EACTS News
European Association For Cardio-Thoracic Surgery
April 2011 **Issue 2**

Is on-pump better than off-pump for coronary artery bypass surgery? Page 10

In this issue…

Message from the President

The first months of 2011 have been very busy ones for EACTS. We are preparing the programme for the forthcoming annual meeting in Lisbon 1-5 October. Abstract submission closed on 1 April and we are encouraged by the number and quality of abstracts received. A total of 1188 abstracts are now with our reviewers who have the task of reading and rating all abstracts prior to the programme committee meeting which will be held in May.

This Annual Meeting is a very special one for the EACTS as it marks our 25th Anniversary. Since EACTS was founded in 1986 we have grown both in number and stature. EACTS held its first scientific meeting in Vienna in 1987 when EACTS had 288 members from 27 European countries, with 420 delegates attending the annual meeting. Twenty five years later, we have grown into the largest professional cardio-thoracic association in Europe with 2945 members, from 101 countries. Our annual meeting is attended by over 4000 physicians and 1500 exhibitors. We are now the largest Cardio-Thoracic meeting in the world.

In this second issue of *EACTS News* we have an interview with the Association's first President, Professor Francis Fontan, who will share his memories of the founding of our Association and his thoughts for the future. We will also look forward to the Lisbon Programme and I would like to take the opportunity to invite you all to celebrate this 25th Anniversary with us at a special Anniversary Party on Tuesday evening 4 October. You will read more about this in this issue of *EACTS News*.

This edition features the SURTAVI Trial with one of its investigators Professor Rudiger Lange. The Big Question in this issue is "which procedure results in better outcomes: off-pump or on-pump for CABG? Patrick Klein, Robert Klautz and Stephan Jacobs debate this hot topic.

The domains have been active in the early months of 2011. Franca Melfi and Ralph Schmid organised the successful Robotic Course in Cardio-Thoracic Surgery in Strasbourg. The Vascular Domain organised a stimulating course in Open and Endovascular Aortic Therapy in Windsor. Juan Comas in co-operation with the Association for European of Paediatric Cardiology (EAPC) organised a multidisciplinary course on The Right Ventricular Outflow Tract Management from Neonates to Adults: An Interdisciplinary View" in Palma. I congratulate all the organizers for their hard work.

It was a great pleasure for me to join Pascal Vouhé and representatives of the National Societies to discuss the future training of cardio-thoracic surgeons.

It is my pleasure to send you the second issue of *EACTS News*. I hope it stimulates the debate concerning topical issues in cardio-thoracic surgery and I hope that you will enjoy reading it.

Ottavio Alfieri, MD, PhD
President

Save the date

Join the 25th EACTS Anniversary Party in Lisbon on Tuesday evening 4 October 2011!

To celebrate the 25th Anniversary of the EACTS, we plan a special Anniversary Party on Tuesday 4th October, to replace the traditional gala dinner. The aim is to create a welcoming and informal atmosphere in elegant surroundings where you can relax and enjoy the company of colleagues both old and new and from all continents. An interesting and varied programme of entertainment and music is planned which will appeal to all tastes. The highlight of the evening will no doubt be the Cardio-Thoracic Surgeons Band, led by Volkmar Falk. A buffet dinner will be served. Further information at **www.eacts.org**

An interview with Francis Fontan

The leading founding father of the European Association for Cardio-Thoracic Surgery

Since the European Association for Cardio-Thoracic Surgery (EACTS) was founded 25 years ago, it has grown into the largest professional cardio-thoracic association in Europe, with 2,500+ members from over 70 countries across the world. EACTS News was delighted to interview the Association's leading 'founding father' Professor Francis Fontan who recounts how the foundations of the EACTS were laid in various airport meetings throughout Europe, his memories of the first meeting and why the annual meeting is now the largest cardio-thoracic meeting in the world.

"I had been thinking about the idea of trying to create a European association or society to represent cardiothoracic surgery and it had occurred to me and others that although national societies existed, the specialty of cardiothoracic surgery in Europe was not sufficiently represented," began Fontan. "The idea matured in 1984/85 when I was on my way back from the American Association for Thoracic Surgery meeting and I thought why are the best European papers presented outside Europe to be recognized by the scientific community in meetings where many of us could not go for geographical reasons and financial constraints? So I decided to try and convince my colleagues to create the Association. "

> "Although national societies existed, the specialty of cardiothoracic surgery in Europe was not sufficiently represented,"

Airports

He contacted his good friends, Hans Huysmans and Marko Turina, and their enthusiastic response coupled with the positive responses from other friends and colleagues encouraged him further. What followed was a series of meetings in airports across Europe. At the first meeting held on 1 March 1986 at Amsterdam airport, Fontan invited 11 colleagues and discussed the formation of a new scientific organisation of cardio-thoracic surgery for Europe.

"When we met in Amsterdam, we didn't know how we could begin to think and work together and there was also a little embarrassment that day, for some as they were meeting each other for the very first time," he commented. "I was soon aware that my belief was unanimous among the group and It became our firm conviction that an Association should be created. After a second meeting was held in Frankfurt on 12 April that same year, the decision to found the Association was taken on 17 May 1986 in Paris, and the Council was set up. "What was extremely important at the beginning was the hardwork and belief of the founding council. They possessed tremendous intellectual and personal qualities, and totally devoted to the EACTS, its aims and ambitions," added Fontan.

"We were 12 people and we decided to have 11 seats on the council. Of the 11 to serve on the council, five were officers and six were councillor. The first question was who would serve as President? And they all said I should be president, but I was reluctant, I didn't help to found the Association just to be its President. But, they all agreed and said it must be me."

The first EACTS Council

The founding council members of the EACTS were: Francis Fontan (President), Kevyan Moghissi (Vice-president), Marko Turina (Secretary general), Ingolf Vogt-Moykopf (Treasurer), Hans Borst, (Editor of the European Journal of Cardio-Thoracic Surgery (EJCTS), Louis Couraud (Councillor), David Wheatley (Councillor), Hans Huysmans (Councillor), Bjarne Semb (Councillor), Ramiro Rivera (Councillor) and Muurizio Cotrufo (Councillor).

From the outset, it was agreed on a 'fair proportion' of cardiac and thoracic surgeons, with the president being a cardiac surgeon serving for two years, followed by athoracic surgeon for one year. The council had seven cardiac surgeons and three thoracic surgeons. The constitution and by-laws were based on those of the AATS, and were largely written by Keyvan Moghissi,

Another important aspect and key part of the EACT project was the appointment of Hans Borst, because Fontan knew that they must establish a journal as well as a society. "It seemed to me pointless to envisage creating an Association without the existence of a journal, the official organ of the Association." Twenty-five years later, the *European Journal* is currently considered to be in the top three for cardiothoracic surgery when considering the highest impact factor.

EACTS annual meeting

The only member of the 12 who was not on the council was Ernst Wolner who kindly offered not to serve on the council but instead to host the first EACTS meeting in Vienna. The first meeting was a great success with almost 1000 people attending of whom 500 were delegates, and Fontan remembers that they were strongly supported by industry. "For the first time, cardiothoracic surgeons throughout Europe had the chance to meet in the same place; there were also many people from non-European countries present. It was not a great financial success, but at least we didn't lose money," Fontan remembers.

The next meeting took place in the following year in Dr Fontan's home town of Bordeaux, France, and attracted twice as many delegates. Since then, the meeting has grown year by year, so that the 24th meeting held last year in Geneva, Switzerland, attracted more than 3800 attendees, making it the world's largest assembly of cardiothoracic surgeons.

> "What was extremely important at the beginning was the hardwork and belief of the founding Council."

"There are two great memories of that meeting. The first is when I was to open the meeting in the first scientific session to explain to the delegates why we had created the meeting. I came from my hotel in a taxi and arrive in enough time to take my slides presentation room. I am in the room for five minutes and suddenly I cannot find my slides anywhere. I take a taxi back to the hotel panicking because this is the first meeting and I am due to make a very important speech and I have no slides. Thankfully, five minutes before the start of my talk, we found the slides in the speaker ready room. It would not have said much for the organisation, if the President had lost his presentation," Fontan remembers. "The second memory was the day after the first meeting in Vienna has finished, my wife and I went for a very relaxing walk in Vienna and I enjoyed it so much because we proved the meeting could be successfully organised, apart from my missing slides!"

Francis Fontan Prize

Such is the debt the Association owes to Fontan, the EACTS funds the Francis Fontan Prize that is awarded to a medical doctor in specialty training in cardiac or cardio-thoracic surgery. The amount awarded is €30,000 and covers the costs of one year's stay at a major European department or any other European research facility. Previous recipients have included physicians from Europe and elsewhere, including a US citizen and others from China and India.

"I remember receiving a phone call from the EACTS President saying that the Association had decided to create a prize called the Fontan Prize and as the founding father of the association, they would like to name it after me. I said to him 'Isn't it normal that you wait until someone has died until you name something after them? Shouldn't we wait until I die?' But it was decided it was best not to wait!"

The one thing that has surprised Fontan is how both the meeting and Association have grown to become the largest in the world. "We did not think at the time it would become so large, but I think the reason EACTS has grown is because new people came in with new ideas. One fundamental change was the creation of the domains because this brought about new developments, as well as brings new personnel into the Association, "concluded Fontan. "All this was achieved because of the intelligence of our successors; councillors and officers. If the EACTS continues to do this, it will keep its position as leader of the cardiac field."

Additional reading:
1 Francis Fontan, "The faith in the future," Eur J Cardiothorac Surg 1988;2:1-7.
2 Marco Turina, "Carrying the torch," Eur J Cardiothorac Surg 2002;22:857-863"
3 http://circ.ahajournals.org/cgi/reprint/114/2/f105.pdf

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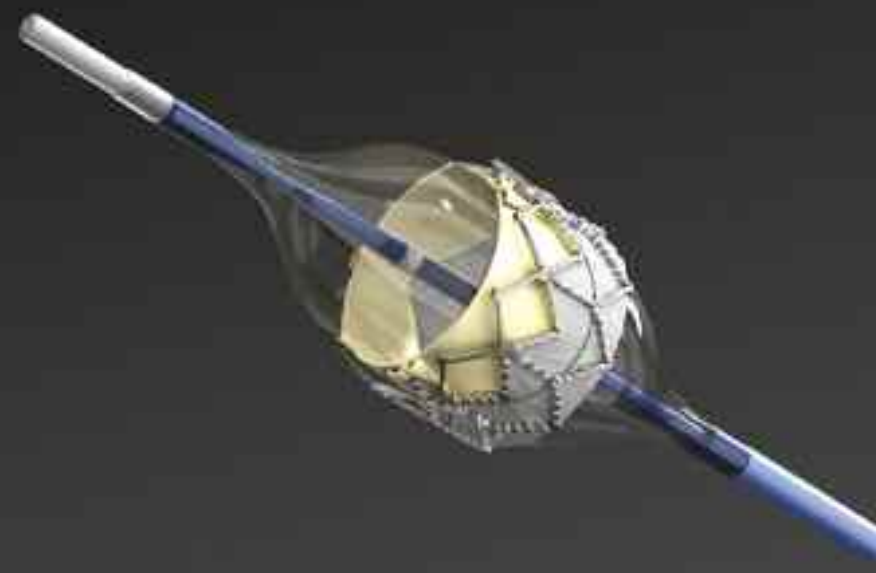

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Edwards

Nurses, nurse practitioners and other allied health professionals at EACTS 2011

EACTS organized the first Post Graduate course for nurses, nurse practitioners and other allied health professionals during the 24th Annual Meeting in Geneva in 2010. The course was very well received by those who attended and the feedback was extremely positive. As the care of our patients is becoming more and more complex the role of specialized nurses will become an integral part of the team effort involved in patient care. The EACTS has decided to organize the symposium again during the 25th Annual Meeting in Lisbon on 2 October 2011.

Nurses and nurse practitioners are presented with a two-day programme which includes Techno College on Saturday and a Post Graduate course on Sunday. The topics included in the postgraduate course will be transplantation, assist devices, developments in wound care, the role for nurses in the implementation of clinical guidelines, nurses/nurse practitioner's role developments, and guidance on writing a scientific article.

This year we are offering nurses and nurse practitioners the opportunity to submit an abstract. Submission is through the EACTS User Area (Abstract section). The deadline for nominations is 15 May 2011.

Suggestions for topics that you would like to see included in the nurses programme can be sent to Rianne Kalkman: RianneK@eacts.co.uk. A more detailed programme will be published on the EACTS website in June.

Programme Chair Leslie Hamilton

Jacqueline Davis, who spoke at last year's meeting

Successful course on Open and Endovascular Aortic Therapy

This year the EACTS Vascular Course took place for the third time and was organized for the first time in Windsor on 16-18 March. Attendees came from a variety of countries, including India and Mexico. The organisers feel that this fact underlines the attractiveness of the EACTS Educational Program and the efforts to its continuous improvement.

There were three days of fruitful dialogues between participants and faculty which we felt was very important as a format with lots of time for discussion was the aim of the course. As such both participants and faculty were able to gain contralateral insights from one another including individual needs during training, the loco-regional variety of treatment options offered as well as the most recent insights into new technology and its clinical application further accompanied by a thorough understanding of what should be recommended for the armentarium of the cardiovascular surgeon today.

Over the three days, the Course was broken into eight sessions. The morning of the first day covered the natural course of thoracic aortic disease, molecular mechanisms of atherosclerotic lesion development and plaque rupture, as well as imaging modalities in aortic disease (Computed Tomography, Magnetic Resonance imaging, Transesophageal echocardiography, Transthoracic echocardiography and Intravascular Ultrasound). In the afternoon, the sessions were concentrated on cardiopulmonary bypass principles of aortic surgery, including cannulation techniques, perfusion options and temperature management, as well as brain, heart and visceral organ protection.

The second day of the course examined the indications and techniques when treating the aortic valve and ascending aorta and included presentations on the replacement of the aortic root (mechanical composite graft), biological aortic root replacement, valve sparing operations (David- and Yacoub procedures) and bicuspid aortic valve (reconstruction and replacement). In addition, Robert Bonser, Ernst Weingang and Roberto Di Bartolomeo, outlined the indications and techniques for conventional arch surgery (partial-, hemi- or total arch replacement), hybrid aortic arch repair (case selection, pre-operative work-up, surgical technique, stent-graft selection) and extended aortic arch repair (Elephant trunk and frozen elephant trunk).

There was also a specific emphasis on the basic requirements for endovascular aortic repair including the technical skills for endovascular procedures, open and percutaneous access for endovascular aortic repair and device selection in endovascular aortic repair. For the session on aortic dissection, attendees assessed the treatment algorithm for acute type A aortic dissection as well as examining the fate of the false lumen after repair for acute type A aortic dissection. This was followed by looking at the treatment options for acute type B aortic dissections and the pitfalls in endovascular repair of type B aortic dissection.

Day three began with a look at the descending and thoracoabdominal aorta and look at the pathomechanisms and treatment options for traumatic aortic rupture. This was followed by a study of neuroprotection in thoracoabdominal aortic repair (including cerebrospinal fluid drainage, somatosensory evoked potential and transcranial motor evoked potentials), as well as an assessment of surgical techniques in thoracoabdominal aortic replacement and of the hybrid approach in thoracoabdominal aortic aneurysm. The final session of the course covered the natural course of abdominal aortic aneurysms and assessed the limitations of both open and endovascular repair and asked which was currently the treatment of choice.

The organisers would like to thanks the participants, faculty and EACTS staff for their support in making this course again a success and do look forward to next year.

EACTS and National Societies discuss future training

A group of motivated European cardio-thoracic surgeons met in the picturesque surroundings of a traditional English garden overlooking the river Thames to discuss the future of cardio-thoracic training in Europe in the coming years against a background of changing therapeutic options, new technology and restrictions of the EWTD.

The meeting with national societies, the ESCVS and the ESTS was organized by the EACTS, where several National Societies were represented at the meeting.

Plenary sessions were alternated with break-out groups which examined the European Board for Thoracic and Cardiovascular Surgery, the Board Examination the role of the UEMS. It became clear from the fruitful discussions in the breakouts that the participants shared common concerns.

Key messages from participants was the need for harmonization of cardio-thoracic training and education programmes in Europe and in particular the need for a set of minimum standards in training programmes. Participants also considered that imaging, minimal invasive and catheter based techniques should be included in training programmes in the future.

In the next phase the group will examine the various European training programmes and work on a guidelines document on training. Participants were also urged to appoint national society members to participate in an active way in the Cardio-Thoracic Section of UEMS.

Other items for discussion included the implementation of Clinical Guidelines and role of the European Databases in quality control and benchmarking.

Also discussed were the content of the EACTS 25th Annual Meeting, the implementation of Clinical Guidelines and the European Databases.

The next meeting will be organized during the 25th EACTS Annual Meeting in Lisbon.

For further information please contact
Rianne Kalkman: RianneK@eacts.co.uk

EACTS attends 22nd Scientific Session of the Saudi Heart Association

The European Association for Cardio-Thoracic Surgery (EACTS) participated for the second time in the Annual Meeting of the Saudi Heart Association. The 22nd Scientific Session of the Saudi Heart Association (SHA22) was held in Riyadh, Saudi Arabia from 21-24 February 2011 at the King Faisal Hall, Intercontinental Hotel. The Saudi Heart Association also welcomed participation from European Society of Cardiology, Association of Thoracic and Cardiovascular Surgeons of Asia, American College of Cardiology, Gulf Heart Association, Arab Association of Cardiothoracic Surgery, Canadian Cardiovascular Society and World Heart Federation.

The meeting attracted some 1,500 participants and is one of the largest meetings in the region. The meeting includes all specialties in cardiac care offering sessions in cardiology, interventional cardiology, cardiac surgery both adult and paediatric, imaging and perfusion in five parallels.

The EACTS had a major role in the meeting, with two full days of sessions that were highly attended by participants from all over the world. The ESC also organised a whole one day programme which included the highlights of the ESC 2010 in Stockholm and ESC guidelines.

In addition to the joint session, the European Association of Cardiothoracic Surgery and Saudi Heart Association had a business meeting with a wide range of issues being discussed, databases, guidelines and future joint sessions.

Dr. Hani Najm, President of the SHA and a member of the EACTS, stated that he was proud to have invited the EACTS speakers to participate in the SHA22, and that having world renowned cardiac surgeons share their knowledge with colleagues and people of Saudi Arabia contributed greatly to the strength of the scientific session. It is the aim of the Saudi Heart Association to continue to expand and foster collaboration with different major international heart associations.

Saudi Heart Association representatives meet their EACTS counterparts

Below: Attendees at the meeting

they did however, recommend that we show you *this*:

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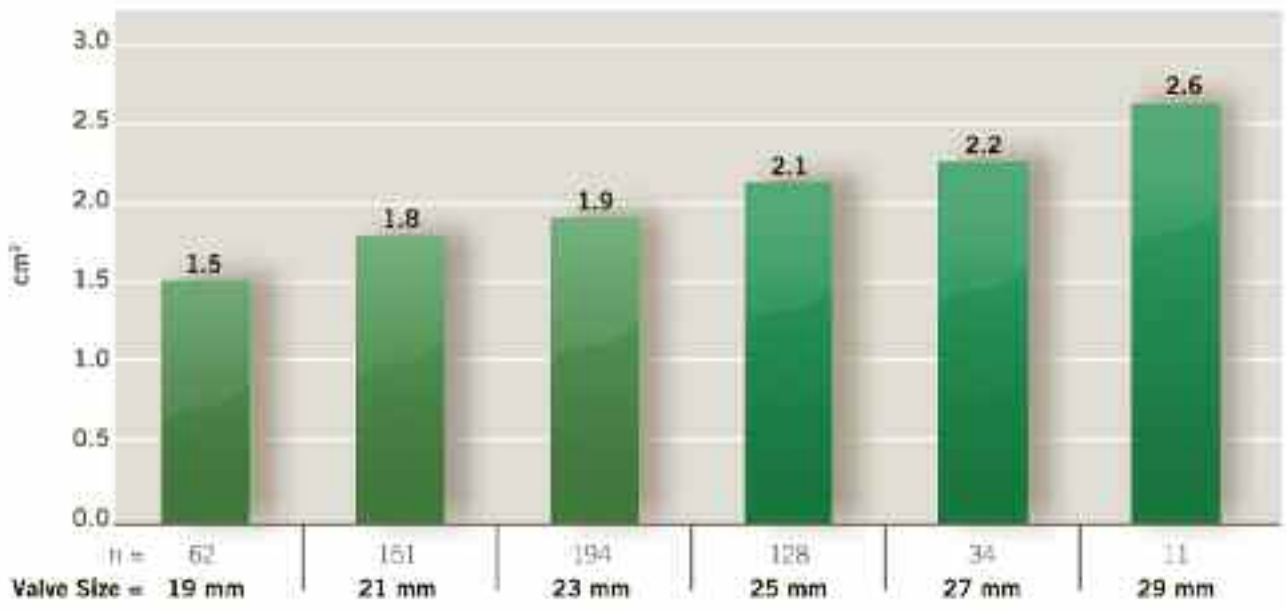

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1. St. Jude Medical, Trifecta 400 Late Patient Year Report, January 2010. Echo follow up at six months.
2. Data on File. St. Jude Medical.

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25th Annual Meeting, 1–5 October 2011, Lisbon, Portugal

The 25th Annual Meeting returns to Lisbon for a third time.

In the 25 years since the first annual meeting was held in Vienna in 1987 when 132 abstracts, (90 Oral, 18 Posters and 14 Films) were presented over two and a half days the annual meeting has developed significantly. It is now over four and half days and continues to evolve to meet the needs of today's surgeons. In addition to new science we offer a wide range of session types to better educate the practitioners of the future in the wider environment which reflects the multi-disciplinary care of patients.

The 25th Annual Meeting will include as usual Techno-college, Post Graduate courses, Advanced Techniques, New Science and Focus Sessions. In addition this year we will present a new session type called Professional Challenges. Professional Challenge sessions will address a single issue, combining keynote lectures, videos, new science and learning from experience, bringing together in one session the state of the art, clinical practice and complications. Each of our four specialty domains will present programmes in each area.

The Domain of Acquired Cardiac Disease plan an extensive range of sessions and this list gives a flavour of what can be expected.

Techno College - Saturday 1 October

- Aortic Surgery
- Transcatheter Aortic Valve Implantation
- Mitral Valve Surgery

PostGraduate Course – Sunday 2 October

- Update on Syntax
- Intrepretation of Guidelines
- Recent Trials in Cardiovascular Disease
- The Great Debate – Surgery is the best treatment for left main stem disease

Monday and Tuesday 3 & 4 October

Professional Challenges

- Wire Skills
- Total Arterial Grafting
- Focus Sessions
- Heart Team at work
- Training for transcatheter aortic valve implantation
- Surgery for Heart Failure 1
- Surgery for Heart Failure 2
- Functional MR
- Antiplatelet therapy
- Perfusion Problems & Opportunities
- New Perspectives in Functional Tricuspid Regurgitation
- Grantsmanship

Advanced Techniques – Wednesday 5 October

- Transcatheter aortic valve implantation - the gold standard for the treatment of aortic valve stenosis
- Controversies Adult Cardiac Surgery: Aortic Valve and Root Surgery
- Minimally Invasive Therapies for Atrial Fibrillation
- Master of Valve Repair
- The role of the Ross Operation on the surgical menu

In addition there will be a range of wet lab courses.

Abstract Submission 2011

The abstract submission is now closed. We are happy to report that we received a total of 1188 abstacts. It is now the task of our reviewers to read and rate all the abstracts prior to the programme committee meeting which will be held in May.

Arrhythmia	37
Assisted Circulation – Artificial Heart	34
Cardiac General	130
Cardiopulmonary Bypass	33
Congenital	120
Coronary/CABG	160
Esophagus	7
Experimental	53
Thoracic Non-oncologic	47
Thoracic Oncologic	76
Thoracic Vascular	102
Transplantation	26
Valves	261
Film	41
Learning from Experience	61
Total	**1,188**

Abstract Reviewers 2011.

The Council and Programme Committee extend their thanks and appreciation to all those members who will diligently read and rate all the submitted abstracts.

Ottavio Alfieri
Manuel Antunes
Raimondo Ascione
Emile Bacha
Jean Bachet
Rimantis Benetis
Benjamin Bidstrup
Ozcan Birim
Johannes Bonatti
Phillipe Bonhoeffer
Robert Bonser
Michael Borger
Jerry Braun
William Brawn
Thierry Carrel
Filip Casselman
Manuel Castellà
David Chambers
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Paola Ciriaco
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Eduardo da Cruz
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Jean-Marie Wihlm
Jens Wippermann
Douglas Wood
Lucio Zannini
Marian Zembala
Andrea Zuin

Previewing Lisbon 2011 – the Thoracic Programme

In the next two issues of EACTS News, we will be focusing on this year's programme from the Annual Meeting in Lisbon. To begin the programme overview, we talked to Thoracic Domain Chair, Paul Van Schil, who outlined some of the highlights planned for the Thoracic programme.

"We had a meeting last year in Paris to decide which topics were most important for the forthcoming year, taking into account the programme for last year," said Van Schil. "There are approximately ten people involved and we make everybody responsible for one part of the programme. The programme is sub-divided so they can have control of that particular area. The Postgraduate Course and Techno-College is decided by the people on the thoracic domain, so they are invited lectures."

Last year, the thoracic Techno College focused on training in thoracic surgery and specific methods to improve surgical outcome in oncology. This year's thoracic Techno-College programme will examine new techniques utilising the transcervical approach in thoracic surgery.

"The programme will examine tumours of thoracic inlet, laryngotracheal surgery and staging of lung cancer, as well as compare minimally-invasive and invasive techniques for lung cancer staging," said Van Schil. "Incorporated into the thoracic Techno-College programme will be video session from Paris with Philippe Dartevelle, so there will be a simultaneous transmission from Paris on extensive but also minimally-invasive procedures on the trachea and thoracic tumours, combined with some expert lectures. Hopefully this will lead to a thorough examination of both the technique and evidence."

The main topics of the thoracic Post Graduate Course are lung sparing surgery, residual space after lung resection and thymic tumours, and will also include a session examining the current diagnosis and management of pleural effusions looking at the pathophysiology and surgical techniques in the management of pleural effusion.

Following on from the success of last year's Robotic symposium, Van Schil revealed the thoracic programme will also include a special focus session this year on "Chest wall disorders", as well as several special invited lectures and the Young investigators award. In addition, there will also be an educational session on Wednesday morning entitled, 'Learning from experience'.

He emphasized that the Thoracic Domain has several working groups and each group would welcome comments or suggestions from members. Alternatively, if members are interested in joining a working group please contact a member of the Thoracic Domain.

"Putting together a comprehensive thoracic programme together is a team effort and I would like to thank the outstanding efforts of our lively Thoracic Domain," concluded Van Schil. "I hope we have put together a broad range of topics which are of interest to thoracic and cardiothoracic surgeons from all over the world."

Paul Van Schil

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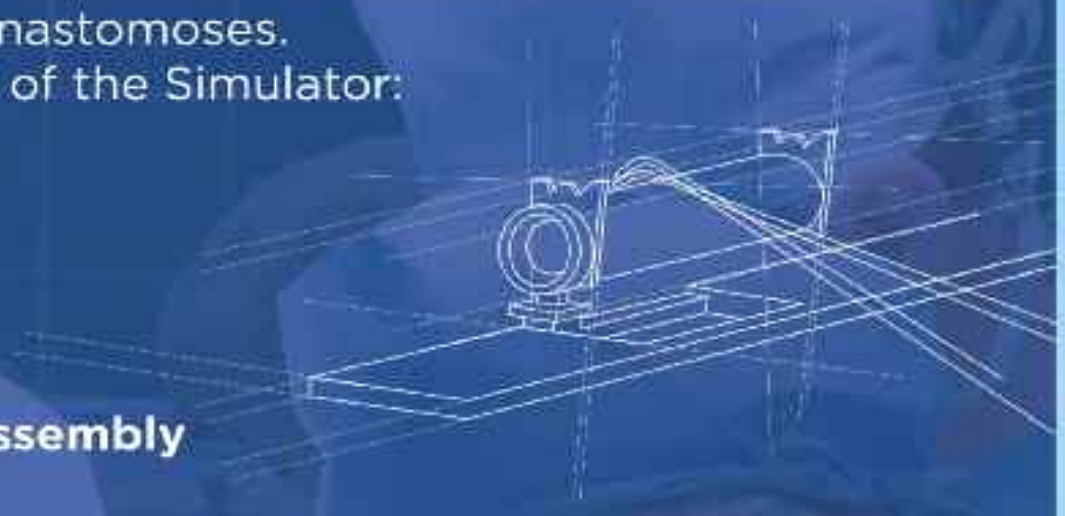

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For more information, visit **www.eacts.org/content/residents**

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Patrick Klein
Leiden University Medical Center, Leiden, The Netherlands

Which procedure result off-pump or on-

On

Why we shouldn't operate off-pump routinely…

Coronary artery bypass surgery has proven to be a highly effective and durable treatment of anginal complaints due to coronary artery disease and can improve survival in selected groups of patients[1,2]. Traditional coronary artery bypass surgery is performed using extracorporeal circulation and aortic cross-clamping. Since the 1980s interest grew to perform bypass surgery on the beating heart and a number of local myocardial stabilizers emerged to facilitate this. Advocates of "off-pump" bypass surgery or OPCAB postulated that OPCAB would reduce per- and postoperative complications associated with the use of extracorporeal circulation and aortic cross-clamping, namely: stroke, neurocognitive disorders, depression of myocardial function and generalized inflammatory response[3,4]. Moreover, this could allegedly be accomplished without compromising the number and quality of coronary anastomoses[5]. While conceptually these postulates seem justified, evidence to support them is still lacking. Also, concerns have raised whether indeed the same number and quality of anastomoses can be performed. The Veterans Affairs Randomized On/Off Bypass (ROOBY) study group published their results in 2009[6]. They randomized more than 2,000 patients scheduled for urgent or elective CABG to either off-pump and on-pump procedures and they found no difference in the rate of the 30-day composite outcome. Especially, neither the incidence of stroke nor the outcome of neuropsychological testing and the incidence of renal failure requiring dialysis was found to be different. More worrisome, the rate of one-year composite outcome was significantly higher for off-pump then on-pump CABG (9.9% and 7.4%, p=0.04, for respectively OPCAB and CABG), with fewer grafts constructed compared to planned in the off-pump group and reduced one-year overall patency. This was entirely attributable to the saphenous vein graft patency and not to the Left Internal Mammary Artery (LIMA) to Left Anterior Descending (LAD) anastomosis. Although hampered by several limitations (mainly low risk and male patients, high conversion rate in the OPCAB group which may be indicative of limited experience in OPCAB surgery), the ROOBY trial constitutes a large and relatively well conducted randomized controlled trial.

It is true that there is no evidence that the number of grafts is directly related to outcome. To the contrary, the results from the SYNTAX-trial imply that the completeness of revascularization was not related to outcome[7]. But, as long as there is no firm proof of the opposite, the surgical basis for the treatment of coronary artery disease, should be a complete revascularization, and may well be the reason for its success.

> More worrisome, the rate of one-year composite outcome was significantly higher for off-pump then on-pump CABG, with fewer grafts constructed compared to planned in the off-pump group and reduced one-year overall patency.

Considering the long-term outcome, Hu et al. found increased rates of repeat revascularization and major vascular events after an average of 4.5 year in a retrospective review of more than 6,000 consecutively operated patients[8]. These results are confirmed by Hueb et al. who found no difference between OPCAB and CABG regarding a composite endpoint (death, myocardial infarction, further revascularization or stroke) at five-years follow-up[9]. Also they found that the number of grafts per patient was significantly higher in the CABG group then in the OPCAB group.

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A meta-analysis by Takagi et. al of OPCAB versus on-pump CABG (12 randomized trials, 4.326 patients) even demonstrated a statistically significant increase in mid-term all-cause mortality by a factor of 1.37 with off-pump relative to on-pump CABG[10]. Indeed, there are also numerous studies which show the opposite. It seems likely that experience is a major factor in achieving high quality revascularization. This becomes an even more important issue as proof is accumulating that complete arterial revascularization has a far more dramatic impact on late outcome, than the use or non-use of ECC. Complete arterial revascularization is technically more demanding and may justify the use of ECC, specifically to improve long-term outcome.

On the other hand, the prospect of an OPCAB procedure using a complete "no-touch aorta" principle, thus also abolishing a sidebiting-clamp, combined with total arterial revascularization might be an excellent strategy in patients with a calcified or atheromatous aorta. These patients have an exceptionally high risk for stroke during conventional CABG and may benefit from OPCAB. The development of a stroke-risk score might be helpful in this respect.

To conclude, we feel that all evidence indicates that we shouldn't perform off-pump CABG routinely. However, OPCAB might be an excellent treatment option for a selected group of patients who have an increased risk of stroke.

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Off

Introduction

Since off-pump coronary artery bypass grafting (OPCAB) without cardiopulmonary bypass has evolved during the past 20 years, it has gained worldwide acceptance and popularity in many centres. However, except selected specialist centres performing more than 90% cases in OPCAB fashion, the adoption of OPCAB has been variable around the globe and accounts approximately 20% of the current practice in the US and Europe[1,2].

The Value of OPCAB

Standardized OPCAB has been proven to be as safe as conventional on-pump surgery and meta-analyses of randomized controlled trials in low-risk patients display comparable results for both approaches with regards to mortality, myocardial infarction, and need for repeat revascularization at one and two years. They also demonstrate OPCAB to be associated with reduction of stroke, wound infection, renal and respiratory complications[2,3]. Moreover OPCAB reduces the need for transfusion and inotropic support as well as the ventilation time, the length of hospital stay and in-hospital and one-year direct costs[4]. These data were confirmed recently in a large meta-analysis including 35 propensity score analyses with a total of 123,137 patients. This analysis found an overall odds ratio less than one for all outcome parameters in favour for OPCAB. These results were significant for most of the evaluated outcome parameters, in particular mortality suggesting OPCAB to be the superior technique when compared to on-pump surgery[5] (Table 1).

In contrast, the recent ROOBY trial showed a 30% risk increase for the occurrence of the primary composite endpoint including death, myocardial infarction and need for repeat

question

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ts in better outcomes – pump for CABG?

revascularization after OPCAB[6]. However, this prospective randomized multicenter trial displayed several major limitations as more than 70% of the evaluated patients were excluded due to clinical reservations of surgeons who were accepted to take part in the study after they had performed only twenty OPCAB procedures. This lack of experience was also highlighted by the up to ten-fold higher need for conversion to on-pump (12%) as compared to specialized OPCAB centres that report conversion rates ranging from 1–5%[7]. More than 50% of OPCAB patients received transfusions versus only 30% reported in previous randomized trials.[7] and only a small proportion of the cohort were high-risk patients, the suggested subgroup to benefit more likely from OPCAB.

> Standardized OPCAB has been proven to be as safe as conventional on-pump surgery

Aortic No Touch Strategies to reduce stroke

OPCAB reduces the risk for neurological complications by eliminating the need for cardio-pulmonary bypass requiring aortic cannulation and aortic cross-clamping[8,9] and indeed, the combination with total arterial grafting offering a "no touch approach" for coronary artery bypass grafting is considered to be the superior strategy to reduce stroke and other major neurological complications[10,11]. Recent studies demonstrated that the aortic no-touch technique is safe, effective and results in a significant decrease of lower neurological complications particularly in high-risk patients. Despite the fact that this technique may represent the best clinical practice, it may not always be applicable especially in patients with multiple coronary lesions requiring a proximal anastomosis. Whenever saphenous vein grafts or free arterial grafts are needed, the proximal anastomosis should be performed in a "no-touch`` fashion using anastomotic devices such as the Heartstring Seal System[12]. The occurrence of stroke or other neurological complications can be significantly minimized with such an anastomotic device, when compared to the standard techniques, particularly in the "atherosclerotic patient"[13].

What are the target patients for OPCAB?

Observational studies suggest that OPCAB is particularly beneficial for high-risk patients, including patients with left ventricle dysfunction, a high calcific load, age older than 75 years, diabetes, renal failure, left main stem disease, reoperations, chronic pulmonary disease, and an overall increased EuroScore >5[14-16]. However, to date, there are no prospective randomized trials comparing OPCAB versus on-pump in high-risk patients, whereas two trials are at least underway to evaluate the potential benefit of OPCAB in this subset of patients. The CRISP trial lead by both the Oxford and Bristol Cardiac Surgery Unit is an international randomized multicenter trial aiming for more than 5000 high-risk patients with an inclusion criterion of a EuroScore >5. In parallel, there is the German Off-Pump Coronary Artery Bypass in Elderly Study (GOPCABE), a multicenter trial randomly assigning 2000 patients older than 75 years to undergo either OPCAB or on-pump.

Comparison of CABG to PCI

Although coronary artery bypass grafting (CABG) remains the method of choice for patients with complex coronary lesions including multi vessel disease and/or Left Main Disease[17] (see guidelines of the European Society of Cardiology / European Association of Cardiothoracic Surgery (ESC/EACTS)), one major argument against the use of CABG is certainly the significantly higher incidence of stroke when compared to PCI[18]. In most of the comparative trials these inferior neurological outcomes resulted from the preferred use of conventional on-pump strategies, whereas neither off-pump techniques, nor aortic no touch strategies or the combination of both were applied and even in the SYNTAX landmark trial, only 15% of the patients underwent off-pump surgery[18]. A standardized OPCAB no touch strategy either using all arterial grafting or the Heartstring device when a proximal anastomosis is required, can potentially minimize this problem and represents a major advantage when compared to on-pump surgery.

Complete Revascularization

A current standardized OPCAB approach does not come at cost of less complete revascularization which has been reported to be significant predictor for the long-term outcome[1]. Recent studies demonstrated feasibility of complete revascularization in OPCAB even in patients presenting with multi-vessel disease[14].

Conclusion

Current data demonstrate that OPCAB is a safe alternative to on-pump CABG, with similar outcomes for low risk patients, and superior outcomes in high-risk patients. It can be safely implemented into clinical routine and although technically demanding, it does not come at cost of incomplete revascularization when standardized performed in high-volume OPCAB centres. The combination with total arterial grafting may constitute the current 'standard of care` to effectively reduce stroke and major neurological complications.

Table 1: The beneficial effect was highly significant for the outcomes mortality, stroke, renal failure, and RBC transfusion; significant for wound infection, prolonged ventilation, intra-aortic balloon pump support and inotropic support (adapted from Kuss et al., JTCVS 2010)

Response	Number of studies (patients)	OR (95%CI) P value, REM	P value homogeneity	I^2(%)	NNT (95%CI)	OR (95%CI) P value, FEM
Mortality	28 (100,066)	0.69 (0.60–0.75) *P* = .0001	.18	14	189 (155–251)	0.70 (0.65–0.76) *P* < .0001
Stroke	22 (55,290)	0.42 (0.33–0.54) *P* = .0001	.16	16	104 (90–132)	0.49 (0.41–0.58) *P* < .0001
Myocardial infarction	14 (35,951)	0.97 (0.73–1.30) *P* = .86	.06	32	2,285 (254 to–229)	0.91 (0.74–1.11) *P* = .35
Atrial fibrillation	11 (29,343)	0.92 (0.80–1.05) *P* = .20	.01	51	79 (33–143)	0.85 (0.80–0.91) *P* < .0001
Renal failure	17 (38,866)	0.60 (0.51–0.70) *P* = .0001	.21	11	82 (67–110)	0.59 (0.53–0.66) *P* < .0001
Inotropic support	7 (6,153)	0.59 (0.38–0.90) *P* = .02	*P* < .0001	82	8 (5–41)	0.65 (0.56–0.75) *P* < .0001
RBC transfusion	8 (16,685)	0.36 (0.25–0.54) *P* = .0001	*P* < .0001	91	9 (7–13)	0.49 (0.44–0.54) *P* < .0001
Wound infection	13 (33,030)	0.59 (0.45–0.77) *P* = .001	.97	0	314 (235–553)	0.59 (0.45–0.77) *P* < .0001
Reoperation for bleeding	14 (39,480)	0.76 (0.57–1.02) *P* = .06	<.01	50	195 (107 to–2,753)	0.69 (0.59–0.81) *P* < .0001
IABP support	7 (9,703)	0.60 (0.41–0.89) *P* = .01	.18	10	245 (164–904)	0.57 (0.43–0.76) *P* < .001
Prolonged ventilation	6 (8,675)	0.71 (0.56–0.89) *P* = .01	.32	0	116 (77–312)	0.74 (0.61–0.90) *P* = .002

OR odds ratio; **CI** confidence interval; **REM** random effects model; **NNT** number needed to treat; **FEM** fixed effects model; **RBC** red blood cell; **IABP** intraaortic balloon pump

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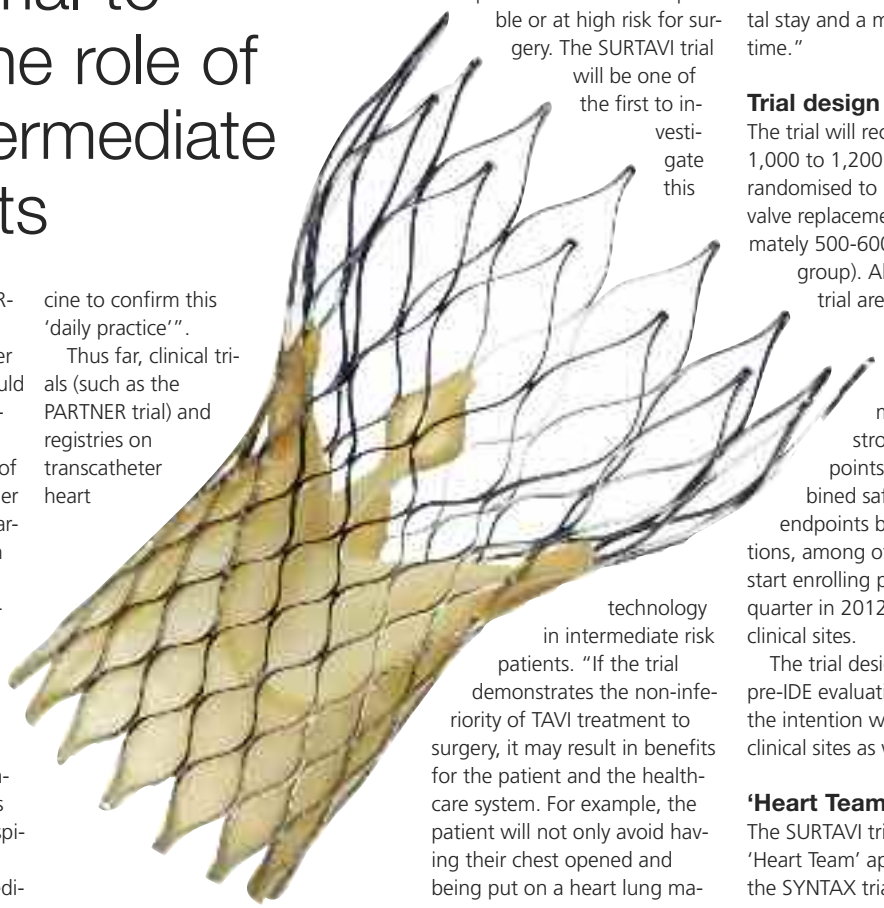
SURTAVI trial to examine the role of TAVI in intermediate risk patients



It is hoped that the proposed SURTAVI trial will provide many answers as to whether transcatheter aortic valve implantation (TAVI) could be an alternative for patients at intermediate risk for surgery. EACTS News discussed the trial with one of the investigators, Professor Ruediger Lange, Director of the Clinic for Cardiovascular Surgery at the German Heart Center, Munich, Germany, about its aim and possible implications for the future of TAVI.

"Current clinical practice dictates that this trial must take place. We have seen a shift in TAVI practice from high-risk surgical patients to intermediate risk patients," said Lange. "Since this has become daily practice in many hospitals, it is the goal of the SURTAVI trial to provide evidence-based medicine to confirm this 'daily practice'".

Thus far, clinical trials (such as the PARTNER trial) and registries on transcatheter heart valves have only included patients who were inoperable or at high risk for surgery. The SURTAVI trial will be one of the first to investigate this technology in intermediate risk patients. "If the trial demonstrates the non-inferiority of TAVI treatment to surgery, it may result in benefits for the patient and the healthcare system. For example, the patient will not only avoid having their chest opened and being put on a heart lung machine, the intermediate risk population would also have a shorter hospital stay and a much quicker recovery time."

Trial design

The trial will recruit approximately 1,000 to 1,200 patients who will be randomised to receive surgical aortic valve replacement or TAVI (approximately 500-600 patients in each group). Although details of the trial are currently under discussion, the primary endpoint will include all-cause mortality and major stroke. Secondary endpoints will include combined safety and efficacy endpoints based on VARC definitions, among others. The aim is to start enrolling patients in by the first quarter in 2012 in more than 40 clinical sites.

The trial design is also undergoing pre-IDE evaluation by the FDA and the intention will be to include US clinical sites as well.

'Heart Team' approach

The SURTAVI trial will utilise the 'Heart Team' approach, pioneered in the SYNTAX trial and also incorporated in the PARTNER US trial. The heart team approach means that both the interventional cardiologist and the cardiac surgeon, together, both decide which patients can be randomised. "As a result, patients are not handpicked and importantly, the patient population is more representative," he added.

Ruediger Lange

The trial, which will utilise the Corevalve (Medtronic), could be expanded to the US, and it is believed the company will submit the SURTAVI trial protocol to the FDA for approval, in the hope that a US arm will be able to participate in the trial.

"It is important that the trial provides a good evidence-base, that way we will know whether it is justified to implant a transcatheter valve in this group of patients," concluded Lange.

Clinical review: **Radial artery grafts versus saphenous vein grafts in coronary artery bypass surgery; a randomized trial**

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In coronary artery bypass surgery (CABG) the use of the left internal mammary artery (Lima) as the preferred graft for the anterior descending artery (LAD) is undisputed. In the recent ESC/EACTS guidelines on myocardial revascularization arterial grafting of the LAD is an IA recommendation. In this guideline complete arterial revascularization to non-LAD coronary systems is recommended for patients with a reasonable life expectancy. Several arterial grafts may be used as a second arterial graft: the right internal mammary artery, the radial artery or the right gastro-epiploic artery. Whether or not complete arterial grafting has a survival benefit in CABG patients is still a matter of debate. And furthermore, which of potential arterial grafts yields the best possible long-term patency rate is less clear.

In their recent publication "Radial artery grafts versus saphenous vein grafts in coronary artery bypass surgery; a randomized trial", JAMA 2011;305(2):167-174, Goldman and colleagues report on a multi-center, randomized controlled trial comparing the 1-year patency rate of radial artery grafts versus saphenous vein grafts. In this well conducted study a total of 733 first time CABG patients were included. These patients were recruited from 6148 patients initially assessed, therefore 12,3 % of all assessed patients were included. 3270 patients were excluded for medical reasons, 2086 patients were excluded for non-medical reasons.

Of the latter group 1087 patients were excluded by physician preference. It is not clear what preferences led to more than 50% of eligible patients not participating in the study and to what potential bias in the study group this might have led. Patients were almost exclusively (99%) male. Patients were randomized to receive a saphenous vein graft (n=367) or a radial artery (n=366). Pre-operatively and prior to randomization the surgeons decided which vessel was the most suitable to receive the graft to be studied. The target vessel for the study grafts was the circumflex artery in 57% of patients, the right coronary artery in 29% and the LAD in 14%. The primary end point of the study was angiographic graft patency one year after CABG. Secondary end points were myocardial infarction, stroke, repeat revascularization and death.

The primary finding of this study was an equal 1-year patency rate of 89% (95% CI 86%-93%) for the radial arteries and 89% (95% CI 85%-89%) for the saphenous vein grafts. There was no difference in graft patency between both groups for the different target vessels of the grafts. Further analysis revealed no influence of various other factors studied. These other factors included off-pump versus on pump CABG, vessel to be bypassed (LAD versus non-LAD) and target vessel size. The incidence of 99% occlusion ("string sign"), or severe stenosis in radial arteries. In this study the angiographic 1-years patency of Lima-grafts was 96%. There was no difference between the two study groups in the secondary end points studied.

The authors of the study conclude that there was no difference in angiographic patency between radial artery grafts and saphenous vein grafts in men. In this study the patency rate for the vein grafts was higher than reported in previous studies and higher than anticipated in the study design (expected patency rate of 83%), therefore the study may have been underpowered to detect a difference in graft patency between the groups. It might be that up to date medical treatment of post-CABG patients, including aspirin and statin treatment, yields a higher early vein graft patency than previously reported.

The authors realize, that the potential difference in graft patency between radial artery grafts and saphenous vein grafts might take more than one year of follow up to be apparent. Their final remarks in their report state that fortunately they will have the opportunity to extend the follow up period to five years, with angiographic evaluation. The results of these mid-term evaluation will be awaited with much interest and might provide more information on the important question what the exact value of more extensive use of arterial grafts is in modern coronary bypass surgery.

Jos Bekkers

EACTS News

Members views

If you would like to comment on any of the aspects concerning training and education, express your opinion regarding the outcomes from the SYNTAX trial or discuss th ESC/EACTS guidelines, *EACTS News* would be delighted to publish your views.

Please send your comments to: **communications@e-dendrite.com**.
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The Leonardo Da Vinci Award for Training Excellence New for 2011

Teaching has to become more efficient, and at the same time highly effective to ensure the surgeons of tomorrow are well equipped. We are fully aware of the current pressures on the system introduced by the European Working Time Directive.

Teaching skills have never been formally recognised to the same extent as research and they are usually eclipsed by clinical acumen. The training and manpower committee of EACTS is proud to announce the Leonardo Da Vinci Award for Training Excellence to identify the best cardiothoracic trainer in Europe, as nominated by the trainees.

A good teacher is easy to recognise but hard to define. We are drawing on the experience of the Silver Scalpel Award in the UK and the Socrates Award for the STS society in America. The principal of the Leonardo Da Vinci Award for Training Excellence is:

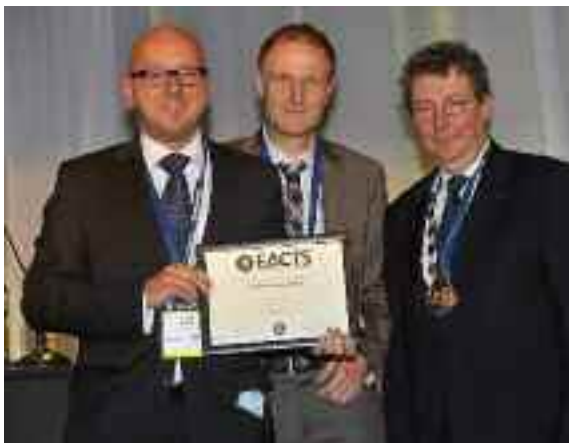
1 Recognise and reward excellence in training
2 Establish a benchmark in the form of a trainer role model
3 To define the attributes that make a good cardiothoracic surgical teacher

All cardiothoracic trainees in every European country are invited to nominate their trainer for the Leonardo Da Vinci Award. Submission for the Leonardo Da Vinci Award for Training Excellence is through the EACTS User Area (Abstract section). The deadline for nominations is 15 May 2011.

The winner of the first Leonardo Da Vinci training award will be announced at the EACTS meeting in Lisbon 2011.

The trainee is asked to submit a piece of reflective writing indicating why the trainer deserves the Leonardo Da Vinci Award. This is in five key competence areas. The submission should not only describe the trainers attributes but give examples of their skills. The areas are

1 Leadership
2 Resourcefulness
3 Training development
4 Professionalism
5 Communication



George Nollert (left) (Techno-College winner 2010)
Pradeep Narayan (left) (Hans Borst Award winner 2010)

The judging process

A scoring system has been developed and in use for the Silver Scalpel Award that runs in the UK. This has been run now for 10 years and the process of scoring ratified independently by educationalists. Each competency has been defined as having seven characteristics. These characteristics are looked under each heading for in this submission. They are marked on a tick box template by trainees to generate a score - the domains are weighted and the maximum score that can be achieved is 7.00.

The top six candidates will be short listed for 360 degree evaluation. They will be invited to nominate a peer, an anaesthetist and a nursing sister and supply their respective email and contact details in order that we can invite them to substantiate the nomination. All these people will be asked to write a reflective statement on why their colleague deserves the award. This will also be done on line and scored a similar way to an abstract. This will be done by a panel from the Training and Manpower Committee. Letters will be sent to the Chief Executive of the Hospital to ensure that there is no contra indication to the nomination of the surgeon for the award. This ensures probity and governance.

The top three nominees will then be interviewed (by Skype) and the responses from the interviews collected in a standardised format and presented to the Nominating Board of the EACTS to decide the winner.

The winner of the award will receive a trophy. Their name, together with a short list of candidates will go on a roll of honour to be established by the European Association of Cardiothoracic Surgeons.

The Award will be presented during the EACTS meeting - it is envisaged that the winner return the following year to tell the audience about how they teach.

David O'Regan
EACTS Surgical Training and Manpower committee

How to apply

Applicants for The Francis Fontan Prize and the Thoracic Prize are requested to send in the following documents to the EACTS Executive Secretariat (at the address stated below):

Curriculum vitae including

- Number and type of operations performed with and without senior assistance
- Scientific publications and work in progress
- An affidavit as to the proficiency of the applicant in English or in the language of the country to be visited
- Proposed plans for the prize year including the name of the department to be visited.
- A letter of support from the head of department which the applicant plans to visit.
- A recording of the applicant with a brief (3 minute) presentation of the proposed plans in English (presentation to be recorded on CD in MPEG or .AVI format).
- A letter of support from the applicant's head of department with an affidavit that the applicant is suitable for the Prize and welcome to return to his department.

The selection of the prize-winner is by a Prize Committee consisting of the President, Vice President and immediate past President of the Association. The winner of the Francis Fontan and the Thoracic Prize will be announced during the Annual Meeting.

On completion of the Prize-funded activities, the prize-winner is required to send a written report to the Secretary General presenting the knowledge and experience gained during the year including any published work. He/she should also report on the potential of disseminating new knowledge within the department to which he/she is returning.

The deadline for submission of applications is 15 May.

EACTS Executive Secretariat,
3 Park Street, Windsor, Berkshire, SL4 1LU, UK
E-mail: info@eacts.co.uk

Techno-College Innnovation Award

The Techno-College invites surgeons, engineers and individuals from companies active in the field of Thoracic and Cardiovascular Surgery to apply for The Techno-College Innovation Award.

We are looking for technological breakthroughs in all areas related to thoracic and cardiovascular research in particular for new surgical methods or devices. Innovations can be in the form of patents, inventions, new products, ideas or services. The innovations should have the potential to change our standard practice and should go beyond marginal improvements in existing procedures or products.

The winner will be chosen on behalf of the EACTS by the members of the New Technology Committee and he/she will have the opportunity to present his/her work during the Annual Techno-College on Saturday 1 October 2011, where the prize, €5,000, will also be awarded.

Submission for the Techno-College Innnovation Award is through the EACTS User Area (Abstract section). The deadline for submissions is 1 August 2011

Previous Winners

2010 Georg Nollert, Siemens AG
2009 E M Boyle, PleuraFlow Catheter Systems
2008 Jean-Marie Vogel, Pleuromed
2007 Milo Simcha, Rehovot, Israel

The Francis Fontan Prize

Available to Cardiac or Cardio-Thoracic Surgeons

The Francis Fontan Prize was instituted in honour of Professor Francis Fontan, leading founding father of The European Association for Cardio-Thoracic Surgery. The Prize is awarded to a medical doctor in specialty training in cardiac or cardio-thoracic surgery. It is not limited to European citizens.

The amount awarded is €30,000 and should cover the costs of one year's stay at a major European department or any other European research facility. The activities during this year are left to the discretion of the prize-winner and the head of the department visited, but should primarily involve fields such as research training, research activities, advanced clinical education and/or departmental management.

Thoracic Prize

The Thoracic Prize was instituted in 2006 by the Council of the European Association for Cardio-Thoracic Surgery. The Prize is awarded to a medical doctor in specialty training in thoracic or cardio-thoracic surgery. It is not limited to European citizens.

The amount awarded is €30,000 and should cover the costs of one year's stay at a major European department or any other European research facility. The activities during this year are left to the discretion of the prize-winner and the head of the department visited, but should primarily involve fields such as research training, research activities, advanced clinical education and/or departmental management.

25th EACTS Annual Meeting
1-5 October 2011
Lisbon Congress Centre
Lisbon, Portugal

info@eacts.co.uk

Awards and Prizes

award
€ 30,000

FRANCIS FONTAN PRIZE

Specialty training in cardiac or cardio-thoracic surgery.

award
€ 30,000

THORACIC PRIZE

Specialty training in thoracic or cardio-thoracic surgery.

award
trophy &
roll of honour

LEONARDO DA VINCI PRIZE FOR TRAINING EXCELLENCE

Specialty training in thoracic or cardio-thoracic surgery.

award
€ 3,000
for each prize

EACTS YOUNG INVESTIGATOR AWARDS

Best manuscripts on topics of clinical or experimental research.

- Cardiac Young Investigator Awards
- Congenital Heart Disease Young Investigator Awards
- Thoracic Young Investigator Awards
- Alessandro Ricchi Transplant Services Foundation Award

award
€ 5,000

HANS G. BORST AWARD FOR THORACIC AORTIC SURGERY

Stimulate advanced clinical or experimental research by young investigators.

award
€ 5,000

TECHNO-COLLEGE INNOVATION AWARD

Technological breakthroughs in new surgical methods or devices.

award
US $10,000

C. WALTON LILLEHEI YOUNG INVESTIGATOR'S AWARD

Implanting the St Jude Medical heart valve.

award
€ 3,000

ETHICON CARDIOVASCULAR SIMULATION AWARD

Creation of a Simulator which replicates for training purposes Coronary Anastomoses.

For more information please check our website, or download the pdf at www.eacts.org

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EUROPEAN ASSOCIATION FOR CARDIO-THORACIC SURGERY

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Competition crossword Fax back to +44 (0) 1491 411 377

Compiled by Sam Nashef, Papworth Hospital, UK. Entries must be received by 30 May 2011. The winner will be the first correct answer randomly selected by the Editor.

Your name | Your email

In a cryptic crossword, the clue is in two parts. One part gives the definition of the answer, another part gives a different way of reaching the same answer. The parts of the clue are run together to further mislead the solver. For example, for the clue, "Planet's broken heart (5)" the answer would be 'Earth' ('Planet' = the definition, and "broken heart" implies an anagram is needed of "heart" = 'earth'. Try the cryptic clues first, but if these are too difficult, the non-cryptic ones will help as both sets of clues have the same answers. Please use BLOCK CAPITALS and BLACK INK and complete your personal details.

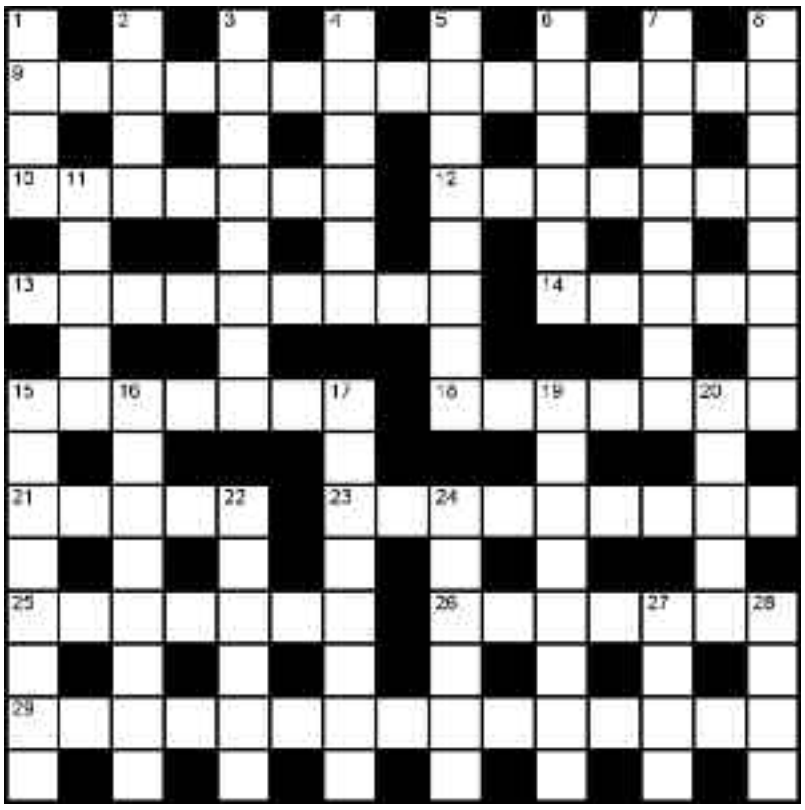
Cryptic clues

Across

9 Tall fruit salad helping 14 26 25 (15)
10 Starting the haematological results of many blood idiosyncrasies ... (7)
12 ... to end as mobile clot head somehow(7)
13/25/27 Antihypertensive treatment, one for the very ill (9,7,4)
14/26 Learn poorly, miss organ malfunction (5,7)
15 Fussy person accepts new jewellery (7)
18 Some Arab's cesspit needs drainage (7)
21 Monsters in the south, therefore come back (5)
23 One with no latitude line, stimulating the heart (9)
25 See 13
26 See 14
29 I left train at terminus, accepting scheme of operation (15)

Down

1 See 2
2/1 Romantic quality of cosmic powder (8)
3 Island relaxed with passion... (8)
4 .... for island swimwear... (6)
5 ... from Crete, tea and others (2,6)
6 He cuts pointed remark with hesitation (6)
7 Aggression was evil once (8)
8 Bad luck in poor Ken's joints... (8)
11 ... joint is something excrutiating (5)
15 Prone to lose right gland (8)
16 Avengers deploying weapon of mass destruction (5,3)
17 Vehicle playing lyric 5 (8)
19 Like us, cooking with garlic (8)
20 He goes downhill: it's more dangerous without central grip (5)
22 Uncommon to promote the last of surplus items (6)
24 Cause displeasure by not working on conclusion (6)
27 See 13 Across
28 Neat eruption here? (4)



Non-cryptic clues

Across

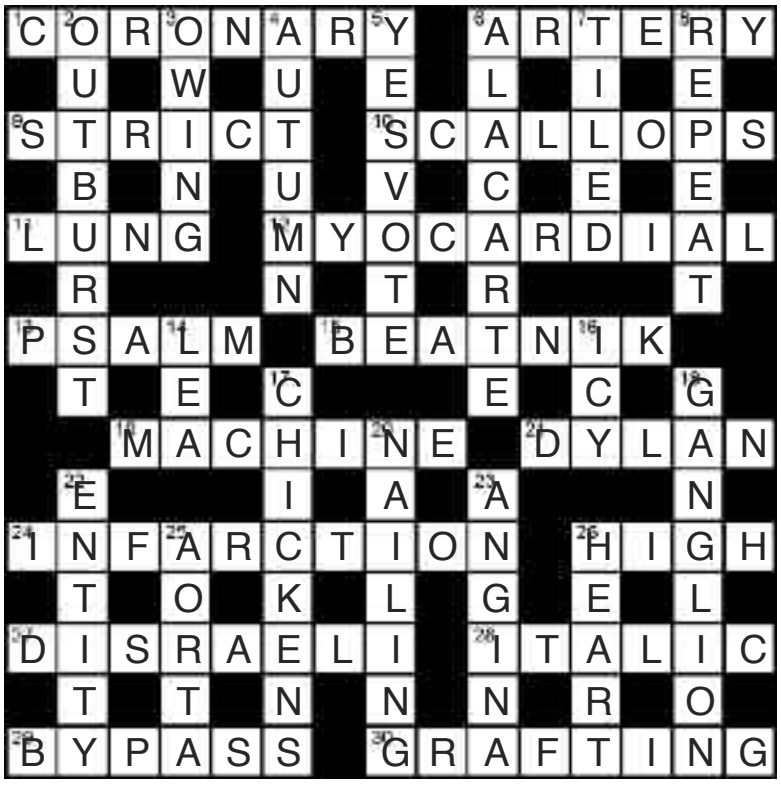
9 Treatment for 14/26 (15)
10 Clots... (7)
12 ...and how they may end up (7)
13/25/27 Part of hospital (9,7,4)
14/26 Anuria (5,7)
15 Jewellery (7)
18 Pus cavity (7)
21 Shrek-like creatures (5)
23 Describing dopamine (9)
25 See 13
26 See 14
29 19 grafting (15)

Down

1 See 2
2/1 Dreamy romanticism (8)
3 Australian island (8)
4 Two-piece (6)
5 And so on (2,6)
6 Hairdresser (6)
7 Rough use of force (8)
8 Metacarpal joints (8)
11 Door feature (5)
15 Gland (8)
16 Neurotoxin (5,3)
17 3-wheeler (8)
19 Non-medical! (8)
20 Sportsman (5)
22 Few and far between (6)
24 Insult (6)
27 See 13 Across
28 Volcano (4)

Solution to competition crossword from issue 1, December 2010

Congratulations to **David Luke, Dublin, Ireland** who was the first correct answer randomly selected by the Editor



Cryptic clues

Across

1/6/29/30 Moving to granary by frying peas, carrots and cabbage when familiar (8,6,6,8)
9 Satire is cute, but oddly uncompromising (6)
10 Drop in and work on board for seafood (8)
11 See 26 Down
12/24 From California city, random 26down attack (10,10)
13 I forgot to mention maltreated song (5)
15 Nonconformist to defeat the devil? Sounds like it (7)
19 See 26 Down
21 Poet after Bob and before Thomas (5)
24 See 12
26 Greeting said to be lofty (4)
27 Earl of Beaconsfield shows princess round the country (8)
28 Script is essential to merit a license (6)
29 See 1

Down

2 Much emotion expressed when tour bus breaks down at junction (8)
3 In the red shabby gown worn by compiler (5)
4 Fall of Man-U playing in Paris: you come in (6)
5 Agreed veto? The opposite! (3,4)
6 Salad: scary item at heart of menu (1,2,5)
7 Like bathroom, but led it astray (5)
8 You've already seen this agent dine (6)
14 Field is clear, but avoid extremes (3)
16 Compiler extremely chilly indeed (3)
17 Elegant Kenneth's birds (8)
18 Swelling with pride – leader follows group (8)
20 Fixing North in trouble (7)
22 Some spent it yearning for independent existence (6)
23 Perhaps gain an indication for 1, 6ac, 29, 30 (6)
25 Large vessel in the sea, or tanker (5)
26/11/19 Listen to yours once, taking a breather with overcoat used in 1,6ac,29,30 (5-4,7)

Non-cryptic clues

Across

1/6/29/30 Operation (8,6,6,8)
9 Stern (6)
10 Seafood (8)
11 See 26 Down
12/24 Heart attack (10,10)
13 Religious song (5)
15 Nonconformist (7)
19 See 26 Down
21 Folk singer (5)
24 See 12
26 Elevated (4)
27 British prime minister in 1868 and 1874 (8)
28 Script (6)
29 See 1

Down

2 Explosion (8)
3 In debt (5)
4 Fall (6)
5 Positive ballot result (3,4)
6 Alternative to set menu (1,2,5)
7 Like bathroom wall (5)
8 Redo (6)
14 Field (3)
16 Very cold (3)
17 Poultry (8)
18 Swelling (8)
20 Fixing (7)
22 Body (6)
23 A possible indication for 1, 6ac, 29, 30 (6)
25 Large vessel (5)
26/11/19 Kit which may be used in 1,6ac,29,30 (5-4,7)

Programme details
at www.eacts.org

ANNUAL
25th MEETING:
TEAMWORK

1-5 October 2011
Lisbon, Portugal

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EUROPEAN ASSOCIATION FOR CARDIO-THORACIC SURGERY

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Key International Events in 2011

7-11 May
American Association for Thoracic Surgery (AATS) 91st Annual Meeting 2011
Philadelphia, US
Contact: Meeting Organiser: American Association for Thoracic Surgery (AATS)
Phone: (+) 978 927 8330
Fax: (+) 978 524 8890

17-20 May
EuroPCR
Paris, France
Fax: +33 5 34 45 26 46
Email: europcr@europa-organisation.comm

27-31 August
European Society of Cardiology Congress 2011
Paris, France
Contact: Congress Secretariat
Phone: (+33) 4 9294 7600
Fax: (+33) 4 9294 8629

7-11 November
Transcatheter Cardiovascular Therapeutics (TCT 2011)
San Francisco, US
Contact Cardiovascular Research Foundation
Phone: 646-434-4500
Email: info@crf.org

10-16 November
American Heart Association Scientific Sessions (AHA 2011)
Orlando, FL
Contact Conference Secretariat – AHA
Email: scientificconferences@heart.org

If you would like to list your events here please email the details to:
communications@e-dendrite.com

EACTS Events in 2011

1-5 October 2011
25th EACTS Annual Meeting
Lisbon, Portugal

16-21 May
ESCTS Cardiac Course Level A
Bergamo, Italy

13-18 June
ESCTS Cardiac Course Level B
Bergamo Italy

24-29 October
ESCTS Cardiac Course Level C
Bergamo Italy

21-25 November
Second Leadership Course for Cardiovascular and Thoracic Surgeons
Windsor, UK

For information, contact:
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Fax: +44 1753 620407
Email: info@eacts.co.uk
Web: www.eacts.org

25th EACTS Annual Meeting
1 + 2 October 2011
Lisbon Congress Centre
Lisbon, Portugal

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ANNUAL
25th
MEETING:
TEAMWORK

NURSES, NURSE PRACTITIONERS AND PHYSICIAN ASSISTANTS

Deadline for abstracts 15 May 2011

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