

The logo for vpm2018 features a white stylized 'C' shape on a dark blue background, with the text 'vpm2018' in white lowercase letters inside it.

vpm2018

A Cardialysis Event

A scenic landscape of Stresa, Italy, featuring a large tree in the foreground, a lake, and mountains in the background under a warm, orange sky.

**Stresa
ITALY**

24-26
June 2018

Vulnerable
Patient
Meeting

A Cardialysis Event

DAY 1

Basics

- 📄 Genomics, immunology and biomarkers
- 📄 The vulnerable blood
- 📄 Macrospasm, spontaneous dissection and Takotsubo: beyond plaque
- 📄 Risk reclassification vs. individualized risk prediction

DAY 2

Mechanisms and Imaging

- 📄 Non-invasive imaging
- 📄 Existing intravascular imaging modalities
- 📄 Multimodality co-registration software
- 📄 Advances in intravascular imaging
- 📄 Hybrid intravascular imaging catheters
- 📄 Local hemodynamic forces and coronary biology
- 📄 Early stage development in cardiovascular disease

DAY 3

Treatment

- 📄 Implications of the local hemodynamic forces in the clinical setting
- 📄 Vulnerable myocardium
- 📄 Treating the vulnerable plaque - Local plaque modification
- 📄 Treating vulnerable patients - A systemic disease requires systemic therapy / Focus on lipid lowering therapy
- 📄 Treating vulnerable patients - A systemic disease requires systemic therapy / Focus on inflammation
- 📄 Treating vulnerable patients - A systemic disease requires systemic therapy / Focus on anti-thrombotic drugs

08:00

Welcome remarks
Patrick W. Serruys

08:10

Genomics, immunology and biomarkers

Fundamental question(s):

How well can genomics predict cardiovascular risk in an otherwise normal individual?

What is the involvement of immune system in atherosclerosis and can you modify it?

Chairmen: Jan Nilsson and Dorian Haskard

08:10

An overview of Genetic risk stratification in CHD
Heribert Schunkert

08:20

B cells, antibodies and complement in atherosclerosis- Where are we now?
Dorian Haskard

n.a.

The role of non-coding RNAs in ischemic disease (see Day 2)
Stefanie Dimmeler

08:30

Soluble cell-death biomarkers and apoptosis: From plaque to patient
Jan Nilsson

08:40

Functional characterization of the GUCY1A3 coronary artery disease risk locus from mouse to human
Heribert Schunkert

08:50

An update on the role of MMPs in plaque vulnerability
Jason Johnson

09:00

The humoral immune protects from CHD and confers favorable plaque characteristics in NORDIL and IBIS-3 studies
Ramzi Khamis

09:10

Macrophage subsets in the vulnerable plaque
Jason Johnson

09:20

The relationship between the brain, the immune system and atherosclerosis
Erik Stroes

09:30

Discussion

Lipid-driven inflammation or inflammation-driven lipid accumulation?

10:10

Coffee break

DAY 1

Sunday **June 24, 2018** / 4

10:40

The vulnerable blood

Fundamental question:

What are the factors driving thrombosis in atherosclerosis?

Chairmen: Amir Lerman and Dominique de Kleijn

10:40

ABC of thrombosis in atherosclerosis

Thomas Lüscher

10:50

Proteomics plaque cells vs. circulating blood

Dominique de Kleijn

11:00

Role of endothelial progenitor cells in vascular injury and endothelial function

Amir Lerman

11:10

Transient LDL oxidation in major general surgery occurs and is regulated by homeostatic antibodies- insights from the SIMIEN study

Ramzi Khamis

11:20

The relationship between inflammatory diseases and atherosclerosis – Insights from Lupus Studies.

Jan Nilsson

11:30

Local vs systemic biomarkers

Nick West

11:40

Discussion

12:10

Lunch

13:40

Macrospasm, spontaneous dissection and

Takotsubo: beyond plaque

Fundamental question:

Causes of vulnerability other than vulnerable plaque.

What are they?

Chairmen: Thomas Luscher and Filippo Crea

13:40

An overview of microvascular physiology and vulnerability

Filippo Crea

13:50

What is the role of vasospasm in cardiovascular event?

Takashi Akasaka

14:00

The patho-physiology of Takotsubo disease

Thomas Lüscher

- 14:10 When does the event happen? The role of weather, emotional stress and circadian rhythm
James Muller
- 14:20 What is the role of micro-vascular dysfunction in predicting a future event?
Javier Escaned
- 14:30 PICSO and targeting micro-circulation
Antonio Colombo
- 14:40 Spontaneous coronary dissection
Amir Lerman
- 14:50 **Discussion**
- 15:25** **Break**
- 15:55** **Risk reclassification vs. individualized risk prediction**
Fundamental question:
How can we customize and individualize risk prediction?
Chairmen: Ewout Steyerberg and Patrick W. Serruys
- 15:55 Risk prediction models: how to develop and validate individualized scores?
Ewout Steyerberg
- 16:05 Selecting the right risk stratification tool: blood biomarkers, invasive imaging or non-invasive imaging.
Wolfgang Koenig
- 16:15 Prediction all cause mortality after revascularization
Patrick W. Serruys
- 16:25 When artificial intelligence meets the clinical laboratory: bringing new value to cardiac biomarkers
Arturo Weschler
- 16:35 **Discussion**
How can we prevent the first cardiovascular event?
- 17:00** **Adjourn**

DAY 2

Monday **June 25, 2018** / 6

08:00

Non-invasive imaging

Fundamental question:

Is non-invasive imaging ready for its broad use in the clinical setting to stratify cardiovascular risk in asymptomatic individuals and in patients with established coronary artery disease?

Chairmen: Gregg W. Stone and Patrick W. Serruys

08:00

Can MSCT predict lesions that will progress and cause events?

Daniele Andreini

08:10

Is MSCT combined with CFD analysis the ideal approach for detecting vulnerable plaques: Insights from EMERALD

Bon Kwon Koo

08:20

Deep learning in coronary imaging, from the lumen to the vessel wall and plaque

Michiel Schaap

08:30

HeartFlow progress in quantifying flow, pressure and plaque forces using CT and CFD

Charles Taylor

08:40

From Syntax III CABG Revolution to Syntax IV

Patrick W. Serruys

08:50

FFR_{CT} guidance in diagnosis and treatment of suspected CAD

Gregg W. Stone

08:55

MRI: how far are we from its use in assessing coronary artery anatomy

Rene Botnar

09:05

What is the potential value of hybrid non-invasive imaging (PET-MRI, or PETMSCT) in detecting vulnerable patients?

Marc Dweck

09:15

Update on molecular imaging of atherosclerosis

Farouc Jaffer

09:25

Population imaging: How to make predictions when no one is normal

Wiro Niessen

09:35

Discussion

10:10

Break

10:30

Existing intravascular imaging modalities

Fundamental question:

Did the existing imaging modalities really fail in detecting high-risk plaques? What have we learnt from them?

Chairmen: James Muller and Ton van der Steen

10:30

Did standalone IVUS imaging failed in detecting vulnerable plaques?

Akiko Maehara

10:40

What are the limitations of OCT in assessing plaque pathology - a critical appraisal

Guillermo Tearney

10:50

NIRS-IVUS is the ideal modality: its accuracy has hit the bar to justify its broad use for clinical risk prediction!

Sean Madden

11:00

Discussion

11:20

Multimodality co-registration software

Fundamental question:

Do they have a value in the clinical arena?

Can they really change practice?

Chairmen: Akiko Maehara and Takashi Akasaka

11:20

IVUS/OCT-X-ray imaging co-registration

Jean-Paul Aben

11:27

IFR road-map and IVUS-Xray coregistration

Nicolas Foin

Advances in intravascular imaging

Fundamental question:

Do we really need these developments? Why and how they will be used in the clinical practice?

11:34

60Mhz IVUS systems (ACIST & Terumo)

Yoshinobu Onuma

11:44

ECG-gated OCT

Jin Won Kim

11:51

Very fast OCT (Heart-beat OCT)

Ton van der Steen

DAY 2

Monday **June 25, 2018** / 8

- 11:58 Polarized OCT
Gijs van Soest
- 12:05 Micro-OCT
Guillermo Tearney
- 12:12 Liquid biopsy catheter
Nick West
- 12:19 **Discussion**
- 12:50 The role of non-coding RNAs in ischemic disease
Stefanie Dimmeler

13:00

Lunch

14:20

Hybrid intravascular imaging catheters

Fundamental question:

What are the experimental evidence? How far are we from their clinical use? Why and how they will be used in the clinical practice?

Chairmen: Chris Bourantas and Ton van der Steen

- 14:20 OCT-NIRF and NIRF-IVUS
Farouc Jaffer
- 14:27 IVUS-FLIm and OCT-FLIm
Laura Marcu
- 14:34 SpectraWave: NIRS-OCT
Gregg W. Stone
- 14:41 CONAVI: IVUS-OCT
Brian Courtney
- 14:48 TERUMO: IVUS-OCT
Yoshinobu Onuma
- 14:55 IVUS - photoacoustic imaging
Gijs van Soest
- 15:02 How well does in vivo OCT identify advanced coronary atherosclerotic plaque morphologies - comparison with coregistered histology
Ranil de Silva

15:12 Are the emerging imaging modalities able to compete with histology?

Michael Joner

15:22 **Discussion**

The ultimate vulnerable plaque study will be with invasive or noninvasive imaging?

15:50

Break

16:10

Local hemodynamic forces and coronary biology

Fundamental question:

What are the mechanisms by which local hemodynamic forces regulate plaque biology? Can we intervene in these pathways?

Chairmen: Jolanda Wentzel and Peter Stone

16:10 ABC of biomechanics and biology

Kim van der Heiden

16:20 Shear stress and Micro-RNA

Stefanie Dimmeler

16:30 Temporal and spatial changes in wall shear stress during atherosclerotic plaque progression in mice

Kim van der Heiden

16:40 Shear Stress and plaque development in porcine models and humans: do the same pathways that regulate atherosclerotic process?

Jolanda Wentzel

16:50 **Discussion**

17:10

Early stage development in cardiovascular disease

Fundamental question:

How to design a phase 2 imaging trial in cardiovascular disease to have informed decisions for phase 3?

Chairmen: Gregg W. Stone and Patrick W. Serruys

17:10 The industry perspective

Benoit Tyl

17:20 The academic perspective

Yoshinobu Onuma

17:30 **Discussion**

18:00

Adjourn

DAY 3

Tuesday **June 26, 2018** 10

08:00 Strategies in Coronary Artery Disease Management – Therapies applied too little, too late
John Ambrose

08:10 **Implications of the local hemodynamic forces in the clinical setting**

Fundamental question:

How far are we from the accurate prediction of vulnerable plaques

Chairmen: Gregg W. Stone and Peter Stone

08:10 Synergetic effect of shear stress and plaque strain in atherosclerotic disease development: insights from the VIVA and Prospect study

Martin Bennett

08:20 Local ESS and the evolution of atherosclerosis: from risk factors, to microvascular dysfunction, to epicardial plaque, to MACE

Peter Stone

08:30 Role of oscillatory shear stress on plaque progression

Jolanda Wentzel

08:40 FSI modeling: approaches to its use in large scale imaging studies

Rob Krams

08:55 IBIS-4: What have we learnt from the CFD processing of serial multimodality intravascular imaging data?

Christos Bourantas

09:05 Challenges in coronary artery modeling in stented (and native?) segments

Ryo Torii

09:15 Shear Stress analysis consensus

Frank Gijzen

09:25 **Discussion**

10:00

Break

- 10:20** **Vulnerable myocardium**
Fundamental question:
What progress have we made with protecting the vulnerable
Chairmen: Amir Lerman and Wolfgang Koenig
- 10:20 COOL-AMI: Insights from Cardiovascular MRI
Marko Noč
- 10:30 Preconditioning for STEMI – Current Status
Raj Kharbanda
- 10:40 Diffusion MRI of post MI LV remodeling
Ranil de Silva
- 10:50 **Discussion**
- 11:05** **Treating the vulnerable plaque - Local plaque modification**
Fundamental question:
Is the capping and sealing of vulnerable plaque with a coronary device clinically feasible?
Chairmen: Patrick W. Serruys and Gregg W. Stone
- 11:05 The scientific case for pre-emptive local therapy of vulnerable plaques – we know how to identify them, they are high risk and we should treat them.
James Muller
- 11:15 Update on PROSPECT II
Gregg W. Stone
- 11:25 Update on PREVENT
Akiko Maehara
- 11:35 Lessons learned from ABSORB programs
Patrick W. Serruys
- 11:45 Sneak peak of LRP study
Carlo di Mario
- 11:55 What should be the current paradigm for evaluating a new BRS device
Michael Joner
- 12:05 **Discussion**
- 12:35** **Lunch**

DAY 3

Tuesday June 26, 2018 / 12

13:50

Treating vulnerable patients - A systemic disease requires systemic therapy / Focus on lipid lowering therapy

Fundamental question:

What is the potential role of new lipid lowering therapies in treating the vulnerable plaque?

Chairmen: Ranil de Silva and Yoshinobu Onuma

- 13:50 HDL remodeling by CSL112 - Update on the AEGIS Program
Larry Deckelbaum
- 14:00 Evolocumab update and Future Clinical Trials
Periklis Giovas
- 14:10 Alirocumab in ACS patients: Insights from ODYSSEY and PACMAN AMI
Lorenz Räber
- 14:20 MARKOV trial design and its impact for future clinical trials
Patrick W. Serruys
- 14:25 Antisense oligonucleotide therapy for lipid lowering ANGPTL3, Anti-LP(a)
Erik Stroes
- 14:35 **Discussion**

14:55

Treating vulnerable patients - A systemic disease requires systemic therapy / Focus on inflammation

Fundamental question:

How do we incorporate immunology and anti-inflammatory treatment in risk stratification and treatment of vulnerable patients?

Chairmen: Thomas Lüscher and Ranil de Silva

- 14:55 What have we learned from the CANTOS trial
Wolfgang Koenig
- 15:05 COLCOT and CIRT update
Wolfgang Koenig
- 15:15 It's more than drugs - my prediction about which future nonpharmacologic and pharmacologic strategies will treat vulnerable patients
Ramzi Khamis
- 15:25 Low-grade inflammation modifies cardiovascular risk even at very low LDL cholesterol levels. Aiming for a dual target concept?
Wolfgang Koenig
- 15:35 **Discussion**

15:55

Break

16:15

Treating vulnerable patients - A systemic disease requires systemic therapy / Focus on anti-thrombotic drugs

Fundamental question:

What is the role of new anti-thrombotic agents in primary and secondary prevention?

Chairmen: Gregg W. Stone and Wolfgang Koenig

16:15

The interface between coagulation and inflammation - hitting two birds with one stone

Dorian Haskard

16:25

From cholesterol to inflammation: novel therapeutic targets in atherosclerosis

Thomas Lüscher

16:35

Global Leaders and ASET Trial - Update

Patrick W. Serruys

16:45

Discussion

17:00

Adjourn

GENERAL INFORMATION

DATES & PLACE

The Meeting will be held June 24, 25 and 26, 2018, at the Regina Palace Hotel, in Stresa Lago Maggiore, Italy.

Perhaps more than any other Lake Maggiore town, Stresa, with a ringside view of sunrise over the lake, captures the lake's prevailing air of elegance and bygone decadence. This is most evident in the string of belle époque confections along the waterfront, a legacy of the town's easy access from Milan, which has made it a favourite for artists and writers since the late 19th century. The water front promenade offers excellent views of the surrounding, the mountains, and the Borromean islands in the lake.

VENUE

REGINA PALACE, STRESA

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<http://www.reginapalace.it/en> | The Regina Palace is located in Stresa.

SCIENTIFIC PRESENTATIONS

The Meeting room will be equipped with Screen, Data Video Projector for Microsoft Power Point presentations, Note pads, pens and laser pointers. Please download your presentation at the meeting secretariat in advance (preferably the day before).

TRANSFER SERVICES FROM/ TO AIRPORT

Transfer services will be available to/from Malpensa and Linate airport according to your flight itinerary. Kindly note, that there will be a transfer service arranged for you upon your arrival and departure. Pick-up time for your departure transfer will be 3hrs prior your flight departure to Malpensa airport and 3hrs and 30mns prior your flight departure to Linate airport.

MEETING SECRETARIAT & OFFICIAL TRAVEL AGENCY

The Meeting's Secretariat will operate during meeting hours.



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SPECIAL THANKS TO



