

## HFA launches new initiatives

Over the past year, the Heart Failure Association (HFA) of the ESC has been working hard to fulfill its mission “to improve quality of life and longevity, through better prevention, diagnosis and treatment of heart failure”. Major activities of the HFA, which, with around 9 000 members represents the largest association of the ESC, include the launch of a global awareness programme, an open access journal, a certification exam, and the group dedicated to supporting young HF specialists.

The Global Heart Failure Awareness Programme, initiated by the HFA in 2014, recognizes that with 26 million people worldwide affected by heart failure a coordinated international approach is needed to make heart failure prevention and management a global health priority. “Our idea is to make everyone aware of the devastating impact heart failure has on people’s lives and identify the most effective ways to address the problem,” explains Gerasimos Filippatos, HFA President.

The first step in May 2014 was the publication of a White Paper demonstrating the burden of heart failure with a clear call to action to promote heart failure prevention, improve heart failure awareness, ensure equity of care, support patients and their caregivers and promote research. The White paper, already endorsed by 49 national HF working groups, emphasizes the need to seize publicity opportunities. Between 2014 and 2018 the second phase of the project will develop a heart failure awareness campaign, produce a White Book highlighting epidemiology, and characterize the ways heart failure is managed in different parts of the world.

In 2014 the HFA ESC specialist HF curriculum was published providing a blueprint for HF training. The curriculum identifies the knowledge required, necessary skills, and professionalism (attitudes and behaviour) needed to become an HF specialist. “Basically it



Prof. G. Filippatos  
(Athens, GR)

outlines what you need to know on top of general cardiology,” explains Filippatos.

Based around this curriculum and ESC HF guidelines (the new edition is due for publication in May 2016) is the HFA online learning platform providing HFA Online and Full members with exclusive access to 15 online modules written by HF experts. The next step, says Filippatos, will be the development of HFA certification with the first exam scheduled to be held during the HF 2016 congress in Florence.

A recent HFA publishing innovation has been establishment of a new HFA journal ‘ESC Heart Failure’ in September 2014 providing the first and only open access HF journal. The journal

is in addition to ‘The European Journal of Heart Failure’. “We’re really proud that at 6 577 our flagship journal now has the highest impact factor of any HF journal in the world,” says Filippatos. “The new journal will provide a home for some of the high quality papers we’ve had to refuse.”

The HFA has recently developed initiatives for both young and established HF specialists. The Heart failure specialists Of Tomorrow (HoT) programme, launched in 2015, provides a platform for young people interested in HF. The organization, offering special services for those under 40, helps members find out about educational opportunities, network, develop competency in HF and get involved with research projects.

For our established members, the HFA created the Fellows of the Heart Failure Association, a prestigious award recognizing excellence in the field of HF. “It acknowledges people at the top of their profession,” says Filippatos.

With such capacity-building underway, the HFA feels confident of improving the future outlook of HF patients.



### Translating basic science into heart failure care

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### Don't miss

- **Late Breaking Trials III:** SEVILLE, 08:30 - 10:00
- **How to:** interpret biomarkers in heart failure? MADRID, 08:30 - 11:00

### HFA Focus: ATHENS

- Valve disease in heart failure: a multidisciplinary approach, 11:00 - 12:30
- Heart failure and arrhythmias, 14:15 - 15:45
- **What's new in Industry?** SEVILLE, 14:15 - 15:45
- **Debate:** Hot issues in heart failure, SEVILLE, 16:30 - 18:00
- **How-to:** A rude awakening: Sleep-apnoea and heart failure, FLORENCE, 16:30 - 18:00

### Abstract sessions in the AGORA

Rapid Fire sessions 3 to 6 from 8:30 to 18:00

# SP&P

**All slide presentations, abstracts and electronic posters are available for consultation on the Scientific Programme & Planner**

Resources are available to full and online members and fellows of the HFA only.

# Translating basic science into heart failure care

At Heart Failure 2015, we designed the basic science track to address not only basic scientists but also, and in particular, clinicians via attractive translational topics. Here, we summarise the sessions to give you a flavour of what to expect.

'Novel drugs - how do they work?' - on Sunday - review the slideset at the e-Library

After more than a decade without major developments in pharmacological heart failure management, we are beginning to see a ray of light. With the PARADIGM trial, neprilysin inhibition combined with AT1-receptor antagonism may set a new standard. On Sunday, John C. Burnett Jr., who witnessed much of the development of this new drug class, gave us a deep insight into the mechanisms underlying the success of PARADIGM. Another development is Serelaxin, which improved symptoms in acute heart failure patients and, unexpectedly, reduced mortality over the ensuing 180 days, despite being administered in only the initial days of the trial. What could be the mechanisms behind it? This was discussed by Thomas Eschenhagen. Rudolf de Boer also gave us an insight into the importance of fibrosis in heart failure, and the various anti-fibrotic agents in the pipeline, while Michael Murphy introduced the concept of mitochondria-directed therapies. As mitochondrial dysfunction and oxidative stress underlie various ageing-related diseases, this novel systemic approach may target not only the heart but also many different organ systems.

'Can you hear me now? How organs communicate' Monday 25 May, 08:30 - 10:00 in room Rome

Talking of systemic therapeutic approaches, we have realised over the past few years not only that the cross-talk between different cell types within an organ is important, but so is that between different organs. This touches on the timely issue of comorbidities, which we know are common and a major problem, especially in the elderly and in heart failure patients with preserved ejection fraction (HFpEF). Today, Adelino Leite-Moreira, Linda van Laake, Thomas Thum and Emeline van Craenenbroeck will explain in more detail how the heart interacts with the lungs, brain, kidney and endothelial cells.

'HFpEF: what's the key mechanism?' Monday 25 May, 11:00 - 12:30 in room Rome

The pathophysiology of HFpEF appears to be governed by its frequent comorbidities, such as diabetes, overweight and hypertension. The speakers here will discuss what, in their view, is the dominant mechanism for HFpEF pathophysiology, ranging from fibrosis (Javier Diez), calcium and sodium handling (Lars S. Maier) to endothelium-myocyte crosstalk (Walter Paulus), or a mixture of all three (David Kass).

'Cardiomyopathies – what are the mechanisms?' Monday 25 May, 16:30 - 18:00 in room Rome

In the past decade, we made substantial progress in understanding the genetic causes of dilated and hypertrophic cardiomyopathies. Several genes have been identified, most commonly encoding sarcomeric proteins. Why do they result in different phenotypes, leading to either systolic and/or diastolic dysfunction, in dilation or concentric hypertrophy? How do changes in metabolism with diabetes affect the heart in diabetic cardiomyopathy? These and other questions will be addressed today by the renowned Hugh Watkins, alongside Norbert Hubner, Jolanda vander Velden and Fatima Smith.

'Metabolic targets in heart failure' Monday 25 May, 14:15 - 15:45 in room Rome

The more we perform unbiased screens in patients with heart failure, the more we find substantial metabolic impairment, apparently closely associated with the pathophysiology. How should these processes be tackled? At the level of substrate metabolism (according to Kieran Clarke and Guiseppe Rosano), or rather directly at the mitochondrial level, as suggested by Christoph Maack? How does Metformin

expand lifespan in heart failure patients? Liesbet Timmerman has an exciting explanation for that: by transiently impairing metabolism, the system learns to help itself by activating endogenous protective pathways that extend lifespan.

'Myocarditis: how to treat, and why?' on Sunday - review the slideset at the e-Library

Several approaches to treat myocarditis have been tested in recent years but, aside from the standard heart failure therapies, no additional treatment has yet translated to routine clinic use. Why is that? Should we target the viruses or the inflammatory response? Is there only 'bad' inflammation? Are biopsies justified? These difficult issues were addressed by Carsten Tschoepe, Peter Liu, Johan Neyts and Jens Mogenson on Sunday afternoon.

So, don't miss out! Come and join us for great translational science and stimulating discussions throughout the congress!



Dr. C. Maack  
(Homburg, DE)



The HFA supports Basic and Translational science with the annual Winter Meeting



Abstract submission opens in August

## Preventing heart failure rehospitalisations with wearable technology



W. Abraham  
(Ohio, US)

Can non-invasive, wearable technology help reduce heart failure hospital readmissions in recently discharged patients by remotely alerting clinicians to the development of pulmonary congestion?

That is the question that will be answered this morning by William Abraham (Ohio State University College of Medicine, Columbus, Ohio,

USA), when he presents results with a novel remote dielectric sensing (ReDS) technology during the Late Breaking Trials III session.

Pulmonary congestion is the leading cause of worsening heart failure symptoms and heart failure hospitalisation. However, one of the difficulties is being able to know when the lung fluid volume is increasing and, consequently, the best time to start treatment to prevent rehospitalisation.

"Most patients get readmitted because they're discharged with inadequate diuresis and their lungs are still too wet," Dr Abraham told Heart Failure Congress News ahead of the session. "Or, once they go home they very quickly begin to re-accumulate fluid in the lungs, get congested again and get readmitted."

To accurately and remotely monitor lung fluid volume, ReDS technology, which uses low power electromagnetic signals to measure absolute lung fluid volume, was incorporated into a wearable vest (Sensible Medical Innovations Ltd).

Dr Abraham explained that the technology "was developed out of the need to more precisely monitor heart failure patients, and it really is the first non-invasive technology that can provide an absolute measure of the status of lung water."

He added: "There have been previously technologies such as impedance-based technologies, which give us a relative measure of lung water...but they never tell us when the lung is normally dry and, when it's wet, they don't tell us quantitatively just how wet the lungs are."

"This technology really goes beyond anything else that we've had before, in providing a non-invasive quantitative actionable assessment of lung water that can be used in the day-to-day management of heart failure patients to keep them out of the hospital."

In the first outcome study of the technology, Dr Abraham and colleagues enrolled patients hospitalised for heart failure and followed them up post-discharge at home using ReDS, alongside standard of care monitoring and follow-up, including daily weights and routine clinical follow-up.

Daily ReDS data were sent to the treating cardiologist via a secure website so that the most appropriate course of action could be considered when the readings were outside the normal range.

ReDS was used for 3 months post-discharge or until either acute decompensated heart failure readmission or all-cause mortality. The number of events in the 3 months following ReDS-guided management was also collected to provide a comparison.

Should the results presented today demonstrate

that ReDS can reduce heart failure readmissions, Dr Abraham believes that the technology will "promote stability management rather than crisis management".

He said that the aim is to "detect the pulmonary congestion when it's still subclinical or sub-symptomatic and we can alter the medications, particularly the diuretics, to dry the lungs out again and keep the patients well, and keep them out of the hospital."

Dr Abraham emphasised that this could help shift the focus from simply treating the signs and symptoms of heart failure, which are, in reality, very late-stage manifestations during worsening heart failure and decompensation, to maintaining stability by keeping the lungs normally dry.

"That presents a very low risk for recurrent heart failure hospitalisation," he concluded.

Late Breaking Trials III - Monday 25 May - at 08:30 - SEVILLE

## HFA Membership

Working together for the future of heart failure

**JOIN** nearly **9 000** of your peers by taking out one of the HFA's 3 membership programmes:

BASIC MEMBERSHIP	ONLINE MEMBERSHIP	FULL MEMBERSHIP
<p><b>Never lose touch with your Association.</b></p> <p>You will be updated regularly by newsletter on everything that is happening in the HFA world.</p>	<p><b>Think about your career:</b></p> <p>Access the:</p> <ul style="list-style-type: none"> <li>• Online European Journal of Heart Failure</li> <li>• CME online education programme</li> <li>• Slides from HFA congresses and events</li> <li>• Eligible for HFA committees and study group membership</li> <li>• And more...</li> </ul>	<p><b>How to make a difference:</b></p> <p>Same benefits as Online members PLUS</p> <ul style="list-style-type: none"> <li>• Vote at HFA general assembly</li> <li>• Access HFA Members Lounge</li> <li>• Discount on registration for HFA ETP courses</li> <li>• Review HFA grants</li> <li>• Propose HFA ETP courses</li> <li>• Apply to be an HFA board member</li> <li>• Opportunity to become "Fellow of the HFA" (FHFA)</li> </ul>
<p>Pick up your HFA membership pins on the HFA Stand</p>		
<p>You also automatically become an ESC member</p>		

## NEW! Calling all HFA members under 40 years old and in training

- **JOIN** the Heart Failure Specialists of Tomorrow (HoT) group and **KEEP IN TOUCH** with people like you.
- **FIND OUT** about ongoing educational, clinical and scientific events and opportunities in the field of heart failure
- **NETWORK** with your peers interested in the field of heart failure, working in different countries and in different positions
- **BE DIRECTLY INVOLVED** in the initiatives led by HoT members, and also **INITIATE** novel projects to be performed together
- **DEVELOP** your expertise and competence in the field of heart failure and **SPEED UP** your career

**JOIN THE GROUP  
PICK UP YOUR HoT BADGE  
ON THE ESC-HFA STAND**

# Registry data shows gaps in heart failure care

There is significant room for improvement in the management of heart failure across Europe and the Mediterranean, delegates at Heart Failure 2015 were told on Sunday.

Marisa Crespo Leiro, from Hospital Universitario, La Coruña, Spain, showed data revealing that a quarter of hospitalised heart failure patients died during 1-year follow-up, alongside almost one twelfth of ambulatory outpatients.

The results came from the EURObservational Research Programme (EORP) Heart Failure Long-Term Registry. This is a prospective, multicentre, observational study of adult patients who either present to European and Mediterranean cardiac centres with new onset heart failure or who have pre-existing heart failure.

For the analysis, Dr Crespo Leiro and colleagues gathered data on patients from the 29 participating countries in the registry's six regions: Northern; Eastern; Western; Southern; Middle East and North African countries.

To ensure that the study population was as homogenous as possible, give consistent data and compensate for some countries having joined the registry after it started in April 2011, the analysis used data from the each country's 12 consecutive best-recruited months.

Centres were chosen to represent the diversity of healthcare and the geographical distribution of heart failure in each country. They were encouraged to follow-up all participants on the same day of the week. There were no specific exclusion criteria, other than the patients being aged over 18 years. The team took into account a



Dr. M. Crespo Leiro  
(La Coruña, ES)

number of demographic and clinical variables, including treatment before admission, laboratory analyses and prior or planned surgery or device implantation.

The current population consisted of 12 440 heart failure patients, of whom 40% were hospitalised and 50% were ambulatory patients with chronic heart failure.

Dr Crespo Leiro told delegates that, among hospitalised patients, 1-year all-cause mortality was 24.0%, 1-year heart failure hospitalisation was 19.0% and 1-year all cause mortality or heart failure hospitalisation was 36.0%.

Among outpatients, 1-year all-cause mortality was 7.0%, 1-year heart

failure hospitalisation was 10.0% and 1-year all-cause mortality or heart failure hospitalisation was 15%.

Risk factors for 1-year mortality in hospitalised patients included, among others, increased age, low systolic blood pressure, high heart rate, low ejection fraction, aortic stenosis and renal dysfunction. Among outpatients, the risk factors for 1-year mortality included higher age, low systolic blood pressure, pulmonary or peripheral congestion, New York Heart Association Class III or IV functional class, aortic stenosis and atrial fibrillation.

Dr Crespo Leiro emphasised that there is clearly room for improvement in heart failure care. Nevertheless, she noted that use of guideline-recommended medical therapy was good, and that patients had excellent medication adherence at 1 year.

Speaking to Heart Failure Congress News ahead of her presentation, Dr Crespo Leiro commented that the advantage of the Registry is that it is not only a tool for giving an overall picture of heart failure and its management but also allows individual countries to identify areas for improvement.

She said: "I encourage every country to use it not only for participating in the Registry itself but to have a good overview on how things are going in each country in heart failure management."

'EORP: Heart Failure registry update' on Sunday - review the slideset at the e-Library

# Are enough heart failure patients being offered heart transplants and LVAD?



L. Lund  
(Stockholm, SE)

The use of heart transplantation and implantable left ventricular assist devices (LVAD) in severe heart failure patients will come under the spotlight this morning, when a leading expert examines whether the treatments are being underutilised.

During today's Late Breaking Trials III session, Lars Lund (Karolinska Institutet, Stockholm, Sweden) will present data from the Screening for Advanced Heart Failure Treatment study, a novel investigation involving outpatients with existing cardiac resynchronisation therapy and/or an implantable cardioverter-defibrillator.

The research was undertaken following a small pilot study at the Karolinska University Hospital, in which they examined the patient rosters. The results suggested that the two treatment options are often not considered for the most severe heart failure patients.

Dr Lund commented: "Based on the number of patients who are in New York Heart Association [NYHA] class IV, and based on the number of patients that have poor prognosis based on comorbidities and

clinical parameters, there should be a lot of patients... who are listed for transplants or even LVAD than is the case."

The current investigation involves more than 1700 patients from eight clinics in seven European countries. Suitability for heart transplantation and LVAD was determined by the presence of NYHA III-IV symptoms and a left ventricular ejection fraction  $\leq 40\%$ .

Dr Lund explained to Heart Failure Congress News that the study, which will provide a more definitive answer about the use of the treatments, is novel not just because it "addresses life-saving therapy that should really be made accessible to many more patients".

"It's also novel because it brings into the cardiology field a concept that was previously only really practicable to oncology, and that is the concept of screening," he added.

Dr Lund noted that it is difficult for generalists to keep up with all the novel therapies that are available, and that it's "possible that there are many patients

walking out there that are candidates for other types of therapy too that don't get it".

He continued: "We do mammography, we debate extensively whether we should screen for prostate cancer and we have lots of data on that, but in the cardiology field we never talk about screening. We always assume that those who need therapy will get it, and that's a mistake."

Discussing why heart transplantation may be underutilised, Dr Lund suggested that it is likely to be a question of organ availability. He said: "What might happen is that, if a middle-aged patient has severe heart failure and is seen in primary care, the primary care clinician might say: 'Well, heart transplantation is an option but it's probably not for you because there are so many young people waiting for heart transplantation'."

"That's mistaken thinking because heart transplantation is available also to middle aged and even older patients," Dr Lund added.

With LVAD, the issue is that its cost-effectiveness

has not been well established. Dr Lund said: "Cost effectiveness for drug therapy in heart failure is well established but for device therapy...it's more put into question."

"Many countries, especially in northern Europe and especially Scandinavia, are very concerned about cost-effectiveness and there are many governments that will not pay for destination therapy, for example, and LVAD."

Finally, Dr Lund believes that European clinicians are slower to adopt novel technologies than their US counterparts, including mechanical circulatory support systems such as LVAD.

Late Breaking Trials III - Monday 25 May - at  
08:30 - SEVILLE

## Heart Failure 2015 Congress News

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Heart Failure is the annual congress of the Heart Failure Association of the ESC

## How does the Heart Failure congress influence your day to day clinical practice?



G. Kamzola  
(Riga, LV)

Every year, the Heart Failure congress reveals the **new directions in the management of heart failure patients** and presents the results of latest clinical trials.

Expert opinion forces clinical decision making in my day to day practice and helps to improve heart failure patient care.

Informal talks with colleagues besides scientific sessions allow to sight differences in management and patient care among countries and to borrow some ideas for improvements in my country.



M. Hassanein  
(Alexandria, EG)

The annual heart failure congress of the HFA has a profound impact on my day to day clinical practice. I like to attend the late breaking trial sessions, where presenters share their very latest research results and developments in the field of heart failure. I am very interested in the case-based focus sessions. These clinical case sessions allow me to witness interesting discussions between the presenters, panellists and attendees on the way the case was handled. Combining this with receiving updates about the guidelines, allows me to refine the way I manage my patients. Also, scientific sessions focussing on emerging therapies and diagnostic techniques, new devices, drugs and biomarkers are of tremendous value to all heart failure specialists.

The 2nd World Congress on Acute Heart Failure is of great interest to all physicians engaged in the management of these critically ill patients. I am looking forward to meeting all my dear colleagues in Seville."

I am sure that the Heart Failure congress will be a good opportunity for me to gather more information about other **multidisciplinary team approaches** around the world.

Some studies revealed the multidisciplinary team approach was beneficial to reduce re-hospitalization of heart failure patients. However, we have not been able to establish its true efficacy.

From this viewpoint, some knowledge and clues from other countries' teams about their care approaches should be very helpful for us.



H. Saito  
(Kamogawa, JP)

It's great to be able to participate in international congresses as a young professional. I find that hearing the experts discussing the newest advances in science and treatment-recommendations is the most efficient way to learn. As a resident I also want to participate in the sessions dedicated to young professionals and to the new HoT activities. Those sessions are usually very educative and help in giving focus to topics that require special attention. I think it's also a very nice way to meet fellows from other countries, exchange ideas and experiences, and thereby try to bring the best practices back home.



H. Tolppanen  
(Helsinki, FI)