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 <p>13-15 Cardiology Matrix-array transducer checks valves. <i>Plus:</i> stents, strokes, surgery</p>	 <p>6-7 Radiology CENTRA enhances CE-MRA. <i>Plus:</i> 1,000-fold magnification</p>	 <p>18 Orthopaedics Patients use EU law for cross-border help. <i>Plus:</i> implants, treatments</p>	 <p>Parker – your specialist in ultrasound equipment please see page 2</p>
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VOL 12 ISSUE 5/03 OCTOBER/NOVEMBER 2003

Costly hospital injuries

USA - Analysis of over seven million recent discharge records from hospitals in 28 states has revealed that a group of 18 medical injuries occurring during hospitalisation may account for 2.4 million extra hospital days, \$9.3 billion in excess charges, and almost 32,600 attributable deaths in the US annually.

Reporting in the *Journal of the American Medical Association* (8/10/03), the researchers from the Johns Hopkins Children's Centre and the Agency for Healthcare Research and Quality (AHRQ) found that among the 18 patient safety events, severe infection or sepsis, developing after elective surgery was the most common treatment-related injury.

Homicidal nurses share common traits

The first systematic analysis of a taboo topic in medical and healthcare circles - the murder of patients - could provide early warning signs to prevent future patient homicides.

Karl H Beine, Professor of Psychiatry at the University Witten/Herdecke, Germany, conducted a study (published: *International Journal of Law and Psychiatry* 26/2003) based on 16 homicides, which occurred in recent decades, and has developed a detailed psychological offender profile.

Contrary to popular belief, Prof Beine found that most offenders are male not female nurses, and that they -

- tended to be insecure and administer non-prescribed medication.
- In their work environment they had to deal with long, unsolved conflicts.

Frequently, these offenders were

identified only up to five years after the homicides had taken place.

Professor Beine also found that their crimes were not committed due to poor working conditions. Nor was sympathy for the patients a trigger for the carer to murder

Observation and discussion may prevent patient murders

Karl H Beine



them. 'The patients who were killed were not in their terminal phase,' the professor pointed out. The act was more to do with their inability to endure suffering.

Concerned about prevention, the professor has identified typical

early warning signs, which include:

- crude language
- isolation within the team
- a 'cynical paralysis' towards the nursing profession
- Additionally, the offenders often even predicted the exact time of death of the patients.

These factors, he suggests, may help to indicate something is going terribly wrong, and he recommends increasing sensitivity to such signs. Additionally, he urges the promotion of a working environment where open and frank discussions are possible. 'Nursing staff in hospitals and nursing homes should be able to speak openly,' he stresses, '... even about aggressive fantasies.'

(Ref: Beine, Karl-H, 'Homicides of patients in hospitals and nursing homes: a comparative analysis of case series', *International Journal of Law and Psychiatry* 26/2003)

Polymer-based pulsed drug delivery

Prescription drugs dominate many people's lives, but the advent of controlled-release delivery systems is set to change all that. Examples already in the marketplace include time-release pills that reduce the number of doses required for pain relievers and antidepressants, and contraceptive patches and implants.

A new drug delivery system, based on a microchip formed from poly(L-lactic acid) - a slowly degrading polyester - has been reported in the publication *Nature Materials*, by Robert Langer and colleagues at Massachusetts Institute of Technology, Cambridge, MA, USA.

Drug solutions are injected into reservoirs on the chip surface, and sealed by biodegradable polymer membranes with different degradation rates. By varying the composition and molecular weight of each polymer membrane, Langer et al say they are able to tightly control the degradation rate (and thus drug release time) over a broad range.

The new polymer-based system is capable of releasing a variety of different drugs at well-controlled times. So far, the team has shown that heparin - a common anticoagulant - remains bioactive after incorporation and release from the system over periods up to 140 days. They researchers add that, given the high biocompatibility and superb performance of the polymer-based system, clinical demonstration should not be too far off.

Details: <http://dx.doi.org/10.1038/nmat999>



Also see our report on the NANOTECHNOLOGY controversy, in *Laboratory and Pharmaceuticals news*: page 16

Fighting for EU rights

UK - Over a quarter of a million people are on waiting lists for orthopaedic surgery in England alone, and some are actively seeking surgery overseas, and pressing for the country's health service to

Patients seek overseas hip and knee surgery

pay for those operations - notably a pensioner who has challenged her rights, under European law, to have £3,800 reimbursed after receiving surgery in another country. The patient had been told by the National Health Service (NHS) that she must wait up to a year for a hip operation.

European law states that any EU citizen facing 'undue delays' in treatment in their own country can apply to have an operation in another member state. However, in the UK, do do so they must have the support of their general practitioners and consultants under the NHS's E112 certificate scheme.

Recently, in the High Court, the

judge rejected the British government's claim that only patients who wait over twelve months are eligible for reimbursement for surgery overseas, and the NHS has been forced to reconsider the situation.

The Department of Health figures reveal that some 1,120 NHS patients were treated elsewhere in Europe in 2002. However, many who have been unable to gain consent to become cross-border patients have funded themselves to seek surgery overseas. For example, this October, a 68-year-old patient needing a double knee replacement, travelled to the Krishna Heart Institute, Ahmedabad, India, where he will receive the surgery and stay for seven weeks. His action, he *continued on ORTHOPAEDICS page 18*

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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 of the Beta publication European Hospital. Candidates will also be automatically entered for a draw to win the prize featured on this page.

Signature

Date

EH 5/03

NEWS

Berlin, Germany - Primary immunodeficiency (PI) arises from an immune system defect and results in an increased susceptibility to infections of, for example, the lungs, airways, ears or paranasal sinuses. 'Without treatment, permanent damage is inevitable as a result of repeated infections. The worst-case scenario: it can even prove fatal,' said Professor Volker Wahn, Director of a new Immune Deficiency Centre, during its opening this September at the Charité University Hospital, Berlin.

Prompt diagnosis and early, suitable treatment is therefore vital in preventing secondary damage, but as there are no clear symptoms this is not easy. 'About 50 percent of all cases are diagnosed inadequately, if diagnosed at all,' said the professor. Thus the centre will provide lectures and information to increase awareness of PI among

incurable, biological products obtained from human blood plasma can be used to replace missing components of the body's immune system and thus prevent lasting damage, Bayer HealthCare points out. Presently this is achieved with highly effective biological medicines. Treatment involves infusion of immunoglobulins to replace immune cells (antibodies) that are missing from the blood, which

- Antibiotic therapy for two months or longer without effect
- Complications following injection of live vaccines, particularly BCG (Bacille Calmette-Guérin) vaccine against TB and Sabin polio vaccine
- Failure to thrive in infancy, with or without chronic diarrhoea
- Repeated occurrence of deep skin or organ abscesses e.g. in lymph nodes or liver

Professor Volker Wahn, Director of the new Immune Deficiency Centre at Charité University Hospital

- Two or more purulent internal infections, e.g. meningitis, severe soft tissue infections, inflammation of bone marrow, arthritis, accumulation of pus in body cavities, blood poisoning
- Persistent fungal



NEW

The Immune Deficiency Centre

doctors in out-of-hospital practices - and particularly pediatricians. 'The disease is caused by a genetic defect in the immune system, so mostly infants and young children are affected and they are usually first seen by a pediatrician,' explained Professor Ulrich Wahn, the Paediatric Unit's director and a chest and immunology specialist.

'Our aim is to increase awareness of this disease and provide patients and their families with extensive assistance with diagnosis and treatment so they can live as normal a life as possible,' said Dr Gunnar Riemann, President of the Biological Products Division of Bayer HealthCare, which is funding the centre (US \$150,000 over a three-year period) in association with the American Jeffrey Modell Foundation, founded by Vicki and Fred Modell.

Although the disease is mostly

reduces infections by about 90%, allowing PI patients to live an active, normal life.

There are eight of these specialist centres in the USA and Europe (where an estimated 1.5 million people suffer PI. Worldwide, the figure is about ten million). Bayer says it has carried out R&D of biological drugs to treat congenital immunodeficiency for over 60 years and supports patient organisations and self-help groups in haemophilia, alpha-1 antitrypsin deficiency and immunodeficiency disorders.

PI warning signs

- Family history of congenital immunodeficiencies
- Eight or more purulent ear infections per year
- Two or more severe sinus infections per year
- Two or more episodes of pneumonia during one year

infections of skin or mucous membranes after aged one year.

- Rejection reactions caused by maternal T cells in a child's blood (chronic graft-versus-host disease) manifested, for example, as inflammatory reddening of skin of unclear origin in infants.
- Normally harmless, 'atypical' mycobacteria cause life-threatening and sometimes even fatal infections. In healthy people atypical mycobacteria infect only the lymph nodes and are successfully controlled by a functional immune system.

If any of these warning signs apply, a doctor should investigate whether the patient might have a congenital immune deficiency (PI) - congenital immunodeficiency diseases are also known as primary immunodeficiency, PI, PIDD and PID.

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13th EUROPEAN RESPIRATORY SOCIETY ANNUAL CONGRESS

At the Opening ceremony awards were presented to Neil B. Pride (Presidential Award), Severin Daum (Congress Chair Award), and Gro Harlem Brundtland (3rd European Lung Foundation Award). Born in 1923, Professor Daum, escaped from the Czech Republic in 1968 and was supported in Basel, Switzerland, by Professor Heinrich Herzog. His background was just one point of interest among many in the 14,000 people who flocked to Vienna for an event which addressed the latest advances in

clinical diagnoses and treatments, and included 20 assembly symposia, 12 hot topics symposia, free communication sessions

Rostislav Kuklik reports from Austria

including 80 oral presentation sessions, 35 informal discussions of posters during thematic poster sessions, 22 postgraduate courses, 20 'Meet the Professor' seminars, evening symposia organised by the

pharmaceutical industry leaders, and 20 major symposia covering the most recent topics on research and clinical practice.

In general, the focus was on chronic obstructive pulmonary disease (COPD), asthma, bronchoalveolar lavage (BAL) procedures, and lung cancer issues. Immunotherapy and immunomodulation modalities were also widely addressed in the speakers' programme - particularly with regard to smoking and smoke-induced pathology.

In terms of trade shows, and developments in respiratory treatments, Boehringer-Ingelheim's presentation of its Respimat Soft Mist Inhaler attracted constant crowds to the stand - although it's difficult to assess whether that was due to the device itself, or the give-away items available.

The European Respiratory Society Annual Congress 2003 was truly outstanding, providing all the pre-requisites to attract at least the same number of visitors next year.



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“If you were in Vienna, between 27 September and 1 October, you may have witnessed an extraordinary event - the ERS Annual Congress 2003”

The gathering was first held in 1991 in Brussels, Belgium, when the ERS President was S W Clarke (UK), and J C Yenault (Belgium) was Congress Chair and Scientific Committee Chair. This year John G Gibson (UK) was elected President, Friedrich Kummer (Austria) Congress Chair, William MacNee (UK) Scientific Committee Chair, and Maximilian Zach Congress Vice-Chair. Under their auspices the whole congress presents a must to scientists and physicians involved in research or treatment of respiratory tract disorders.

CANCER

Patients' network goes global

Each year lymphoma kills 186,000 people and presents 350,000 new cases. The new Lymphoma Coalition, set up to raise awareness of the disease and treatment, is a networking organisation of lymphoma patient groups (educational grant: Roche Pharmaceuticals).

Its international member base includes leading lymphoma organisations in Australia, America, Brazil, Canada, Germany, Ireland, Spain and the UK. The aim is to share best practice worldwide and encourage the formation of new lymphoma patient groups, particularly in countries where none exist.

Details: www.lymphomacoalition.org.

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The Netherlands - Demand for premium medical services by patients who are underserved in their own countries is increasing. Focusing on this market and on streamlining those services while reducing costs, Dr Joseph F Straus (founder/principal of Raphael Medical, LLC), convened the second annual meeting of Healthcare Across Borders - organised by the Strategic Research Institute of New York.

Comparing the development and use of electronic data in healthcare with the Industrial Revolution over the past 150 years, Dr Ajit Singh, President of the Oncology Care Systems Group of Siemens Medical Solution Data, said space and time need to be perceived in a new way in order to create a formula to improve healthcare delivery and best outcomes for patients.

Other speakers examined cost containment, comparative survival statistics, forms of healthcare delivery, hospital know-how and international collaboration and solutions for improved outcomes.

Kristine Hoover, Director of UnitedHealth Access, UnitedHealthcare International, showed how the right alignment of healthcare benefits with a healthcare delivery system improves outcomes for quality treatments and costs. Patient information, international administrative efficiency, including increased transparency and accountability, need work, she stressed: 'The right relationships, marketing alliances and public-private collaboration contribute significantly'.

Undertaking the formidable task of comparing Healthcare Services in the US and Europe, Dr Michel P Coleman, Professor of Epidemiology and Vital Statistics, Head of Cancer and Public Health Unit of London School of Hygiene and Tropical Medicine, pointed out that US cancer survival figures are almost 50% higher than in Europe. Although partly due to statistics,

much of the discrepancy points to culture leading to earlier diagnosis in the USA.

International European healthcare costs, as well as those of the US, were compared by John Hutton, Vice President European Operations and Head of Global Health Economics, MedTap International, Inc, who demonstrated that clinical culture, social, personal economic and political factors resulted in variability in the

costs or lowering business risk.

Allan Fine, Principal of Navigant Consulting, reinforced this, showing that half of a hospital's cost increases relate to new and emerging technologies - but which increase long-term viability. He advocated strategic planning by hospitals, such as structured technology assessment and evidence-based medicine. When in place, he said, both administrative and clinical departments must be involved

and Emery, who, after point out that compassion is not the exclusive domain of non-profit groups, presented the pros and cons of privatisation, with various options and forms.

Julie McCashin, Vice President for Medical Services, SOS, entranced the audience with experiences in delivering healthcare to remote international locations. The biggest challenges lie in selecting the right local partner, she said, and the next is licensing and retention of expatriate staff while locals train to international standards.

Also focusing on the developing world, Paul Eckbo, CEO of Preferred Global Health said the application of global best practice could decrease cost by 25% and increase outcome by 25%. This ambitious plan is based on best patient outcome, by acquiring a second opinion and using a treatment plan that requires patient involvement. This further implies quality control and use of the best hospitals.

His theme was echoed by Chimon Schurr, President and CEO of Collaborative Medical Technology Corporation, whose solution for improved outcomes in developing regions is to interconnect major hospitals to form a network, then to connect this, via a primary hospital centre, to US medical experts.

Dr Szabolcs Dorotovics, MD Europe of Johns Hopkins International, projected new approaches to hospital management, innovations in quality patient care and cost-efficient management applications shared with other hospitals through international collaboration.

Finally, discussion centred on health insurance challenges faced by multinational employers, which pinpointed not only the need for individual planning, but also more standardised and efficient administration.

Details:www.rafaelmedical.com

Healthcare across borders

Report by
Hanna Politis
European Hospital



Dr Joseph Straus
Chairman of
Healthcare Across Borders

quantity of services offered. Costs rose, he said, due to changing demographics, increased consumer demand and demand for technology. Cost containment, he added, could be achieved by benefit reduction, decrease in administrative

in implementation and results should be tracked and return on investment documented.

Healthcare privatisation was defended by Monte Dube, Chairman, Health Law Department of McDermott, Will

Physicians

By Karen Dente



USA - A decade ago Clinton's initiative to extend health care to more Americans failed. A radical new proposal has been endorsed by thousands of US physicians that would abolish for-profit hospitals and insurers and provide universal health coverage to some 41 million US citizens who are uninsured - including those who are employed but without health coverage.

The proposal, recently published in the Journal of the American Medical Association (JAMA), was authored by four physicians (three affiliated with Harvard Medical School). A large number of doctors endorsed the

US citizens healthcare

Dissatisfaction with US healthcare delivery has risen 10% since 2000, according to a recent poll of 1,000+ people carried out by the ABC News-Washington Post. The study revealed that 54% of respondents were dissatisfied with the overall quality of US healthcare, whilst 44% were satisfied. 65% of insured respondents said they are satisfied with its cost, but this represents a drop of 9% since 1997.

However, 62% said they would prefer a government programme to provide healthcare, instead of the present employment-based system, even if it meant higher taxation. (32% did not agree). 53% percent of the insured respondents said they are worried about losing their insurance in the event of job loss.

In 2002, 43.6 million people were uninsured in the USA - about 15.2 percent of citizens. Over one in six respondents said they have no insurance. Up to a third of those earning under \$20,000 a year were uninsured, compared with 8% of those earning over \$50,000 annually.

Six in 10 of the respondents said they are worried about affordability of health insurance in the future. 70% said buying prescription drugs outside the United States should not be illegal, and one in eight reporting doing this or having a family member who did.



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call for national health insurance

plan, for-profit insurance companies would not have been abolished, but all companies would have been required to offer health insurance with subsidies helping smaller employers.

Sceptics of the health plan think that America is not ready for such a drastic proposal. Rashi Fein of Harvard Medical School said in an editorial accompanying the proposal published in JAMA that the plan might be too radical to find acceptance in the US political system, but that the physician proposal should rekindle the debate.

Rashi Fein said that is was a moral issue for society and that the interest of conservatives had to be sought for the proposal to go anywhere.

Dr Gerald Thompson, Professor of Medicine at Columbia University said, at a NY press conference: 'The privatisation of healthcare hasn't worked. We could take care of everyone if we didn't have this devotion to the private sector.' Lack of insurance was equivalent to having a disease with higher mortality, he added.

Dr Oliver Fein, Chair of the New

York Metro Chapter of Physicians for a National Health Programme said, 'Proposals that call for tax credits, or that push seniors into private HMOs, all retain the role of private insurers. They are doomed to failure because they perpetuate administrative waste and make universal coverage unaffordable.'

Dr Victor Seidel of Albert Einstein College of Medicine, NY, agrees with the waste of costs for administration in the current health insurance system. Twenty percent of current costs are administrative, which, he added, '...could be extended for universal coverage for everyone in the US and for preventive medicine.'



Dr Oliver Fein, Chair of the New York Metro Chapter of 'Physicians for a National Health Programme'

plan (7,782) and two include former surgeon generals.

The physicians' plan was developed by the Physicians for a National Health Programme and would transfer all US citizens into an embellished Medicare programme (the federal health insurance programme for the elderly) for all age groups. It would control costs by having the government pay for healthcare through a fixed national budget. Private insurance companies would be eliminated, while most hospitals would remain privately owned, with the government providing them with fixed amounts for operating costs on a monthly basis. Under Clinton's

want for all



Almost two-thirds believe the country will ration healthcare - whereby some medical procedures will not be covered by insurance.

But - UK/USA study shows US surgical cases fare better

Patients undergoing surgery under the UK's National Health Service are seven times more likely to die than equivalent cases in the USA, according to results from a small study of 1,100 patients carried out by University College, London and Columbia University, New York.

Cases from only two hospitals were studied: the Queen Alexandra Hospital in Portsmouth, UK, and Mount Sinai Hospital, USA. However, the study showed that, after major surgery, patients in the US are transferred to critical care, where high-level monitoring takes place and where they also continue to be cared for by their consultant and anaesthetist. By contrast, in the parallel cases studied in the UK over a third of the patients who died after major surgery had not received similar attendance.

A shortage of specialists plus intensive care beds, and the longer UK waiting lists were considered major influences on the case outcomes.

In the last six years, the National Health Service has recruited 55,000 more nurses, 6,500 additional consultants, 1,600 extra GPs.

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Patients at risk of suffering an ischaemic stroke may be identified with greater precision as a result of advances in imaging techniques being pioneered by doctors at the University of Bonn.

Dr Winfried Willinek and colleagues in the department of radiology have worked with Philips Medical Systems to develop contrast-enhanced timing-robust angiography (CENTRA), which enhances contrast material-enhanced magnetic resonance angiography (CE-MRA). This technology offers clinical and practical advantages over conventional imaging modalities in diagnosing carotid artery stenosis, a major risk factor for ischaemic stroke.

CENTRA is currently used for screening patients having surgery that could put them at risk from ischaemia, e.g. a liver transplant, and those who may be asymptomatic, but considered at risk of stroke due to the presence of generalized atherosclerotic disease, for example. CENTRA also used for screening patients who present clinical indications such as dizziness or disturbed vision, or have had previous minor strokes or transient ischaemic attacks.

Identifying patients with atherosclerotic plaques, which can be removed surgically by carotid endarterectomy, will be the most important clinical application - but certainly not the only one. As MR imaging using CENTRA is a far less invasive technique, than conventional x-ray, it is safe enough to have the potential to be used for mass screening of at risk groups such as diabetics, cigarette smokers,

CENTRA enhances CE-MRA

obese patients, or those with high blood pressure or high cholesterol, who can be asymptomatic.

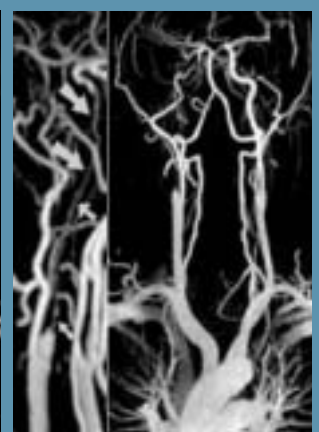
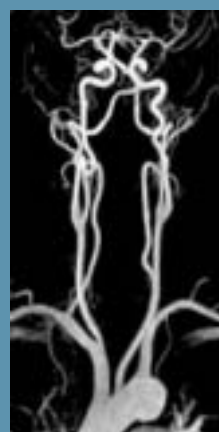
CENTRA not only produces images with superb resolution, it can also be applied across large anatomic regions of interest within a single scan. The scan gives high quality views of the carotid and vertebral arteries from the aortic arch above the heart to the circle of Willis, the loop of arterial vessels at the base of the brain. So the technique has potential to be used in the diagnosis of a wide range of abnormalities of various parts of the supra-aortic arterial system such as subclavian steal syndrome - a defect that impairs blood circulation to the arms, Dr Willinek says.

Dr Willinek's team began using

the technology in 2000. The first year was spent conducting validation studies but for the past two years it has been an established part of the protocol for investigating patients showing clinical symptoms of cerebrovascular disease. The team has now carried out over 1000 investigations and is currently seeing 30-40 patients monthly.

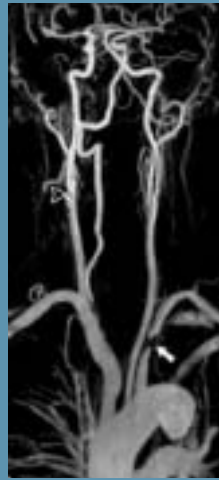
The basis of the new technology is improved capture and analysis of data obtained from an MR scan. Conventional CE-MRA has problems with artefacts caused by interference from contrast medium in adjacent vessels. To minimise these effects the start of image acquisition must be carefully timed to coincide with the arrival of contrast medium in the artery. This restricts the acquisition times available,

48-year-old male presenting amaurosis fugax: Coronal, contrast-enhanced 3D MR angiography using CENTRA covers brain-supplying arteries from aortic arch to the circle of Willis, without venous overlay



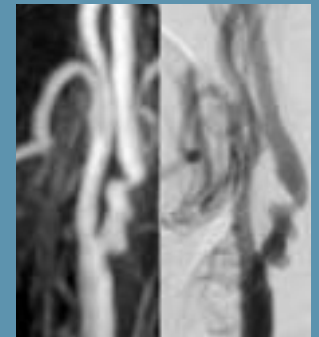
68-year-old male. Right ICA occlusion was suspected by duplex ultrasound. However, high-grade right ICA stenosis with secondary hypoplasia (arrows) was depicted on the enlarged sagittal view of the MR angiogram (left image)

65-year-old male with suspected left subclavian steal syndrome. Due to extensive anatomic coverage provided by high spatial resolution MRA using CENTRA, severe stenosis of the left proximal subclavian artery (arrow), detection of an asymptomatic stenosis of the right ICA (arrowhead) and visualisation of the circle of Willis could be diagnosed in just one examination



An incidental, 5mm left MCA aneurysm visualised in a 67-year-old male patient

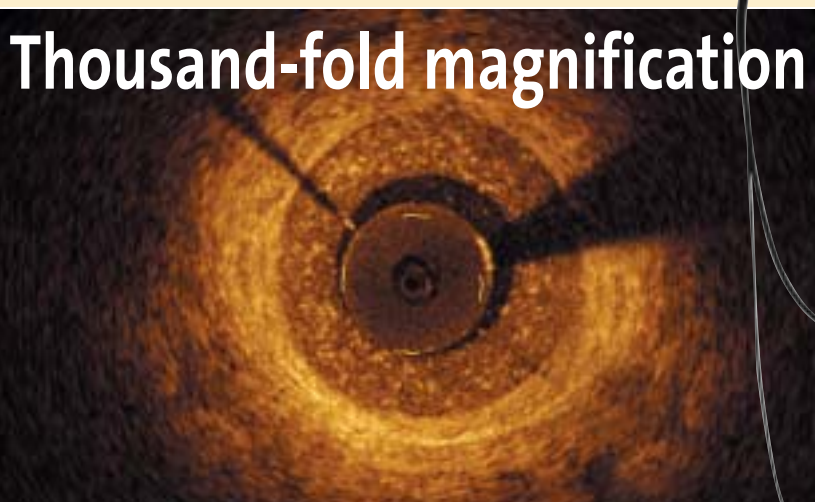
Enlarged sagittal views of the right ICA. High-grade stenosis and ulceration of atheromatous carotid plaque is displayed. In this patient, DSA was available for comparison and confirmed the MRA diagnosis (right).



Winfried A Willinek, MD

ONCOLOGY

Thousand-fold magnification



Conventional endoscopes often do not allow diagnosis of lesions at an early stage - which could lead to tumours or carcinomas. Along with digital endoscopy systems, new technologies offer the possibility of early cancer detection. For example, Pentax, in co-operation with LightLab Imaging Inc, Boston, is working on optical coherence tomography (OCT) in endoscopy, a system that will enable identification of microstructures in gastroenterological and pulmonological applications.

OCT combines ultrasound (US) with microscopic image quality. However, images are not generated by using sound waves, but through light waves, transmitted from a light source via a probe inserted into the body through an endoscope channel. As a result of high frequencies and bandwidths of infrared light, a resolution of 10-20 µm can be obtained, providing images 8-25 times better than those generated by US, Pentax reports.



Left: Distal end of confocal endoscope with confocal image

Extremely high resolution allows even the smallest tissue changes within the mucosa to be seen, as well as precise differentiation of individual layers.

Above left: OCT System: Image of a stenotic biliary duct due to scarring

The confocal system

In 2002, Pentax also joined OptiScan Imaging Ltd, Melbourne, to pursue a second research emphasis: confocal endoscopy - in which laser light is introduced directly, via an endoscope, to produce microscopically accurate real-time images of living cells can be generated in thousand-fold magnification.

The bundled laser light beam is reflected by the outer intestinal tissue surface, and transmitted through confocal fibre optics, which only conduct light from a specified focal plane to the processor, which transforms the signals into images. Due to thousand-fold magnification of tissue structures, the microscopic images enable recognition of structures to the size of cell nuclei. To better differentiate and identify tissue structures, the surface of the mucous membrane is first stained with a fluorescent contrast agent.



NM camera and agent

Royal Philips Electronics is collaborating with bio-tech firm CellPoint LLC, of Englewood, Colorado, to combine the firm's diagnostic imaging agent with Philips'

SKYLight gantry-free gamma camera and share clinical trial costs in developing cost-effective imaging techniques for cancer diagnosis and pre-screening for therapy. 'There is an interdependence between companies developing molecular imaging technologies and those developing the agents. Close collaboration among these groups is essential for applied molecular imaging to become a reality,' explained Peter Luyten, Philips Medical Systems' director of molecular imaging.

CellPoint's ethylenedicycysteine drug conjugate technology (EC Technology) is a unique delivery system that functions as a chemical bridge to link tissue-specific ligands (e.g. hormones, proteins, peptides, glucose analogues) or pharmaceutical compounds (investigational or FDA-approved drugs) to radio-isotopes for cancer diagnosis and treatment.

For diagnostics, the firms will collaborate on CellPoint's first molecular imaging agent, Tc-99m-EC-deoxyglucose. EC Technology allows deoxyglucose to be labelled (i.e., linked) with the radioisotope Technetium-99m (Tc-99m) - excellent for NM imaging due to its high imaging energy, long half-life, wide availability and ease of use. Radiologists can access Tc-99m either from an in-house

Molybdenum generator, or by ordering a unit dose from radiopharmaceutical firms. However, to date, promising molecular imaging agents have not been labelled with Tc-99m due to its chemical complexity and lack of a chemically stable coupler capable of linking it to

Cost effective molecular imaging

diagnostic compounds. EC Technology's chemical stability and versatility will enable the widespread use and availability of Tc-99m labelled agents.

In the trials, Tc-99m-EC-deoxyglucose will target tumours and SPECT cameras, including Philips' nuclear medicine cameras will image them. Tumours absorb more glucose than surrounding tissue, so when a patient is injected with this chemically linked agent (via EC Technology), active tumours absorb both the glucose and radioisotope. In several medical institutions where further clinical trials take place, SKYLight cameras and associated analytical software will produce images of tumours and their rate of radioisotope uptake, and data from SPECT imaging will be used to determine the tumour's location and size, and predict therapeutic doses of agents.

'Since SPECT cameras are already installed in thousands of clinical departments nationwide, the adoption curve for this technology should be reasonably quick,'

which in turn limits the spatial resolution that can be achieved.

CENTRA employs a novel technique for sampling the image - random segmentation of the central k-space - which minimises the effects of the interference from overlying

Images over 350 mm FOV

venous vessels. This allows a much longer data acquisition time and greatly improves the spatial resolution achieved.

For radiological technicians carrying out the scans the main advantage of the new technique is ease of use. A scan of the whole head and neck can be done without repositioning a patient. 'We also used to have to take two measurements with different coils - now it is a one stop shop,' Dr Willinek explains.

Although it is too early to assess the financial impact of the technique, he believes these are likely to be positive. 'The single measurement obviously has an effect on patient throughput and we can increase the number of patients receiving the stroke protocol. So, yes, I would say there is definitely an economic benefit for the university hospital,' adds Dr Willinek.

Having carried out the first published study on the CENTRA technology (W.A.Willinek et. al. Randomly Segmented Central k-space Ordering in High-Spatial-Resolution Contrast-enhanced MR Angiography of the Supra-aortic Arteries:Initial Experience.

Radiology Nov. 2002, Vol. 225, No. 2, p583-588 technology), the University of Bonn team is keen to develop the technique to full potential. Dr Willinek is carrying out a comparison of the results of the technique with DSA (digital subtraction angiography), the method currently viewed as the gold standard in coronary artery stenosis diagnosis.

The latter, a much more invasive technique, involves exposure of patients to radiation, so is unlikely to be used except in patients who are showing symptoms. In contrast because MR with CENTRA is a far safer technique it could allow for mass screening for those at risk.

Virtual ultra-low-dose CT-Colonography

Virtual CT-Colonography, a new, non-invasive diagnostic procedure for early detection of intestinal polyps and colonic cancer, is in an early stage development. At Dusseldorf's University Hospital, **Dr Christoph Vogt** and colleagues are performing a large prospective study for direct comparison of the computer-tomographic virtual colonography in an ultra-low-dose technique and conventional colonoscopy (high-resolution video-colonoscopy).

'Quite often there is additional information from these investigations performed at the same time. The comparative study aims at determining whether virtual colonography detects preliminary

stages of intestinal cancer as reliably as a conventional colonoscopy,' Dr Vogt explained. 'For that reason patients are examined with the virtual CT-Colonography as well as (and on the same day) with conventional high-resolution colonoscopy.

This research will be presented at MEDICA 2003 (November, Dusseldorf) at the North-Rhine Westphalia stand.

Contact: Dr Christoph Vogt, Dept. of Gastroenterology, Hepatology and Infectiology, Institute of Informatics and Institute for Diagnostic Radiology.

Email: VogtCh@med.uni-duesseldorf.de

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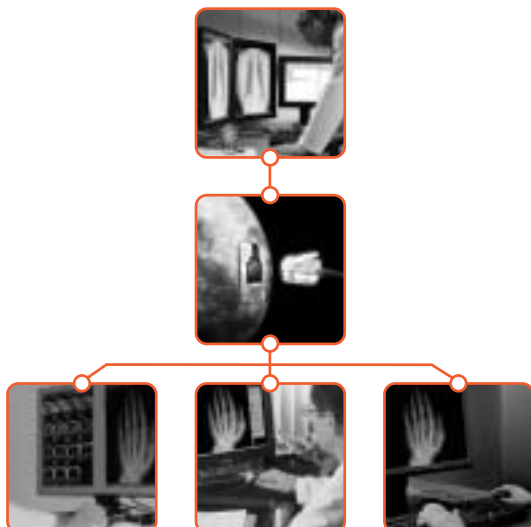
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Greg Colip, CellPoint's CEO, pointed out.

The Phase I clinical trial began this April at The University of Texas M D Anderson Cancer Centre, ranked the nation's best cancer hospital (2002 and 2003. *US News & World Report*). Trial data will be reviewed by Philips to determine if adjustments are needed to improve the clinical/diagnostic image quality. If necessary, Philips will reprocess the data by optimizing the reconstruction filtering parameters and acquisition protocols for molecular imaging in oncology.

The firms' agreement could expand into treatments using the same EC Technology to couple a therapeutic radionuclide to a tissue-specific ligand or targeting cancer drug to deliver therapy directly to a tumour.

The SKYLIGHT gantry-free nuclear camera allows gamma detectors to be mounted directly onto a room's structure/ceiling, and enables operators to image almost any size patient, in almost any condition and almost any position, without leaving a patient's side.

The SKYLIGHT 2.0 version offers concurrent imaging that allows clinicians to acquire images for molecular agents and drugs/radiopharmaceuticals simultaneously, providing better quality images significantly faster. Concurrent imaging uses a single acquisition data stream to generate up to 16 image sets simultaneously, each with a different energy window setting. The sets can then be processed and converted into clinically useful information.

The Webby awards

USA - Planned Parenthood Golden Gate (www.ppgg.org) has won the 2003 Webby Award, and HIV Stops With Me (www.hivstopswithme.org) has won the People's Choice Award, both in the healthcare category of the Webby Awards.

Other nominees in this category were:

www.cancer.gov
www.lifeclinic.com
www.teenwire.com



To enter your site go to

www.webbyawards.com

Webby Awards are presented annually by *The International Academy of Digital Arts and Sciences* (www.iadas.net), linked with publisher and computer exhibitions organiser IDG (www.IDG.net). Awards judges have included David Bowie, Francis Ford Coppola and other specialists among the Academy's membership list, who hail from diverse fields such as arts, science and business. Sponsors have included Intel, Hewlett-Packard, PricewaterhouseCoopers, Visa, Pacific Bell, United Airlines and many more national and international organisations.

If you'd like to enter your site, or any other in healthcare, for the 8th Annual Webby Awards, or you would like more details, go to www.webbyawards.com

In the special section **MEDICAMEDIA**, during a day-long programme consisting of 17 workshops and forums, over 120 experts from research, hospitals, associations and industry, will discuss trends and problem solving in healthcare telematics. Over 30 research institutes and institutions will also present the latest e-health developments

'The gap between vision and application results partly from research and development offering good products without first looking at a realistic implementation,' said Dr Volker Hempel, organiser of **MEDICAMEDIA**. 'We are presenting a programme in which visions are considered, but one that also offers practical and specific solutions to healthcare practice. Participants from the associations and public institutions in healthcare and science will be able to inform themselves about the current state and perspectives.'

Health card and electronic patient file

The German health card is scheduled to arrive in 2006. A workshop will introduce and

continues. The infrastructure for this is provided by information and communication technology and telemedicine. Differences in quality, waiting periods and costs of national healthcare markets are prompting regional, European and international boundary crossing of patients, which in turn can prompt clinics to ask whether they can benefit from this demand by expansion and performance improvements. What has the experience been with foreign patients to date? What problems arise? Can telemedicine contribute to optimisation?

The SARS outbreak emphasised the necessity to network disaster and emergency medicine data with public

Knowledge-based systems and the clinical workplace

The increasing distribution of healthcare telematics offers new perspectives on the application of knowledge-based or expert systems and their integration into medical decision-making. Medical expert systems as a rule require an experienced doctor whom they are supposed to support in patient care and the associated administration of data. The dialogue between the doctor and knowledge-based computer systems can raise the clinical quality standard while making more time available for doctor/patient dialogues. Knowledge-based systems do not replace but support the doctor during diagnosis and possibly also

MEDICA MEDIA

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Expert presentations of new concepts prompt discourse and potential solutions

Data errors and responsibility

UK - A National Health Service (NHS) electronic medical records contract, worth 3.7 million dollars and up for tender at the time of going to press, stipulates that the supplier(s) will be responsible for identifying and solving the problem of inconsistent data entered in the system by medical staff.

IBM Global Services and the BT Group PLC top the bidders, Lockheed Martin Corporation having now withdrawn.

E-Health
2003
Congress

The healthcare net

Dresden, Germany - A programme for the digitisation of imaging and image communication in Saxony's hospitals was presented at E-Health 2003 by SaxTeleMed.

Saxony has 90 state hospitals and two university clinics. The SadTeleMed project, focusing on radiology, was initiated by the free state's Ministry of Social Welfare, Health, Youth and Family, and involves 39 hospitals and medical centres in seven regional projects. Lead hospitals in the seven regions are: Chemnitz General Hospital, Erlabrunn Hospital, Dresden-Neustadt City Hospital, Zittau District Hospital, Dresden-Friedrichstadt General Hospital, Riesa District Hospital and Zwickau Heinrich Braun Hospital.

Organisational, technical, legal, and economic problems in digitisation and networking, are being tested in the programme. In these lead hospitals, a restructuring into an almost film-less hospital is meant to take place by means of digitisation and image communication that spreads out from radiology to other

departments.

From various German regions, fifteen experts in medicine, economics, and informatics, appointed to a board for the project, set standards and structural guidelines for the seven main SaxTeleMed hospitals.

One notable development in this project has been a quality function deployment (QFD) method for PACS specification and selection. Another is the introduction of a health professional card (HPC).

Other key issues at the E-Health 2003 congress included cross border and international trends in health telematics as well as strategies for progress. Participants included standardisation and data protection groups, managers of healthcare telematics firms, ministry representatives and international representatives from science and industry.

The congress was organised jointly by the Action Forum for Telematics in Healthcare (ATG), Federal Ministry of Health and Social Security, and the Saxony State Ministries for Social Affairs, and Economics and Labour.

discuss the framework and primary applications of the card, plus legal and economic factors.

'Individual' and 'virtual electronic' patient files will also be discussed, using examples of communication platforms for electronic communication among doctors (D2D).

Solid experience has grown in network-based healthcare research and care, for example in the human genome network, the transregio project of special research fields and a multitude of networked care initiatives. Network-based co-operation requires rethinking by all participants. Its status will be evaluated in the context of the EU and other nations.

Global networking of national healthcare systems

The internationalisation and Europeanisation of healthcare

decision makers and research facilities and decision makers, not just at regional and national levels but also internationally. In a user forum, these structures will be outlined and demonstrated through examples, and their successes and weak points will be discussed.

Telecare and telemonitoring

Telecare is multimedia-based remote treatment or remote care of regular and care patients in their private setting. The focus of telemedical pilot projects lies in complex telematic monitoring tasks and rehabilitation measures that could otherwise only be performed in the hospital, without the use of telematics, e.g., after a stroke. Can clinics benefit from telematics developments already in use?

therapy. A workshop will attempt to dispel many prejudices against expert systems.

New media in medical training

This year, with participation by almost all medical projects that were sponsored in the Federal Ministry for Education, Science, Research and Technology (BMBF) programmes 'New Media in Education' (2000-2004) and 'Notebook Universities' (2002) - the question of a permanent and nation-wide use of new media in medical faculties will be pursued in a high level discussion forum.



Complete programme: www.teleforum-medizin.de or www.medica.de (special presentations)

Developments in IT are proving as critical as medical advances in spurring the growth of evidence-based medicine and significant opportunities are emerging for healthcare IT companies within general healthcare provision and particularly in disease management, according to a new report from consultants Frost and Sullivan (F&S).

Healthcare IT companies mainly focus on clinical information systems (CIS) and hospital information systems (HIS), but there are several niche areas, in which the 'disease management service sector' is the most prominent, the report points out.

Small, flexible and innovative organisations are expected to be the early beneficiaries of emerging opportunities in the disease management service sector, the report continues: 'In the USA, the IT route is being adopted by many pioneering companies that are offering the information provision, patient monitoring, communication facilities and data collection essential for disease management.'

'By transforming themselves from occupying a sub-contractor role to being perceived as disease management enablers, these companies appear to have gained the lions' share of opportunities in raising care quality. They are the only company type currently able to provide the right input,' said Gordon Blackwell, Research Analyst at F&S.

A niche for small IT firms

The congruence between IT and disease management techniques is well established. Successful disease management depends on a disease-specific information system that manages care programmes across the healthcare continuum, enables home monitoring, monitors self-care procedures and, ensures effective communication/information exchanges among patients, caregivers, and health care providers, the report continues.

'The IT sector is now emphasising that it is no longer sufficient to have clinical programmes producing health improvement and reducing costs. Rather it is essential to provide the necessary integration and connectivity to give real-time information and data to all the stakeholders in a programme,' Gordon Blackwell added. The emphasis is therefore on achieving integration within hospitals and then community-wide systems.

'While this is a positive development, the continued neglect of elderly and functionally limited home-based patients requiring disease management remains disquieting. The marginalisation of these potential user groups compels technology designers to address the constraints related to old age and functional inexperience.

'Today, both specialised, single-disease as well as multiple disease management service companies are active on the market. Rare diseases, such as haemophilia, offer prospects for specialisation. However, the trend favours multiple disease management providers. This stems from the fact that chronic conditions often involve overlapping diseases,' the F&S report adds.

'Multiple disease companies can

DISEASE management

deliver a coordinated campaign against multiple and overlapping chronic conditions thereby cutting the administrative costs associated with managing a medley of programmes,' Gordon Blackwell pointed out. 'They provide the benefits of one-stop shopping with only one contact point.'

While traditional disease man-

agement appears to have proven cost effective in the US, there is little proof of the cost effectiveness or even potential long-term cost reduction accrued from the use of the Internet in disease management, the report indicates. 'Despite this, leading healthcare consultancies estimate the U.S. market for IT-based disease management services

expanded from \$68 million in 1997 to \$500 million in 2000, projecting \$10 billion in revenues by 2010.

'In Europe, the multiplicity of health systems and languages has underlined a fragmented IT sector. In this scenario, medical product companies active in IT are likely to have the best prospects for ascendancy. Most healthcare specialist companies in the IT sector are small. They will therefore have to achieve rapid growth or enter into acquisition programmes, to be able to compete effectively.

'Clinical information systems, with the ability to provide computer-assisted diagnosis, are expected to anchor healthcare systems of the

future. This will present the company supplying the software with the opportunity to supply and/or control the supply of all the essential compatible hardware and other products.'

'This will require organisations with very considerable resources, and the need for corporate mass will mean that the end-point of the development is likely to be a small number (perhaps five or six) global giants in the area that will dominate the healthcare marketplace,' Gordon Blackwell concluded.

* Pub: August 2003. Report code: B251. Price: US\$ 9,950. Details: <http://healthcare.frost.com>.



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Whenever something truly new is to be created, you need vision. Taking several steps at a time, the new Video System from Pentax sets new standards in digital video endoscopy. The EPK-1000 video processor and video endoscopes of the 70K and 80K series feature innovative design and exceptional ergonomics, optimizing image quality and therapy capability. If you too want to experience endoscopy digitally, contact us: Telephone +49-40-56192-0; Fax +49-40-5604213; E-mail: medical@pentax.de or Internet: www.pentax-endoscopy.com

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Autofluorescence-Bronchoscopy

Sales of speech recognition systems accelerates



Specialist terminology from various medical fields can now be recognised, recorded and transcribed in German, Austrian, Dutch, French, Swedish, Flemish and UK English

In Europe, medical reports cost an average of four euros to produce. In the USA total costs for information capture and report generation in healthcare is estimated at \$50 billion annually (*Healthcare Documentation: A Report on Information Capture and Report Generation*, 6/2002. © C P Waegemann, C Tessier, et al., Newton, MA). However, according to market research firm

Mercer, using speech recognition can increase efficiency in report production and decrease costs by some 50%.

Radiologists (among the first to use speech recognition) use a fairly standard vocabulary, so high recognition rates were achieved. 'The turn-around time for radiology reports improved by 35%,' said Professor Kumpan, at the Kaiser Franz Josef Hospital,

Vienna, who has used a Philips SpeechMagic system for over five years. '95% of documents are available on the same day.'

The interest of specialists working in other fields inevitably increased.

Philips was the first to combine various ConTexts (recognition vocabularies) in one MultiMed ConText. MultiMed is used with SpeechMagic and covers 80% of

all medical disciplines.

Now Philips and the medical IT company Kuhlmann Information Systems have announced that the university hospital in the state of Saarland, Germany, and two district hospitals in the north, will be the first in Germany to introduce speech recognition on a hospital-wide scale. They follow the Vejle Hospital and Kolding Hospital in Denmark, which were

the first hospitals in Europe to upgrade their digital dictation system to speech recognition.

Additionally, the Berlin-based IT firm Optimal Systems has secured a major order to integrate SpeechMagic in nine German convalescent clinics - initially equipping over 170 workstations with SpeechMagic. Marcel Wassink, General Manager of Philips Speech Recognition Systems pointed out: 'These orders show that hospitals are increasingly embracing modern technologies to help face the challenges of increased cost pressure and reduced public healthcare budgets.'

Dr Marion Kalwa, responsible for the pilot project in the Münsterland Clinic, Germany, said: 'The service for patients has improved because waiting time between dictation and release of a report has been almost eliminated. In addition, automatic filing has reduced the number of errors resulting from manual filing. The increased productivity of our transcription department has freed resources, which we now use for more important tasks. All these improvements will lead to a clear reduction in administrative costs.'

Philips now provides MultiMed ConTexts for use in German, Austrian, Dutch, French, Swedish, Flemish and UK English. The company also plans to release further language versions shortly.

TELEMED

Home monitoring success



Illinois, USA - The combination of remote monitoring, patient education and medical intervention virtually eliminated re-hospitalisation and emergency room visits and significantly improved patients' satisfaction with home care services and quality of life, according to a 120-day pilot study conducted by the Visiting Nurse Association of Southeast Michigan (VNA).

In the TeleHomecare programme, focusing on 32 heart failure patients, each received a special weighing scale and blood pressure cuff, which were connected to their home telephone lines. Each day, when patients weighed and took their own blood pressure (BP) their weight, heart rate and BP readings were automatically sent to a secure internet site and evaluated by the VNA nurses. 'Only one person during the study was re-hospitalised for heart failure,' said Rosanne Brugnoni, VNA director of clinical innovations. 'That is a fantas-

tic outcome. Heart failure patients have the highest rate of readmissions to hospital or emergency care while under home care supervision.' Nationally, 25% return to hospital within 30 days of treatment - and 45% return within 90 days.

Traditionally, patients are monitored from visit to visit rather than daily, which leaves uncertainty about their condition between visits. The VNA points out that TeleHomecare is a far more proactive approach, and is readily accepted by patients and family, encourages education, prevention and self-management and employs a team approach.

Within the next year, the association plans to expand the TeleHomecare programme to cover asthma, chronic obstructive pulmonary disease (COPD), diabetes and hypertension. Email contact for details: vna@vna.org.

Telediagnosis could cut flights



Australia - Currently the Royal Flying Doctor Service flies suspected coronary heart disease patients from distant hospitals to Perth for diagnosis - but for many the flights prove unnecessary. Now, due to a system developed and tested over an eight-year period, local scanning may save patient transportation costs and keep more hospital beds free.

Dr John Walker, a nuclear physician, has been developing and testing a radiology service Imaging the South (ITS), which uses myocardial perfusion scintigraphy (MPS) via a web-based system, to check out emergency patients who present chest pains in their local hospitals. The system now covers about 470 cases daily, carrying out real-time transmissions between primary care physicians and consultants, and provides 24/7 service for A&E patients and multi-trauma cases seen by hospitals a distance away.

Dr Walker said internet-based RIS and PACS help to streamline reporting, and enable second opinions, even from international specialists if necessary, and the system demonstrates high sensitivity and specificity in diagnosing myocardial ischaemia, thus improving risk stratification and clinical management for emergency patients. He believes the same results will be achieved when using CT, MRI, and ultrasound.

E-health in practice

Files move, patients do not.
Report by Dr Hans-Jürgen Hühne of Deutsche Telekom

Information and telecommunication infrastructures, and the implementation of tailor-made solutions, are core competences of Deutsche Telekom. In healthcare, eHealthConnect and eHealth Net, produced by the firm's T-COM division, not only provide necessary location-spanning for physicians, hospitals and other health sector teams, but also secure communications.

Primarily, the aim is to implement suitable network-information systems as the technical basis to meet two important requirements shared by hospitals and external general practitioners: ensuring patients receive the best treatment and achieving this at the optimum costs.

The Rotkreuz hospitals in Frankfurt have achieved both aims. An electronic patient file is at the heart of the solution. Information is available not only to hospital staff, but also to external physicians in their medical practices. State-of-the-art secure technology protects sensitive data within the network and during transmission.

A fast and secure network is also the basis for a co-operation, across several locations, used by an appliance-sharing group of nuclear physicians in the Nuremberg-based Radiologische Nuklearmedizinische Apparategemeinschaft. Their aim is for diagnostic and therapeutic patient data to be available to medical teams involved. In other words, data moves, patients do not. The result of using this system is that Deutsche Telekom's 'all-in solution' helps to attain efficient, full-capacity use of expensive equipment, which also optimises the group's economy.

These modules of a comprehensive telematics solution represent a strategic contribution towards the evolution of a networked health sector.



NEW

International Society for Telemedicine (ISfT)



Tromsø, Norway - The new International Society for Telemedicine (ISfT) was inaugurated (as a Society under Swiss Civil Code) at the 8th International Conference on the Medical Aspects of Telemedicine in September.

ISfT aims to promote international health telematics - particularly telemedicine, telecare, telehealth, ehealth and associated fields. The society will focus on, for example,

legal aspects, rules for good practice, and the bringing together of scientists and researchers, sponsors and advisers, manufacturers and distributors and their scientific personnel, and promote initial and supplementary theoretical and practical training in telemedicine.

Details: www.isft.org Contacts: Professor Michael Nerlich (President) or Frank Lievens (Treasurer)

Network for stem cells

Leiden, NL - Up to now, transplant centres have had to check each cord blood stem cell (CBSC) bank individually. However, leading public cord blood banks have been joining the Netcord Foundation - which aims to provide cord blood stem cell (CBSC) transplants produced in accordance with Netcord FAHCT standards. This centralised system will present the full inventory of CBSC held by the member banks, speed up selection and reservation of a cord blood unit, and help reduce the frequency of possible allocation conflicts for a cord blood transplant provided by a bank, Netcord points out.

Registered in the Netherlands, and subject to Dutch law, the Netcord Foundation also has offices in other countries.

The European Community (EC) supported the banks involved during the development of a Netcord Virtual Office - which can be seen at MEDICA in November. netcord@itz.uni-duesseldorf.de

Stem cells under scrutiny Fusion or transformation?

Transplanted bone-marrow-derived cells (BMDCs) can fuse with other mature cell types in live mice, according to a new study published online by the journal Nature (<http://dx.doi.org/10.1038/nature02069>), a finding could undermine the rationale that stem cell transplants can be a genuine replacement therapy.

In culture, bone marrow cells can generate liver, heart and brain cells. In vivo, the same also appears to be true. However, although some researchers believe the transition to be a genuine transformation of one cell type to another, others think that the transplanted cells fuse with host tissue, thereby taking on the characteristics of the host cell. Fusion had been shown to occur in vitro, and an earlier study published in Nature this year showed that bone marrow cells could fuse with cells of a damaged liver in vivo.

Now Arturo Alvarez-Buylla and colleagues at the Univ. of California, San Francisco, have shown that transplanted mice BMDCs can fuse with liver, brain and heart cells, even in a healthy animal, but there was no evidence of authentic transdifferentiation (the ability of one cell type to turn into another).

This result hints that cell fusion might occur naturally. Under normal conditions, many heart and liver cells have two or more nuclei - which may be due to fusion, the authors speculate, although whether this represents a repair mechanism for damaged tissue is unknown.

The rationale for clinical procedures based on the idea of transdifferentiation may also need rethinking. The team conclude that further animal studies are needed to assess the value of BMDC transplants as a useful replacement therapy. Email: abuylla@itsa.ucsf.edu

NETCORD is a foundation subject to Dutch law. The registered office of the foundation is situated in Leiden (NL). The NETCORD foundation has branch offices in other countries

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Disaster prompts critical care course



UK - During a football game in Hillsborough, Sheffield, 14 years ago, 96 people were crushed to death. Later, the Hillsborough Disaster Fund was set up. From this fund, in 1989 funds were given to the London-based Royal College of Surgeons to develop facets of the hospital phase of emergency care. The College chose to develop a special course called 'Care of the critically ill surgical patient' (CCrISP), which became one of its most popular courses. Thousands of surgical trainees and their patients have benefited from this teaching and training, and the course is run in over 50 centres nationally - as well as in Ireland, Hong Kong, Australia and New Zealand. In Australasia it has in fact become a mandatory part of surgical training, with 1,000 trainees last year alone.

This September the college launched the second edition of the course, aimed at ensuring trainees are taught the systematic management of the acutely ill patient, either in the emergency room or on a surgical ward. Manchester-based consultant surgeon Iain Anderson, who donates time to tutor on the CCrISP, said that the newly-devised course was developed by a multidisciplinary team of surgeons, intensivists and anaesthetists, who revised it due to the experience as well as opinions canvassed from all CCrISP instructors. 'Piloting of the new course suggests it will achieve its aims - to make the dissemination of this knowledge easier, more effective and more enjoyable for student and teacher alike.' http://www.rcseng.ac.uk/surgical/raven_courses/bst/bsc_html?CourseID=11

MEDICAL TECHNOLOGY

TRILUX medical technology stands for a wide product range of medical supply units in care and intensive care areas as well as lighting systems destined for use in the health care sector.

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TRANSPLANTS GRANT

The Netherlands - Dr Harm Hoekstra, of Groningen University Hospital, has been awarded the Fujisawa 2002 Study and Research Grant.

Created in partnership with the European Society for Organ Transplantation (ESOT), this annual grant recognises innovative excellence by young researchers in clinical and experimental transplantation and aims to fund a new research project.



Spain leads in organ donations

 **EU** - The striking differences between the number of organs donated for transplants in six European countries was highlighted during September's first European Forum 'Alliance for Organ Donation', arranged by the German Organ Transplantation Organisation (DSO). According to 2002 statistics, Spain - a best practice country - has 33.7 organ donors per million inhabitants, whilst France had 20; Italy 18.1; Hungary 16.4; United Kingdom 13 and Germany 12.2.

'Even though the legal and organisational frameworks vary greatly between the Member States of the European Union, transplant candidates all over Europe suffer because waiting times are much too long,' said DSO president Professor Martin Molzahn. 'In Germany, which has not yet achieved the same rate of transplants as its European neighbours, the death of patients awaiting heart or liver transplants is the sad reality.'

At the forum, politicians and experts discussed options for improving European organ donation by working together. Despite differences in healthcare policies and legal and organisational frameworks, much common ground exists. The initial goal of the forum was to look more closely at the European situation, focusing on the six participant countries, and to find some preliminary approaches for

taking steps towards improving organ donation. This goal is reflected by the countries' first joint declaration, which forms the basis for concrete future measures. These include sharing information, joint study of best practice models, joint initiatives for standards in quality assurance and recipient safety.

Six countries enter new alliance

This co-operation will also result in planning and implementation of joint research projects to further develop transplants.

The organisers also want to pay a contribution to renewing public awareness of the issue of organ donation.

The declaration underlines that the partner organisations support the ethical principles of solidarity and altruistic organ donation and are clearly opposed to material incentives for organ donation and to the organ trade. **Hospitals** - The declaration adds that they should always try to give anyone wishing to donate his or her organs after death the opportunity to do so. The situation

of organ donation is often closely tied to the co-operation of hospitals, the forum adds. Procurement organisations are there to support hospitals and transplant centres round the clock, the declaration also emphasises. Procurement organisations ensure that information is found and provided quickly and professionally, using information technology that is vital in the process of organ donation.

Organ transplantation is a proven therapy and organ donations from cadavers have priority. There are many situations where donation from living donors is justified from a medical, legal and ethical standpoint, but the health risks for the donor must always be taken into consideration, the forum pointed out, adding that alternatives to organ donation (e.g. xenotransplantation) will not be a short or medium term option for candidates on waiting lists.

'We want to learn from the best practices in our respective countries, formulate joint objectives and find solutions,' the declaration concludes. 'It is our objective to establish a rate of organ donation in all European countries that is similar to the current rate in Spain.'



State Secretary Dr Klaus Theo Schroder (right) welcomed by Dr Martin Molzahn (left), Chairman of the German Organ Transplantation Foundation

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Live kidney donors increase But many more are needed

 **Venice, Italy** - The number of live kidney donations in the USA now exceeds the number cadaver kidneys donated, and they are expected to increase, according to data presented at the 11th Congress of the European Society for Organ Transplantation.

The finding was announced at a major symposium entitled 'Living Donor Kidney Transplantation 2003: Looking to the Future', sponsored by Fujisawa Pharmaceutical Co Ltd, of Osaka, Japan, which is conducting a major global initiative to help the transplant community educate and raise awareness of the issues involved, and to encourage debate into all aspects of living donation.

Greater focus has been placed on live-donation of kidneys as the number of those needing a transplant far exceeds the number of donor organs available. Indeed, as transplantation has become more and more successful, the numbers and types of people who are now considered possible candidates to benefit from a transplant has grown, and demand for donor organs is expected to continue to exceed organ availability.

The latest data (end of 2001) show that 52% of donors were living donors and that the number increased by an average of 12% each year in the previous five years, compared with 2% from deceased donors. By contrast, during the same period the number of patients on the cadaver organ waiting list increased by 11% per annum (2002 Annual Report of the US Scientific Registry of

Transplant Recipients and the Organ Procurement and Transplantation Network. www.optn.org/data/annualreport.asp)

It is now common for partners, distant relatives and friends to donate a kidney, as well as siblings,

parents and children. This has been made possible due in part to the recent advances in immunosuppressive therapy, including Fujisawa's Prograf(r) (tacrolimus), the firm reports. Details: www.livekidney.com

USA - Removing key muscles in the forehead and neck of migraine patients can reduce migraine attacks, according to Dr Bahman Guyuron, who presented his early findings, from a 5-year study, at the World Congress of Plastic Surgery in Sydney, Australia. A year after 100 patients received this type of surgical treatment at the Zeeba Clinic, Cleveland, Ohio, 90 had reported having no migraine attacks - or far fewer than before the surgery.

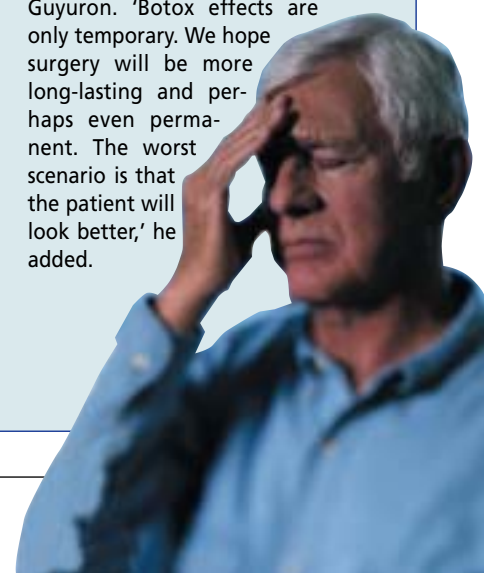
Dr Guyuron, a plastic surgeon, said that about four years ago, when two patients reported having fewer attacks after 'brow lift' treatment with Botox to paralyse muscle, he checked on 314 people who had also received this treatment and found that 39 of the migraine sufferers said they still regularly suffered migraines, but 31 said their headaches had ceased after the injection. He speculated that migraines occur in many cases because of a trapped or pinched nerve in any one of four areas - forehead, temple, back of the neck or nose - or in more than one of those areas.

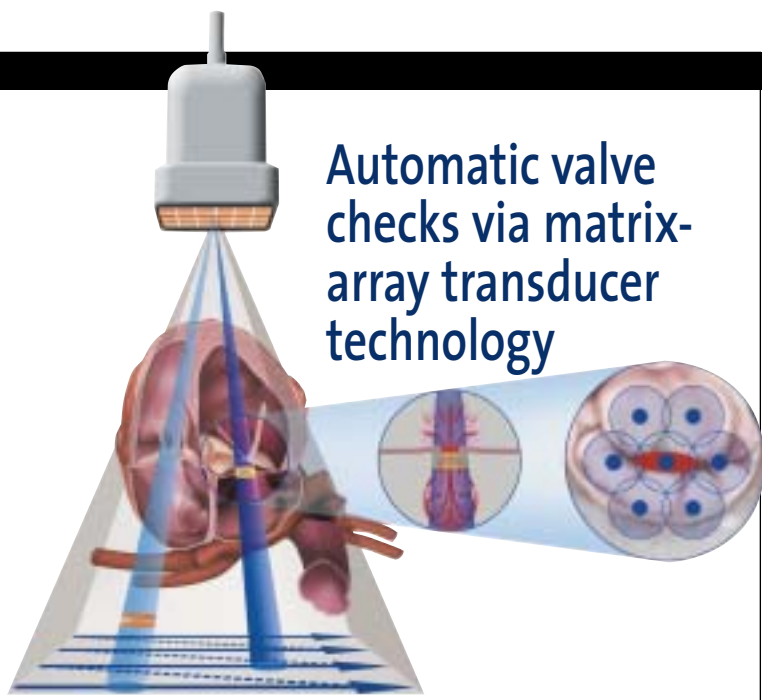
In a small trial, over a three-month period, he used Botox to

paralyse muscles in each of those areas individually - except the nose. In a follow-up, these patients were asked whether they still had migraines. When the answer was affirmative, he deduced the cause to be in the nose, and those patients had surgery to straighten bone separating nostrils, whilst the others had surgery to remove relevant branches of the trigeminal nerve - known to trigger migraines.

Now the biggest majority of the volunteers (each formerly averaging 15 migraines monthly) have reported improvements or no migraines. 'They have seen at least a 50% reduction in the severity of migraines. Some have no migraines at all now,' said Dr Guyuron. 'Botox effects are only temporary. We hope surgery will be more long-lasting and perhaps even permanent. The worst scenario is that the patient will look better,' he added.

Muscle surgery cuts migraines





Automatic valve checks via matrix-array transducer technology

A diagnostic tool, Flow Navigator, checks cardiac valve function using a search beam generated by an ultrasonic matrix-array probe to scan the heart three-dimensionally and, via high-frequency Doppler signals, analyse the power/velocity of blood flow through the valves. Thus the navigator can automatically detect valve damage and help decide the optimal time for surgery.

In addition to providing a simplified and more accurate method for the assessment of heart valve disease in clinical practice, Thomas Buck PhD, at Essen University, reports that this approach provides a further diagnostic application of the new matrix-array transducer technology. E-mail: thomas.buck@uni-essen.de

Obesity increases the risk of heart disease by raising blood pressure and levels of LDL cholesterol and triglycerides, and reducing HDL cholesterol. In addition obesity can provoke left ventricular hypertrophy - an abnormal thickening and enlargement of the left ventricle - which could lead to heart failure etc. And when obese patients need cardiac surgery, their condition has been considered a greater risk factor for complications and even death.

However, according to a new study, obesity does not lower the patient's chances of surgical success.

Dr Barnaby Reeves, at the London School of Hygiene and Tropical Medicine and surgeon Dr Gianni D. Angelini at Bristol University have evaluated the effect of obesity - specifically body mass index - on the outcome of coronary artery bypass graft (CABG) surgery, and reported their findings in the *Journal of the American College of Cardiology* (20/8/03).

The team looked at results from 4,372 cases of CABG from April 1996 - September 2001. Three percent were underweight (BMI less than 20); 26.7% were of 'normal' weight (BMI 20-24); 49.7% were overweight (BMI 25-29); 17.1% obese (BMI 30-34); and 3.6% severely obese (BMI 35+). The patients were monitored for infection, respiratory and neurological effects, length of time in intensive care unit (ICU) and the hospitals - and early death.

The study pointed out that obese patients were 'less likely to be selected for surgery than normal weight patients'. However, they found that 'overweight, obese, and severely obese patients were no more at higher risk of

adverse outcomes than normal weight patients' - and, interestingly, they were less likely than normal weight patients to require a transfusion.

Indeed, an unexpected finding was that underweight CABG patients showed a higher risk of death or complications than normal weight patients.

'It is as safe to operate on obese patients as normal patients,' Dr Angelini concludes. However, he

researchers also found that overweight patients were at particular risk.

The team examined the impact of the diluting process on kidney efficiency. They examined over 1,400 bypass patients, comparing the percentage concentration of red blood cells (haematocrit) after dilution with levels of creatinine in the blood. When functioning normally, the kidneys remove this chemical from blood, secreting it

Obesity

pointed out that the study only looked at surgical outcome - it did not address the overall negative health effects of obesity itself.

However, in a different study, carried out in the USA, obesity was a risk factor - in blood thinning during bypass surgery.

Blood-thinning risks

About one in 12 bypass patients suffer kidney damage as a result of blood thinning during major cardiac procedures - when a heart-lung machine is used. About 2% end up on dialysis.

When heart function is stopped for surgery, the need for oxygenation is reduced, then blood thinning, when the blood's usual 36-40% of red cells is diluted to 22-26%, is used to help prime the heart-lung machine and also reduce the risk of blood clots. However, thinning, achieved with a saline solution, could harm the kidneys, according to a new study by Dr Mark Stafford-Smith and colleagues at Duke University Medical Centre, USA (pub: *Annals of Thoracic Surgery*). The

No big deal in bypass surgery - but blood thinning is a threat

in urine. The researchers found the lower the concentration of red cells, the higher were the creatinine levels - which was particularly noticeable in overweight patients.

'This is the first report highlighting the association of haemodilution during bypass surgery with acute injury to the kidneys,' Dr Stafford-Smith said. 'Our findings question the wisdom of tolerating the lowest levels of haematocrit during bypass surgery.'

The use of donated blood instead of saline also could prove harmful. The researchers suggested that redesign of heart-lung machines, so they would need less fluid, could be one solution to reduce this risk.

Stopping the heart safely



Substitutes for potassium ions

Australia - Although many cardiac surgical procedures are now carried out without stopping the heart, the use of alternative drugs to potassium ions would help during surgery on the inside of the organ. In experiments, two drugs - adenosine and lignocaine - have now been used to stop the heart by a research team at James Cook University (due for publication in the *Journal of Thoracic and Cardiovascular Surgery*).

Potassium ions work by interfering with the movement of chemicals in tissues that generate electrical activity in the heart, and so beating stops. However, potassium doses can cause permanent damage. In rat experiments, when their hearts were flooded with potassium for two hours only about 50% began to beat again. However, when perfused with adenosine and lignocaine for four hours, all the animal's hearts began to beat - although showing just 70% of earlier ability. Additionally, in an experiment involving a dog, one five-minute infusion of adenosine and lignocaine stopped the heart for an hour and later it began to beat spontaneously, seeming to work as before. Another advantage was that, whereas the body is generally cooled for open-heart surgery, the dog's heart had been maintained at body temperature.

Open-heart surgery

Patients prefer being awake

The use of an epidural, instead of a general anaesthetic, in open-heart surgery has been practiced in Britain for the first time, although the technique, pioneered in Turkey three years ago, has been adopted in other EU countries and the USA.

Consultant cardiac surgeon Mohamed Amrani and team at the UK's renowned Harefield Hospital, have operated on several heart disease patients, administering an epidural at a level similar to that received by women undergoing caesarean sections, and patients remain wide awake during the procedures.

Mr Amrani said the time in which these patients recovered is impressive and pointed out that discharge is earlier than after general anaesthetic - in days rather than a week.

Although lack of training in epidural administration - and the need for larger randomised controlled trials for use in other cardiac surgery - will limit the use of this 'wide awake' option in most hospitals, Harefield Hospital will now offer suitable coronary artery bypass patients the choice of staying awake during their operations.



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Studies have shown that the use of a drug eluting stent (DES) - which releases active agents prevent cell growth at the site - to treat arterial stenosis, has resulted in a significant reduction in restenosis cases. Underlining the benefits of their use, Dr Fabian

Time for policy changes

Stahl, one of the first cardiologists to participate in a pilot project using DES, said: 'Usually you see patients with coronary heart disease over and over. But those who receive a DES only come once to the catheter lab. More quality of life and less costs for follow ups - you couldn't think of better arguments for a new technology.'

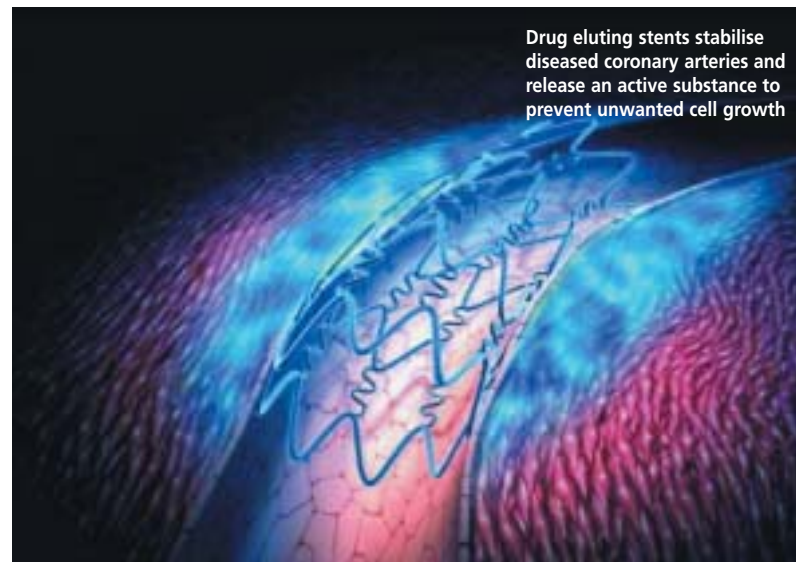
The use of non-drug-eluting stents has shown 25 % restenosis in patients, within six post-operative months. This means angioplasty must be repeated, and often bypass-surgery becomes necessary. 'With data like that you

Drug eluting stents

don't want to use conventional stents any more. Can you imagine what it means to a patient if you spare him bypass-surgery?' said Professor Eberhard Grube, cardiologist at KH Siegburg and a member of the German group Aktion Meditech.

However, because a DES costs more than non-drug eluting versions, arguments continue about reimbursement for their use - and, in general, only risk groups, such as diabetics or patients with small vessels, receive them.

Now Aktion Meditech, comprised of physicians, patients, scientists and companies, and '...working to create more patient-oriented healthcare policies', is asking for reimbursement models to be reshaped so that as many coronary heart disease (CHD) patients as possible can be provided with this new technology. 'Currently the TKK (one of the biggest German sickness funds) is testing whether using drug eluting stents can even reduce costs in the long run, because follow ups are reduced,' said Aktion Meditech,



Drug eluting stents stabilise diseased coronary arteries and release an active substance to prevent unwanted cell growth

DES from Aktion Meditech

Heart failure

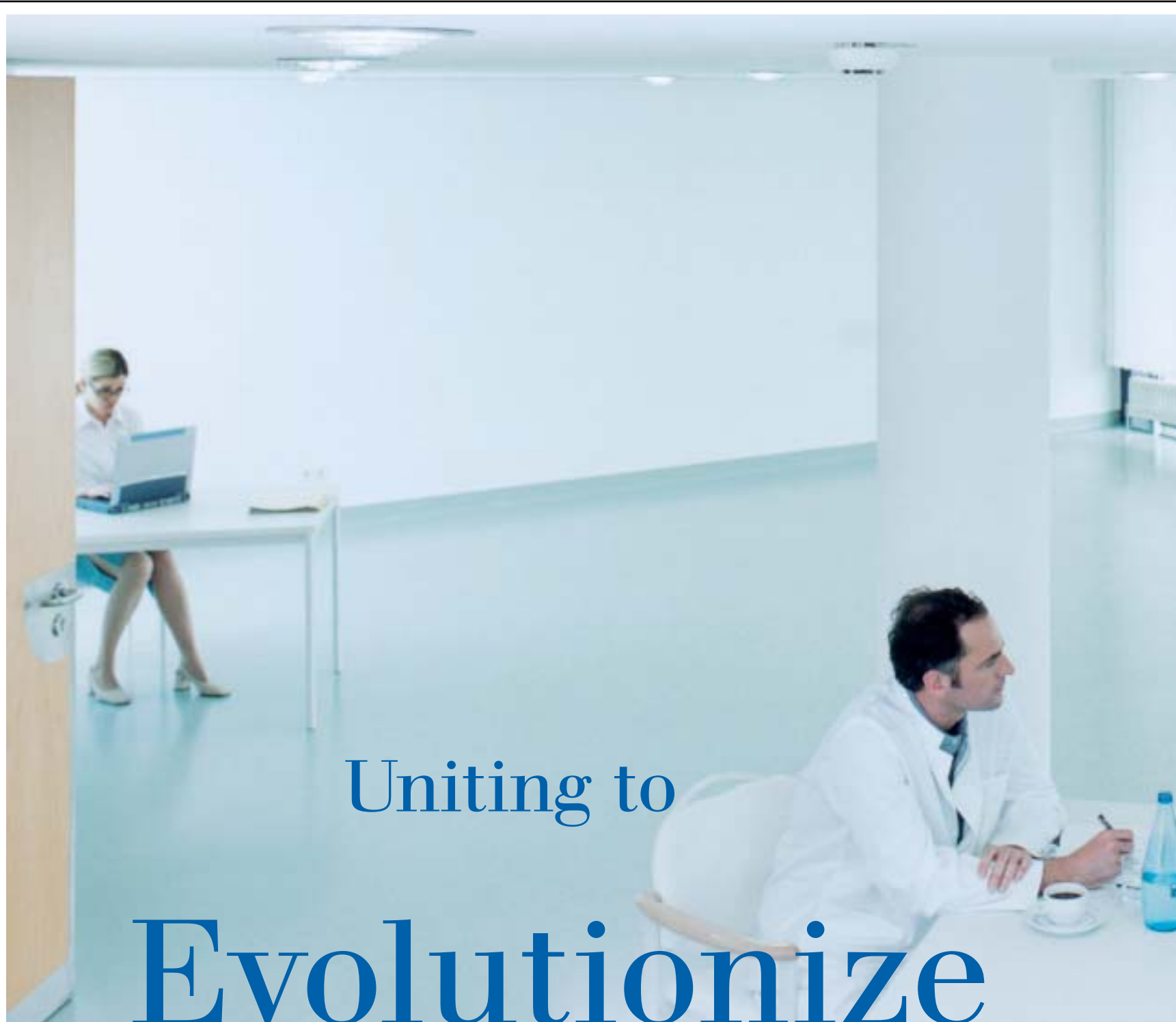


The value of resynchronisation

Vienna, Austria - Heart failure affects over 5 million Europeans and over 600.000 new cases are diagnosed annually in Europe alone. This is therefore one of the major causes of hospitalisation, yet, despite improvements in pharmacotherapy, the disease retains high rates of hospital admissions and mortality, as well as poor quality of life.

At the European Society of Cardiology Congress (ESC) in September, a computerised health economics model, developed on behalf of the Eucomed Cardiac Resynchronisation Therapy (CRT) Steering Committee and titled 'Cardiac Resynchronisation Therapy in Heart Failure - A Model to Assess the Economic Value of this New Technology' was presented. This demonstrated that in Germany, for example, average savings from using CRT amount to 3300 euros per patient in the first year of treatment and hospitalisation days could be reduced by 90%. The model explores the cost-effectiveness of CRT compared with traditional pharmaceutical treatment for heart failure, and enables similar conclusions to be drawn for other European countries. Besides the favourable economic outcome, patients undergoing this treatment also benefit from improved quality of life, Eucomed added.

'Innovation in medical technology today brings considerable benefits to the patient and contributes to better, faster, higher quality and cost-effective healthcare. The European Commission should encourage and actively promote equitable and timely patient and clinician access to life-saving and life-enhancing medical technology in the European Union,' said Maurice Wagner, Director General of Eucomed, which has worked for a year and a half with five major pacemaker manufacturers to elaborate the CRT model.



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Sharps injuries

Aktion Meditech is also warning of the dangers of using unsafe products that cause injury, such as sharps and/or sharp instruments, with the potential to cause hepatitis B or C or HIV.

'New medical products with integrated safety mechanisms provide effective protection,' the group says, advising that those who are responsible in the healthcare sector for protecting users and patients should use those products. '84 % of infections are avoidable - using safety products. Sharps injuries often happen after taking blood or giving infusions (concrete

examples). Highly effective protection is given from innovative medical products that aim exactly at these precarious situations, for example canulas with a safety-shield that is easy to activate and safety catheters that almost fully eliminate the contact with the patient's blood

American studies show that using such safety products would avoid 84 % of all sharps injuries! This is also economically important, because sharps injuries are causing consequential costs of several 100 million Euros annually!' www.aktion-meditech.de

MORE WOMEN DIE OF STROKE THAN MEN

Geneva, Switzerland - Stroke kills 400,000 more women than men annually - yet 6 out of 10 physicians said they believe men are more likely to die from a stroke, according to findings in the 'Global Reality of Attitudes on Stroke Prevention and Hypertension' (GRASP) survey, compiled from 825 primary care physicians in eleven countries (France, Germany, Italy, Spain, United Kingdom, Canada, Mexico, Sweden, Turkey, South Korea and South Africa) and presented at the European Society

of Cardiology (ESC) Congress, in August.

'While most people think of cardiovascular disease as a man's problem, the truth is that both sexes suffer just about equally, but for a variety of reasons cardiovascular conditions, such as stroke, are more often fatal in women than in men,' said Janet Voûte, CEO of the World Heart Federation (WHF) which, with Merck & Co Inc sponsored the survey to ascertain physicians' perceptions on hypertension management. That general misconception among physicians, plus other findings from



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the survey were highlighted during this year's World Heart Day (also sponsored by WHF).

According to the World Health Organisation (World Health Report 2002), 11% (2.9 million annually) of women's deaths result from stroke, compared with 8% (2.5 million annually) of men's deaths from stroke. Additionally, if women survive a stroke they are more likely to be severely disabled than men, according to Wolf-Maier K et al (JAMA 2003).

'Cardiovascular disease is the largest single cause of death among women, accounting for a third of all deaths, Janet Voûte continued. 'The understanding about cardiovascular disease in women needs to be raised to the same level it is for cardiovascular disease in men. We also want World Heart Day to serve as a catalyst to encourage women around the world to be proactive in preventing heart disease and stroke. Women must have discussions with their physicians about their risk factors - such as hypertension - and, if necessary, seek the best available treatments and/or make appropriate lifestyle changes.'

Hypertension and stroke - links are strong

A common public perception is that the main risk associated with hypertension is heart attack, but hypertension is a major contributing factor in strokes. Additionally, a recent analysis published in the Journal of American Medical Association (JAMA) showed the prevalence of hypertension is much higher in a sample of six European countries (England, Finland, Germany, Italy, Spain and Sweden) than in Canada and the United States. This pattern strongly correlates with death rates from stroke in Europe (Roger J et al. Stroke 2003, 34: 1581-5.3).

Physicians appreciate the fact that hypertension and stroke are strongly correlated. The GRASP survey indicates that 70% of physicians believe all or most first strokes can be prevented by properly treating high blood pressure. The majority of physicians, 87%, also said they believe there is a need for improvement regarding the treatment of hypertension and its consequences.'

'It is encouraging that physicians are concerned about preventing stroke in hypertensive patients,' said Professor Massimo Volpe, hypertension expert and professor of cardiology, Department of Medicine and Pathology, University of Rome. 'Now we need to ensure that they also appreciate that women are just as much at risk of having a stroke as men. Therefore, women as well as men need to be evaluated and treated appropriately, using evidence-based medicine, to reduce their risk of having a stroke.'

Details: www.worldheartday.com

Particles used in *nanotechnology* are invisible to the human eye - one nanometre being one billionth of a metre. A human hair is 80,000 nanometres wide.

Nanotechnology can therefore produce smaller, stronger products. But shouldn't we assess the dangers before racing towards finding increasing uses for this in our everyday lives?

'Innovation is running ahead of regulation,' said **Dr Caroline Lucas**, UK MEP, during the first international seminar on the societal impacts of nanotechnology (European Parliament in June).



Micro-systems technology used for molecular detection has already resulted in DNA-arrays and biochips being used extensively in genetic, disease and drug research

Groups of scientists are working independently. They must talk!

gy features as one of the thematic priorities and has been allocated a budget of 1,300 million euros for the years 2003-6. Within the Commission, the Head of Unit for nanotechnology, Renzo Tomellini, explained that the Commission's aim in funding such research is to create new economic opportunities and improve living conditions for Europe's citizens. He recognised concerns about the implications of this technology, and stressed that if a danger is perceived, it should be investigated.

Jurgen Altmann, University of Dortmund, drew attention to the possible impact that nanotechnology could have on military operations. Research is already being conducted by the military, and has

the US of this work: 'The US is way ahead and so won't lose anything with a slow deceleration and it could buy time for an international agreement on limits [to such technology].'

Pat Mooney, Executive Director of the action group on erosion, technology and concentration (etc) underlined the need for deceleration and investigation. 'Do policy makers know this technology is coming?' he asked. 'Most have no idea - and it's here.' Governments, he added, are running around five years behind time in terms of assessing the potential impacts. 'As much as health and environmental concerns must be a priority, there is a desperate need to look at the effects on and control of the economy,' he pointed out. Nanotechnology will mean that the raw materials that we currently consider essential will change, and this will have a dramatic

Whilst those working in nanotechnology recognise future benefits, most others at the seminar expressed various concerns about the impact of this new technology on human health and the environment, its effects on international trade and developing countries, and the possible proliferation in armaments. In summary, the over-riding concern was: we do not know what the impact of nanotechnology will be, and therefore should have a moratorium on aspects of its use as well as research.

'I am not against new technologies, but want to be sure about their impact,' Dr Lucas pointed out. 'The minimum we need now is a moratorium on products applied to the skin.' Most people do not realise that products developed by using nanotechnology already surround us - face creams and sun lotions, for example, which can pass through the skin and potentially be mutagenic and cancerous.

Toxicologist Vyvyan Howard (University of Liverpool, UK) reported that nanoparticles can pass into the body in three ways: inhalation, ingestion, and transdermally. 'Breathing in very small particles has toxic effects, and it doesn't seem to matter what they're made of,' he said, adding that the important thing is

size. Pointing to concerns about particles between 65 and 200 nanometres in size he said toxicity increases as the size of the particle decreases. 'Another worry is where the particles go within the body,' he added. We know from pharmaceutical companies that putting a drug on the back of a nanoparticle can increase the delivery of the drug to the brain. 'If it [the nanoparticle] can get to the brain, I see no reason why it wouldn't get to the foetus.' Dr Howard called for more research on such implications and for scientists to work together: 'Groups of scientists are working independently. They don't seem to be talking, and I think they must.'

One way of increasing such collaboration is through the European Commission's Sixth Framework Programme, where nanotechnology

has been since as early as the 1980s. There has been a recent increase in such activity, particularly in the US, said Dr Altmann, pointing out that US researchers are working on battle-dress that would protect soldiers from radiation as well as become a compress when a soldier is injured. Other innovations could include the facilitation of surveillance, bombs the size of a pen that could flatten a whole city and, most worryingly for Dr Altmann, the manipulation of the human body to make soldiers more stress-tolerant, to repair injuries more effectively and to speed up reactions. Dr Altmann is also concerned that once such technology has been used by the military, transfer to civilians will be a natural step. He called for a moratorium on non medically-driven implants, as well as a slowing down by

effect on developing countries, many of which rely on the export of raw materials.

Vandana Shiva, from the Indian Research Foundation on Science and Technology criticised the way in which some countries are being told that they must become nano-adapted or remain underdeveloped. 'The way in which nanotechnologies are being presented is a betrayal of the science on which they are based,' she also added. 'At a time when science allows us to see the world in a deeper way, the quantum is brushed aside.'

Pat Mooney was also concerned about the impact on intellectual property, because it is conceivable that a single patent may have dominance over many industrial sectors by covering the fundamentals of all matters. 'This avoids most of the debates which have taken place on patenting life because it goes below the level of life - which concerns the ownership of nature.' He also warned that, 'the coalition between industry and government will get worse. It will protect the interests of what they say is society, but what they mean is industry.'

Pointing to different ways in which researchers are handling nanoparticles, he said, these are justification for decelerating and taking stock of nanotechnology. While scientists in South Africa handle nanoparticles as if dealing with the AIDS virus, other researchers wear only a 'Japanese subway mask' as protection. 'It's like wearing a volleyball net to keep out mosquitoes,' he said.

Douglas Parr, chief scientist with Greenpeace in the UK, compared the nanotechnology controversy with the debate on genetically modified organisms (GMOs). Policy makers' consideration of GMOs was originally very narrow, he said: The overall lesson should be that policy must not be composed by small groups of experts and bureaucrats, he added, calling on the EU to act as a technology facilitator with a user or civil society forum.

Last June, the UK government had already requested a study on the potential benefits and problems.

However, despite the many reservations about nanotechnology (including the fear of autonomous self-replicating nanorobots), a number of potential benefits were acknowledged. Products such as self-cleaning trousers and crack-resistant paint are already marketed, and future applications could enable removal of minuscule contaminants - including greenhouse gases in the atmosphere.

In conclusion, Dr Lucas recommended that policy makers ensure they are asking the right questions, and stressed that 'the most immediate priority is to prevent those who have the most to gain - big business - from beating the regulation race'. This, she said, is unlikely to happen in the EU without huge pressure, and called on the Commission to mainstream safety concerns.

Links: www.cordis.lu/nanotechnology and www.etcgroup.org

Nanotechnology

Decelerate research!

DRUG SALES INCREASE

From June 2002 to May 2003 drug retail sales increased by 6% in 13 key countries, closing at US\$289.5 billion, according to IMS Health, the global healthcare information company. The IMS Retail Drug Monitor covers direct and indirect pharmacy channel purchases from wholesalers and manufacturers in 13 key countries. Sales figures are at ex-manufacturer prices and include all prescription and certain over-the-counter data. Figures include sales from the hospital sector in Japan and mail order in the USA.

In the 12 months covered, sales in the top five European markets showed a 5% constant exchange growth - up on last month's survey, with Spain again the best performer at 10% growth. Low growth rates for Europe compared to our surveys in 2002 are attributed to French price cuts & re-imbursment changes in France and Italy.

● North America posted an 11% sales growth at \$159.8 billion in sales in the 12 months to May, the same as our last survey. The Key therapy growth area for North America was the Central Nervous System group with a 14% growth in the same period. USA growth remained at 11% for the year to May 2003.

By therapeutic category the biggest increase worldwide continues to be in the Cytostatics group all with a sales growth at constant exchange of 14%.

The single largest therapeutic sub category in dollar sales continues to be the C10, hypolipidemia, class selling \$20.5 billion with a growth of 13% in the 12 months to May.

2003. 66% of the sales of this class are in the US and 20% in the leading five European countries.

● The best selling drug for the 12 months ending May 2003 was still Lipitor, worth over \$8 billion, which showed the highest growth at 16% in the top five. The five top drugs are 1. Lipitor 2. Zocor 3. Losec 4. Norvasc 5. Prevacid (Ogastro).

The top 5 corporations in the year to May 2003 in order continued to be: 1: Pfizer 2: GlaxoSmithKline, 3: Merck 4: AstraZeneca 5: Novartis.

European Pharmaceutical Pricing

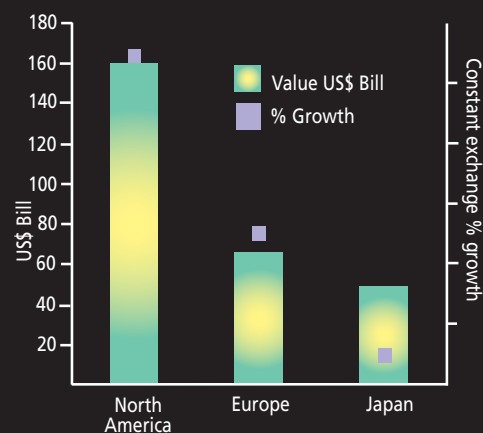
Pricing for pharmaceuticals in Europe is becoming increasingly complex. Government-led cost and volume containment measures and increases in the volume of parallel trade have all contributed to European pharmaceutical growth levels at less than 8% in 2002 (versus world growth above 8% and US at double-digit levels). Is the European pricing model outdated or can and should the US continue to be the mainstay for future growth?

An in-depth review by Janice Haigh, at IMS Consulting, looks at reasons why European pharmaceuticals pricing strategies are failing. From corridor pricing (with its minimal impact on the growth of parallel trade and potentially revenue limiting effects), to the effects of organisations such as NICE and the justification of price differences within the EU as differential in ability to pay (Ramsey pricing). IMS argues that Europe is becoming increasingly important - not only because an expanded EU represents 450 million, but that, increasingly payers globally are looking to Europe for guidance on price and pricing policy. Janice Haigh concludes that the answer is to radically alter the way prices are perceived and set by moving to a value-based pricing approach, in which drug prices would be set and flexed according to stakeholder perception of their value and that price.

Details: JHaigh@uk.imshealth.com

Genetics - realising the future of the NHS

June saw the publication of The UK government's White paper - 'Our Inheritance, Our Future - Realising the potential of genetics in the NHS' (published last June) demonstrates that the coun-



try's Department of Health appreciates both the value that genetics and personalised medicine may add to the provision of healthcare in the UK, and the importance of long-term planning in realising this value.

The press focused on the social and ethical implications of this - such as the impact on insurers. However, a further and equally critical question is the impact on healthcare infrastructure in adopting and applying that technology. Guy Bate, of IMS Global Consulting, reviewed the White paper and its potential impact both on and for the pharmaceuticals industry.

The UK's Department of Trade and Industry is exploring the impact of such issues on industry (report due shortly). Guy Bate said individual companies also need to consider the implications now, and he highlights the impact of personalised medicine on pharmaceutical commercialisation strategies (including market fragmentation and 'niche-ing'), the hurdle or stimulus for new therapy adoption represented by genetic screening and the need for diagnostic processes, as well as challenges for clinical development for new therapeutics for a genetically targeted group.

Details: GBate@uk.imshealth.com

Source: IMS Health, IMS Retail Drug Monitor. www.imshealth.com

Nanoparticles to deliver drugs

A project named TATLYS, led by the scientific coordinator Professor Emo Chiellini (University of Pisa) is developing a system in which biocompatible nanoparticles carry drugs and target them to break down blood clots - which are made up of the insoluble protein fibrin. The usual treatment is

thrombolytic drugs, but these can cause serious side effects (e.g. haemorrhage) if given systemically. 'Given orally they partly break down, so efficiency is reduced,' Prof Chiellini pointed out, adding: 'If you protect them with a nanoparticle, they can be delivered directly to the specific site. We use less material; the treatment is

more cost-effective, and you get fewer side effects.'

Supported by the EU, the TATLYS project is studying surface chemistry and is using nanoparticles for drug delivery. Prepared from biocompatible polymers, nanoparticles containing urokinase

are being produced on a laboratory scale. With these, simple proteins (oligopeptides) are created to match specific sites on fibrin molecules in a clot. Combinations of nanoparticles, oligopeptides and drugs will be tested to ascertain which produce the most effective fibrin targeting and drug release, as well as their stability and possible toxicity.

'Knowing the structure of the site on the fibrin, we design a peptide

that matches it - and the nanoparticle will bond to the site,' explained Professor Chiellini. 'Choosing different polymers to make the nanoparticles allows us to release the drug either in a short burst, or slowly over a period of time.'

The EU has contributed 2.14 million euros to the project, and research contributors are based in academic centres in Italy, the UK, Czechoslovakia and Israel.



Recent mergers of large laboratory diagnostics firms may be at a standstill since the Bayer/Chiron and Roche/Boehringer mergers, but large companies keep a keen eye on smaller start-up companies that may present new methods developed during university research programmes. The resulting small firms either find their niche in the laboratory diagnostics market or are taken over - for example, Igen by Roche and Visible Genetics by Bayer. This trend is expected to continue.

Examples of new technologies entering laboratory diagnostics include nanoscale sensors, genetic chips and proteomic chips are examples of new technologies entering laboratory diagnostics. Genetic chips are already in use in some areas, and will become particularly important in early diagnosis of genetic illnesses and tumours. Proteomic chips and nanoscale sensors are still in early stages of development, but are also expected to become an important.

The introduction of personalised medicine is another area of interest. Before licensing, all new drugs must be tested on patients, which includes continuous testing to ensure effectiveness and safety. (One example is the HER2 test, which is required for the use of Herceptin).

There is also a trend towards non-invasive examinations, which do not require blood sampling. This is particularly important for the advancement of 'near patient testing'. At present, only the determination of blood glucose levels is of economic importance. However, current research should lead to procedures to determine other parameters. Recently a new cholesterol test that determines parameters directly from the skin was introduced.

Apart from near patient testing, direct testing on patients - point of care testing (POCT) by doctors and other medical staff - will increase significantly. Although predicted growth rates of 20-30% per annum have not yet been achieved, the annual growth rate will definitely be in two figures.

Small, handy equipment to carry out tests quickly and safely is being developed. These machines will adhere to quality assurance requirements, store results and can be connected to central processors as and when required.

The problem with these methods, apart from the need for blood sampling, is the unfavourable reimbursement structure in many countries. In some, the tests are currently either not reimbursed at all or only by very little, so there is no incentive for doctors to use them. In others, doctors are not even allowed to perform these tests at all. However,

With a research budget of about 2-3 billion euros globally, the laboratory diagnostics industry is one of the most research-intensive sectors.

Internationally, among some 800 companies the ten largest firms share 85% of the market turnover - 23 billion euros. In this field, developments in industrialised nations are much the same, so Germany can be used as a yardstick for expansion:



Western Europe should also have a positive impact.

Further improvements can be expected from new diagnosis related groups (DRG) accounting procedures, which will boost laboratory diagnostics because improved diagnosis enables better treatment and ultimately saves costs. This transforms the laboratory from a mere cost factor into a means of production that can generate income for hospitals.

Product registration and licensing has also improved internationally. In the past, every country in Europe had its own licensing system. However, from 7 December this year, Europe will have a unified registration and licensing system, so export problems should become history. Efforts to achieve bilateral arrangements and mutual recognition of licensing systems with countries outside the EU are also underway, already with encouraging developments with some countries, although an agreement with the USA's FDA probably will be difficult.

Freedom of movement between EU member states has not yet resulted in a unified reimbursement procedure for tests. The reimbursement structure is still controlled by national committees - in Germany by the German General Medical Council. Whereas generally we can be optimistic about developments of new laboratory procedures and the worldwide laboratory diagnostics market in general, in Germany hopes for new products may be more pessimistic. Important tests such as Viruslast for HIV and Troponin took four years and eight years respectively to be included in the approved list of treatments.

Conclusion: We can state that in the future the diagnostics industry is set to experience a healthy growth, based on:

- New technologies leading to quicker/better testing, even for new disease markers
- New therapies need intensive diagnostics
- A focus on keeping populations healthy leads to a growth in preventive diagnostics
- Strong growth in POC and OTC markets due to demands for instant results
- Development of healthcare markets in the fast-developing nations
- Harmonising of licensing requirements leading to fewer export barriers
- Introduction of DRG (diagnosis related groups) in industrialised nations

LABORATORY DIAGNOSTICS a growth market

By Rolf Haker

* The German Association for the Laboratory Diagnostics Industry was founded in 1975 with just 13 members and a turnover of around 150-200 million euros. Today this association has 75 members and represents 95% of the country's laboratory diagnostics turnover - which last year amounted to around 1.7 billion euros.

patients' demands for better, faster health service and diagnosis mean that laboratory testing in surgeries will become more important. In industrialised countries, the establishment of large laboratory units has led to a decrease in the cost of single tests, but unfortunately customer service has deteriorated.

The reimbursement structure has also had a negative impact on the laboratory diagnostics industry in many industrialised nations because the payment for tests has been decreased - leading to enormous competition in this area. The turnover for laboratory diagnostics firms over the last few years has been weak, and in some countries is even turning downward. However, for the next few years an upward trend is predicted, mostly attributed to methods such as POCT/OTC and the new, predominantly molecular-biological approach. These new procedures will also bring better pricing and so improve the situation in that industrial area.

The expansion of healthcare services in many fast-developing nations should also impact positively on lab diagnostics turnover. The predicted growth rate for some countries in South America, as well as China and India, approaches 20% per annum. The alignment of central and east European countries with the level of

Sun creams warning

Increased malignant melanoma risk

A 13-year British study indicates that sun creams may not protect against skin cancer - and worse - may actually increase risk of the disease. The study by Professor Roy Sanders and colleagues, published in the October issue of the *Journal of Investigative Dermatology*, was carried out by a medical research charity, the Restoration of Appearance and Function Trust (RAFT), based at Mount Vernon Hospital, London, UK.

The researchers warn that using a sunscreen could increase the risk of developing malignant melanoma - the most aggressive and potentially fatal form of skin cancer.

The team said British consumers were staying out longer in the sun while using high-factor sun creams that protected against UVB radiation and prevented burning. But the same creams offered almost no protection against the invisible damage caused by the more penetrating UVA rays, despite assurances on the bottle.

Claire Linge, head of cell biology at Raft, said her team tested three high-protection sunscreens on skin discarded from surgery. Although the sunscreens claimed to offer protection against UVA, tests showed UVA radiation penetrated the skin even when creams were applied in the recommended amount. UVA, once believed to be less harmful than UVB, is now thought to cause the release of free radicals, which damage DNA and cause melanoma. Dr Linge said: 'We found the protection against UVA was the equivalent of only sun protection factor 2. The non-education of the public is worrying. You don't have to go red to have UVA damage.'

RAFT is in discussions with manufacturers about funding research into a new additive to protect against UVA, which could be available within a year. Manufacturers claimed their products were safe but agreed to conduct further research.

No discussion was made of the beneficial effects of UVB in generating vitamin D, critical in the update of calcium in the body, nor of the effects of diet on susceptibility to sunburn. Report: Simon Best MA



Chemotherapy nausea

Aprepitant blocks NK1 receptors and prevents vomiting reflux

An international clinical trial involving 520 patients with respiratory cancers and being treated with chemotherapy, has shown that only 26% percent of those who received aprepitant - along with the standard anti-nausea/vomiting drugs dexamethasone and ondansetron - experienced the side effects. 48% of the patients who were given a placebo with the standard drugs did suffer nausea and vomiting. Additionally, a separate Dutch study of 164 patients - led by Dr Ronald de Wit, at the Rotterdam Cancer Institute, the Netherlands - showed that 73% of the Boston patients given aprepitant did not suffer vomiting on the day of chemotherapy. 52% of those on the current standard treatment alone did not. Aprepitant was effective from day one, and proved effective four days after treatment, when nausea and vomiting frequently occur in those receiving repeated chemotherapy. Current treatments to control these symptoms tend to become less effective during continuing chemotherapy.

Paul Hesketh at the Caritas St. Elizabeth's Medical Centre, Boston, USA, who led the 520- patient study, said that, in almost a decade this is the first substantial advance in prevention of nausea and vomiting related to chemotherapy.

Cisplatin - Of those patients given aprepitant plus the usual suppressor drugs (which work on another family of receptors in the brain) 25 percent of those receiving the common chemotherapy drug cisplatin, complained of nausea and vomiting. Those on the placebo reported those symptoms 44% of the time. After six courses of cisplatin, 59% did not experience the symptoms if given aprepitant, but 34% on the placebo with standard therapy did.

In March, following earlier data from these studies, plus a separate one which took place in Latin America, the US Food and Drug Administration's (FDA) approved the use of Emend - Merck's version of aprepitant. (Ref: *Journal of Clinical Oncology*).

Perugia, Italy - An overview of injuries and current treatment options for complex extremity trauma will be presented in a course organised by the Department of Orthopaedics, New Jersey Medical School North Jersey, USA.

The course directors are Professor Fred Behrens, who is Chair of the department, and Professor Gianna Randelli, of the Orthopaedics and Traumatology Department at the Policlinico di Sand Donato Hospital, Perugia. Professor Fulvio Pecorelli, of Perugia University and the Policlinico hospital will be local host during the programme, which, say the organisers, will aid orthopaedic specialists to:

- Recognize and understand trauma of the extremities, with treatment options.
- Evaluate and manage paediatric fractures.
- Effectively manage tibial plateau fractures.
- Compare and contrast techniques

of plating vs. external fixation of pilon fractures.

- Identify treatment options for dealing with bone and soft tissue loss.

The intensive, four-day course, given by US and Italian experts, will cover:

Foot & Ankle

Talus Fractures Prof. Roberto Buzzi; *Calcaneus Fractures* Michael Sirkin MD; *Malleolar Fractures* Prof. Antonio Pace; *Understanding Paediatric Ankle Fractures* Sanjeev Sabharwa, MD.

Tibia

Pilon Fractures: Temporising Fixation & Staged Plating Michael Sirkin MD; *Pilon Fractures: Definitive External Fixation* Prof. Federico Santolini; *Tibial Plateau Fractures: Plating* Prof. Max Morandi; *Tibial Plateau- Percutaneous Techniques* Fred Behrens MD.

Specialist course

6-13 November

Complex extremity trauma

Femur & Knee

Distal Femur: Physis Sanjeev Sabharwal MD; *Extensor Mechanism Injuries* Louis Rizio MD; *Distal Femur: Plates* Michel Oransky, MD; *Distal Femur and Retrograde Nailing* Michael Sirkin MD; *Fracture after TKA* Joseph Benevenia MD. *Acute Management of Knee Dislocations* Louis Rizio MD; *Antegrade Femoral Nailing* Dr. Ettore Sabetta; *Unstable Peritrochanteric Fractures* Fred Behrens MD; *Femoral Neck Fractures* Prof. Marco D'Imporzano; *Haemiarthroplasty Failures: What To Do?* Prof. Marco D'Imporzano; *Fracture after THA* Joseph Benevenia MD.

Shoulder & Humerus

Acute Management and Modern Treatment of Shoulder Instability Louis Rizio MD; *Proximal Humerus Fractures: Plating* John Capo MD; *Humeral Nailing: Proximal and Shaft* Prof. Michel Oransky; *Humeral Shaft Fractures: Plating, MIPO* Prof. Dario Capitani; *Radial Nerve, What To Do* Dr Ettore Sabetta;

Forearm & Wrist

Forearm Shaft Fractures Dr Nicola Annichiarico; *Paediatric Forearm Shaft Fractures* Dr Maurizio De Pellegrin; *Distal Radius Fractures, External Fixation* Prof. Federico Santolini; *Distal Radius Fractures, Plating* Prof. Pietro Regazzoni; *Galeazzi Fractures and DRUJ Injuries* Prof. Antonio Pace.

Elbow

Paediatric Elbow Fractures Sanjeev Sabharwal MD; *Fractures of the Radial Head and Neck: Excision, ORIF, Prosthesis* John Capo MD; *Distal Humeral Fractures* Prof. Francesco Maggi; *Olecranon Fractures* Dr Filippo Randelli; *Elbow Dislocations, Hinged Fixators* John Capo, M.D.

Bone & Soft Tissue Defects

Diagnostic Dilemma: Don't Get Fooled Joseph Benevenia MD; *Osteomyelitis* Michael Sirkin MD; *Bone Grafting Options* Fred Behrens MD; *Bone Transport* Sanjeev Sabharwal MD; *Soft Tissue Coverage in Trauma* John Capo MD.

*Unrestricted educational grants have been made by Merck-Italy and the Krugman Group International Inc. Details: <http://ccoe.umdj.edu/ccoe/italy/>. Registration: Course code: 04MN08. Fee: \$850 <http://pluto.umdj.edu/education/coneducation.asp> (Click on Physician CME icon).



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Knee and hip

NEW PRODUCTS

Two new innovative products - the AEQUOS knee endoprosthesis and VarioFit hip prosthesis system - have been launched by aap Implantate AG, which specialises in biomedical implants for bone fractures (osteosynthesis), joint replacement (endoprosthetics) and biological bone substitute (orthobiology).

'AEQUOS, the firm reports, is the newest generation of knee endoprosthesis. The patented design of the replacement almost perfectly replicates the physiological rolling-sliding movement of the knee joint. The rolling movement in the high-burden phase of the movement minimises abrasion and consequently wear of the endoprosthesis.' Thus, AEQUOS solves the problems caused by wear not only by the materials mix but by replicating the actual movement,' the firm points out. 'In addition, the construction of the AEQUOS prosthesis prevents hyperextension and thus supports the patient's ligaments. The AEQUOS knee system has two outstanding features: almost entire restoration of the natural movement of the knee joint and long durability.

'The Variofit hip endoprosthesis, with its combination of patented innovations and well-tried elements of hip endoprosthetics, sets a new standard for the patient-centred restoration of hip anatomy. The

prosthesis' hip shaft and four different cones can be adapted to the individual patient's anatomical requirements. This surgical flexibility allows an almost exact restoration of any given hip anatomy as well as compensation of an existing malposition. VarioFit not only adjusts different leg lengths but also provides optimal muscle-ligament load which helps minimise spine problems. Even under complicated anatomical conditions the VarioFit hip endoprosthesis allows normal load and provides longer durability of the implant.



continued from page 1

estimated, would save about £12,000 and a two-year NHS delay. (The same treatment, carried out privately in the UK would have been about £20,000).

Around one in four patients on the overall NHS waiting list need orthopaedic surgery. Historically orthopaedics is the specialty that has the biggest proportion of patients waiting over 6 month for surgery (35% of the total) and those waiting 9 months (38%). Many of these are elderly, with poor quality of life due to pain and immobility.

In June this year the government launched a £50 million drive '...to eliminate long waits for NHS orthopaedic patients and boost capacity in the NHS, so that an extra 41,000 patients per year can receive an operation'. The Department of Health also pointed out that, at the end of this March, 254,496 orthopaedic patients were waiting for inpatient treatment in England - 'a substantial fall of almost 10,000 since last December'. By the end of 2004 the NHS predicts that none of its orthopaedic patients will wait more than 9 months, 'with urgent patients being seen more

Mobile therapy



Pulsed magnetic fields

Dr Goettfert Systems, which holds the world patent for developments in pulsed magnetic field therapies for mobile use in surgeries, clinics and at home, reports increasing demand from surgeries and clinics, which '... reflects therapists' and patients' interest and satisfaction, and also highlights the limitations of equipment previously available in this market. Business people, freelance professionals, managers, sales reps and sports people have ever busier lifestyles or are always on the move,' the firm adds, 'and despite needing treatment it cannot be performed in a surgery or at home.'

The firm points out that its mobile G-ogo sport device is '...the ideal solution for this patient group. It combines all the advantages of a professional pulsed magnetic field device with the benefits of its mobility. Comfortable to wear and without needing power, it offers a wide range of convenient applications for patients and therapists.

'Within a very short time we have become a consultant for orthopaedic specialists and a market leader for pulsed magnetic field therapy systems,' the firm adds. 'Our expert team realises the dynamic and efficient implementation of new developments such as the patented G-ogo systems or our G-support CD-ROM with a mix of courage, an entrepreneurial spirit and without external investors.' Explaining why it does not use intermediaries or a sales force, the firm point out that it relies on good recommendations from doctors, therapists and patients: '... the aim and result of our work'.

quickly', and that by 2005 no one should have to wait longer than six months for an operation.

The fund is to be invested in NHS orthopaedic services including those in NHS Diagnosis and Treatment Centres (DTCs) and will be spent on modernising theatres and buying new equipment or upgrading existing facilities.

In figures covering all surgery procedures, the NHS has shown a considerable drop in number of waiting longer than 12 months for an operation (from almost 22,000 on 31 March 2002, to 134 at 30 April 2003).

Germany - The non-profit Nations HealthCareer School of Management gGmbH, based in Hennigsdorf/Brandenburg, was founded in cooperation with the Fresenius University Foundation for Healthcare Management in Bad Homburg and the co:bios Foundation for Biosciences mbH in Hennigsdorf. Their aim is to bridge the gaps between science, teaching and practice in the field of hospital management and to offer international, talented academics an excellent foundation for a career in the international healthcare market.

This October, the first intake of students (Spring 2002) graduated with an MBA in International Hospital Management, an event celebrated at a lunch held at German Parliamentary Association, Berlin.

Congratulating the graduates on

London, Phoenix, Singapore, Münster and Vienna. You have willingly accepted that paying your university fees involves some opportunity cost. Your spouses, parents and families have all given you their support and made sacrifices as well. We would also like to pay tribute to their commitment'.

'You are the pioneers of this postgraduate training programme, which is unique in the world,' she continued. 'It links theory and practice, in eight attendance modules, and places great emphasis on an entrepreneurial and international approach. We are immensely proud of you, and would like to take this opportunity to thank you for your patience, inevitably called for in your role as the programme's pioneers.'

'The students who followed you have greatly benefited from your ideas

Guests of honour: the students, who were joined at the celebration by the board of examiners, **Professor Roman Brandtweiner**, Head of the MBA Centre at Danube University Krems; **Professor Ray Robinson** (London School of Economics) and **Dr Christian Rauscher** (Faculty of Economics at the University of Vienna) **Thomas Bethke**, Managing Director of Co:Bios Foundation. Also present were **Dr Christian Ehler**, Member of the Land Brandenburg Parliament, and **Andreas Schulz**, Mayor of Hennigsdorf City, where Nations HealthCareer School of Management is based, and many others who significantly supported this postgraduate programme



MANAGEMENT GRADUATES celebrate success

behalf of the Nations HealthCareer School of Management and its partner organisations, Dagmar Moeller, Executive Director, said that the first course, run as a pilot programme by Danube University Krems in cooperation with Nations HealthCareer, had proved its success. The graduates, who hailed from Vietnam, Pakistan, Croatia, the United Arab Emirates, Italy, Romania and Germany, had been motivated by the principle of learning for leading, and had taken on a tremendous challenge, involving: 'enormous professional stress and a great deal of personal sacrifice,' she pointed out. 'You have attended modules in Berlin,

and experience. In April 2004, the next international group of students will conclude their studies. The MBA degree course in International Hospital Management which since autumn 2003 is being conducted in cooperation with HfB Business School for Finance and management, offers the students from Asia, the Middle East and Europe an even more international programme with new modules and practical insights in Dubai, Rotterdam and Tokyo.'

The group, she pointed out, is already regarded as a significant network of competence. As part of the alumni activities which will begin in Spring 2004, and which will involve

academic and industrial partners, companies and foundations, we will offer the alumni and subsequent groups of students the opportunity to expand their contacts further.

Ms Moeller went on to point out that students registering for the MBA course already had an academic qualification and often years of professional experience in healthcare - whether medical, pharmaceutical, medical-technical or health insurance and other administrative fields. 'They have up to ten years' professional experience - three to five years are the minimum required for matriculation. They are true professionals. And, despite their different backgrounds,

they are united by their desire to succeed, their willingness to prove themselves, their commitment, and their initiative.'

Their MBAs will, she added, equip the medical professionals to tackle management shortcomings in the hospital sector and the business and financial professionals to further their know-how to cope with rapidly changing fields - particularly in technology-based industries.

Among future challenges is the globalisation of healthcare as well as commercial considerations, Ms Moeller pointed out. Given all the changes in healthcare delivery, due to deregulation worldwide, future health managers will need to demonstrate strong entrepreneurial skills. 'They must be open to international developments and solutions, and most importantly, they should establish and utilise their own personal networks.' Ms Moeller also referred to the international friendships formed, and said the intercultural sharing that occurred at the university would form a common bond and '... undoubtedly influence the way in which you deal with teamwork and cooperation in future'.

In her address, Ms Moeller also thanked all those involved in educational roles and in sponsorship, who had 'ensured that many talented young managers from countries with a low per capita income have a chance to participate in this postgraduate programme'.

Gifts, including the book 'Management Across Borders', were presented to graduates Zia Bokhari; Aglaia Frommholz; Dragan Juric; Oussama Kayali; Stephan Meister; Gudrun Mekle; Dafin Muranescu; Dagmar Powitz; Alexandra Simböck; Jürgen Sprekelmeyer; Elena Vanni; Anh Duong Vuong; Claudine Ahrens

and Nicolette Reuther.

The current course - In October, students from Ethiopia, Cambodia, Germany, Indonesia, Iran, Kuwait, Malaysia, Nigeria, Oman, Austria, Sweden and the United Arab Emirates, as well as other countries, commenced the Autumn 2003 MBA in International Hospital Management programme, jointly offered by the HfB-Business School of Finance and Management, Frankfurt and Nations HealthCareer School of Management. The 18-months MBA course is being taught by an equally international team of professors and experts in healthcare management.

Sponsorship of particularly talented students - who this year hail from Africa, Asia and the Middle East - were granted by the Co:Bios Foundation for Biosciences, the Fresenius University Foundation for Healthcare Management and other foundations. The English-language degree course, accredited by the FIBAA, consists of eight attendance modules as well as two e-learning sessions. During the 9-day international modules, running every six to eight weeks and held in Germany, Finland, Austria, the United Arab Emirates, Great Britain, Phoenix (USA) and Japan, participants will learn about a variety of healthcare systems worldwide.

The next MBA in International Healthcare Management programme: 30 April 2004
Deadline for applications: 28 February 2004
Further advice and information:
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GETINGE

AWARDS

Lung research rewarded

Spain - Epidemiologist Judith Garcia-Aymerich has received the European Respiratory Society (ERS) Research Award 2003 for her original research on the risk factors of Chronic Obstructive Pulmonary Disease (COPD) exacerbation (EFRAM Study). Sponsored by Boehringer Ingelheim, 50,000 euros award recognises the work of young European ERS members active in pulmonary research, and is to be used to further those studies. 12 national winners also received travel grants for the ERS 13th Annual Congress in Vienna.

Dr Garcia-Aymerich, who works at the Respiratory and Environmental Health Research Unit, Municipal Institute of Medical Research (IMIM), Barcelona, said cases of COPD are a significant challenge to all involved. 'We need to know more about factors which trigger the development of the disease and how it worsens over time.'

COPD exacerbations are associated with significant health and economic costs, primarily due to hospital admissions. The Study of the Risk Factors of COPD Exacerbation (EFRAM), involving a large cohort of these patients, and on which Dr Garcia-Aymerich worked, is considered to have increased still scarce knowledge regarding COPD exacerbations, and the results will help with health planning and COPD guidelines.

One important finding was the moderate to high prevalence of potentially modifiable risk factors of COPD exacerbation. It was found that the risk of COPD admission increased in patients with low levels of normal physical activity, under-prescription of long-term oxygen therapy, and more severe COPD (i.e. more previous admissions, lower FEV1 and lower PO2).

Current research is focused on the heterogeneity of COPD phenotypes, which it is hoped will lead to a better understanding of the clinical course of COPD and therefore result in better disease management.

The European Respiratory Society (est. 1990) has over 6,000 members, who are scientists, doctors and allied health professionals working in over 90 countries.

The German pharmaceutical company Boehringer Ingelheim, with 32,000 employees worldwide, produces inhaled anticholinergic bronchodilators, used in the management of COPD. Carrying out research on COPD, and working to raise awareness of the disease worldwide, the firm points out that it is under diagnosed and under treated.



Dr Judith Garcia-Aymerich, 31, graduated in Medicine at the University of Barcelona in 1996, and joined the Respiratory and Environmental Health Research Unit of the Municipal Institute of Medical Research (IMIM) of Barcelona as an epidemiologist. The focus of her continuing work there (and PhD thesis; 2002) has been on Chronic Obstructive Pulmonary Disease (COPD), specifically the Study of the Risk Factors of COPD Exacerbation (EFRAM Study).

Pharmaceutical awards

Sydney, Australia - Professor Ernst Mutschler received the Høst-Madsen Medal - the International Pharmaceutical Federation's (FIP) highest scientific honour - at the FIP World Congress in September. Presented every two years by the Danish Pharmaceutical Association, the medal honours the memory of former FIP President Dr Høst-Madsen.

Currently professor emeritus of the Pharmacological Institute, Frankfurt/Main University, Dr Mutschler has received many international awards for his scientific research, which includes differentiating muscarinic receptor subtypes as well as the discovery of new tri-arterene derivatives.

He has also authored and co-authored over 600 scientific papers, ranging from pharmacodynamic, pharmacokinetic and

analytical publications - particularly on centrally active and cardiovascular drugs. His textbooks are used worldwide.

From 1991-'94 he was President of the European Federation of Pharmaceutical Sciences.



Prof Ernst Mutschler (right) with FIP president Jean Parrot

The Neema Project, focusing on villages in Tanzania, has won the 2003 Pharmaceutical Practitioner Award, given by the International Pharmaceutical Federation (FIP)

In 1993, an idea presented by two pharmacy students, from Tanzania and Spain, prompted the International Pharmaceutical Student's Federation (IPSF) to initiate the Neema Project, which aims to improve the health of people living in Kiromo, Buma and Mataya. Run by the Neema Coordinating Group, with representatives from students' associations in Tanzania, Canada, USA, UK, Portugal, Spain as well as past participants, students

ran fundraising events internationally for this project. Since May 2001 over 47 international and local students/graduates (pharmacy, agriculture, medicine and economics etc) have volunteered to work in the dispensary, and liaise with village communities to increase access to healthcare services through the building, equipping and staffing of a Kiromo-based dispensary and Mother-Child Healthcare Centre. They have also worked with the Village Health Committee and local government officials to organise health campaigns and a local health insurance system.

The Neema dispensary will be handed over to local government and included in the Tanzanian government's network of dispensaries in 2004.

* The International Pharmaceutical Students' Federation represents 300,000+ pharmacy students in over 60 countries.

Details: www.ipsf.org/projects/Neema www.fip.org/foundation

Diane Gal, Neema Coordinator (left) with Simon Bell, President: International Pharmaceutical Students Federation, and Dr Peter Kielgast of FIP



Entry to US neonatal care market



Luebeck, Germany - Draeger Medical AG & Co KGaA and the US firm Hillenbrand Industries Inc, of Batesville, Indiana, have signed a contract for Draeger to acquire the Air-Shields infant care business of Hill-Rom Company Inc, a subsidiary of Hillenbrand Industries. With 200 employees, Air-Shields reported a worldwide net revenue of c. US\$ 40 million (c. 36 million Euros) in 2002 - over 50% gained in the US.

Air-Shields is a leading provider of infant care warming therapy, incubators and other infant care products. Draeger Medical plans to consolidate Air-Shields' employees and assets into its Luebeck-based company. The transaction should be completed early in 2004. 'Through this acquisition, Draeger Medical gains access to the important US neonatal business and extends its portfolio in neonatal care by adding products tailored to the needs of our North American customers. We will also be able to offer them comprehensive

solutions combined with patient monitoring for neonates. Clinical staff will benefit from these integrated solutions through increased quality of therapy and process cost reductions,' said Dr Wolfgang Reim, President & CEO of Draeger Medical.

Draeger Medical, the largest division of Draegerwerk AG and one of the world's leading manufacturers of medical equipment, is a Draeger and Siemens company. The division employs about 5,700 people worldwide and R&D and production are located in Luebeck, Germany; Best, The Netherlands; Shanghai, China, and in the US, Telford, PA and Danvers, MA.

Hill-Rom will continue to provide its customers with maternal care products that cover labour, delivery and foetal monitoring. The firm specialises in sales and rentals, plus healthcare products such as beds, therapy surfaces, stretchers, infant warmers, incubators, furniture, communication systems, surgical columns, medical gas management systems and headwall systems. In addition, two subsidiaries specialise in burial and cremation products, as well as insurance and trust-based financial products for pre-planning funeral services.

LSS takeover



Sweden -The medical technology group Geringe AG took over the Life Support Systems (LSS) Division of Siemens Medical Solutions for 200 million Euros, on 1st October. The division's sales volume is over 200 million Euros. The 720 LSS employees will become part of Geringe AG and the firm will integrate LSS into its Surgical Systems division.

The take-over was subject to agreement by the EU anti-trust authority. In March, Siemens announced that it was ready to divest itself of LSS to fully comply with requirements of the EU anti-trust authority for a joint venture in critical care with Draegerwerk AG, in Luebeck, Germany.

Swiss buy US firm



Nidau, Switzerland - Under new ownership, the Ohio Medical Instrument Company, Inc. (OMI®) of Cincinnati, has been merged by the holding company of Schaefer Mayfield Schweiz, AG under the joint name Schaefer Mayfield.

In recent years, these long-established companies have operated as a business alliance, the former producing the Mayfield line of cranial stabilisation products for use in neurosurgery, and the latter specialising in Schaefer surgical tables and steriliser lines. Schaefer Mayfield Schweiz, AG, was founded in 1892. Schaefer Mayfield, USA, Inc, formerly OMI, and based in Cincinnati, Ohio, was founded in 1968 by neurosurgeon Frank Mayfield.

INNOVATIONS

Flexible synthetic layers of 'skin'

Dresden, Germany - The Gottfried Wilhelm Leibniz Research Society reports that scientists at the Dresden Institute for Polymer Research (IPF) are studying possibilities for the production of an artificial surface based on human skin.

The upper layers of various materials are to be given functions that will make them particularly resistant against external influences.

In developing new, multifunctional surfaces, researchers often look to nature.

Customised for cardiology and angiology

Acuson CV70, a new digital ultrasound system from Siemens Medical Solutions (Med), was developed specifically for hospitals providing adult and paediatric cardiovascular services, and for trans-oesophageal and intra-operative applications. The system's open architecture enables integration of future technologies, which makes the system a secure long-term investment, the firm reports.

A Dimaq ultrasound workstation, for digital acquisition, storage, and display of full ultrasound studies, has been integrated into the system. 'The multihertz function ensures improved penetration depth, while Tissue Harmonic Imaging provides high diagnostic certainty in patients that are difficult to scan,' the firm adds.

In terms of workflow, Siemens Med points out that support for DICOM 3.0 formats enables fast digital data transfer and easy integration into existing PACS systems, a connectivity that means images are available throughout the hospital immediately after an examination. Additionally, images can be stored in a digital patient folder or on a CD-ROM in DICOM standard.



Kodak buys CAD Technology

Image reveals areas, pinpointed by CAD technology, which should be closely examined for disease



The acquisition will expand Kodak's capabilities in 'image intelligence', a key element in its strategy for leading the digital information transformation occurring in the medical imaging field, the firm points out.

Kodak plans to offer CAD software as a stand-alone product and as a component of its digital capture and image-and-information management systems.

The Eastman Kodak Company has bought CAD Technology from MiraMedica Inc of Los Gatos, California. To accelerate and lead other CAD development at Kodak, a number of MiraMedica employees will join Kodak's Health Imaging Group, the firm reports: Wido Menhardt, MiraMedica's Chief Technology Officer, will become General Manager of CAD operations, and Caren Mason, President & CEO of MiraMedica Inc will serve as a business consultant during the transition.

Computer-aided detection (CAD) technology includes software that automatically highlights suspicious areas on digitised images by analysing the shape, groupings and other characteristics of abnormalities and determining their correlation to previously analysed disease characteristics, thus signalling radiologists to examine those areas for possible disease.

Press presence

Courses to guide public relations personnel in promotion and the development of individual profiles for directors are available at 'Media Workshop'.
Details:
mediaworkshop@newsaktuell.de

GE set to acquire UK firm

Purchase price: \$9.5 Billion - 800 pence per share

General Electric Company has agreed (subject to regulatory approval etc in 2004) to buy all outstanding shares in Amersham plc, which specialises in diagnostic imaging agents (Omnipaque, Myoview, Omniscan and Visipaque) and life sciences as well as healthcare information technology (IT).

GE's Chairman of the Board and CEO, Jeffrey R Immelt, said the purchase would add new, high growth platforms to GE Medical's diagnostic imaging, services and healthcare information technology businesses, enabling GE to accelerate the development of molecular imaging and personalised medicine - predicting disease and tailoring therapies to the individual. 'We're delighted to bring Sir William Castell and his team to GE to help make this vision a reality,' he added.

It is planned that Sir William Castell will become a Vice Chairman and member of GE's Board of Directors and, as CEO of GE Healthcare Technologies, will have financial and leadership responsibility for GE Healthcare Technologies, the combined Amersham and GE Medical firms. The division will be based in the UK, where Sir William Castell will head the integration process. Joseph Hogan, Senior Vice President of General Electric, will continue to lead the GE Medical business.

GE expects the firms' combination to be non-dilutive to 2004 earnings per share (before in-process research and development charges) and \$0.01 accretive in 2005. The firm also expects to generate revenue by the end of the third full year of \$350-400 million annually - expected to translate into operating profit benefits of \$100-200 million per annum.

In 2002, the Amersham Group, with 10,000 employees worldwide, had sales of £1.62 billion. The firm was formed in 1997 following the mergers of Amersham International (UK), Pharmacia Biotech (Sweden) and Nycomed (Norway).



Dr Heribert Ballhaus, Vice President of GETINGE Medical Systems and CEO of Maquet

Maquet expands OT and ICU presence

presence in the operating theatre and expanding in intensive care. The firm reports that the acquisition brings a leading market position in ventilation and makes it the global number three in anaesthesia. In May this year, Getinge AB also acquired Jostra AG (Hirrlingen, near Tübingen), which ranks among the four leading global

• **Critical Care:** Anaesthesia and ventilation systems in the operating theatre and in intensive care.

Dr Heribert Ballhaus, vice president of GETINGE Medical Systems and CEO of Maquet added, 'In the world of medicine, the Maquet product range has traditionally been known for setting

Sweden - Following the acquisition of Siemens Life Support Systems (LSS) by the medical technology group Getinge AB, the firm has formed a new business unit - Maquet Critical Care (MCC), based in Solna. Getinge is one of the world's leading providers of technical equipment and systems for medical surgery, intensive care, extended care and the pharmaceutical industry.

MCC will focus on anaesthesia and ventilation technology and market the firm's established product groups Servo (ventilation), Kion and Symeon (anaesthesia) under the corporate brand name Maquet - for 165 years a leading name in operating theatre and intensive care equipment. Sales of the firm's anaesthesia and ventilation systems reached some 205 million euros (year ending 30/9/03).

Getinge AB now counts over 720 employees from the former Siemens LSS business unit among its workforce of some 6,860 staff, producing total sales of around 1.2 billion euros. Of that, the firm's medical systems division (headquartered with Maquet in Rastatt, Germany) accounts for c. 590 million euros, and employs about 2,930 employees internationally.

With this development, Getinge AB is strengthening its



Maquet specialises in equipment for operating theatres, anaesthetics/artificial respiration, and cardiac surgery

manufacturers of heart-lung machines and disposable open-heart surgery products, the firm points out.

In line with expansion three clear sales and services divisions will be made:

- **Surgical Workplaces:** Operating theatres, surgical tables, surgical lights and ceiling supply units, plus prefabricated operating suites
- **Cardio-Pulmonary:** Heart-lung machines, oxygenators (artificial lungs) and disposable products for open-heart surgery

forward-thinking standards. The Maquet group of companies has a joint approach to strict customer orientation and the power of innovation, highest product safety and quality, the highest level of reliability and the best service. Maquet focuses on solutions for faster and safer patient treatment, which also benefits hospitals worldwide from an economic point of view. Maquet offers perfect products for the best possible surgical results and optimum workflows: Maquet is the gold standard.'

'Everyone knows how resistant and sensitive, tough and rough, smooth or wrinkled, fatty or dry the human skin can be,' said Sergej Minko of the IPF. It reacts with great sensitivity to temperature, humidity and different pH-levels and can absorb fat and water in different ways. 'The skin fulfils important functions - it protects the body against dehydration, overheating and penetration by germs,' he added, so it is a big challenge to create a synthetic surface with those useful characteristics. So far, only certain skin functions have been copied - such as 'switchable, mixed polymer brushes'. The objective was to make them with various layers of synthetic materials attached to a surface, Manfred Stamm, who heads this project at IPF. The brushes react to certain solvents, such as water, different pH-levels or temperatures. The 'switching' of surface characteristics means the polymer brush layers adapt their structure and characteristics to different environments and react, in a hydrophobic or hydrophilic way, so the brushes can resist or attract water.

The polymer brush layers may be used, for example, in textiles used in healthcare, such as those to cover wounds.

Details: www.ipfdd.de

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Prim Dr Günther Leiner (left), President of the International Forum Gastein and David Byrne (right), EU Commissioner for Health and Consumer Protection

and the number of working people will decrease. Additionally, the number of people over 80 will increase from the 2000 figure of some 14 million to about 38 million in 2050. As a result, expenditure on health services will surge, and the rise in the number of working women will lead to an even greater need for institutional nursing.

Can the EU afford the life expectancy of its citizens? Pointing to the scandalous inhumane neglect of patients at a nursing home in Lainz (Austria), and to inadequate hospital services in France during last summer's heat wave, resulting in thousands of deaths, Dr Hans Stein said, 'Nothing will happen until there are dead bodies on the streets!' Speaking at the 6th European Health Forum Gastein (EHFG), in October, which focused on 'Health & Wealth', and for which Dr Stein had organised a parallel forum on 'Healthy aging', he pointed out that events reported in Lainz are not a unique, not in Austria and not in Europe. However, he added that such scandals only bring the calamities of nursing and geriatric care before the public for a short time.

By 2050, he said, the number of people over 65 will increase in the 15 EU states to about 103 million,

EU hospital crisis

Health only for the Rich?

Report by Christian Pruszinsky

Nonetheless, Dr Stein does not believe the welfare state will necessarily collapse under the burden of the elderly. What is needed, he said, is a change in our prevailing 'disastrous attitude'. Eventually, increased life expectancy could manifest economic and social achievements, but, at present, he added, '... we have a high life expectancy and instead of being proud of this, citizens are

being frightened!'

Dr Stein also emphasised that the possibilities of cross-border co-operations in the health sector are exhausted: there are already pilot projects to create a balance between the under and over supply existing in certain regions. Underlining this, Dr Henk Nies, head of the Netherlands Institute of Care and Welfare, presented the Care and Management of Services for Older People in Europe Network (CARMEN) project, in which 40 organisations from

motivated by all means, which would pay off in the long run. 'Nothing costs a health insurance company as little as a healthy person who can lead an independent life,' she stressed. But, said Dr Stein: 'There would have to be massive changes in the employment policy,' if setting retirement years at 67, 80 or 100, because people already face the possibility of unemployment at 50. Moreover, for many people sudden retirement is a shock: 'From one day to the next their usual life style



LINK UP



GLOBAL EVENTS

2003/4

OCTOBER

28-1 Nov
13th European Respiratory Society Annual Congress
Details: sophie.cretton@ersnet.org

29-30 Brussels, Belgium
EUROMED - Risk Management and Quality Systems Workshop and 7th Technical Forum
Highlighting the impact for Members of the forthcoming withdrawal of EN 1441 (Risk Analysis), its replacement by ISO 14971 (Risk Management), and the impact and possible changes necessary to quality management systems arising from the application of EN ISO 14971 and EN ISO 13485:2003.

The Forum will provide an update on key regulatory issues such as MDD review, Pharma and Human Tissue Regulation. Details: elsie.vancoillie@eucomed.be

29-2 Nov Austria
Oncology - 29th ESMO Congress
Details: chatrina@esmo.org

31-2 Nov Adelaide, Australia
International Paediatric Anaesthesia Conference
Details: info@fcconventions.com.au

NOVEMBER

3-4 London UK
RCR Breast Group - CME accredited meeting

Keynote speakers: Professors Giorgio Rizzatto and Christiane Kuhl. Coverage: breast MRI, sentinel node biopsy, breast radiology, breast ultrasound, oncologic breast surgery, and the Sloane project. Details: hmc@hamptonmedical.com

9 Malta
Radography

Academic meeting on cardiovascular imaging using MRI, NM, CT, ultrasound, digital angiography. Contact: srm_malta@hotmail.com

9-12 Malta
Fourth Congress of the International Federation of Infection Control

IFIC conferences have built a reputation of being truly multi-disciplinary events encouraging fruitful interactions between physicians, nurses and other infection control professionals. 'The goal is to translate current research into practice and

arrive at a consensus on multi-national approaches to common infection control problems,' say the organisers. Contact: infection.control@gov.mt

12 UK
5th Annual Conference of the Multidisciplinary Association Of Spinal Cord Injury Professionals (MASCIP)

Focusing on 'Bowel Management: an issue for everyone'

18-21 Tyumen, Russia
Medicine & Health Care International Exhibition on Medical Equipment, Pharmacy and Optics

19 Vienna, Austria
Nanotechnology/BIT Forum

25-26 London, UK
International Biotech and Lab Automation Europe plus the Automation: Concepts to Implementation Conference
www.internationalbiotech.com

DECEMBER

7-12 USA
Current Concepts in Emergency Care 24th annual conference
Workshop on 'Managing Cardiac Emergencies -Year 2003'. Details mawayne@hotmail.com

9-11 UAE
International Genetics Congress 2003
Genetics: the global challenge - regional focus. Advances in community and preventive genetics. Organiser: Genetics and Development Research Priority Group, Faculty of Medicine and Health Sciences, UAE University Details: www.alain-genetics.com

13-16 Malta
European Committee of Radiographers and Radiotherapists
Details: srm_malta@hotmail.com

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EUROPEAN HEALTHCARE POLICY UPDATE

By Dr Martin Schoelkopf



Restricting job access

On 9 September, the European Court decided on the admissibility of restrictions on access to the job of hospital administrator in France (case C-285/01). In the case, a Portuguese citizen qualified as a hospital administrator in her own country, had applied to join the senior ranks of public hospital administration in France. Her application was refused on the grounds that she would first need to have successfully participated in the selection procedure for admission to the Ecole Nationale de la Santé Publique (ENSP). The European Court decided that the requirement of participation in a selection procedure for the ENSP creates an impediment to the freedom of movement of workers, which is not compatible with the EC Treaty if the qualification in another Member State has the same status as the French qualification.

Source: European Court of Justice.

Cross-border healthcare

Milan, Italy - European health ministers discussed the status of consultations in the High-Level Reflection Group on cross-border healthcare at an informal meeting in September, following the EU Health Commissioner David Byrne's report that the Group had resolved to tackle:

- Optimisation of use of resources in the healthcare system, on a cross-border basis where appropriate (e.g. specialised technical equipment, hospital capacities);
- Securing access to and quality of healthcare;
- Harmonization of national healthcare policy with European law; and

- Information for patients, healthcare professions and political decision makers. The ministers differed on conclusions emerging from the reflection process. France urged that the principle of health protection should be anchored more firmly than before in the Constitution Contract. The UK and others argued in favour of re-imposing restrictions on the legal entitlement - subject to broad interpretation by the European Court - to cross-border healthcare and cost reimbursement. On this issue, Germany tends to assume the role of mediator, but has stated that it wishes to approve the draft Constitution in unchanged form. The acceding countries drew attention to the risk of

emigration of healthcare professionals to the wealthier nations of the expanded EU - now to be discussed in depth in an additional working group. Final report due: 8 December 2003. Source: gid.

A statement on the High-Level Reflection Process (23/9/03) from the European Social Insurance Partners (ESIP) urged the EU Commission to incorporate more concrete legislation recommendations into the Reflection Group's final report. The need for a list of political priorities, including a concrete timetable for implementation, was also argued, which the ESIP said should include:

- European reference centres. Here, a proposal for implementation is required which will also comprise statements on the facility

selection process and on financing and regulating access to the centres

- Use of free medical services: here, a European framework must be introduced which will facilitate the conclusion of cross-border agreements between financial backers and service providers
- Within the framework of the reflection process, further discussion is needed on the consequences of competition law for health insurance companies
- The setting up of a 'permanent mechanism on quality issues' at European level is advocated, aimed at the reciprocal exchange of quality standards in healthcare.

Against this background, ESIP advocates continuation of the reflection process in 2004.

Source: ESIP.

EU citizens' freedom of movement

In early September, the European Parliament welcomed the proposal of the Commission regarding simplification and modernization of Regulation 1408/71 - which aims to guarantee freedom of movement for EU citizens; therefore it should co-ordinate cross-border aspects of the various social-welfare benefit systems - particularly in terms of retaining accrued claims to social-welfare

benefits if relocating within the EU. The Commission proposal serves simplification on the one hand and, on the other, proposes changes in content. Its proposal extends the Regulation to all those covered by national social-insurance systems, an amendment welcomed by Parliament. MEPs also supported the Commission's proposal not to generate a definitive list of the types of social insurance covered by

the Regulation, since this leaves the Regulation open to further developments. However, the Council of Ministers would prefer a definitive list. Further significant changes proposed by the Commission, which the MEPs accepted, relate to the incorporation of pre-retirement provisions into the Regulation's area of application, as well as changes to the rules relating to unemployment and cross-border employees.

However, the MEPs also urged that the Regulation be brought into line with the latest judicial rulings of the European Court on cross-border take-up of medical services - particularly relating to patients on waiting lists. In addition, they wish to improve the situation of the disabled who move to another Member State, who, during a transitional period often receive no benefits. An amendment motion would help overcome these financial difficulties. Via a number of amendment motions, the MEPs are also aiming to improve the situation of cross-border workers and their dependants. One very controversial proposed amendment, aimed at expanding the definition of family, to incorporate the cohabiting communities recognized in several Member States, failed to win a majority in the Parliament.

Source: European Parliament

An EU Centre for Disease Prevention and Control

At the informal meeting of the Council of European Health Ministers (Milan, 9/03), the planned setting up of a European Centre for Disease Prevention and Control was discussed. There was broad unanimity that the actual authority for epidemic risk management should continue to be held by Member States. Germany and other Member States referred to the very positive work of existing national organisations and rejected the idea of a new 'higher authority'. However, the need to set up a co-ordinated structure at Community level was undisputed. In addition, the future co-ordination centre would have to be networked with the European Food Authority. Against this background, one may anticipate that political agreement on the Commission's proposal will be reached at the Council of Health Ministers on 1/2 November. Further to approval by European Parliament and the Council, the Centre could commence work as an independent European institution in 2005.

Details: http://europa.eu.int/eur-lex/en/com/pdf/2003/com2003_0441en01.pdf.

Cross-border co-operation

The EU Commission presented a programme to promote collaboration in regions bordering on the newly acceding EU Members. This programme aims, inter alia, at the development of cross-border co-operation in healthcare. The following will be promoted within the programme's framework:

- Support of local and regional authorities in acquiring the knowledge to develop and implement cross-border structures
- Institutionalisation of contacts and promotion of future-oriented cross-border structures jointly with district and regional authorities

- Promotion of cultural communication in the border regions by way of joint neighbourly activities.

Further information: (http://europa.eu.int/comm/enlargement/borderregions/pdf/2003/calls3/call_for_proposal_notice_ADM_DE.pdf)

EU CALLS FOR TENDERS

1 A study to analyse the impact of the enlargement process on health and the health sector in the 10 new Member States

Questions to be addressed: Did the implementation of Community public health and other health-related legislation improve national legislation or did it lead to countries having to change existing effective practices? Has the enlargement process in general enhanced health efforts in the countries - e.g. the resources and priority given to health - or has it diverted efforts from national priority areas? Has fulfilling EU membership requirements led to more efficient management and use of resources, or have the budgetary rules led to restrictions on resources for health?

The contractor is also asked to develop recommendations for policies and action and the Commission expects the project outcome to provide valuable information to stakeholders and decision-makers at national and EU levels.

http://europa.eu.int/comm/health/ph_programme/howtoapply/call_151875_2003.htm

2 Health challenges in candidate countries

The study objective is to improve understanding of health challenges facing 13 applicant countries and how to address them. This consists of surveying the existing data and gaps in relation to the strengths of and challenges facing the applicant countries with regard to their health policies and measures, health capacity, health determinants and health systems. The project encompasses an assessment of existing analytic capacity for each country and the identification/analysis of needs, priorities and challenges, both specific for individual applicant countries and shared by them.

Recommendations for policies and action aimed at addressing the above issues are also requested.

http://europa.eu.int/comm/health/ph_programme/howtoapply/call_151874_2003.htm

Publications, studies, reports

Legal framework for EU-wide calls for hospital tenders

The EC envisages that all public procurement be open for EU-wide competition, for which a number of EU directives were amended or adopted. Contracting authorities are primarily local, regional or federal/national institutions or their assets, which include all public hospitals (city, community, military, university - if it is public, etc). Therefore, contracting authorities that enter into a public procurement procedure must comply with a number of rules and regulations. Baumann-Fachverlag has published a current summary of the legal framework for EU-wide calls for tenders for hospitals (in German): www.klinikmarkt.com/download/Europ.doc



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