

Congress News

ESC Congress Paris 2019

Together with World Congress of Cardiology

Day 1

Saturday 31 August

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What's new in 2019?

Going global: Welcome to ESC Congress 2019 and the World Congress of Cardiology



Prof. Silvia Priori (ESC)



Prof. Marco Roffi (ESC)



Prof. Karen Sliwa (WHF)

Bienvenue à Paris! ESC Congress Programme Committee Chairs, Professor Silvia Priori (University of Pavia, Pavia, Italy) and Professor Marco Roffi (Geneva University Hospital, Geneva, Switzerland) are keen to get the congress underway to showcase the wide-ranging and stimulating programme of scientific sessions and professional development activities.

Prof. Priori explains, "This year's congress is even more special as it will be held together with the World Congress of Cardiology. The theme of 'global cardiovascular health' is highly relevant for the mission of both our organisations and, with this partnership, we are confident that we will achieve a result that is greater than the sum of our two efforts. Not only will we get a perspective on issues relating to cardiovascular diseases in ESC member states and affiliated countries, but we will get a truly global view of the challenges for healthcare affecting the entire world."

Professor Karen Sliwa (University of Cape Town, Cape Town, South Africa), President of the World Heart Federation (WHF) explains, "This will be the first World Congress of Cardiology under a new model, which will see the congress taking place every year, rather than every two years, and in collaboration with another cardiology meeting. But ESC Congress 2019 is not just 'another cardiology meeting'—it is the largest summit in cardiovascular medicine in the world. Holding our annual congresses together is a



measure of our joint commitment to advocate for cardiovascular disease as a global health priority. ESC members can find out more about the work of the WHF during the Inaugural Ceremony, at the new Global Exchange area, the NCD Café, through scientific sessions and here in the *Congress News*."

"When designing the ESC Congress programme," explains Prof. Roffi, "we aimed to promote excellence and engagement. Excellence through game-changing late-breaking clinical trials, the best basic and clinical science, as well as the most evidence-based practice delivered by key opinion leaders. Engagement through tailoring the learning environment to the topic and audience, providing education in a dynamic and engaging format, and fostering interaction between attendees, faculty and partners. Nobody is left behind: the basic/translational science programme has been extended and, at the same time, clinical case sessions have been expanded to give the opportunity for clinicians from around the world to present their most educational cases."

Prof. Priori also states, "We want the congress to serve as a forum to stimulate even more discussions among clinicians and scientists—we want to encourage young physicians to use basic science to drive advances in patient care."

Prof. Priori and Prof. Roffi have listened to the feedback on what members' value. "It's become clear that on one side, delegates

want practical guidance on how to perform procedures and deliver high quality clinical medicine, and on the other side, they want to be exposed to cutting-edge scientific advances. We want attendees to leave knowing how cardiovascular diseases should be managed with the relevant guideline recommendations, but also to be aware of new advances and have a glimpse of what developments are around the corner."

And the final thought from our hosts: "Above all, we should not miss the fantastic opportunity this meeting gives us to build bridges in a world that seems to be more and more divided. We are all here in Paris because we are passionate about cardiovascular medicine, science and patient care. What a strong bond!"

Don't miss!

Inaugural Session

Today, 17:00 - 18:00; Paris - Main Auditorium

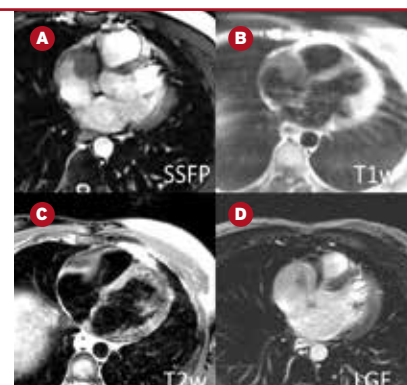
What's Your Diagnosis?

BROUGHT TO YOU BY THE EUROPEAN ASSOCIATION OF CARDIOVASCULAR IMAGING (EACVI)

Cardiac MRI in a 43-year-old male with retroperitoneal fibrosis demonstrating histiocytosis infiltration. a) SSFP b) T1 weighted c) T2 weighted d) late gadolinium enhanced images.

Bernhard Gerber, Cliniques St. Luc, UCLouvain, Brussels, Belgium

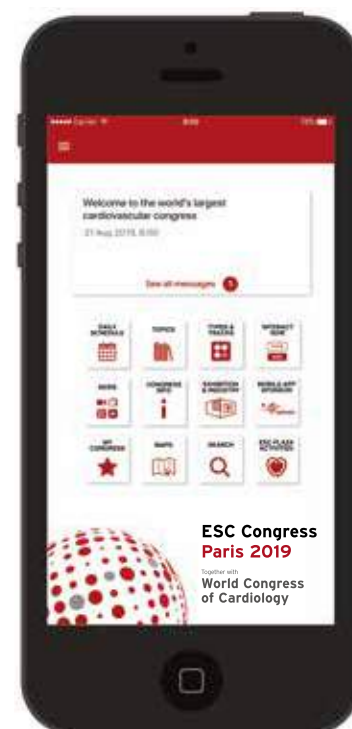
EACVI
European Association of
Cardiovascular Imaging



Answer on page 5.



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Global cardiovascular health – why we need to do more



Prof. Barbara Casadei (ESC)



Prof. Karen Sliwa (WHF)

It is a sad fact that cardiovascular disease (CVD) is the leading cause of death and disability in the world, killing millions of people annually, but why is global cardiovascular (CV) health specifically under the spotlight at ESC Congress this year?

“We haven’t conquered CVD,” explains President of the ESC, Professor Barbara Casadei (University of Oxford, Oxford, UK). “Results from the ESC Atlas of Cardiology tell us that there are ~11 million new cases of CVD per year in ESC member countries.¹ After years of precipitous reductions in premature CV deaths, we began to see a plateau in CV mortality rates. And now, for the first time, we are seeing a worrying rise in CV mortality, particularly in the West. In addition, CVD is increasingly becoming a problem in developing countries where the main causes of premature death have shifted from infectious diseases to non-communicable diseases, such as CVD.”

“Probably because we have made so many advances over the last few decades leading to better prevention and management of acute and chronic CV conditions, we (clinicians, policy makers, politicians and industry) have lowered the guard and become somewhat complacent,” says Prof. Casadei. “We also risk becoming too introspective, concentrating on incremental benefits for small groups of people, when we need to focus on the bigger picture and provide maximum impact for as many people as possible.”

“Joining forces with the World Heart Federation (WHF) and holding the ESC Congress with the World Congress of Cardiology is part of a range of activities designed to help re-energise our efforts to fight CVD worldwide.”

“The ESC will do all it can to support its cardiologists and scientists in developing pragmatic solutions to foster progress and reduce the burden of CVD. We are also collaborating with other professional societies, governments and industry to advocate for greater research funding and renewed interest in CV drug development, innovation and implementation, details of which will be featured in sessions throughout ESC Congress 2019.”

President of the WHF, Professor Karen Sliwa (University of Cape Town, Cape Town, South Africa) explains what global health means to her: “Global health is the understanding of disease prevention, management and control in an international, interdisciplinary context based on the priority of improving health equitably to all people worldwide.” And she describes the part that WHF is playing. “Together with our 200 plus members, including the ESC, the special role of WHF is to lead the advocacy effort for action to improve global health by reducing the burden of CVD.”

Working closely with the World Health Organization (WHO) executive board and the World Health Assembly, WHF represents the cardiovascular community in all WHO activities, such as drawing up policy statements, guidelines and technical documents. The Federation also works alongside the United Nations (UN) and other international bodies to influence global policies, development strategies and funding allocations. In fact, WHF adopted the UN resolution to reduce premature mortality from CVD by 25% by 2025 in its mission, which we are now using as a stepping stone to reaching the Sustainable Development Goals target of reducing premature mortality from non-communicable diseases by one third by 2030. What this means is that at all levels—community, national, regional and global—WHF and its members are working to reduce mortality related to a whole range of issues, including exposure to tobacco

and lack of access to treatment, along with neglected conditions like rheumatic heart disease and Chagas disease that kill hundreds of thousands of people each year.

Prof. Sliwa also highlights another of WHF’s most urgent priorities, air pollution, which disproportionately affects those living in low-resource settings. “According to WHO, nine out of ten people worldwide breathe polluted air, which contributes to more than 20% of all CVD deaths—that’s more than three million deaths every year. WHF is committed to taking action on this important global issue and calling for more research on the link between air pollution and CVD.”

In order to give maximum exposure to the global CVD crisis, this year’s Spotlight Track, led by a faculty of international experts, will highlight disparities in prevalence, clinical manifestations, prevention strategies, diagnostic modalities and management of CVD and focus on the lessons that can be learnt from the ingenuity and commitment of institutions and colleagues worldwide.

Prof. Casadei and Prof. Sliwa both agree that heart health is a fundamental human right for everyone. “Global cardiovascular health is such a pressing concern that we must co-ordinate our efforts for change—the ESC Congress and World Congress of Cardiology provide a perfect platform for these collaborations. We encourage everyone to join our mission and to participate in the spotlight-related activities here in Paris.”

1. Timmis A, et al. Eur Heart J 2018;39:508-579.

Bringing a unique global perspective



From 1950 to today, the World Congress of Cardiology has offered a truly global perspective on cardiovascular health. Beyond the scientific sessions, here are some of the activities taking place over the next 5 days that showcase the inspiring work and ambitions of the World Heart Federation (WHF):

NCD Café

The NCD Café is a joint initiative of the NCD Alliance and WHF as part of their mission to reduce non-communicable diseases (NCDs), including cardiovascular diseases (CVDs). Located in the buzzing ESC Plaza, the NCD Café provides an interactive platform for open discussion as well as a space for networking with prominent experts and thought leaders, with an emphasis on partnership and collaboration. Lunchtime sessions will focus on a range of stimulating topics, including air pollution, rheumatic heart disease, universal health coverage, and the role of healthcare professionals and patients in combatting NCDs.

At the NCD Café, ESC Plaza:

- **Putting people living with NCDs at the centre of universal health coverage**
Today, 12:30 – 13:30
- **The role of healthcare professional in strengthening health systems and combating NCDs**
Sunday, 12:30 – 13:30

- **CVD and obesity: Changing attitudes among healthcare professionals**
Monday, 10:00 – 11:00
- **What’s next for rheumatic heart disease?**
Monday, 12:30 – 13:30
- **Air pollution and CVD: A window of opportunity**
Tuesday, 12:30 – 13:30

WHF Meet & Share Forum

Taking place at the ESC Plaza’s Global Exchange today and Sunday, the WHF Meet & Share Forum is a unique opportunity for those working in the field of cardiovascular health across all continents to come together and share experiences, showcase successes and discuss challenges in combatting CVD at the national, regional and global level. The Forum was designed in collaboration with foundations, societies and associations who will play a dynamic role in leading four interactive and stimulating sessions.

Meet & Share Forum, Global Exchange 2, ESC Plaza:

- **Leveraging social media**
Today, 09:00 – 12:00
- **Fundraising**
Today, 14:00 – 17:00
- **Campaigns**
Sunday, 09:00 – 12:00
- **Advocacy**
Sunday, 14:00 – 17:00



Launching two new WHF Global Roadmaps

CVD and related conditions can be detected early and treated cost effectively, preventing expensive hospitalisations and untimely death, but this requires coordinated national policy and health systems’ responses built around evidence-based strategies.

Developed by experts from all over the world, WHF Global Roadmaps are designed to offer guidance for policymakers, healthcare professionals, patients, the private sector and the public on key topics relevant to reducing premature mortality from CVD. WHF Global Roadmaps summarise current recommendations that are proven, practical and cost effective, highlight obstacles to implementing recommendations, propose potential solutions for overcoming obstacles and provide tools and strategies to adapt solutions to local needs.

Adding to existing Roadmaps on secondary prevention, raised blood pressure, tobacco control, cholesterol, rheumatic heart disease and atrial fibrillation, the WHF will launch two new Global Roadmaps on Monday, one on heart failure, and one on CVD prevention in people living with diabetes, in collaboration with the International Diabetes Federation.

Don’t miss!

- **Heart failure and diabetes: what is on the horizon**
Monday, 11:00 – 12:30; Sarajevo – Village 5
- **Expert Advice – Optimising the organisation of heart failure care**
Monday, 16:40 – 17:50; Budapest – Village 5

Visit the WHF Stand in the ESC Plaza to learn more about our programmes and events, and to take a picture in the World Heart Day photobooth!

The Global Exchange: A dynamic new dimension for delegates

You came to ESC Congress for great science and global networking. But did you know that you can also learn skills that support your professional development beyond science? An exciting new range of sessions and activities are being offered in the Global Exchange Area, next to the Main Auditorium and the Professional Members' Lounge, situated in the ESC Plaza.

Across 26 sessions in two lecture rooms, choose topics that will complement your clinical competences and equip you for the future. From research integrity and funding, to patient involvement and device regulations, the Global Exchange adds a stimulating new component to the congress.

ESC President, Professor Barbara Casadei (University of Oxford, Oxford, UK) says these sessions are an invaluable way to ensure that members, and the ESC as a whole, are 'fit for the future' and ready to embrace and conquer new challenges.

"To be well equipped," she says, "it is not sufficient to simply train our members in how things have always been done. We need to provide them with tools that allow them to devise new and imaginative ways to deliver the best care possible, locally and globally, in intelligent and affordable ways. To take our profession to the forefront, to

regain influence, we need to encourage our members to start thinking differently and imaginatively about how we practise cardiology, conduct research, and work with our patients, politicians, health economists and industrial partners. The best solution for physician burnout is to regain control of our profession and the way we practise it by providing innovative solutions, setting clear expectations, and being ready to stand our ground."

The Global Exchange gives you that added extra!

Global Exchange 1

Today

- Get engaged with the ESC: 11:30 - 12:30
- The future of precision medicine: the case of cardiology: 12:45 - 13:30
- European cardiovascular research funding: lagging behind the needs and expectations: 13:45 - 14:45

Sunday

- Investor session: 10:00 - 11:00
- Part I: Towards Integrity in Research. A continuing challenge: 11:15 - 12:15
- Patient involvement: unleashing the potential for true excellence in cardiovascular care: 13:00 - 14:00

- Female patients and female physicians. Does it make any difference? 14:15 - 15:15
- Discussions with the Investors: 15:30 - 16:30
- Cardiovascular disease and women: global threat or macro-opportunity: 16:40 - 17:40

Monday

- Medical devices in the global era: balancing access, safety and innovation: 09:00 - 09:45
- Research funding 360: supporting research and researchers in Europe and worldwide: 10:05 - 11:00
- Part II: Towards Integrity in Research. Interactive case presentations and discussions: 11:15 - 12:15
- Challenges and opportunities for Cardiovascular Disease Research: The Strategic Research Agenda of ERA-CVD: 12:30 - 13:30
- Pursuing Health Equity: how to close the gaps in health care disparities: 15:45 - 16:45

Tuesday

- Launch of new Oxford Masters in Clinical Trials: 10:05 - 10:50
- New EU Regulations for medical devices: impacting all clinical practice from May 2020: 11:00 - 12:00
- Health economics in the era of the increased health care demands: 14:15 - 15:15

- ESC and UEMS cardiac session - Quality and standards in cardiology: 15:50 - 16:50

Global Exchange 2

In Global Exchange Room 2, the WHF will also hold their Meet & Share Forum to impart more international insights, experiences and strategies.

Today

- Meet & Share Forum - Leveraging social media: 09:00 - 12:00
- Meet & Share Forum - Fundraising: 14:00 - 17:00

Sunday

- Meet & Share Forum - Campaigns: 09:00 - 12:00
- Meet & Share Forum - Advocacy: 14:00 - 17:00

Monday

- Reducing the burden of cardiovascular disease in the Americas: 09:00 - 10:30
- Reducing the burden of cardiovascular disease in Asia Pacific: 11:00 - 12:30
- Reducing the burden of cardiovascular disease in Africa: 14:00 - 15:30
- 2019 New WHO cardiovascular risk charts: 15:30 - 16:15

Tuesday

- Be scientific and unique on Twitter: 13:00 - 14:00



UNIVERSITY OF GOTHENBURG

This program is accredited by the European Board for Accreditation in Cardiology (EBAC) for 1 hour of external CME credit. Each participant should claim only those hours of credit that have been spent in the educational activity.
Organized by: the Sahlgrenska Academy, University of Gothenburg, Sweden
Course Director: Professor Karl Swedberg



EBAC ACCREDITED SATELLITE SYMPOSIUM HELD DURING ESC CONGRESS 2019

TOWARDS THE STATE-OF-THE-ART K⁺ CONTROL IN PATIENTS WITH HEART FAILURE: ARE WE THERE YET?

Saturday, 31st August 2019, 15:30 - 16:30, Centre Stage

Agenda

Time	Session
15:30-15:35	Chair's introduction Stefan Anker - Chair (Germany)
15:35-15:45	Chronicity and burden of hyperkalaemia in heart failure: An update Javed Butler (USA)
15:45-15:55	Hyperkalaemia: A barrier to guideline-recommended RAASi therapy? Stefan Anker (Germany)
15:55-16:20	The management of hyperkalaemia in heart failure: Is there room for improvement? Mikhail Kosiborod (USA)
16:20-16:30	Towards the state-of-the-art potassium management in heart failure: Opportunities and challenges All faculty



Supported by an unrestricted educational grant from AstraZeneca

In compliance with EBAC guidelines, all speakers/chairpersons participating in this program have disclosed or indicated potential conflicts of interest which might cause a bias in the presentations. The Organizing Committee/Course Director is responsible for ensuring that all potential conflicts of interest relevant to the event are declared to the audience prior to the CME activities.



From cell to patient – translating basic science to clinical medicine



**Prof.
Silvia Priori**

“The basic science track at ESC Congress is growing every year and becoming even more focussed on the ESC’s ideology of directing research to where it can most improve patients’ lives,” says Professor Silvia Priori (University of Pavia, Pavia, Italy), an ESC Congress Programme Committee Chair, as she highlights some of the not-to-be-missed sessions being held over the next 5 days.

A symposium today will help to showcase recent advances and demonstrate that, in some difficult-to-treat conditions, promising innovations are heading progressively closer to the clinic (Translating new pharmacology science into clinical practice; Saturday, 11:00 – 12:30; Pristina – Village 3). Prof. Priori explains, “Optogenetics is a prime example of how basic scientists are using novel approaches to address unmet clinical needs. For instance, in the future, light activation may be able to turn implanted cardiac cells

into pacemakers in an approach that is more physiological than using modern devices. Although this research is still currently in the realm of basic science, it goes well beyond the interest of scientists alone and is clearly relevant for clinicians, highlighting how diseases may be managed in years to come.”

A symposium tomorrow will explore other exciting new therapeutic concepts to correct abnormal heart rhythms (Emerging arrhythmia therapies; Sunday, 08:30 – 10:00; Athens – Village 3). “Research is ongoing to investigate if delivery of DNA or RNA can modify cardiac channels and cure inherited arrhythmogenic diseases, or in the future, treat acquired conditions. Another angle involves targeting fibrosis that develops, for example, in heart failure, which is often the substrate for arrhythmia development,” says Prof. Priori.

An advance that may be particularly beneficial in arrhythmia research is the ability to combine induced pluripotent stem cells with tissue engineering techniques to create 3-D human cardiac organoid models. The organoid platform may serve as a new tool to model complex re-entrant arrhythmias and, as will be discussed this afternoon, may also be used for drug screening to identify new candidate compounds (Cardiac tissue

engineering; disease modelling and novel therapeutics; Saturday, 13:45 – 15:00; Athens – Village 3).

Prof. Priori says, “Translational medicine is also playing a key role in the improved treatment of cardiomyopathies. Historically, different cardiomyopathies were treated in the same way, but it is now known that they differ in their pathophysiology.”

“In the era of precision medicine, it is increasingly understood that it is the molecular and proteomic background of the condition that often determines patient response to therapy.”

Due to greater mechanistic insight, prolactin for peripartum cardiomyopathy and tafamidis for cardiac amyloidosis are two translational medicine success stories. A few years ago, they would have been described as ‘emerging therapies’, but tomorrow, they will be discussed as approved treatments backed by robust clinical trial data (Success stories in translation from bench to bedside; Sunday, 16:40 – 17:50; Athens – Village 3).

Prof. Priori is keen to describe an additional new element that needs to be considered in cardiovascular research and another concept

that exemplifies the value of translational research—the microbiome. It is becoming increasingly apparent that the microorganisms that coexist within the body can directly influence pathogenetic disease processes. How the microbiome relates to cardiovascular diseases will be discussed in the abstract-based programme and at the joint Basic CardioVascular Science (BCVS)-ESC symposium (Bench to bedside: Therapeutic perspectives; Tuesday, 14:30 – 15:40; Balzac – The Hub).

Prof. Priori concludes, “ESC Congress 2019 is about new developments, and it is also about our new scientists—we want them to become protagonists and to push back the frontiers with their own research. For this purpose, we have new abstract-based sessions, such as ‘Advances in Science’ and the ‘Blockbusters from the Young’ and entire sessions designed by the young community around their topics of interest. To further support our Scientists of Tomorrow, we have a dedicated symposium so they can better understand their very valuable role in the scientific community (‘Tomorrow never dies’ – Your role in basic science communities! Monday, 08:30 – 10:00; Pristina – Village 3).”

Replay the video and slides on ESC 365: www.escardio.org/365

Digital health – are we ready?



**Prof.
Martin Cowie**

“Digital health is all around us,” says Chair of ESC’s Digital Health Committee, Professor Martin Cowie (Imperial College London, London, UK), “And it is very important that we, as the ESC and as healthcare professionals, are part of the discussions and the advances.”

“One of the ESC’s roles is to educate members about the latest developments and likely future directions. The ESC also wants to provide a forum to demonstrate some of the new technologies that are being designed. Healthcare professionals, who are uniquely aware both of the issues facing patients living with different cardiovascular conditions and of the management goals, have a crucial part to play as co-designers.”

The ESC is currently active in key topics relating to digital health in cardiovascular health and care: from electronic medical records to clinical decision support using artificial intelligence, from e-prescribing to mobile health, and from cybersecurity to data protection. Prof. Cowie explains, “Digital Health has a much greater presence at ESC Congress 2019 than in previous

years, with a larger Digital Health Area and a fuller scientific programme to reflect the growing role of new technologies and the ESC’s increasing involvement in the key topics.”

The digital transformation discussions begin today with a symposium in collaboration with Healthcare Information and Management Systems Society (HIMSS). Doctor Charles Alessi, HIMSS’ Chief Clinical Officer, will talk about digital health solutions in clinical practice (Digital cardiovascular health revolution – Are you ready? 11:00 – 12:30; Digital Health Stage 1). Prof. Cowie says, “Electronic medical records are often perceived as user-unfriendly and detrimental to the patient-healthcare professional relationship if numerous boxes need to be completed on screen during a consultation, taking the focus away from the patient. Yet, the development of less unwieldy digital health ‘solutions’ could improve data flow between sectors and even between countries, with greater standardisation, and this could truly support clinical care.”

Relating to personal digital health, the latest on wearables, smart textiles and apps will be covered in the session and at others. This afternoon, a symposium will discuss apps developed as part of the Horizon 2020-funded consortium, CATCH ME (Characterising Afib by Translating its Causes into Health Modifiers in the Elderly):

the ‘AF Manager’ app is designed to be used by healthcare professionals and ‘My AF’ by patients (CATCH ME – App-assisted management of patients with atrial fibrillation, 13:45 – 15:00; Rome – Village 4).

Prof. Cowie continues, “Rarely used even just a few years ago, ‘artificial intelligence’, ‘big data’ and ‘machine learning’ are terms that are increasingly finding their way into the cardiologist’s vocabulary. However, many are unclear on their place now and in the future. We have various symposia, poster sessions and interactive activities over the course of ESC Congress 2019 to educate, demonstrate and stimulate.”

“The ESC wants to do more than just react to new technologies; it wants to be a part of the digital health transformation as it’s happening.”

“Whatever the level of interest and expertise, we hope delegates will find what they need to know about digital health developments here at ESC Congress 2019. And for those wanting more, the first ESC Digital Health Summit will take place in Tallinn, Estonia in October 2019.”

Further information can be found at the Digital Health Area and in *Congress News*.

And don’t miss tomorrow’s sessions at the Digital Health Stage 1:

- **Digital cardiovascular health solutions**
08:30 – 10:00
- **How big data will impact cardiology: a physician’s guide**
11:00 – 12:30
- **Telemedicine in heart failure management – The minimum, the optimum, and the unnecessary**
16:40 – 17:50

Our Diversity is our Strength

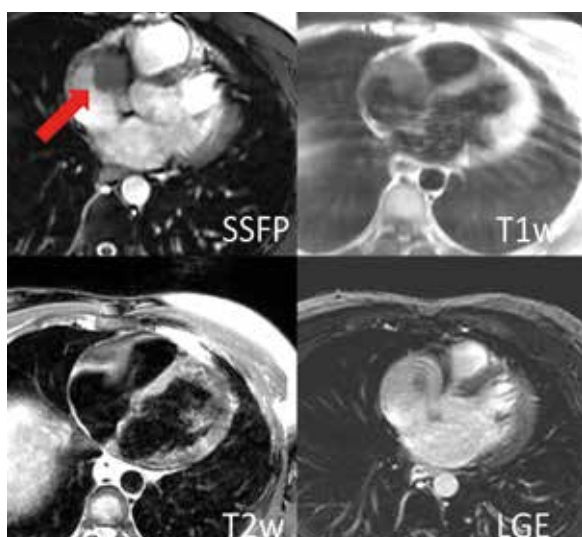
The ESC is proud of its 57 member National Cardiac Societies



Visit your National Cardiac Society on the ESC Plaza



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Erdoheim-Chester disease (ECD) is a rare non-Langerhans histiocytic disorder most commonly characterised by multifocal osteosclerotic lesions, with multisystemic granulomatosis and widespread manifestations and of highly variable severity. ECD affects the cardiovascular system in 75% of patients. Infiltration of the pericardium and the right atrioventricular septum (arrow) is the most common presentation. Typically, the tumour appears isodense on T1 and T2 weighted images and has low contrast enhancement. In nearly 60% of cases, death occurs because of cardiac complications, such as arrhythmias, pericardial tamponade, myocardial infarction, cardiomyopathy and symptomatic valve disease. Patients may be successfully treated with BRAF inhibitors or interferon alpha.

Bernhard Gerber, Cliniques St. Luc, UCLouvain, Brussels, Belgium



Does yoga with breathing exercises improve outcomes after STEMI?

In this study, 2,470 patients receiving PCI for STEMI at three centres in India were randomised to either post-procedure yoga and pranayam or no further intervention. "Patients in the yoga arm undertook three months of a new daily one-hour programme specifically designed for cardiac patients, incorporating yoga and meditation in the morning and a pattern of breathing exercises, comprising slow- and fast-breathing elements, in the evening," says Prof. Sen.

categories than those in the non-yoga arm (25.0%, 17.5%, 14.4% and 13.0%, respectively).

The benefits of yoga and pranayam remained after adjustment for baseline patient characteristics. "Potential explanations for the beneficial effects of yoga and breathing may include reductions in the pressure in the pulmonary and coronary circulation, reduced remodelling of the left ventricle, improved oxygen tension of the blood and also reduced endothelial damage of coronary vessels with decreased release of inflammatory mediators, such as interleukins and C-reactive protein," says Prof. Sen.

Don't miss!

Role of Indian yoga with pranayam to prevent ventricular remodeling and reduce mortality rate according to LV ejection fraction in post PCI patients of STEMI

Today, 11:00 - 16:00: Poster Area

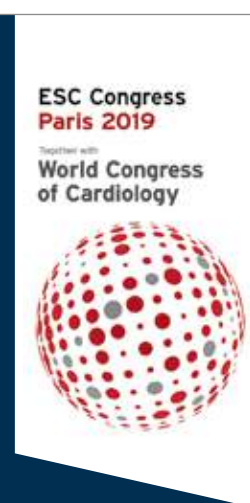
PAH – THE IMPORTANCE OF ASSESSING RISK IN TREATMENT AND MANAGEMENT TO DELAY DISEASE PROGRESSION

NAZZARENO GALIÈ (Co-Chair) University of Bologna | Bologna, Italy
MARC HUMBERT (Co-Chair) South Paris University | Le Kremlin-Bicêtre, France
PASCAL DE GROOTE University Hospital Lille | Lille, France
VALLERIE MCCLAUGHLIN University of Michigan | Ann Arbor, USA



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EM-14657 DATE OF PREPARATION: JULY 2019



A word cloud visualization of research topics related to pulmonary hypertension. The words are arranged in various orientations and sizes, representing their frequency or importance. Key terms include:

- COMBINATION THERAPY
- RISK ASSESSMENT
- PATIENT
- DIAGNOSIS
- NETWORKING
- QUALITY OF LIFE
- PULMONARY HYPERTENSION
- BURDEN
- CASE STUDY
- COLLABORATION
- TRIPLE CLINICAL TRIAL
- RV COMBINATION PERSPECTIVE
- FUNCTION CO-MORBIDITIES
- PERSPECTIVE
- PATHWAY
- TRITON STUDY
- DOUBLE COMBINATION
- GENDER
- HEMODYNAMICS
- SYMPTOMS
- PERSPECTIVE
- PAH-CHD
- ADHERENCE
- IMAGING
- CO-MORBIDITIES
- PULL
- NATURAL HISTORY
- REGISTRY DATA
- CENTRAL
- EXPERT
- PAH
- WSPH NICE
- TRIAL UPDATES
- MONOTHERAPY
- PAH-CTD
- PGI₂
- COMBINATION
- DOUBLE
- COMBINATION

Sessions of the day

9:00	
Tbilisi	Challenges in valvular heart disease management: Essential Update
Sarajevo	New molecules and targets in heart failure treatment
Athens	Horizons of discovery: using genetics to identify new drug targets
Balzac	Very old patient, very new problems
Colette	Improving the chain of survival after cardiac arrest. Organised with ACNAP and the French nursing community
Centre Stage	State of the art management of cardiovascular patient in the emergency department
Camus	Mini quiz – Algeria vs Latvia
Hugo	Tough calls in acute cardiology - Accept the challenge. Organised with the French Society of Cardiology
Duras	Application of single-cell genomics in cardiovascular research
Case Corner 1	Aortic diseases
Case Corner 2	Unusual encounters in atrial fibrillation ablation and left atrial appendage closure
Nicosia	Improving the efficiency of advanced cardiac imaging
Astana	Drug treatment in hypertension - New insights
Reykjavik	Controversies in dietary fat
Pristina	Novel pharmacological targets in vascular disease
Rome	Challenges in the management of atrial fibrillation
Zagreb	Differences in the management and outcomes in congenital versus acquired heart disease
Sofia	New strategies in acute coronary syndrome management
London	Meet the Experts – Cardiovascular disease in pregnancy
Prague	Personalized tobacco cessation strategies for your patient: patches, drugs or e-cigarettes?
Science Box 1	Innovative strategies in percutaneous coronary intervention
Science Box 2	HFpEF: What's new in 2019
Agora 1	TAVI in the trenches
Agora 2	Advanced plaque imaging
Berlin	Late Breaking Science in Atrial Fibrillation 1
Helsinki	Late Breaking Science in Acute Coronary Syndromes 1
Global Exchange 2	Meet and Share Forum - Leveraging social media
10:10	
Digital Health 1	ESC Paul Hugenholtz Lecture for innovation
11:00	
Amsterdam	Meet the Experts - Cardiac imaging in challenging patient subsets
Helsinki	Expert Advice - Not all myocardial infarctions are created equal
Tbilisi	Frontiers in the treatment of cardiomyopathies
Tashkent	Guidelines in Practice - Cerebrovascular and peripheral arterial disease
Tallinn	PCI Hot Topics in 2019
Pristina	Translating new pharmacology science into clinical practice
Digital Health 1	Digital cardiovascular health revolution - Are you ready? Organised with the Healthcare Information and Management Systems Society
Balzac	Primary prevention revolution
Colette	Challenges in the cath lab: a paramedic perspective. Organised with ACNAP and the French nursing community
Centre Stage	Cardiopulmonary resuscitation today
Camus	Mini quiz – France vs Hungary
Hugo	TAVI - Tips and tricks for beginners. Organised with the French Society of Cardiology
Duras	Mitochondria and the diabetic heart
Case Corner 1	Ventricular arrhythmias and sudden cardiac death
Case Corner 2	Acute Coronary Syndromes I
Nicosia	Predicting coronary events – Is plaque imaging the key?
Reykjavik	New frontiers: SGLT2 inhibitors in cardiorenal disease
Rome	Adverse outcomes in atrial fibrillation: can they be prevented?
Sarajevo	Heart failure with preserved ejection fraction
Zagreb	Novel therapeutic targets in hypertrophic cardiomyopathy
Sofia	High sensitivity troponins in patients with suspected acute coronary syndromes
Berlin	How to implement CABANA, CASTLE-AF and CAPTAF results in clinical practice
Budapest	Meet the Experts – Triggers of AHF
Astana	Guidelines in Practice – Hypertension in pregnancy and stable coronary syndromes
Prague	Infection, inflammation and the heart. Organised with SAHA
Athens	Non-coding RNAs regulating cardiac hypertrophy and disease. Organised with ISHR

Science Box 1	Complex PCI revisited
Science Box 2	Interventions for stroke: From prevention to acute treatment
Agora 1	New insights for acute coronary syndrome pharmacotherapy
Agora 2	Non-coding RNAs in cardiovascular disease
London	Late Breaking Science in Cardiovascular Pharmacology
Digital Health 2	Wearables
ESC TV Stage	25 years of ESC Guidelines
11:30	
Global Exchange 1	Get engaged with the ESC. Organised for ESC Professional Members and future Members: practical tips to enhance your involvement in ESC
12:00	
Digital Health 2	Remote Monitoring for Chronic Heart Failure
12:40	
Balzac	Let's enhance our efforts in secondary prevention after myocardial infarction?
Hugo	Cardiovascular consequences of obstructive sleep apnea
Reykjavik	Nursing and Allied Health Professions Investigator Award
12:45	
Centre Stage	Emergency Care in response to terrorist attacks
Duras	Experts on the spot: expanding knowledge on glucagon-like peptide-1 receptor agonists in cardiometabolic care. Sponsored by Novo Nordisk A/S
Global Exchange 1	The future of precision medicine: the case of cardiology
ESC TV Stage	Twitter Influencers get social at #ESCcongress
13:00	
Digital Health 2	m-Health and Coronary Artery Disease
13:05	
Prague	Memorial Lecture for Bongani Mayosi
13:45	
Nicosia	Multi-modality imaging in cardiac infection
Helsinki	Key issues in risk management after acute coronary syndromes
Tbilisi	My patient with severe valvular heart disease says he is asymptomatic: when should I intervene?
Zagreb	New concepts in myocarditis
Tallinn	Meet the Experts - How to deal with challenging interventional scenarios
Rome	CATCH ME - App-assisted management of patients with atrial fibrillation
Digital Health 1	Social media in cardiology: 21st century advancement or Pandora's box
Balzac	General cardiologists caring for frail patients
Colette	Health care without walls - Embracing technology to improve outcomes. Organised with ACNAP and the French nursing community
Centre Stage	Emergency medicine: the French touch. Organised with the Acute Cardiovascular Care Association and the French Society of Cardiology
Camus	Mini quiz – Estonia vs Slovakia
Hugo	Amyloidosis: more complex than we thought? Organised with the French Society of Cardiology
Duras	What makes your heart beat?
Case Corner 1	Peripheral vascular diseases
Case Corner 2	Arrhythmias
Amsterdam	Innovations in CMR imaging of coronary artery disease
Reykjavik	The right glucose-lowering drugs for the right patient
Sarajevo	Comprehensive investigations in acute heart failure
Tashkent	Inherited diseases of the aorta: when science meets practice
Berlin	Expert Advice – All you want to know on catheter ablation of ventricular arrhythmias
Astana	Hypertension: Essential Update
London	Sexual activity and your heart
Sofia	Outcome disparities in acute coronary syndromes between the rich and poor and in different ethnicities
Athens	Cardiac tissue engineering: disease modelling and novel therapeutics
Budapest	The Conundrum of HFpEF. Organised with AHA
Prague	YIA Session - Global Cardiovascular Health
Science Box 1	Imaging parameters in valvular heart disease
Science Box 2	Atrial fibrillation: from drugs to ablation
Agora 1	Perspectives on anticoagulation across cardiovascular disease
Agora 2	Translational research in acute coronary syndrome registries

Global Exchange 1	European cardiovascular research Funding: lagging behind the needs and expectations
13:50	
Pristina	Late Breaking Basic and Translational Science - Acute Coronary Syndromes and Heart Failure
14:00	
Global Exchange 2	Meet and Share Forum - Fundraising
15:00	
Digital Health 2	m-Health in Special Populations
15:30	
Prague	GLP-1 Receptor agonists – Pioneers of further cardiovascular risk reduction in diabetes? Sponsored by Medscape through an independent educational grant from Novo Nordisk
Tallinn	The bigger picture in stroke prevention and anticoagulation: think beyond atrial fibrillation. Sponsored by Bayer AG
Centre Stage	Towards the state-of-the-art potassium control in patients with heart failure: are we there yet? (EBAC accredited) Supported by an unrestricted educational grant from AstraZeneca
Tbilisi	PCSK9i, changing practice in cardiology: the emerging story. Organised by PACE-CME, supported by an educational grant provided by Amgen, Draupnir Bio ApS, Sanofi-Regeneron & The Medicines Company
Zagreb	Epigenetics: a new pathway to tackle residual risk? Organised by PACE-CME, supported by an educational grant provided by Resverlogix
Rome	STEMI care today: can we do better? Sponsored by Boehringer Ingelheim
Sarajevo	The heart failure patient's journey: key learning and objectives. Sponsored by Servier
Amsterdam	Hypertension management: behind the scenes of 2018 ESH/ESC guidelines. Sponsored by Menarini Group and Daiichi Sankyo Europe GmbH
Athens	What is the long term impact of atrial fibrillation? Insights from GARFIELD-AF. Sponsored by Thrombosis Research Institute
Duras	To the heart of the matter – Identification and management of cardiac amyloidosis. Sponsored by Alnylam Pharmaceuticals
Colette	Hypertension – Recent top articles and highlights from the journal's 40 years. Sponsored by AHA and Wolters Kluwer
Balzac	The Heart of Fabry - The role of biomarkers in diagnosis and monitoring treatment response. Sponsored by Sanofi Genzyme
Helsinki	Heart failure treatment – Keeping the patient on the top of our mind. Sponsored by Novartis Pharma AG
Reykjavik	Optimizing medical device therapies in advanced heart failure. Sponsored by Abbott
Sofia	Paradigm shift in DOAC reversal - What are the current therapeutic options? Sponsored by Portola Pharmaceuticals Inc.
Camus	Targeting of PCSK9 with siRNA for LDL-C reduction in a high-risk population. Sponsored by National Lipid Association
16:15	
ESC TV Stage	2018 ESC Guidelines - One year after
17:00	
Paris	Inaugural Session

Today in the ESC Professional Members’ Lounge

10:30-10:45

Career development: How to write your CV?

12:00-12:30

ESC Cardio Talk

12:30-12:45

Make the most of your benefits: ESC CardioMed is evolving - New 3D enhancement

12:45-13:00

Why is Digital Health relevant?

14:30-15:00

New Clinical Case Gallery

15:00-15:15

Make the most of your benefits: ESC 365

15:15-15:45

Career development: Be a Twitter Pro

15:45-16:00

Career development: Tips for job interviews

18:00-19:00

Inaugural Networking Event

Public Event

11:00 – 19:00

Paris City Hall

Le cœur de Paris bat plus fort

In the limelight: Emergency medicine

Emergency medicine makes a strong appearance at ESC Congress 2019, with a series of four back-to-back sessions today, organised in collaboration with the Acute Cardiovascular Care Association and the Société Française de Cardiologie.

Professor Pascal Vranckx (Hartcentrum Hasselt, Hasselt, Belgium) from the Acute Cardiovascular Care Association and Doctor Patrick Goldstein (Lille University Hospital, Lille, France) from the Société Française de Cardiologie and SFMU (French Society of Emergency Medicine) discuss the importance of developing a robust emergency care system and how today's sessions can help the cardiovascular community work towards this.



Prof. Pascal Vranckx

"Emergency medical care bridges the community response and the medical response—we need to make sure that these phases are working well and working together. The French emergency medical system is one of the best in Europe and the ESC is delighted to offer the Société Française de Cardiologie the centre stage by building joint sessions with the Acute Cardiovascular Care Association.

What happens to the patient in the cardiology department depends on what happens to them in the emergency care stage.

The initial stage of the emergency medical care is the community response; it is all about awareness, behaviour and reaction of bystanders—we need to educate the population to recognise and act upon

emergency situations. Creating a uniform emergency number, such as a unique '112' for the whole Europe, can also help to save precious time. We must train the public—in school and beyond—so that they can perform first-aid interventions, which can mean the difference between life and death. It is the responsibility of the medical community to ensure that the need for this type of training is recognised by governments and is placed high on the political agenda.

Emergency medical dispatch forms the first part of the professional response and the dispatcher must be able to locate and prioritise emergencies and also guide the person on the scene through phone-assisted cardiopulmonary resuscitation (CPR) when needed. The emergency medical services take over at the scene, and we need highly trained individuals capable of treating the patient at this stage because intervention cannot wait until the patient arrives at hospital. The hospital itself is also important and it should be chosen based on its suitability to provide the best treatment for the patient rather than its proximity to the event. These are the elements that, when working together, make up a good, strong emergency care system. By promoting standardisation, we hope that such systems can be put in place in other countries to help more people survive emergency events."



Dr. Patrick Goldstein

"Today's programme on the Centre Stage will be very interesting and relevant to both emergency physicians and cardiologists.

Among the topics covered in the first session, 'State of the art management of cardiovascular patients in the emergency department' (09:00 – 10:30), the roles of

the emergency doctor and the cardiologist and how they can work together to ensure the best pathway for the patient in the emergency department will be discussed. The session will also debate chest pain units, asking questions such as: Should they be a part of the acute cardiac care unit, emergency department or both? Who should lead the unit? Which patients should be referred there—all those with chest pain or only those with acute coronary syndromes? There will also be a talk on cardiac troponins and whether 'rule in, rule out' is feasible in less than one hour in overcrowded emergency departments, some of which may see over 300 patients a day and have no cardiologist.

The session 'Cardiopulmonary resuscitation today' (11:00 – 12:30) will address issues including whether epinephrine still has a place in CPR, which patients will benefit from therapeutic temperature management and where the best place is for extracorporeal life support—the emergency room or, as we are pioneering in France, the pre-hospital setting.

Recently, our French medical emergency services had to manage terrible terrorist attacks. Our strategies, faced with mass casualties, were deeply modified. In a dedicated session, we will share with the audience this experience, discussing pre-hospital and in-hospital responses in these situations.

I hope that many of our colleagues will come to the session 'Emergency care in response to terrorist attacks' (12:45 – 13:30).

The final session 'Emergency medicine: the French touch' (13:45 – 15:00) will include talks on cardiac arrest during sporting activities and the place of lytic therapy in patients with myocardial infarction.

With all these fascinating subjects and experienced speakers, we are expecting the sessions to be a great success."

Don't miss!

- **The Emergency Medicine Programme**
Today, 09:00 – 15:00; Centre Stage – The Hub
- **Improving the chain of survival after cardiac arrest – a symposium organised by ACNAP and the French nursing community**
Today, 09:00 – 10:30; Colette – The Hub
- **New insights into cardiopulmonary resuscitation – a joint symposium with the European Resuscitation Council**
Sunday, 14:30 – 15:40; Helsinki – Village 8

Register for CPR workshops at the ESC Plaza:

- **CPR-AED Refresher Workshop**
Today, 13:30 – 15:00; Sunday to Tuesday, 08:30 – 10:00 and 14:15 – 15:45
- **Advanced CPR Skills Workshop**
Today, 15:30 – 17:00; Sunday to Tuesday, 11:00 – 12:30 and 16:15 – 17:45

Outstanding abstracts at the Poster Area:

- Lack of early systematic investigations among young victims of sudden cardiac arrest (P2823)
Sunday, 14:00 – 18:00
- Survival after dispatcher assisted CPR in out of hospital cardiac arrest compared to CPR without dispatcher assistance and no CPR before emergency medical services arrival – A nationwide study (P4170)
Monday, 15:45 – 16:35
- Diagnostic accuracy and clinical utility of point-of-care ultrasound among syncope patients in the emergency department (P5672)
Tuesday, 08:30 – 12:30
- Performance of the early clinical judgement for the diagnosis of syncope on the emergency department (P6570)
Tuesday, 14:00 – 18:00

ESC Professional Membership: Education, Science and Community



Prof. Cecilia Linde

"Being part of a vibrant community is special and that's one of the many reasons that people choose to become Professional Members of the ESC," says Professor Cecilia Linde, Vice-President of ESC 2018-2020 (Karolinska University Hospital, Stockholm, Sweden).

"The opportunities to share ideas and interests are boundless, with more than 100,000 healthcare professionals, from 150 countries making up the ESC community."

The networking side of society membership plays a big part in the ESC's success. "The cooperative spirit and sense of belonging is tangible here at ESC Congress. As another of the ESC's major assets, ESC Professional Members can register for this great global

gathering at a reduced fee and can access the dedicated Professional Members' Lounge. For those who are unable to attend, or when there are just too many interesting sessions to participate in at once, ESC 365 allows year-long access to all the science—abstracts, slides and videos, as part of membership. If the healthcare professionals within our Society are well informed about the latest advances and the current guidelines, then this will be highly beneficial for our patients too."

At ESC Congresses and through free access to ESC webinars and the ESCeL e-learning platform, the ESC delivers world-class learning and professional development. Membership also provides free access to ESC CardioMed, the online encyclopaedia, which is based upon the ESC Textbook of Cardiovascular Medicine's 3rd edition and is regularly updated to reflect the latest ESC Guidelines. For up-to-date science and research, ESC Professional Membership comes with a free online access to three journals, including the ESC's flagship journal, the *European Heart Journal*.

Prof. Linde continues, "The ESC is unique in providing all these benefits for one annual fee, with additional pay-for-product costs kept to a minimum. ESC Professional Membership represents excellent value and ESC Professional Members can be safe in the knowledge that the fees paid will be equally returned, for example, as educational resources, and research and travel grants. Everything goes back to the members! And as membership grows, so will the accessible resources and opportunities."

The main aim with the different membership packages is to cater for all career stages, learning styles and specialties. The young community and those in training can join for a nominal fee. The ESC's strength and influence comes from its ability to represent all cardiologists, nurses and allied professionals. Combined packages enable ESC Professional Members to add an Association membership for their specialty to gain the best of both worlds. With so much to offer, Prof. Linde fully endorses the simple yet flexible approach of the membership packages available:

"From student to emeritus professor, ESC Professional Membership really does have something for everyone!"



ESC PROFESSIONAL MEMBERSHIP

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- ESC journals
- Online education
- **and more**



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Visit the ESC stand

Lessons learned from CABANA, CASTLE-AF and CAPTAF



Prof. John Camm

After some years of waiting for large randomised clinical trials comparing catheter ablation and medical therapy for atrial fibrillation (AF), three have been reported in the last two years. Ahead of a case-based session today discussing the results from CABANA, CASTLE-AF and CAPTAF, Professor John Camm (St. George's, University of London, London, UK), provides some insight:

"For decades, we've accumulated observational evidence and randomised trial data from hundreds of patients around the world showing that symptomatic AF can be effectively suppressed by left atrial catheter ablation. While a fairly large proportion of patients will have recurrences, episodes are often short and asymptomatic. As a result, cardiologists generally consider one-off ablation preferable to long-term use of antiarrhythmic drugs.

With CABANA, CASTLE-AF and CAPTAF, we now finally have important new evidence from randomised clinical trials. An intention-to-treat analysis of CABANA—the largest study—did not show superiority for ablation regarding cardiovascular (CV) outcomes (death, disabling stroke, serious bleeding, or cardiac arrest),

although a secondary endpoint of death or CV hospitalisation was significantly reduced. Results were complicated by substantial crossover in both arms and when the data were analysed on an as-treated basis, recurrences and the burden of AF were dramatically reduced with ablation. Importantly, quality of life (QoL) was better with ablation. CABANA also suggested that patients with heart failure (HF) did well with ablation. This brings us to CASTLE-AF, a study in patients with HF, which showed that ablation was better than medical therapy at reducing mortality and CV hospitalisation and the proportion of time patients spent in AF. The third trial, CAPTAF, links back to CABANA, showing the primary endpoint of QoL to be unequivocally in favour of catheter ablation, despite little difference in recurrence of AF. The reduction of AF burden was, however, significantly greater in the ablation-treated patients than in those given antiarrhythmic drugs.

The data from these trials suggest that ablation may be the preferred approach for new-onset or untreated AF, particularly in HF, but we await definitive guidance from the 2020 ESC Guidelines."

Don't miss!

- **How to implement CABANA, CASTLE-AF and CAPTAF results in clinical practice**
Today, 11:00 - 12:30; Berlin - Village 4
- **Atrial fibrillation: from drugs to ablation**
Today, 13:45 - 15:00; Science Box 2 - Poster Area

Hot topics in PCI Overcoming anatomical and clinical challenges in everyday practice



Prof. Julinda Mehilli

"With 40 years of experience in percutaneous coronary intervention (PCI) and more than 10 years of experience with percutaneous transcatheter valvular procedures, interventional cardiology has reached the 'maturity phase' and become the main cardiac repair option," says Professor Julinda Mehilli (Munich University Clinic, Ludwig-Maximilians University, Germany), Congress Programme Committee member.

"However, patients have changed over the years. Typically, we see patients who are older and with multiple comorbidities, compared with patients in the past. Current patients generally have anatomically complex coronary and valvular disease, which require high interventional and operative repair skills."

Cutting-edge techniques and developments will be covered in a range of sessions, from Live in the Box sessions to Hot Lines to symposia, and here Prof. Mehilli picks out just some of the many highlights:

"The latest coronary stent platforms allow us to treat challenging anatomies and to perform complete one-stage revascularisation of multivessel coronary artery disease with excellent long-term safety and efficacy. The PCI Hot Topics session this morning will look to address unanswered questions, including 'What is the best-in-class drug-eluting-stent?' and 'Which stent is best for patients with a high bleeding risk?'. A Meet the Experts session this afternoon will discuss challenging interventional scenarios, such as 'Spontaneous coronary artery dissection with recurrent ischaemia' and 'PCI when the bleeding risk is high'.

Sessions will discuss recent controversies coming from the MITRA-FR and COAPT trials of mitral valve repair of secondary mitral regurgitation, which highlight the importance

of accurate patient selection. Furthermore, transcatheter mitral valve repair is one of the additive treatment options for heart failure patients, therefore a close collaboration between heart failure specialists and interventionists is also necessary.

Another controversy that will be discussed in the debate session on Sunday is the use of transcatheter aortic valve implantation (TAVI) for low-risk aortic stenosis (AS) patients. Discussions on TAVI will continue in a European Association of Percutaneous Cardiovascular Interventions (EAPCI) session on Tuesday, which will look at the latest trial data in symptomatic AS and address the issues of durability and the best antithrombotic treatment to use.

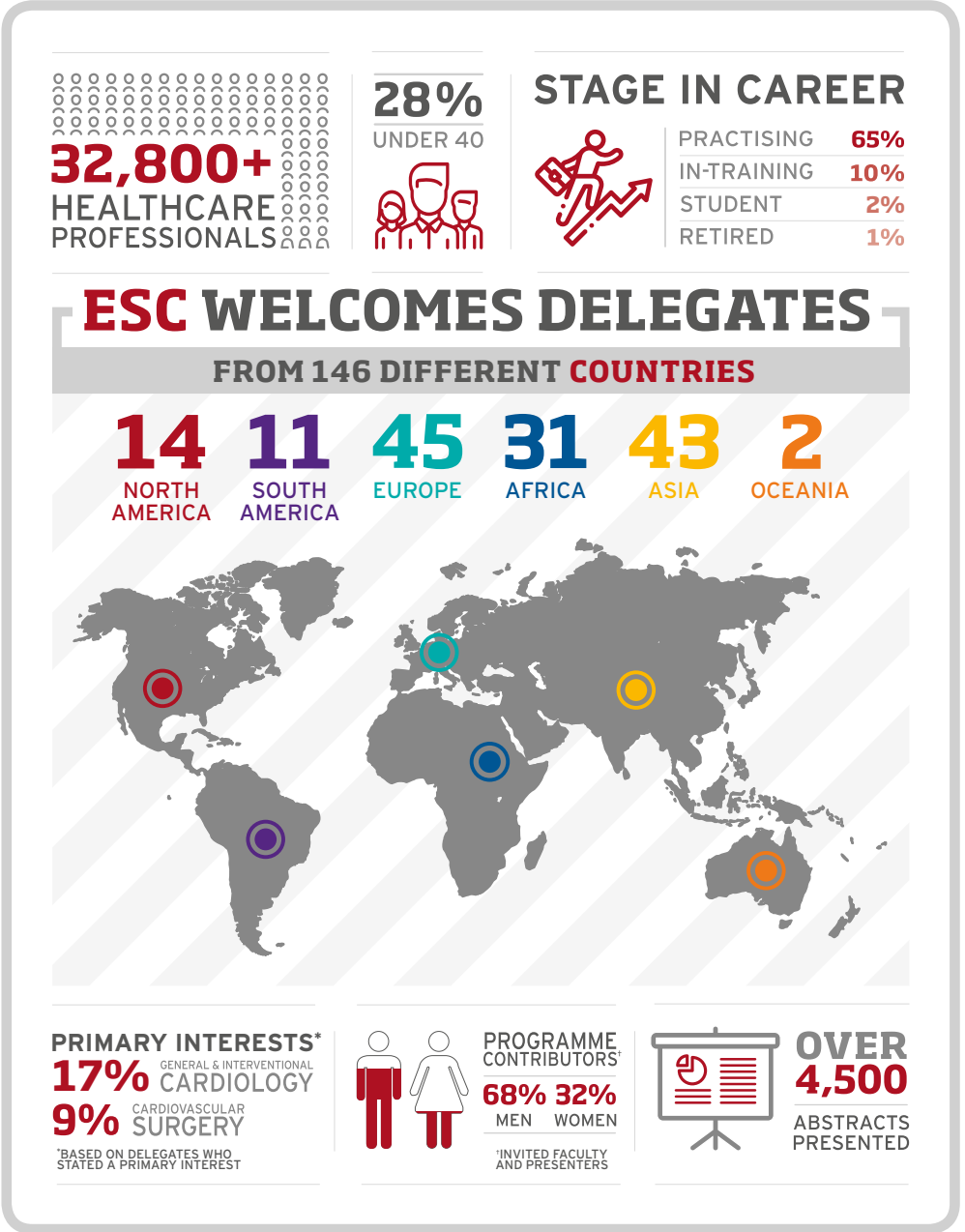
Percutaneous transcatheter procedures in 2019 are characterised by their diversity, suitability for a continuously growing number of heart diseases and their feasibility for a patient collective that continues to expand and increase in complexity. On Tuesday, leading experts will 'look into the crystal ball' and present what they think are the future clinically relevant advances in the percutaneous and also surgical management of a range of conditions.

With Hot Line presentations including COMPLETE, ISAR-REACT 5, DANAMI-2 and FRANCE-TAVI, there's so much going on for interventionist and those who want to learn more. Do come and join us."

Don't miss!

- **PCI Hot Topics in 2019**
Today, 11:00 - 12:30; Tallinn - Village 7
- **Meet the experts - how to deal with challenging interventional scenarios**
Today, 13:45 - 15:00; Tallinn - Village 7
- **Controversies in valvular heart disease**
Sunday, 08:30 - 10:00; Duras - The Hub
- **Looking into the crystal ball: clinically relevant advances in the interventional/surgical practice in cardiovascular medicine in the next 10 years**
Tuesday, 08:30 - 10:00; Hugo - The Hub
- **Severe symptomatic aortic valve stenosis - TAVI the first treatment choice for all?**
Tuesday, 14:30 - 15:40; Tashkent - Village 7

ESC Congress - Facts & Figures



Case Corner

Transesophageal echocardiography showing severe aortic regurgitation, perforation as well as mobile tissue at the level of the non-coronary cusp, and sinus Valsalvae aneurysm in a 43-year-old Japanese man due to vascular Behçet's disease.

Submitted by Doctor Minami Kakiuchi (Ako Municipal Hospital, Hyogo, Japan) (FP# 113)

What is your diagnosis?
How would you treat this patient?

Join the discussion on this and other interesting cases:

Aortic Diseases
Today, 09:00 - 10:30; Case Corner 1 - Poster Area

2019 ESC Clinical Practice Guidelines – what’s new?



Prof. Stephan Windecker

With five new ESC Clinical Practice Guidelines being presented at ESC Congress 2019 and simultaneously published in the *European Heart Journal*, it's been a very busy time for the ESC's Committee for Practice Guidelines (CPG) and the expert Task Forces.

But why do they do it? CPG Chair, Professor Stephan Windecker (Inselspital, University of Bern, Bern, Switzerland) explains, “For 25 years, ESC Guidelines have been summarising relevant evidence on a given topic to inform physicians on the benefits and risks of particular diagnostic or therapeutic procedures, with the ultimate aim to improve patient care. This year’s new ESC Guidelines cover a range of distinct issues, including some of the most frequent cardiovascular diseases as well as commonly present risk factors. Over the last few years, data from large-scale randomised clinical trials have generated opportunities for novel treatments and technologies to be incorporated into ESC Guidelines, either for the first time or in new ways. For instance, huge outcomes trials have been recently conducted in patients with diabetes to assess cardiovascular safety

and in patients with atherosclerotic vascular disease to evaluate novel cholesterol-lowering drugs and strategies. There have also been important advances in the treatment of frequently encountered arrhythmias, supraventricular tachycardias; previous ESC Guidelines on this topic were published in 2003 and therefore it was timely to provide recommendations based on evidence accumulated during the past 15 years. An important new version of the 2014 ESC Guidelines on acute pulmonary embolism will be presented synthesising recent evidence in diagnosis, risk stratification and short- and long-term prevention of recurrent events.”

2013 ESC Guidelines referred to ‘stable coronary artery disease’; however, the nomenclature has been changed to ‘chronic coronary syndromes (CCS)’ in the 2019 update. Task Force Chairs, Professor William Wijns and Professor Juhani Knuuti, state that although coronary artery disease often seems ‘stable’ in between acute events, the underlying disease status is anything but ‘stable’. Prof. Wijns explains, “Atherosclerotic plaque accumulation is a dynamic process that can alter over the continuum of the disease to include growth, stabilisation or regression, as well as changes in plaque composition or thrombosis, depending on lifestyle, risk factor modulation and pharmacological therapies. CCS also better covers the different clinical presentations and multiple syndromes, and, as with heart failure, the new terminology allows



clinical presentations to be conveniently categorised as either acute or chronic coronary syndromes, more accurately covering the different stages of the disease.”

Prof. Windecker would like to thank all those who have been involved with the new ESC Guidelines including Task Force representatives, Review Coordinators and the large pool of peer reviewers, including the 57 member National Cardiac Societies. The highly valuable collaborative efforts of the European Atherosclerosis Society (EAS), European Respiratory Society (ERS) and the European Association for the Study of Diabetes (EASD) are also gratefully acknowledged.

Join Prof. Windecker tomorrow for a not-to-be missed overview of all five new 2019 ESC Guidelines. There is also the chance

to ‘Meet the Task Force’ for each set of recommendations. And if you want to learn more about the impact of last year’s guidelines, Prof. Windecker and Professor Jean-Philippe Collet will be chairing a ‘2018 ESC Guidelines – One year after’ session this afternoon.

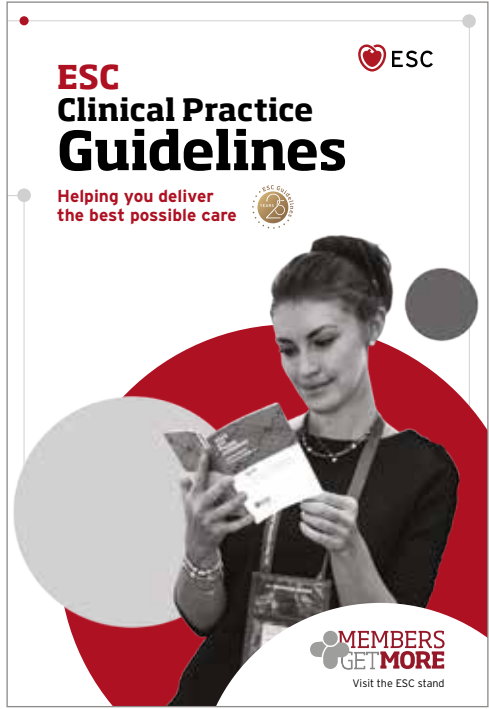
Don’t miss!

- **2018 ESC Guidelines – One year after**
Today, 16:15 – 16:55; ESC TV Stage – ESC Plaza
- **2019 ESC Guidelines Overview**
Sunday, 08:30 – 10:00; Paris – Main Auditorium

Check out the Scientific Programme for all ESC Guidelines sessions

Societies	Guideline	Task Force Chairs
ESC	Chronic coronary syndrome ¹ <i>Presented on Sunday</i>	William Wijns & Juhani Knuuti
ESC/EAS	Dyslipidaemias ² <i>Presented on Monday</i>	Colin Baigent, François Mach & Alberico Catapano
ESC in collaboration with EASD	Diabetes, pre-diabetes and cardiovascular diseases ³ <i>Presented on Monday</i>	Francesco Consentino & Peter Grant
ESC in collaboration with ERS	Acute pulmonary embolism ⁴ <i>Presented on Tuesday</i>	Stavros Konstantinides & Guy Meyer
ESC	Supraventricular tachycardia ⁵ <i>Presented on Tuesday</i>	Josep Brugada & Demosthenes Katritsis

1. 2019 ESC Guidelines for the diagnosis and management of chronic coronary syndromes. Eur Heart J 2019. doi/10.1093/eurheartj/ehz425
2. 2019 ESC/EAS Guidelines for the management of dyslipidaemias: lipid modification to reduce cardiovascular risk. Eur Heart J 2019. doi/10.1093/eurheartj/ehz455
3. 2019 ESC Guidelines on diabetes, pre-diabetes and cardiovascular diseases developed in collaboration with the EASD. Eur Heart J 2019. doi/10.1093/eurheartj/ehz486
4. 2019 ESC Guidelines for the diagnosis and management of acute pulmonary embolism. Eur Heart J 2019. doi/10.1093/eurheartj/ehz405
5. 2019 ESC Guidelines for the management of patients with supraventricular tachycardia. Eur Heart J 2019. doi/10.1093/eurheartj/ehz467



Clinical cases: Sharing experience – building knowledge



Prof. Marco Roffi

A feature of this year’s programme is the wide range of clinical case-based sessions. Professor Marco Roffi (Geneva University Hospital, Geneva, Switzerland), an ESC Congress Programme Committee Chair, explains the types of sessions available and what they can teach us.

“The ESC Congress has long recognised the educational properties of case presentations. The ‘Meet the Experts’ sessions, in which cases are presented

by thought leaders in the field and thoroughly discussed with panelists and chairs, have been very successful. The same is true for ‘Guidelines in Daily Practice’ session, in which one presenter describes the management of a patient and then a member of the corresponding ESC Guidelines Task Force discusses the guideline content on that specific topic. This year, four of our ‘Guidelines in Daily Practice’ sessions will be organised by National Cardiac Societies. In order to enhance the education effect and the discussion, cases for which the management is not well defined or controversial are frequently selected.

Building on the success of these sessions, we have introduced two new case-based

formats this year. Firstly, we have six ‘How Should I Treat’ sessions. The presenter will introduce the case, another expert will then explain how they would manage the patient and, finally, the case presenter will describe the actual treatment the patient received. A ‘How Should I image’ session will use the same format to address constriction vs restriction physiology and a patient with a cardiac mass.

Secondly, 28 sessions, comprising four or five cases each, will be hosted in specifically designed learning environments, the ‘Case Corners’. Cases have been selected by a dedicated committee among the best-graded submitted cases. In addition to the undeniable learning effect for

clinicians, ‘Case Corners’ are part of the ESC’s efforts to be as inclusive as possible and to value a broad spectrum of congress contributions, from late breaking clinical trials, to basic and translational research discoveries, to practice guidelines, to sharing challenges encountered in everyday patient management. We are convinced that Case Corners will offer a great opportunity for presenters and attendees from all over the word to interact, sharing experience and building knowledge by discussing highly educational cases. Look out for Case Corners ‘tasters’ in *Congress News*.”

Don’t miss today!

Clinical cases at the Case Corners in the Poster Area

Turning bright ideas into better health – helping researchers become inventors



Prof. Silvia Priori



Dr. Robert Byrne

Now, more than ever, there's a need to foster new concepts and develop imaginative approaches to address the urgent and growing problems related to cardiovascular disease worldwide. But how can scientists and clinicians transform their 'eureka' moments or collaborative brainwaves into life-saving practice-changing treatments? Where can they turn for help?

Professor Silvia Priori (University of Pavia, Pavia, Italy), an ESC Congress Programme Committee Chair, is keen to emphasise the role that the ESC and ESC Congress can play: "We want to encourage delegates to 'think of themselves as inventors'. By including all aspects of innovation in the ESC Congress 2019 programme, we hope to inspire budding discoverers and help them get their ideas off the ground and into the clinic."

Innovation is everywhere you look at this year's Congress. Scientists, clinicians and engineers—who responded to the ESC's Call for Technology and Innovation earlier this year—will be showcasing their latest ideas for innovations, digital solutions, technology or products over four days on the Digital Health Stage.

"Funding is one major hurdle to making an idea a reality," says Prof. Priori. "It is very important at a political level to provide funding to train scientists and clinicians—this may be through the provision of research funding, for example, Horizon Europe, and also via specific PhD programmes. The ESC actively advocates for such funding at an EU level. Here at ESC Congress 2019, there is a dedicated Innovation Funding Area, where innovators in cardiovascular medicine can get advice from the ESC Grants team, EU funding experts, investment firms and funding foundations, whether their ideas are still at the basic-research stage or have progressed to early clinical trials." There will also be other opportunities to meet investors face-to-face, with two dedicated sessions at Global Exchange 1 tomorrow (10:00 – 11:00 and 15:30 – 16:30), while some very prominent research funding organisations will take part in a joint session with the European Commission at Global Exchange 1 on Monday (10:05 – 11:00).

Prof. Priori continues, "From highly translatable science in the form of intra-cardiac 4D flow parameters to new developments in percutaneous valve therapies, the symposium, 'Cardiovascular innovation: the next frontier' will cover some really cutting-edge advances to inspire us to think of our own new breakthroughs and blockbusters (Monday, 14:30 – 15:40; Digital Health Stage 1). With new technologies, there has never been a better time to explore and discover—the support is there for those who wish to add their own courageous efforts to improve cardiovascular health."

Medical device technology provides an example of an area of cardiology where innovations have truly revolutionised patient care. Doctor Robert Byrne (Deutsches Herzzentrum, Munich, Germany), member of the ESC Regulatory Affairs Committee,

explains, "As just one illustration, the field of transcatheter cardiac interventions has been characterised by pioneers who have come up with innovative ideas and translated them into clinical practice. When Werner Forssmann performed the first cardiac catheterisation on himself in 1929, this set the ball rolling. No one is endorsing self-experimentation, but people like Werner Forssmann, and inspired innovators like Andreas Grüntzig, who did the first coronary angioplasty, are great examples of the spirit of invention in cardiology. Many of these innovations come from bright people with bright ideas who have been able to connect with funding organisations and companies that have the expertise to lead the device/product into clinical development. This culture of collaborative innovation is established in medical devices and it's up to us to embrace it throughout cardiology."

Dr. Byrne continues, "One of the biggest challenges for any innovator is the red tape. We are lucky in Europe to have a regulatory system that strives to give patients timely access to safe and effective, as well as new technologies. With the introduction of the new Medical Devices Regulation (2017), which will fully apply in May 2020, approval processes in Europe are undergoing change. Scientists and physicians should be educated about the regulatory approval process, including knowing how and where they can provide feedback and where to find information about the devices they use. The importance of balancing access, safety and the innovation of medical devices worldwide will be discussed at Global Exchange 1 on Monday (09:00 – 09:45). Having a better understanding of what's needed to generate the right clinical evidence may accelerate our innovations, making them more readily available for patients—this is our ultimate goal."

Follow that hashtag!



Prof. Sarah Clarke

"This year, through social media, we want to break the latest news from the Congress faster than ever, promoting scientific interaction with a global reach," says Professor Sarah Clarke (@DrSarahClarke, Royal Papworth Hospital, Cambridge, UK), Chair of the ESC Media Committee.

We have sourced and appointed highly regarded 'twitterati' as ESC Social Media Ambassadors, namely Professors Michael Gibson (@CMichaelGibson), Mamas Mamas (@mmamas1973) and Roxana Mehran (@Drroxmehran) who will cover Hot Topics and Late-Breaking Science, and Pascal Meier (@DrPascalmeier) who will cover intervention and digital health. They will be joined by 50+ selected Ambassadors from across the world, with different subspecialty interests, to help spread updates from the Congress through #ESCCongress, #ESCDigital and #ESCGuidelines. All supported by our in-house #SoMe Supervisor, Lavinia Baciú (@ESC_Lavinia).

If you are relatively new to social media and want to join the twitter family go to 'Career development: Be a Twitter Pro' today (15:15 – 15:45, Professional Members' Lounge). To 'Be scientific and unique on Twitter' join an interactive workshop led by Prof. Michael Gibson with some of our experts on Tuesday (13:00 – 14:00, Global Exchange 2, ESC Plaza).

Good morning Twitter!

New this year is #ESCBreakfastBuzz. Join the Twitter chats with your morning coffee—Prof. Gibson will be answering and commenting on your tweets about the previous day's highlights. Start tweeting your questions the evening before or during the live Q&A (Sunday to Tuesday; 08:00 – 08:20) using #ESCBreakfastBuzz and see Prof. Gibson's responses via @escardio.

Let's get the conversation going Tweeples: create a Twitterstorm and get Trending! #ESCCongress

Cardiology in 4 days: Pick and mix



Prof. Stephan Achenbach

A big hit at ESC Congress 2018, the 'Cardiology in 4 days' track returns for a second year. Starting today, 14 non-overlapping symposia will give a comprehensive picture of the current clinical standards across the entire field of cardiology. From prevention, through coronary artery disease and acute coronary syndromes, to very advanced heart failure and even sports cardiology, these sessions are ideal for those wanting to refresh their knowledge or to learn about an area outside their specialty.

ESC President-Elect, Professor Stephan Achenbach (Friedrich Alexander University, Erlangen, Germany), is very enthusiastic about

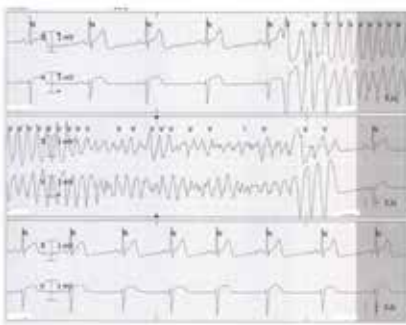
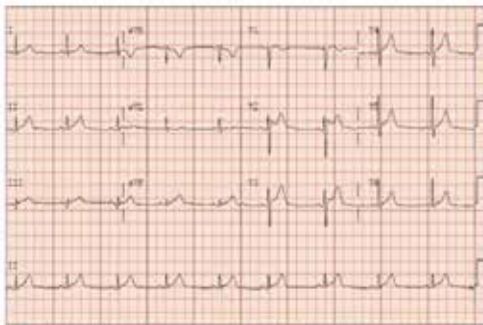
this strand of the ESC Congress 2019 Scientific Programme. "The talks are designed with the needs of the clinically practising cardiologist in mind. Providing a really good overview of current management approaches in each area of cardiology, they also act as the perfect base for delegates who then want to find out more in-depth information or the latest cutting-edge science from other congress sessions." These mobile app interactive sessions encourage delegate participation to help reinforce knowledge. And the speakers have been specially selected. "As well as being top experts who know about the latest research in the field, they are clinically active and understand the importance of presenting from the clinical perspective," says Prof. Achenbach. "They are also great teachers and we are confident that the talks will be both easy to follow and fun to attend."

"You can come to them all or just pick ones that you are really interested in," says Prof. Achenbach. "Table d'hôte or à la carte—the choice is yours."

Case Corner

A 38-year-old male was diagnosed with Guillain Barre Syndrome. ECG on admission showed ST elevation in lead V2-V3 with incomplete right bundle branch block pattern (left panel). Early the next morning, runs of non-sustained polymorphic VT were noticed on telemetry monitor (right panel).

Submitted by Doctor Mosaad El Banna (Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates) (FP# 270)



**What is your diagnosis?
How would you treat this patient?**

Join the discussion on this and other interesting cases:

Ventricular arrhythmias and sudden cardiac death
Today, 11:00 – 12:30; Case Corner 1 – Poster Area

The ESC data trail – the virtuous circle

ESC is committed to evidence-based medicine. Its registries, guidelines, education and advocacy, are all founded on a data trail of evidence. The different activities—collecting, using, disseminating and learning from data—form a feedback loop when effectively connected. But how is ESC achieving this ‘virtuous circle’? And how can these elements be combined to improve patient care?

In collecting data, ESC registries are at the sharp end of the process, explains ESC EURObservational Research Programme Oversight Committee Chair, Professor Chris P. Gale (University of Leeds, Leeds, UK). “The ESC has an international footprint in the delivery of bespoke registries concerning common diseases and interventions, as well as rare diseases. From these, we are aware of important discrepancies between guideline recommendations and clinical practice, which often translate into variation in clinical outcomes. We would like to close these gaps, and we are currently developing quality indicators that map to the ESC Clinical Practice Guidelines. This will help local healthcare professionals, researchers and the ESC alike quantify the quality of care provided.

A major advantage of the ESC data trail is that it has wide geographic coverage, in terms of its 57 member countries. With such an engaged community, we can generate critical information at scale, and relatively quickly, in response to specific questions. This unique international network is also central to the layering of data collected in the ESC Atlas of Cardiology, which maps gaps and inequalities in the delivery of healthcare across more than 40 countries.”

ESC Committee for Practice Guidelines Chair, Professor Stephan Windecker (Inselspital, University of Bern, Bern, Switzerland) says, “ESC guideline recommendations are the result of the careful appraisal of data derived from clinical trials and registries. However, they are only valuable if they are implemented into the daily clinical care that we give to our patients. The ESC is a major provider of both guidelines and the educational programmes used to underpin guideline implementation, and changes in medical practice in response to guidelines can be assessed in ongoing registries. For added value, the ESC made a conscious effort to interlink guidelines, education and registries, rather than having them as separate entities—this is a unique feature of the ESC and enables a learning system.”

The importance of education and dissemination cannot be overstated and that is one reason why we are here at ESC Congress 2019. The ESC is also generating its own data on education delivery. ESC Education Committee Chair, Professor Paulus Kirchhof (University of Birmingham, Birmingham, UK) explains, “To investigate the impact of an educational intervention on patient treatment, the multicentre randomised trial, STEER-AF, was initiated in a unique cooperation between the ESC Education Committee, the European Heart Rhythm Association and the ESC Council on Stroke. This will help us to gauge the effectiveness of our education delivery to confirm its quality.” Continually looking for new ways to reach healthcare professionals, the ESC is developing an online platform to provide its entire educational content ‘24-7-365’ and is also creating programmes to help cardiology trainees track their practical experience. Beyond healthcare professionals, the ESC is reaching out directly to patients, with educational tools such as the patient-facing app for the 2016 ESC guidelines for atrial fibrillation and patient websites such as heartfailurematters.org, afibmatters.org and the newly launched healthy-heart.org.

But does the ESC data trail matter when it comes to patient advocacy? “Yes! Everything we do in our communication with politicians and the public must be backed up with accurate scientific data,” says ESC Advocacy Committee Chair, Professor Lina Badimon (IR-Hospital de la Santa Creu I Sant Pau, Barcelona, Spain). “ESC initiatives, such as the ESC Atlas of Cardiology, are very important because, across countries, they give us data on disease states, current treatment practices and on the use of new devices and technologies. This information is crucial for helping to illustrate intercountry differences to politicians and to support funding applications for research to improve management. We are currently using Atlas data for interactions with the European Parliament.”

The experts agree that the ESC is not alone in trying to make routine clinical data available for quality improvement and clinical research, but what makes the ESC data trail so special is that it forms a complete circle, with the ESC striving to generate and update data on current treatment and then modify its activities in line with the new evidence.

Find out more about ESC research, guidelines, education and advocacy at the ESC Stand.

Saturday, August 31, 2019
15:30-16:45
Sarajevo – Village 5

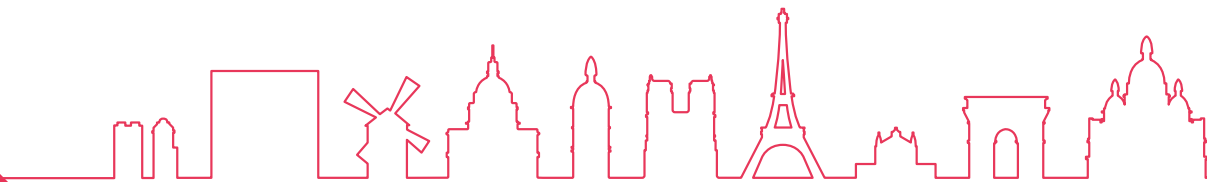
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