

# EUROPEAN HOSPITAL

THE EUROPEAN FORUM FOR THOSE IN THE BUSINESS OF MAKING HEALTHCARE WORK

BARCELONA



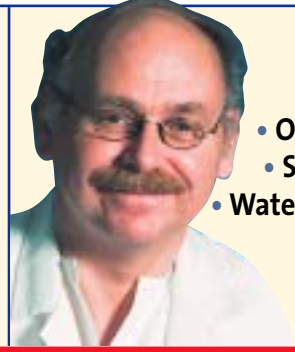
**9-16**  
**Cardiology**

- BMI devalued
- New cath lab imaging
- Nuclear cardiology
- Gender and HD



**24**  
**Respiratory medicine**

- The pulmotension research project.
- Extra-corporeal artificial lungs
- Asthma programme



**19-23**  
**Surgery**

- Obesity surgery
- Steroid sparing
- Waterjet technique
- HD systems aid MIS

VOL 15 ISSUE 4/06

AUGUST/ SEPTEMBER 2006

## contents

News .....	1-7
Cardiology .....	8-16
Surgery .....	18-23
Respiratory medicine ...	24
Anaesthetics .....	25
Research & prevention .	26
IT & telemedicine .....	27
Innovations .....	28
Forum Gastein .....	29
Medica preview .....	30
Global events .....	31
Advertisers index .....	31

# Foreign doctors say Non! to 'slave labour' wages

## Pay rows threaten French health minister's political future

Militant doctors are threatening to take the French government to court over its treatment of almost 7,000 practitioners whose qualifications were gained at universities outside the European Union.

The French Health Ministry is coming under increasing pressure as clinicians, angered by its slow response to resolving issues of inequality, walk out of hospitals and clinics throughout the Republic to support their demands for action. However, they have been keen to reassure the public that emergency cover would continue to be provided 'in all cases'.

A recent four-day stoppage – the second in less than a month in a campaign that has been gathering momentum over the past two years – highlighted their anger at being

French union poster declares:  
With some things their disappearance is desirable  
With some it is regrettable  
But with others it is frightening.  
Who will operate on you tomorrow...?



paid less than half that received by their colleagues with similar EU qualifications, as well as their lack of recognition by the French health authorities. Demonstrators took to the streets of Paris, many waving placards calling for a halt to

'modern-day slave labour' in French hospitals.

Dr Talal Annani, president of the National Union Group for General Practitioners with Diplomas outside the European Union (Inpadhue), which is

By Keith Halson  
EH correspondent in France

campaigning on behalf of the doctors, said that clinicians with non-EU degrees – many of whom are French nationals – were paid only 1,800 euros a month compared with the 3,800 paid to colleagues with equivalent qualifications obtained in the EU. 'These men and women come mainly from Morocco, Tunisia and Algeria, and also from black Africa,' he explained. 'They are in an intolerable position – apart from being paid up to three times less than a French doctor, they can neither establish their proper bona fides nor work in private  
*continued on page 3*



MyLab<sup>TM</sup>50 XVISION  
MyLab30CV  
INNOVATION in CARDIAC  
DIAGNOSIS at your Hands

MyLabWorld



Strain

ESAOTE BIOMEDICA Deutschland GmbH  
Hanns-Braun-Straße 50 · D-85375 Neufahrn  
Fon +49-(0)1180-5 372683 · Fax +49-(0)8165-618 20  
www.esaote.de · esaote@esaote.de

esaote

# WHAT A WASTE!

## LAWS DESTROY INVALUABLE DRUGS

By Brenda Marsh,  
EH Editor in Chief

UK – Inter Care, a Leicester-based registered charity that supplies returned/unused medicines to 94 healthcare centres in seven African countries – to date treating around one million people too poor to buy them – is facing possible criminal prosecution, brought by the country's Environment Agency, due to what have been described as 'confusing' UK and EU laws, which led the agency to believe those medications present serious health dangers and should be destroyed.

As a result, Inter Care, which says it is 'fighting for its very existence', has dumped its stockpile of useable and costly medicines, earmarked for despatch to meet orders from the African healthcare units.

Dr Margaret McDonald, CEO of Inter Care, said: 'We could have carried on, but our Trustees decided it would be best to suspend activities. Now, to maintain a supply of medicine, we must purchase generic ver-



Medications awaiting disposal

sions of the basic medicines. This will cost at least about €73,920, to partly replace the €443,490 – worth of returned branded prescription drugs. But many,' she added, 'are too expensive to even consider purchasing.' These costs will now drastically reduce the range of drugs the charity can supply.

As a result of the, as yet, only threatened criminal prosecution,

the charity has also suspended the collection and screening of returned prescription medicines.

Yet, Inter Care, set up 32 years ago by a general practitioner (GP), has contributed these returned/useable medicines, without hindrance up till now.

In addition, through the years, the charity has carefully adhered to the World Health Organisation (WHO) rules and made regular monitoring visits to the African healthcare centres to which it donates the medicines.

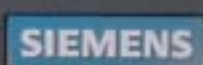
The concept has been underpinned by a country-wide network of GPs who want to help in this valuable work, and volunteers who had collected medicines returned by patients to GP surgeries. Retired NHS professionals – a team made up of doctors, nurses and pharmacists – then carefully assessed the condition of the medications, their  
*continued on page 3*



We see a way to change coils with a single mouse click

We see a way to increase patient throughput by 50%

# Tim proves it.



We see a way to do MRI with an increased signal-to-noise of up to 100%

[www.siemens.com/medical](http://www.siemens.com/medical)

Results may vary. Data on file.

M-2934-1-7600

**Proven Outcomes with Tim (Total imaging matrix technology).** In hundreds and hundreds of installations around the world, Tim<sup>®</sup> is proving that a new era in MRI is here. With Tim's unmatched 32 independent RF channels and up to 102 Matrix coil elements, you can combine coils in any way, for multi-organ exams, all in a single patient set-up. Offering incredible flexibility and accuracy.

Ensuring no detail is lost – from the smallest lesions to a large organ or extended anatomical region. And with iPAT in all directions, you can actually reduce image time, yet scan at a higher resolution. Visit us at [www.siemens.com/Tim](http://www.siemens.com/Tim) and let Tim prove it to you.

Siemens **Medical Solutions** that help

**SIEMENS**  
medical



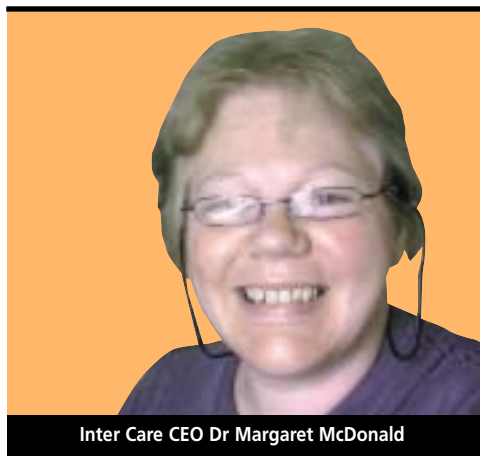
continued from page 1

sealed packaging and shelf life. These approved medications then awaited specific requests from the African units before being despatched to meet needs.

Understandably, EC rules have been created to ensure waste is not illegally dumped in countries other than where it originates. The problem appears to arise from the interpretation of 'waste'.

The Environment Agency stated that it could not comment on on-going investigations but that pharmaceutical products, e.g. pills and medicines, could contain chemicals and drugs that might be harmful to the environment and humans. 'As the regulator, we have a duty to ensure that this waste is being disposed of and handled correctly. Sometimes these drugs are shipped to other countries that may need them, and while we recognise the intention is to be of assistance to developing countries, they need to follow the controls,' the Agency's statement read.

Inter Care responded: 'The World Health Organisation has produced the Guidelines for drug donation. These define minimum quality standards that are universally acceptable and are core to the Inter Care Quality Assurance. Inter Care uses the WHO quality guidelines



Inter Care CEO Dr Margaret McDonald

when assembling every consignment for Africa.'

The charity also pointed out that it supplies the healthcare units with up-to-date information on dosages, contra-indications, side-effects etc, as well as with training and educational materials on diseases such as malaria and HIV/AIDS.

Inter Care is now 'in limbo', not knowing the charges that might be brought against it, and simply awaiting to be called to an 'interview' with the Environment Agency. 'We understand that the agency could prosecute

anyone at Inter Care, and the result could be huge fines or even imprisonment,' said Dr McDonald, who has even been asked to supply the agency with the names and addresses of volunteer helpers. 'We can get no answers from the agency. It's frightening. We are dealing with faceless people about a supposed criminal offence. Perhaps they want to make us a test case. Without answers we do not know which way to go.'

#### France

The situation is far different across the English Channel.

Cyclamed, based in Paris, is a large, highly organised, non-profit-making group that re-cycles waste – and, within that description, unused but useable medications. Cyclamed supplies these to organisations for distribution to the homeless in France, as well as to humanitarian groups that include Médecins Sans Frontières – the renowned international humanitarian non-government organisation that provides emergency medical aid in over 80 countries.

In the 90s, Cyclamed received the approval of the then Prime Minister of France. It also operates with the co-operation of the French pharmaceutical industry's national Union (Le Syndicat National de l'Industrie Pharmaceutique, now renamed Les Entreprises du Medicament) and runs TV, radio and poster campaigns to encourage the population to recycle medications, etc. The public complies willingly. The concept is generally admired and supported, from politicians down to the poor.

'I am envious,' Dr McDonald said ruefully. 'It almost makes me want to move to France.'

Could you help the UK charity in any way? Visit: [www.intercare.org.uk](http://www.intercare.org.uk) and [www.medicalaidforafrica.org.uk](http://www.medicalaidforafrica.org.uk).

# THE HIGHEST SPEND IN EU

## CVD costs UK €43 billion

The UK spends more of its healthcare budget on cardiovascular disease than any other country in the EU. In 2004 alone, CVD accounted for at least 43 billion, according to a study\* by researchers at the Health Economics Research Centre, in Oxford's Department of Public Health.

Funded by the British Heart Foundation and the European Heart Network, the researchers based calculations on all UK residents diagnosed with cardiovascular disease in 2004 and the associated costs: community health and social services, primary, out-patient, emergency care and inpatient care – plus the costs of unpaid care and lost earnings due to illness and premature death.

Coronary heart and cerebrovascular diseases accounted for nearly 80% of all CVD deaths and 56% of costs. Other cardiovascular diseases, e.g. high blood pressure or other forms of cardiac disease, accounted for the remaining proportion of the cost.

Hospital in-patient costs reached almost €14.74 billion, or almost two thirds of the National Health Service bill for CVD. Related drug costs were almost €4.42 billion.

Ramón Luengo-Fernández, the study's lead author, commented that the cost of CVD in the UK is only surpassed by mental illnesses: 'Yet until now, there has been no systematic cost-of-illness study to evaluate the economic burden of cardiovascular disease. The objective of this study is to help policy-makers assess the impact of their policies and set priorities for research spending.'

\* Published online in the *Heart Journal*.

Full text: <http://heart.bmjournals.com/>  
Cardiology reports: pages 9-16

## Sourcing drugs and educational materials

Acquiring medicines is not that easy, particularly during emergency appeals following natural disasters and wars, the charity points out.

However, every day, pharmaceutical manufacturers destroy in-date, perfect quality medications, due to batch over-runs, cancelled orders, or items having damaged packaging. Sometimes, Inter Care has been given these valid products for donation to the African Centres.

The charity also sources medications to purchase from low-cost UK suppliers and the African healthcare units' countries, depending on availability and the needs of the units.

Old editions of MIMS and BNF (medicines guides) are also sent to Africa, with medicines, to ensure local medical staff can keep up to date with prescribing changes.

continued from page 1

clinics. Their career development suffers accordingly.'

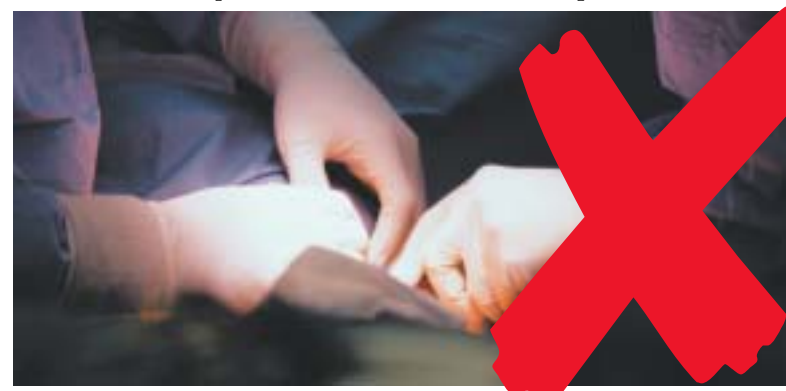
Halde (High Authority Against Discrimination) – the French government's anti-discrimination body – denounced the doctors' 'precarious' situation and agreed they were suffering salary discrimination 'although their responsibilities are identical to those of other hospital doctors'. In May, under its wide-ranging judicial powers, Halde gave Health Minister Xavier Bertrand four months to address the situation. If he fails to comply to Halde's satisfaction, Inpadhue will ask it officially to censure the health minister, a move that would trigger serious political repercussions for him.

On 13 July, M. Bertrand promised to amend the country's Social Security regulations in 2007. Among other things, he proposes to introduce a special examination to be taken by doctors with non-EU degrees, to establish their levels of medical competence and their knowledge of the French language.

However, Dr Annani has urged doctors to step up pressure on the government through further strike action in protest against the apparent lack of political will. He revealed that, starting on 6 September, a series of demonstrations will take place each Wednesday at 14.00. The first will be outside the health ministry, followed by the Hotel Matignon (the French prime minister's official residence), the Senate and finally the National Assembly. Inpadhue also warned that unless a fair and just solution

to its grievances is found, the demonstrations would continue throughout October, November and December.

'The health minister has merely confirmed that proposals to remedy the problem will be submitted before the end of the year. But that does not change that fact that we do not agree with them,' Dr Annani pointed out. 'For example, we believe that the new examination will not take into account the experience that each doctor has acquired.'



Inpadhue wants doctors from outside the EU with over five years' service in French hospitals to be exempt from having to take written examinations, preferring instead that they be assessed professionally on the basis of their qualifications and work experience.

Dr Annani added: 'And what will happen if the minister's proposals are not accepted and the law is not changed? Will these doctors have to wait a further 12 months before anything is done? We also deplore the ill-will that has been created. Theoretically, hospital doctors on strike could be ordered to perform emergency

hospitals but are not officially recognised as doctors. Our members have no papers to justify their professional status and would not, for example, be able to prove they were doctors if they needed to go into a pharmacy and buy controlled medicines.

By allowing this discrimination to go unchecked the government is actively exploiting these highly trained and responsible men and women – the very people whose skills they need to ensure the safe and efficient operation of French

hospitals and clinics.

'It is little short of a disaster. The country is crying out for more hospital doctors yet the authorities refuse to recognise those with non-EU qualifications and employ them only on short-term contracts. Foreign doctors, some of whom are in their forties and who have vast experience, find this extremely frustrating and humiliating and deplore the instability and lack of career prospects.

'That is why they are on strike.'

#### Meanwhile...

Surgeons, anaesthetists and gynaecologists are facing a professional crisis unprecedented in their history.

More than 3,000 of them, out of a total of 7,000, are taking industrial action at clinics and hospitals throughout France in a long-running row with the health ministry over a review of their pay and allowances. They are also angry at what they say have been unacceptable rises in the cost of their professional insurance cover and are demanding that premiums be capped.

They accuse health minister Xavier Bertrand of bowing to political pressure exerted by the powerful insurance companies and allowing them to make huge profits, whilst refusing to address the doctors' claims.

The three professional associations representing the clinicians – UCDF (poster photo), the surgeons' union, SYNGOF for the gynaecologists and obstetricians, and AAL, which represents anaesthetists.

In 2004, when surgeons began limited strike action, an agreement

was reached under which the health authorities promised to look at the issues. 'However,' say the unions, 'nothing has been done since then. We are fed up with the delaying tactics of officials responsible for public health.'

At the start of the summer heatwave, UCDF president Philippe Cuq said he had warned the health ministry that his members were merely waiting for such an opportunity to take action. 'The situation will be made worse because many surgeons are about to go on holiday. In the past, managements at hospitals and clinics have been used to bringing in extra clinical staff to maintain a normal service and to cope with a rise in cases caused by a heatwave. But this option now appears to be extremely limited.'

Xavier Bertrand denounced the heatwave industrial action as 'irresponsible', but strikers countered with: surgeons are rarely called on to deal with heatstroke cases.

Syngof president Jean Marty said that gynaecologists and obstetricians were playing 'cat and mouse' with health officials, attending deliveries but refusing to carry out surgical operations. 'They are now threatening to boycott deliveries unless there is swift response to their two core grievances.' This, he said, would have to come from both the health ministry, and insurance firms. 'We need to take united action against the industry,' he said. 'On average, my members attend 180 births a year, for which they are paid around €54,000. However, their annual professional insurance premiums now cost almost 30,000.'



# EUROPEAN HOSPITAL Reader Survey



YOU may qualify for a FREE subscription to EUROPEAN HOSPITAL, the bi-monthly journal serving hospitals throughout the EU.

\* If selected, you will be sent a copy of EUROPEAN HOSPITAL every two months.

To participate, simply fill in this coupon and fax to: +49 211 73 57 530

No fax? No problem. Please post your coupon to:

European Hospital Publisher, Höherweg 287, 40231 Düsseldorf-Germany

Please inform me about the Hospital Administrator Forum at the ECR 2007.

## ENTRY COUPON

FAX TO: EUROPEAN HOSPITAL, +49-211-7357-530

DO YOU WISH TO RECEIVE OR CONTINUE TO RECEIVE EUROPEAN HOSPITAL  YES  NO

Signature \_\_\_\_\_ Date \_\_\_\_\_

Reader Number \_\_\_\_\_

Name \_\_\_\_\_

Job title \_\_\_\_\_

Hospital/Clinic \_\_\_\_\_

Address \_\_\_\_\_

Town/City \_\_\_\_\_ Country \_\_\_\_\_

Phone number \_\_\_\_\_ Fax \_\_\_\_\_

Now, tell us more about your work, so that we can plan future publications with your needs in mind. Please put a cross  in the relevant boxes.

### 1. SPECIFY THE TYPE OF INSTITUTION IN WHICH YOU WORK

General hospital  Outpatient clinic  University hospital

Specialised hospital/type \_\_\_\_\_

Other institution (eg medical school) \_\_\_\_\_

### 2. YOUR JOB

Director of administration  Chief medical director  Technical director

Chief of medical department/type \_\_\_\_\_

Medical practitioner/type \_\_\_\_\_

Other/department \_\_\_\_\_

### 3. HOW MANY BEDS DOES YOUR HOSPITAL PROVIDE

Up to 150  151-500  501-1000  more than 1000

None, (not a hospital/clinic)

### 4. WHAT SUBJECTS INTEREST YOU IN YOUR WORK?

Surgical innovations/surgical equipment  Radiology, imaging/high tech advances

Clinical research/treatments/equipment  Intensive Care Units/management/equipment

Ambulance and rescue equipment  Pharmaceutical news

Physiotherapy updates/equipment  Speech therapy/aids

Nursing: new aids/techniques  Laboratory equipment, refrigeration, etc.

Hospital furnishings: beds, lights, etc.  Hospital clothing and protective wear

Hygiene & sterilisation  Nutrition and kitchen supplies

Linens & laundry  Waste management

Information technology & digital communications  Hospital planning/logistics

Personnel/hospital administration/management  Hospital Purchasing

Material Management  Medical conferences/seminars

EU political updates

Other information requirements - please list \_\_\_\_\_

\_\_\_\_\_

### ESPECIALLY FOR DOCTORS:

Please complete the above questions and we would like you to answer the following additional questions by ticking yes or no or filling in the lines as appropriate.

What is your speciality? \_\_\_\_\_

In which department do you work? \_\_\_\_\_

Are you head of the department?  Yes  No

Are you in charge of your department's budget?  Yes  No

How much influence do you have on purchasing decisions?

I can only present an opinion  Yes  No

I tell the purchasing department what we need  Yes  No

I can purchase from manufacturers directly  Yes  No

Do you consider that your equipment is out-dated  Yes  No

relatively modern  Yes  No

state-of-the-art  Yes  No

Do you use/buy second-hand equipment?  Yes  No

If so, what do you use of this kind? \_\_\_\_\_

Is your department linked to an internal computer network?  Yes  No

Is your department linked to an external computer network?  Yes  No

Is your department involved with telemedicine in the community?  Yes  No

Do you consider your department is under-staffed?  Yes  No

Are you given ample opportunities to up-date knowledge?  Yes  No

Do you attend congresses or similar meetings for your speciality?  Yes  No

This information will be used only in an analysis for European Hospital, Höherweg 287, 40231 Düsseldorf, Germany, and for the mailing out of future issues.

EH 4/06

## NEWS

# NURSING NEWS

### UK restricts recruitment of international nurses

Nursing organisations have warned that about 70% of newly qualified nurses cannot find jobs in the UK's National Health Service (NHS).

In August, the British government declared that the NHS has no further need to recruit from overseas.

However, universities have been told that the NHS will be funding between 10-30% fewer places for nurse training. This cut-back has been blamed on the need to offset current, massive NHS deficits, but the plan has led university leaders to warn of a very serious future shortage of nurses - and the need, in the long term, the need to again seek nurses from overseas..

### Council opposes armed Middle East conflict

The International Council of Nurses (ICN), based in Geneva, believes nurses have an important role to play in addressing the impact of conflict, including the emergency and long term health needs of refugees, other civilian populations and wounded armed forces personnel, and it demands protection for all health professionals and relief personnel providing care in conflict zones. In a statement, the organisation said: 'The ICN strongly opposes armed conflict under any circumstances and we urge our member national nurses associations in 129 countries to join us in calling for an immediate cessation of the armed conflict in the Middle East and the rapid deployment of an international peace keeping force.'

### 2006 Human Rights and Nursing Awards

Gaza - Five nurses from The St John Ophthalmic Outpatient Clinic and Cataract Day Case Surgical Centre, in Gaza, have been awarded the 2006 Human Rights and Nursing Awards in recognition of their extraordinary work in difficult circumstances to ensure that the people of the Gaza Strip receive ophthalmic nursing and cataract surgery of the highest possible standard.

The awards were announced at the 2006 Globalisation of Nursing: ethical, legal and political conference, held at the University of Surrey. The nurses, Hanan Zaalan, Fouad Najjar, Ghazi El Baba, Mohamed Barakat and Abdallah El Baba, could not be at the conference. Their award was received on their behalf by Jackie Jaidy, of the St John Eye Hospital, Jerusalem, of which the Gaza-based clinic is an outpost. She said they had been given the award because they had continued to work under great duress and great restrictions to both their daily and working lives.'

Presenting the awards, Professor Anne Davis, International President of the International Centre for Nursing Ethics, valued at \$3,000, congratulated the nurses on their determination to continue to provide nursing care to the Gaza's population, despite difficulties in sourcing equipment, and in some cases even reaching the clinic.

Dr Verena Tschudin, Director of ICNE, said: 'Nowadays, it is impossible to do almost anything without considering the ethics of it. This is particularly true in nursing, which is more than just a job; it is also a moral endeavour. Therefore, morality and ethics are a large part of any nursing role and should be recognised as such.'

**The awards** - This unique nursing award is given in recognition of any nurse's outstanding commitment to human rights and exemplifies the essence of nursing's philosophy of humanity. Nominations are open to all nurse practitioners. The winners are chosen by an international committee.

Previous award winners include: Sister Grace Kodiyan (India) for dedicating her life to the poorest of poor people in Bihar; Fidelis Mudimu (Zimbabwe) for providing medical and psychological rehabilitation for victims of organised violence and torture; Karla Schefter (Germany) for founding and running a hospital in Afghanistan; Glenda Wildschut (South Africa) for resettling people after the Rwanda massacre; Christine Schmitz (Germany) for her work with Médecins sans Frontières; Cathy Crowe (Canada) for her work as a 'street nurse' caring for homeless people; and Mpho Motlehasadi-Sebanyoni (South Africa) for founding a hospice community for people suffering HIV/AIDS.

### University honours influential American nurse



The University of Salford is to present an honorary award to The General Secretary of the Royal College of Nursing (RCN), Dr Beverley Malone received an honorary award from Salford University, in July, in recognition of her 'inspirational role as a successful black nurse. The award follows the naming of the University's new £22m Mary Seacole Building for the Faculty of

Health & Social Care, after the famous black nurse working in Britain during Queen Victoria's reign.

Dr Malone, who was brought up in the southern states of the USA, became the head of the American Nursing Association before moving to the Whitehouse, in Washington DC. In 2000 she was named as one of the top 100 influential black Americans.

She arrived in Britain in 2001, after leaving her position within the Clinton administration. She became the first non-British General Secretary of the RCN - appointed for her renowned negotiating and public speaking skills. Dr Malone has spearheaded the RCN's drive for more nursing pay and initiatives to make hospitals safer and cleaner.

Jill Wild, Head of Salford University's School of Nursing, described Dr Malone's '...outstanding leadership qualities and dedication to the nursing profession' as '...an excellent example to staff and students'.

### Health & safety rules hamper aid workers

Another aspect of the Israel-Lebanon conflict is that health and safety rules could hamper the work of British international aid agencies, as well as supplies to devastated zones. Numerous safety rules have been imposed since September 11, by agencies such as Christian Aid, Oxfam, and Save the Children. The rulings include having to make detailed danger assessments prior to journeys into conflict zones, as well as hiring professional security officers for protection, who can decide whether a trip is too hazardous to undertake. This decision had, in the past, been one that the aid workers themselves undertook.

Such rulings have not been imposed on humanitarian workers from various other European countries, such as Belgium and Spain, which entered bombed areas in southern Lebanon within days of the war.

Part of the reason for these more stringent health and safety rulings are thought to be the fact that, recently more aid workers have been targeted and killed in Afghanistan and Iraq. In addition, aid agencies were concerned that, in the Israel-Lebanon crisis, the Israeli government did not establish a humanitarian corridor through which relief workers could pass in safety

### International agreements urged for the human right to healthcare

Following their July conference on 'The Globalisation of Nursing' and organised by the International Centre for Nursing Ethics, based in the University of Surrey, UK, the following statement was issued:

'As nurses and nurse educators from 20 countries, we have spent two intensive days examining the impact of globalisation on health and healthcare. Millions of nurses throughout the world have the especially responsible position of frontline workers and professionals, caring for and preventing human suffering. We take our social responsibility seriously. We are concerned that the delay and neglect of key international agreements will exacerbate the growing global healthcare crisis and undermine the sustainability of nursing itself. We therefore call on our national governments and the relevant international organisations fully, diligently and urgently to respect, implement and enhance the international agreements on the human right to healthcare, on economic justice and on the mitigation of climate change.'



# Acquisition promises larger endoscopy range

Sopro, French manufacturer of a large range of dental and medical equipment - including cameras, light sources, insufflators, irrigators for endoscopy (distributed worldwide) has acquired the surgical endoscopy firm Comeg, of Tuttlingen, Germany.

With headquarters in La Ciotat, France, Sopro has 80 employees, exports worldwide and reports a turnover of €25 million.

Sopro is a subsidiary of the Bordeaux-based company Acteon Group, which designs, manufactures and markets dental and medical equipment (ultrasonic units, high frequency surgical units, autoclaves, etc.) as well as pharmaceutical products and consumables for dentists. Acteon employs 620 people, 220 of them located overseas in ten subsidiaries. Reported turnover: €95 million.

Comeg designs, manufactures and markets a complete range of endoscopes for abdominal surgery, urology, arthroscopy, gynaecology and ENT. Employing 50 people, the company's reported turnover is €6.5 million.

The new firm, Sopro-Comeg, unites their different R&D departments and the Acteon Group, working in five production sites with almost 60 engineers specialised in electronics,

mechanics, computer engineering, as well as chemists and biologists, etc. This force will provide a large range of endoscopy products, from 'capital equipment' to all surgical endoscopes.

The Sopro-Comeg management: Pierre Montillot, CEO of Sopro and Sopro-Comeg GmbH. Eugen Weimer, Managing Director of the Tuttlingen plant. Bernd Seide, Sales & Marketing Director of the Sopro-Comeg Group.



## CONTACTS

Acteon	Sopro	Sopro-Comeg GmbH
ZI du Phare 17 avenue Gustave Eiffel BP 30216 33708 Merignac Cedex France	ZAC Athélia IV Avenue des Genévriers 13705 LA CIOTAT Cedex France	Dornierstrasse 55 D-78532 Tuttlingen Germany
Contact : Gilles Pierson	Contact : Pierre Montillot	Contact : Pierre Montillot
Tel. (33) (0)5 56 34 06 07 Fax (33) (0)5 56 34 92 92	Tel. (33) (0)4 42 98 01 01 Fax (33) (0)4 42 71 76 90	Tel. (33) (0)4 42 98 01 01 Fax (33) (0)4 42 71 76 90
info@acteongroup.com	info@sopro.acteongroup.com	info@comeg.de
www.acteongroup.com	www.acteongroup.com	www.comeg.de

## Multi-million euros IT set-up for Toulouse

France - Following a public tender, the Centre Hospitalier Universitaire (CHU), in Toulouse, contracted Agfa HealthCare to install ORBIS, the company's clinical and administrative information system. The installation, scheduled to be concluded by 2011, will involve some 10,000 users.

## AV-TV advances into more medical fields

Scotland - A joint venture by two National Health Service groups (NHS Tayside and NHS Education for Scotland) and the University of Dundee, has resulted in a new Postgraduate Education Centre at Dundee Dental Hospital and School. One aim, said Penny Crowe, Postgraduate Education Centre Manager, was to train dental surgeons in a state of the art, flagship centre.

Among advanced developments, Sony Professional Services design consultants designed and installed audio-visual (AV) IT systems in a lecture theatre and two seminar rooms. This equipment includes projectors, built-in ceiling speakers, induction loops for those with hearing impairment, a visualiser (showing a magnified image of items placed on it), and video-conferencing facilities.

Live demonstrations on model 'dummy' heads in the Centre's Clinical Skills Laboratory are transmitted via a link direct to the lecture theatre, enabling the training of a wider audience.

**More AV-TV & surgery reports: pages 20-21**



## We see dots everywhere.

A pioneer of 3D Ultrasound Technology, MEDISON's three dots imply Progress, Reliability, and Trustworthy. On these principles, we have been leading innovative ultrasound technology for more than 20 years in the world. On top of improving our technology continuously, we put human life our first priority. Our dedication and commitment toward more valuable human life through technology have been inspired by everyone and seen everywhere in the world.

www.medison.com | marketing@medison.com

see it all   
**MEDISON**



# DNA COPYING

## GENETIC MACHINE PRE-DATES HENRY FORD'S PRODUCTION CONCEPT

Scotland - Researchers at the University of Dundee have made a significant new discovery about how cells copy their genetic information accurately and efficiently to avoid cancers and other diseases, according to a report in the scientific journal *Cell* (30/6/06).

Dr Tomo Tanaka, Professor Julian Blow, principal investigators in the Division of Gene Regulation and Expression in the University's School of Life Sciences, with member Dr Etsushi Kitamura, discovered that, contrary to conventional views, the machinery that copies DNA stays fixed inside the cell whilst the DNA being copied has to move.

For the genetic information to

be properly inherited, a cell must copy its DNA using a specialised 'copying machine' before it can divide into two daughter cells. It was originally thought that the DNA copying machine moves along the DNA as it is copied. Dr Tomo Tanaka said: 'We can liken the process that we have discovered in cells to an assembly line for making cars, invented by Henry Ford and his engineers. It was a revolutionary idea in industry that products move along a line and engineers stay at fixed places to assemble them. This achieved much more accuracy and efficiency in manufacturing products.'

'Similarly cells can copy DNA accurately and efficiently by moving it through a stationary

copying machine, rather than by moving the copying machinery along stationary DNA. Because errors in DNA copying cause human diseases such as cancers, it is crucial to understand how our cells organise the copying of DNA in space and time.'

Referring to cancer being caused by uncontrolled cell division and multiplication, Professor Angus Lamond, Head of the Division of Gene Regulation and Expression pointed out: 'This latest advance is a wonderful example of how genetic research in Dundee is leading the way in understanding how cells divide and therefore helps us understand the basic causes of cancer. Future cancer treatments will build upon this improved understanding of what has gone wrong.'

Research for the study - 'Live-cell imaging reveals replication of individual replicons in eukaryotic replication factories' - was funded by Cancer Research UK.

Contact: Dr Tanaka. E-mail [t.tanaka@lifesci.dundee.ac.uk/](mailto:t.tanaka@lifesci.dundee.ac.uk/) Telephone: 01382 385814.

# Student's immune defences hit by examination nerves

Sweden - The rise in asthma and allergies is often blamed on stress in the West. Now research\*, involving medical students and carried out at the Karolinska Institute, in Stockholm, has indicated that there are important links between mental stress and characteristic complex physical inflammation reactions of allergies.

To understand the link between stress and allergy, the research team, led by Mats Lekander and Caroline Olgart Höglund, examined how a major medical exam at the Institute affected feelings of stress, stress hormone levels, the immune system and lung function amongst students who suffered allergies - 22 students had hayfever and/or asthma - and 19 other students who had none.

Two extensive tests were carried out, the first during a calm period of study, when the subjects faced no immediate examinations, then



shortly before a major exam.

The researchers were able to show, for the first time on record, that a group of regulatory T cells, which control the activity of a number of other cells in the immune system, appear to sharply increase in number in response to

mental stress. Both groups of students had this increase. Blood concentrations of cytokines, a group of inflammation products, were also seen to have changed and shifted against a pattern associated with allergic inflammation in the allergic students, but remained normal in the healthy students.

The two discoveries might be linked. Mats Lekander explained: 'There is much to suggest that the regulatory T cells are dysfunctional in people with allergies. When people become stressed, they increase in number and normally have an anti-inflammatory effect. If this system does not work in people with allergies, it could explain the changed cytokine balance that we have observed in them.'

\* *Clinical & Experimental Allergy*. Peer reviewed publication and references: 'Changes in immune regulation in response to examination stress in atopic and healthy individuals'.

responsibility to profession, responsibility to community), and four domains of impeding factors (attitudinal barriers, uncertainties, helplessness, fears and anxieties).'

The classification could prove a valuable tool to aid in the design of error-reporting systems that would encourage the disclosure of errors by physicians. The study was published in the *Journal of General Internal Medicine* (Vol. 21, September 2006). Authors: Lauris C Kaldjian; Elizabeth W Jones, Gary E. Rosenthal; Toni Tripp-Reimer and Stephen L Hillis.

# MEDICAL ERROR REPORTING

## STUDY PRESENTS A ROUTE TO HELP DOCTORS WITH MEDICAL ERROR REPORTING

Medical error reporting by doctors to healthcare institutions, colleagues and patients, is not only important for patient safety, but also to professional education. However, in a recent report, researchers at the University of Iowa point out that variables that might facilitate or impede disclosure are diverse and lack conceptual organisation. Aiming to develop a comprehensive classification of factors that affect voluntary disclosure of errors by physicians, the team reviewed 316 articles, identifying 91 impeding or

facilitating factors affecting doctors' readiness to disclose errors. They also identified another 27 factors from exploratory focus groups reports.

By sorting and hierarchical cluster analysis, the team organised factors into eight areas. 'Confirmatory focus groups and expert review relocated six factors, removed two factors, and modified four domain names,' the researchers said. 'The final taxonomy contained four domains of facilitating factors (responsibility to patient, responsibility to self,

# Royal Society of Medicine under new leadership

UK - The Royal Society of Medicine (RSM) has appointed a new Chief Executive: Stephen Dodd, and new President: Professor Ilora Finlay.

Stephen Dodd, a former medical scientist, with a degree in chemistry and pharmacology (Oxford),



Ilora Finlay

began his new role in August, after working for BMI Healthcare, the largest UK private hospital group, where he led a programme to establish centres of clinical excellence across a number of medical specialties.

Professor Finlay is a consultant in palliative medicine and chronic pain at the Velindre Trust, Cardiff. She is also an honorary professor

and vice dean of the College of Medicine, University of Wales. As a Fellow of the RSM she founded its Section of Palliative care. (In 2001, Professor Finlay became a member of the House of Lords, and titled Baroness Finlay of Llandaff). The professor is keen to see medical practitioners working more closely with colleagues in dentistry and veterinary science as well as other healthcare professions '...to ensure continued improvement in human health', and will also encourage collaborative work with '...other educational providers to ensure that our expertise is shared with the developing world'.



Stephen Dodd

# Improved internal communication reduces absenteeism

Absenteeism from work is not only caused by illness but also by stress in the workplace, aggravated communication between colleagues, or between supervisors and those they are in charge of; psychosomatic problems (depression and anxiety) and psychosocial stress. This has been confirmed once more by a study carried out in a medium-sized company.

It is important to promote employees' identification with the company they work for and therefore to increase job satisfaction. The above-mentioned study achieved a reduction of absenteeism by 12% through the introduction of these measures:

- Regular departmental meetings that were reported to those in charge
- Discussion of workflow that promote communication, cooperation and participation amongst employees
- Redesign of blackboards and

deciding who is responsible for the upkeep of such means of communication

- Sending out the company newsletter to the employees' home addresses
- Including and informing the lowest level of management - including foremen - though the distribution of press reviews, updates from senior management etc.
- Putting up suggestion/complaints boxes that can be used anonymously - with information addressed to the management
- Assessment of line managers and superiors by those they oversee.

It is impossible to ascertain whether improved communication was the only reason for the reduction of absenteeism from work. However, overall, the work climate improved and employees' identification with the company increased.

Report: Heidi Heinhold



# First EU ranking of the Lithuanian healthcare - worst in EU

According to The Health Consumer Powerhouse, an independent expert organisation, the estimated 2006 Euro Health Consumer Index, based on 2003–2004 data, placed Lithuania at the very bottom of the list (340 out of 750 maximum points). The Index compares all 25 EU nations' healthcare systems, plus Switzerland, from the consumers' viewpoint. Measured by 28 indicators, including the accessibility of health services, patients rights, opportunities to receive the latest medication, recovery rates and death rates in cases of difficult diseases, France was closely followed by the Netherlands, Germany, Sweden, Switzerland and Luxemburg. Best value for money is provided by Slovenia and Estonia.

It is worth mentioning that the 2006 Euro Health Consumer Index was the very first independent ranking of the Lithuanian healthcare system, as well as for other new country-members of the EU. Johan Hjertquist, President of Health Consumer Powerhouse, told Lithuanian National Radio that the index is a serious signal to Lithuanian healthcare politicians who, though they claim to perform a reform, are not capable of ridding the country's heritage from the Soviet healthcare system.

Retiring from his role as Health Minister, Z Padaiga agreed at a press conference that there are still too many hospitals and hospital beds in Lithuania, and that still too

little attention is paid to primary healthcare and patients nursing. He also responded that, during the past decade, nothing had been done in that respect, so no miracle changes could be expected. 'I believe that the shortage of funds is the main reason,' he pointed out. 'A series of indicators listed in the report depend on money, and the funding has significantly increased only this year.'

Although a special press release regarding the Lithuania rates reports that some of Lithuanian

## By Andrius Vagoras, our correspondent in Lithuania

healthcare measures are not bad (patients rights and information, accessibility to medical records), it also indicates that accessibility to treatment, especially new modalities and treatment outcomes, are unsatisfactory. Predictive arguments for poor funding are defended by presenting Estonia as an example of a similar former healthcare system; currently, in the EU,

Estonia takes second position after Slovenia for the best value for money, meaning that not just money determines good results; by the same token, Lithuanian healthcare is not the poorest.

The particular proposals for Lithuanian healthcare from Health Consumer Powerhouse are to:

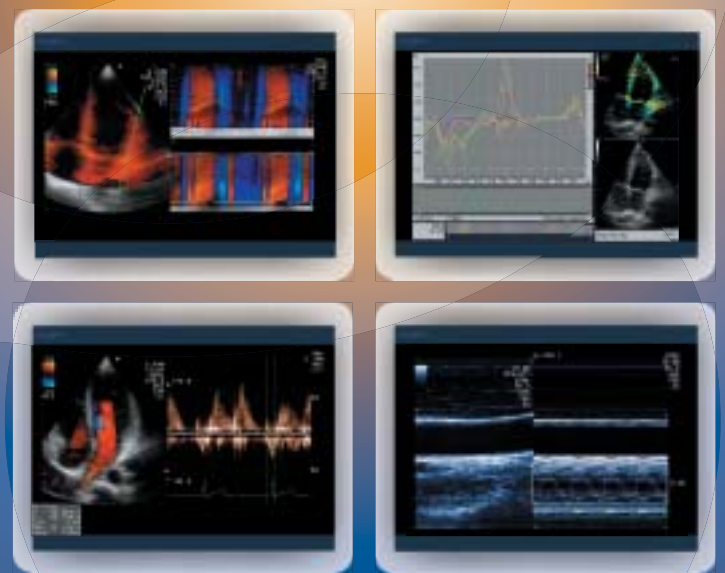
1. establish insurance, which will not expect patients who are victims of medical negligence to prove the guilt of the latter
2. set up indispensable vaccination of all the children against poliomyelitis

3. guarantee proper public information about the medical care system.

Dr A. Björnberg, head of the Euro Health Consumer Index survey, states that a healthcare system in Lithuania is undergoing thorough reformation, meaning scope and hope for a better score in 2007. So, if we could optimistically transform the 2006 Euro Health Consumer Index slogan - 'Room for big improvements in every country' - the Lithuanian 'room' is the biggest.

## Comprehensive Cardiovascular Examination

From Preventive Medicine to Treatment



ESC/WCC 2006 Barcelona - Exhibition Booth J190

Ultimate Compounding Technologies

## prosound α10 cardiovascular

### Ultimate ProSound — unprecedented image quality

Aloka introduces a compound pulse wave generator that lets us design the transmission waveform to match the application. This allows precision focus control of high-resolution ultrasound beam while significantly reducing unwanted artifacts. The result is a remarkable new standard in image quality.

### Unlimited ProSound — unceasing expandability

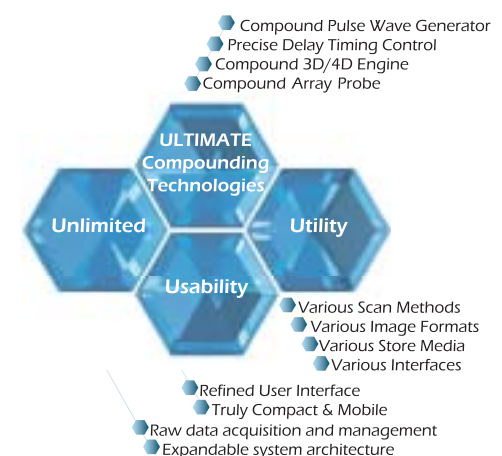
Raw echo data stored intact through digital signal processing enables detailed analysis as never before. Flexible, scalable system architecture allows future hardware and software upgrades for higher performance, as well as enhanced response to coming needs through reuse of clinical data.

### Utilitarian ProSound — unrivaled practicality

An array of electronic and mechanical scanning methods in addition to high performance 4D probes support an extensive range of diagnostic purpose. Popular data and image formats, storage media, and input/output interfaces offer data management choices suited to the user's system environment.

### User-friendly ProSound — unmatched usability

ProSound alpha 10 is exceptionally compact and mobile for easy use in almost any health care setting. It has a large, adjustable-height operation panel that swivels for stress-free scanning. Moreover, its low power consumption and reduced noise show Aloka's consideration for the environment.



## THE REPUBLIC OF LITHUANIA



The largest of three Baltic States, Lithuania borders Belarus, Latvia, Poland, and

Russia, and lies on the Baltic Sea to the west. The country has an area of around 65,200 sq. kilometres and an estimated population (2006) of 3,596,617, with a growth rate of -0.3%. The birth rate is 8.8/1000 and infant mortality 6.8/1000. Average life expectancy is 74.2 years.



- The capital city is Vilnius.
- Lithuania declared independence from Russia in 1990. This was recognised in September 1991 and, eleven days later, the country joined the United Nations.
- In 1994, Lithuania applied for membership of NATO.
- It joined the World Trade Organisation in 2001.
- Lithuania has been a member state of the European Union since May 2004.

The country's motto is 'Let unity flourish'

**ALOKA**  
Science & Humanity

Aloka Holding Europe AG, Steinhauserstrasse 74, CH-6300 Zug, Switzerland  
Telephone: +41-41-747-2120 Facsimile: +41-41-747-2121  
<http://www.aloka-europe.com> <mailto:info@aloka-europe.com>



Whilst there will be no special focus on women and heart disease during the 2006 World Congress of Cardiology, held in Barcelona, at the 2005 event, held in Stockholm, this important, largely non-investigated area of cardiological understanding fell under the full spotlight for the first time.

Awareness is increasing that there are gender differences in terms of disease and treatment received. Indeed, this was very much underlined by an article published in the *Journal of the American Medical Association* (JAMA), in which 4,500

hospital accident and emergency departments or even when women become actual hospital patients – different approaches are still made, and could prove life threatening.

‘Positive action is needed to more and more raise awareness of gender differences and cardiac disease – even among cardiologists,’ said Eva-Elisabeth Swahn MD PhD, President of the Swedish Society of Cardiology, during a discussion on this subject with European Hospital’s Editor Brenda Marsh.

One problem the professor pointed to simply arises from the poor communication skills of doctors

reaction, perhaps to stress, Professor Swahn pointed out that the woman patient, even with typical cardiac symptoms, would be more likely to be diagnosed as suffering ‘anxiety’. In which case she would be prescribed tranquillisers. ‘It is the duty of doctors to be able to differentiate between the way men and women describe their symptoms,’ she pointed out, suggesting: ‘Doctors should learn to ask indirect questions, so that yes or no answers can be given. It would help towards a better diagnosis.’

Prof. Swahn’s interest in this field began in the 1980s, when writing

Eva-Elisabeth Swahn MD PhD, Professor of Internal medicine and cardiology, and head of the Cardiology Department at the University Hospital, Heart Centre, Linköping, Sweden,

The professor studied medicine in Stockholm’s world-renowned Karolinska Institute.

She has written around 60 scientific publications, which have been published in well known international scientific journals (for example, including ‘The care of patients with cardiovascular diseases from a gender perspective’ published in *The European Heart Journal* [1998;19:1758-65]) and has authored book chapters focused on ischaemic heart disease.

Submitted peer-reviewed articles include: Female sex is an independent predictor of death and bleeding among fibrinolytic treated patients with AMI; results of the Global Utilisation of Streptokinase and Tissue plasminogen activator for Occluded coronary arteries - V trial. H Reynolds, M Farkouh, M Lincoff, A Hsu, E Swahn, Z Sadowski, J White, E Topol, J Hochman for the GUSTO V Investigators.

She is a recognised speaker at national and international cardiology congresses, and is a senior lecturer at post-graduate courses organised by the European Society of Cardiology (ESC).

Professor Swahn was also principal/assistant principal coordinator in the multi-centre studies RISC,

TRIC, FRISC I&II and IRIS during the 80s-and 90s, which involved patients with unstable CAD. RISC and FRISC I&II, she points out, are landmark studies, internationally well known and often cited. The IRIS-study has specifically dealt with women’s ischaemic heart disease from a diagnostic, pathogenetic and prognostic viewpoint.

She was national coordinator in a multi-centre, worldwide thrombolysis-study (GUSTO V), co-national coordinator in ASSENT 3 Plus, and principal investigator of the gender perspective in RIKS-HIA.

Significant also is her active part in starting the Linköping Female Medical Association, of which she was president for four years.

Professor Swahn has been President of the Swedish Society of Cardiology since 2004.



# Women, doctors and heart disease

## Gender differences need recognition and medical research

patients diagnosed with heart failure participated. The study results showed that the risk of dying of heart failure had decreased significantly between 1979–2000. However, it revealed that the opposite was the case for older females.

As a specific example, although in the last decade heart attack survival has improved greatly due to thrombolytics, such as TPA and streptokinase, a USA study, involving 1,078 people screened for TPA eligibility, showed that 39% of the women were too old, 59% had non-diagnostic electrocardiograms and 30% went to hospitals too late. Overall, only 16% of the screened women were eligible for TPA, compared with 25% of men. Of those eligible women, 55% received TPA, compared with 78% of the men.

For many experts, it is still shocking – and regrettable – that poor recognition of gender differences have for so long resulted in different treatment of patients presenting themselves in doctors surgeries,



Professor Eva-Elisabeth Swahn with Alexandra Charles of the 1.6 Million Club attending patients, as well as those of male and female patients, who tend to describe symptoms in very different ways. A doctor might then incorrectly interpret what a patient says, affecting his/her diagnosis. ‘Male patients are more straightforward with their answers. They say *I have a pain*. Whereas a woman patient would answer more vaguely, *I have a feeling...*’ the professor explained. Feelings and pain can be interpreted as poles apart: the one is tangible, the other perhaps as an experience of the mind. Asked whether doctors might even interpret female ‘palpitations’, for example, as an ‘hysterical’

her theses. At that time she realised that most trials mainly involved males, rather than females. She heard reasons such as ‘women’s ECGs are different’, or they had ‘a different physiological way of reacting from men’. From the realisation that there was very little research on any gender differences, and believing there was ‘much to be done’, her involvement grew. Carrying out research has not been easy. The professor had to work alone, with virtually no funding. However, today, perhaps because gender differences are at least acknowledged, if not understood, the professor has two fellows to undertake her research agenda. Nonetheless, obtaining funding for this particular field of work is still a difficult task, she added.

The professor mentioned one Swedish development that has helped raise awareness – the 1.6 Million Club, an organisation founded by Alexandra Charles, a celebrity well-known in Sweden because she had opened, then run,

the country’s first nightclub in the 60s and 70s.

In the late ‘90s, Alexandra Charles was shocked to learn that males and females received different medical treatment, that most medical understanding came from research generally carried out on males – often young and fit ones – and that this resulted in diseases and doses of medication based on the male body, not that of the female. ‘We want a society, where gender equality in medical education and research is the most important issue,’ she decided. Taking action, she founded her second, very different club in 1998, basing the name on the number of women over 45-years-old in her country. (Germany now has a similar organisation, but has more women in that age group: it is the 19.6

Million Club).

Today the 1.6 Million Club has around 20,000 members, and is seen, in political and medical circles, as a strong lobby for the improvement of conditions for women’s health and status.

Fund raising and women’s health education are numbered among its activities.

Apart from more research on women and the heart, and certainly more seminars on the subject, Professor Swahn said her hopes for the future include having ‘... an informed population – both doctors and people. Then they will question what doctors think. Even if typical symptoms are seen, cardiologists do not realise, because they are used to dealing with the male psyche. That has to change.’

## Drug therapy for heart-endangering staphylococcus infections

**USA** - The effectiveness and safety of a new drug for treating bloodstream and heart infections caused by *Staphylococcus aureus* bacteria has been demonstrated by researchers at Duke University Medical Centre, in an international clinical trial. The research results appear in the *New England Journal of Medicine* (17/8/06).

In 2003, this drug, daptomycin, received Food and Drug Administration (FDA) for the treatment of skin infections caused by *S. aureus*. However, it was not known whether the drug could effectively treat bloodstream and heart infections.

Because many strains of *S. aureus* have developed resistance to all penicillin-related antibiotics, treating the infections they cause is difficult, the researchers point out. Among these strains - methicillin-resistant *S. aureus* (MRSA) - some have now shown resistance to the drug vancomycin.

In their study, the researchers tested the drug’s effect on two specific kinds of infection caused by *S. aureus*, as

well as MRSA strains - bacteraemia and infective endocarditis. In the latter, if caused by *S. aureus*, the infection is extremely severe; it can affect either the tricuspid, mitral, or aortic valves. It frequently occurs in patients with pre-existing heart disease.

In the randomised, controlled trial, 246 patients in 44 centres in four countries, had bacteraemia, with or without endocarditis. The patients were randomly placed in one of two treatment groups, one receiving daily intravenous doses of six milligrams of daptomycin per kilogram of body weight, and the other given standard antibiotic therapy - initially, over four days, gentamicin, then a full course of either an anti-staphylococcal penicillin or vancomycin, depending on bacterial susceptibilities.

During these treatments and up to hospital discharge, the researchers evaluated the patients, but also, because up to 10% of *S. aureus* infections can recur after antibiotics are stopped, all patients were again evaluated six weeks later.

Daptomycin proved as effective as

standard therapy, showing a 44.4% success versus 31.8% in eliminating drug-resistant *S. aureus*. However, the standard therapy did slightly outperformed daptomycin for *S. aureus* without drug resistance (48.6% v. 44.6%). Neither of those differences was statistically significant, the researchers concluded.

Treatment periods took about the same - eight or nine days - to clear an MRSA infection.

Because previous studies, carried out prior to the FDA approval of the drug’s use for skin infections, had suggested that higher doses might cause significant side effects, and this study’s subjects received higher dosages than those approved for skin infections (four milligrams per kilogram of body weight), the researchers also evaluated its safety. Daptomycin proved to be easier on the kidneys than standard therapy, which, the researchers suggest, was possibly caused by the use of gentamicin in the study, which has potent renal toxicity. Patients treated with daptomycin experienced fewer adverse kidney events (6.7% v. 18.1%). In addition, measuring the organ’s ability to filter creatinine protein from the bloodstream indicated that kidney performance was less affected by the drug than by the standard therapy.

## SLOW BREATHING AND BLOOD PRESSURE

**USA** - High blood pressure increases the risk of heart attacks and strokes, and can cause kidney damage, blindness and dementia. Constant under-breathing and a high salt intake might lower the ability of the kidneys to release the salt – which is estimated to be eaten over double the highest recommended limit by Americans. Thus, understanding the way people breathe might explain how the body regulates blood pressure and much else.

Scientists do not fully understand what causes hypertension. To this end, Dr David Anderson, chief of research into behaviour and hypertension at the National Institutes of Health’s National Institute on Aging, is using a device – RESPeRATE – to ‘train’ volunteers suffering hypertension to breathe slowly.

In 2002, the device received FDA approval for non-prescription sale as an aid to help lower blood pressure by pacing breathing. It counts breaths by sensing chest or abdominal movements and makes gradually slowing sounds to signal when the user should inhale and exhale. The sounds are followed until the user’s breathing slows from around 16 to 19 breaths a minute to 10 or less.

In earlier clinical trials, volunteers who used the device for 15 minutes daily, over a two-month period, were reported to have lowered blood pressure 10–15 points. Dr Anderson pointed out that although slow, deep breathing can relax and dilate blood vessels, this is temporary, so does not explain the longer-term effect after using the device. He is now testing a theory that, when under chronic stress, people’s breathing can become ‘inhibitory’, meaning they shallow breath, unconsciously holding their breaths; this in turn diverts more blood to the brain to increase alertness, but that interferes with the chemical balance of the blood. Increased acidity in the blood decreases kidney efficient excretion of sodium – seen in animal studies.



# PET/CT Morphology and function in the management of heart disease

The fusion of PET/CT is important because it combines PET's ability to precisely measure regional myocardial blood flow with the capability of multislice CT to image, non-invasively, the anatomy of coronary arteries, Professor Camici explained: 'In this way, one can ascertain if a given restriction on the coronary angiogram corresponds to an abnormality of myocardial blood flow in the territory subtended by the diseased vessel. PET is unique,' he pointed out, 'because it provides quantitative measurements of myocardial blood flow, that is, in units of millilitres of blood per minute per gram of myocardium. This is at variance with methods that provide only relative measurements based on gradients in tracer uptake between different areas of the heart. With the latter techniques one can only conclude that a given area of the heart has more blood flow relative to another area. Although this approach is clinically useful for the diagnosis of myocardial ischaemia, it is



Paolo Camici

ineffective when blood flow in the whole heart is abnormal. For instance, in patients with cardiomyopathies there are abnormalities of myocardial blood flow that homogeneously affect the whole left ventricle. In these patients, only PET can demonstrate the abnormalities of absolute myocardial blood flow compared with normal volunteers.

'Furthermore, PET allows us to measure the utilization of important metabolic substrates, such as any free fatty acid by the myocardium. Clinically, these metabolic measurements are used to assess myocardial viability, i.e. the presence of metabolically active tissue within a dysfunctional left ventricular segment.'

**What is the potential role of PET/CT in imaging plaques in coronary arteries, for example, to define a type of plaque?**

'At the moment this is a little bit of wishful thinking. There are a lot of technical problems to overcome before we can realise such diagnostic methods. The problem we face is the fact that the heart moves intrinsically as well as secondary to respiratory activity. This motion affects the accuracy of PET/CT measurements and limits the achievable spatial resolution. Unless we find a way to correct PET/CT acquisitions for these movements, the resolution necessary to image plaque cannot be reached. Just imagine: The diameter of a main coronary artery is between 2 and 5 mm, so we are talking about a very small, moving object. To obtain good images you need tracers with a very high specific activity and very high radioactive concentration. We still don't have any tracers like that. To

Possibilities and opportunities offered by new PET/CT systems for cardiac research and diagnoses will be an important topic at the ESC in Barcelona this year. During the event, **Paolo Camici**, Professor of Cardiovascular Pathophysiology at Imperial College School of Medicine, in London, will lecture on this development, which he outlined during an interview with **Daniela Zimmermann** of European Hospital

summarise: specific imaging of coronary plaques by PET/CT is not an application I see in the near future, although a lot of research is happening in this field.'

**Does this mean PET/CT could benefit research, but not daily clinical practice?**

'I would not say so. Certainly this combination is very useful for research, but it is also of interest for clinical practice. Clinically, PET has applications for the assessment of viability in combination with FDG and for the diagnosis of coronary artery diseases when used in

combination with rubidium-82. Furthermore, PET/CT now allows us to image coronary arteries in a way similar to angiography, but without the need of a catheter.

**In your ESC lecture, will highlight any other aspect?**

Yes, the fusion of PET and MRI.

Taking research aspects into consideration, this will be a very promising combination. MRI can provide a lot of functional parameters without radioactivity, with important ethical advantages. In addition, MRI is very flexible and has a lot of important applications in the fields of cardiology. PET and MRI are very complementary; together they can provide information on regional ventricular anatomy and function, on coronary anatomy and tissue perfusion, on tissue viability and metabolism.

GE Healthcare

No matter how different the patient, the care is the same.

Large or small, short or tall, old or young: with GE's compact Venti™ nuclear cardiology camera, you'll be able to image virtually all of your patients regardless of body type. Ergonomically designed, Venti ensures your patients feel comfortable and secure during their scan. The outcome - less patient movement for outstanding image quality, improved efficiency and diagnostic confidence. With Venti, you have them all covered.

**Nuclear Medicine Re-imagined.**

Come and visit us at World Congress of Cardiology, Barcelona.

2- 6 September, GE booth no. F500, Hall 2.

To learn more visit [www.gehealthcare.com/re-imagine](http://www.gehealthcare.com/re-imagine)



GE imagination at work

© 2006 General Electric Company GE Medical Systems, a General Electric company, doing business as GE Healthcare.



# Forecasts

## Massive gathering of cardiologists promises vital knowledge exchange

In Barcelona, this September (2–6), the *World Congress of Cardiology* will offer, under one roof, the *European Society of Cardiology (ESC) Congress 2006* plus the 15<sup>th</sup> *World Congress of Cardiology World Heart Federation*. Thus the event promises more than a lively exchange of scientific research results and innovative cardiology solutions. Professor Raimund Erbel, of the West German Heart Centre Essen, Duisberg University Hospital, Germany, forecasts and discusses the likely 'hot' topics.

'Imaging procedures will be a main focus at the World Congress. Currently, 64-slice and 128-slice CT are very topical – and now we are also expecting images from a 256-slice. It remains to be seen how accurate and detailed images produced by the 256-slice are and whether we will gain any diagnostic benefits from them.'

'Imaging via MRI is also becoming more important in cardiology. Developments in this area are also rapid – some manufacturers have already moved from Tesla 3 to Tesla 7.'

'There are also some very new developments in radiographic techniques for heart catheterisations. At the University Hospital in Duisburg-Essen we were the first in Europe to install a procedure that combines conventional radiographic technology with ultrasound scanning technology. This brings us a big step closer to the modular development of a catheter workstation. We will present our first experiences and evaluations at the Congress.'

'We have been closely involved in this development. For years, we had been asking for the development of modular systems for cath labs. Now we have finally succeeded in integrating not only X-ray diagnostics into the cath lab, but also ultrasound diagnostics. The difficulty with this combination has long been the correct 'match' between the two diagnostic systems – the fusion of two types of images in a way that ensures a meaningful overall image for diagnosis.'

'The first system of this kind results from GE Healthcare partnering the Volcano Corporation (see box). The X-ray and ultrasound diagnostics combination gives a cardiologist inimitably clear images of the coronary and peripheral vascular morphology. The images achieved by merging data from X-rays and ultrasound scans significantly ease the evaluation of the severity of cardiovascular diseases.'

'This puts cardiologists in a position where they can make decisions on the appropriate therapy options much faster – and safer. This new state-of-the-art technology enables us to shine light onto, so far, dark areas surrounding the causes and progression of coronary and peripheral arterial diseases. Other medical companies also will aim to achieve this type of combination. The next step for cardiology will now be to equip catheter systems in such a way that the X-ray images produced can be directly aligned with CT or MRI images.'

'This calls for intelligent IT solutions. We are currently working on

a solution based on the upgrading of a PACS system, and which enables the combination of different imaging systems at the catheter workstation. There has been a lengthy demand for this combination, but the technical realisation, up to now, has been too difficult. The PACS itself offered no solution here, because the programme was only designed around data and image archiving. However, this type of archiving, without

sations. So, from the beginning there must be a close co-operation between radiology and cardiology, with the objective of finding synergies in diagnostics.'

'Take an example from our university hospital. One of our MRI scanners is based at the heart centre and is used jointly by the cardiology and radiology departments. Basically, the cardiologist asks for the MRI images and the radiologist produces them. Both specialists then carry out the eval-

plastics. 'The prevention of cardiovascular diseases will also be among the congress topics. Over the last few years, effective therapies have been developed for lowering harmful low density lipoprotein (LDL) levels, so the research is now focusing on ways to utilise the protective characteristics of high density lipoproteins (HDL). The results of an American study into the subject of progression and regression under the increase of the HDL (i.e. into establishing whether an artificial



Raimund Erbel

analysis of results, is of little use for diagnosis.'

'The Hospital Information System (HIS) that we developed brings together all patient data in one place – doctor's letters, Echo and ECG, X-rays and other diagnostic images. This grouping ensures easy availability of relevant information and facilitates the best possible diagnosis. We developed this system in co-operation with an American company; it is already on the market.'

Asked whether imaging procedures, previously the realm of radiologists, are increasingly entering the realm of the cardiologist, and whether this causes conflict, Professor Erbel said a similar situation occurred in the past: 'Heart catheterisation used to be the responsibility of radiologists, and, for example in Sweden, this is still the case. However, the worldwide trend is towards an exchange between different medical fields, which then results in new speciali-

## Combining imaging technologies

The first combination of digital X-ray and ultrasound scanning procedures result from a partnership between GE Healthcare and the Volcano Corporation, which merged GE's digital X-ray system for catheter laboratories with Volcano's new, PC-based, intravascular ultrasound imaging system (IVUS) platform.

The product is a mobile, handy machine that delivers very sharp images, allowing more accurate diagnosis of cardiovascular diseases and their severity. The image quality also promises to make interventions, such as the insertion of stents, safer and more accurate.

uation and diagnosis, together. The aim of this procedure is for the clinician who knows the patient to communicate closely with the radiologist to achieve comprehensive diagnostic findings.'

Asked about intervention as another big issue in cardiology, Professor Erbel said: 'New developments in this area focus on heart valves, i.e. heart valve replacements and reconstructions with the help of catheter technology. This is definitely an important topic in view of the ageing population worldwide.'

'In the area of drug eluting stents, research is concentrated around finding materials that can form vascular surfaces quicker and more complete and resolve afterwards. We are trying to get away from the type of stent that remains in the body as a foreign object. Two developments in this field look promising – magnesium-stents and those made from polymer

increase in HDL leads to a regression or progression of the disease) are due to be published this autumn.'

'This is done with the help of a cholesterol transport system inhibitor. The result of this study could give a real boost to preventive therapy. So, overall we can look forward to some important developments and innovations at the congress.'

On the wall in his office is a certificate stating that he is 'Man of the year'. Asked about this, the professor explained that it is science related, and awarded by the American Biographical Institute. Prompted further, he added: 'I was selected to receive the Man of the Year award because of my numerous publications.'

Further details: [www.escardio.org/congresses/World\\_Congress\\_Cardiology\\_2006/WC\\_C\\_2006/](http://www.escardio.org/congresses/World_Congress_Cardiology_2006/WC_C_2006/)

NEW

## The digital cath lab imaging system with fully-integrated IVUS

Scott Huennekens, President & CEO of Volcano Corporation

GE Healthcare and Volcano Corporation have combined GE's Innova digital X-ray cath lab system with Volcano's new PC-based IVUS platform, to provide a clear view of coronary and peripheral vessel morphology. The companies report that the resulting image clarity will help clinicians to determine the extent of cardiovascular disease and to carry out treatments, such as stent placement, by determining lesion and stent lengths.

'GE has sought opportunities to integrate IVUS technology directly into our award-winning, industry-leading Innova systems. Until the development of Volcano's PC-based IVUS product, this leapfrog in technology has not been possible,' said Laura King, Global Vice President and General Manager, of GE's Interventional, Cardiology and Surgery division.

Volcano's newest PC-based IVUS platform reduces the size, weight and noise of the IVUS console, so the unit can be easily attached to a bedside table, in the control room or used in other areas beyond the daily pattern of the cath lab. The integrated user interface is set apart from current stand-alone systems that

impose many practical limitations on the regular use of IVUS, Volcano points out.

With more than 1,900 Innova all-digital x-ray systems installed worldwide, GE and Volcano are poised to facilitate greater utilization of IVUS to further guide patient management. The companies point out that, as the clinical relevance of IVUS has increased, particularly with the recent innovations in IVUS based on-line tissue characterization and IVUS/angio-image co-registration, so too has the market need for an integrated, easy-to-use system.

Dr William Wijns MD, Co-Director of the Cardiovascular Centre, in Aalst, Belgium, added: 'When you have a catheterized patient on the table, often in the midst of an acute syndrome, you need your diagnostic and therapeutic tools at the ready – there for quick and simple implementation. Many times it is just not an option to ask the staff to roll in the IVUS, turn it on and wait for it boot up. We have been asking for this advance from the IVUS companies for some time now, and are thrilled that Volcano and GE recognized the need and are investing in developing this product.'

Ralf Birkemeyer MD added: 'IVUS, advanced

3-D angiographic imaging techniques and non-invasive imaging technologies, such as MDCT and MRI, hold the promise of unlocking many important mysteries surrounding the cause and progression of coronary and peripheral artery disease. Only by combining information from several, if not all, of these modalities will we be able to gain a clear understanding of this disease. The integration of IVUS with Angio systems is an important step in making truly integrated imaging feasible and practical for a wide array of physicians.'

GE also intends to work with Volcano to provide... unparalleled cath lab design, installation and field repair/service of this new system. Current GE cath lab customers can modify existing cath lab rooms with the new integrated IVUS system. Customers will be able to contract with one vendor, GE, for their purchasing, installation and field service needs.'

### Prototypes

In EuropPCR, this May, both the GE and Volcano booths demonstrated the prototypes of the new investigational device.

NEWS

## Statins are cardioprotective

Long-term treatment with statins is known to lower cholesterol and prevent heart attacks and strokes. Now a novel beneficial action of statins has been reported in a study published online in the *British Journal of Pharmacology* (August - [www.nature.com/bjp](http://www.nature.com/bjp)). This suggests the action only needs a few days of treatment, is independent of cholesterol lowering and helps the heart to recover after a heart attack. Following an attack, blood does not flow correctly into vessels in the heart, even when they open again. Increasing the blood flow in these vessels would decrease the area known as 'no-reflow' and restore more of the ventricular function.

Jing-Lin Zhao and colleagues demonstrate decreased 'no-reflow' and better preservation of ventricular function in animals treated for only two days with a statin - simvastatin. They also identify the mechanism underlying this cardioprotective action, showing that the observed beneficial effects of simvastatin are abolished by blocking the  $K_{ATP}$  channel in mitochondria.

Their results suggest that taking statins long-term not only reduces the likelihood of a heart attack, it could also allow the heart to recover more fully from heart attacks by decreasing the damage done to heart muscle.

Author:

Yuejin Yang (Fuwai Heart Hospital, Beijing, China) e-contact: [realplayone@yahoo.com.cn](mailto:realplayone@yahoo.com.cn)



Meet our EUROPEAN HOSPITAL team at:

**MEDICA 2006** 15 - 18 NOVEMBER

DUSSELDORF, GERMANY  
Hall 7, Booth E15

**The RSNA**

26 NOV - 1 DECEMBER  
CHICAGO, USA  
Hall A, South Building  
Booth 1008

EUROPEAN HOSPITAL

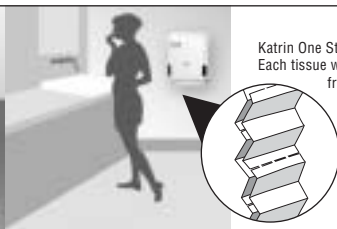


**WHERE'S KATRIN?**

In any lavatory, where safety is the point!

Katrin's paper products are smooth, effective and efficiently.

The hygienic solution for any lavatory.



**Katrin One Stop Tissues:**  
Each tissue will be spent separately from the dispenser and unfolds completely by itself. You only need one tissue to dry your hands, the user only touches the tissue he used.

**KATRIN**



MetsiTissue  
Tel. +39 02 45 67 37 1  
e-mail: katrin.it@metsitissue.com  
[www.katrin.com](http://www.katrin.com)

Not so long ago, Cor Boonstra, the then head of Philips, decided, that the company would be based in Amsterdam, capital of the Netherlands, and conveniently situated near Schiphol airport. A building, largely emblazoned with the name Philips, has towered there ever since. To learn more about the presence of Philips in healthcare - and particularly cardiology - our Netherlands correspondent **Michiel Bloemendaal** met with **Gert van Santen**, 44, the Director of Healthcare Communications for Europe, the Middle-East and Africa.

# PHILIPS From X-rays to Motiva homecare

That Philips has a long history might be generally known, along with its products: light bulbs, TV sets and other electronic devices. Less known is the fact that, since 1918, Philips has applied its skills and knowledge to the manufacture of medical products. In that period, Philips Research began investigations into X-rays and in 1927 the firm bought the German company Müller & Co, which had specialised, since 1899, in X-ray applications. From X-ray technologies other techniques slowly developed to image the inside of the human body. Since acquiring some large medical companies, Philips has become one of the top three players in the manufacture of medical equipment. In cardiology Philips is even number one!

During our interview, Gert van Santen repeatedly said that Philips is highly motivated. A device is not just 'to make money' - although no one in the company is averse to that - but the firm believes in the human being, who should benefit from their activities. Philips tries to understand the real needs of patients, as well as the medical specialist. To meet those needs it creates integrated, innovative solutions. Among these is the 'cardiovascular care cycle', which aims to detect cardiac defects at a very early stage: from screening & early diagnosis, via diagnostics to treatment and follow-up.

The fact, that these stages need all kinds of equipment, from monitors and CT scanners to defibrillators and IT-equipment, is a nice consequence for Philips. This made the firm an international market leader in cardiology.

## Cardiology and future

According to the Dutch Heart Association, the Netherlands has more than 1,000,000 cardiac patients. The latest study from The American Heart Association revealed that one in three Americans has some form of vascular or heart disease (<http://circ.ahajournals.org/cgi/content/short/113/6/e85>). A great threat to the heart is vulnerable plaque, deposits of fatty substances, cholesterol, cellular waste products, calcium and other substances build up in the inner lining of an artery.

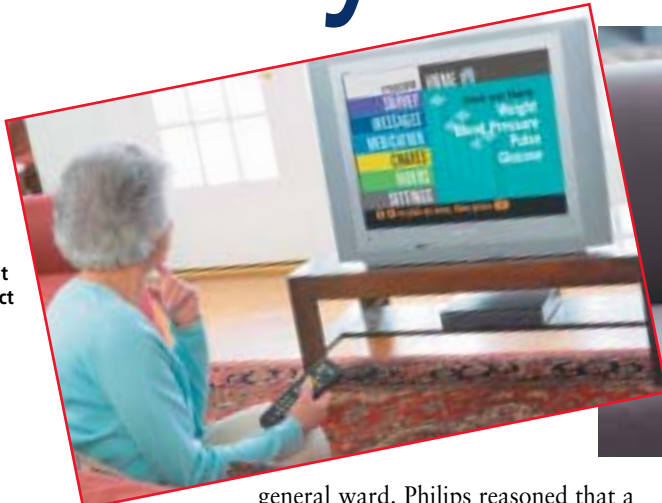
Considering the enormous numbers involved in these problems, it is vital to energetically attack them. This requires a multiple approach, which appears possible due to modern imaging techniques and medication: molecular healthcare, which makes it possible to trace and attack potential problems, such as plaque, at an early stage.

## Overseas

It is thought that heart problems resulting from a high percentage of cholesterol, are typically problems of the West. In this respect one points at fat Americans and Europeans - just waiting for heart attacks.

'Oriental people don't have such problems, so there's no market for

Motiva, the interactive healthcare platform, uses broadband television, along with home vital sign measurement devices, to connect patients to their healthcare providers and medical support system



Philips', or so it was thought. However, the West has increasingly influenced oriental culture and lifestyle - including nutrition. A remarkable result is Japan's currently high cholesterol percentages. These hardly existed until around five years. Then the first American fast-food hamburger restaurants arrived!

## At home

Philips recognises that people are hospitalised through necessity, not by choice. That stay might begin in a ward and then, after surgery, be in an intensive care unit, then again in a cardiac care ward, and finally a

general ward. Philips reasoned that a hospital stay could be shorter, and began to study how to do that. Line connections between the hospital and the patient's home were devised to monitor the patient. Now, via a simple line connection (e.g. TV) a patient's data can be recorded daily, so that a hospital cardiologist can observe his/her condition. The doctor can deduce whether there are problems and if another hospital admission is necessary, from answers given by a patient to questions such as: What is your weight? Have you taken your medication? How do you feel generally?

Although this programme, named Motiva, is in the test stage in Europe,

in the USA the first commercial application is on the market. It has also won the *Medical Design Excellence Award* and has been nominated for the *Top-5 Disease management Ideas 2005*.

Results from studies of Motiva's use will be presented at September's World Congress of Cardiology in Barcelona.

The system might provide the answer to ever-increasing healthcare costs. Shortening a hospital stay is not only good for insurers, but also hospitals.

## Philips today and in the future

Worldwide, about 30,000 people work in Philips Medical Systems

departments, which include *Imaging Systems, Ultrasound and Monitoring, Healthcare Informatics, New Ventures and Global Sales and Service* - the latter in 63 countries. The company's production plants are in the Netherlands, Germany, Finland, Israel and the USA.

That Philips has confidence in a glorious future can be heard in the words of its CEO Gerard Kleisterlee, who said, in a speech in Berlin this March: 'I am very confident that, over the next few years, Philips will enter into many more mutually beneficial business relations and partnerships with healthcare providers'.

Let the patient profit from that!

**CARDIOVIT AT-10 plus**  
Top performance in laptop format

REICHL UND PARTNER

**SCHILLER**  
The Art of Diagnostics

## CARDIOVIT AT-10 plus

High-quality and easy to use 12-channel ECG for clinics and practices.

- High-resolution colour display
- 12-lead high-end ECG system for resting and optional stress ECGs
- Advanced algorithm
- Rechargeable battery for mobile use
- Enhanced pacemaker detection software
- Optional pacemaker and spirometry measurement
- Optional Resting ECG interpretation and thrombolysis software
- Optional internal modem
- Network capabilities with SCM (SCHILLER Communication Module) for the transmission of diagnostic recordings in XML formats and for integration with practice systems or HIS



Visit us at the World Congress of Cardiology  
2-6 September, 2006, Barcelona-Spain, booth H150

Headquarters: SCHILLER AG, Altgasse 68, CH-6341 Baar, Switzerland.  
Phone +41 (0)41 766 42 42, Fax +41 (0)41 761 08 80, sales@schiller.ch, [www.schiller.ch](http://www.schiller.ch)



Siemens is participating in the foundation of the first *European Institute of Molecular Imaging (EIMI)* at the Westphalian Wilhelms-University in Muenster, following a contract signed by Siemens AG Board Member Professor Erich Reinhardt, and Professor Jürgen Schmidt, Vice chancellor of the Westphalian Wilhelms-University Muenster. When the institute begins work this October, the university expects a further boost for key competencies in molecular imaging, particularly the opportunity to work with the latest molecular imaging systems

# The European Institute of Molecular Imaging

The University and the University Hospital Muenster are international pioneers in molecular imaging research. In June 2005 the university set up an interdisciplinary special research field called 'Molecular Cardiovascular Imaging' (MoBil). This involves four faculties, involving the first Centre of Competency for Molecular Imaging, financed by the German Research Foundation.

'This interdisciplinary project will boost the competency of our fields of research. Medical, mathematics/informatics, chemistry/pharmaceuticals and physics researchers work together with scientists from Siemens,' explained Professor Jürgen Schmidt. Siemens is gaining access to specialist knowledge in cardiovascular diseases and to the planned new developments at the EIMI, such as biomarkers and algorithms.

Professor Erich Reinhardt said:

'Demographic changes require a rethink in the healthcare sector. A cost explosion caused by the increasing demand for health services can be better controlled through improved quality in medical care.'

Research results from molecular medicine and innovative diagnosis procedures are calling for a change from the extremely evidence-based, reactive type of medicine of the past to a knowledge-based medicine of the future, which considers working interrelationships: Preventive screening and early diagnosis are to gradually replace the wait for the occurrence of symptoms and their often invasive treatment once a disease has manifested itself.

The new EIMI comprises two fields of work: One will concentrate on the development of specific, target-oriented substances – the biomarkers – whose distribution within a patient's body can be



Erich Reinhardt: 'Modern modalities and diagnostic systems deliver increasingly detailed results. Doctors need integrated information technology, which gives them continuous access to these results and the opportunity to evaluate them.'



Jürgen Schmidt, Vice chancellor of the Westphalian Wilhelms-University Muenster, believes in the importance of partnerships with private companies because they promote interdisciplinary networks from which university faculties profit considerably.



Otmar Schober: 'Participation promotes relationships. Both sides profit equally from our project. We work out all the different services on different levels – staff, technology or intellectual property – on a one-to-one basis.'

viewed through imaging procedures. These molecules point to certain pathological changes. The focus of the second field of work will be the development of technological potentials, as well as their pre-clinical evaluation.

Professor Otmar Schober, speaker

for the special research programme 656, at Westphalian University Muenster said: 'We want to get to the bottom of a particular problem within the European population. In Western culture groups cardiovascular diseases are responsible for every third fatality; cancer only for

every tenth. Moreover, the chances of curing cardiovascular diseases are significantly higher.'

Early diagnosis of diseases, as well as individualised therapies, can make a significant contribution towards improving the quality of healthcare, whilst lowering costs.

## THE LANCET HIGHLIGHTS CARDIAC RESEARCH

In the August issue of *The Lancet*, dedicated to cardiology, an editorial strongly calls for 'A full and frank discussion at the upcoming World Cardiology Congress' to gain more interest from the world research regarding the most neglected of neglected diseases, that has profound cardiac consequences – Chagas' disease – an infectious illness that kills 50 000 people a year. 'Would this unacceptable situation be any different if Chagas' disease was endemic to a richer continent?' *The Lancet* asks.

Among the research articles published in this issue, are some surprising results and statements. Here we present synopses of a few, which include the effects of tobacco – one of the main discussion subjects at the international gathering of cardiologists in Barcelona, this September

### Tobacco

All forms of exposure are bad for the heart

Previous studies have shown that tobacco smoking increases the risk of heart disease. However, to date most of those studies have been in developed countries, and few large studies have been carried out to examine the effects of tobacco in other geographical regions.

Results from the INTERHEART study have led Professor Salim Yusuf, of Hamilton General Hospital-McMaster Clinic, Hamilton, Canada, and Koon Teo, of McMaster University, Ontario, Canada, and colleagues, to conclude that all forms of tobacco exposure, including smoking, chewing or inhaling second hand smoke, increase the risk of heart attack up to three times.

The team calculated the risk of heart attack for various forms of active tobacco use (both smoking and non-smoking) and second hand smoking (SHS) in all areas of the world. The study included data from over 27 000 people in

52 countries. The investigators adjusted their calculations to exclude the effect of other lifestyle factors that could affect heart attack risk, such as diet and age.

They found that tobacco use in any form, including sheesha smoking, which is popular in the Middle East and beedie smoking, common in South Asia, was harmful.

'Chewing tobacco also increased the risk of a heart attack two fold, indicating that all forms of tobacco use or exposure are harmful,' added Dr Koon Teo.

Compared with people who had never smoked, smokers had a three-fold increased risk of a heart attack. Even those with relatively low levels of exposure (8–10 cigarettes a day) doubled their risk of heart attack.

However, the researchers did find that the risk of heart attack decreased with time after smoking cessation; among light

smokers (<10 cigarettes a day) there was no excess risk 3–5 years after quitting.

By contrast, moderate and heavy (20+ cigarettes a day) smokers still had an excess risk of around 22%, 20 years after quitting.

The team also found that exposure to second hand smoke increased the risk of heart attack in both former and non-smokers. The findings suggest that individuals with the highest levels of exposure to SHS (22 hours or more per week) may increase their risk of heart attack by around 45%.

'Since the risks of heart attack associated with smoking dissipate substantially after smoking cessation, public-health efforts to prevent people from starting the habit, and promote quitting in current smokers, will have a large impact in prevention of heart attack worldwide,' Professor Yusuf concluded.

### BMI does cannot predict outcome for HD patients

Physicians know that obesity is a risk factor for developing heart disease. However, just how obesity affects people with established heart disease has remained unclear because studies have produced contradictory results, until now.

According to new study results reported by Francisco Lopez-Jimenez, and colleagues at the Mayo Clinic College of Medicine, in Maryland, USA, body mass index (BMI) – a number calculated from a person's height and weight, which is commonly used as a measure of obesity – cannot reliably predict the outcome for patients with heart disease, because BMI is an unreliable indicator of obesity.

To investigate, the researchers combined data from 40 studies, involving about 250 000 people with heart disease; the average follow-up was four years. Most

of the studies used BMI as a measure of obesity. The investigators found that patients with a low BMI had a higher risk of death than those with a normal BMI. Overweight patients had better survival and fewer heart problems than those with a normal BMI. Obese people who had had bypass surgery had a higher death rate when compared with people with a normal BMI, while severely obese people had a higher risk of a heart-related death but not death from other causes.

The better outcomes for overweight people might be because they have more muscle than normal weight people, the authors said. They concluded that the results therefore demonstrate the inability of BMI to discriminate between body fat and lean muscle. 'Rather than proving that obesity is harmless,



The tasks ahead call for interdisciplinary competencies. Muenster is offering the very best conditions in the field of cardiovascular imaging. A select committee, the 'Joint Review Committee', made up of representatives from both partners, aims to develop studies, co-ordinate research activities and exchange research data.

Knowledge-based medicine offers doctors a network with access to all patient data and disease information so that the best possible diagnosis can be ensured. Siemens can make a considerable contribution here, due to the company's expertise in integrated networking technology. At the same time, the company is offering the Wilhelms-University Muenster researchers access to the very latest imaging procedures, such as the MR-PET scanner, a hybrid system with elements of magnetic resonance imaging and positron emission tomography, which the firm is due to roll out this September.

According to Professor Erich Reinhardt, the planned take-over of the diagnostics division at Bayer constitutes a further building block on the way towards an integrated diagnostic company that will combine imaging systems, laboratory diagnostics and clinical information technology. This puts the company in a strong position in the three areas that are due to see the most innovations within healthcare in the future: knowledge-based care, molecular imaging and in-vitro diagnostics. Report: Guido Gebhardt



Further details of these articles and other new cardiology findings: [www.thelancet.com](http://www.thelancet.com)

**BMI categories**

Underweight = <18.5

Normal weight = 18.5-24.9

Overweight = 25 - 29.9

Obesity = BMI of 30 or greater

our data suggest that alternative methods might be needed to better characterise individuals who truly have excess body fat, compared with those in whom BMI is raised because of preserved muscle mass,' Dr Lopez-Jimenez explained.

In an accompanying Comment in The Lancet, Maria Grazia Franzosi, of the Istituto Mario Negri, Milan, Italy, said: 'BMI can definitely be left aside as a clinical and epidemiological measure of cardiovascular risk,' adding: 'Uncertainty about the best index of obesity should not translate into uncertainty about the need for a prevention policy against excess bodyweight, which must be strongly supported.'

# HD training for cardiac surgeons

**The Netherlands – Medical Audiovisual Services Holland BV (MASH), which specialises in the scientific preparation, production, postproduction, multiplication and distribution of postgraduate education material in videotape, CD-video and DVD, also organises international postgraduate education programmes for cardiologists, run by the firm's Director,**

**cardiologist Ton Hooghoudt MD PhD. The MASH studio is fully equipped for high-end broadcast video production, and the firm has recently upgraded its video facilities from Analog Betacam/DVCPRO to High Definition (HD), because the higher resolution of 1,080 scan lines – compared with the normal 625 scan lines of a non-HDTV**

**image – ensures crisper image quality. The firm's new system, from Sony, includes an HDW-2000 HDCAM camcorder, BVM-D20 multi-format monitor, and XPRI HD non-linear editing system, to provide complete in-house processing of HDCAM recordings, in high as well as standard definition.**



**CARDIAC SCIENCE**

AT THE HEART OF SAVING LIVES



## Cardiac Science offers a complete line of products

The products developed by Cardiac Science Corporation under the brand names Burdick, Powerheart and Quinton, which incorporate advanced characteristics in, technology and connectivity are designed to solve your patients needs - today and tomorrow.

Cardiac Science manufactures a wide range of products that includes automated external defibrillators, electrocardiographs, stress test systems, monitoring Holter systems, defibrillators, telemetry systems for cardiac rehabilitation, monitors-defibrillators for patients and ECG managing systems for cardiology.

Cardiac Science Corp. • International — Kirke Værloesevej 14, DK-3500 Værløse, Denmark, Ph. +45.4438.0500  
 • UK — Unit 13, Crown Industrial Estates, Canal Road, Timperley Altrincham, Cheshire, WA14 1TE United Kingdom, Ph. +44.161.926.0000



The King and Queen of Spain, accompanied by the Minister of Health and over 100 institutional and corporate authorities, inaugurated the new Madrid headquarters of the country's National Centre for Cardiovascular Research in February.

**Dr Eduardo de la Sota**, our correspondent in Spain, reports on the structure and aims of this research enterprise



The CNIC headquarters

## The Spanish National Centre for Cardiovascular Research



Dr Valentin Fuster (right) with King Juan Carlos I of Spain and Queen Sofia

The objective of the CNIC is to lead cardiovascular research in Spain and establish itself as a leading international centre.

The scientific management of the CNIC is under the direction of Spanish born Dr Valentin Fuster who serves the Mount Sinai Medical Centre as Director of the Heart and Cardiovascular Institute (New York), and is President of the World Heart Federation. Sixteen universities throughout the world have granted Dr Fuster 'honoris causa'. His publications include over 400 articles on the coronary artery disease, atherosclerosis and thrombosis.

Discussing the CNIC, Dr Fuster said: 'Today, research is a synonym of well-being and progress for any developed country, but even more so in the case of biomedical research, where the knowledge gained is translated into an immediate, substantial improvement in the health and quality of life of citizens. In this respect, the CNIC has the major challenge of establishing a new two-way translational research model, which enables both the application of basic knowledge to the diagnosis, treatment, prognosis or prevention of cardiovascular diseases and which contributes to answering the scientific questions arising in the daily clinical practice at the patient's bedside.' Research at the CNIC falls into these categories:

- Vascular Biology and Inflammation
- Atherothrombosis and Cardiovascular Imaging
- Regenerative Cardiology
- Cardiovascular Developmental Biology
- Cardiovascular Epidemiology and Population Genetics
- Translational Cardiovascular Research of Novel Technologies and Therapeutics.

### Financing

The CNIC has been designed as a flexible entity, in terms of its organisation as well as financing, with significant

participation from the private sector. Through the ProCNIC foundation, and in conjunction with the objectives of the Government's Programa Ingenio 2010 (2010 'Talent Development Programme'), thirteen of the principal Spanish companies (Acciona, Banco Santander, BBVA, Endesa, Fadesa, Fundación Abertis, Fundación Ramón Areces, Gas Natural, Grupo Prisa, Inditex, La Caixa, Repsol YPF and Telefónica) have agreed to participate in the ambitious CNIC project. This corporate commitment, which is open to new companies, began last December after the Prime Minister, José Luis Rodríguez Zapatero, signed a co-operation and constitution agreement for the Pro CNIC foundation, which will contribute 100 million euros up to 2012.

### Headquarters in Madrid

Spread over 23,000 m<sup>2</sup> the new building, costing over 50 million euros, has the capacity to house 300 scientists. From 2000, through an agreement signed with the Ministry of Health, the pharmaceutical industry has made several contributions to this expenditure.

The building has four floors above ground and three below. The laboratories, which occupy most of the Centre, are equipped with services and facilities necessary to perform world-class biomedical research, and provide an open environment designed to encourage maximum collaboration and communication.

### Collaborations

The following institutions are involved:

- Consejo Superior de Investigaciones Científicas, Instituto de Biomedicina de Valencia
- El parque científico de Madrid
- The European Molecular Biology Laboratory
- The Flanders Interuniversity Institute for Biotechnology
- La Fondazione Centro San Raffaele del Monte Tabor

- Fundación Bamberg
- Fundación Genoma España
- Fundación para la investigación biomédica del Hospital Ramón y Cajal
- Instituto de Salud Carlos III
- Lacer, S.A.
- Universidad Complutense de Madrid
- Universidad de A Coruña
- Universidad de Salamanca
- Universidad de Valencia
- University of Cincinnati
- The University of Yale

### A pool of researchers

One of the Key objectives of the CNIC will be to create a strong pool of multidisciplinary researchers. Therefore, as well as attracting the best cardiovascular specialists, the centre will pay considerable attention to training young scientists, with seven pioneering projects in Spain that will be carried out jointly with the Instituto de Salud Carlos III, an entity affiliated with the Ministry of Health. Interestingly, the *CNIC international programme* is intended for young doctors from any of the biomedical areas and includes training abroad as well as the possibility of returning to the Spanish centre after the training period. Specialists who have finished their MIR (specialty) training in the cardiovascular field will be offered the possibility of participating in a translational research project designed by de CNIC, which lasts between 12 and 24 months, together with the possibility of collaborating with the Mount Sinai Hospital in New York.

### Technical units

Currently, the CNIC has four technical units, with the possibility of more in the future. Each unit maintains advanced facilities in their specialist area, and is set up to incorporate new technologies as they emerge. Researchers can thus take advantage of the latest technologies without having to divert their own resources.

As independent units, the services are equally available to all users, and the economies of scale and competitiveness with external suppliers help to stretch research budgets.

Technologies covered:

- Cytometry
- Proteomics
- Genomics.

### The CNIC - general information

Address: Centro Nacional de Investigaciones Cardiovasculares, Melchor Fernández Almagro,3 28.029 Madrid, Spain.  
Telephone: (+34) 91 453 12 00  
Fax: (+34) 91 453 12 45. E-mail: [cnic@cnic.es](mailto:cnic@cnic.es). Website: [www.cnic.es](http://www.cnic.es)

## A stretcher with hydraulic lifting system

Italy's smart, innovative design enjoys a worldwide reputation. This also applies to the country's healthcare products.

To meet demand for a stretcher that can automatically rise up one metre - frequently necessary when moving patients from bed to stretcher and transferring them between hospitals - Spencer Italia S.r.l. has produced a completely new concept - the Alto.

Its potential uses are many. For example, many X-ray tables are about a metre high, but no stretcher is produced in that height. Thus patients have had to be lifted, creating risks for patient and operator safety. 'The Spencer Alto unites an excellent level of comfort for the patient with the reduction of effort on the part of the operator. It is simple in its substance but with a balanced relation between comfort and cost,' the company reports. 'The intelligent lifting system for raising patients to a height of one metre is the fruit of an advanced project that has established new standards of the X-frame stretcher in terms of agility and reduction of effort required.'

### Stability

The system continuously verifies stability, adapting itself to a necessary height. The 'flexible' distribution of the two axles allows the wheels to achieve a maximum traction and to make the most of the thrust. 'Therefore, the stretcher always offers an optimal stability and gear dynamics,' Spencer points out.

### Ergonomics

The comfort and the ergonomics of the stretcher have been raised

and this allows for a reduction in the effort expended, to an increase in safety and therefore improved performances of the operators. The firm also reports that the stainless steel, welded framework with aluminium and polycarbonate inserts guarantees this equipment's durability. In addition, a polished finish and easy access to all parts enables efficient maintenance and cleaning.

### Control

Optimisation of the position of the controls and centre of gravity, enables absolute control and command of the stretcher. 'But we are not dealing only with



a sensation: notwithstanding a natural tendency to lean sideways, predictable when the surface for the patient is raised relatively high, the Alto has a notable steering capacity and minimum risk of lateral pitching,' Spencer says, explaining that this is obtained from the combination of the calibration of the springs, wheel tracking and pace, the specific mixture of wheels that have a greatly reduced drift, and from the Twist system that enables variation in interlocking, depending on the conditions in which the stretcher must be steered.

Full details: [www.spencer.it](http://www.spencer.it).  
Or: [www.evacuationchair.net](http://www.evacuationchair.net)



## WORLD HEART DAY

In the lead up to this year's World Heart Day campaign - motto 'How Young is Your Heart?' - Professor Valentin Fuster, President of the World Heart Federation, observed many people's efforts to keep looking young and said: 'If we put as much effort into keeping our hearts young we would see a dramatic decrease in the number of premature deaths from heart disease and stroke each year.'

The WHF international 'heart days' encourage a healthier lifestyle, focusing on diet, physical activity, tobacco smoking cessation, and much else. 'It is never too late to start living a healthy lifestyle,' said Professor Sidney Smith, of the University of North Carolina, who is also Chairman of the World Heart Federation's Scientific Advisory Board. 'By asking everyone to think about the age of their hearts on World Heart Day we are encouraging the world's population to adopt a heart-healthy lifestyle.'

For the day, the Federation's member organisations in 100 countries will promote activities that include health checks, walks, runs, jump rope, fitness sessions, public talks, stage shows, scientific forums, exhibitions, concerts and sports tournaments. Details: [www.worldheartday.com](http://www.worldheartday.com)



## ACUTE CARDIAC CARE 2006

21-24 OCTOBER

Czech Republic – Prague will host a sequel to the highly successful First European Congress on Acute Cardiac Care organised by the Acute Cardiac Care Working Group of the European Society of Cardiology, which was held in Rome in 2004. The scientific programmes and sessions at that congress attracted considerable interest among the 1,100 medical specialists who attended, drawn from more than 60 countries.

The organisers of the 2nd Congress on Acute Cardiac Care expect participants to include basic and applied research scientists, internists, cardiologists, intensive care and emergency physicians, and nurses working in Intensive Cardiac Care Units.

Details:  
<http://www.escardio.org/congresses/AcuteCardiacCare2006/>

## THE 8<sup>TH</sup> INTERNATIONAL CONFERENCE ON NUCLEAR CARDIOLOGY

29 APRIL – 2 MAY 2007

During the past decade the ICNC meeting has become an important event since, in recent years, its scientific focus broadened significantly from 'only' nuclear cardiology to encompass Computed Tomography (CT) and Positron Emission Tomography (PET) techniques. These integrate multi-slice computed tomography and myocardial perfusion imaging into nuclear cardiology, thus allowing for combination of anatomy and function attitudes.

Co-organiser of the conference, Dr Jeroen Joost Bax MD PhD (above) said: 'PET and multi-slice CT have attracted a lot of attention; with PET, absolute quantification of cardiac perfusion and metabolism is possible enabling detection of coronary disease with the highest possible accuracy. Undoubtedly, the integration between multi-slice CT and PET is the area of most technical advancement used for non-invasive imaging of the coronary arteries.' The strength of multi-slice CT is currently related to the high negative predictive value, he added. 'This method also came a long way from originally 4-slice CT systems up to contemporary 64-slice CT systems introduced lately.'

Conference venue:  
Prague, Czech Republic.  
Details: [www.icnc8.org/](http://www.icnc8.org/)



SOURCE: UNIVERSITY OF LEIDEN

# Revised ACC/AHA/ESC guidelines on atrial fibrillation

## Stroke risk should determine anti-clotting treatment for people with irregular heartbeat

Risk factors for stroke should be used to determine whether anti-clotting therapy is given to people with atrial fibrillation (AF), according to revised Guidelines for the Management of Patients with Atrial Fibrillation released by the American College of Cardiology, American Heart Association and the European Society of Cardiology. (Authors: Amy Murphy at ACC, Bridgette McNeill at AHA, and Lisa Abdolian at ESC).

Atrial fibrillation (AF), the most common heart rhythm disturbance, increases the risk for stroke, heart failure and all causes of death, especially in women. Presently AF affects over 4.5 million Europeans, a number expected to increase even more due to aging populations, a rising number of people with chronic heart disease and improved diagnostic possibilities.

Previous guidelines published in 2001 recommended using several patient characteristics - age, gender, heart disease risk and concurrent conditions - to decide proper anti-clotting therapy for these patients. The new approach recommends that the risk for stroke should be the main factor, said Valentin Fuster MD PhD, co-chair of the guidelines writing committee, fellow of all three associations, and professor of medicine and director of the Mount Sinai Cardiovascular Institute in New York. 'We focused on stroke risk because AF is associated with increased long-term risk for stroke,' he said. 'About 15-20% of strokes occur in people with AF, and those strokes are especially large and disabling. Incorporating existing recommendations on anti-clotting therapy from the stroke primary prevention guidelines will streamline patient care and make recommendations

clearer for physicians.'

During the last two decades, hospital admissions in the USA and Europe increased by 66%. Total costs approach €13.5 billion in the European Union.

The revised guidelines also recommend daily aspirin therapy (81-325 mg) to guard against blood clots in AF patients with no stroke risk factors. Aspirin or warfarin is recommended for those with one 'moderate' risk factor (over age 75, high blood pressure, heart failure, impaired left ventricular systolic function or diabetes). Warfarin is recommended for people with any 'high' risk factor (previous stroke, transient ischaemic attack [TIA], systematic embolism or prosthetic heart valve) or more than one moderate risk factor.

According to co-chair Lars E Rydén MD PhD, also a fellow of all associations and professor emeritus at Karolinska Institute, in Stockholm, the guidelines help physicians to prioritise the objectives of patient care according to the following steps: 1) controlling heart rate, 2) preventing clots, and, if possible, 3) correcting the rhythm disturbance. Rate control usually involves achieving a ventricular rate (pulse) of 60 to 80 beats per minute at rest and between 90 and 115 beats per minute during moderate exercise.

Also new in the guidelines, catheter ablation - the procedure to correct irregular heartbeat with radiofrequency energy - is considered 'a reasonable alternative to drug therapy to treat AF in patients with little or no left atrial enlargement, and in whom drug treatments did not stop the rhythm disturbance,' Dr Fuster said.

Depending on symptoms, controlling the heart rate may be the reasonable therapy in elderly

patients with persistent AF who have hypertension or heart disease, according to the authors. For people under age 70, especially those with recurrent AF and no evidence of underlying heart disease, rhythm control may be the preferred approach, starting with drugs and by means of catheter ablation if medication fails to stop the attacks. Drs Fuster and Rydén emphasised: 'Regardless of the approach, the need for anti-clotting therapy should still be based on stroke risk and not on whether proper heart rhythm is maintained.'

Other writing committee members: David S Cannon MD; G Neal Kay MD; Harry J Crijns MD; James E Lowe MD; Anne B Curtis MD; S Bertil Olsson MD PhD; Kenneth A Ellenbogen MD; Eric N Prystowsky MD; Jonathan L Halperin MD; Juan Luis Tamargo MD; Jean-Yves Le Heuzey MD; and Samuel Wann MD.

The European Heart Rhythm Association and the Heart Rhythm Society collaborated on the statement.

Full guidelines: [http://www.escardio.org/knowledge/guidelines/Management\\_of\\_Atrial\\_Fibrillation.htm](http://www.escardio.org/knowledge/guidelines/Management_of_Atrial_Fibrillation.htm) and *The European Heart Journal*

## ESC GUIDANCE ON CARDIAC RHYTHM MANAGEMENT PRODUCTS

Reporting on the performance and adverse events of Cardiac Rhythm Management (CRM) device technology is significantly different in European Union and non-EU countries. This, according to results from a policy conference held by the ESC's European Heart Rhythm Association (EHRA), could cause problems for the general public if steps are not taken to minimize them.

Variations in regulatory requirements and approval processes mean that a new CRM product is frequently clinically tested and commercialised much earlier in Europe than elsewhere. The EHRA document states that active monitoring of these products in Europe is therefore necessarily and should be conducted independently from international monitoring or registry activities, although data sharing should be encouraged.

National Competent Authorities should be encouraged to work with clinician/scientific societies to improve event reporting on national levels. Specifically, EHRA recommends the creation of a single, standardised multi-lingual incident notification sheet that can standardise

the process of reporting incidents or near-incidents. Additionally, a confidential forum for informal discussions of product performance issue should be established to help improve communication about devices.

EHRA also proposed a novel approach for assessing individual hazard analysis. This risk model takes into account the condition of an arrhythmic patient and the current indication for the device implantation, i.e. primary or secondary prevention of sudden cardiac death (for patients with implantable cardioverter-defibrillators). This approach will help prioritise patients who should be contacted in case of a field safety corrective action, as well as provide the best advice to patients.

Finally, EHRA envisions a role for itself in explaining scientific and medical issues associated with such advisory communications to the media and other interested persons.

These observations and ideas outline a framework for future actions on the regulatory and the public policy front and a basis for formulating clinical guidelines. Full text: *EUROPACE Journal* (5/06).

Enjoy the power of lightweight patient monitoring in emergency care

**SCHILLER**  
The Art of Diagnostics

### ARGUS PRO LifeCare

Ultra compact emergency monitor with defibrillator and pacemaker

- 12-lead ECG with full diagnostic options
- NIBP
- SpO<sub>2</sub>, etCO<sub>2</sub>
- 2 connections for temperature
- 2 connections for invasive blood pressure
- Defibrillator: AED/manual
- Pacemaker: Transcutaneous
- Total weight: only 3.6 kg (incl. rechargeable battery and accessories)



Visit us at the World Congress of Cardiology  
2-6 September, 2006, Barcelona-Spain, booth H150

Headquarters: SCHILLER AG, Altgasse 68, CH-6341 Baar, Switzerland,  
Phone +41 (0)41 766 42 42, Fax +41 (0)41 761 08 80, [sales@schiller.ch](mailto:sales@schiller.ch), [www.schiller.ch](http://www.schiller.ch)



# Cardiac centre raises hygiene standards

The paths of bacteria, viruses and fungi that cause nosocomial infections are manifold. However, many hospitals pay more attention to complex hygiene solutions they do on another, simple solution: hand washing. They will consider the maximum germ penetrability of surgical textiles; equip operating theatres with complex ventilation systems and establish complex hygiene management systems for MRSA patients, yet germs continue to be spread - by the hands of medical and nursing staff, caterers, technicians and

even visitors.

In many cases, the hygienic benefit of such expensive precautionary measures has either not been scientifically proven, or it is vastly disproportionate to the cost involved, e.g. there are still no studies available to show that a single hospital infection was, or is likely to be prevented by highly technical and cost-intensive surgical ventilation systems. Nevertheless hospitals invest much time and money in implementing relevant legal, though often impractical, requirements.

Hand hygiene is also prescribed by law. Nevertheless, it is widely recognised that serious deficiencies in this are found in many hospitals, despite the potential major hygiene benefits at relatively little cost. So why do many hospitals still focus on complicated hygiene technologies rather than on simple hand disinfection?

For over a year, the services and

logistics firm *Gesellschaft für Dienstleistung und Logistik* (GDL), which has 40 employees, has supplied the 250-bed cardiology centre in Bad Krozingen with supplementary services, including bed cleaning and other cleaning services and logistics tasks. Daily, this hospital carries out complicated cardiac interventions. It is also one of the few German hospitals that willingly accepts MRSA patients. To do so the clinic has its own hygiene management system.

Hans-Jörg Grote, GDL's Director, emphasises that hygiene begins in the sanitary rooms of the clinic - with hand washing. 'With this trivial procedure a lot can be done to improve hygiene - with very little money - because, according to experts, if, after washing your hands, you dry them carefully with a disposable towel, this alone removes about 90% percent of germs from the hand.'

Obviously therefore, careful drying with a disposable towel is as important as hand washing, which means that sanitary rooms should, at all times, provide high-quality paper towels. Hans-Jörg

Grote acknowledges this is a banal task, but one that has seen no less progress in recent years than surgical room ventilation.

Seeking improvement in the clinic, the purchasing manager Holger Klein tested, over an extended period, used the new *Ultimatic* hygiene system manufactured by the Finnish firm Metsä Tissue. This includes towel dispensers, toilet paper, soaps, disinfection towels, sanitary bags and corresponding sanitary bins. The company reports that the system ensures no paper rolls are left lying around toilets, no paper falls out of dispensers, no questionably hygienic folded paper towels are used, and there are no overflowing waste bins, or empty dispensers.

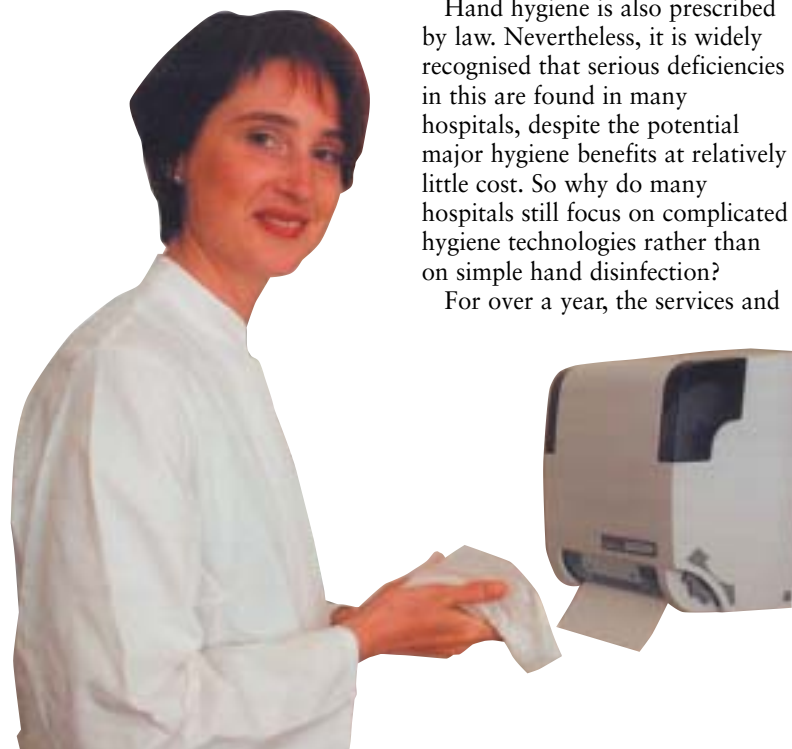
A reserve roll, integrated into the dispenser, falls automatically into place once the previous roll is empty. Paper consumption is considerably reduced. The dispenser releases only a single towel, also preventing transfer of germs on the towel 'With an absorbency of 16 g it easily soaks up the typical residual moisture of 9 g from hands after washing,'

Metsä Tissue points out.

From the practical tests, H-J Grote reported that the system has been widely accepted by the staff, in part because the paper is particularly absorbent and soft, making it easy on frequently washed hands.

Using the *Ultimatic* paper towel dispensers, in some periods the cardiology centre the reduction in paper consumption was over 30%. Moreover, the intervals for refilling the dispenser could be extended from once daily to twice a week. 'So the clinic is saving time as well as money,' said Holger Klein. It is not as easy to calculate benefits for hygiene, but, he added: 'Clean sanitary rooms also contribute greatly to creating a better image, because this is an aspect that patients and visitors are far better able to judge than, for example, the quality of the medical services.'

H-J Grote plans to gradually extend the use of Metsä Tissue's new towel dispensers - which have been used there not only in the lab and blood donor area, but also in staff and visitors' toilets - to all hospital sanitary areas.



## CORONARY HEART DISEASE Media image versus patient reality By Holger Zorn



Will bypass surgery soon be a thing of the past? Cardiac surgeons are increasingly asked this question not only by doctors, but also patients. There are two reasons: With ever-improving stents, interventional cardiologists can deal with ever more complex cases - and achieve more media attention, even in this publication. This increased attention results from many randomised, controlled studies that compare coronary artery bypass grafting (CABG) with percutaneous coronary intervention (PCI), i.e. surgical care with cardiac care, neither of which show any significant differences in morbidity rate or mortality. Therefore, people assume that the two procedures are on a par. According to cardiologists, the most significant advantage of the operation - the low rate of repeat procedures required - will soon be a thing of the past due to new, drug-eluting stents.

However, most of the studies do not reflect reality, according to experts in the Guideline Commission of the Germany Society for Thoracic and Cardiovascular Surgery. 'No one doubts the accuracy of the stent-studies,' said Professor Hans-Reinhard Zerkowski, at the society's annual general meeting in Hamburg. 'But they just do not reflect patient reality!' In 13 studies analysed, only four percent of screened patients were actually included in the studies - a selection

Top: Removal of a saphenous vein for use as bypass material  
Right: Opening the pericardium and exposure of the myocardium

that does prompt the question as to whether the results discovered in this way are actually likely to apply to the 'remaining' 96% of patients.

It is also noticeable that up to 70% of patients included in these studies suffered from one-vessel or two-vessel coronary disease with normal heart pump function - a combination for which it has long been known that these patients don't actually benefit from bypass operations (Yusuf et al, *Lancet* 1994;344:563-70).

This criticism of the selective perception was backed up by the propensity analysis carried out by the cardiology department at the Cleveland Clinic, Ohio, USA (Brener et al, *Circulation* 2004;109:2290-5). This study looked at the long-term survival of 6,033 patients who had to be revascularized at the clinic between 1995 and 1999. Where the mortality for PCI patients was 5% at one year, it was only 4% among CABG patients. After five years this ratio was 16% versus 14%, i.e. the difference had increased to two percentage points - and this with significantly increased co-morbidity among the patients left to the

care of the surgeons. After the risk adjustment this advantage became statistically highly significant ( $p < 0.001$ )!

The observation study carried out by Hannan (*N Engl J Med* 2005;352:2174-83) goes one step further and, with 59,314 patients of the New York Registry for CABG and PCI with stent involved, gives us the most realistic and comprehensive picture of reality. Apart from a significantly higher proportion of re-interventions among the PCI group, in the long term - after risk adjustment in all morphological constellations - there is a significant increase in the survival advantage for CABG.

For one-vessel or two-vessel coronary diseases without stem stenosis and without involvement of the proximal LAD there are no prognostic differences between CABG and PCI. With three-vessel coronary disease, with or without main stem- and/or proximal LAD stenosis, CABG offers patients a clear survival advantage compared with PCI - so media reality does not reflect the reality for patients.

## CARDIOLOGY PACS

The European PACS market gained \$73.6 million revenues in 2005 and could rise to \$200.5 million in 2012

The number of cardiology examinations are increasing by 20% annually - largely due to aging populations, the rise in obesity as well as cardiac and circulatory diseases - according to the latest analysis of the European Cardiology PACS Market (Ref: B930 - 50) produced by Martin Bryant, at the medical imaging division of the global growth consultancy Frost & Sullivan ([www.frost.com](http://www.frost.com)).

The mounting incidence of heart disease has been paralleled by the retirement of the affluent baby boomer population, a group that is increasingly willing to pay for services not provided by public health authorities, the F&S report points out. 'This has resulted in an urgent need for some form of image and data management in the realm of cardiology to effectively cope with the huge volumes of information generated by these new studies. Accordingly, healthcare providers are boosting investments in cardiology PACS systems.'

However, despite acceptance shown towards these systems, financial pressures felt by the end users is likely to reduce investments in the infrastructure needed to house a cardiology PACS, the report continues. 'Cardiologists sometimes find it harder to make a case for the necessary investment this entails, as, unlike the radiology department, cardiology does not serve the rest of the hospital, and other departments do not use cardiology PACS as extensively as they do radiology PACS.'

Martin Bryant explained that, in Europe, the distinct lack of healthcare investments will be felt most acutely in the cardiology PACS market, purchase of which signifies incurring substantial upfront costs. 'This problem is exacerbated by the predominance of the capital investment model in Europe, with many providers reluctant to take out leasing options.'

Designing a cardiology PACS system based on an open architecture, with sufficient flexibility will be the key to overcoming this restraint, he suggests. 'End users with existing radiology PACS infrastructure will be able to opt for cardiology PACS and CIS modules that suit their needs, and fit onto existing radiology networks and archiving.'

The 'European Cardiology PACS Market' analysis is part of the Medical Imaging Subscription, which also includes research on European PACS and PACS Professional and Technical Services, European Cardiac Catheterisation, and 3-D and 4-D Imaging in Europe. All research included in subscriptions provide detailed market opportunities and industry trends that have been evaluated following extensive interviews with market participants.

To receive a virtual brochure - which provides manufacturers, end users, and other industry participants with an overview of the European cardiology PACS market, e-mail [rmtheodore@frost.com](mailto:rmtheodore@frost.com), quoting *European Cardiology PACS Market* (Ref: B930 - 50) and giving your title, name, company name and full address, plus phone number and e-address.






We see a way to reduce patient images  
turnaround time from 4 hours to 2 minutes

# The *syngo* Suite. For efficient workflow.

[www.siemens.com/medical](http://www.siemens.com/medical)

Results may vary. Data on file.

HS-Z9511-1-7600

 **Proven Outcomes with *syngo*®.** The *syngo* Suite provides seamless workflow in radiology by integrating RIS, PACS and processing functionality. While *syngo* Workflow manages all processes for the exchange of patient data and images, *syngo* Imaging bundles the applications for image processing, viewing and reporting. With advanced features all along the process, the

*syngo* Suite significantly improves your workflow. It makes it faster. Easier. More efficient. And by integrating with the clinical and administrative cycles, it leads the way to a holistic world of health care.

***syngo*. it's all about you.**

Siemens **Medical Solutions** that help

**SIEMENS**  
medical



# LIVER TRANSPLANTS

Primitive cells might become an alternative therapy

Scotland - A liver transplant is the only treatment for a patient with acute and chronic liver failure. However, the supply of donor livers is insufficient to meet demand. Now, however, certain newly identified primitive liver cells might have the

potential to mature into different cells types and help repair a failing liver, according to findings published in *The American Journal of Physiology - Gastrointestinal and Liver Physiology* by a team of scientists at the University of Edinburgh.

Dr James Ross, who heads the research team at the Department of Surgery and the Tissue Injury & Repair Group, Centre for Regenerative Medicine, said: 'Potentially, cell replacement therapies could provide alternative treatments that would avoid difficulties associated with obtaining sufficient donor organ transplantation,' Dr Ross said. 'We have now identified primitive cells with the potential to mature into

different cell types within and without the liver. It is possible that these cells lie dormant in the adult liver and may be the source of repair cells that are activated by severe liver injury.'

The liver is often able to repair and heal itself following injury or damage and this occurs in one of three ways, Dr Ross pointed out: 'First, mature liver cells have a well recognised and extensive capacity to divide in response to injury.

Second, in response to massive loss of functioning liver tissue, a population of primitive liver stem cells may be stimulated to proliferate and develop into mature liver cells. The third mechanism of liver repair involves circulating stem cells originating from other sources, such as the bone marrow, and it is possible that these cells may be recruited into the liver and form new liver cells.'

# CYBERKNIFE RADIOSURGERY PROGRESS



Germany - The unique Cyberknife Robotic Radiosurgery System, which we have featured in European Hospital magazine in previous issues, has delivered 400 treatments in its first year of use, according to a report from the Cyberknife Centre, which operates with the collaboration with University Hospital Munich.

The system, the first on only one of its kind, was designed to treat tumours, anywhere in the body, with sub-millimetre accuracy, the maker reports. 'Using image guidance technology and computer controlled robotics, the CyberKnife System is designed to continuously track, detect and correct for tumour and patient movement throughout the treatment. Due to its extreme precision, the system does not require invasive head or body frames to stabilise patient movement, vastly increasing the system's flexibility. In the first year, 450 patients have been treated in the Cyberknife Centre, in Munich. The main indications were brain



and spine tumours. Just recently the centre began its' breath triggered radiosurgical programme to also irradiate lung and liver tumours in a radiosurgical approach, which means a single session out-patient procedure that lasts about 1-2 hours. The indication for the procedure is discussed beforehand, with specialist sur-

geons and radiation oncologists. It can be an addition or alternative for a surgical procedure. Out-patient Cyberknife treatment does not lead to limitations in normal daily life. One day after the treatment the usual activities can be resumed.'

Further details: [www.cyber-knife.net](http://www.cyber-knife.net)

## Centralised operating theatre control provides many benefits

**Core** - the integrated operating theatre concept created by Richard Wolf GmbH, a leading innovator in minimally invasive surgery since its inception - has a modular, networked structure to link various devices in the operating theatre and provide interactive monitoring and centralised control from a single operator panel. The system has speaker-independent voice control that enables devices such as cameras, lights, video conferencing units, PACS, high frequency equipment, room functions and the operating table to be operated from the sterile area.

Dr Jens Burghardt, specialist surgeon and consultant in endoscopic surgery and sonography, and consultant at the Department of General and Thoracic Surgery, Sana Hospital of Berlin Lichtenberg, has used core for several years. 'The system provides a complete operating room customised to meet the requirements of the individual hospital,' he explained. 'The standard package includes an operating table, operating lights, endoscopy equipment and a range of monitors that


surround the patient and can be adapted, prior to surgery, to the surgeon's height and any other preferences he/she may have. This reduces surgery times and improves comfort for surgeons performing the procedure.'

MEDIMAGE, a digital patient imaging and document management system, facilitates intra-operative visualisation of pre-operative image data on monitors located within the operating area. The use of the centralised operating mechanism in core allows the operator, using voice control, to manage imaging data, record images and film sequences and produce electronic operating reports in real time, he added. 'This facility is also used for training purposes.'

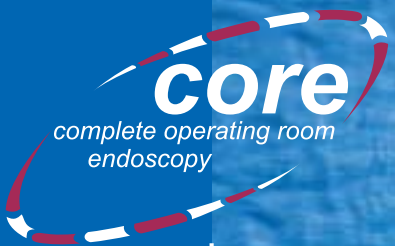
Dr Burghardt pointed out that the ergonomic design of the integrated system allows the surgeon to continue working for a sustained period with no physical interference. 'Another key advantage is that the LCD modules are connected to a network, eliminating the need for the patient's doctor to be present in the operating room. The operating theatre also can be monitored from a

workstation while administrative tasks are being carried out, thus reducing the workload of consultants and junior doctors and generating savings for the hospital. The advanced technical features of the system also mean that fewer members of staff are needed to perform an endoscopic intervention. At least three surgeons must be present during operations performed in other surgical areas, whereas only two surgeons and a nurse need be present when the Richard Wolf system is used.'


Asked whether this type of system will become more important in the future, Dr Burghardt anticipated that the technology '.... will grow in importance as we attempt to improve management in the operating theatres. The number of doctors choosing to specialise in surgery, notably endoscopic surgery, is declining because training takes so long. Regulatory changes vis-à-vis maximum working times must also be taken in to account. Therefore, it will be essential to respond to staff shortages and more stringent training regimes by improving management. In this context, the Richard Wolf system is a particularly useful tool.'



**RICHARD WOLF**  
spirit of excellence




**core**  
complete operating room  
endoscopy



**The perfect system**

everything works together



Core - In this integrated OR concept, the individual system tools complement each other perfectly to produce the ideal result. The main task of Core is the networking of the individual devices in the OR and a special control system with interactive monitoring.

Just as a team of rowers all pull together in unison to reach their goal, the optimum interaction of the individual Core system tools allows all team members to work together economically in the OR.

Core - modular, universal, unique.

RICHARD WOLF GmbH · 75434 Knittlingen · PF 1164 · Telephone +49 70 43 35-0  
Telefax +49 70 43 35-300 · GERMANY · info@richard-wolf.com · www.richard-wolf.com

AUSTRIA · BELGIUM / NETHERLANDS · FRANCE · GERMANY · INDIA · U.A.E. · UK · USA



## BETWEEN ECONOMICS AND ETHICS – WHAT HAS HEALTHCARE REFORM DONE TO US?

## VASCULAR SURGERY

'Alles im Fluss' is the slogan of the 22nd Annual Congress of the German Society for Endovascular & Vascular Surgery, to be held from 6-9 September, in Muelheim an der Ruhr. On the last day of this event a session that focuses on the discrepancy between economics and ethics will take place. Here, **Professor Klaus Balzer**, Head of the Vascular Surgery Department at Evangelical Hospital, Mülheim an der Ruhr, sums up the dilemmas facing health professionals today – especially those who work in vascular surgery.

**The beginning** – The German Social Security system is based on the concept of solidarity. Those who are healthy and able to work pay for the sick and needy. As is known, this system can no longer be financed. The reasons are several.

The birth rate is declining and therefore the number of those able to potentially make financial contributions. Thanks to advances in medicine, people live longer and longer. Illnesses, however, occur particularly in old age so that fewer and fewer people must pay for more and more sickness. The number of those able to pay financial contributions into the system is decimated through high unemployment and the social funds are stretched to the limits to support the unemployed. Medical advances are rapid, modern methods of treatment are very effective but also expensive.

With ever declining income there is an ever-increasing amount of



Klaus Balzer MD PhD is President of the German Society for Vascular Surgery as well as President of the European Board of Vascular Surgery. He is also a member or corresponding member of many societies in other countries. The professor's scientific investigations include: angiological problems, measurements on haemodynamics, plaque morphology, histopathology, vascular imaging (especially angioscopy), vascular surgical operative techniques, particularly on the supra-aortic branches, the abdominal aorta and the femoral artery, vascular grafts, endovascular techniques, endovascular grafting, clinical trials on vaso-active drugs, especially Prostaglandins. Around 200 of his articles have appeared in books and scientific publications.

expenditure to cover. This was previously addressed through raising the compulsory health insurance contributions. Even years ago, emergency brakes were put on ancillary wage costs that could no longer be financed and the contributions for the various costs were 'budgeted'. This meant nothing, other than that a fixed amount was put aside for medication, GPs and hospital doctors. To a point, this made it possible to relieve expenditure, but the income situation has not improved at all.

**The situation in hospitals** – Hospitals face the additional problem that we have a dual financing system where the running costs are paid for by medical insurers, and hospital upkeep and construction

costs are paid for by the state with tax monies. As the state has not actually been able to supply these monies for quite some time we basically have a situation where hospitals are dependent on just one source of income, i.e. payments received by patients – who have been reimbursed by their medical insurers. The German system, where the costs are divided by the number of days spent in hospital, which led to a higher and higher daily flat rate, has become absurd. It has now been superseded by a system that classifies every illness to be treated as an individual

entity, which is divided into many different groups then reimbursed, independent of the course the disease takes in the individual patient. The so-called diagnosis related groups (DRGs) were introduced as an important contribution towards curbing spending in the healthcare system, but they only work under certain conditions. Moreover, we are experiencing a phase of transition, i.e. the pressure of competition for hospitals is significant and it appears that inefficient hospitals will actually be better off during this transitional phase until the year 2009, because they are advan-

tagged by a higher budget, higher flat rates and therefore a better income situation than hospitals that have been thrifty and economical in the past.

**The doctors' situation** – The largest percentage of hospital expenditure goes towards personnel costs – particularly doctors' salaries. A specialist department must be ready for action 24/7 for all types of illness. A specific part of a hospital doctor's work is therefore to be available to patients during the night and also at weekends. This system of on-

*continued on page 20*

O L Y M P U S   M E D I C A L   S Y S T E M S

## Universal platform – all the options

Experience unprecedented image  
quality in combination with unrivaled  
compatibility – experience EVIS EXERA II.





# 1080i HDTV

EVIS EXERA II is the first video platform introducing HDTV 1080i to all fields of endoscopic imaging. Next to the application in surgical endoscopy, EVIS EXERA II is fully compatible with Olympus upper and lower tract GI endoscopes, allowing for O.R. standardisation. And the combination of Narrow Band Imaging and HDTV 1080i presents previously unachievable image quality to practical reality in the O.R. environment.

Find out more at: [www.olympus-europa.com](http://www.olympus-europa.com)

SE004-06

**OLYMPUS**

Your Vision, Our Future



# Quality control in minimally invasive surgery

Minimally invasive surgery (MIS) is, after the introduction of anaesthesia and asepsis, appropriately designated as the third patient-friendly revolution in surgery: It dramatically changed the face of surgery by not only minimising the access trauma, but also by giving new impulses for a less traumatic method of operating. In over 3,000 studies - which include about one third controlled clinical and about 200 randomised controlled trials, as well as meta-analyses and review articles - the results were analysed and compared with those of conventional surgery. In terms of the criteria of evidence-based medicine, significant advantages of MIS methods were described, regarding all pain associated parameters, duration of hospitalisation and period of complete physical and mental rehabilitation, compared with conventional techniques. Moreover, several authors observed a reduction in the complication rate, as well as an improved oncological long-range prognosis.

Indeed, MIS advantages only appear on condition that the surgery is performed with a low complication rate. Patients with complications, particularly when converting to an open technique became necessary, show worse results throughout than patients operated on conventionally in the first place.

Whereas it was initially assumed that an experienced surgeon could adapt the new technique without difficulty, laparoscopic surgery turned out to evince a substantial learning curve, especially concerning the 'video-eye-hand-coordination'. Learning the new technique appeared to require not only time, but also patience, mental strength and persistency. Among standardisation of operating techniques, concern about a structured education came to the fore, with the objective of benefiting patients as much as possible from the advantages of MIS, as well as appropriately avoiding complications. Subsequently, in

**Professor Reinhard Bittner FRCS**, of the Department for General and Visceral Surgery, Marien Hospital, Stuttgart, urges the foundation of a national institute to co-ordinate education and certification in minimally invasive surgery, and to co-operate with pharmaceutical companies to improve instrument technology



Reinhard Bittner

2000, the German Society of Visceral Surgery founded an association of minimally invasive surgery (CAMIC). By organising many meetings, including video demonstrations and live operations, CAMIC fulfilled its obligation to promote standardisation and further development of minimally invasive surgery. In addition, a network of clinics was established to enable training in the new technique. These clinics need to provide a defined catalogue of structural and process quality requirements, as defined by CAMIC. External audits with adequate certification are planned for the future. Admittedly, extensive financial resources are required to realise this idea.

As a further step to improve quality, CAMIC introduced 'minimally invasive surgery' curriculum, as a certified additional qualification. To obtain this

additional certification applicants must verify a certain training, as well as a specific operating catalogue defined by CAMIC. Additionally - and this is absolutely new worldwide - they need to submit three uncut original videos of different, self-performed operations. In this, a tool is created that enables estimation of the surgical abilities of an applicant comparatively, in an objective way. An expert opinion points out, in detail, the applicants' strength and weakness in technique.

In our opinion, the implementation of the curriculum is a great opportunity to standardise the technique and minimise complications in MIS. Till now, unfortunately, on a few surgeons (about 60) have used this opportunity, not least because the concept is voluntary. Further acceptance may be expected if hospital administrators do not merely assume a 'knowledge in minimal invasive surgery' but also demand the 'minimally invasive surgery' curriculum for surgeons who want to achieve a leading position.

However, to promote this process, the efforts of other scientific and medical associations are needed.

Currently, minimally invasive surgery could be viewed as a surgical 'innovation'. Broad fields of surgery are affected, which include enormous patient groups (biliary tract, inguinal and incisional hernia, appendicitis, colorectal and reflux disease). The advantages of MIS compared with conventional techniques are less pain and faster rehabilitation. One disadvantage of this new unfamiliar technique is a difficult 'video-eye-hand-coordination' due to two-dimensionality and resulting loss of depth perception. The education and therefore safe performance of the operation are critical points. To ease minimally invasive surgery, a national institute that co-ordinates education and certification and co-operates with pharmaceutical companies to improve instrument technology, is urgently required.

*continued from page 19*

call duty used to be covered by deploying doctors available during the periods required. A lot of on-call periods had to be covered by each doctor, which appeared to be compensated for by relatively high salaries in relation to the work carried out. However, in reality, doctors were and are subject to the same tariff laws as all other occupational groups within the public service. Therefore, the European judgement that ruled that on-call periods were to be classed as regular hours of work led to doctors losing their privileged position and rights to a better income than other occupational groups. However, the burden of covering night shifts and weekends continues.

Additionally, doctors are burdened with increasing administrative duties. This is partly done under the cover of introducing quality assurance measures, or by letting the amount of paperwork and documentation required become completely out of hand. This exaggerated bureaucracy increasingly

stops doctors from doing the real work required. However, the less documentation is carried out by hospitals the higher the danger that their earning potential is lowered, which in turn leads to a situation where doctors endanger their own financial situation and those of the hospitals. Compared internationally, hospital stays in Germany are too long and we are also running an out-patient and in-patient care system concurrently.

The recent strikes among German hospital doctors are proof of these conflicts. The general public is now aware that being a doctor, and particularly a hospital surgeon, is no longer a dream job with generous pay.

Moreover, the shorter the hospital stays and the fewer the complications of illnesses, the more lucratively the hospitals can work. This can lead to a situation where patients are selected along these criteria and where the DRG system could be misused to improve hospitals' income. The benchmarking approach for hospitals also makes only limited sense. In

vascular surgery especially, there are particularities that strain revenues. Patients with vascular disease tend to be multimorbid, as arteriosclerosis is a systemic disease. Those diseases that can be treated cost-effectively are increasingly being treated interventional and often no longer require inpatient stays.

**Everything is changing - The future of vascular surgery**

This September, 'Alles im Fluss' is the motto of the 22nd Annual Congress of the German Society for Endovascular & Vascular Surgery in September. We would like a comprehensive discussion about our specialist medical field, about the position of health professionals in our society, and about vascular surgery in particular. We need to take stock. This includes listening to what all those who are part of the system have to say, then discussing the points raised. The session on the discrepancy between economics and ethics is a special event scheduled for the last day of the congress. A journalist will be the moderator.

# HDTV advantages

By **Ronald Mårvik MD PhD**, surgeon at St. Olav's Hospital, University Hospital in Trondheim, Norway and the Head of the National Centre for Advanced Laparoscopic Surgery, and **Thomas Langø PhD**, research scientist with SINTEF Health Research, Medical Technology

During the emergence of colour television in the late 1950s and early 60s, broadcasters standardised on two formats that allowed colour images to be transmitted. These formats are still used today - as NTSC in the USA, Canada and Japan, and PAL in Europe and most of the rest of the world. The local infrastructure investment necessary for TV transmission has helped ensure their dominance for the past fifty years. TVs, video recorders, DVD players and video camcorders, all rely on the PAL

or NTSC transmission format, depending on the location.

Since the advent of colour broadcast television, Medicine gradually experienced a massive growth in the application of Closed Circuit TV (CCTV), particularly influencing surgery: minimally invasive techniques could not have become accepted without it.

All the video systems used have been based on either the PAL or NTSC broadcast formats, again depending on the location. However, the advent of digital broadcast television has now

## A higher definition of surgery

The increasing trend towards minimally invasive surgery (MIS) is helping to reduce patient trauma and, as a result, is shortening recovery times dramatically. Advances in medical technology have been vital to the proliferation of MIS, such as the advent of smaller cameras, and have made it possible for surgeons to peer into every section of the human body.

The advent of high definition (HD) technology is providing surgeons with greater levels of accuracy in MIS procedures. By combining the use of HD endoscopes and HD displays with a workflow system, surgeons acquire a wealth of rich

**How developments in audio-visual technology hold the key to excellence in the operating theatre**

use HDTV in surgery, you can see tiny details and structures that were not visible before."

The use of AV technology is not limited to MIS. In small, but ever increasing numbers surgeons are choosing to film open surgery procedures. By doing so they can keep a detailed record of their operations that can be shared, often in real time, with students and peers. Surgeons are now recording their surgical techniques in HD enabling others to view their approach as if they were in the operating theatre itself.

As European hospitals become increasingly networked environments so these recorded operations can be shared by doctors and students. Professor Bill Heald, a leading UK cancer surgeon has been filming his pioneering procedures in HD for over a year now and explains the advantages, "When you're broadcasting your images on a huge screen to 200 people in a lecture theatre, you really need the extra resolution that HD can deliver. The Sony HD cameras that I use provide such high quality pictures that what is being seen on the screen is never in doubt - and that has to be good news for our patients."

As surgeons and hospitals experience the richness of image provided by high definition they will see that it represents the future of health-care. Through further research and the work of pioneering surgeons in this field, developments are being made that will transform the way the doctors and hospitals treat their patients.

For further information, or to receive a Whitepaper, please contact David Dowe of Sony Healthcare Europe, David.dowe@eu.sony.com  
Source: Sony



David Dowe

visual information that allows them to view keyhole procedures with the same clarity as open surgery. This results in improved success rates, fewer infections, shorter hospital stays and faster patient treatment. In turn, this increases surgeons' efficiency, reduces hospital costs and, most importantly, improves patient care.

After performing the first ever endoscopic procedure using HD technology in the year 2000, Dr. Stephen Palter of the Yale School of Medicine stated the advantages of using HD: "High definition television provides more than double the previous resolution, from fewer than 500 lines to more than 1,000 lines - it's like looking through a window. It's that clear. When you



# lead to medical advances

unleashed the prospect of High Definition Television (HDTV) as a practical reality in medicine.

As with all advances, there has been considerable argument about which of the various HDTV formats would become used globally. Today, in Europe, Japan, and most of the rest of the world, a display known as 1080i has become the choice. In each frame 1080i produces an image that contains about five times more information than PAL, yet it is practical for digital broadcasting because a similar number of channels can still be fitted into the space occupied by today's analogue TV broadcast bands. TV screens can now become larger and offer greater detail, while LCD technology means they can be wall-mounted in a living room, ready to receive cinema quality images beamed into the home. Thus NTSC and PAL soon will become history.



Ronald Mårvik:

*'We live in a society programmed to expect constant innovation, yet valuable technology platforms can be surprisingly stable and long lasting, becoming an accepted and barely visible part of the framework of our lives. Broadcast television is one such technology.'*

## HDTV in medicine

In the operating theatre evidence is growing that advanced minimally invasive surgery (MIS) is facilitated by the integration of theatre equipment, the video endoscopic system and surgical devices. Equally, practical benefits arise from seamlessly linking the operating theatre to the hospital information system (HIS) and picture archiving and communications system (PACS), while facilities for teleconferencing have made this kind of consultation an expected part of surgical practice, rather than a rare privilege. The advent of HDTV could make much of today's video equipment installed in operating theatres obsolete.

It may be found that HDTV does not fundamentally change practice, but its potential to improve surgical precision, and protect against errors, inevitably will increase pressure on hospitals to replace their existing equipment with new HDTV equipment. Nonetheless, scientific studies are needed to reveal the potential clinical benefits of this new technology, to ensure that a transition from SD (Standard Definition) to HD video signals in the future operating rooms is clinically evidence-based, rather than a strictly commercially driven transition ('too early and too

expensive'). As reported in *European Hospital* in April 2005, in the *future* operating room at St. Olav's Hospital in Trondheim, Norway, we are conducting such a study based on a HDTV video laparoscope system (Olympus). It is important for companies that today supply medical and surgical video optic systems, to lead the way in collaboration with hospitals and clinicians during this

transition; their motivation to do so may seem obvious, but history is littered with examples where dominant companies failed to recognise fundamental change and fell by the wayside.

For vendors of such equipment, the transfer of video-endoscopic systems to HDTV has priority within product development programmes. Commercial firms already know that HDTV goes far

beyond the video system. As a result Olympus, for example, has redesigned lens and optical relay systems set up so that products such as laparoscopes are widely available and meet the more stringent requirements of HDTV even before the more expensive video systems are introduced.

Furthermore, such technological developments are tightly linked with integrated designs for theatre refurbishment or new build planning. All such work requires extensive feedback and development collaboration with expert users. At Trondheim's National Centre for

Advanced Laparoscopic Surgery we are working closely with industry to accomplish these tasks. In addition, industry partners, Olympus, Sony and Siemens, work together with scientific researchers at the research institute SINTEF to examine how technologies such as HDTV will influence surgical practice.

Most importantly, as High Definition technology becomes available for adoption within the operation environment, commercial partners should assist the medical community to ensure the benefits of HDTV are clarified early and brought into practice sensibly.

**SONY**  
High Definition Healthcare

Come and see High Definition Healthcare in action at the 10th World Congress of Endoscopic Surgery, 13-16 September, Berlin, Germany hosted by EAES\*

**"I firmly believe that Sony High Definition offers a quantum leap in improving the outcome of surgical procedures."**

Professor Bill Heald OBE, M. CHIR. FRCS  
The Pelican Cancer Foundation, North Hampshire Hospital

**Sony HD. Making it easier to be certain.**

**High Definition video solutions for healthcare**

For more information, please visit [www.sonybiz.net/eaes](http://www.sonybiz.net/eaes)

\*European Association for Endoscopic Surgery



# Steroid sparing By Ian Mason PhD

## A QUIET REVOLUTION IN TRANSPLANT SURGERY

A quiet revolution is underway in transplantation surgery. Within five years almost all renal transplants will be steroid free, say leading transplant specialists.

This may not sound a staggering innovation, but the implications are profound, according to Dr David Taube, Renal and Transplant Unit, St Mary's Hospital, London.

Since the 1960's steroids such as



David Taube

prednisone have been an integral part of post-transplant anti-rejection regimens. But steroids have numerous unpleasant side effects, including: nausea, vomiting, mood swings, thin skin, easy bruising, slow wound healing, bone and muscle problems, facial shape change, cataracts, and insomnia - to name a few. Steroids also have significant adverse effects on cardiovascular risk factors such as hypertension, hyperglycaemia, hyperlipidemia, and post-transplant diabetes mellitus.

'For these reasons, we have been trying to withdraw steroids for many years. The first serious attempts started in the late 1990s with the availability of new immunosuppressive regimens such as tacrolimus, mycophenolate mofetil (MMF) and induction agents,' Dr Taube explained.

Early results had suggested that risk of acute rejection and deterioration in graft function might result if corticosteroids were removed from the immunosuppressive cocktail.

'More recently, studies have shown that steroids can be withdrawn from a tacrolimus-based regimen, or even avoided,' he added.

Dr Taube recently completed a five-year audit of steroid withdrawal in more than 150 renal transplant recipients at St Mary's Hospital, London. The results, he said, were reassuring.

'Early and late steroid withdrawal in patients receiving tacrolimus-based immunosuppression resulted in excellent patients and graft survival, with a low incidence of post-transplant diabetes mellitus.'

Across Europe, something like one in ten renal transplants are currently 'steroid free'. This proportion will increase rapidly as more centres become aware of the advantages of steroid sparing, he pointed out - but added that, for this to happen, surgeons and purchasers must appreciate the benefits, and be reassured their budgets will not suffer.

Faced with reluctance from some healthcare purchasers to embrace this new approach due to the increased cost of steroid-free immunosuppressive regimens, he pointed out that the total annual costs of steroid free immunosuppressive regimens are less than one year of the Erythropoietin therapy given to dialysis patients pre-transplant to avoid anaemia.

'There is no doubt that in the UK, and in some other parts of Europe, we are dragging our feet about adopting this new technology. But you only have to ask most patients with renal failure whether they want steroids, and the answer is a resounding 'no' - they will do anything to get off steroids. I really think it is time



Julio Pascual

we put a stop to steroids, and in five years I am sure we will have done.'

Dr Julio Pascual, Head of the Kidney Transplantation Programme, Ramon y Cajal Hospital, Madrid, Spain, agreed. Dr Pascual has been evaluating three steroid avoidance protocols: Complete steroid avoidance, steroid minimisation (give steroids for a few days and then withdraw), and steroid withdrawal

after several months of treatment. His conclusion, presented at ESOT, was that modern tacrolimus-based regimens make it possible to minimise metabolic complications by eliminating corticosteroids without adversely impacting acute rejection rates or graft loss.

'In low to medium immunological risk patients steroid-sparing strategies are advantageous in terms of reducing cardiovascular risk factors as well as improving bone mass loss. When receiving ciclosporin or tacrolimus + MMF, steroid withdrawal after the first months is associated with an increased incidence of mild acute rejection, but is effective and well-

tolerated after 1-3 years of follow-up. Steroid avoidance or minimisation after anti-IL2 antibody induction and treatment with tacrolimus/MMF is an efficacious and safe option, at least during the first post-transplant year,' he said.

An additional reason for avoiding steroids is the increasing age of the many transplant recipients. 'In some areas of Spain, France, Italy and England, the percentage of renal allograft recipients who are over 60 years old, is growing exponentially, leaving us with a tremendous number of high risk patients in terms of cardiovascular morbidity and mortality - problems that are clearly exacerbated by steroid treatment,' said Dr Pascual. 'A final reason why we should embrace steroid-free regimens is because we are short of donor organs, and one of the most important causes of graft loss is the death of the recipient with a functioning graft. These deaths are mostly due to

cardiovascular disease, so we must improve the cardiovascular risk profile of immunosuppressive regimens to save the patient and save the graft.'

'Ten years ago steroid sparing was more a wish than a reality, but today there is good evidence supporting a steroid sparing strategy - the trouble is that for many transplant surgeon, steroids are a life-long companion. They know them, and know how to use them. They think they are non toxic (for the patient) despite clear evidence to the contrary,' Dr Pascual pointed out. 'They need to appreciate how much immunosuppressive non-compliance is driven by steroid-avoidance. Many young adults do not know which of their pills is giving them a hairy face, making them fat, and thinning their skin, so they stop all treatment. The result - the kidney is lost - an avoidable tragedy. Thank goodness things are starting to change.'

PHOTOGRAPHS: IAN MASON

Five years ago, surgeons at the Lukas Hospital in Neuss, Germany, used water jet dissection for visceral surgery for the first time. Dr Bernhard Lammers, head of the hospital's General and Visceral Surgery Department, describes subsequent experiences with this procedure and possible future developments

## WATER JET DISSECTION

'Water jet dissection enables us to separate organ structures using a water jet of around 0.1cm diameter. This anatomically suitable tissue penetration allows for different physical characteristics, for example, structure, firmness and elasticity of the organs,' Dr Lammers explained. 'For instance, the liver, with its soft parenchyma, is dissected with a water jet pressure of 30 bar, which means the blood vessels in this area are preserved and can be supplied separately. Depending on the type of tissue the water jet pressure can be varied between 20 and 40 bar. In the beginning we hoped to use this method for the clean, blood-conserving preparation of malignant tumours, particularly in resections of the liver, kidney and rectal tumours. Over the years, the method has fulfilled all our expectations - and more.'

### Advantages

'One advantage lies in surgery for liver metastases. With many metas-



Bernhard Lammers

tases in the left and right lobes of the liver we can now carry out larger resections, thanks to this tissue-preserving type of dissection, and we therefore we can remove more liver metastases. The incredible precision in the removal of malignant cells and preservation of healthy tissue achieved with the water jet has astonished us. The fact that out of a total of 100 operations the blood supply to the liver had to be stopped

during only one of those operations is further proof of how precise the method is. In all other cases, the liver's arterial supply was maintained throughout the whole surgical procedure. We also have been able to significantly lower the amount of blood loss occurring during surgery. On average, patients lost around 350ml, and around 80% of our tumour patients did not need any blood transfusions or plasma. This presents an enormous relief for the patients' organs.

'We have also found that, in general, patients recover from this type of surgery much faster. In addition, there is definitely a lower rate of infectious complications. Problems with liver function or liver failure hardly ever occur. A further positive effect has been seen in surgery on rectal carcinoma. As the nerves are protected during this type of surgery, 97% of patients who underwent resection of the rectum with total excision did not require a catheter. Before the introduction of water jet dissection around 50% of patients left hospital with a catheter! We can say with confidence that due to water jet dissection the healing process is faster and patients are mobilised quicker. Apart from the obvious health benefits to the patients, there is also a cost-saving element as patients' hospital stays are reduced.'

### The future

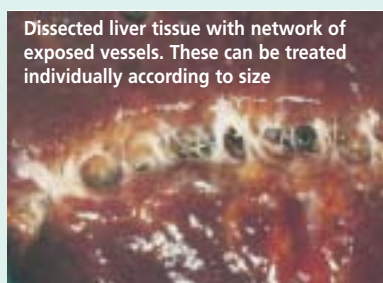
'Over the last few years this method, and its uses, have developed and evolved continuously. Apart from visceral surgery, the method is now also increasingly used in urology, for instance in prostate surgery. We continuously exchange information and experiences with colleagues in different medical fields, so there are other developments, as well. We are always curious to see what other positive surprises this procedure will have in store for us.'

Interview: Denise Hennig, European Hospital

## Waterjet surgery supplements ERBE's operating theatre product range

ERBE's core competence is electrosurgery. For about five years ERBE Elektromedizin GmbH has extended its product portfolio to include waterjet technology, which enables surgical interventions with optimised preservation of nerves and vessels.

Waterjet surgery has become established in many surgical disciplines and offers not only extremely selective dissection but many other advantages. In addition to low intra-operative blood loss, operating times are reduced, particularly in general, visceral and orthopaedic surgery. Full details: [www.erbe-med.de](http://www.erbe-med.de)



## AWARDS



Peter Iblher



Hanns Iblher

## BROTHERS RECEIVE DGA's THIEME TEACHING AWARD

Germany - Anaesthetists Peter Iblher and Hanns Iblher, who work in the anaesthesiology departments of the Schleswig-Holstein University Hospital, Lubeck, and the Frauenfeld District Hospital respectively, have received the *Thieme Teaching Award* from the Deutsche Gesellschaft für Anästhesiologie und Intensivmedizin\* (DGA). The 5,000 euros award, sponsored by the scientific publisher Thieme, was presented to the brothers in recognition of their efforts to organise emergency medical seminars held by medical students for medical students.

\* The German Society of Anaesthesiology and Intensive Care Medicine



# DRUG, VACCINE AND SURGERY

Obesity is a burgeoning nightmare for everyone involved in health-care delivery.

Efforts to tackle this ballooning health problem, which leads to so many others, include the development of a vaccine, as well as drugs that can reduce the appetite. Recently, for example, a drug said to control appetite by blocking activity in the brain area that regulates the body's energy balance and ability to break down sugars and fats in the blood - and which reduced the weight of four in 10 people by 10% in clinical trials - became available in the UK, where over 1.2 million people are reported to be morbidly obese. (NB: the drug still needs approval from the National Institute for Clinical Excellence (NICE), before it can become available to all National Health Service patients.)

Meanwhile, a vaccine against obesity could be in the offing. Scientists at the Scripps Research Institute, in California, have reported their development of a method to make the immune system produce antibodies that attack ghrelin, a recently discovered hormone that decreases

energy expenditure and fat breakdown. Given the vaccine, fat rats ate normally yet lost weight.

By **Brenda Marsh**, Editor,  
European Hospital

energy expenditure and fat breakdown. Given the vaccine, fat rats ate normally yet lost weight.

However, for many who cannot respond to nutrition control and increased exercise, another possible route is surgery. The options include a gastric bypass or bariatric (or lap band) surgery. Both are laparoscopic procedures. During a gastric bypass a small stomach pouch is created and a small intestine is grafted on to it, so that food will not only bypass the stomach, but also much of the intestine.

In bariatric surgery, an inflatable band is fixed around the stomach, thus dividing it into two areas. By forming a smaller pouch at the top, less food can be taken in but the patient feels no continuing hunger. The food then moves into the lower portion of the stomach and digestion continues normally.

The band can be inflated with saline solution so that the opening to the lower chamber decreases, again increasing food restriction. Generally the band needs two adjustments, the first about six weeks after surgery.

During the recent annual meeting of the *Society of American Gastrointestinal and Endoscopic Surgeons*, George Fielding MD, of the Surgical Weight Loss Programme, at New York University Medical Centre, USA, presented initial results on using laparoscopic bariatric surgery to treat obese teenagers.

Since 2001, 46 female and 12 male teenagers received lap band surgery within the programme. Their ages ranged between 13-19 years. Before the surgery, the average weight of the group was 300 pounds, and the average body mass index (BMI) was 51 kg/m<sup>2</sup>.

Many suffered obesity-related co-morbidities, usually asthma, depression and dyslipidaemia.

Surgery averaged 35 minutes. Most patients were discharged within 24 hours.

There were no acute re-admissions or repeat surgery. In post-surgery follow-ups, which began three months later and continued for four years, the patients' weight loss steadily

progressed. After a year, average weight dropped from 300 to 211 pounds (average loss: 57%) and BMI had reduced by 18 points. In addition, Dr Fielding reported that, although two cases needed antidepressants, all co-morbidities resolved in that year.

The programme's study also suggests this surgery is safe. Only two lap band slippages occurred, there was one case of leakage and

two of hiatus hernia.

Also presented at the meeting, another study showed similar results from using Roux-en-Y gastric bypass surgery.

In this Brazilian study - involving 42 obese youngsters, aged 13-18 years, also had a several co-morbidities, which included diabetes, high serum insulin, depression, hypertension, asthma, cholelithiasis,

arthropathy, and reflux disease - the average hospital stay averaged 30 hours. No intra-operative revisions were needed. There were no intra-operative complications, conversions or deaths.

48 months later, the patients' average BMI had dropped from 45 kg/m<sup>2</sup> to 23.5 kg/m<sup>2</sup>. Weight did not rise, nor was any malnutrition observed.

4,300,000 cases under management

## One proven cardiology solution

Thousands of physicians use Agfa Heartlab Cardiovascular to seamlessly connect to the complete cardiovascular patient record. The system provides fast access to patient information, diagnostic images and clinical reports—on the Web. Agfa Heartlab Cardiovascular saves time and improves departmental workflow. So you have more time to concentrate on the care of your patient.

Visit Agfa at World Congress of Cardiology 2006, Stand #K170  
September 2-6, Barcelona, Spain

**AGFA**   
HealthCare

Visit Agfa at [www.agfa.com/healthcare](http://www.agfa.com/healthcare).



# PULMOTENSION

EU MULTIDISCIPLINARY LUNG RESEARCH PROJECT  
AIMS TO CURE PULMONARY HYPERTENSION

Pulmonary hypertension (PH) describes a group of chronic, prolonged crippling and fatal vascular diseases. It is characterized by high blood pressure in the lung vessels leading to right heart failure. PH often affects young or middle-aged patients, who suffer progressive loss of exercise capacity and dyspnoea. As a result, this serious lung disease represents a major burden on our healthcare systems.

At the beginning of this year, the multidisciplinary lung research project 'Pulmotension' was granted European Union (EU) funding of

lung experts work "from bench to bedside" or "from the molecule to the patient", said Werner Seeger, Head of the University of Giessen Lung Centre (UGLC) of the Justus-Liebig-University of Giessen, Germany. 'Over the next four years, we aim to uncover underlying molecular pathways of PH, identify distinct targets for anti-remodelling therapy, foster drug development based on these targets in alliance with industrial partners and exploitation facilities, and carefully test these new treatment options in preclinical



At a meeting co-ordinated by Professor Werner Seeger, Head of the University of Giessen Lung Centre (UGLC) at Justus-Liebig-University, representatives from the participating institutions elected a central steering committee and initiated research strategies, clinical trials and a European PH Tissue Bank and Registry

11.4 million euros, over a four-year period to better understand and find a cure for this major health problem. Pulmotension integrates 31 institutions at leading EU centres, in association with industrial partners in 12 European countries.

This pan-European initiative allows the collaborating researchers to investigate basic science questions in terms of clinical applicability and provides a unique potential for scientific breakthroughs, technological advances and new treatments for pulmonary hypertension. 'In this translational research concept the

and clinical trials. This is a huge but thrilling organizational challenge for all of us.'

The combined expertise in Pulmotension extends from the initial discovery of gene mutations in PH to the establishment of new therapeutic regimen of PH. These include the discovery of BMPR2 mutations in PH, an effort led by Professor Richard Trembath (King's College, London, UK) or the introduction of sildenafil (Viagra) into the treatment of PH by a team of physicians led by Professor Friedrich Grimminger (UGLC, Germany).

Details: [www.uglc.de/eu-six.html](http://www.uglc.de/eu-six.html)

## Community acquired pneumonia

BinaxNOW tests quickly identify pathogens



Community-acquired pneumonia (CAP) is a major health problem globally, with mortality rates as high as 30%. For most CAP patients, the main problem is that the causative organism is unknown. Although early, correct identification could result in immediate, appropriate, targeted therapy - reducing mortality, healthcare costs, and lowering the use of broad-spectrum antibiotics that could lead to resistance if overused - this usually involves lengthy laboratory investigation and therefore considerable time.

Unipath, which produces the BinaxNOW range of tests, reports that these are simple, highly sensitive tests to rapidly detect CAP and other respiratory infections. 'Streptococcus pneumoniae and Legionella tests are easy to perform, require no additional equipment, give results within 15 minutes and require urine samples. Other BinaxNOW tests for respiratory infections include Influenza A & B, respiratory syncytial virus (RSV) and Streptococcus pyogenes (Group A Strep). The sample type varies accordingly with the assay. Typical sample types include nasopharyngeal and throat swabs.'

Further details: [www.unipath.com](http://www.unipath.com)

## ASTHMA

Bavaria's novel care programme for youngsters

Thousands of children are hospitalised annually due to acute asthma attack. Special treatment, adapted to their individual needs, could prevent such emergencies.

To that end, a new care programme for asthmatic patients, aged 2-18 years, has been set up by Techniker Krankenkasse (TK), a German public health fund, in partnership with paediatricians in the PaedNetz-Bayern association; the asthma centre CJD Berchtesgaden, and the Santa Maria Clinic in Bad Hindelang-Oberjoch.

Within this integrated care programme paediatricians also offer patient's parents special training courses in relevant techniques for inhalation and tension release, as well as the use of medication.

'The participating doctors have special qualifications and are informed about the course of disease of each individual patient,' explained Helmut Heckenstaller, head of TK in Bavaria. 'Thorough care that is organised and overseen by the paediatrician guarantees that treatment is provided quickly and effectively.' In addition, he added, 'If necessary, we can complement out-patient treatment at our partner institutions in Berchtesgaden and Bad Hindelang-Oberjoch, where

children can visit so-called asthma camps with their parents and siblings. Beside trainings courses, the patients partake in special sports programmes

where they learn how to ideally map out their recreational activities.'

The centres also provide schools, so that children do not miss their education during their stay.

Details: [www.tk-online.de/lv-bayern](http://www.tk-online.de/lv-bayern) and [www.paednetz.de](http://www.paednetz.de)



## The extracorporeal lung

Acute lung failure results in a 30-40% mortality rate. Along with this, the use of conventional mechanical ventilation could result in damage to lungs and other organs, which might take years to heal.

German medical technology firm Novalung GmbH (est. 2002) produces extracorporeal artificial lungs - such as the 'Interventional Lung Assist' (iLA) device, which 'breathes' for a patient, taking the strain off diseased/damaged lungs and giving them time to recuperate.

Recently, Novalung invited about 40 leading international lung specialists to attend its first lung symposium, to discuss new treatment methods for lung failure. Clinical, economic and ethical aspects of artificial ventilation for diseased/damaged lungs were discussed, along with measures and techniques to assist their regeneration. Professor Luciano Gattinoni, intensive care specialist at Milan University, said: 'The potential for treating lung failure has not yet been fully realised.' This, he added, is particularly true of lung protection using extracorporeal ventilation by means of an artificial lung, still used far too little despite its obvious benefits.

Dr Stefan Fischer, of the Hanover Medical School (MHH), reported on the use of the Novalung iLA extracorporeal ventilation system for patients on the lung transplant waiting list who had gone into potentially fatal lung failure. 'Without this technology,' he said, 'it is highly unlikely that those patients would have survived until a transplant could be performed.'

At Regensburg University Clinic over 130 of these artificial lungs have helped patients following acute lung failure. Professor Thomas Bein said: 'The option of inserting cannulae into the bloodstream to connect the artificial lung must be weighed up against the risk of conventional ventilation methods.'

In preparation for the second symposium in November, three working groups were formed to prepare suggestions regarding indicators for the use of artificial lungs (e.g. acute lung failure; acute infections in chronically diseased lungs; bridging the period up to lung transplantation).



International lung specialists meeting in Schloss Haigerloch, Germany

NOVALUNG

## EUROPEAN RESPIRATORY SOCIETY CONGRESS

2-6 SEPTEMBER 2006

I am very pleased to introduce you to the of the European Respiratory Society (ERS) in Munich, Germany. This summer Germany hosted the football World Cup. Likewise, it is going to host a worldwide event in respiratory medicine. There should be a link between the two events! Perhaps it is the following message that makes us think positively. To play football at a high-quality level one needs very good lung health, which can be obtained by prevention (e.g. never smoking) and by the best disease treatment (e.g. asthma control).

Welcoming attendees to the 16<sup>th</sup> Annual Congress ERS Congress, to be held in Munich, Germany, ERS President Giovanni Viegi pointed out that the event celebrates a 40<sup>th</sup> and 25<sup>th</sup> anniversary related to ERS predecessors. 'In 1966, the European Society for Clinical Respiratory Pathophysiology (SEPCR) was founded in Prague, whilst in 1981 the European Society of Pneumology (SEP) was founded in Italy. The two merged in the UK in 1990 to give birth to the ERS.'

Although the ERS is still predominately based in Europe, its members hail from over 100 countries. 'Respiratory diseases are still a

huge burden for our countries,' he points out. 'As reported in the ERS European Lung White Book, the World Health Organization estimates that in 2020, twelve million people will die annually due to lung diseases. This corresponds to about one in every six deaths. Respiratory physicians, scientists and allied professionals have a huge challenge in front of them, to increase their efforts in order to expand the awareness of the needs for more research and prevention, better treatment and better rehabilitation, on behalf of respiratory patients.'

The event, prepared by the president and congress chairs Ulrich Costabel and Karl Haeussinger, as well as the ERS scientific assemblies and staff., will be attended by members and delegates from over a hundred countries. They will hear of new discoveries in basic sciences; appreciate the usefulness of guidelines and standard protocols in clinical medicine,' Giovanni Viegi points out. They will also learn about the effects of risk factors in epidemiological surveys - and much else.



Giovanni Viegi



# High-tech plaster for analgesic therapy

It sticks to the skin like a plaster, but this credit-card sized innovation contains an entire patient-controlled drug-delivery system. Developed for post-operative pain management, Ionsys, manufactured by Janssen-Cilag, was the product highlight at the 53rd German Anaesthesia Congress, in Leipzig. **Holger Zorn** reports.

Intravenous patient-controlled analgesia systems (IV PCA) are the current gold standard for post-operative pain management. This pre-programmed and electronically controlled pump system, called a 'pain pump', allows the patient to push a button to intravenously administer small doses of analgesic. The patient can repeat this procedure as often as he wishes, until an acceptable level of medication has been reached. Certain risks are associated with this system, in particular incorrect programming of the machine, an incorrect analgesic solution, or problems with the intravenous access.

A new procedure aims at reducing these risks: the patient-controlled transdermal analgesia (PCTA) sys-

VitaClip, the 'pain pump'



tem. The credit-card sized system (Fig. 1) is applied to the patient's arm or chest and functions like an IV PCA – however without an IV access. The system comes pre-filled with the analgesic fentanyl and is pre-programmed. By pushing a button, 40 micrograms of the medication are released, using a low-intensity electrical current of 170  $\mu$ A (so-called iontophoresis), and the dose is transported through the skin over a period of ten minutes. During that time, the system does not respond to further prompts for medication release. Thus an increase of the dosage by the patient is excluded. 80 doses total can be administered. The number of doses administered is identified semi-quantitatively and displayed via an LED.

PCTA has been proven to be effective and safe compared with a placebo (Chelly JE, Grass J, Houseman TW, Minkowitz H, Pue A (2004) *The safety and efficacy of a fentanyl patient-controlled transdermal system for acute postoperative analgesia: a multicenter, placebo-controlled trial*. *Anesth Analg* 98:427-433) and compared with the standard procedure the patient-controlled intravenous analgesia (Viscusi ER, Reynolds L, Chung F, Atkinson LE, Khanna S (2004) *Patient-controlled transdermal fentanyl hydrochloride vs intravenous morphine pump for postoperative pain*. *JAMA* 291:1333-1341).

Stefan Grond, Professor of Anaesthesiology at Martin Luther University in Halle, Germany, considers this system '...an important step towards empowerment of the patient'. Nurses and physiotherapists will also welcome this innovation because it facilitates and increases

mobility of the patients - since an infusion pump is no longer required.

Vita-Clip (Figure 2) - developed and produced by Serumwerk Bernburg - is another innovative plaster that can simplify the work of personnel. This plaster induces external vascular occlusion and consists of a silicone support, with a silicone lens

in the centre and a reservoir under this, with a foil at the base, to which skin adhesive has been applied.

The skin is no longer directly punctured - but the silicone lens. If the needle is removed at the end of treatment, the reservoir under the lens fills up with a little blood from the puncture canal. This causes an extracorporeal haematoma, which presses the foil against the skin and stops bleeding, without having to be pressed by hand. Professor Reinhard Weidhase, Manager for Innovation and Registration, considers this to be particularly advantageous for dialysis patients.

The silicone lens increases the visi-

bility of the puncture site, so that a dialysis shunt is hit more precisely and not damaged. The puncture needle is stabilised, reducing pain. Subsequent bleeding from the shunt is reliably avoided. The side of puncture remains sterile for a longer period and infections are reduced. Last but not least, time is saved, as neither the personnel nor the patient has to apply pressure by hand. The first users have reported that the skin tolerability is very good, particularly when it is thin and atrophic. They say that it is very comfortable to wear, as they can take a shower or bath after dialysis (*Source: Dialyse aktuell* 2006; 10 (3): 52-53).



Infectious Disease Testing? We've got it covered.

## BinaxNOW<sup>®</sup>

Binax is the world-wide leader in rapid respiratory diagnostics. Our passion for science and the accurate diagnosis of infectious disease is the foundation of our BinaxNOW product line - one of the broadest in the industry. Our cutting edge technology allows us to create new paradigms for rapid, in vitro diagnostics that allow pathogen-specific diagnosis and targeted treatment, thereby helping to mitigate antibiotic resistance and improve patient outcomes. We know that preventing the spread of infectious disease is a lofty goal, but we are confident that our research and scientific collaborations will indeed yield new diagnostics that will improve global health. And our drive to develop superior, enhanced technologies to address unmet medical needs is fueled by that vision.

When the result is critical, so is the test.

[professionaldiagnosics@unipath.com](mailto:professionaldiagnosics@unipath.com)

[www.binax.com](http://www.binax.com)



Visit us at the Congress of European Respiratory Society, Munich, September 2-6, 2006 at stand A04



# An all-out attack on auto-immune disease

Although auto-immune diseases are the third most common cause of death after cardiovascular diseases and cancer, there has been a lack of focused, results-oriented fundamental research and collation of interdisciplinary knowledge at an international level. However, the foundation of the AESKU.KIPP Institute, based in Wendelsheim, Germany, presents a platform to initiate and co-ordinate international auto-immunity research projects. As the main initiator of this organisation, and Chairman of the Board of the interdisciplinary auto-immunity research association AIRA e.V, Dr Torsten Matthias describes the Institute's foundation and objectives



Dr Torsten Matthias (right) with AIRA e.V. Deputy-Chairman of the Board, Dr Torsten Witte, of Hanover Medical University

AESKU Diagnostics, founded in 2000, now offers, the largest product range of innovative test systems for auto-immune diagnostics, worldwide, Dr Torsten Matthias explained. 'The development of innovative and market-driven products for auto-immune diagnostics was, and still is our clear objective. At the same time we are involved in the development of new therapy procedures and in fundamental research, because we are convinced that you can only really develop effective methods for diagnosis, prognosis and therapies if you understand all aspects of a disease and actively use the synergies between different medical disciplines. We wanted to set up an independent research institute, on an international level, to promote further developments in this area.' **Will the Institute's research be oriented around the requirements of healthcare organisations for diagnoses and therapy procedures?** 'Definitely not. The institute will work independently, with the objective of continuously, interdisciplinary and internationally collating and developing the basic findings on auto-immunity. Auto-immune diseases are very complex. The previous diversification of research in the field of auto-immunity presents a significant problem for research. Some researchers specialise in T-cells, others carry out research on B-cells, whilst other researchers focus on certain organs, such as the liver. We want to bring these researchers – doctors, biologists and biochemists – together, because each is such an expert within his/her own field that they sometimes find it difficult to look beyond their own specialist fields.

'The Institute will streamline this research and information, and our findings will offer new impulses for diagnoses and therapies, as well as comprehensive data. This will happen through international

research co-operation and developmental projects, for which we can offer the necessary premises and staff. The main focus of our activities will be research into the causes of auto-immune diseases. Building on this, we then aim to develop new therapy concepts and test systems for the early diagnosis and prognosis of auto-immune diseases through clinical research co-operation.

'A further focus is intensive knowledge management and advanced training for doctors, in the form of seminars or PhD degree courses. There will also be information events for patients, to promote the general awareness around auto-immune diseases.' **You mentioned the complexity of auto-immune diseases. What is the clinical pattern?**

'A healthy body has a defence mechanism against viruses and bacteria, the immune system. If this is intact, such intruders are recognised by antibodies and destroyed. With auto-immune diseases the organism of those affected are reprogrammed: The antibodies lose their ability to distinguish between our own and foreign tissue, so they begin to attack the body's own tissue or organs. Some auto-immune diseases are directed against certain organs such as the thyroid. The more severe auto-immune diseases are systemic, such as Lupus Erythematoses. With this type of the disease it is not just certain organs that can be affected but also blood vessels and the brain. Further typical auto-immune diseases are diabetes mellitus type 1, rheumatic arthritis or multiple sclerosis. It is still not known why this reprogramming of the immune system occurs and it is one of the clearly defined objectives of our research institution to discover this.'

**How do you finance such a project?**

'The Institute is financed as a public-private partnership. Apart

from my involvement on the financial side, we also have the support of our Swiss private investor Dr Karl-Heinz Kipp, which has secured the future of the institute for the first few years. The motivation for both of us is not just our belief in the need for such an institute but also our belief in the success of this project.

'The Rhineland-Palatinate's Ministry of Economics is also subsidising equipment purchases for the laboratory at the Institute, depending on its current needs at any given time. In the medium and long term, public funds, donations

and co-operation with various private companies will also go towards financing the Institute. Finally, and as soon as possible, we hope to put the results of our research into practice by developing new products that can be licensed for the public good.

'Through Dr Kipp's support, as a first step towards developing the Institute, we have been able to set up the first professorship for auto-immunity, at Tel Aviv University. This chair has been awarded to Professor Yehuda Schoenfeld, who has made a name in the field of auto-immunity through numerous publications and worldwide guest professorships. We are also glad to have Professor Schoenfeld on our scientific advisory board. The board is made up of ten of the world's best researchers and therefore represents an international network of competency.'

**A current trend is to draw together laboratory, bioscientific research and imaging fields.**

**Might companies, such as Siemens, which is expanding its position in the growth area of molecular diagnostics, show interest in the Institute?**

'Siemens would definitely be an interesting partner, because it is trend-setting. The company has purchased the Diagnostic Products Corporation, in Los Angeles, as

well as Bayer Diagnostics, which has focused a lot of competence. In return, our organisation can work very promptly, and our research can concentrate on assumed niches. Assumed because many of these "niches" have actually already become the focus of attention - such as rheumatoid arthritis, which affects one percent of the entire world population. Within these niches we research the parameters that are decisive for diagnosis.

'There are still no reliable test systems for the diagnosis and prognosis of many auto-immune diseases. We see it as our responsibility to develop these, so that in the future we can achieve an early and clear diagnosis, because the earlier a disease is diagnosed the earlier it can be treated. This sounds logical, but up until a few years ago wasn't always acknowledged as a matter of course.

'We hope to continuously improve diagnosis and therapy standards with innovative products and to promote awareness and understanding of the medical and economic importance of auto-immune diseases through the AESKU.KIPP Institute

Interview: Daniela Zimmermann

## DISEASE PREVENTION BAVARIAN HEALTH POLICY AIMS TO CUT COSTS

*The cheapest patient is a dead patient - cynical but true. If we cannot subsidise smoking for ethical reasons, then we have to increasingly invest in prevention - and not only for smokers. This begins with every individual, ideally during childhood. That was the starting point for the symposium 'Preventive Medicine - Costs, Uses, Technology', organised by Bavaria Innovative (Bayern Innovativ), in Nuremberg.*

Representatives from the world of politics, hospitals, medical insurers, pharmaceutical and medical technology industries, as well as doctors and engineers, agreed on an immediate need for action and discussed the best ways to proceed. What is clear is that the stresses of work and daily life, in terms of demographic developments, are calling for preventative medical measures to maintain health.

The Bavarian Ministry of the Environment, Public Health and Consumer Protection came up with a health initiative with four priority objectives: smoke-free life, responsible alcohol consumption, healthy diet and exercise, as well as healthy working environments. Children and adolescents are the target groups, but influence is also to be exerted via health management in the workplace. Up to now, preventive measures in the healthcare system have always been at a disadvantage, compared with curative measures, due to the timeframes involved - no profitable, private company will invest money today with a view to only possibly being able to see a return on their investments in thirty years time. Politicians need to come up with an affordable framework for healthcare.

But even in acute medicine,

By Anja Behringer

prevention is helpful - the recognition of people's predisposition for illnesses, and therefore a confinement of risks, need to be addressed. Taking strokes as an example, Professor Dirk Sander, of the University Hospital Rechts der Isar, at Munich's Technical University, explained that, in Germany, every year around 150,000 - 200,000 people suffer strokes. This makes the problem the third most common cause of death after coronary heart disease and tumours. However, the risk factors for patients are not sufficient addressed by doctors as the Euroaspire-I and -II studies proved. These involved examinations on 3,000 patients in nine European countries between 1995 - 1996 and 1999 - 2000. In both studies, the risk factors smoking, high blood pressure and obesity occurred unabatedly - and this in view of the fact that, apart from medicinal treatment options, there are also numerous evidence-based, non-medicinal treatment options for primary and secondary prevention of strokes, such as diet, surgery for carotid stenosis or increased levels of physical activity.

From a cost-benefit aspect it is important to identify patients who are at risk as early as possible. Professor Sander named two important, easily applicable and non-invasive procedures for the early detection of arteriosclerotic vascular changes - the duplex scan of neck vessels, with measurement of the thickness of the walls, and the Doppler scan for the

determination of the 'Ankle-Brachial-Index' (ABI) as parameters for asymptomatic peripheral arterial disease. For cancerous diseases, Professor Heinrich Iro, of the Ear, Nose and Throat Clinic, University of Erlangen-Nuremberg, named ultraviolet radiation, genetics and infections as additional, possible causative risk factors, if these are not controlled as part of preventative measures. Vaccinations are still the top choice when it comes to prevention, but vaccination rates among the general population are currently decreasing. This may partly be due to the fact that patients move frequently and doctors need to take a more active roll in ensuring that vaccinations are kept up to date.

Although it is expensive, computed tomography makes a contribution towards prevention through delivering ever more accurate and detailed images, which helps with the early detection of diseases. Costly again, but highly efficient for patients through its focus on the individual, is laboratory diagnostics. However, cutting costs in this area can turn out to be misguided and expensive, because treatment costs may rise significantly if patients are not being given the correct medication from the beginning of their treatments, as Dr Thomas Baier, of Roche Diagnostics, in Penzberg, explained. He complained that: '... in Germany, none of the new diagnostic methods (in vitro) have been allocated a payment code for the last six years'. However, patients can only be prescribed the most effective medication at an early stage if a tumour is analysed for immune history, as well as molecular-biologically, which in turn will lower treatment costs.





# DIAGNOSTIC IMAGING TOOLKIT FROM CANADA HEALTH INFOWAY

assurance and performance testing managers and security specialists. While some of the processes described are specific to the Canadian health system, most of the material is useful to any healthcare institution.

Canada is making this extraordinary resource available free of charge to any publicly (government) owned hospital or government health agency in the world. It is necessary to first complete a free reg-

istration at E-Health KnowledgeWay (<http://knowledgeinfoway-inforoute.ca/CHI/Pages/UserRegistration.aspx?Lang=English>). After registration is accepted, it is necessary to enter the E-Health KnowledgeWay website and submit a new registration for access to the DI Toolkit.

Why is Canada making this valuable information that is sold by professional consultants available free of charge?

'The faster that digital technology can

be adopted for healthcare, the more rapidly spin-off benefits will be,' Van Essen said. 'The DI Toolkit was an expensive resource to develop. Canada Health Infoway would like to see it utilised by any healthcare organisation that can benefit from it. We think that the DI Toolkit is truly unique and will help others save money and time as they convert to PACS. Infoway is proud to share this resource with the world.'

Canada Health Infoway is a not-for-profit organisation founded by the Canadian government in 2001. Its mission is to promote and accelerate the adoption of electronic health information systems for the purpose of improving healthcare throughout its provinces and territories. Infoway has been allocated \$1.02 billion (Canadian dollars) in federal government funding to assist local health

By **Cynthia E Keen**

regional agencies and provincial health ministries in the creation of a national electronic health record (EHR). Canada's goal is to establish an interoperable EHR for 50% of its population by the end of 2009.

As one component of this initiative, Canada is in the process of implementing provincial interactive PACS infrastructures between 2003 and 2009. Canada Health Infoway is providing \$310 million (Canadian dollars) of the funding to create enterprise PACS that utilises centralised electronic archives within each province. To date, Newfoundland and Nova Scotia have achieved 97% filmlessness.

Diagnostic imaging is a core component of the Canadian EHR. Because PACS is complex to plan and implement, Infoway funded the development of a 'Diagnostic Imaging Toolkit'. The DI Toolkit is designed to share the knowledge and practical experiences of individual and multi-facility PACS implementation. This information can help minimise the risk, time, mistakes and expense of future PACS projects.

The Internet-accessible DI Toolkit contains over 200 items: business cases, strategic and project planning documents, forms and templates, network requirements, testing protocols, 'how to' documents, and detailed case study reports of experiences in all aspects of the process of planning and implementing a PACS. Jane Van Essen, the DI Toolkit's project manager, said 'Much of the process of implementing PACS is the same, regardless of the healthcare institution or the PACS vendor selected. By sharing transferable information that otherwise would need to be created over and over again, it is possible to significantly reduce the project cost to implement a PACS.'

All documents contained in the toolkit are published in English and French. They are designed for use by hospital and health authority executives, project managers, financial managers, and technical personnel, responsible for recommending and establishing the infrastructure and PACS applications environment. Detailed information is available for use by systems analysts, architects, database administrators, quality

## seca closes the gap.



**seca 657** – digital platform scale for stretchers with integrated and separate undercarriages (dimensions: 800 x 1,470 mm)

**seca 677** – digital wheelchair scale with handrail and roller castors

What a wonderful feeling to have found the last piece of the puzzle! You, too, can experience the same wonderful feeling with the seca range. Because the new platform scales perfectly round off the range for hospitals, rehabilitation centers, homes for the elderly and nursing homes. The new seca 657 – with its large platform – has been specially designed for weighing patients on stretchers whilst the seca 677, with its useful handrail, is easy to transport and stow away. See for yourself: How wonderful it is when the many parts fit perfectly together to form a harmonious picture!

seca gmbh & co. kg. · Hammer Steindamm 9-25 · 22089 Hamburg, Germany  
Phone +49 40 20 00 00 0 · Fax +49 40 20 00 00 50 · [www.seca.com](http://www.seca.com)

**seca**  
Precision for health



# The IMEC transport system

12-month  
pilot  
study  
results



For the past 12 months the 20SGL intensive care unit (ICU) at Nuremberg Hospital North, Germany, has been testing the IMEC (Interdisciplinary Medical Equipment Carrier) transport system, made by TRUMPF Kreuzer Medical Systems. The ICU recent-

ly concluded that the system has made intensive care transport considerably safer and saves up to 40% in pre-op and post-op time. 'The costs alone for the new system have amortized, because it has helped avert equipment crashes and prevent transport damage that would

users of IMEC, they are also contributors to the current quality and functionality of the transport system. The Puchheim-based manufacturer customised it in close collaboration with the users and in accordance to their needs.

Since October 2005, the ICU has been using two IMEC solo transport units for transporting all equipment-dependent patients from the intensive care unit to exam rooms or the OR. The principle of IMEC is to function as a connector between ceiling-mounted and mobile medical supply units, to be compatible with medical and technical equipment of all types and machine brands – from IV management to respiration systems and monitoring systems – and to dock onto every conventional ICU bed. All supply lines and cables are protected against strong pulls or even breakages; the patients remain securely connected to the IV and life support devices during the entire transportation. (The system even provides space for an emergency bag, gas bottle holder and suction system).

Despite a loading capacity of up to 65 kilograms, the unit – consisting of bed and IMEC that can be securely connected in any situation – can be comfortably moved by two nurses. It can be manoeuvred in a tight space and fit into any 3-metre-long elevator.

TRUMPF Medizin Systeme has subsidiaries in Great Britain, France, Italy, the USA, China, and Singapore.

**Sample calculation of savings using IMEC:**

Average number of transports per day	4
Number of working days per annum	220
Time saving per transport	20 minutes
Average hourly rate per nurse	39 €
Time saving per annum	293 hours
Financial savings per annum per person	11,440 €

have developed within just two to three years,' said Markus Ziegler, Deputy Manager of the ICU, who is also responsible for product tests of new medical devices. 'For pre-op and post-op transport, we currently need only about 40–50 minutes instead of 70 – thus saving about 40% in time in the pre-op and post-op phase, as well as during other relocation transports. Overall, the intensive care station documented 31,700 transport minutes in 2005 – initial savings through IMEC included.' Doctors and nurses at the Nuremberg ICU are not only pilot

ly concluded that the system has made intensive care transport considerably safer and saves up to 40% in pre-op and post-op time. 'The costs alone for the new system have amortized, because it has helped avert equipment crashes and prevent transport damage that would

## One-touch testing for electromedical equipment



UK – As an international centre of excellence London's Great Ormond Street Hospital for Children (GOSH) treats about 100,000 children annually. To ensure all electromedical equipment is available, safe and effective, the hospital's Biomedical Engineering department is using an innovative 'braincell' concept developed by Rigel Medical, as part of a formal preventive maintenance protocol that covers around 18,000 electromedical devices.

The braincell technology is linked to the Rigel 277 electromedical tester and uses smart RFID data tags – extending the concept of traditional bar code test systems for the automatic identification and testing of medical equipment.

At GOSH, a central medical equipment register automatically identifies devices due for periodic safety testing in line with the IEC technical standards. When the braincell attached to a device is scanned with a read/write probe, the Rigel 277 tester automatically recalls all previous test information and prompts the engineer to repeat the required test sequence, which reduces test time significantly and eliminates the possibility of errors.

When the test is complete, data is transmitted from the implement to be held in a smart tag, enabling service records to be automatically updated after each routine. The large storage capacity of the tag means that all product information, including asset ID, test class, site and location, previous test date and test engineer, can be recorded and stay with the item for its lifetime.

GOSH also has a specialist internal mechanical and engineering section that designs and develops customised medical instruments, used particularly by research departments and clinicians. Electrical safety testing is carried out routinely on all new equipment, and following any modifications and repairs.

Bhaskar Patil, head of Medical Electronics and Mechanical Engineering at GOSH, pointed out that the hospital's equipment is in almost constant use. 'We aim for a 5% maximum downtime for any equipment needing maintenance, repair or testing. So the Rigel braincell system plays an integral part in this process by providing fast, one-touch retesting of medical equipment. This reduces paperwork enabling our engineers to work at maximum efficiency.'

## New anaesthetic face mask enhancements



Seals and mask sizes are colour coded

EcoMask, produced by the UK-based firm Intersurgical, is a range of single-use non-PVC anatomical anaesthetic facemasks that are lightweight and clearer versions of the reliable rubber facemasks. The company reports that this range has been enhanced by introducing non-slip rings around the full circumference of the mask shell to allow more grip, enabling a gentle but firm downward pressure to facilitate the seal with the patient. Colour coding has also been introduced on the mask seal to correspond with the mask size, speeding selection. Details: [www.intersurgical.com](http://www.intersurgical.com)

## ADVANCED CATHETERS FOR IN VITRO FERTILISATION

Exhibited during National Infertility Day this June, Sure-Pro and Sure-Pro Ultra is a newly launched range of advanced embryo replacement catheters for in vitro fertilisation. These catheters are an evolution in supported catheters, offering clinicians the softer handling of the classic Wallace design with the added benefits of a supporting element and a preformed outer sheath, the manufacturer Smiths Medical explained, adding: 'The new catheters are also visible by ultrasound when used with existing SureView technology. 'Recognising the need for better-designed catheters in this field, Smiths Medical conducted exhaustive customer surveys among IVF specialists to identify their precise clinical requirements as well as those catheter features that could provide supplementary benefits,' said Sally Rogers of Smiths Medical. 'Sure-Pro and Sure-Pro Ultra are the culmination of this work and the most sophisticated IVF catheters available today.'



The Sure-Pro Embryo Replacement Catheter

The new range is supplied in various procedural trays and caters for the following embryo transfer options:

- Single-stage transfer – embryo replacement catheter comprising a supported soft inner catheter and a preformed outer sheath.
- Elective two-stage transfer – includes a flexible tipped obturator loaded inside a preformed outer sheath. Once in position, this can be removed and the supported soft inner transfer catheter can be advanced through the outer sheath.
- Two-stage set for difficult transfers – includes a preloaded outer sheath with a formable stylet, ready for shaping as necessary to negotiate a difficult cervix. The stylet can then be replaced with the soft supported inner transfer catheter.

## VoluCount monitors entire gas usage

Draeger Medical predicts that VoluCount – its new system that accurately measures the consumption of all installed medical gases in all hospital areas, will not only clarify individual departmental usage and identify potential savings, but also determine invoicing of others who use those facilities. The system is also said to make the detection of leaks easier.

The VoluCount is simply integrated into the valve box of the gas management system control unit in a specific area. No additional installations are necessary. Gas management systems ensure that medical gases are available in the right quantity and quality, while valve boxes monitor the gas pressure and vacuum in every hospital zone. The VoluCount records the gas consumption at shut-off valve for an area and identifies the type and quantity of gas used in each hospital zone. Measurements are then sent automatically to the hospital's control centre.

The system also can be connected to the hospital's central alarm management system, which controls the supply of gases.

Two types of sensors are offered with the VoluCount,



NEW

each covering a different measurement range (up to 50 or 450 l/min). To monitor gas flow, one sensor for each specific gas is used in the valve boxes. The sensors are calibrated for air, O<sub>2</sub>, n<sub>2</sub>O and air 8 bar. A menu provides access for setting the counter for each gas and to adjust the alarm thresholds for monitoring flow



# The 9<sup>th</sup> European Health Forum Gastein (EHFG)

**4 – 7 October Gastein, Austria** 'Bringing together experts and politicians is something which should be a matter of course but in reality occurs far too rarely,' says **Günther Leiner**, President of the European Health Forum Gastein - considered a European think tank for health politics and health administration. Quite the contrary will be the case in October, when both experts and politicians will gather to take part in the 9<sup>th</sup> EHFG. Here he discusses some of the key challenges for healthcare provision that will be the focus of the 2006 EHFG

"Following intense disputes between various stakeholders, the Council and the European Parliament reached a Common Position on the directive on the right of establishment and freedom to provide services within the European Union on 29<sup>th</sup> May 2006. However, health services were excluded from the scope of the Services Directive and currently various proposals are being developed to define a new legal framework for health services in Europe, among them a non paper, put forward by the Belgian Minister of Health and Social affairs, Rudy Demotte. This calls for a dual



EHFG President Günther Leiner

approach to legislation in healthcare, which should be legally binding in some areas, whereas the open method of coordination seems more appropriate in other cases. The rules for reimbursement of care provided in another member state should also be clarified.

The initiative is said to be backed by a number of member states, including France, the UK, Germany, Luxembourg, Spain, Portugal and Sweden.

*Health sans frontières* – will provide the first opportunity to discuss this and other current developments in EU healthcare with representatives of the European Commission (EC) member states and other stakeholders in a parallel forum session hosted by DG SANCO. Research results will be presented by the *Europe for Patients* project and the Health and Consumer Powerhouse will look into the responsiveness of systems to patients. The EC will introduce the audience to the future orientations of European policy on health services. The session is designed to provide delegates with sufficient opportunities for discussion and interaction with speakers.

The EHFG has developed into the leading health policy platform in the EU since its beginnings in 1998, attracting close to 600 high-level participants annually. The importance of this opportunity is highlighted by the EHFG's most prominent participant, EU

Commissioner for Health Markos Kyprianou, who said: 'Health threats are no respecters of borders. But if we work together, we can achieve a positive vision of health without borders – health for all throughout Europe, I hope that this forum will once again help us to achieve that aim.'

While increasing patient mobility offers new opportunities for service providers, the World Health Report 2006 predicts that staff shortages

will be a serious challenge for many countries in coming decades. Aided through Single Market legislation, health professional migration will become an important issue in virtually all EU member states. Whilst some countries are actively recruiting staff from abroad, others are finding themselves understaffed due to the outflow of health professionals. The UK, for instance, has experienced significant nursing shortages

in recent years, leading the Department of Health to set nurse staffing increase targets to recruit 35,000 additional nurses between 2004 and 2008. This also involved intergovernmental agreements to recruit actively in some countries. Already in 2002, one third of the total 70,000 NHS hospital medical staff came from other countries. On the other hand, a survey conducted among physicians in *continued on page 30*



## IMAGING GENERATIONS

BE A PART OF IT!

16,000 PARTICIPANTS

92 COUNTRIES

270 SCIENTIFIC AND EDUCATIONAL SESSIONS

1,600 ACCEPTED PROFFERED PAPERS & EXHIBITS

62 % REJECTION RATE

CME ACCREDITATION

25,000 M<sup>2</sup> TECHNICAL EXHIBITION

200 COMPANIES

REGISTRATION ONLINE  
FROM NOVEMBER 1, 2006  
AT [WWW.ECR.ORG](http://WWW.ECR.ORG)

**ECR**   
European Congress of Radiology

**ESR** The annual meeting  
of the European Society of Radiology

March 9–13, 2007  
Vienna, Austria

[www.ecr.org](http://www.ecr.org)



In the booming international medical products market, MEDICA – the world's biggest medical trade fair – is the industry's performance barometer. With ComPaMED, the event attracts around 137,000 visitors and over 4,000 exhibitors from 60 nations.

This year, exhibits and special shows will again include MEDICA MEDIA (Telemedicine), MEDICA meet.IT (IT systems), MEDICA VISION (an innovation forum for research institutes and universities) and the physiotherapy forum

Among the many other highlights will be demonstrations by medical technology and electromedical providers of developments in medical imaging. No other trade fair in the world showcases such a diverse palette of products for use in, for example, ultrasonic diagnosis. Visitors will also be able to test, on volunteers, the latest innovations for improved picture quality. Whether optimised hard- and software, the latest generation of contrast media or the newest transducers, visitors will see the entire range of products at MEDICA.

One latest innovation, for example, is a new laser-based endoscopy method that enables, for the first time, microscopic examination of the digestive tract. This procedure, known as endo-microscopy, provides images magnified up to 1,000 times; until this, the maximum possible level of magnification was 100 times. The process enables images to be generated at cell level – a tremendous advantage in diagnosing problems with the intestinal mucosa and its vessels, and one that would enable considerable reductions in the number of biopsies performed on patients with chronic intestinal complaints.

Such innovations underline why the imaging market continues to grow at a rapid rate. Experts estimate the global market to be 12.5 billion euros and further annual growth rates of at least 4%. The world market for ultrasound alone is worth three billion euros (source: Philips Medical and LBBW). Anyone visiting an ultrasound provider's booth will quickly realise that interest in this topic is not restricted to Germany (with 40,000 machines already in use). The ease of use and relatively low cost of the procedure are attracting interest globally.

If the range of products exhibited is anything to go by, supply is as global as demand – and not only for medical imaging. Together with the medical products sector, this is one field that clearly demonstrates the technical maturity of the market, even in countries where, ten years ago, manufacturers were still exhibiting relatively simple products at MEDICA. Now the show gives the German medical technology and

products industry the opportunity to measure itself against high-performing, ambitious international manufacturers. Whether they come from India, China or the Arab nations, these firms no longer sell merely on price. Instead, with manufacturers from South Korea or Japan leading the way, competitive features have become their main selling point.

The 8th Annual Medical Forum, which includes the highly international medical trade exhibition and runs in tandem with ComPaMED, the international trade fair for the medical supply market, as well as the German language MEDICA Congress and German Hospital Congress, will be held in Dusseldorf, Germany, from 15-18 November. **Wilhelm Niedergoeker**, Managing Director of the Messe Dusseldorf GmbH, previews this year's events

# MEDICA 2006

## Honouring top researchers

The increasing number of registrations for MEDICA 2006 from European countries, including Spain, Italy, Austria, Poland and the Netherlands, and the latest statistics from the relevant industry associations, show that the German and European industries are in tune with the Zeitgeist. In Germany around 7% of the industry's total expenditure is on research and development; the proportion of employees is similarly high. These values are the world's highest.

The effectiveness of German research will be evidenced at the MEDICA opening ceremony, when the German Federal Minister for Research and Education, Dr Annette Schavan, will announce this year's winner of the competition *Innovation in Medical Technology*. The MEDICA VISION show will give details about prize-winners and their projects.

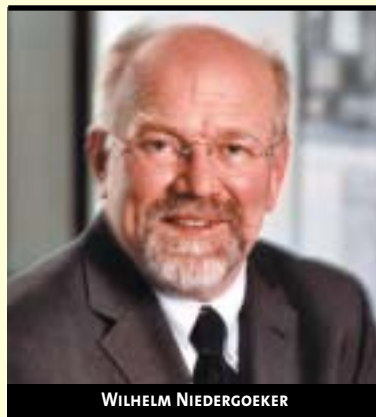
## The Lab Technology and Diagnostics sector: 650 exhibitors

What began with simple applications for blood and urinalysis has become a high-tech field. Despite that, today's products and equipment are considerably easier to use. Modern, compact lab equipment for now enable blood, plasma or serum on reagent carriers, or test strips, to be evaluated using the most diverse range of data from organs (even the pancreas), and validity of results are no longer questioned. Increasingly, the time-consuming and costly transport of biopsy material to a central lab can be dispensed with; analysis data is available immediately at the treatment location.

The 'pocket lab' concept of biochip technology will be high-

lighted. Molecular medicine techniques enable biochips to be used in complex cancer diagnoses and treatments and to determine patients' responses to particular medications. Biomedical tumour marker tests are now available from all leading diagnostics manufacturers.

Whilst current tests are designed



WILHELM NIEDERGOEKER

primarily for diagnosis during illness, in the future, molecular-medical applications could provide important clues for early detection. Mass spectrometry techniques can increase success in screening blood and other bodily fluids for protein and in identifying their relevance as indicators of cancer.

Bearing such advances in mind, no wonder the lab diagnostics market is extremely dynamic. Although varying by world region, its growth lies between 4 - 7%, with a total volume of around 24 billion euros (Europe approx, 9 billion euros, Germany 1.9 billion euros. Source: VDGH).

## IT: Going digital

MEDICA is again the annual trendsetter. Today, experts estimate that hospitals could save up to 30% by using IT, and increasing numbers of

## Your MEDICA 2006 and ComPaMED pass

The pass will be valid for MEDICA, ComPaMED and many events during the German-speaking MEDICA Congress – which includes 200 seminars and courses and over 500 internationally-renowned speakers, making this Germany's largest interdisciplinary medical gathering. Details: <http://www.medica.de> <http://www.compamed.de>

leading technology concerns are entering an IT and communications market that, only a few years ago, was the domain of smaller system providers with specialist knowledge.

At the MEDICA meet.IT Forum selected providers will, for the first time, showcase 'Management Information Systems'. These enable costs generated by a patient during

the course of a hospital stay to be modelled accurately and in real-time. Previously, this was either impossible or extremely inaccurate, as important cost parameters (e.g. material or personnel costs and reimbursements) can change considerably at short notice. New software solutions, based on integrated database systems, enable a dynamic linking of parameters, right through to the simulation of economic processes. These also enable internal cost assignment. For hospital managers attending the German Hospital Conference at MEDICA, this topic promises many interesting insights.

MEDICA 2006 – and in particular the MEDICA MEDIA telemedicine forum – will also showcase new telemedical infrastructures for controlling 'intersectoral communication', i.e. the flow of data and information between hospitals, health-care facilities and doctors' surgeries. Fundamental components include electronic doctors' letters and centrally-held electronic patient records (EPRs).

Presently, Germany is implementing one of the biggest IT projects the country has ever undertaken – the cross-linking of the entire healthcare system, and its patients, via the electronic health card – a project estimated to involve a market volume of between 1.4 and 4 billion euros. From the second half of 2006 about 80 million patients will receive a chip card. Additionally, around 200,000 doctors, 21,000 pharmacies, 2,200 hospitals and over 300 insurance providers will be involved. The card is already being introduced in official pilot regions, and initial experiences almost certainly will be heavily discussed at this year's event.

## ComPaMED 2006

In 2004, this event – which exhibits assemblies/ modules/ components;

drive systems; hoses/tubing; filters; pumps; valves; fittings and technologies for use in the production of medical equipment; raw materials; adhesives; processing; testing systems and verification services; packaging and services – was given its own exhibition hall, and its total exhibition area increased by 53%. In the last two events growth rose by around 15%.

During this, the 15th International Trade Fair for Components, Parts and Raw Materials for Medical Manufacturing, the target is primarily heads of production, R&D departments and other planning personnel. Again there will be a focus on microsystems and nanotechnology. IVAM (the international association of companies and institutes in the field of microtechnology) is organising an exhibition (Hall 8) to feature products from manufacturing, microtechnology, nanomedicine and new materials. Firms will also take part in a 'High-Tech for Medical Devices' forum, supplying information and products for the production of medical technology, microtechnology components and systems, clean room technology, process technology, nanomedical applications, surfaces and material analysis.

While industry specialists visit MEDICA to learn about the latest finished products and equipment for telemedical applications, ComPaMED showcases the innovation behind these new products. For example, last year at ComPaMED, the Helmholtz Institute for Applied Medical Engineering (the AME in Aachen), presented intelligent implants for blood pressure telemonitoring – a chip with a pressure sensor and antennae, used to transmit data and absorb energy. As the entire assembly is only about 5mm long and 2.3mm in diameter, it can be implanted into at-risk patients to constantly monitor blood pressure.

Supplier know-how, as showcased here, is tremendously important, not just for medical technology and product industries, but also for manufacturers of lab technology equipment. Many developments in the 'Lab-on-a-chip' concept would not have been possible without input and solutions provided by suppliers. Important components for the biochip carriers provided by diagnostics manufacturers to process samples contain, for example, synthetic micro pumps to transport sample material and reagents. These were first demonstrated at ComPaMED.

Our new ComPaMED website has a wide range of online services, and the constantly up-dated exhibitor database, in addition to general information, provides online showrooms containing detailed information about products exhibited by participants.

*continued from page 29*  
the Czech Republic, Hungary, Lithuania and Poland in 2002, revealed that between 1/4 and 1/2 of respondents indicated they were thinking of migrating to other EU countries, potentially resulting in a significant brain drain. The OECD is currently conducting a project on health workforce and migration and will present preliminary results in a workshop at the EHFG. Moreover, the opening plenary session will give the floor to high-level decision makers and experts to discuss the policy implications of these migratory flows for source and destination countries.

EU structural funds, especially the European Regional Development Fund (ERDF), will be eligible to fund investment in healthcare from 2007, giving the new member states the possibility to invest in a sector that has remained somewhat underinvested. The EHFG offers the opportunity to share knowledge for implementation in a parallel forum session, designed as a follow-up to last year's satellite event, and to discuss how to take the right decisions in future. Under the convergence objective, the ERDF will seek to support sustainable regional and local economic development and employment by focusing on a num-

ber of priorities. The Council's Common Position of 12 June 2006, since been approved by the European Parliament, lists 'investments in health and social infrastructure which contribute to regional and local development and increasing the quality of life' as one of 11 key areas for action. Medical equipment, physical conditions in health institutions as well as the specific health challenges of individual countries require considerable improvement to reach levels comparable to those of the old member states.

Other sessions will discuss innovation in health policy, European

HTA, HIV/AIDS, chronic and rheumatic diseases and pandemics. The Finnish EU Presidency will present its 'Health in all Policies' strategy, based on the enhanced inclusion of health requirements into other policy areas. The upcoming German EU Presidency will also host a workshop to present its presidency agenda. DG SANCO will host a session to report on developments on nutrition and physical activity since the Commission's parallel forum on Nutrition at the 2005 EHFG. In addition, there will be workshops on cross-border exchange of best practice, paediatric pharmaco-vigi-

lance and ageing, health and long-term care in Europe.

High-ranking politicians such as the Austrian Minister for Health Maria Rauch-Kallat, Lithuania's Zilvinas Podaiga, or the UK Secretary of State for International Development, Hilary Benn, are expected to attend, with WHO Regional Director Marc Danzon and a multitude of leading health experts, e.g. Ilone Kickbusch, Martin McKee and Klaus-Dirk Henke making the EHFG one of the rare opportunities where politicians and experts really do come together.





2006

SEPTEMBER

2-6 Barcelona, Spain  
World Congress of Cardiology

Joint meeting of the European Society of Cardiology (ESC) Congress 2006 and the World Heart Federation's (WHF) XVth World Congress of Cardiology. Over 25,000 attendees expected.

9-16 San Francisco, USA  
16th International Congress of Neuropathology

www.icn2006.org/info.html  
10-14 Sydney, Australia  
6th International Congress of Neuropsychiatry (INA 2006)  
www.ina2006.com

10-14 Melbourne, Australia  
17th International Association for Child and Adolescent Psychiatry and Allied Professions Congress 2006

www.iacap2006.com/  
11-16 Cluj, Romania  
10th European Conference of Medical and Health Libraries  
www.eahilconfcluj.ro/index.html

12-16 Cape Town, S. Africa  
24th International Congress of Radiology (ICR 2006)

www.isr2006.co.za/  
12-16 Innsbruck, Austria  
18th Congress of the European Sleep Research Society  
www.esrs2006.at

13 Istanbul, Turkey  
5th Congress of the European Federation of the International Association for the Study of Pain Chapters

13-15 Washington DC, USA.  
Consumer Driven Healthcare Summit

www.consumerdrivensummit.com  
13-17 Lisbon, Portugal  
The European Association of Coloproctology 8th Scientific and Annual General Meeting  
www.eacp.org

14-17 Copenhagen, Denmark  
42nd Annual Meeting of the European Association for the Study of Diabetes (EASD) 2006

www.easd-cph-malmoe.dk  
14-19 Genoa, Italy  
Association for Medical Educators in Europe Meeting (AMEE) www.amee.org

16-21 Montreal, Canada  
International Academy of Pathology Centennial Congress

www.iap2006.com/  
16-20 Paris, France  
19th Congress of the European College of Neuropsychopharmacology  
www.ecnp.nl

17-21 Cairo, Egypt  
12th World Congress of the International Society of Sexual Medicine (ISSM)

18-20 London, UK  
Migraine Trust International Symposium www.migrainetrust.org

18-22 Berlin, Germany  
56th German Congress for Gynaecology & Obstetrics  
www.wisepress.co.uk

20-24 Dubrovnik, Croatia  
43rd Congress of The European Societies of Toxicology and 6th Congress of Toxicology in Developing Countries (Eurotox)

www.eurotox2006-6ctdc.org  
24-27 Barcelona, Spain  
13th Meeting of the European Society for Pigment Cell Research  
www.cnb.uam.es/~espcr06

25-27 Brighton, United Kingdom  
ICNA Infection Control Conference

Organiser: Infection Control Nurses Association  
www.comtec-presentations.com/icna  
28-29 Geneva, Switzerland  
2nd Geneva Surgical Experts Days. Laparoscopic Surgery for Incisional Hernia www.laparoscopy-geneva.ch

25-27  
Third Health Information Technology (HIT) Summit, Washington, District of Columbia, USA www.HITsummit.com

30-4 October Athens, Greece  
European Association of Nuclear Medicine Congress  
www.eanm.org

OCTOBER

13-15 Washington DC, USA.  
Consumer Driven Healthcare Summit

www.consumerdrivensummit.com  
13-17 Lisbon, Portugal  
The European Association of Coloproctology 8th Scientific and Annual General Meeting  
www.eacp.org

14-17 Copenhagen, Denmark  
42nd Annual Meeting of the European Association for the Study of Diabetes (EASD) 2006

www.easd-cph-malmoe.dk  
14-19 Genoa, Italy  
Association for Medical Educators in Europe Meeting (AMEE) www.amee.org

16-21 Montreal, Canada  
International Academy of Pathology Centennial Congress

www.iap2006.com/  
16-20 Paris, France  
19th Congress of the European College of Neuropsychopharmacology  
www.ecnp.nl

4-7 Rhodes, Greece  
15th European Academy of Dermatology and Venereology Congress (EADV) www.eadv.org

5-7 Barcelona, Spain  
The Fifth European Stanley Conference on Bipolar Disorder  
www.stanleyresearch.org

8-11 Barcelona, Spain  
European Academy of Paediatrics  
www.docguide.com/crc.nsf/congresses

8-12 Leipzig, Germany  
25th Annual Congress of the European Society for Therapeutic Radiology & Oncology www.estro.be/estro/Index.html

10-12 Singapore  
Hospimedica Asia  
www.hospimedica-asia.com

14-18 Santa Monica CA, USA  
11th Biennial Meeting of the International Gynaecological Cancer Society www.kenes.com/IGCS-11  
15-18 Amsterdam, The Netherlands  
6th International Conference of Hospital Infection Society  
www.his2006.co.uk

18-21 Dusseldorf, Germany  
REHACARE International 2006  
www.rehacare.de

18-21 Vienna, Austria  
The Role of Communication in Patient Safety and Pharmacotherapy Effectiveness  
Organiser: European Society of Clinical Pharmacy. www.associationhq.com/escp/vienna/

18-22 Barcelona, Spain  
17th Annual Conference of the European Society of Paediatric and Neonatal Intensive Care www.espn.org

21-25 Berlin, Germany  
14th United European Gastroenterology Week (UEGW) www.uegw.org

22-26 Pattaya, Thailand  
35th World Congress of the International College of Surgeons  
Location: Pattaya, Thailand

26-29 Cape Town, S. Africa  
World Stroke Congress  
www.kenes.com/stroke2006/gen.asp

NOVEMBER

4-7 Chicago, USA  
HEALTHCARE DESIGN '06  
Organiser: Medquest Communications, Center for Health Design.  
www.healthcaredesignmagazine.com

18-19 September, Palo Alto, California  
1ST TRANSLATIONAL NEUROSCIENCE SYMPOSIUM: PSYCHIATRIC DISORDERS

Recent advances in molecular and cognitive neuroscience have created unprecedented means for the study of psychiatric disorders, according to the pharmaceutical firm Roche and the journal *Nature Medicine* - joint organisers of the first Translational Neuroscience Symposium. 'This affords a unique opportunity to translate scientific findings into therapeutic strategies. The symposium will highlight recent progress in the understanding of schizophrenia, anxiety and depression, as well as the impact of these findings on the identification of therapeutics.'

Individual organisers include René Hen of Columbia University; Thomas Insel, of the National Institute of Mental Health; Luca Santarelli, of Roche, in Palo Alto; Andrew Sleight, from Roche in Basel, Switzerland and Juan Carlos López of *Nature Medicine*.

50 attendees were chosen for the 'by invitation only' event by submitting CVs and a letter describing their interest in the meeting. (Applications closed on 15/6/06)

**International speakers include:** A-M Belli, Consultant Radiologist and Reader in Interventional Radiology at St George's Hospital in London; E Scott Pretorius MD, author/editor of 'Radiology Secrets' and contributor to textbooks 'Body MRI' and 'Imaging of Kidney Cancer'; Prof N Gourtsoyiannis, Chairman, Dept. of Radiology at the University of Crete; Dr D J Breen, Consultant Abdominal Radiologist and Honorary Senior Lecturer at Southampton University Hospital, UK; Prof G Gamsu, Vice-Chair of Radiology at Weill Cornell Medical Centre; P A Grenier MD, Chairman of the Dept. of Diagnostic Radiology at the Pitié-Salpêtrière Hospital in Paris; Dr H R Harnsberger, Prof. of Radiology and R C Willey Chair in Neuroradiology, University Of Utah School Of Medicine; Dr A King, senior lecturer at the Chinese University of Hong Kong, based at the Prince of Wales Hospital; D DT Maglinte MD, Prof of Radiology, Indiana University School of Medicine; Prof M McCullough, Associate Prof and Head of Paediatric Nephrology & Transplantation, Red Cross Children's Hospital, Cape Town; Dr K McHugh, Consultant Paediatric Radiologist, Great Ormond Street Hospital for Children; Prof D A Stringer, a managing editor of emedicine.com; Prof Somers, 1998-2004 Chairman of the Department of Radiology at McMaster University in Hamilton, Ontario; D Wagenfeld, President of SA Cochlear Implant group and the SA Society ORL/H&NSurgery.

The event's major sponsors: Siemens, Agfa, Axim, Philips and GE Healthcare, with other industry exhibitors contributing significantly to the cutting edge technology to be displayed at the congress.

5-7 Algiers, Algeria  
International Health Week Algiers 2006  
Details: www.exotec-algeria.com

15-18 Dusseldorf, Germany  
MEDICA Details: www.medica.de

10-13 Jerusalem, Israel  
3rd International Jerusalem Conference on Health Policy  
Organiser: Israel National Institute for Health Policy Research. www.israelhpr.org.il

26-1 Dec Chicago, Illinois  
Radiological Society of North America (RSNA) annual meeting

DECEMBER

6-9 Prague, Czech Republic  
EUROECHO 10 - Annual Meeting of the European Association of Echocardiography (a Registered Branch of the ESC)  
Organised with the Working Group on Echocardiography of the Czech Society of Cardiology. Focus: cardiovascular ultrasound.

7-10 Toulouse, France  
14th European Congress of Andrology (EAA)  
www.eaacongress2006.cict.fr/en/index.html

2007

JANUARY

17-19 Washington DC, USA  
Health & Human Capital Management Congress  
www.worldcongress.com

MARCH

27-30 Cairo, Egypt  
Egyptian E-medicine International Conference  
Organiser: Egyptian Diabetes Centre.  
www.onlinediabetes.net/emedicine

APRIL

29 - 2 May Prague, Czech Republic  
ICNC 8 - international scientific nuclear cardiology meeting, with additional focus on PET and cardiac CT imaging

JUNE

9-12 Hamburg, Germany  
Heart Failure 2007  
Hfsecretariat@escardio.org

24-27 Lisbon, Portugal  
Europace 2007 The European Heart Rhythm Association (EHRA), a registered branch of the European Society of Cardiology, will focus on arrhythmias and cardiac pacing in Europe.  
europace@escardio.org

27-1 July Glasgow, Scotland  
World Congress on Design and Health.  
Organiser: International Academy for Design and Health. www.designandhealth.com

EUROPEAN HOSPITAL

EUROPEAN HOSPITAL Publisher,  
Höherweg 287, 40231 Düsseldorf  
Germany  
Phone: +49 (0)211 7357 532  
Fax: +49 (0)211 7357 530  
e-mail: info@european-hospital.com



www.european-hospital.com

**Editor-in-Chief** Brenda Marsh  
**Art Director** Mary Pargeter  
**Executive Directors** Daniela Zimmermann, Reiner Hoffmann  
**Managing Editor** Denise Hennig  
**Jouralist/Editor** Meike Lerner  
**Founded by** Heinz-Jürgen Witzke

**Correspondents**  
**Austria:** Christian Pruszinsky. **Baltic:** Andrius Vagoras. **Czech Republic:** Rostislav Kuklik. **France:** Keith Halson. **Germany:** Anja Behringer, Annette Bus, Guido Gebhardt, Heidi Heinhold, Max Heymann, Holger Zorn. **Great Britain:** Brenda Marsh, Peter Howieson. **Italy:** Danilo Camisasca. **The Netherlands, Belgium:** Michiel Bloemendaal. **Poland:** Piotr Szoblik. **Spain:** Eduardo de la Sota. **USA:** Karen M Dente, Cynthia E Keen, Ivan Oransky, Craig Webb.

**UK editorial address**  
55 Way Meadows, Weybridge, Surrey KT13 8XY

**Subscriptions**  
Janka Hoppe, European Hospital,  
Höherweg 287, 40231 Düsseldorf, Germany

**Subscription rate**  
6 issues: 42 Euro, single copy: 7 Euro. Send order and cheque to: European Hospital Subscription Dept

**Finishing** media technique johri, Weilerswist, Germany

**Printed by** Frotscher Druck, Darmstadt, Germany

**Publication frequency** bi-monthly  
**European Hospital** ISSN 0942-9085

**Advertising:**  
**Ted Asoshina**, Japan, +81 3 3263 5065  
**Ben Chen**, Taiwan, +88 6 2 8712 2385

**Denise Hennig**, Germany, +49 211 7357 532  
**Juri Laskin**, Russia, +70 95 2711 006

**Simon Kramer**, BeNeLux, GB, Scandinavia, France +31 180 6172 26

**C.K. Kwok**, Hong Kong, +85 2 2890 5510  
**C.H. Park**, South Korea, +82 2 3644 182

**Hanna Politis**, USA, Canada +1 301 8696 610  
**Germany**

**Head Office Düsseldorf**  
European Hospital, Höherweg 287,  
40231 Düsseldorf, Germany  
Tel: +49 211 7357 531, Fax: +49 211 7357 530  
e-mail: dz@european-hospital.com

**GB, Scandinavia, BeNeLux, France**  
Simon Kramer, Willem Alexander Plantsoen 25,  
2991 NA Barendrecht  
Tel: +31 180 6172 26, Fax +31 180 6200 20  
e-mail: sk@european-hospital.com

**Hong Kong, China**  
Eastern Source Int. Media Centre, C K Kwok,  
25/F Great Smart Tower, 230 Wanchai Road,  
Wanchai, Hong Kong  
Tel: +85 2 2890 5510, Fax: + 85 2 2895 1443

**Japan**  
Echo Japan Corporation, Tetsuzo Asoshina,  
Grande Maison Room 303  
2-2 Kudan Kita, 1 Chome Chiyoda-Ku  
Tokyo 102, Japan  
Tel: + 81 3 3263 5065, Fax: +81 3 3224 2064  
e-mail: ta@european-hospital.com

**South Korea**  
Far East Marketing Inc,  
Room 103-1011, Brown Stone,  
1330, Baekseok-dong, Ilsan-ku,  
Goyang-si, Gyunggi-do, Korea 410-360  
Tel: +82 2 730 1234, Fax: +82 2 732 8899  
e-mail: ch@european-hospital.com

**USA & Canada**  
Media International, Hanna Politis, 8508 Plum  
Creek Drive, Gaitherburg, MD 20882, USA  
Tel: +1 301 8696 610, Fax: +1 301 8696 611  
email: hp@european-hospital.com

**Taiwan**  
Jurassic Communications Corp., Ben Chen,  
10th Floor-4, No 235, Chang Chuen Road,  
Taipei 10479, Taiwan R.O.C.,  
Tel: +886 2 8712 2385, Fax: +886 2 8712 2618  
e-mail: bc@european-hospital.com

ADVERTISERS INDEX EH

Company	Page	Product
Agfa	23	IT imaging solutions
Aloka	7	Cardiovascular ultrasound
Cardiac Science	13	Cardiology equipment
Esaote	1	Ultrasound equipment
GE	9	Diagnostic imaging solutions
ECR	29	European Congress of Radiology 2007
Medison	5	Ultrasound equipment
Medica	32	38th World Forum for Medicine Trade Fair & Congress
Metsä	11	Hygiene products
Olympus	19	Endoscopy equipment
Richard Wolf	18	OR-solutions
Sony	21	High definition for healthcare
Schiller	11/15	Cardiology equipment
Seca	27	Scales
Siemens medical	2/17	Diagnostic imaging
Unipath	25	Rapid respiratory diagnostics



12-16 September  
Cape Town S. Africa

RADIOLOGISTS INTO AFRICA

Under the slogan 'Radiology into Africa' the biennial 2006 International Congress of Radiology (ICR) is to be held in Cape Town under the auspices of the Radiological Society of South Africa (RSSA), the International Society of Radiology (ISR), and the International Society for Magnetic Resonance in Medicine (ISMRM). 'The event will combine a first world academic programme with issues important to Sub-Saharan Africa,' explained Dr Richard Tuft, Chairman of the organizing committee.





**MEDICA®**

**38th World Forum  
for Medicine**  
International Trade Fair  
with Congress

**[www.medica.de](http://www.medica.de)**

**Düsseldorf,  
15. – 18. Nov. 2006**

Messe Düsseldorf GmbH  
Postfach 101006  
40001 Düsseldorf  
Germany  
Tel. +49 (0) 211/45 60-0 1  
Fax +49 (0) 211/45 60-6 68  
[www.messe-duesseldorf.de](http://www.messe-duesseldorf.de)



**Messe  
Düsseldorf**