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
Welcome remarks
Patrick W. Serruys

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
10:40 The vulnerable blood
Fundamental question: What are the factors driving thrombosis in atherosclerosis?
Chairmen: Amir Lerman and Domique 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

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
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**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tr>
<td>11:58</td>
<td>Polarized OCT</td>
<td>Gijs van Soest</td>
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<td>12:05</td>
<td>Micro-OCT</td>
<td>Guillermo Tearney</td>
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<td>12:12</td>
<td>Liquid biopsy catheter</td>
<td>Nick West</td>
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<td>12:19</td>
<td>Discussion</td>
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<td>12:50</td>
<td>The role of non-coding RNAs in ischemic disease</td>
<td>Stefanie Dimmeler</td>
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<td>13:00</td>
<td>Lunch</td>
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<td>14:20</td>
<td><strong>Hybrid intravascular imaging catheters</strong></td>
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<td>Fundamental question:</td>
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<td><em>What are the experimental evidence? How far are we from their clinical use? Why and how they will be used in the clinical practice?</em></td>
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<td>Chairmen: Chris Bourantas and Ton van der Steen</td>
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<td>14:20</td>
<td>OCT-NIRF and NIRF-IVUS</td>
<td>Farouc Jaffer</td>
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<td>14:27</td>
<td>IVUS-FLIm and OCT-FLIm</td>
<td>Laura Marcu</td>
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<td>14:34</td>
<td>SpectraWave: NIRS-OCT</td>
<td>Gregg W. Stone</td>
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<td>14:41</td>
<td>CONAVI: IVUS-OCT</td>
<td>Brian Courtney</td>
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<td>14:48</td>
<td>TERUMO: IVUS-OCT</td>
<td>Yoshinobu Onuma</td>
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<td>14:55</td>
<td>IVUS - photoacoustic imaging</td>
<td>Gijs van Soest</td>
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<td>15:02</td>
<td>How well does in vivo OCT identify advanced coronary atherosclerotic plaque morphologies - comparison with coregistered histology</td>
<td>Ranil de Silva</td>
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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
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 Gijsen

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
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

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
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 waterfront promenade offers excellent views of the surrounding, the mountains, and the Borromean islands in the lake.

VENUE
REGINA PALACE, STRESA
29, Corso Umberto I, 28838 Stresa VB, Italy
Tel: +39 0323 936936 | Fax +39.0323.936666
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 30mins prior your flight departure to Linate airport.
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