



Annual Report
2019

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About Us

Who we are

The European Society of Cardiology (ESC) is a not-for-profit medical society. We are a member focused, volunteer-led institution, where all our activities are driven by healthcare professionals, for healthcare professionals, healthcare authorities and patients. The volunteers are supported by a team of ESC staff, based at the European Heart House in France and the European Heart Agency in Brussels.

Our mission: To reduce the burden of cardiovascular disease (CVD)

We are a global network that covers the full spectrum of cardiology

Our diversity is our strength

100,000

scientists, clinicians,
nurses & allied
professions

57

**National Cardiac
Societies**

from Europe and the
Mediterranean basin

47

**Affiliated Cardiac
Societies**

from around
the globe

28

**Subspecialty
Communities**



Acute Cardiovascular
Care Association



ACNAP
Association of Cardiovascular
Nursing & Allied Professions



EACVI
European Association of
Cardiovascular Imaging



EAPC
European Association
of Preventive Cardiology



EAPCI
European Association of
Percutaneous Cardiovascular
Interventions



EHRA
European Heart
Rhythm Association



HFA
Heart Failure
Association



ESC
Councils



ESC
Working Groups

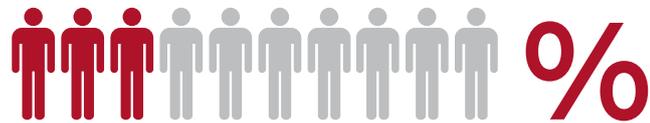
Why We Exist

There has been significant progress in the management of cardiovascular disease, but our job is not done.

Cardiovascular disease remains the world's **number 1** killer

Source: World Health Organisation

Globally CVD claims
17.9 million lives
each year - that's
31% of all deaths



Source: World Health Organisation

11 million new cases
of CVD per year
in **ESC member**
countries



Source: ESC Atlas of Cardiology

83.5 million people
are living with CVD
in ESC member
countries



Source: ESC Atlas of Cardiology

What We Do

The ESC coordinates observational registries, creates clinical practice guidelines and organises and endorses education programmes. We disseminate robust and independent science through our congresses, journals and digital tools such as mobile apps and our website. We're the voice of the cardiology community when advocating for heart-health policies, regulation and funding. All of these things enable us to:

- Identify cardiovascular trends
- Address inequalities
- Share best practices to improve standards of care for patients
- Provide high quality, evidence-based science

Five pillars of ESC activities



Congress

Bringing together the best minds and the best science in cardiovascular medicine



Education

Delivering world-class learning and professional development



Research

Encouraging excellence and managing innovation



Advocacy

Leveraging our knowledge, network and influence to shape an environment favourable to cardiovascular health



Membership

Improving members' access to the latest science, best practices and networking



Ethical Integrity

The ESC operates a Declaration of Interest (DOI) policy. The 2,000 cardiologist volunteers are required to complete an annual DOI. This policy can be reviewed at www.escardio.org/DOI. We also adhere to the Alliance for Biomedical Research in Europe Code of Conduct.

Our values

ESC values guide our decision-making, actions and how we conduct our interactions with partners. ESC volunteers and staff commit to:

Trustworthiness | Transparency | Helpfulness | Excellence

How we're funded

A number of ESC activities are fund-generating, such as our congresses, journals and membership. Income from these activities is invested in everything else the ESC does, including the development of our guidelines, education, research, grants and advocacy. All of our activities support healthcare professionals in their daily practice to improve patient care.

President's Report

At the Spring Summit of the European Society of Cardiology in March, I shared this quote:

“Every organization with the ability to inspire starts with a person or small group of people who were inspired to do something bigger than themselves.”
Simon Sinek

With this, I wanted to pay tribute to the pioneers who founded the ESC, but also provide some insight into how far we have come since then.

In 1950, 14 National Cardiac Societies came together with one mission: to reduce the burden of cardiovascular disease in Europe. They did this by sharing innovation and best practice at a congress held every four years. Today, 57 National Cardiac Societies come together at that same meeting, which has become the world's leading cardiovascular annual congress, attracting more than 30,000 healthcare professionals. But ESC Congress is just one of dozens of ESC activities aimed at fighting cardiovascular disease.

Last year our flagship scientific publication, the *European Heart Journal*, achieved a record Impact Factor; our education portfolio successfully delivered post-graduate courses in collaboration with some of the world's leading universities; and our advocacy efforts achieved tangible results in public health policy, medical device regulation and funding for cardiovascular research.

The following highlights from the last 12 months demonstrate that almost 70 years later we remain an innovative society, focussed on the future.

Transparency and Trustworthiness

Dissemination of balanced and unbiased evidence is at the heart of the ESC. To this end, we revised our declaration of interest (DOI) policy. The revised policy aims to achieve greater transparency and clarity on how a possible conflict is assessed and adjudicated at every level of the society. A DOI is required from each of the 2,000 expert volunteers involved in the ESC activities. The document is available at www.escardio.org/DOI.

Research - strategy and funding

In 2018, the ESC created a new Research and Grants Committee. Its mission is to recommend and implement an ESC strategy for supporting research and the training of future cardiovascular scientists. This new committee was also responsible for awarding the 2018 ESC training and research grants: 28 grants worth a total €540,625.

In March of this year we announced the launch of a new federation of nationwide registries: EuroHeart - an initiative for continuous quality-of-care improvement based on individual patient data. Such registries are ongoing in some countries (e.g. in Sweden and the UK) and the implementation of such a project, with the collaboration of ESC member countries, will allow us to conduct observational and randomised research.

Digital Health

New health technologies will revolutionise healthcare and the way physicians interact with their patients. At ESC Congress a dedicated Digital Health Area highlighted advances in everything from mobile apps to Big Data. Sessions in this area were overwhelmingly popular and dominated the conversations on social media. The next step is to influence ways in which digital health should impact cardiology. Over the last 12 months we've been developing the first ESC Digital Summit, which will move us towards that goal. The Summit will take place on 5 and 6 October 2019 in Tallinn, Estonia - the epicentre of digital health innovation.

Patient Engagement

We believe that a patient's perspective on how heart disease is managed is critical to improving and developing our scientific and educational activities. In 2018, we launched the first ESC Patient Forum. The patients took part in ESC Congress 2018 and 'ESC Scientific Week' to share their views on ESC education, clinical practice guidelines and registry programmes. Working with the Patient Forum and other patient organisations also provides us with new insights that we can share with policymakers in Brussels.

Changes within the ESC

At ESC Congress 2018 we announced several important advances, including the creation of the following:

- Association of Cardiovascular Nursing and Allied Professions (ACNAP)
- ESC Council on Cardio-Oncology
- ESC Statutes Revision Task Force

Through ACNAP, nurses and allied professions are now represented on the ESC Board and are more closely involved with the development of ESC strategy. The new Council will help the ESC better understand and manage the increasing incidence of cardiovascular disease in oncology patients.

The update to our statutes—the bedrock of all ESC activities—is a significant and necessary undertaking to ensure full transparency and coherence in our mission.

Supporting our Members

Last year the ESC presented results from a survey (C-Change) of its members that highlighted **one in three people feel burnout at work**. As leaders in cardiology, the ESC has a responsibility to support colleagues and to create work environments that enable them to do their best. Our 2019 Spring Summit focussed on leadership and how each of us can support our team members by fighting against discrimination, increasing transparency and supporting the need for a better work-life balance. It was a step in the right direction, but much more needs to be done.

I would like to conclude by evoking the ESC values, as defined by the ESC Board at the outset of my presidency:

Trustworthiness, Transparency, Helpfulness, Excellence

These are the values that guide us in our decisions and actions each and every day. They are the values that will help the ESC continue to grow and guide cardiovascular professionals on ways to provide better care to their patients. The values that will inspire us to achieve something bigger than ourselves; to help people around the world live longer, healthier lives.

I thank the ESC's Board and Committees, National Cardiac Society Presidents and all those who give their time, expertise and unfailing energy in the pursuit of our common goals.



Prof. Barbara Casadei, FESC
ESC President 2018 - 2020

European Society of Cardiology Board 2018 - 2020

Elected voting members

President

Prof. Barbara Casadei, United Kingdom

President-Elect

Prof. Stephan Achenbach, Germany
Cardiovascular Round Table

Secretary/Treasurer

Prof. Dan Atar, Norway

Vice-Presidents

Prof. Cecilia Linde, Sweden

Working Groups and Councils, Women in ESC, ESC Membership and Young Communities

Prof. Franz Weidinger, Austria

National Cardiac Societies and Advocacy

Prof. Jose Luis Zamorano, Spain

National Cardiac Societies and Global Affairs

Councillors

Prof. David Erlinge, Sweden

E-communication, Media and Registries

Prof. Stephan Gielen, Germany

Advocacy and Young Communities

Prof. Michael Glikson, Israel

Congress Programme Committee, ESC Membership, Women in ESC/Diversity

Prof. Bernard Lung, France

Congress Programme Committee, Clinical Practice Guidelines, Media

Prof. Julia Mascherbauer, Austria

Cardiovascular Round Table, Young Communities, Women in ESC/Diversity

Prof. Zuzana Motovska, Czech Republic

E-communications, ESC Membership

Ex-Officio voting members

Past-President

Prof. Jeroen Bax, Netherlands - *Chairman of the Nominating Committee*

Associations Representatives

Prof. Susanna Price, United Kingdom - *Acute Cardiovascular Care Association Representative*

Prof. Tina Hansen, Denmark - *ACNAP Representative*

Prof. Thor Edvardsen, Norway - *EACVI Representative*

Prof. Paul Dendale, Belgium - *EAPC Representative*

Prof. Andreas Baumbach, United Kingdom - *EAPCI Representative*

Prof. Hein Heidbuchel, Belgium - *EHRA Representative*

Prof. Petar Seferovic, Serbia - *HFA Representative*



Non-voting members

Prof. Lina Badimon, Spain - *Advocacy*

Prof. Sarah Clarke, United Kingdom - *Media*

Prof. Donna Fitzsimons, Ireland - *Patient Engagement*

Prof. Christopher Peter Gale, United Kingdom - *EUObservational Research Programme of Registries*

Prof. Ian Graham, Ireland - *Statutes Revision Task Force*

Prof. Diederick Grobbee, Netherlands - *Global Affairs*

Prof. Tomasz Guzik, United Kingdom - *Research and Grants*

Prof. Paulus Kirchhof, United Kingdom - *Education*

Prof. Thomas Luescher, Switzerland - *Publications*

Prof. Gunnar Olsson, Sweden - *Advisor*

Prof. Silvia Priori, Italy - *Congress Programme Committee (Chair)*

Prof. Marco Roffi, Switzerland - *Congress Programme Committee (Chair)*

Mr. Jonathan Sellors, United Kingdom - *Advisor*

Prof. Stephan Windecker, Switzerland - *Clinical Practice Guidelines*

Mrs. Isabel Bardinnet, France - *Chief Executive Officer*

Mrs. Nathalie Lefebvre, France - *ESC Chief Financial Officer*

Mrs. Marina Ximeris, France - *ESC Board Secretary*



ESC Activity Reports



Membership

Membership is one of the 5 pillars of the ESC strategic plan 2016-2020 and its scheme is based on the concept of providing access to scientific and educational resources for the continuing professional development of healthcare professionals worldwide while fulfilling the ESC mission.

ESC Membership Committee

A new ESC Membership Board Committee was created in August 2018 and has been focusing on five priority topics addressed by dedicated sub-groups:

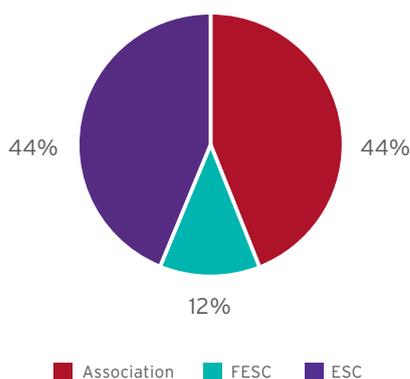
- Socio-economic barriers in low & middle income (LMI) countries
- Innovative products/services
- Member recruitment & retention
- Young members and women cardiologists
- Simplification of membership scheme (with Associations)

ESC membership

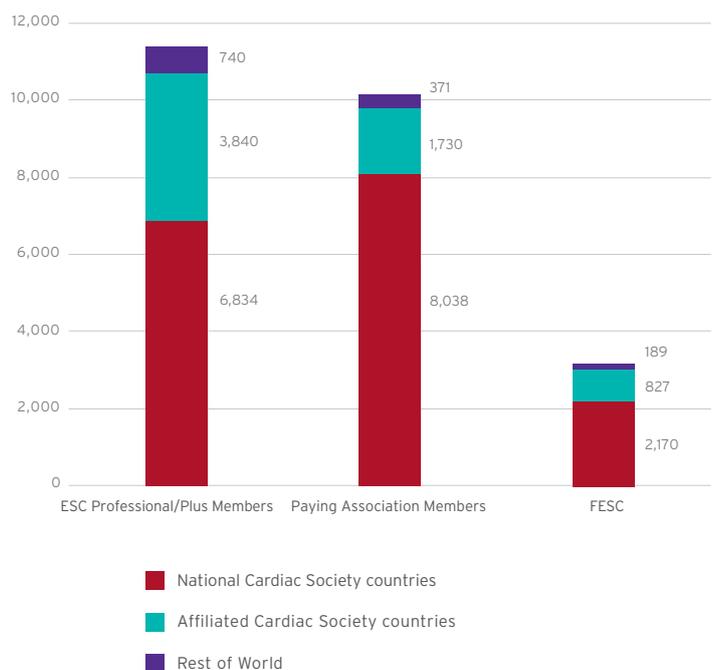
20,500 paying members

scientists, clinicians, nurses and allied professions from around the world

Paid Memberships (31 March 2019)



Paid Memberships by Region





Exclusive networking activities created an incomparable sense of belonging among the ESC Community at ESC Congress.

Young Cardiologists



The ESC Young Community comprises 12 groups of young cardiologists representing general cardiology (Cardiologists of Tomorrow, CoT) and 11 subspecialties.

Acute Cardiovascular Care

Nursing and Allied Professions - **NEW**

Electrophysiology

Intervention

Basic Science

Imaging

Heart Failure

Prevention

Thrombosis

Pharmacotherapy

Myocardial and Pericardial Diseases

The ESC undertook the following activities to support these groups:

ESC Congress 2018

- **FREE registrations: 912 cardiologists** under the age of 40 (758 nominated by National Cardiac Societies and 154 by Affiliated Cardiac Societies) attended **ESC Congress 2018 with free registration** and free ESC Professional Membership through the ESC's Cardiologists of Tomorrow Programme. The ESC offers 25 free registrations to each of its 57 National Cardiac Societies and 47 Affiliated Cardiac Societies
- A special registration fee was offered to those 35 and under and to abstract presenters 35 and under
- Dedicated sessions held for Cardiologists of Tomorrow and Scientists of Tomorrow
- Clinical Case sessions provided the opportunity to present science and to network
- 6 Young Investigator Award (YIA) winners were provided with related financial support from the ESC

Spring Summit 2019

Young leaders from all National Cardiac Societies were invited for the second consecutive year to join this important event at the European Heart House. 27 young cardiologists actively participated in the event (20 NCS young leaders, 4 sub-specialty young leaders and 3 CoT Nucleus members).

ESC Professional Membership

The ESC supports cardiologists in training. A particular focus is put on career development by facilitating their access to a wide range of scientific and educational resources. ESC Professional Membership is available at a significantly reduced fee of €30 as well as combined memberships with any ESC Association for just €72.

Congresses



We are passionate about congresses because they are powerful platforms from which to disseminate highly relevant research findings and update clinical practice. Knowledge sharing in this way can have a profound impact on patient care and is at the heart of our mission.

We are however mindful of the challenges facing all medical congress organisers. Busy and underfunded healthcare professionals must also contend with mounting regulatory restrictions. These factors are barriers to attending congresses which are critical to cardiologists' ongoing professional development and lifelong learning.

Despite these challenges, ESC congresses continue to attract high numbers of delegates, which is testament to our efforts to provide outstanding meetings that are best in class. We do this by:

- Applying robust quality checks to ensure the independence and excellence of our content
- Constantly innovating so our content is delivered in formats that are engaging and interactive
- Investing in our members by providing congress educational grants

In the reporting period, the ESC organised **seven subspecialty congresses**, as well as its flagship meeting, **ESC Congress, in Munich, Germany**. A total of 51,608 participants from **155 different countries** took part in these events, underlining the continued value of medical congresses for the global cardiology community.

Knowledge sharing in this way can have a profound impact on patient care and is at the heart of our mission.

ESC Congress 2018

Annual congress of the European Society of Cardiology

- Participants: **32,858**
- Abstracts submitted: **11,029**
- ESC scientific programme sessions: **586**



2018

APRIL

EuroPrevent 2018

Annual congress of the European Association of Preventive Cardiology

- Participants: **1,486**
- Abstracts submitted: **629**
- ESC scientific programme sessions: **59**



FCVB 2018

Frontiers in Cardiovascular Biology
Annual congress of the ESC Council on Basic Cardiovascular Science

- Participants: **618**
- Abstracts submitted: **485**
- ESC scientific programme sessions: **41**

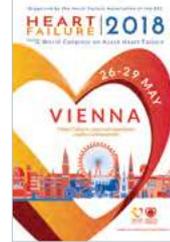


MAY

Heart Failure 2018

Annual congress of the Heart Failure Association of the ESC

- Participants: **5,861**
- Abstracts submitted: **1,844**
- ESC scientific programme sessions: **178**



JUNE

EuroHeartCare 2018

Annual congress of the ESC Council on Cardiovascular Nursing and Allied Professions

- Participants: **619**
- Abstracts submitted: **250**
- ESC scientific programme sessions: **18**



DECEMBER

EuroEcho-Imaging 2018

Annual meeting of the European Association of Cardiovascular Imaging

- Participants: **4,216**
- Abstracts submitted: **1,105**
- ESC scientific programme sessions: **148**



2019

MARCH

Acute Cardiovascular Care 2019

Annual meeting of the Acute Cardiovascular Care Association

- Participants: **1,016**
- Abstracts submitted: **817**
- ESC scientific programme sessions: **60**



EHRA Congress 2019

Annual meeting of the European Heart Rhythm Association

- Participants: **5,552**
- Abstracts submitted: **1,403**
- ESC scientific programme sessions: **101**





Research

ESC Registries: EURObservational Research Programme (EORP)

EORP's major goal is to record and evaluate medical practice in Europe and around the world, based on the collection of real-life data. This work is conducted with the ESC's unique network of 28 subspecialty communities, 57 National Cardiac Societies and 47 Affiliated Cardiac Societies.

EORP is now demonstrating its potential with the implementation of **21 European registries** covering a large spectrum of cardiovascular diseases:

- Common Diseases to assess the epidemiology and management of diseases with a major impact on public health
- Intervention to assess the impact of interventional procedures, imaging techniques and therapeutic tools/diagnostic procedures
- Rare Diseases to assess the epidemiology and management of orphan, rare and complex diseases
- Cardiovascular Prevention, including a structured approach to prevent disease (e.g. risk factors, epidemiology and preventative measures)



Achievements in the reporting period

- **Launch of six new registries:**
 - AFIII (Atrial Fibrillation III, enrolment started in June 2018)
 - HFIII (Heart Failure III)
 - ACS_NSTEMI
 - Valve Durability_TAVI (Transcatheter Aortic Valve Implantation)
 - EURECA (European Registry on Cardiovascular Imaging)
 - SCAD (Spontaneous Coronary Artery Dissection)
- **17 papers published (total 121 papers published since 2009):**
 - Atrial Fibrillation (AFgen LT and AFA)
 - Heart Failure (HF LT)
 - Cardiomyopathy (CMY)
 - Pregnancy and CVD (ROPAC)
 - Prevention (EUROASPIRE IV and V)
 - ESC/EORP-EHRA Registry ELECTRa (European Lead Extraction ConTRolled)
- **16 ongoing publications:**
Submitted to journals and awaiting results
- **5 congresses - sessions and abstracts:**
Heart Failure, EHRA, EuroPrevent, EuroEcho, ESC Congress

Atlas of Cardiology

The ESC Atlas of Cardiology is a unique collection of qualitative and quantitative data, mapping cardiovascular health economics across ESC member countries. This comprehensive array of cardiovascular disease statistics covers major risk factors for cardiovascular disease, disease prevalence and mortality in each participating country.

In the reporting period, Atlas data was successfully updated with the participation of 46 National Cardiac Societies including new data on health infrastructure and cardiovascular services across 75 indicators. Other information was collected from the World Health Organisation (WHO), the Organisation for Economic Co-operation and Development (OECD), the Institute for Health Metrics and Evaluation, and the World Bank.

Results from this update will be published in the second Cardiovascular Disease Statistics paper in the *European Heart Journal* in November 2019.

In addition, the ESC initiated two subspecialty Atlases:

- **The Heart Failure Atlas project**, containing data on Heart Failure epidemiology and resources collected from 42 National Societies of Heart Failure.
- **The EAPCI White Book**, which represents the first systematic survey on interventional cardiology practice in Europe aimed at disclosing healthcare gaps and inequalities across countries.

The first publications from each of these subspecialty editions are in the pipeline.

EU-Funded Projects

In the reporting period, the ESC has been a partner in seven European projects including two new projects:

- **euCanSHare**
- **Young50**



ESC Research Grants

ESC Research Grants are given to medical graduates and researchers to undertake specialised cardiovascular research in an ESC member country centre of excellence.

In 2018: • 7 ESC Research Grants awarded

ESC subspecialty communities organised 20 live teaching courses around Europe.





Education

ESC Education Conference

The dialogue between the National Directors of Training & Education and the ESC Education Committee manages the development of needs-driven educational activities relevant to healthcare professionals in each country. The 6th ESC Education Conference was held at the European Heart House in Sophia Antipolis, France on 30 and 31 January 2019.

**Ninety participants from 45 ESC member countries gathered to discuss:
Educated healthcare professionals + educated patients = Effective shared care.**

New in the reporting period

- The update of the ESC Core Curriculum for the Cardiologist was initiated. This will be the 4th edition of the European Training framework (2006/2008/2013). The updated Core Curriculum is planned to be released in 2020.
- The ESC Live Educational Events Endorsement Policy was developed and deployed across the ESC constituent bodies. The objective was to ensure consistency and structure in endorsement requests received, while at the same time protecting the ESC brand and ensuring that the quality of ESC Endorsed programming is compliant with our quality standards.

Online learning

- **ESC Webinar Series in general cardiology and subspecialties of cardiology**
In addition to the 10 webinars in General Cardiology focusing on recently published ESC Clinical Practice Guidelines, the ESC's subspecialty communities delivered 45 webinars with an average of 300 participants per live session in the reporting period.
- **ESC eLearning Platform**
Seven areas of study are offered, including general cardiology, imaging, arrhythmia, acute care, PCI, prevention and heart failure. More than 3,300 unique users in 2018 engaged with the 800+ courses on the platform. Now that the ESC eLearning Platform is accredited by the UEMS EACCME®, nearly 6,000 CME certificates have been distributed.
- **ESC Clinical Case Gallery**
Over 120 clinical cases were reviewed and published on the ESC website between April 2018 and March 2019, covering a large variety of cardiology topics (imaging, arrhythmia, VHD, congenital heart diseases...)
The call for clinical cases for ESC Congress 2019 together with World Congress of Cardiology was hosted through the ESC Congress Clinical Case Gallery (649 cases were submitted in 2019 versus 575 in 2018).
- **Guidelines into Practice Tracks**
Five new tracks were published in 2018, bringing this family of educational tools to 25+ tracks. Guidelines into Practice Tracks are a great support to teachers and trainees looking for essential content, from the Clinical Practice Guidelines overview presentation to clinical presentations.

Face-to-face learning

European Heart Academy

Championing excellence and innovation by fostering future leaders in cardiovascular medicine.

In collaboration with renowned universities, the European Heart Academy prepares cardiology professionals to become tomorrow's leaders in their field by providing quality, innovative executive programmes.

The Academy runs three successful programmes leading to recognised postgraduate degrees:

- **Master of Science (MSc) in Health Economics, Outcomes and Management in Cardiovascular Sciences in collaboration with the London School of Economics**
The programme counts more than 70 students in training from 32 countries.
- **Diploma of Advanced Studies (DAS) in Cardiac Arrhythmia Management in collaboration with Maastricht University and the European Heart Rhythm Association (EHRA).**
With more than 30 participants in training, it is a unique programme combining state-of-the-art cardiovascular electrophysiology, health economics and leadership coaching.
- **Certificate of Advanced Studies (CAS) in Heart Failure developed in collaboration with the University of Zurich, University Hospital Zurich and the ESC Heart Failure Association of the ESC (HFA)**
More than 60 students are currently participating in the programme, to improve their clinical skills in diagnostic and increase their therapeutic knowledge.



ESC subspecialty courses

In addition to postgraduate courses, ESC subspecialty communities organised 20 live teaching courses at the European Heart House and at other centres around Europe.

Assessment and evaluation programmes

Certification activity

In 2018, the ESC and ESC Associations delivered 17 exams to 1,900 candidates.

The European Exam in General Cardiology (EEGC) is growing steadily in popularity, expanding from 14 to 16 participating countries. In June 2018, 484 candidates sat the examination, and for the first time, a specific UK exam was delivered to comply with the General Medical Council (GMC) regulations. This is a successful collaborative initiative between NCS, ESC and UEMS Cardiac Section.



Quality Improvement Programmes, Research in CME and Evidence-based Education

The ESC Education Committee delivers educational interventions that improve CV outcomes. This requires a systematic approach to identifying gaps in practice and addressing them through comprehensive instructional programmes. The aim is to evaluate the impact of these educational interventions and report the findings in peer-reviewed journals. A programme on Stroke Prevention and Management in Atrial Fibrillation is currently under construction. The evidence-based blended learning educational intervention will be deployed in France, Germany, Italy, Poland, Spain and the United Kingdom.

● **ESC Training Grants**

ESC Training and Nursing Grants allow young cardiologists and nurses to train in centres of excellence in a country other than their own.

In 2018:

- **19 Training Grants**
- **2 Nursing Grants**

Grants and Scholarships



The ESC is committed to supporting the cardiology community through a range of grants and fellowships. These are designed to support training and research in centres of excellence, as well as participation in educational courses and congresses.

In the reporting period, the ESC gave a total €1,651,356 in grants to the cardiology community.

Grant type	Total in €
ESC Research and Training Grants	€540,625
Scholarships for MSc in Health Economics with LSE London School of Economics	€242,349
Grants for Women Transforming Leadership Programme with Saïd Business School, Oxford	€52,302
ESC Congress Awards	€39,000
ESC Association, Council and Working Group grants and awards*	€400,980
Subspecialty congress awards	€132,600
EHRA Congress educational grants **	€193,500
Board donations for charities European Heart for Children	€50,000
TOTAL	€1,651,356

* A total of €130,000 (32%) was supported by industry in the form of unrestricted educational grants

**Supporting EHRA members to attend EHRA 2019 congress

Publications

The *European Heart Journal* (EHJ) has maintained its top journal ranking in the Cardiac & Cardiovascular Systems category with a record **Impact Factor (IF) of 23.425**. *European Journal of Heart Failure*, *European Heart Journal - Cardiovascular Imaging*, and the *European Journal of Preventive Cardiology* also established record IF ratings. The quality of the ESC's journal portfolio has been further enhanced by the acceptance for inclusion in the citation index of two more recent journals, *European Heart Journal - Cardiovascular Pharmacotherapy* and *European Heart Journal - Acute Cardiovascular Care*, which will receive their first IF in June 2019.

Online journal usage rose by an impressive **17.5%, to 15.8 million** full text article downloads in the 2018 calendar year.

Significant increase
in the use of the
ESC Journals'
Twitter channel
[@ESC_Journals](#)



250% increase
in numbers of followers

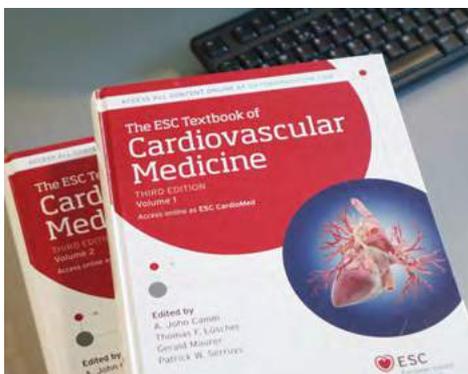


40% uplift
in the number of times
journal tweets were seen



60% increase
in our audience engagement

Textbooks



2018 saw the publication of the new edition of the ESC flagship book, *The ESC Textbook of Cardiovascular Medicine (3rd Edition)*, and the launch of its continually updated online companion, *ESC CardioMed*.

Three new subspecialty textbooks were also released:

- *The ESC Textbook of Cardiovascular Development*
- *The ESC Textbook of Sports Cardiology*
- *The EACVI Textbook of Cardiovascular Magnetic Resonance*

Clinical Practice Guidelines

The Committee for Practice Guidelines is responsible for the development of the ESC Clinical Practice Guidelines and for ensuring their quality and accuracy. Bringing together the expertise of representatives from ESC subspecialties, other medical specialties and National Cardiac Societies, ESC Guidelines are a trusted reference on best practices for practitioners worldwide.

2019 marks the ESC Clinical Practice Guidelines' 25th anniversary.



ESC Clinical Practice Guidelines published at ESC Congress 2018

- Syncope
Chairpersons: Michele Brignole & Angel Moya
- Fourth Universal Definition of Myocardial Infarction and Myocardial Injury
Chairpersons: Kristian Thygesen, Joseph Alpert & Harvey D. White
- Myocardial Revascularization
Chairpersons: Franz Joseph Neumann & Miguel Sousa Uva
- CVD During Pregnancy
Chairpersons: Vera Regitz-Zagrosek & Jolien Roos-Hesselink
- Arterial Hypertension
Chairpersons: Bryan Williams & Giuseppe Mancía

The 2018 guidelines were downloaded more than 1.2 million times between end of August 2018 and end of March 2019.

Clinical Practice Guideline Downloads

Title	2018	2019	Total
2018 ESC Guidelines for the diagnosis and management of syncope	320,774	44,916	365,690
2018 ESC/ESH Guidelines for the management of arterial hypertension	299,436	120,228	419,664
2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy	72,972	30,801	103,773
2018 ESC/EACTS Guidelines on myocardial revascularization	148,453	58,805	207,258
Fourth universal definition of myocardial infarction (2018)	143,173	53,821	196,994
TOTAL FROM AUGUST 2018 TO MARCH 2019			1,293,379

ESC Pocket Guidelines App

The ESC Pocket Guidelines mobile application is available at no cost on all application platforms. It contains algorithms, calculators, charts and scores to support all healthcare professionals working in the cardiovascular field in their clinical decision-making. The app is updated whenever new ESC Clinical Practice Guidelines are published.





Advocacy

The ESC leverages the knowledge, network and influence of the cardiology profession to promote policy, regulation and partnerships that advance cardiovascular science, support high quality healthcare, and encourage evidence-based decision making.

In the reporting period, ESC advocacy activities included:

- **Advocacy and the ESC community**

Whilst the ESC undertakes advocacy action at the European level, National Cardiac Societies have a critical role to play at a national level.

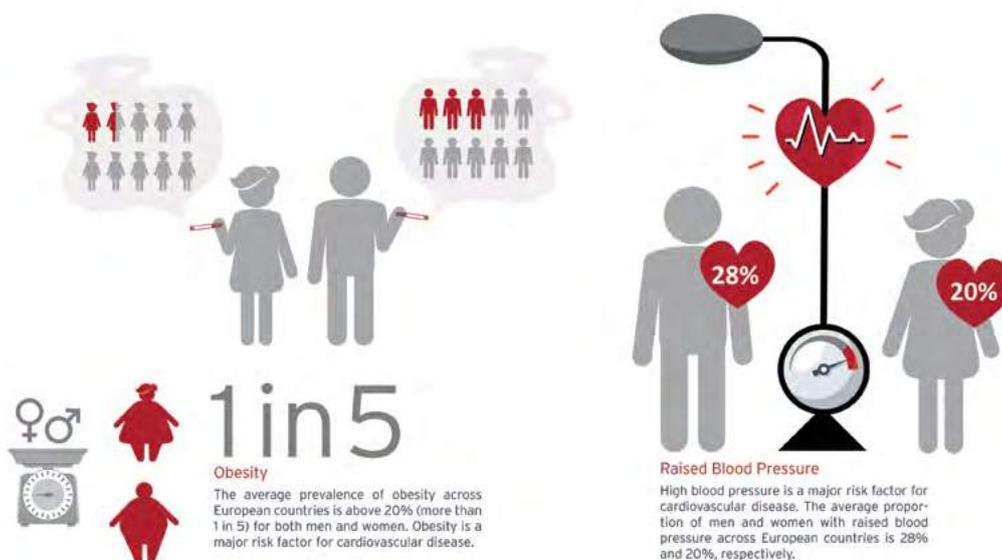
With a view to **involving more ESC member National Cardiac Societies in advocacy activities**, the Chair of the ESC Advocacy Committee met with leaders of National Cardiac Societies (NCS) to discuss how the ESC and NCS can join forces to advocate for cardiovascular health. There was consensus that CVD is no longer perceived as a priority by decision-makers and that urgent and bold action is needed to place CVD high on policymakers' agenda.

Regular meetings were initiated with the leadership and advocacy leads of ESC Associations, in view of ensuring effective communication between the Advocacy Committee and the ESC specialty groups and to foster coherence across the range of advocacy activities devised by the ESC community.

A periodic **ESC Advocacy Bulletin** was also launched to better inform the ESC community about the main ESC Advocacy activities.

- **Advocating for CVD to become a priority**

To demonstrate the need for policy action, ESC Advocacy used ESC Atlas of Cardiology data to produce a series of **'Cardiovascular Realities in Europe' infographics**, revealing wide geographic disparities and social inequalities. ESC Advocacy will continue to use Atlas data to raise the profile of cardiovascular health on the EU policy agenda.



The image shows several European Union flags flying on tall, silver poles in front of a modern building with a grid-like facade of windows. The flags are blue with twelve yellow stars arranged in a circle. The building's facade is composed of horizontal and vertical lines, creating a grid pattern. The lighting is bright, suggesting a sunny day.

To demonstrate the need for policy action, ESC Advocacy used ESC Atlas of Cardiology data.

ESC Advocacy created a dedicated **"EU Presidencies Task Force"** to leverage the influence of the cardiology community and push for EU action to tackle CVD. The first initiative of the Task Force was the successful engagement with the Austrian Ministry of Health for the Austrian Presidency of the European Union Ministerial Conference on Food and Health in November 2018.

- **Driving excellence in research and innovation**

The burden of CVD is immense and greater than any other condition, yet it receives less research funding than other clinical areas, notably cancer. To act upon this discrepancy, we joined forces with the ERA-CVD network to develop an advocacy document, **'Strategic Research Agenda for CVD in Europe'**. The paper provides a blueprint on how to combat CVD through basic and translational research. The document will be disseminated and promoted widely to EU and national decision-makers.

As a member of the European Commission's eHealth Stakeholder group, the ESC has continued to **provide expert advice for the shaping of EU policy on digital health**. This includes contributing to the draft of three policy reports covering the following topics: care continuum, citizen and health data, and reimbursement of digital health products and solutions. These reports provide the European Commission with a series of recommendations to move eHealth forward at the EU level.

The European Commission, together with a group of national research funders, have been pushing for **open access publishing** of all research results they fund by 2020. This move is expected to have significant implications for learned societies like the ESC that manage and publish academic journals. ESC Advocacy has worked with the BioMed Alliance in Europe - representing 30 European medical societies - to press for a longer transition period in order to mitigate implications and ensure a successful move to open access.

- **Regulatory affairs: guaranteeing timely access to safe, innovative and efficacious health technologies**

Analysing the policy and regulatory environment to assess challenges and opportunities is an integral part of advocacy. Since 2010, the ESC has been actively following the **medical devices legislative process** within the EU. Today, ESC experts take part in five European Commission expert groups preparing the implementation of the new EU regulatory framework. ESC also chairs a newly created BioMed Alliance Task Force on medical devices, which informs and encourages the involvement of all medical specialties in the regulatory process.

A joint Task Force established by the ESC Regulatory Affairs Committee (which is part of Advocacy) and the European Heart Rhythm Association (EHRA) was established to investigate how the new **EU General Data Protection Regulation applies to cardiac implanted electronic devices**. The Task Force has also looked at the legal implications that exist for patients and clinicians regarding data produced from remote monitoring. Preliminary findings were discussed in a dedicated session at EHRA Congress. The final recommendations will be presented at ESC Congress 2019 in Paris.

Cardiovascular Round Table

The Cardiovascular Round Table (CRT) is a strategic forum to facilitate high-level and transparent dialogue between ESC leadership and healthcare industry partners to identify and discuss key pivotal issues for the future of cardiovascular health in Europe. The industry members of the CRT include 20 pharmaceutical and medical equipment manufacturers.

The CRT organised two plenary meetings in the reporting period:

- *"Observational, Real-World, Randomised, Wild-type and Big Data: a guide to the best use of patient data"* - May 2018
The objective was to define how to make the best use of data to improve cardiovascular health and avoid common pitfalls and misconceptions.
- *"Developing partnerships between patients, health professionals and the European Society of Cardiology"* - October 2018
The aim of the meeting was to discuss and share the most effective ways of involving patients in the activities of a learned societies such as the ESC, including the ESC Clinical Practice Guidelines, educational programme and communication strategy.

Ongoing activities

The CRT has developed articles arising from discussions at the following workshops or meetings:

- Addressing cardiovascular risk in type 2 diabetes mellitus: a report from the European Society of Cardiology Cardiovascular Roundtable - 16 November 2018, *European Heart Journal*
- Transcatheter heart valve interventions: Where are we? Where are we going? - 4 January 2019, *European Heart Journal*

CRT participating companies

Abbott Amgen AstraZeneca Bayer Boehringer-Ingelheim Bristol-Myers Squibb Daiichi-Sankyo	Edwards Lifesciences GE Healthcare Medtronic MSD Novartis Pharma Novo Nordisk Pfizer	Philips Roche Diagnostics Sanofi Servier Siemens Vifor Pharma
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Patient Engagement



Following the ESC Board's decision that patient engagement should become a strategic priority for the ESC, the ESC Patient Forum was established in Summer 2018 as the key mechanism to involve patients in a number of ESC activities. The purpose of the patient engagement initiative is to listen and learn from patients' unique experiences and knowledge and to use that insight to find innovative approaches to achieve the ESC mission.

The ESC Patient Forum currently consists of 25 patients from 12 countries living with a range of cardiac conditions. The patients participate in their personal capacity, not as representatives of patient organisations, to avoid the risk of external influence. Patients were invited by ESC volunteers to join the forum; criteria included sufficiently stable health allowing them to travel internationally.

The Patient Forum has already been actively involved in a number of ESC activities including:

- Feedback and support in the development of a **Patient Reported Experience Measures (PREMs) questionnaire** by the European Association of Percutaneous Interventions
- Feedback and support for the development of the **ESC Guidelines' Patient Card on Syncope**
- Patient Forum member sitting on **EHRA & Regulatory Affairs Committee's Joint Task Force on CIEDs**
- Contribution to the development of the **new patient webpage** of the European Association of Preventive Cardiology
- Contribution to the **ESC Education Conference**, titled: "Educated healthcare professionals + Educated patients = Effective shared care"
- The new **ESC Patient Engagement webpage**, which includes short **videos of forum members** sharing their personal experiences - www.escardio.org/patients

Major objectives planned for the year ahead include two patients sitting on the **2021 Heart Failure Guidelines** Task Force and two patients sitting on the Task Force for the **Core Curriculum 2020 update**.

Women in ESC

The ESC aims to achieve gender equity in the cardiology profession so that patients benefit from the contribution of ALL talented cardiovascular professionals.

For the fourth consecutive year, the ESC sponsored eight grants for members to attend the **Women Transforming Leadership Programme**. This innovative executive education offering was established by the Saïd Business School in Oxford, to assist women in achieving their full career potential. In 2018, 84 members applied for the grant, underlining the need for this type of training within cardiology.

Dedicated sessions and networking events were organised at ESC Congress 2018. These included a session entitled “Women in Cardiology: bridging the gap”, a networking reception and speed-mentoring sessions allowing ESC members to exchange with and receive guidance from peers and ESC leadership.



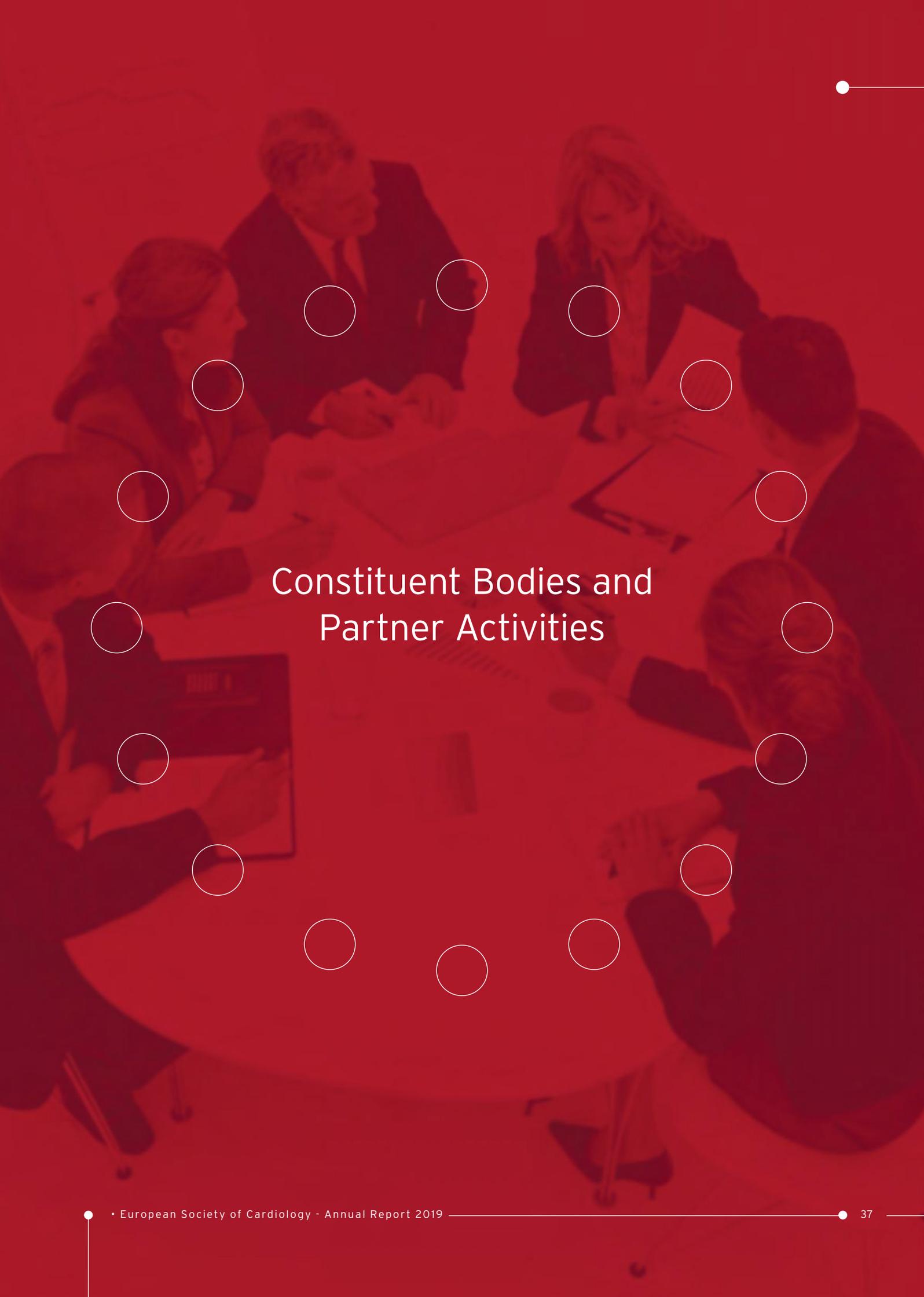
Digital Health

Digital health is transforming healthcare and the ESC is fully engaged in this critical new area of high-tech development. In the reporting period, a survey of more than 2,100 ESC members highlighted that 8 out of 10 cardiologists believe that digital health will radically change their practice. In the same survey, 94% said they needed to learn more about digital health.

The ESC's primary focus is sharing with the cardiology community the most impactful and safe applications of digital health solutions to prevent and treat cardiovascular disease. At ESC Congress 2018, a new digital health area hosting scientific sessions presentations and information from other stakeholders across the digital health arena was met with phenomenal success, generating significant commentary onsite, as well as on social media channels.

In March 2018, the ESC announced it will launch a dedicated ESC Digital Summit in Tallinn, Estonia. Whereas ESC Congress is largely focussed on information dissemination, the aim of the summit will be to shape and direct how digital health *should* and *could* impact cardiology in the future.





Constituent Bodies and Partner Activities

ESC Subspecialty Communities



Acute Cardiovascular
Care Association

Acute Cardiovascular Care Association (ACCA)

President: Prof. Susanna Price, FESC (2018 - 2020)

Mission: *To improve the quality of care and outcomes of patients with acute cardiovascular diseases.*

Highlights

- First AcuteCVDays campaign - free access to topic specific courses
- Three new scientific posters
- CME credits made available on the ESC eLearning platform
- New stage: challenging cases at Acute Cardiovascular Care 2019

Membership

With over 4,000 members, the association welcomes all professionals involved in the management of patients with acute cardiovascular diseases. Four levels of membership are available to best answer the needs of each sub-community. For example, the Silver level caters to the young community, which comprises over 50% of members, as it includes access to ESC educational resources as well as online access to the *European Heart Journal - Acute Cardiovascular Care*.

Congresses

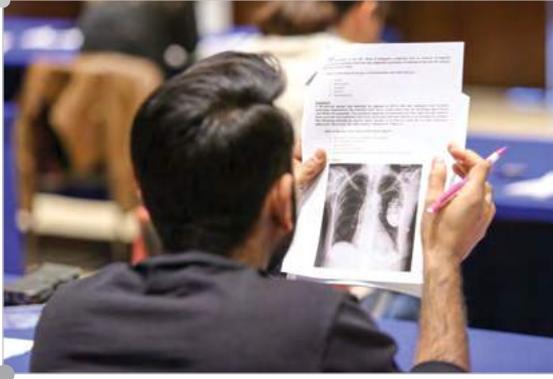
The annual Acute Cardiovascular Care 2019 (Acute CVD 2019) congress took place in Malaga, Spain and attracted over 1,000 participants. This edition featured interactive sessions especially geared towards the Young Community, including case discussions, hands-on sessions, mentoring and networking events.

Education & Certification

- ESC e-learning programme (39 topics available)
 - Three to twelve courses per topic
 - Self-assessment: New 3 CME credits per MCQ
 - *The ESC Textbook of Intensive and Acute Cardiovascular Care* chapters are included on the platform
- Three webinars
- Clinical Decision-Making Toolkit edition 2018 (printed booklet and mobile app formats in French and English versions)
- The Acute Cardiovascular Care School 2018 in Madrid - 2nd edition (seven modules)
- Scientific posters
 1. Frailty and the Management of Patients with Acute Cardiovascular Disease
 2. Clinical Interpretation of Cardiac Troponin
 3. Fourth Universal Definition of Myocardial Infarction
 4. Percutaneous Mechanical Circulatory Support
 5. ECG- Based Diagnoses in Cardiovascular Emergencies
 6. Quality Indicators - Definition & Assessment
 7. Definitions and Treatment - Cardiogenic and Septic Shock
 8. Right Heart Failure - Imaging and Implication



NEW



Education & Certification

NEW

- *The European Heart Journal - Acute Cardiovascular Care*
 - Educational series in each edition
 - Journal to receive an Impact Factor for the first time - IF to be announced in June 2019
- Certification exam during School 2018 and Acute Cardiovascular Care Congress 2019 in Malaga

Research

- Support and dissemination of research projects where young members are involved
- 5 study groups
 - Biomarkers
 - Acute Heart Failure
 - Quality of Care
 - Pre-Hospital
 - SCAD

Advocacy

- Collaboration with sister societies (EUSEM, ESICM, ERC, EACTA, EBCP, ELSO, European EMS) to promote multi-disciplinary approach in patient care
- Collaboration with North American healthcare professionals to develop transatlantic educational programme
- Support from national working groups on acute cardiac care advocacy

Communication

NEW

- Monthly bulletin with Topic of the Month
- AcuteCVDays campaign to increase awareness and access to all resources developed by the association. This campaign created an uplift in membership and use of educational and scientific resources

Strategic trends

Consolidate the association's position as global leader in the field - which means:

- Being the leading journal in the field
- Being the best (not necessarily largest) congress in the world in the subspecialty
- Being the go-to place for teaching and training in the subspecialty
- All collaborations involve patients, at whatever level - patients as partners by default
- Being the go-to place for definitive opinions in the subspecialty

Specific lines of development

- Reduce inequity in acute cardiovascular care
- Promote a patient-centric approach in acute cardiovascular care
- Value acute cardiovascular care as a specialty and its educational standards
- Promotion of research and definition of gaps of evidence in the field of acute cardiovascular care



Association of Cardiovascular Nursing and Allied Professions (ACNAP)

President: Dr. Tina Hansen, FESC (2018 - 2020)

Mission: *To support nurses and allied professionals throughout Europe to deliver the best possible care to patients with cardiovascular disease and their families. We do this through the creation and delivery of a diverse programme of activities, including education, research and mentorship.*

Highlights

- ACNAP was created at the ESC General Assembly on 28 August 2018
- Launch of ACNAP Silver Membership in December 2018
- Record-breaking **EuroHeartCare 2018** with more than 600 participants
- **Three webinars** with 230+ participants
- *European Journal of Cardiovascular Nursing (EJCN)*: Impact Factor of 2.651 - a new record
- More than **3,600 ACNAP members** by 31 March 2019

On 28 August 2018, the ESC General Assembly in Munich voted to elevate the long-standing ESC Council on Cardiovascular Nursing and Allied Professions (CCNAP) to an Association, one of only seven within the ESC. Nurses and allied professionals play a pivotal role in cardiac care. The evolution of the CCNAP to the Association of Cardiovascular Nursing and Allied Professions (ACNAP) further strengthens this growing community.



ACNAP Vision: To be the best interdisciplinary group in cardiovascular nursing and allied professions in Europe and to build interdisciplinary alliances within the ESC and with international decision makers.

Membership

In December 2018, ACNAP launched a new membership programme to better suit the specific needs and interests of the ACNAP community. Members of the former council were made ACNAP members in November 2018.



ACNAP has two membership levels - Regular Membership (free) and Silver Membership (€45) as well as a combined ESC/ACNAP Membership package. ACNAP counted more than 3,600 members by 31 March 2019.

- 80% female
- 30% under 40 years of age
- 60% nurses

ACNAP's goal is to reach 5,000 members by the end of 2021 and to double the number of allied professions in its community.



A key strategic objective for ACNAP was to set up and lead the ESC Task Force on Allied Professions. To date, 11 members from ESC associations and selected representatives of allied professions comprises the Task Force. Their first tasks were to agree on a common definition and list of allied professions across the ESC and to create the first ESC Summit on Allied Professions.

Congress

EuroHeartCare 2018 was a record-breaking event, welcoming more than 600 participants from 40 countries. It was held in collaboration with the Irish Nurses Cardiovascular Association in Dublin. The two-day programme was composed of 26 sessions and 2 satellite symposia, with 88 international faculty. There were 232 abstracts accepted in total and 36 clinical cases.

ACNAP launched a task force on congress strategy in order to better position EuroHeartCare as an international must-attend event. The aim is to represent a multi-disciplinary audience and welcome not only nurses, but also cardiovascular allied professionals and include special tracks for each sub-specialty (for example heart failure, imaging, intensive care) as well as technology innovation through digital health sessions and additional pre-conference workshops.

In the future, ACNAP hopes to provide additional travel grants, mentoring and networking opportunities, as well as offer a new delegate experience.

Education & Certification

The ACNAP Education Committee focussed on producing additional webinars to support its members in their professional development.

Online learning

- 3 webinars were organised, with 230+ participants and 2,140 pageviews for on-demand webinars



Other initiatives included:

- Launching translated versions of the guideline's implementation toolkit (Be Guidelines Smart) and the development of a new toolkit on atrial fibrillation
- Creating a Task Force on Certification to gauge knowledge about general and cardiovascular nursing certification and understand the needs to set up a certification process for nursing
- Developing a first textbook on Cardiovascular Nursing
- Creating courses and master classes targeting healthcare professionals in clinical practice

Research

- The *European Journal of Cardiovascular Nursing* (EJCN) is dedicated to the advancement of knowledge in the field of cardiovascular nursing, promoting evidence-based clinical practice. In 2018 the Impact Factor was 2.651, which is a new record.
- In spring 2019, ACNAP submitted a manuscript on "Evaluating the extent of patient-centred care in a selection of ESC Guidelines" to the *European Heart Journal - Quality of Care and Clinical Outcomes*.
- Significant contribution to the ESC Prevention of CVD Programme

Two major projects were initiated:

- *Injectable Therapies in Cardiovascular Disease*, to collect patient and healthcare professionals' perspectives on the use of injectable medicines among patients
- Lead a position paper on PROMS and PREMS with other ESC Associations

Advocacy

ACNAP has played a pivotal role in the ESC Patient Forum since its establishment in 2018.



European Association of Cardiovascular Imaging (EACVI)

President: Prof. Thor Edvardsen, FESC (2018 - 2020)

Mission: *To promote excellence in clinical diagnosis, research, technical development and education in cardiovascular imaging.*

Highlights

- All time high Impact Factor for the *European Heart Journal - Cardiovascular Imaging*: 8.336
- Launch of fellowship programme: FEACVI
- Publication of the *EACVI Textbook on CMR*
- Creation of a committee for scientific initiatives
- New courses: one on transoesophageal echocardiography, one focusing on CMR in congenital heart disease
- Launch of certification in cardiac CT programme

Membership

EACVI offers two levels of membership, as well as combined membership offers with ESC Professional Membership and other sub-speciality membership programmes. EACVI welcomed more than 14,000 members in 2018, half of whom were trainees and young professionals. It has also launched a fellowship programme to recognise excellence and professional achievements.

The collaboration with national working groups on imaging is expanding from year to year, with more than 50 active representatives and with increasing participation from HIT (Heart Imagers of Tomorrow) Ambassadors.

Congresses

EACVI organised three congresses dedicated to all four modalities:

- EuroEcho-Imaging 2018 had more than 4,000 participants in Milan, reinforcing the role of imaging as a pivotal diagnostic tool.
- During 2018 it was agreed that a unified multi-imaging congress with a special patient-centred focus creating bridges between professionals and enhancing their competencies would be held in December 2020 in Barcelona. Preparations for this new congress, EACVI 2020, which we anticipate will be held every few years, are ongoing and will incorporate educational tracks on the technical aspect of each modality.
- Preparations for EuroEcho 2019, EuroCMR 2019 and ICNC 2019, as well as EuroCMR 2021 and ICNC 2021 were launched, with the committees working hard to offer great congresses to the EACVI audience.



Education

Every year the EACVI develops a range of educational courses and publications to maintain professional excellence among imaging specialists.

- A new course on transoesophageal echocardiography attracted more than 60 participants who benefited from hands-on sessions.
- The CMR preparatory course for certification has been very popular in recent years, with more than 90 participants wanting to hear directly from Key Opinion Leaders before sitting their examination.
- In 2018, it was agreed that the EACVI face-to-face course offering would be expanded. Added was a course on CMR in congenital heart disease including hands-on sessions, another one dedicated to cardiac CT and finally a joint workshop on artificial intelligence co-organised with SCMR (Society for Cardiovascular Magnetic Resonance).
- In addition to providing more than 12 webinars per year to its members, new tutorials on multi-modality imaging in congenital heart disease were published.

Textbooks

EACVI published a successful textbook on CMR and is working on an update of the Echo handbook, a new handbook on transoesophageal echocardiography as well as handbooks on cardiac CT and nuclear cardiology.

Certification and Accreditation

The number of candidates sitting EACVI exams is increasing year after year. EACVI launched a certification programme on cardiac CT and has extended its programme on nuclear cardiology. In 2018 EACVI laid the groundwork to offer re-certification in CMR and will assess laboratory excellence through its new laboratory accreditation on CMR.



Research

- EACVI contributed to the EURObservational Research Programme (EORP), participating in the EuroENDO and EURECA surveys.
- The first paper from Euro-filling (one of the EACVI's multicentre studies) was published in *European Heart Journal - Cardiovascular Imaging*.
- EACVI continued to provide research grants to young doctors who want to expand their research experience abroad.
- EACVI published several position papers and/or consensus documents in its journal, which achieved a record **Impact Factor of 8.336**.

Advocacy

- EACVI took part in 17 international and European imaging congresses. These events were attended by the leadership who presented joint sessions. We are also proud to welcome global partners at EACVI congresses.
- EACVI launched a new Committee for Scientific Initiatives which aims to have a global view of progress across Europe about guideline implementation, management of patients needing imaging, and the use of imaging in daily clinical practice. This is done mainly through short EACVI Research Network centres' surveys, snapshot registries and patient surveys.
- EACVI launched a joint taskforce with the Acute Cardiovascular Care Association on FOCUS Echo, to train both acute cardiac care and echocardiography specialists in emergency situations where these handheld devices are used.
- EACVI is also focusing on defining the training requirements for multi-imagers and how multi-imaging is implemented across Europe.

Strategic Trends

- EACVI initiated a patient centric approach from the clinical practice perspective and use of the various imaging modalities. EACVI will engage with patients to foster this approach further.
- New jobs and technologies were identified during 2018 which should enable EACVI to build its European network through training, education, certification, standards of practice, and recommendations. These include imagers in the cath lab, FOCUS Echo and the use of artificial intelligence.



European Association of Preventive Cardiology (EAPC)

President: Prof. Paul Dendale, FESC (2018 - 2020)

Mission: *To promote excellence in research, practice, education and policy in cardiovascular health, primary and secondary prevention.*

Highlights

- New ESC Textbook on Sports Cardiology
- New Diabetes and CVD Educational Programme
- Three live courses
- 4 CME credits available for the updated version of the ESC Guidelines Learning Tool
- EJPC: +40% manuscript submissions
- New section: primary care and risk factor management

Membership

With four membership levels and a special offer for young professionals, the EAPC is a vibrant community, gathering over 7,740 healthcare professionals in 2018. The association developed several activities for its young community, including special sessions, networking events and a Young Ambassadors programme with 18 countries represented in the first year.

In addition to its LinkedIn group, the association launched a Facebook group for the Preventive Cardiology Community.



Congresses

EuroPrevent, the EAPC annual congress, is the leading congress in preventive cardiology. The 2018 edition was held in Ljubljana, Slovenia with over 1,400 participants and 150 international faculty members, who gathered for three days of scientific exchange on the latest advances in the field.

After a last edition in Malaga in April 2019, EuroPrevent will be renamed '**ESC Preventive Cardiology Congress**'.



Education & Certification

- EAPC launched a new educational programme to raise awareness on diabetes as a cardiovascular risk factor and provide educational and scientific resources. The first outputs were a literature review, case-based quizzes and a webinar.
- The association also delivered three educational courses in 2018, covering preventive cardiology, cardiac rehabilitation, cardiopulmonary exercise testing and sports cardiology, as well as three webinars on cardiovascular risk assessment and exercise prescription.



- The third phase of the ESC Prevention of CVD Programme was launched. Led by EAPC, in collaboration with the Acute Cardiovascular Care Association (ACCA) and the Association of Cardiovascular Nursing and Allied Professions (ACNAP), the programme's focus is now on implementation and evaluation as well as awareness among healthcare professionals and patients.
- EAPC also updated its "Guidelines Learning Tool" an online course designed to facilitate the implementation of ESC Guidelines on CVD Prevention in Clinical Practice, now accredited with 4 European CME Credits (ECMEC®s).
- EAPC's second textbook, the *ESC Textbook of Sports Cardiology*, was released in March 2019.
- The association conducted a pilot for Centre Accreditation with six European centres, and will open its accreditation scheme in 2019.

Research

The EAPC journal, the *European Journal of Preventive Cardiology*, achieved a noteworthy Impact Factor rating of 5.640 in 2018. Submissions are growing, with over 1,150 manuscripts received in 2018 (+40%). A series of new recommendations for participation in competitive and leisure sports and a position paper on exercise training for patients with type 2 diabetes and CVD were published. Two 'how-to' articles were also made available online in 2018:

- How to Exercise After Heart Transplantation
- How to Provide Telerehabilitation in Cardiac Patients

EAPC is also conducting a survey on the role of cardiac imaging in the clinical evaluation of competitive athletes.

Advocacy

- In 2018, the Association contributed to the ESC's patient engagement activities and the first Patient Forum meeting.
- 15 experts acting as spokespersons for CVD prevention, exercise, epidemiology and sports cardiology, supported the ESC's Advocacy agenda. These spokespersons provide expert input to the ESC's advocacy initiatives and act as ESC representatives at policy events and meetings.
- EAPC renewed its network of 56 National CVD Prevention Coordinators in ESC Member Countries.

Strategic Trends

Bringing lifelong prevention to the heart of cardiology:

- With the new primary care and risk factor management section, unite preventive practitioners and scientists under a common umbrella: Preventive Cardiology.
- Establish a long-term strategy highlighting key risk factors, starting from 2020 onwards (nutrition, hypertension, lipids, diabetes, obesity, smoking, sedentary lifestyle).
- Broaden the scope of the association from CV disease prevention to include CV health promotion, patient empowerment initiatives and the co-creation of tailored preventive strategies in primary care.
- Create new alliances outside traditional industry channels to include insurance, biotech, technology and "big data and analytics" companies.
- Map EAPC competencies, accommodate entry of representatives from new clinical and scientific disciplines such as nutrition and occupational health, and to foster talent development through the EAPC Young Community.



European Association of Percutaneous Cardiovascular Interventions (EAPCI)

President: Prof. Andreas Baumbach, FESC (2018 - 2020)

Mission: *To reduce the burden of cardiovascular disease through percutaneous cardiovascular interventions.*

Highlights

- First certification exam for physicians
- Launch of the EAPCI White Book project
- Patient focus initiative

Membership

At the end of 2018, the EAPCI community represented a large network of over 10,500 professionals from more than 115 countries.

Congresses

EAPCI members made a major contribution to ESC Congress 2018 in Munich as well as to the two official EAPCI annual courses:

- EuroPCR, the world's leading course in interventional medicine welcomed 10,987 participants from 125 countries
- At PCR London Valves, the Heart Team Course focussing on transcatheter therapies for valvular heart disease was attended by 2,645 participants



Education & Certification

NEW

The EAPCI launched a certification exam in interventional cardiology for physicians which will take place every year at EuroPCR and ESC Congress. In addition, the association supported young interventional cardiologists by holding the fifth EAPCI Fellows Course in May 2018 to prepare the next generation of EAPCI leaders.

The EAPCI supported five one-year education and training grants thanks to industry's educational grants and 10 micro-fellowship grants on a specific technique supported by the EAPCI. As part of the strategy to support female cardiologists, a goal of distributing 50% of the support to female cardiologists was announced. The EAPCI also made significant contributions to the *PCR-EAPCI Textbook in Interventional Cardiology* as well as to their monthly journal, *EuroIntervention*, which has achieved an Impact Factor of 4.417 (2017).



Research

EAPCI continued to support the Acute Coronary Syndrome registries (NSTEMI, STEMI), the Spontaneous Coronary Artery Dissection registry (SCAD) and the Valve Durability registry, through the EURObservational Research Programme (EORP).

In addition, the Association published the first edition of the *EAPCI White Book* to map interventional cardiology across Europe. The aim is to provide updated, high-quality data on the interventional cardiology community:

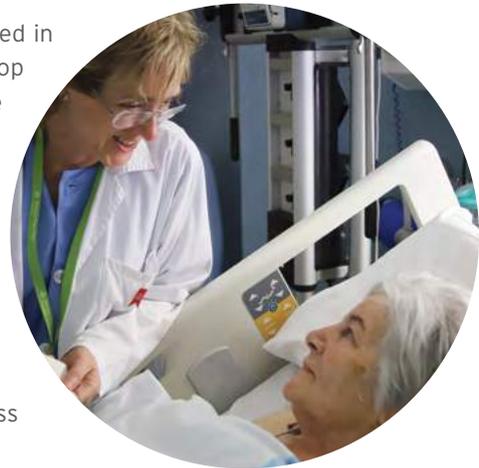
- o 16 participating countries
- o 41 variables
- o Covers interventional and structural cardiology
- o Complements ESC Atlas of Cardiology

Through the Scientific Affairs Committee, the EAPCI created, supported and endorsed multiple important position statements.

Advocacy

Advocacy activities included the Valve for Life initiative launched in Poland, France and Portugal. Valve for Life, which remains a top priority, seeks to increase awareness of valvular heart disease and to allow patients with valvular heart disease to receive the guideline-recommended diagnostic and therapeutic work-up.

In May 2018, the EAPCI launched the Patient Focus Initiative which puts the patient at the centre, making the best invasive cardiovascular treatment available to all patients, and ensuring optimal care pathways for improved outcomes. In addition, the EAPCI strongly stands by the ESC in promoting patient advocacy initiatives aimed at improving patients' access to novel and more effective therapies in all EU regions.



Strategic Trends

- Align the Patient Focus Initiative with the ESC Advocacy strategy
- Strategic development of membership benefits for EAPCI members
- Increased dialogue and collaboration with National Cardiac Societies
- Adaptation of Valve for Life to country-specific realities and industry funding



EHRA
European Heart
Rhythm Association

European Heart Rhythm Association (EHRA)

President: Professor Hein Heidbüchel, FESC (2018 - 2020)

Mission: *To improve the quality of life and reduce sudden cardiac death by limiting the impact of heart rhythm disturbances.*

Highlights

- *EP Europace* has the highest IF of all EP journals with a new record Impact Factor of 5.231
- Patient's website afibmatters.org available in 9 languages
- 570 cardiologists attended EHRA training courses
- 1,900 cardiologists participated in EHRA webinars
- EHRA 2019 in Lisbon was attended by 5,552 participants from 96 countries
- 425 grants were awarded to support cardiologists to attend EHRA 2019
- 3,400 members and 78 Fellows of EHRA

Membership

EHRA members benefit from international expertise through EHRA's close collaboration with its 63 EP National Cardiac Societies and EP Working Groups, as well as its sister societies, including the Asia Pacific Heart Rhythm Society (APHRs), the Heart Rhythm Society (HRS) in the United States and the Latin America Heart Rhythm Society (LAHRS).

In 2018, more than 500 young electrophysiologists from some 60 countries joined the young EP network. Through EHRA, electrophysiologists under 40 years of age gain scientific exposure and networking opportunities which support career development and accelerate their early careers.



Congresses

The second annual edition of EHRA Congress was held in Lisbon, Portugal, from 17 to 19 March, and attracted 5,552 participants from 96 countries around the topic of "Implementing diagnostic and therapeutic innovations in daily practice". EHRA 2019 comprised more than 230 scientific sessions, which included the broadcasting of live case transmissions from two European centres, presentation of late-breaking trials and the participation of patients in dedicated sessions.



Education & Certification

Every year, EHRA designs and provides the latest educational training programmes to help maintain professional excellence among cardiologists specialising in pacing and arrhythmias. In the reporting period, this included:

- 4 face-to-face courses
- 11 webinars
- 287 candidates sat for the certification exams
- 25 centres joined the EHRA Recognised Training Centres
- 39 EHRA Observational Training Programme grants were awarded to physicians from across Europe
- Diploma of Advanced Studies in Cardiac Arrhythmia Management (DAS-CAM) course with Maastricht University





Research

EHRA routinely conducts online surveys involving more than 117 European centres (part of the EHRA Scientific Research Network) and publishes the results in the *EP Europace* journal. Two snapshot surveys were also conducted to evaluate the implementation of the ESC Clinical Practice Guidelines on Syncope and Atrial Fibrillation..

EHRA works with EORP on the ESC AFIB Registries and contributes to several important registries and trials:

- European Lead Extraction ConTRolled Registry (ELECTRa)
- Epicardial/Hybrid Atrial Fibrillation Registry (EHAFAR)
- Early Comprehension Atrial Fibrillation Stroke Prevention Trial (EAST)

EHRA published 9 scientific documents with extensive collaboration with sister societies.

Together with international scientific societies/associations and the European Resuscitation Council (ERC), EHRA is involved in the European Sudden Cardiac Arrest network, working towards prevention, education, and new effective treatments (ESCAPE-NET). This project aims to translate the outcomes into European clinical practice for the prevention of SCA, and to help European infrastructures improve survival after Sudden Cardiac Arrest.

Advocacy

- The website for patients, afibmatters.org, was translated into Polish. It's now available in nine different languages
- The scientific network of female EP experts reached 220 members. The network includes 180 women who are interested in actively participating in EHRA congresses and other scientific meetings as chair or speaker. Women in EP collaborated on the H2020 ESCAPE-NET workshop on gender differences in healthcare, held during EHRA 2018.

Journal: *EP Europace* is the official journal of EHRA as well as the ESC Working Group on Cardiac Cellular Electrophysiology and the ESC Working Group on e-Cardiology. Its Editor-in-Chief is G. Hindricks, FESC (Germany).



Heart Failure Association of the ESC (HFA)

President: Prof. Petar M. Seferovic, FESC (2018 - 2020)

Mission: *To improve quality of life and longevity, through better prevention, diagnosis and treatment of heart failure, including the establishment of networks for its management, education and research.*

Highlights

- HFA Atlas data collection from 42 countries
- *European Journal of Heart Failure* Impact Factor rose to 10.683
- 11 position papers published
- 10 webinars produced
- 27 countries participated in Heart Failure Awareness Days

Membership

The HFA has 5,000 members around the world. Benefits including access to ESC 365 and discounted HF Congress registration were offered to members.

Congresses

Heart Failure 2018

The Heart Failure Congress 2018 took place in Vienna and attracted more than 5,800 participants. The HF Congress is the world's leading congress for experts in cardiology to discuss strategies for a multidisciplinary approach to heart failure.

HFA Winter Meeting

The HFA Winter Meeting on Translational Heart Failure Research is a longstanding tradition and has emerged as one of the best basic and translational heart failure meetings in Europe. The 2019 meeting was attended by 130 participants.

HFA Summit

The annual HFA Summit was held in Vilnius, Lithuania and attended by the Presidents of National Heart Failure Societies and Working Groups. The HFA was honored to have the Lithuanian Vice-Minister of Health actively participating in the Summit.

Education & Certification

Online Education

- 10 webinars were released from March 2018 to April 2019 with 450 participants on average
- 27 modules are available in the online HFA education programme on the ESC e-Learning Platform

Certification Exam

The certification exam of the Heart Failure Association took place at Heart Failure Congress 2018 with 100 participants.





HFA Summit, Vilnius, Lithuania

Postgraduate Course in Heart Failure (European Heart Academy course with Zurich University)

The Postgraduate Course in Heart Failure is a two-year programme with eight modules of 2.5 days each, a total of 160 lecture hours and 140 hours of self-study. Each module is chaired by an internationally recognized expert.

Clinical Trialists Summer School

The Clinical Trialists Summer School is a complement to the Postgraduate Course in Heart Failure. The programme is focused on clinical trials and data analysis and attracted 25 students from all over Europe.

Grants

150 travel grants were distributed for Heart Failure Congress 2018.

Research

The HFA counts 15 committees covering all aspects of heart failure, from basic cutting-edge science to patient care management. 12 workshops were organised by HFA board members to write key position papers. One notable workshop was the workshop on Endomyocardial Biopsy organized by the Heart Failure Association, the Heart Failure Society of America and the Japanese Heart Failure Society.

The HFA has two official journals: the *European Journal of Heart Failure* with an Impact Factor of 10.683, and the open access *ESC Heart Failure Journal*.

Advocacy

The HFA patient website, heartfailurematters.org, attracts more than 2.5 million visitors a year. New videos recorded by patients talking about their experiences were added in the reporting period.

Heart Failure Awareness Day in May 2018 saw participation by 27 countries. The six winners of the competition for Best Programme were Cyprus, Germany, Lebanon, Italy, Lithuania and Turkey.

During the reporting period the HFA Board collected the initial round of data from 42 Heart Failure Working Groups to create the first HFA Atlas. As with the ESC Atlas of Cardiology, the aim of this project is to identify gaps and inequalities in heart failure management across ESC member countries.

Councils

Highlights

- **Council on Basic Cardiovascular Science** : 600 participants attended Frontiers in CardioVascular Biology congress (FCVB)
- **Council of Cardio-Oncology**: Creation of the Cardio-Oncology Council in August 2018
- **Council for Cardiology Practice**: *E-Journal of Cardiology Practice* now has 45,000 subscribers
- **Council on Hypertension**: The Council was heavily involved in the 2018 ESC/ESH Guidelines on the Management of Arterial Hypertension
- **Council on Stroke**: Successful second edition of ESC Heart & Stroke conference
- **Council on Valvular Heart Disease**: Council Nucleus members involved in the development of the programme of ESC Congress and its spotlight on Valvular Heart Disease



Council on Basic Cardiovascular Science (CBCS)

Chair: Prof. Johannes Waltenberger, FESC (2018 - 2020)

Aim: *Enhancing basic research and its importance to clinical cardiology.*

Membership

Basic science organisations in Europe and ESC Working Groups come together to form the Council on Basic Cardiovascular Science.

The Scientists of Tomorrow (SoT) is a group of young, proactive, basic and clinical researchers, who work closely with the Council on Basic Cardiovascular Science. This community reached 800 members by March 2019 via the LinkedIn platform where basic scientists from all around the world are able to discuss major issues and discoveries. The SoT organised networking events for its young community during the Frontiers in CardioVascular Biology (FCVB) congress in 2018.



Congresses

In 2018, the Council organised the fifth meeting of the Frontiers in CardioVascular Biology (FCVB).

FCVB was held over 3 days and comprised 41 scientific programme sessions including 9 abstract-based sessions. It attracted 600 participants from over 40 countries. The scientific programme was delivered by a faculty of 110 experts. 485 abstracts were submitted.

Basic Science was delivered at ESC Congress in a dedicated village. In 2018, the Council collected 70 proposals for ESC Congress 2019 that it refined for submission as part of its pre-scope process.





Education

During ESC Congress 2018, the Council held its annual Basic Science Poster Reception, an informal event where young basic scientists can meet with poster authors and recipients of the Council's grants and awards, as well as basic science colleagues from around the globe.

50 travel grants were awarded by the Council on Basic Cardiovascular Science for recipients to attend ESC Congress 2018.

Cardiovascular Research (CVR) is the ESC's international journal for basic and translational research, (IF 6.290). The *Cardiovascular Research* editorial team and the Scientists of Tomorrow collaborate to produce *Cardiovascular Research Onlife*, an online platform linking *Cardiovascular Research* with the wider scientific community.

Research

During 2018-2019, the Council awarded:

- 5 First Contact Initiative Grants to allow young scientists to establish contact with hosting institutions with the aim of obtaining a fellowship or research affiliate position.
- 1 Basic Research Fellowship to enable a researcher to spend one year in a European research laboratory.
- 2 Outstanding Achievement Awards to recognise investigators of exceptional merit.



Council of Cardio-Oncology

Chair: Dr. Riccardo Asteggiano, FESC (2018 - 2020)

Aim: *To reduce the burden of cardiovascular diseases by improving the standard of care in oncology patients and cancer survivors treated with cardiotoxic cancer therapies or radiotherapy.*

Membership

The creation of the Council of Cardio-Oncology was officially approved at the ESC General Assembly in August 2018. By March 2019, the Council had attracted over 600 members from multiple disciplines.

The Council reaches out to members via its quarterly e-newsletter and has recently published a series of articles which investigate the cardio-oncology situation in various countries. In order to further facilitate interaction between different healthcare professionals, the Council launched its Facebook group in March 2019.

Congresses

Since its creation in August 2018, the Council has been involved in joint sessions at ESC subspecialty congresses: in December at Euro-Echo Imaging 2018 and in March 2019, at EHRA Congress. The Council is developing additional joint sessions for 2019-2020.

Education

The Council developed a special cardio-oncology 4-part series in the *E-Journal of Cardiology Practice*, published in early 2019. The articles in this series introduced this subspecialty oriented to the prevention, diagnosis, treatment and follow-up of cardiovascular (CV) diseases due to cancer treatment.

Research

In late 2018, in collaboration with the Council for Cardiology Practice, the Council of Cardio-Oncology developed a survey entitled Cardiology Care delivered to Cancer Patients. A report on the survey results will be published in 2019.

Advocacy

The Board of the Council includes representatives from other ESC Constituent Bodies and external societies including oncologists, radiation oncologists and haematologists. The Council is developing joint initiatives with the external societies for delivery during 2019-2020.

In early 2019, the Council has reached out to the ESC Patient Forum to begin the development of educational tools aimed specifically at cancer survivors.





Council for Cardiology Practice (CCP)

Chair: Dr. Dimitrios Richter, FESC (2018 - 2020)

Aim: *To improve the standard of care in the clinical cardiology practice of office-based general cardiologists.*

Membership

The Council aims to bring together office-based general cardiologists. As of March 2019, the Council's members numbered more than 1,000. As 60% of the Council members are under 40 years of age, the Council has continued to develop its social media strategy and aims to launch a Facebook group within the coming months.

Congresses

In 2018, the Council continued to contribute to the ESC Congress scientific programme with the General Cardiology Programme for physicians, technicians and general practitioners. This programme included a Congress Condensed General Cardiology session.

The Council also participated in a joint session at the EuroValve Congress in April 2018.

Education

- The Council has continued to share knowledge and good practice through its *E-Journal for Cardiology Practice* and its e-newsletter. The *E-Journal* keeps professionals up to date with recent findings and techniques via a weekly email sent to subscribers. In 2018, there were over 45,000 subscribers to the *E-Journal*. Its success is attributed to the high quality of the submissions that cover a wide range of subjects. In 2018-2019, the *E-Journal* published a series on valve diseases, cardio-oncology and atrial fibrillation.
- In January 2019, the Council developed a webinar in collaboration with the ESC Working Group on Aorta and Peripheral Vascular Diseases entitled 'What every cardiologist should know about vascular diseases'

Research

The Council for Cardiology Practice conducts surveys within the ESC to understand today's management of cardiovascular diseases as well as the knowledge of, and compliance with the ESC Clinical Practice Guidelines by cardiologists throughout Europe. In 2018-2019, the Council collaborated with the Council on Hypertension and the Council of Cardio-Oncology to develop two surveys on:

- The management of arterial hypertension
- Cardiology care delivered to cancer patients

Reports of both surveys will be published in 2019.



Council on Hypertension

Chair: Prof. Giovanni de Simone, FESC (2018 - 2020)

Aim: *The Council encourages research, teaching, communication of knowledge and it participates in education, focusing on the cardiovascular aspects of hypertension.*

Membership

In March 2019, the Council on Hypertension's membership rose to almost 1,400 health professionals from multiple fields. Almost 40% of the members are under 40 and consequently, the Council continues to develop its social media strategy.

The Council encourages its members to engage in council activities, such as the writing of scientific documents and the collection of proposals for the scientific programme at ESC Congress through its pre-scope process.

Congresses

- The Council was heavily involved in developing the Hypertension topic programme for ESC Congress 2018. Several sessions were organised to disseminate and discuss the 2018 ESC/ESH Guidelines on the Management of Arterial Hypertension.
- The Council Nucleus members participated in joint sessions at EuroCVP 2018, and at the European Society of Hypertension Annual Meeting in 2018.

Education

- The past-Chairperson of the Council is also Chairperson of the 2018 ESC/ESH Guidelines on the Management of Arterial Hypertension Task Force. Since the release of these updated guidelines at ESC Congress 2018, the Council has been actively promoting their dissemination. The Council is currently developing an ESC Clinical Practice Guidelines Implementation Educational Programme.
- In February 2019, the Council held its first webinar entitled 'Case-based examples of implementation of 2018 ESC/ESH Arterial Hypertension Guidelines'. Nucleus members have also been involved in other ESC webinars.
- In 2018, the Council on Hypertension supported young healthcare professionals by providing 10 travel grants for ESC Congress.



Research

Between 2018 and 2019, the Council was active in the production of position papers and consensus documents focused on providing practical clinical information. A consensus document on clinical recommendations for high altitude exposure of individuals with pre-existing cardiovascular conditions was published in the *European Heart Journal* in May 2018.

A position paper on the management of hypertensive emergencies was published in the *European Heart Journal of Cardiovascular Pharmacotherapy* in January 2019.

In late 2018, in collaboration with the Council for Cardiology Practice, the Council on Hypertension developed a survey on the management of arterial hypertension in daily practice. A report on the survey results will be published shortly.



Council on Stroke

Chair: Prof. Wolfram Doehner, FESC (2018 - 2020)

Aim: *To promote multidisciplinary cooperation, education and research on stroke.*

Membership

In March 2019, the Council on Stroke counted more than 1,800 members. It is composed of multidisciplinary physicians and specialists including neurologists, vascular specialists, neurosurgeons, radiologists and interventional cardiologists. The Council has continued to develop its member benefits and in 2018 introduced travel grants and reduced fees for its annual scientific meeting.

Congresses

In January 2019, the Council organised its second international conference: ESC Heart & Stroke. The conference was designed to stimulate a multidisciplinary approach to stroke prevention and treatment and to educate cardiologists. Endorsed by the European Stroke Organisation, a total of 279 participants from 49 countries took part in the programme. The scientific programme was delivered by a faculty of 31 experts for 49 roles in the programme. 79 abstracts were submitted, and 40 travel grants were distributed.



In 2018, the Council participated in joint sessions with external neurological societies: the European Stroke Organisation and the European Society for Vascular Surgery and with EAPCI during EuroPCR Congress.

The Council participated in the ESC Congress 2018 scientific programme including a joint session with the European Association of Neurological Societies and the European Stroke Organisation.

The Chairperson of the Council was a keynote speaker at the Heart & Brain Symposium in April 2018 in Chicago and contributed to the scientific programme of the European Stroke Organisation's Summer School in 2018.

Education

In 2018, the Council developed two webinars as part of its online educational strategy:

- New indications for non-vitamin K oral anticoagulants: COMPASS primary and sub analyses data
- Routine search for underlying cause of ischemic stroke

The Council was heavily involved in a Cardiovascular Round Table on stroke in March 2018 and has since developed a manuscript that has been submitted to the *European Heart Journal* for publication.

Research

In early 2019, the Council distributed a €25,000 research grant to provide an opportunity for a research training in the field of stroke.

Advocacy

The Board of the Council includes representatives from other ESC Constituent Bodies and external societies (stroke, neurological, neurosurgical, vascular surgical, neuroradiological).

The Council continues to work on how to simplify the neuro-specific training requirements for interventional cardiologists.



Council on Valvular Heart Disease

Chair: Prof. Luc Pierard, FESC (2018 - 2020)

Aim: *To be a multidisciplinary forum for the Heart Valve Team, to encourage research, knowledge exchange, teaching and other educational activities relating to Valvular Heart Disease.*

Membership

As of March 2019, the Council on Valvular Heart Disease had 1,400 members. The Council continues to reach out to members via a quarterly e-newsletter and a member's directory.

Congresses

Valvular Heart Disease was the spotlight topic during ESC Congress 2018 and the Council was heavily involved in the development of this programme which included symposia, debates and abstract sessions.

Education

In 2018, the Council endorsed and was involved in developing the Scientific programme for the EuroValve Congress.

In 2018-2019 the Council has continued to participate in the development of ESC Clinical Practice Guidelines as reviewers and/or writers.

Research

In 2018, members of the Council's Board contributed to a Consensus Document entitled 'Multiple and Mixed Valvular Heart Diseases'.

The Council Chairperson also published an article in *European Heart Journal's CardioPulse* in February 2019.



The ESC has 15 Working Groups focused on the remaining subspecialty areas defined by the Cardiology Core Curriculum that are not addressed by the Associations or Councils. Working Groups provide education, share expertise, and facilitate exchange of best practices and ongoing medical developments. As the scientific backbone of the ESC, the Working Groups contribute to the ESC's overall mission by taking an active part in core research and publications, contributing to the ESC Congress, and in organising and promoting their own symposia, courses, and meetings in specific area of expertise.

Membership

Total membership of the ESC's 15 Working Groups has risen to over 8,300 members over the last year.

Congresses

Seven of the ESC Working Groups organised their annual meetings, attracting 1,700 international delegates. These meetings have become the **European best in class in their respective cardiology subspecialties**.

- Biennial symposium on Atherosclerosis and Vascular Biology prior to FCVB: April 2018, Vienna, AT
- Annual meeting on Grown-Up Congenital Heart Disease: EuroGUCH, April 2018, Munster, DE
- Annual meeting on Cardiovascular Pharmacotherapy: EuroCVP, May 2018, Tel Aviv, IS
- Annual meeting on Cardiac Cellular Electrophysiology: 42nd EWGCCE, June 2018, Essen, DE
- Annual meeting on Thrombosis: EuroThrombosis, October 2018, Barcelona, SP
- Annual meeting on Myocardial and Pericardial Diseases: EuroCardio, October 2018, Belgrade, SR
- Annual meeting on Development, Anatomy and Pathophysiology: October 2018, Marseille, FR
- Annual meeting on Cardiac Cellular Electrophysiology: 43rd EWGCCE, March 2019, Vienna, AT

ESC Working Groups also actively participate in **international meetings with joint sessions**, promoting best practices in their area of expertise throughout **Europe, North and South America and Asia**.

Advocacy

The ESC Working Groups are engaged in European projects and public awareness initiatives, such as the CompBioMed European Commission H2020-funded Centre of Excellence, and the Angina Awareness Programme.

Research & Publications

The ESC Working Groups published more than 10 position papers this year and drove the following ESC publications:

- *European Heart Journal - Cardiovascular Pharmacotherapy*
- *ESC Handbook of Cardiovascular Pharmacotherapy*
- *ESC Textbook of Vascular Biology*
- *ESC Textbook of Cardiovascular Development*
- Clinical Case Gallery in Myocardial & Pericardial Diseases

Education

Education is a major focus of the Working Groups.

The ESC Working Groups endorse, organise, and contribute to webinars, courses and educational programmes.

- Teaching courses: 'All About clinical trials' and 'Arteries, from head to toe'
- Webinars series: 'Updates in anti-thrombotic therapy for cardiovascular diseases'
- Webinar: 'Current standards in lowering lipid therapy post ACS'
- Basic Science Summer School
- HFA Winter Meeting in Translational Science
- The 15 Working Groups of the ESC are:

- Working Group on Aorta and Peripheral Vascular Diseases
- Working Group on Atherosclerosis and Vascular Biology
- Working Group on Cardiac Cellular Electrophysiology
- Working Group on Cardiovascular Pharmacotherapy
- Working Group on Cardiovascular Regenerative and Reparative Medicine
- Working Group on Cardiovascular Surgery
- Working Group on Cellular Biology of the Heart
- Working Group on Coronary Pathophysiology and Microcirculation
- Working Group on Development, Anatomy and Pathology
- Working Group on e-Cardiology
- Working Group on Grown-up Congenital Heart Disease
- Working Group on Myocardial and Pericardial Diseases
- Working Group on Myocardial Function
- Working Group on Pulmonary Circulation and Right Ventricular Function
- Working Group on Thrombosis

ESC National Cardiac Societies

The National Cardiac Societies (NCS) are the founders and main Constituent Bodies of the ESC. Their knowledge and expertise underpin all ESC activities.

At ESC Congress 2018, the Association of Cardiologists of Uzbekistan officially joined the ESC, becoming the 57th ESC National Cardiac Society. This unique partnership with so many nations makes diversity one of the ESC's major strengths.



Strategic collaboration

Spring Summit 2019

This ESC's annual strategic meeting welcomed 200 delegates, including 57 representatives from 40 National Cardiac Societies to collaborate on ways to make our institutions stronger and more relevant to our members. The Spring Summit focused on how to be fit for the future, on what it means to be a leader and how adapt to the Digital Revolution which is rapidly transforming healthcare.



Leaders and future leaders at ESC Spring Summit 2019

Individual leadership meetings

Discussions on common scientific and economic challenges as well as regulations impacting relations with industry have been top priorities on the agenda of leadership meetings held with NCS Boards. Identifying opportunities to strengthen collaboration around the five strategic pillars of ESC has also been a priority.

ESC representation at NCS congresses

ESC/NCS joint sessions

The ESC actively contributed in 31 joint sessions at NCS annual events with the aim of enhancing the exchange of scientific knowledge and the implementation of ESC Clinical Practice Guidelines.

ESC stand

NCS members were welcomed at the ESC stand at 21 NCS congresses where they learned more about the ESC and how NCS members, by upgrading their existing ESC membership to ESC Professional Membership, could gain access to a wide range of highly relevant scientific and educational resources for better patient care.

Membership

Members of ESC National Cardiac Societies are automatically part of the ESC community, representing almost 75,000 individual members.

By upgrading to ESC Professional Membership they can access an enhanced range of scientific and educational resources. To support mutual growth, a cardiologist working in an ESC member country wishing to become an ESC Professional Member must be a member of their National Cardiac Society. The ESC is also further engaging with NCS on joint membership development activities.

Congress

At ESC Congress 2018, 39% of abstracts were submitted by NCS members and 34% of delegates were NCS members. The active contribution of NCS was also reflected in the scientific programme, with 63% of chairpersons, 59% of graders and 51% of speakers made up of NCS members.



NCS Presidents meeting at ESC Congress 2018

Research

ESC Atlas of Cardiology: 46 National Cardiac Societies contributed to the second edition of ESC Atlas of Cardiology.

EURObservational Research Programme (EORP): Country-based registries are managed through the National Cardiac Societies. In the reporting period, 36 NCS were signed-up to take part in AF III.

Education

NCS play a major role in developing continuing medical education (CME) and knowledge assessment at the ESC. In January 2019, 90 participants from 45 ESC member countries gathered to discuss “Educated healthcare professionals + Educated patients = Effective shared care”.

NCS are also critical partners in the dissemination of the European Exam in General Cardiology (EEGC).

Guidelines

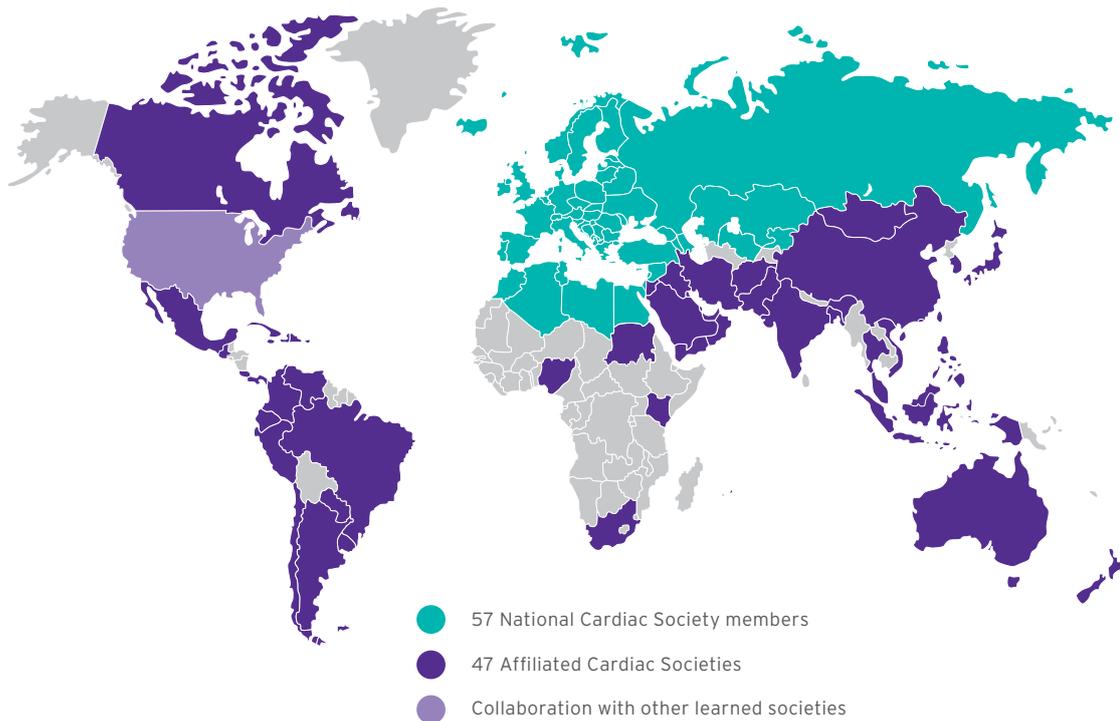
The NCS are involved in the review process of all ESC Clinical Practice Guidelines.

In 2018, 51 National Cardiac Societies participated in the review process of the ESC Guidelines to be published in 2019. The NCS also can endorse, translate and distribute ESC Clinical Practice Guidelines and Pocket Guidelines in their respective country with a six-month exclusivity period from publication. In 2018, the Full Text and Pocket Guidelines were translated by many ESC National Cardiac Societies soon after publication. Numerous articles, editorials and summaries directly related to the ESC Guidelines were also published in the official NCS journals. On average, the ESC Guidelines and/or Pocket Guidelines are available in more than 12 languages.

Global Affairs

ESC global scope

Today the ESC has a global mission and a global reach. This can only be achieved through collaboration with National Cardiac Societies around the world - jointly united to fight the burden of cardiovascular disease. The ESC has partnerships with 47 such organisations - our Affiliated Cardiac Societies.



At ESC Congress 2018, two new Affiliated Cardiac Societies joined our global network: The Dominican Society of Cardiology and the Afghanistan Cardiovascular Association.

Through Affiliated Cardiac Societies and global partners, the ESC can make a difference in the prevention and management of cardiovascular disease on a global scale through:

- Joint sessions at international and national cardiovascular meetings.
- Development of educational programmes.
- Close collaboration between society leaders to establish common goals and find ways achieve them.
- Cardiologists from our global network are increasingly looking to the ESC for science and education. We are seeing an increase in membership, ESC congress attendance and use of guidelines from these countries.



Dominican Society of Cardiology joins ESC Affiliated Cardiac Society community.



Presidents of Affiliated Cardiac Societies at ESC Congress 2018

Focus on Asia

The ESC is proud of its longstanding collaboration with a number of cardiology partners across Asia. In the last 12 months we have been developing our activities with these groups by bringing ESC science and education to the region and sharing Asian expertise through ESC platforms. ESC Congress consistently receives more abstract submissions from Japan than any other country.



Japanese Circulation Society and ESC collaborate



ESC, APSC and AFC plan new meeting for Asian cardiologists in November 2019

ESC Asia with APSC & AFC

In 2018, the ESC worked closely with the Asian Pacific Society of Cardiology (APSC) and the Asean Federation of Cardiology (AFC) on a new joint initiative ESC Asia with APSC & AFC. This ground-breaking, three-day scientific event will be held in Singapore on 8-10 November 2019 and will allow the ESC to further expand the boundaries of cardiovascular medicine, delivering the very latest science to those Asian cardiologists (with a special focus on the young community) unable to attend ESC Congress 2019.

Global affairs events from April 2018 to March 2019

During these events, leadership meetings were organised to discuss the opportunities for further collaboration and joint developments.

May 2018	Location
ESC in Taiwan at the Asian Pacific Society of Cardiology (APSC) Congress	Taipei, Taiwan
August 2018	Location
ESC in Australia at the Cardiac Society of Australia & New Zealand (CSANZ) Congress	Brisbane, Australia
September 2018	Location
ESC in China at CSC during the Chinese Society of Cardiology (CSC) Congress	Hangzhou, China
ESC in Brazil during the Brazilian Society of Cardiology (BSC) Congress	Brasilia, Brazil
ESC in Thailand at the Asean Federation of Cardiology Congress (AFCC)	Bangkok, Thailand
October 2018	Location
ESC in South Africa during the South African Heart Association (SA Heart) Congress	Sun City, South Africa
ESC in China at GWICC during the Great Wall International Congress of Cardiology (CHF/GWICC)	Beijing, China
ESC in Argentina during the Argentine Society of Cardiology (SAC) Congress	Buenos Aires, Argentina
ESC in Canada at the Canadian Cardiovascular Society (CCS) Congress	Toronto, Canada
Joint ESC and Gulf Heart Association Programme	Kuwait
November 2018	Location
ESC in India during the Cardiological Society of India (CSI) Congress	Mumbai, India
Joint ESC and Saudi Heart Association Programme	Al-Hassa, Saudi Arabia
March 2019	Location
ESC in Japan during the Japanese Circulation Society (JCS) Congress	Yokohama, Japan
ESC in Saudi Arabia during the Saudi Heart Association (SHA) Congress	Riyadh, Saudi Arabia

Governance

Ethics Committee

The ethics committee has an advisory role for the ESC Management Group and Board. ESC constituent bodies and individual members may also raise an issue with the ESC Ethics Committee. The committee manages specific issues of professional or scientific misconduct of individual members or of ESC bodies if it affects the ESC as an organisation.

The ESC Ethics Committee conducts its activities in accordance with a Charter approved by the Board of the ESC. It comprises four ESC expert volunteer members and three (non-ESC) legal and ethics experts.

Declaration of Interest (DOI) Policy

In 2018, the ESC collected 1,954 Declarations of Interest (DOI) from volunteers working on 295 different ESC tasks or committees. This generated 4,732 DOI reviews.

A total of 93 reviewers took part in this oversight to ensure ESC scientific documents are produced in full compliance with the ESC Declaration and Management of Conflict of Interest Policy.

The process identified 110 potential conflicts of interest. Upon further investigation, 94 of those cases were deemed not to be conflicts and the volunteers were confirmed in their ESC position. In four instances, volunteers were asked to step down from their ESC position because their declarations did not comply with ESC DOI policy.

ESC Audit Committee

The Audit Committee provides an oversight of financial, ethical and general governance by reviewing compliance with relevant policies and procedures. Particular attention is given to the approval of the yearly Financial Statements, the assessment of risks, the management of financial assets and the implementation of the Declaration of Interest Policy. The Audit Committee also validates the checks and balances of the general Governance of the ESC.

The Audit Committee consists of five members, three of them external members with experience in business, law, financial affairs, marketing and other professions. This external expertise ensures that best practices are implemented and that no prejudice or bias affect their decisions and deliberations. The other two members are elected and are ESC volunteers, representing National Cardiac Societies, Associations, Councils and Working Groups.

The Audit Committee meets with the ESC Management Group and Board from time to time but reports directly to the ESC General Assembly, further strengthening the Audit Committee's Independence within the ESC structure.

This year's report by the Audit Committee includes the following actions and recommendations to:

- approve the 2018-2019 financial statements
- complete the review of the ESC Statutes
- approve key changes to the Declaration of Interest and the Financial Investment policies
- initiate a review for the long-term use of available reserves and funds

Financial Report

Secretary Treasurer's Report

The activities of the European Society of Cardiology are shared between two legal entities:

- The **European Society of Cardiology**, which is the not-for-profit professional medical association and learned society including the revenue generating activities such as congresses
- The **Maison Européenne du Coeur**, a real estate property company which owns the European Heart House and surrounding land

The figures reported below are the consolidated financial statements including both entities, prepared in accordance with French GAAP (Generally Accepted Accounting Principles), certified by the Statutory Auditors and reviewed by the Audit Committee. The Secretary Treasurer's Report includes a three year period of the Group statement of incomes and expenditures together with the Consolidated Balance Sheet, business reporting analysis and graphs on the evolution of the revenue, profit, headcount and net assets.

ESC GROUP STATEMENT OF INCOMES AND EXPENDITURES

31 March 2019 - Euros

	31/03/2017	31/03/2018	31/03/2019
Turn over	50,783,301	64,986,347	59,378,354
Other operating income	8,168,481	7,003,856	7,969,151
Consumables	-41,904	-84,523	-295,955
Compensations and wages	-13,407,681	-14,329,960	-15,433,476
Others charges	-43,482,833	-53,824,679	-51,125,876
Fiscal Charges	-968,377	-1,047,935	-1,045,783
Depreciation and provisions	-198,877	-577,693	222,483
OPERATING PROFIT	852,109	2,125,413	-331,102
Financial Result	496,698	439,887	296,121
RESULT BEFORE TAX	1,348,808	2,565,300	-34,981
Extraordinary items	88,952	-23,260	-22,659
Taxes	-352,382	-793,458	-21,114
RESULT AFTER TAX	1,085,377	1,748,582	-78,754
Notes : Operating income and expenses include sales and purchases of hotel rooms for	K Euros 8,595	K Euros 13,828	K Euros 13,532

ESC GROUP BALANCE SHEET CONSOLIDATED

31 March 2019 - Euros

ASSETS	31/03/17	31/03/18	31/03/19
Intangible assets	222,795	192,626	158,218
Tangible assets	4,355,870	4,423,899	4,539,117
Financial Assets	59,034	52,895	51,799
TOTAL FIXED ASSETS AND INVESTMENTS	4,637,698	4,669,419	4,749,133
Deffered taxation	150,436	155,131	118,936
Inventories and WIP	2,606,188	3,189,764	4,163,738
Accounts receivable / Suppliers downpayments	16,648,684	13,890,283	9,082,379
Fiscal and social debtors	2,173,169	1,545,300	2,406,715
Other current assets	9,748,009	3,402,333	5,160,937
Cash and Cash equivalents	55,655,758	61,136,049	51,514,321
TOTAL CURRENT ASSETS	86,982,243	83,318,860	72,447,026
TOTAL ASSETS	91,619,941	87,988,279	77,196,159
LIABILITIES	31/03/17	31/03/18	31/03/19
Non refundable funds	4,849,260	4,849,260	4,849,260
Investments reserves	36,963,926	38,049,303	39,797,886
Surplus for the year	1,085,377	1,748,582	-78,754
TOTAL NET ASSETS	42,898,563	44,647,144	44,568,392
Deffered taxation	23,841	47,481	32,400
Provisions for liabilities and charges	191,675	192,637	182,000
Financial long term debt	0	0	0
Accounts payable	9,121,368	4,586,077	4,975,798
Fiscal and social creditors	4,291,332	5,141,486	4,818,988
Other Creditors	35,093,163	33,373,454	22,618,581
TOTAL LIABILITIES	48,721,378	43,341,134	32,627,767
TOTAL LIABILITIES AND NET ASSETS	91,619,941	87,988,279	77,196,159
WORKING CAPITAL	38,260,865	39,977,726	39,819,259
WORKING CAPITAL REQUIREMENTS	17,394,893	21,158,323	11,695,062
CASH AND CASH EQUIVALENTS	55,655,758	61,136,049	51,514,321

Commentaries on ESC Group Consolidated Accounts:

The accounts reported by the European Society of Cardiology group for the fiscal year 2018-2019 show a result before tax of €-35k, which compares favourably to the budget of €-1.9 million.

Net result after tax is €-79k.

This is in line with the Board decision to allocate all of the funds to the ESC activities and to invest to make ESC “Fit for the Future”.

Total ESC group revenue (excluding hotel room sales) was €53.8 million.

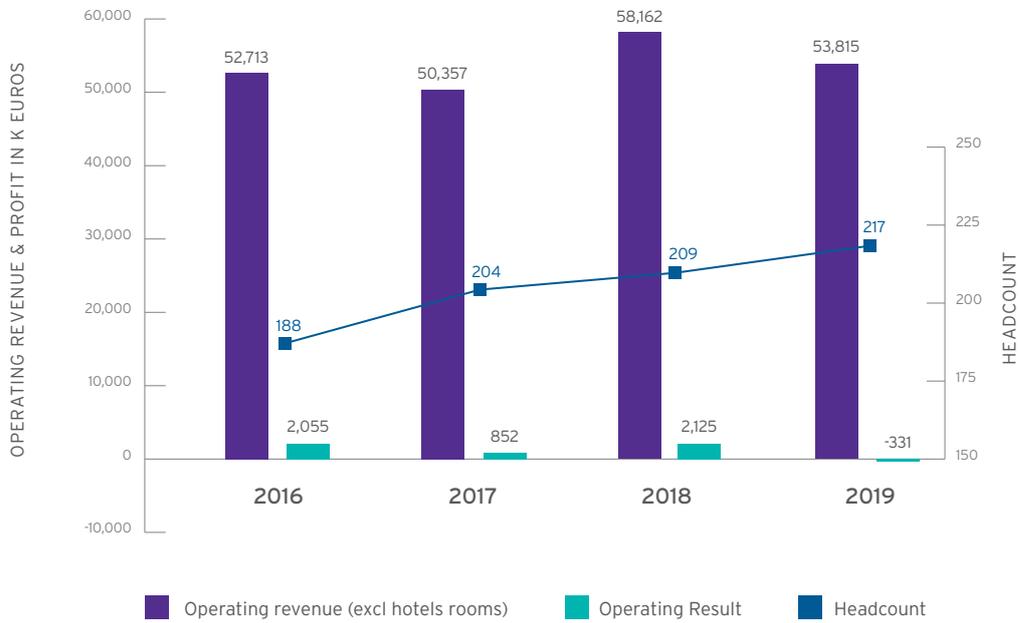
Operating result:

As mentioned in the ESC business reporting an €-331k operating result has been generated this year and can be explained by referring to the various activities of the ESC:

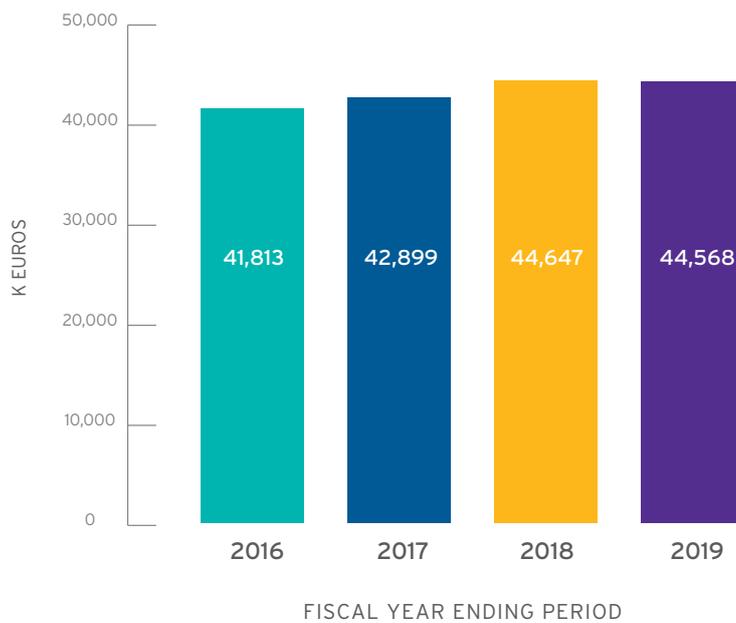
- **Scientific documents and Educational activities** - The ESC has continued its investments in the development of Clinical Guidelines.
 - During the year, €988k were spent on related activities and five new Clinical Practice Guidelines were approved and released
 - Education in Cardiology: the department is now focused on providing services regarding distance learning, webinars, assessment and courses
The ESC has continued its investment in the development of its online educational platform, improving the ESC Clinical Case Gallery to manage call for cases for ESC and subspecialty congresses, produced new multiple-choice questions (MCQs) and general cardiology webinars. In addition, the ESC and subspecialty communities have continued to invest in the development of educational materials.
The ESC has continued its collaboration with European Universities and the implementation of post-graduate courses. It is also supporting and developing the European Examination in General Cardiology.
- **EORP (Registries)** - The multi-registries and multi-sponsors programme (EORP) started in October 2009 and has continued its implementation. Twenty-one registries are currently on-going and will provide the scientific community significant insights into Clinical Practice Guideline adherence and where investment in further education is required. Based on the signed sponsoring agreements, the ongoing discussions with potential sponsors and taking into account an extension of the programme scope, the project is considered break-even. Revenue and costs have been assessed at €2,592k during the current fiscal year for the EORP main programme and €891k for the prevention programme (Euroaspire V).
- **Journals and publishing activities** - The ESC family of journals and publishing activities have generated a total contribution of €2,244k and have increased their international coverage, impact and influence. This year, the *European Heart Journal* (EHJ) remains the major contributor with a €945k contribution. Regarding book publishing, sales of ESC Pocket Guidelines generated revenue of €222k. The ESC launched CardioMed, the online cardiology encyclopaedia, that links to ESC Clinical Practice Guidelines.

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- **Congresses** - Eight congresses were organised this fiscal year: ESC Congress 2018, Heart Failure 2018, EuroEcho-Imaging 2018, EuroHeartCare 2018, EuroPrevent 2018, FCVB 2018, Acute CVD Care 2019 and EHRA Congress 2019.
 - ESC Congress 2018 in Munich was a significant scientific and financial success with 11,029 abstracts submitted (acceptance rate 40%), 32,858 participants and 155 countries represented.
 - **Membership** - The ESC membership activities have generated a result of €+773k with 20,500 paying members. 12% of these members are ESC Fellows, 44% are related to the ESC Professional Members and 44% to the subspecialty associations, with a breakdown of €+452k for ESC and €321k for the subspecialty associations.
 - **Board and committees** - Board and committee expenses reached €-1,668k
A travel policy for volunteers' travels has been implemented together with the cost containment principles in order to adapt the association to a more and more challenging environment.
 - **Associations and Working Groups** - The seven Associations and the 15 Working Groups have continued to develop their activities and projects, participating in the improvement of the overall ESC position. They have generated a €3,890k contribution during the reporting period. The allocation of the support functions (Human Resources, Finance, IT, Direct support...) amounts to €2,374k.
 - **Financial investments** - The Board maintained the ESC financial investment policy that is characterised by a prudent capital conservation profile. Cash & Cash equivalents are mainly invested in corporate bonds, a euro denomination fund with protected contract, short-term deposits, and saving accounts in major banks.

Growth in Group Annual Revenue, Result and Headcount



Growth in Net Assets



Based on European Medicines Agency guidelines, the overall proportion of industry and non-industry income is detailed below, taking into account the highest contribution from a single company represents 5% of the overall income.

INDUSTRY RELATED INCOME		
Name of company/funder	Amount of income - Euros	% of overall organisation's income
Congresses	39,333,446	58,4%
Others seminars	3,964,368	5,9%
Studies and registers	2,638,033	3,9%
Publications	1,165,730	1,7%
Miscellaneous: sponsoring for CRT, sub-specialties fellowship training...	534,901	0,8%
SUBTOTAL:	47,636,479	70,7%

NON-INDUSTRY RELATED INCOME		
Source of funding	Amount of income - Euros	% of overall organisation's income
Congresses	10,708,290	15,9%
Journal royalties	3,333,101	4,9%
Membership fees	3,075,695	4,6%
Others seminars	925,371	1,4%
Donations	162,512	0,2%
Publications	101,558	0,2%
Others	1,404,498	2,1%
SUBTOTAL:	19,711,025	29,3%
TOTAL:	67,347,504	100%

ESC FINANCIAL RESULTS

By division (ESC reporting) - Euros

Description	FY 2018-2019 ACTUALS	FY 2019-2020 BUDGET
INCOME :		
CONGRESSES & MEETINGS (excl. sales of hotel rooms)	36,630,393	39,023,175
EDUCATION IN CARDIOLOGY	364,723	1,890,466
EUROOBSERVATIONAL RESEARCH PROGRAMME	2,638,033	6,604,926
RESEARCH	0	0
PRACTICE GUIDELINES	76,004	57,500
JOURNALS & PUBLICATIONS	3,924,624	3,771,542
SCIENTIFIC DOCUMENT	0	0
ADVOCACY	960,212	1,055,221
MEMBERSHIP	2,707,081	2,525,972
EUROPEAN HEART AGENCY, ACADEMY & INSTITUTE	523,244	1,239,074
BOARD & COMMITTEES	7,280	0
COMMUNICATION & MARKETING	0	0
MGT / FINANCE / HR / OFFICES	1,382,602	35,000
BUSINESS DEVELOPMENT	0	0
PROJECTS & SYSTEMS	0	0
ASSOCIATIONS, WGs & COUNCILS	4,601,154	7,697,205
OPERATING INCOME	53,815,350	63,900,082
EXPENSE :		
CONGRESSES & MEETINGS (excl. purchases of hotel rooms)	-20,255,938	-24,903,102
EDUCATION IN CARDIOLOGY	-1,276,898	-2,475,964
EUROOBSERVATIONAL RESEARCH PROGRAMME	-1,915,771	-5,645,673
RESEARCH	-594,984	-704,859
PRACTICE GUIDELINES	-1,063,870	-989,896
JOURNALS & PUBLICATIONS	-1,680,918	-2,024,341
SCIENTIFIC DOCUMENT	0	-51,558
ADVOCACY	-1,052,245	-1,449,504
MEMBERSHIP	-2,255,082	-2,159,721
EUROPEAN HEART AGENCY, ACADEMY & INSTITUTE	-1,255,685	-1,732,596
BOARD & COMMITTEES	-1,667,791	-1,459,572
COMMUNICATION & MARKETING	-2,634,434	-2,703,405
MGT / FINANCE / HR / OFFICES	-6,846,763	-4,894,369
BUSINESS DEVELOPMENT	-1,312,415	-1,619,232
PROJECTS & SYSTEMS	-3,353,651	-4,017,795
ASSOCIATIONS, WGs & COUNCILS	-6,980,009	-10,119,054
OPERATING EXPENSE	-54,146,452	-66,950,642

ESC FINANCIAL RESULTS

By division (ESC reporting) - Euros

Description	FY 2018-2019 ACTUALS	FY 2019-2020 BUDGET
RESULT :		
CONGRESSES & MEETINGS	16,374,455	14,120,073
EDUCATION IN CARDIOLOGY	-912,176	-585,498
EUROOBSERVATIONAL RESEARCH PROGRAMME	722,262	959,253
RESEARCH	-594,984	-704,859
PRACTICE GUIDELINES	-987,866	-932,396
JOURNALS & PUBLICATIONS	2,243,706	1,747,201
SCIENTIFIC DOCUMENTS	0	-51,558
ADVOCACY	-92,033	-394,283
MEMBERSHIP	452,000	366,251
EUROPEAN HEART AGENCY, ACADEMY & INSTITUTE	-732,440	-493,522
BOARD & COMMITTEES	-1,660,511	-1,459,572
COMMUNICATION & MARKETING	-2,634,434	-2,703,405
MGT / FINANCE / HR / OFFICES	-5,464,161	-4,859,369
BUSINESS DEVELOPMENT	-1,312,415	-1,619,232
PROJECTS & SYSTEMS	-3,353,651	-4,017,795
ASSOCIATIONS, WGs & COUNCILS	-2,378,855	-2,421,849
OPERATING RESULT	-331,102	-3,050,560
FINANCIAL INCOME	606,538	371,170
FINANCIAL EXPENSES	-310,417	-15,000
FINANCIAL RESULT	296,121	356,170
RESULT before Tax	-34,981	-2,694,390
EXTRAORDINARY ITEMS	-22,659	
TAXES	-21,114	
RESULT after Tax	-78,754	-2,694,390

Auditor's Report

Year ended 31 March 2019

Statutory auditor's report on the consolidated financial statements

To the Annual General Meeting of S.E.C.,

Opinion

In compliance with the engagement entrusted to us by your Annual General Meeting, we have audited the accompanying consolidated financial statements of S.E.C. for the year ended March 31, 2019.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at March 31, 2019 and of the results of its operations for the year then ended in accordance with French accounting principles.

Basis for Opinion

- **Audit Framework**

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the *Statutory Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report.

- **Independence**

We conducted our audit engagement in compliance with independence rules applicable to us, for the period from April 1, 2018 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in the French Code of Ethics (*Code de déontologie*) for statutory auditors.

Justification of Assessments

In accordance with the requirements of Articles L.823-9 and R.823-7 of the French Commercial Code (*Code de commerce*) relating to the justification of our assessments, we inform you of the assessments that, in our professional judgment, were of most significance in our audit of the financial statements of the current period.

These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the consolidated financial statements.

Accounting principles

Note "Notes on the operating account / Explanations on the accounting of certain revenues" to the consolidated financial statements sets out the accounting standards and methods used with regard to long-term contracts. As part of our assessment of the accounting standards and methods applied by your Association, we appreciated the appropriateness of the accounting methods described above, of the information given in said note, and of their correct implementation.

Accounting estimates

Your Association constitutes provisions to cover contingencies as described in Note "Notes concerning liabilities / Provisions" to the consolidated financial statements. As part of our assessment of these estimates, we appreciated the reasonableness of the assumptions adopted and the resulting evaluations.

Specific verifications

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by laws and regulations of the information given in the Group's management report of the Board of Directors.

We have no matters to report as to their fair presentation and their consistency with the consolidated financial statements.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The consolidated financial statements were approved by the Board of Directors.

Statutory Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As specified in Article L.823-10-1 of the French Commercial Code (Code de commerce), our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management in the consolidated financial statements.
- Assesses the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein.
- Evaluates the overall presentation of the consolidated financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The statutory auditor is responsible for the direction, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed on these consolidated financial statements.

Marseille, July 12, 2019

The Statutory Auditor
French original signed by
ERNST & YOUNG Audit
Camille de Guillebon

This is a translation into English of the statutory auditor's report on the consolidated financial statements of the Company issued in French and it is provided solely for the convenience of English-speaking users.

This statutory auditor's report includes information required by French law, such as the verification of the information concerning the Group presented in the management report. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.



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