Seitun, Maurizio Porcu, Carlo Catalano
- 11.40 Concept of "patient's vulnerability" in modern cardiology: what is relevant to know?  
Paolo Camici
- 12.00 Lights and shadows of CT for vulnerable plaque imaging  
Riccardo Marano
- 12.20 Imaging of acute chest pain: rationale use of non-invasive diagnostic tools  
Tim Leiner
- 12.40 From diagnosis to prognosis: which imaging biomarker?  
Antonio Esposito
- 13.00 **Round Table**  
Stenosis, lesion load, vulnerability: which impact on patient's management  
Pierpaolo Bassareo, Francesco Prati, Christian Loewe, Gavin Blake, Stefano Profili
- 13.30 Stop Lunch

- 14.40 **SESSION 7 · Imaging and therapies: guidelines and current insights.**  
Luigi Meloni, Gianluca Pontone, Gavino Casu, Roberto Montisci
- 14.40 Coronary atherosclerosis progression: what is important to know  
Pierpaolo Bassareo
- 15.00 Use of invasive imaging tools to guide therapy and monitor pharmacological response  
Francesco Prati
- 15.20 Cardiac CT to monitor coronary plaque changes before and after therapy:  
is there a rationale?  
Riccardo Marano
- 15.40 Coronary calcium score: pros and cons  
Sara Seitun
- 16.00 **Round Table**  
Is there a future for imaging-based targeted therapy?  
Alberto Boi, Marco Francone, Filippo Cademartiri, Paolo Camici
- 16.40 Best clinical poster (first, second and third) will be awarded (To be confirmed)
- 16.50 **Main Lecture Day 2**  
Imaging of Coronary arteries: current trial and future prospectives  
Rodrigo Salgado
- 17.15 Remarks – summary - final points and next meeting information (October 2021)
- 17.30 Stop



## GENERAL INFORMATIONS

Registration fee: € 150, iva inclusa  
Residents: € 40

## POSTER AND ORAL PRESENTATION SUBMISSION

Deadline July 5th  
Communication of Abstract Acceptation July 15th  
For detailed information: [www.frathero.com](http://www.frathero.com)

### Submission

Participants interested in making an poster presentation are invited to submit an abstract.

To submit your abstracts you will need to send contact a word file to the following email:  
[fratherosclerosis@gmail.com](mailto:fratherosclerosis@gmail.com)

Accepted abstracts will be invited for presentation in one of the following formats:

- as an oral presentation in a workshop session
- as a discussed poster in the poster exhibition
- as a poster presentation in the poster exhibition

All abstracts must be submitted and presented in clear English with accurate grammar and spelling of a quality suitable for publication.

### Presentation at Congress

For each abstract, an author is expected to attend the congress and make the poster or oral presentation. Presenting authors must register by the registration deadline September 1st, 2019. Instructions for preparation of oral or poster presentations will be sent together with acceptance notifications.

Abstract title – Limited to 25 words  
Abstract text – Limited to 250 words

All the accepted abstracts will be indexed by [indexreference.org](http://indexreference.org)

## Best Research Poster Presentation Awards

These awards recognize the scientific merit of poster presentations given at the conference

The top 10% of scores given by the Contributed Research Review Committee at the time of submission are considered for the award

A certificate with an inscription stating the award name, name of the presenting author, and title of the presentation shall be sent to the award recipient after the conference when the conditions of acceptance are met.

Official announcement of the recipients will occur after the conference via the website, and via email to conference attendees.

## UNDER THE AUSPICES



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