19TH ANNUAL SA HEART CONGRESS 2018
4 - 7 OCTOBER 2018
SUN CITY
NORTH WEST PROVINCE
SOUTH AFRICA

What does the future hold?

www.saheart.org/congress2018
Relations of Interest Disclosures

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Institutional Research Grants (former institution)
Abbott Vascular, Biotronik, MiCell, MicroPort, Terumo

Co-founder of Argonauts, an innovation facilitator
Scientific Advisor Rede Optimus Research
Steering Committee TARGET AC trial & Honoraria: MicroPort
The Best of the Last Year of Publishing

European Heart Journal

William Wijns
NUI Galway, Ireland
The ESC Journal Family

Impact Factor
23.425

7.341 in 2005
2018 ESC Practice Guidelines

2018 ESC/EACTS Guidelines on myocardial revascularization

2018 ESC/ESH Management of arterial hypertension

4th Universal definition of myocardial infarction

Management of cardiovascular disease during pregnancy

2018 ESC Guidelines for the diagnosis and management of syncope

ESC Guidelines always top citations and top downloads
2018 ESC / EACTS Guidelines on Myocardial Revascularisation

4 Essential Take-Home Messages for the Heart Team

Decision-making for stented PCI based on anatomy AND physiology
Extent of CAD by SYNTAX score essential for CABG/PCI choices
Presence of diabetes is an important decision modifier by itself
Prognostic importance of achieving complete revascularisation
Aspects to be considered by the Heart Team for decision-making between PCI and CABG among patients with stable multivessel and/or left main coronary artery disease (1)

<table>
<thead>
<tr>
<th>FAVOURS PCI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical characteristics</strong></td>
</tr>
<tr>
<td>Presence of severe co-morbidity (not adequately reflected by scores).</td>
</tr>
<tr>
<td>Advanced age/frailty/reduced life expectancy.</td>
</tr>
<tr>
<td>Restricted mobility and conditions that affect the rehabilitation process.</td>
</tr>
</tbody>
</table>

| **Anatomical and technical aspects** |
| MVD with SYNTAX score 0-22. |
| Anatomy likely resulting in incomplete revascularization with CABG due to poor quality or missing conduits. |
| Severe chest deformation or scoliosis. |
| Sequelae of chest radiation. |
| Porcelain aorta. |

PCI

- Right coronary artery
- Circumflex coronary artery
- Left coronary artery
- Distal right coronary artery
- Left anterior descending coronary artery
Aspects to be considered by the Heart Team for decision-making between PCI and CABG among patients with stable multivessel and/or left main coronary artery disease (2)

**CABG**
- Left internal thoracic artery to left anterior descending
- Right internal thoracic artery or radial artery
- Sequential anastomosis to obtuse marginal 1 and 3

<table>
<thead>
<tr>
<th>FAVOURS CABG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical characteristics</strong></td>
</tr>
<tr>
<td>Diabetes.</td>
</tr>
<tr>
<td>Reduced LV function (EF ≤35%).</td>
</tr>
<tr>
<td>Contraindication to DAPT.</td>
</tr>
<tr>
<td>Recurrent diffuse in-stent restenosis.</td>
</tr>
<tr>
<td><strong>Anatomical and technical aspects</strong></td>
</tr>
<tr>
<td>MVD with SYNTAX score ≥23.</td>
</tr>
<tr>
<td>Anatomy likely resulting in incomplete revascularization with PCI.</td>
</tr>
<tr>
<td>Severely calcified coronary artery lesions limiting lesion expansion.</td>
</tr>
<tr>
<td><strong>Need for concomitant interventions</strong></td>
</tr>
<tr>
<td>Ascending aortic pathology with indication for surgery.</td>
</tr>
<tr>
<td>Concomitant cardiac surgery.</td>
</tr>
</tbody>
</table>
Type of revascularization in patients with 3 VD or left main CAD

Stable three-vessel or left main coronary artery disease with suitable anatomy for PCI and CABG and clinical eligibility for either PCI or CABG

Three-vessel CAD

Syntax Score 0-22
- No Diabetes
  - PCI IA
  - CABG IA
- Diabetes
  - PCI IIb A
  - CABG IA

SYNTAX Score > 22
- PCI IIIA
  - CABG IA

Left main CAD

SYNTAX Score 0-22
- PCI IA
  - CABG IA

SYNTAX Score 23-32
- PCI IIa A
  - CABG IA

SYNTAX Score >32
- PCI IIIB
  - CABG IA
2018 ESC HotLine and Late Breaking Trials

Saturday 25 August

Reduction in Radiation Exposure in Cardiovascular CT Imaging Results from the Prospective Multicenter Registry on RadiaTion Dose Estimates of Cardiac CT AngioGraphy IN Daily Practice in 2017 (PROTECTION VI)

Sunday 26 August

Relationships of Interleukin-6 Reduction to Atherosclerotic Events and All-cause Mortality: Analyses from the Canakinumab Anti-Inflammatory Thrombosis Outcomes Study (CANTOS)

In-hospital mortality of patients with atrial arrhythmias Insights from the German-wide Helios hospital network of 161,502 patients?and 34,025 arrhythmia-related procedures

Monday 27 August

Real-world clinical utility and impact on clinical decision making of FFRCT- Lessons from the ADVANCE Registry

Systemic Microvascular Dysfunction in Microvascular and Vasospastic Angina

Prevalence and Correlates of Coronary Microvascular Dysfunction in Heart Failure with Preserved Ejection Fraction: PROMIS–HFpEF

Tuesday 28 August

Associations Between Very Low Concentrations of LDL-Cholesterol, hs-CRP and Health Outcomes in the Reasons for Geographical and Racial Differences in Stroke (REGARDS) Study

Association between Phenotypic Familial Hypercholesterolemia and Telomere Length in US Adults: Results from a Multi-Ethnic Survey

Potential impact of the 2017 ACC/AHA guideline on high blood pressure in normotensive patients with stable coronary artery disease: insights from the CLARIFY registry
Prevalence and correlates of coronary microvascular dysfunction in heart failure with preserved ejection fraction: PROMIS-HFpEF

Reduction in radiation exposure in cardiovascular computed tomography imaging: results from the Prospective Multicenter Registry on RadiaTion Dose Estimates of Cardiac CT AngIOgraphy IN Daily Practice in 2017 PROTECTION VI
Real-world clinical utility and impact on clinical decision-making of coronary computed tomography angiography-derived fractional flow reserve: lessons from the ADVANCE Registry.

Re-classification rate of 66.9%
Prediction of obstructive CAD and prognosis in patients with suspected stable angina

Reeh et al. Eur Heart J 2018; in press
Prediction of obstructive CAD and prognosis in patients with suspected stable angina

Reeh et al. Eur Heart J 2018; in press
The performance of non-invasive tests to rule-in and rule-out significant coronary artery stenosis in patients with stable angina: A meta-analysis focused on post-test disease likelihood

Diagnostic performance of angiography-derived FFR (Q-FR)
A systematic review and Bayesian meta-analysis

14 studies, 1,843 vessel comparisons, 3 different methods (8 + 2 + 4)

Sensitivity 89 %  Positive LR  9.09
Specificity 90 %  Negative LR  0.12
BP is an Important CV Risk Factor

European Heart Journal (2018) 0, 1–8

Blood pressure and outcomes: are we getting the right figures? Deepak L. Bhatia, et al.

Received 13 September 2017; revised 8 November 2017; accepted 12 November 2017

Multivariable models adjusted for age, sex, race, heart failure, hypertension, dyslipidaemia, prior MI, current smoker, duration of diabetes, HbA1C, eGFR (continuous), treatment arm, NT-proBNP (continuous), and hsTnT (continuous), and stratified by established CV disease vs. multiple risk factors alone.
BP Variability is an Important Risk Factor

Blood pressure variability is associated with cardiovascular events and mortality in patients with hypertension and different cardio metabolic risk profile.

Maria H. Mehlum1,2, Knut Liestøl3, Sverre E. Omland3, Tsushung A. Hua4, Peter M. Rothwell5, Giuseppe Ambrosioni6, Michael A. Weber7, and Eivind Berge8.

1Department of Geriatric Medicine, Oslo University Hospital, Oslo, Norway; 2Institute of Clinical Medicine, University of Oslo, Oslo, Norway; 3Department of Cardiology, Oslo University Hospital, Oslo, Norway; 4Unit of Biostatistics and Pharmacometrics, Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA; 5Department of Clinical Neuroscience, John Radcliffe Hospital, University of Oxford, Oxford, UK; 6Department of Cardiovascular, Neural and Metabolic Sciences, S. Luca Hospital, IRCCS, Institute of Hematology, University of Milano-Bicocca, Milan, Italy; and 7Department of Cardiovascular Medicine, St. George’s University of London, London, UK.

Received 22 March 2017; revised 19 July 2017; editorial decision 27 October 2017; accepted 17 November 2017.

European Heart Journal (2018) 00, 1–9
doi:10.1093/eurheartj/ehx760
Renal denervation: will the Phoenix rise from the ashes?

Franz H. Messerli

1Department of Cardiology and CVD Research Center, Columbia University Medical Center, New York, NY, USA

Online publish-ahead-of-print 29 August 2017
Effect of renal denervation on blood pressure in the presence of arterial renaland rand

David E. Karp
Dimitrios T
HTN-ON W

<table>
<thead>
<tr>
<th>Baseline BP (mmHg)</th>
<th>151.9</th>
<th>151.1</th>
<th>96.9</th>
<th>97.6</th>
<th>164.6</th>
<th>163.1</th>
<th>99.6</th>
<th>102.3</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Change in BP from baseline to 6 months (mmHg)</th>
<th>Renal denervation</th>
<th>Sham control</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-hour SBP</td>
<td>n=36</td>
<td>n=36</td>
</tr>
<tr>
<td>-9.0 (-12.7, -5.3)</td>
<td>p&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>24-hour DBP</td>
<td>n=36</td>
<td>n=36</td>
</tr>
<tr>
<td>-1.9 (-4.7, 0.9)</td>
<td>p=0.172</td>
<td></td>
</tr>
<tr>
<td>Office SBP</td>
<td>n=38</td>
<td>n=38</td>
</tr>
<tr>
<td>-6.8 (-12.5, -1.1)</td>
<td>p=0.0205</td>
<td></td>
</tr>
<tr>
<td>Office DBP</td>
<td>n=38</td>
<td>n=38</td>
</tr>
<tr>
<td>-3.5 (-7.0, -0.0)</td>
<td>p=0.0478</td>
<td></td>
</tr>
</tbody>
</table>

CrossMark
Predicting the development of in-hospital cardiogenic shock in patients with ST-segment elevation myocardial infarction treated by primary percutaneous coronary intervention: the ORBI risk score

Vincent Auffret, Yves Cottin, Guillaume Leurent, Martine Gilard, Jean-Claude Beer, Amer Zabalawi, Frédéric Chagué, Emanuelle Filippi, Damien Brunet, Jean-Philippe Hacot, Philippe Brunet, Mourad Mejri, Luc Lorgis, Gilles Rouault, Philippes Druelles, Jean-Christophe Cornily, Romain Didier, Emilie Bot, Bertrand Boulanger, Isabelle Coudert, Aurélie Loirat, Marc Bedossa, Dominique Boulmier, Maud Maza, Marielle Le Guellec, Rishi Puri, Marianne Zeller, and Hervé Le Breton; On behalf of the ORBI and RICO Working Groups

6838 patients without CS on admission and treated by primary percutaneous coronary intervention, included in the Observatoire Regional Breton sur l’Infarctus (ORBI)
Patients with acute myocardial infarction and non-obstructive coronary arteries: safety and prognostic relevance of invasive coronary provocative tests

Rocco A. Montone, Giampaolo Niccoli*, Francesco Fracassi, Michele Russo, Filippo Gurgoglione, Giulia Cammà, Gaetano A. Lanza, and Filippo Crea

In patients presenting with MINOCA and suspected coronary vasomotor abnormalities, a positive provocative test for spasm is safe and identifies a high-risk subset.
Age and outcomes following guided de-escalation of antiplatelet treatment in acute coronary syndrome patients undergoing PCI: results from the randomized TROPICAL-ACS trial


N=1186
≤ 57 years

N=1424
> 57 years
EuroCTO Trial
A randomized multicentre trial to compare revascularization with optimal medical therapy for the treatment of chronic total coronary occlusions

Clinical use of intracoronary imaging

Räber et al. EuroIntervention 2018;14-online publish-ahead-of-print June 2018
Spontaneous Coronary Artery Dissection

European Society of Cardiology, acute cardiovascular care association, SCAD study group: a position paper on spontaneous coronary artery dissection

ESC-ACCA Position Paper on spontaneous coronary artery dissection

David Adlam (Chairperson UK)¹*, Fernando Alfonso (Section Editor Spain)², Angela Maas (Section Editor Netherlands)³, and Christiaan Vrints (Co-Chairperson; Section Editor Belgium)⁴

Writing Committee: Abtehale al-Hussaini (UK)¹, Hector Bueno (Spain)⁵,⁶, Piera Capranzano (EAPCI Women, Italy)⁷, Sofie Gevaert (Belgium)⁸, Stephen P. Hoole (UK)⁹, Tom Johnson (UK)¹⁰, Corrado Lettieri (Italy)¹¹, Micha T. Maeder (Switzerland)¹², Pascal Motreff (France)¹³, Peter Ong (Germany)¹⁴, Alexandre Persu (European FMD initiative, Belgium)¹⁵,¹⁶, Hans Rickli (Switzerland)¹², Francois Schiele (France)¹⁷, Mary N. Sheppard (UK)¹⁸,¹⁹, and Eva Swahn (Sweden)²⁰
European Heart Journal Submissions

Submissions

Extrapolation

10 per day
Submissions per country
Myocardial extracellular volume fraction quantified by magnetic resonance imaging is increased in diabetes and associated with incipient heart failure and mortality.

Highly cited articles with corresponding authors based in US

64 cites

90 cites

133 cites

85 cite
Cardiovascular disease in Europe
Epidemiological update 2016

✓ More than 550 press stories in one week
✓ Alt-Metric Score of 1,265
✓ Over 9,634 full text downloads – more than double the number of downloads in the first 6 months than the 2015 update
European Heart Journal in the News

Articles published in EHJ were accompanied by a press release in order to widen the reach of the research and raise the profile of the journal. Articles with press releases also receive bespoke marketing, feature as part of a continually promoted Virtual Issue, and are collated into an annual round-up campaign: **EHJ in the News**

A particular highlight was the **Happy Heart Syndrome** article which made it into **Altmetric’s top 100 highest scoring articles of 2016**

The Altmetric score of this article continues to grow.
Podcast and Issue @ a Glance

Issue @ a Glance provides a short summary of the entire issue and puts it in perspective. It is published in the journal and as a podcast. academic.oup.com/eurheartj/pages/Podcasts

Heart failure: focus on co-morbidities, inflammation, and heart rate

Thomas F. Lüscher
Editor in-Chief, Zurich Heart House Cardio Campus, Hausenstrasse 4, 8091, Zurich, Switzerland

In spite of recent progress made in the management of heart failure as outlined in current guidelines, patients often remain symptomatic, and the event rate, even on optimal therapy and with devices, is still high.

Besides pump failure itself, co-morbidities contribute importantly to the disease burden in heart failure patients. Besides renal failure and diabetes, many patients with heart failure have an iron deficiency, probably due to chronic inflammation associated with the disease process. According to the first manuscript, by Piotr Pankowski from the Clinical Military Hospital in Wroclaw, Poland, an ESC FAST TRACK manuscript entitled “Beneficial effects of long-term intravenous iron therapy with ferric carboxymaltose in patients with symptomatic heart failure and iron deficiency” is accompanied by a critical Editorial by Harry Crijns from the University Hospital Maastricht in the Netherlands. The aim of this study was to evaluate the benefits and safety of long-term intravenous iron therapy with ferric carboxymaltose in 304 iron-deficient patients with heart failure and a reduced left ventricular ejection fraction and elevated natriuretic peptides enrolled in CONTINUOUS-HF and randomized to intravenous ferric carboxymaltose or placebo. The primary end point was the change in 6-min walk test distance from baseline to 24 months. Secondary end points included symptomatic heart failure and mortality.