ESC CONGRESS NEWS
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EUROPEAN SOCIETY OF CARDIOLOGY®

WEDNESDAY 31 AUGUST

Efficacy of drug-eluting stents fails to top bare metal in RCT

'Patients treated with DES do not live longer'

HOT LINE SESSION RESULTS

THE LARGEST STENT trial ever has found no significant differences in death from any cause or non-fatal MI in patients receiving drug-eluting stents (DES) and bare-metal stents (BMS). The investigator-initiated NORSTENT study, reported in a Hot Line session yesterday, was published simultaneously in the *New England Journal of Medicine*.

'Patients treated with DES do not live longer and they do not live better than patients treated with BMS,' said study presenter Kaare Bonaa from the University of Tromso, Norway. Both contemporary DES and BMS, he added, may be similarly recommended for coronary revascularisation.

'Although ESC guidelines recommend new DES over BMS as default for coronary revascularisation, this recommendation,' he said, 'may need to be modified in light of the NORSTENT findings.'

Aware that findings for bare-metal stents have improved with new stent designs, different metal composition and thinner struts, the NORSTENT investigators felt a re-examination against second-generation DES was needed. The study took place in all eight centres in Norway performing PCI.

Between September 2008 and February 2011, the Norwegian Coronary Stent Trial (NORSTENT), funded by the Norwegian Research Council, randomised 9013 patients with stable or unstable CAD to PCI with either contemporary drug-eluting stents (n=4504) or bare-metal stents (n=4509). In the DES group 96% received everolimus or zotarolimus-eluting stents.

Results at six years showed that the rates of the primary outcome (a composite of death from any cause and non-fatal spontaneous MI) were 16.6% in the DES group and 17.1% in the BMS group. Additionally no differences were found between the two groups for all-cause mortality.

However, the six-year rates of any repeat revascularisation were 16.5% in the DES group and 19.8% in the BMS group (HR 0.76, 95% CI 0.69 to 0.85; P<0.001).

Results from the Seattle Angina Questionnaire show that no differences were found between DES and BMS groups for physical limitation, angina frequency and quality of life.

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Kaare Harald Bonaa presented results of the NORSTENT trial, the largest stent trial yet and found comparable efficacy. 'Guidelines may need to be modified.'

A new anticoagulant option around cardioversion for AF

Edoxaban is an effective and safe alternative to anticoagulation therapy for AF patients undergoing electrical cardioversion, according to the ENSURE-AF study presented in a Hot Line yesterday. The findings were published simultaneously in *The Lancet*.

ENSURE-AF is the largest prospective randomised trial to date of anticoagulation for cardioversion in patients with AF. Principal investigator Andreas Goette said the advantage of this new approach was 'very convenient and very fast'.

'At a practical level, our study results show that newly diagnosed non-anticoagulated AF patients can start edoxaban as early as two hours prior to cardioversion if they have access to transoesophageal echocardiography or three weeks prior to that,' said Goette, from St Vincenz-Hospital, Paderborn, Germany.

Andreas Goette described a new anticoagulant option before cardioversion.

Current guidelines for AF patients having cardioversion recommend three weeks of therapeutic anticoagulation prior to the procedure. This is followed by continuation of anticoagulation for four weeks - or longer in patients at risk of AF recurrence or those with stroke risk factors present.

VKAs have traditionally been used successfully as oral anticoagulants around cardioversion. However, they have major

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Don't Miss

- **08:30 - 09:30**
  - 2015-2016 year in cardiology practice Take home messages — Galileo (The Hub)
  - ESC Clinical Practice Guidelines 2016 Highlights — Rome (Main Auditorium)
  - Basic Science Highlights — Forum (The hub)
- **09:45 - 11:45** — Rome (Main Auditorium)
  ESC Congress Highlights

TOTAL ATTENDANCE
ROME 2016: 33 050
LONDON 2015: 32 773

Honours even in trial of P2Y12 antagonists

Petr Widimsky: PRAGUE-18 trial found both prasugrel and ticagrelor 'very effective and safe' in AMI and STEMI.

THE FIRST EVER head-to-head comparison between the P2Y12 receptor antagonists tricagrelor and prasugrel found no differences in safety or efficacy in patients in AMI and STEMI. The study, PRAGUE-18, was presented yesterday in a Hot Line session.

'These results offer more freedom to clinicians to select an antiplatelet agent on top of aspirin for STEMI patients who receive dual antiplatelet therapy,' said study presenter Petr Widimsky from the Cardiocenter of Charles University, Prague. 'Based on previous results we had expected that during the first seven days prasugrel might be more effective, and that later ticagrelor might be superior. But we found that both drugs are very effective and safe, and significantly contribute to the excellent outcomes we now have in patients with AMI.'

Indeed, the trial was stopped early after interim analysis found no difference in endpoint results.

While aspirin is considered the cornerstone of treatment in ACS, there has been debate over whether it should be combined with ticagrelor or prasugrel. ESC guidelines have given both prasugrel and ticagrelor Ib recommendations in patients having primary PCI.

PRAGUE-18 study randomsied 1230 STEMI patients to prasugrel 60 mg followed by 10 mg/day for one year (5 mg/day if >75 years or <60 kg) or ticagrelor (180 mg orally followed by 90 mg b.i.d. for one year) prior to PCI.

The primary endpoint (defined as death, re-infarction, urgent target vessel revascularisation, stroke, serious bleeding requiring transmission or prolonged hospitalisation at seven days) was achieved in 4.0% of patients in the prasugrel group and 4.1% in the ticagrelor group. Additionally, no endpoint difference between the two groups was found at 30 days.

Widimsky explained that further analysis will be undertaken next year to explore the safety of any 'economically motivated' switch from prasugrel or ticagrelor to clopidogrel. 'Notably in the Czech Republic these drugs are free to patients during their hospital stays, but following discharge they have to cover the costs of tricagrelor or prasugrel themselves. So some patients decide to switch to clopidogrel, which is fully covered by local health care,' said Widimsky.

ESC Spokesman Andreas Baumbach from the University of Bristol, UK, applauded the trial and its motivation. 'I think it is worth commenting,' he said, 'that we never thought we would see this study performed, and we should be grateful to the PRAGUE investigators for doing it.'

Decoy protein reverses anticoagulant bleeding

Stuart Connolly: 'Andexanet rapidly reverses anti-factor Xa activity in acutely bleeding patients and this is associated with excellent or good hemostatis in most.'

A STUDY PRESENTED in a Hot Line session yesterday suggested that a decoy protein can rapidly reverse potentially life-threatening bleeding effects associated with anticoagulants.

Interim results from the ongoing ANdexanet alfa, a Novel Antidote to the Anticoagulation Effects of FXA Inhibitors (ANNEXA-4) study, published simultaneously in the *New England Journal of Medicine*, show the antidote andexanet alfa reduces anticoagulant activity within half an hour in nearly 90% of patients.

NOACs are considered safe but are associated with increased risk of major gastrointestinal bleeding. Andexanet alfa is the first agent designed to reverse effects of these newer oral anticoagulants which inhibit factor Xa enzyme. A modified recombinant derivative of factor Xa, andexanet alfa acts as a decoy receptor.

It has been shown to reduce anti-fXa activity in volunteers but, until now, there was no data for acutely bleeding patients. The interim results from the ANNEXA-4 study are based on 67 patients with a mean age of 77 years requiring urgent reversal of acute major bleeding. This was within 18 hours of receiving either a direct fXa inhibitor (such as apixaban, rivaroxaban or edoxaban) or an indirect one (enoxaparin).

The main site of bleeding was either gastrointestinal (49%) or intracranial (42%). The study was not randomised (for ethical reasons) and all patients received andexanet, first in an immediate IV bolus over 15 to 30 minutes and then followed by a two hour IV infusion. Dosing was based on exposure to fXa inhibitor.

Patients were assessed at baseline, at end-of-bolus, and at end of the two-hour infusion. Assessment also took place at four, eight and 12 hours, and safety follow-up visits occurred at three and 30 days post-infusion.

The primary outcomes were based on primary efficacy measurements and on safety measurements. The former included change in anti-fXa activity and clinical hemostatic efficacy through 12 hours using independent adjudication committee with pre-specified precise evaluation criteria. The latter covered overall safety; thrombotic events; antibodies to FX, FXa, andexanet; and 30-day all-cause mortality.

The interim results reported an 89% decrease in anti-fXa activity from baseline to end-of-bolus for those patients exposed to rivaroxaban, and a 93% reduction for those exposed to apixaban. Clinical haemostatic efficacy was rated as 'excellent or good' in 79% of patients at 12 hours.

Thrombotic events occurred in 18% of patients during 30 day follow-up. Study presenter Stuart Connolly from McMaster University in Canada.said this was not unexpected given the 'highly compromised' profile of patients and that anticoagulation was discontinued at the time of bleeding and not restarted.

'The preliminary report of the ongoing ANNEXA-4 study shows us that andexanet rapidly reverses anti-factor Xa activity in acutely bleeding patients and this is associated with excellent or good haemostatis in most,' Connolly. added.

Comparable effects in bare metal vs drug-eluting stents trial

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Bonaa disclosed that on the basis of these results 30 patients would need to be treated with DES to prevent just one repeat revascularisation.

'As expected, the need for repeat revascularisation was lowered by DES, but this effect was less than anticipated,' said Bonaa, adding that in some studies it was found to be around half this level.

An accompanying *Lancet* editorial described the observations as 'important because they balance the claim by some observers that there is no longer a role for bare-metal stents in PCI because of the superiority of their drug-eluting counterparts in these outcomes'. The editorial added that the trial results 'should increase confidence' in choosing bare-metal stents if clinical indications favour that decision and support guideline recommendations endorsing it.

Anticoagulation around cardioversion in AF

Continued from page 1

limitations in that VKAs require regular monitoring to ensure target INR range of 2.0-3.0. This can delay cardioversion sometimes for several weeks.

Trials have suggested that NOACs could be a safe alternative to VKAs, but there is limited data on the NOAC endoxaban in this role. ENSURE-AF was thus designed to assess the efficacy and safety of edoxaban when compared to the conventional therapy (enoxaparin/warfarin) in patients with non-valvular AF having cardioversion. It aimed to demonstrate that once-daily edoxaban is a feasible treatment option for patients undergoing cardioversion.

The phase 3b study involved 239 study sites in 19 countries in Europe and the US, with 2199 patients with documented non-valvular AF recruited. All were scheduled for electrical cardioversion after anticoagulation therapy.

A total of 1095 were randomised to edoxaban, and 1104 to enoxaparin/warfarin with dosing varied depending on patient characteristic. A total of 90.2% (n=988) were cardioverted electrically and 87.5% (n=966) were cardioverted spontaneously, some with TEE.

The study's primary efficacy objective was to compare incidences of the composite endpoint of stroke, MI and CV death between the two groups at day 28 (ITT analysis).

The endpoint occurred at a comparable rate in both groups, that is in 0.5% in the edoxaban arm versus 1.0% in the enoxaparin/warfarin arm (OR=0.46; 95% CI, 0.12-1.43).

The primary safety outcome was a composite endpoint of major and clinically relevant non-major bleeding events at 30 days. This also occurred at a comparable rate of 1.5% and 1.0% respectively.

Overall, edoxaban had similar rates of major bleeding and thromboembolism compared to well-managed optimised enoxaparin/warfarin therapy. Results were also similar whether TEE-guidance was used or not, whether patients had received prior anticoagulation or not, and in patients with a broad range of associated comorbidities.

Professor Goette said: 'Results suggest that edoxaban is an effective and safe alternative to standard enoxaparin/warfarin VKA therapy.'

Test for recurrent VTE in women on anticoagulants

Marc Rodger: Test showed that over half of women with unprovoked VTE can safely discontinue anticoagulants.

A CLINICAL DECISION RULE can help clinicians choose which female patients can safely discontinue anticoagulants by identifying those at low-risk of VTE recurrence. The REVERSE II trial, presented yesterday, showed that the HERDOO2 rule can be applied to women after a first unprovoked VTE, making it the only validated rule to do this, according to study investigator Marc Rodger.

HERDOO2 owes its name to the four risk factors which must be considered in determining a patient's VTE risk recurrence:

- Hyperpigmentation, edema or redness in a leg
- D-dimer blood test (>250 ng/ml on anticoagulants)
- Obesity (BMI ≥30)
- Older age (≥65)

VTE is the third most common CV disease after ACS. Short-term treatment with blood thinners can save lives but there's controversy about continuation of treatment. Most clots are unprovoked and guidelines recommend lifelong blood thinners. However, long-term follow up studies have shown that less than half of patients get recurrent clots if left untreated. The result is that patients continue on blood thinners needlessly.

The REVERSE II trial tested the HERDOO2 rule in a multinational study. A total of 2779 patients (mean age 54.4 years) with a first unprovoked VTE were enrolled after completing at least five and up to 12 months of anticoagulant therapy.

The number considered low-risk based on HERDOO2 criteria was 622, and the majority discontinued anticoagulant therapy. Most of the 591 high-risk women continued anticoagulants.

The primary outcome was recurrent blood clots in low risk women who discontinued blood thinners. The study showed there was a 3% rate of recurrent VTE per patient year for the low-risk women who had discontinued anticoagulants. The rate was 8.1% in high-risk patients who discontinued, and for high-risk patients who continued it was 1.6%.

'This is an important finding as, using our rule, over half of women with unprovoked VTE can safely discontinue anticoagulants and be spared the burdens, costs, and risks of lifelong anticoagulation,' said Rodger, from the Ottawa Hospital and University of Ottawa, Ontario, Canada.

Trial results of stenting for coronary bifurcation

CORONARY BIFURCATIONS – a type of coronary artery narrowing - are best treated with Culotte stenting as opposed to T-and-protrusion (TAP) stenting, when there is a need for side-branch stenting, according to the BBKII trial presented yesterday. The trial, published simultaneously in the *European Heart Journal*, represents the first ever head-to-head comparison of the two most commonly used techniques in side branch stenting with anatomy considered suitable for both techniques.

'Interventional cardiologists can now use Culotte stenting with more confidence knowing that this technique is associated with a very low angiographic restenosis rate and lower rate of TLR as compared with TAP stenting,' said study presenter Miroslaw Ferenc, from the University Heart Center, Freiburg, Bad Krozingen, Germany, 'even though it is slightly more challenging and requires appropriate training,' In coronary bifurcation lesions side branch stenting is necessary in 5-36% of patients for optimal results.

In the Bifurcations Bad Krozingen (BBKII) study, 300 patients with stable or unstable angina were deemed amenable to both stenting techniques and were randomised to either TAP stenting (n=150) or Culotte stenting (n=150).

Results at nine months showed that the primary endpoint of maximal in-stent diameter stenosis of the bifurcation lesion (assessed by follow-up quantitative coronary) was 27% for Culotte stenting versus 20% for TAP stenting.

Miroslav Ferenc: Culotte stenting has now to be seen as the preferred approach for coronary bifurcations.

The difference in the primary endpoint was driven almost entirely by differences in the side branch, where the mean percent diameter stenosis was 16% in the Culotte arm versus 22% in the TAP stenting arm.

Other important differences favouring Culotte stenting included a highly significant difference in binary in-stent restenosis at the bifurcation lesion, which occurred in 6.5% of the Culotte arm and 17% of the TAP arm as well as the target lesion rate of bifurcation lesion revascularization rate at one year, which occurred in 6% of the Culotte arm versus 12 % of the TAP arm.

'Given the clear results of this trial together with the same trend for hard clinical endpoints, Culotte stenting has now to be seen as the preferred approach for coronary bifurcations, when stenting of the site branch is needed,' concluded Ferenc.

Grants for training and research available from ESC

RAISING standards and harmonising training for cardiologists is a cornerstone of the ESC's mission to improve patient care. To that end, the ESC has developed a range of grants for healthcare professionals.

Professor Francesco Cosentino, Chair of the ESC Credentials Committee, which evaluates grant applications, says: 'The ESC recognises that in today's environment access to funding can be challenging. ESC Grants Fellowships are designed to support those who have little or no access to training or to carry out research in centres of excellence outside their own country.'

In 2016, 28 grants worth 1.9 million Euros were awarded to individuals to support their projects and advance cardiovascular research. In addition, 25 ESC grants worth 625,000 Euros were awarded to support clinical practice training.

In 2009 Alexander Kharlamov from Russia was awarded an ESC Research Grant. He says: 'The ESC Grant was a truly dramatic step forward. It upgraded my level of knowledge and experience in cardiology, and enabled me to join a translational cardiovascular team at Radboud University Hospital at Nijmegen in the Netherlands under the mentorship of Professor Paul Smits. This inspired me to take part in further projects with another renowned expert in interventional cardiology, Professor Patrick Serruys at Erasmus MC in Rotterdam. I've never looked back.'

Professor Cosentino, who trained outside his own country as a young cardiologist, adds: 'Moving abroad to advance your career is a must for anyone who really wants to grow, not only in their field of interest but as a human being. Young physicians have to take the opportunity and identify an academic institution that is really top in what they want to pursue. This is a great opportunity to develop yourself, to produce results and to acquire the necessary skills to return home with.'

Find out more about ESC grants and fellowships at www.escardio.org/grants

European Heart Academy extends postgraduate education programmes

THE EUROPEAN HEART ACADEMY was established by the ESC three years ago to train future leaders in cardiovascular medicine. In collaboration with selected universities, the Academy provides cardiovascular degrees under the European Union Bologna Framework. The specialised programmes combine lectures from key opinion leaders and executive-style teaching formats.

Current educational programmes

The Academy offers two programmes:

- *The Postgraduate Course in Heart Failure* designed by the Heart Failure Association (HFA) of the ESC in collaboration with Zurich University and the Zurich Heart House in Switzerland. It leads to a Certificate of Advanced Studies.
- *The Executive Master in Health Economics, Outcomes and Management in Cardiovascular Sciences,* which is a joint collaboration between the Academy and the London School of Economics. The second round of the programme begins in December 2016.

Coming soon: Diploma of Advanced Studies in Cardiac Arrhythmia Management

The Diploma of Advanced Studies in Cardiac Arrhythmia Management (DAS-CAM) is a joint collaboration between the Academy, Maastricht University Medical Centre and the ESC's European Heart Rhythm Association (EHRA). The programme is designed for clinical cardiac electrophysiologists to improve their knowledge and skills.

DAS-CAM will bring together renowned experts to cover not only clinical cardiac electrophysiology and device technology, but issues of leadership, biostatistics and health economics. This innovative programme will allow electrophysiologists to fulfil regulatory and managerial positions in their hospitals, universities and other work environments.

Participants will keep working while taking the two-year executive style programme. The classes will include eight modules, taught in Maastricht and Brussels.

The programme will begin in January 2017, with deadline for applications set at 20 September 2016.

More information on the Academy programmes can be found at the ESC Plaza and on www.EuropeanHeartAcademy.org.

New European guidelines on CVD prevention follow the close collaboration of ten societies

By Guy De Backer
Emeritus Professor
Ghent University
Belgium

and Marco Roffi
Vice-Chairman of Cardiology
University Hospital Geneva
Switzerland

THE 2016 EUROPEAN GUIDELINES on cardiovascular disease prevention in clinical practice were released in May this year following a close collaboration between 10 societies led by the ESC and the European Association for Cardiovascular Prevention and Rehabilitation.

The guidelines were conceived as a response to several emerging questions, including:

- What does CVD prevention mean today?
- Who needs CVD prevention?
- How should CVD prevention be applied?
- Where should it be offered?

The work of 26 international opinion leaders has now resulted in a 78-page document with 570 references, freely downloadable from the ESC website and in a pocket version now available at this Congress.

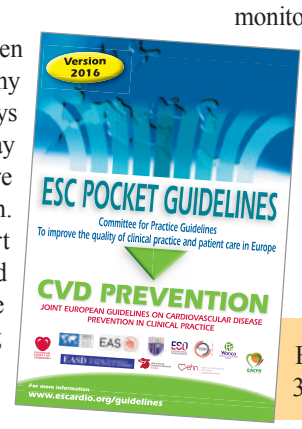
The new guidelines were presented at a Main Session yesterday, and will be reviewed in a Highlight Session this morning.

The guidelines are an update of the 2012 version; essential issues are re-emphasised and new aspects are added. Among the latter, a new chapter deals with a population-based approach to CVD prevention. Accordingly, measures aiming at the promotion of healthy lifestyles at the population level are presented, with recommendations given to adopt healthy diets as well as sufficient physical activity and to avoid smoking through regulation, economic incentives and health education in schools, at the workplace and in community settings. This novel population-based approach to CVD prevention is complementary to the still valid 'high-risk' approach which is characterised by the adaptation of preventive actions in accordance with the total CV risk of the individual.

The most important CV risk factors are briefly discussed and advice is given on how to estimate total risk and how to stratify the community in different total CV risk categories. Compared with the previous version of the guidelines, new sections are dedicated to specific groups of individuals, such as women, younger and elderly persons, ethnic minorities and patients treated for cancer.

Major new key recommendations are given to guide CVD prevention in patients with selected conditions, such as heart failure, atrial fibrillation, coronary heart disease or peripheral artery disease.

Although lifestyle changes have been recommended in several guidelines for many years, results from the EUROASPIRE surveys reveal only limited success. Better results may be achieved if these recommendations are integrated into a population-based approach. In some instances, a more professional support and monitoring may be needed - as expressed in a new recommendation that in some patients regular assessment and counselling on physical activity is recommended to promote the engagement and, if necessary, to support an increase in physical activity volume over time.



A main part of the guidelines deals with the management of major CV risk factors, such as arterial hypertension, dyslipidaemia and dysglycaemia. Corresponding recommendations have been adapted after considering the most recent observations from randomised controlled trials and observational studies.

In the final chapters, advice is given on where to intervene at the individual and at the population levels, and on how to monitor preventive activities.

To conclude, a table is presented summarising the most important recommendations on:

- Why and how to estimate total CV risk
- How to intervene
- Medication and healthy lifestyle adherence
- Implementation of recommendations

ESC Clinical Practice Guidelines 2016 - Highlights
31 Aug 08:30-09:30 Rome - Main Auditorium

European data resource collated in the ESC Atlas of Cardiology

DESPITE MANY advances in healthcare, there are still serious disparities in cardiovascular systems and outcomes in Europe. In addition, there remain significant problems in healthcare management in many countries. European policymakers need extensive, reliable data to solve these problems and further document cardiovascular disease as the number one health priority throughout the continent. The *ESC Atlas of Cardiology* aims to do just that.

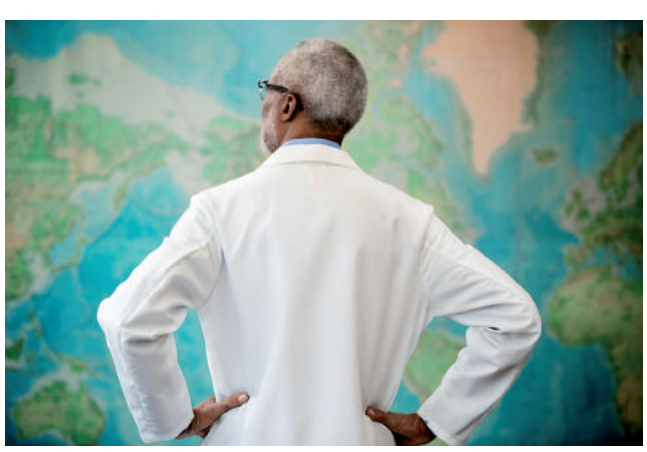
The Atlas is a unique, ambitious project that provides essential evidence to improve decision making and patient care, and bridge the gap between policies and realities.

It is a comprehensive data collection project of 350 variables. It is also the first project ever to combine socio-demographic, economic, health outcomes, risk factors, healthcare system structure and policies data derived from international sources (WHO, World Bank and the Organisation for Economic Co-operation and Development) and cardiovascular data provided by ESC Member National Cardiac Societies.

This phenomenal resource maps the status of European healthcare systems from a cardiology perspective, revealing trends, disparities, gaps and associations between fundamental variables and provides the answers to questions such as:

- How do European countries compare with each other?
- What explains the disparities between them?
- What is the optimal level of service provision?
- Which factors are responsible for better outcomes?
- Where should health systems invest?

The next steps for the ESC will be to use the robust data and analyses from the Atlas to provide national and international decision-makers with evidence-based policy recommendations. The ultimate goal is to shape cardiovascular policy and regulation; influence allocation of funds for prevention, treatment, education and research to harmonise standards of care for healthier, longer lives.



The E-Atlas of Cardiology is now available to all those ESC National Cardiac Societies who participatedin the project; demonstrations are available at the ESC stand.

Making sure that cardiologists have a say in EU research funding

RESEARCH NEEDS funding – and funds can be hard to come by. But there are ways. Each year the ESC and the European Commission hold a joint session at ESC Congress on EU funding and networking opportunities. These practical sessions focus on where to find relevant information, how to prepare a successful project proposal and an overview of managing EU-funded research projects.

Ensuring researchers know what opportunities are available and how to make the most of them is one part of the ESC's work. Another is ensuring that such funds are available in the first place.

The ESC's advocacy programme works with European institutions to emphasise the need for funding and advise where EU funds should be used in cardiovascular research. In short, ensuring that scientific experts have a say on where and how the money should be spent.

To achieve this, the ESC has also teamed up with 20 other leading medical societies within the framework of the Alliance for Biomedical Research in Europe (BioMed Alliance) of which the ESC is a founding member. The BioMed Alliance has made significant inroads to ensure that scientists are consulted by decision-makers when deciding on research policies. This includes the creation of the Scientific Panel for Health - a unique body created within the European Commission under the Horizon 2020 programme - that brings together 30 experts and has been mandated to formulate recommendations to policymakers.

Karin Sipido, Past President of the BioMed Alliance and Chair of the Scientific Panel for Health says: 'By uniting research organisations through the BioMed Alliance we have built solid foundations. We now need to push for even more engagement with decision-makers, so that every Euro is spent where it's most needed and that those who know about research are part of the process.'

* Supporting excellence in research is one of five focus areas for the ESC in the coming years. Another is advocacy, to shape a policy and regulatory environment favourable to improving cardiovascular health. Find out more on www.escardio.org

* Videos and slides from the ESC/EU sessions are available at www.escardio.org/365 http://www.escardio.org/Home-Escardio-beta/Research/Research-Funding/eu-funding-for-organisations

Despite guidelines, SCD in hypertrophic cardiomyopathy rarely linked to exercise

SUDDEN DEATH IN patients with hypertrophic cardiomyopathy (HCM) is rarely associated with exercise, according to study results presented by cardiologist Gherardo Finocchiaro from St George's University of London, UK. Speaking at a press conference earlier this week, he explained that almost 80% of patients in the study had no symptoms and only one in five had been diagnosed with HCM before their death.

As background to his report Finocchiaro explained that HCM is an inherited heart muscle disease with variable clinical expression and natural history. It is characterised by hypertrophy of the left ventricular walls ('thick heart muscle'). Sudden cardiac death (SCD) is a relatively common cause of mortality in patients with HCM, caused by fatal arrhythmias which can be effectively treated with ICDs.

'Exercise is considered a trigger of fatal arrhythmias,' said Finocchiaro, 'and international recommendations advise patients with a clear phenotypic expression of HCM to avoid competitive sports. It is unclear, however, if SCD occurs more frequently at rest or during exercise in these patients.'

This study investigated the circumstances and demographics of SCD in 184 HCM patients enrolled from 1994 to 2014 at St George's Hospital. All had a detailed post-mortem examination to confirm the diagnosis. However, only 20% had had a previous diagnosis of HCM. Just 22% of patients had

Gherardo Finocchiaro: HCM diagnosis is also rare.

exhibited cardiac symptoms such as dyspnoea, syncope and chest pain.

SCD occurred at various ages, with the highest prevalence in the third and fourth decades of life. The majority of patients (almost 80%) died during rest, 12% during sleep. SCD during exertion occurred more frequently in young male patients; 11% were recreational or competitive athletes.

Finocchiaro said: 'Our findings are relatively new and are based on a large sample size. We showed that SCD in HCM occurs relatively rarely during sport activity, but more often at rest and sometimes during sleep.'

However, even if treated with an ICD, the risk of sudden death, however slight, may not be wholly removed, for another study described at the same press conference suggested that the risk of traffic accidents is around 50% higher in ICD patients than in age and gender matched controls

'Driving after ICD implantation is an area of great debate and concern for both doctors and patients,' said first author Jenny Bjerre from Herlev and Gentofte University Hospital, Copenhagen. 'Our study provides contemporary data suggesting that the risk of motor vehicle accidents is in fact higher following ICD implantation than in controls.'

Using national registers, the researchers identified all Danish residents who received a first ICD for primary or secondary prevention between 2008 and mid-2012. Motor vehicle accidents were recorded from national records on accidents and deaths. The study included 4874 ICD patients and a control group of 9748 subjects matched by age and gender. Participants were 63 years old on average.

During an average follow-up period of 2.5 years, 2.3% of ICD patients were in contact with a hospital following a motor vehicle accident, compared to only 1.7% of the controls. Over time, this translated into a 51% higher risk of motor vehicle accident in ICD patients than in controls. There was no difference in accident risk between primary and secondary prevention ICD patients.

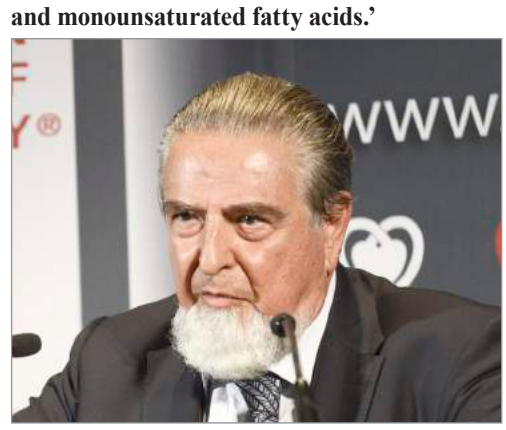
Nevertheless, the overall rate of motor vehicle accidents in ICD patients was low (1.0 to 1.4% within the first year after implantation), and the researchers in this study observed no traffic accident deaths in those with an ICD.

Huge mortality benefits from Mediterranean diet

While a Mediterranean diet has been linked to a wide range of health benefits for a wide range of people, rarely has a study specifically found a lower risk of death. Yet this was the conclusion of the Moli-Sani project, a prospective epidemiological study of 25,000 randomly recruited adults living in the Italian region of Molise. Among them were 1197 with a history of CVD at the time of enrolment.

During a median follow up of 7.3 years there were 208 deaths. A 2-point increase in the Mediterranean Diet Score was associated with a 21% reduced risk of death after controlling for age, sex and other variables. The highest MDS score (6–9) was associated with a 37% lower risk of death than the bottom category (0–3).

Investigator Giovanni de Gaetano (below) from the Neuromed Institute in Pozzilli, Italy, said: 'The major contributors to mortality risk reduction were a higher consumption of vegetables, fish, fruits, nuts and monounsaturated fatty acids.'



GENERAL ASSEMBLY
ROME 2016

This year's General Assembly, which took place yesterday morning, marked the conclusion of Fausto Pinto's Presidency and a start to the term of office of his successor, Jeroen Bax.

Incoming President Jeroen Bax: a five-year strategic plan

Reviewing his vision for the ESC, incoming President Jeroen Bax said that his aim is 'to provide continuity of action that stabilises, fosters, protects and further develops the ESC'. Professor Bax will be ESC president from 2016 to 2018. Describing the Society as 'a big ship' he said that subtle adjustments can be made to a course that is set, but, 'if you shift it more than one degree there is a danger that the organisation could sink'. Professor Bax, from Leiden University Medical Center in the Netherlands, said the five-year strategic plan for the ESC had been formed to help steer the ESC course, taking into account a changing environment and focusing on advocacy, research, education, congress and membership.
The ESC will look to stimulate research rather than carry it out, and in education the successful ESCel programme will focus on general cardiology as well as the subspecialties. Guidelines, he added, are based on trials that may not be representative of daily clinical practice. 'So we need to integrate our registries and use this feedback to change the guidelines.' ESC Congress, which had a record-breaking attendance in 2016, will continue to provide the highest scientific and educational content, and the concept of ESC 365, in which sessions are online after the meeting, will be expanded.

There will also be changes to membership, said Professor Bax, with a need to develop the concept of 'personalised membership', which, much like personalised medicine, will be tailored to the needs of individual members.

Outgoing President Fausto Pinto: an expansion to research and training

In his outgoing address, Professor Fausto Pinto described his Presidency as a 'real privilege'. It had, he said, 'enriched his knowledge' of different countries and bodies. Among his achievements of the past two years, he highlighted the new membership scheme and the expansion of research and training. 'We can provide more for a younger generation which has been one of our priorities, and provide more support for the younger society,' he said. Research, education and membership are among the five pillars which continue to support the ongoing success of the ESC, along with advocacy - such as a strong European Heart Agency - and ESC Congress. He attributed the ESC's success in disseminating knowledge and guidelines to the Society's global nature. One novelty implemented between 2014 and 2016 was the ESC ethics committee. 'Strong governance,'he said, 'makes our Society very strong.'

Thanking his fellow board members, Professor Pinto described them as 'outstanding people, outstanding colleagues' who had 'dedicated a substantial part of their lives for the good of our society'. saying: 'I'm really deeply grateful and you will all remain in our hearts.' ESC chief executive officer Isabel Bardinet was singled out for special thanks - 'I've learned a lot from her. We have an excellent relationship.' He also applauded the seven ESC Silver Medal award winners who were this year recognised for their outstanding contribution.

On a personal note, Professor Pinto thanked his family too for the sacrifices they had made during his time as President. 'They were a group of people who did suffer a little bit - my wife and my five children. I missed them and many times I was missing at home.' He completed his term of office by wishing Jeroen Bax the best of luck for 2016 to 2018.

The following members have been elected to the ESC board for 2016 to 2018

President Elect:
Barbara Casadei

Vice Presidents:
Bela Merkely, Lina Badimon
Stefan Anker

Secretary/Treasurer:
Ian Graham

Councillors:
Hector Bueno, Cecilia Linde
Sarah Clarke, Christophe Leclercq
Donna Fitzsimons, Franz Weidinger

Audit Committee:
Jose Lopez Sendon

Nominating Committee 2016-2018

Representatives of National Societies:
Keith Fox, Frans Van De Werf, Martin Borggrefe
Kurt Huber, Eva Swahn, Hélène Eltchaninoff

Representatives of Associations, Working Groups and Councils:
Patrizio Lancellotti, Antonio Pelliccia
Andrew Coats, Christie Deaton
Petar Seferovic, Martine Gilard

Papal cart now in place at ESC Congress

The Pope will arrive at 12:15 today, driven slowly along the Passarella in his Papal cart.

Buses will drop off delegates at the West entrance only. All delegates should arrive by 11:00. Entrances will be closed shortly afterwards and remain closed until the end of the Pope's visit by 13:15.

There will be no restrictions on leaving Fiera Roma after 11:00. There will be airport-style security at the entrance, with designated fast-lanes for delegates with only hand luggage.

Those with suitcases should leave them at the Cloakroom after clearing security. ESC will be providing a bus service to the airport from the main parking area outside Fiera Roma near the train station. This service will be free of charge and run between 11:00 and 15:00. If you wish to return to the city, please take a taxi or train.

Missed a session? Just catch up at home

You can review all scientific resources from this year's ESC Congress on ESC Congress 365

• View the sessions you missed • Bookmark your favorite presentations for future reference • Share content of interest with your colleagues •

WHAT IS ESC CONGRESS 365?
ESC Congress 365 is the online platform to find all available scientific resources from this year's ESC Congress and previous events since 2011.

WHAT IS AVAILABLE ON ESC CONGRESS 365?
You will find resources from presentations given during this and past ESC Congress: slides, e-posters, videos, abstracts and reports.
And new this year, a direct access to ESC TV interviews for more insights on sessions. Watch the interviews with the speakers

LOG-IN WITH YOUR 'MY ESC' ACCOUNT
These resources are only accessible to certified healthcare professionals, associated press, industry representatives and other qualified stakeholders in the science, management and prevention of cardiovascular disease.
So to access any of the resources, turn to the ESC website where you will either sign-up – if you don't have a My ESC account – or log-in with the email address and password you usually use on the ESC website.
• A My ESC account is a free of charge personal account giving the user access to congress resources, online journals, newsletters, etc. From this same account users can also renew ESC membership, register for a congress or access a webinar.

HOW CAN I FIND A CONGRESS PRESENTATION ON ESC CONGRESS 365?
To find a presentation, you may use the provided filters and/or keyword search from the ESC Congress 365 homepage.

SEARCH BY KEYWORDS OR FILTERS
FIND AN ABSTRACT FROM A SPECIFIC AUTHOR
Type the author's name in the search bar from the home page.

RETRIEVE CITATIONS OF ABSTRACTS
The citation of the abstracts is available on the abstract itself. Look for the presentation on ESC Congress 365 then open the 'abstract' resource: the citation will be mentioned there.

ACCESS ALL PRESENTATIONS FROM A SPECIFIC COUNTRY
To access all presentations from a specific country type the country name in English using quotation marks in the search bar - eg, 'South Africa' and all search results will be displayed with presenter(s) or author(s) from South Africa.

HOW DO I MAKE A NEW SEARCH?
Click on the ESC Congress 365 logo on the upper left corner to return to the home page.

WHAT IS 'YOUR 365 SELECTION'?
'Your 365 selection' is the selection of all the presentations you tagged as 'Favourite' with the star button.
Keep your presentations of interest for future reference

WHY DO SOME PRESENTATIONS NOT HAVE SLIDES AND/OR VIDEOS
Most of the resources on ESC Congress 365 were available within 24 hours of the presentation's delivery in Rome.
However, ESC Congress 365 only features resources for which the speakers and/or presenters have granted the ESC the rights to use for educational purposes.

• In early September one 'best of' presentation from each of the Congress's 10 main topics will be summarised in a brief 10-minute presentation.

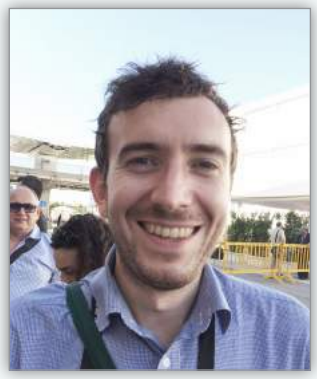
• More than 1 million visits (since 2013)
• More than 27 500 presentations
• More than 150 cardiovascular topics

This platform is supported by AstraZeneca, Bayer, Boehringer Ingelheim, the Bristol-Myers Squibb and Pfizer Alliance, Daiichi Sankyo Europe GmbH, Novartis Pharma AG, and SERVIER in the form of an unrestricted educational grant.

What's your take-home message from Rome?

John Camm
General cardiologist
London

"I was particularly interested in the DANISH trial's neutral result, which showed that the use of ICDs in patients with non-ischaemic systolic heart failure did not deliver benefits. This trial reflects a general need to reassess therapies that were originally investigated many years ago against the background of modern treatments. But there can be difficulties in persuading ethics committees to reinvestigate something that seems to be proven from the past. There have concerns about depriving patients. I believe that the providers of health care and the payers have a particular interest in encouraging these kind of studies."



Peter Lynn
Preregistration pharmacist
Glasgow, UK

"For me, the take home message is team working and sharing knowledge. I work with adult congenital heart problems and we really lack evidence from randomised controlled trials. Of course, it's really difficult to do these trials because of the heterogeneous population - but that's the challenge for us. Many of our practices are based on expert opinion and consensus because of the small numbers of patients. Most of our patients have been engaged since a young age and they want to benefit from any breakthroughs. I attended a meeting on Tetralogy of Fallot and it emphasised for me just how much there's a need for collaborative research across country and centre."

faces in the crowd

Bojidara Borissova
Head nurse
Sofia, Bulgaria

"Doctors and nurses should be one team. I deal with cardiac patients and those with vascular disease so it's important to be team working to ensure patients get the best results. I've worked in cardiac surgery and collaboration is especially important there in the heart teams. Nurses have a vital role to play but where I am from in Bulgaria there is a lack of nurses. Maybe small salaries are a factor, as well as the psychological impact of the job which is emotionally draining. A lot of young people study and then when they finish they go off to other countries. We need to do more to make them stay."

Sakis Themistoclakis
Electrophysiologist
Venice, Italy

"I was particularly interested in the new ESC guidelines on atrial fibrillation. In the past our usual practice was to use ablation techniques as second line after drug therapies to control rhythm and rate. Now, the new guidelines give ablation a far more prominent role and suggest there's now a real possibility to offer our patients ablation up front instead of drugs. For me the guidelines offer confirmation of strategies we have already been following for some time in our clinical practice, and ones which we've found that our patients generally prefer."

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