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<p>7 Management Experts discuss accreditation, certification, quality and performance measures</p> 	<p>9-13 Surgery Shockwaves, super patient transport, plus anaesthesiology, cardiology, transplants</p> 	<p>15 Wounds & Hygiene New hygienic wound tracking device, plus nanotech paint combats MRSA</p> 	<p>18 Innovations The revolutionary delivery bed, automated delivery vehicle & space research</p> 
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CAROTID STENTING: 'A FEEDING FRENZY'

The impact of purchasing co-operatives

The proportion of hospital turnover linked to purchasing co-operatives will rise from the present 45% to 90% in 2010, according to the study Future Relevance and Consequences of Hospital Purchasing Cooperatives for Medical Technology Suppliers in Germany, commissioned by the German medical technology association BVMed from the consultancy firm Simon Kucher & Partners.

'The bundling together of hospitals' purchasing power is resulting in continuous pressure on prices, which presents new challenges for the sales and marketing activities of medical devices manufacturers,' BVMed reports. 'Between 2002 and 2005 the net prices of medical devices in hospitals fell by an average 10%.'

Drawing attention to the 'responsibility for prices' of the entire medical technology sector, the consultants said competition should concentrate on the product and service elements and not on prices. Companies, they predicted, would be influenced in the future by 'large, commercially experienced and authoritative purchasing co-operatives and competition-oriented individual houses'.

www.bvmed.de/publikationen/Studien/?language=2

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At the Vascular and Endovascular Issues, Techniques and Horizons (VEITH) Symposium) in November, attended by key opinion leaders in the field of vascular surgery, physicians remained divided on the issue of stroke prevention with carotid stent placement in patients with carotid artery disease. Most experts agree that more information is needed regarding stents, particularly for those with asymptomatic disease.

Kenneth Ouriel MD, of the Cleveland Clinic, Ohio, an avid proponent of stenting who was involved in the pivotal SAPHIRE trial, sees a 'big future' for carotid stenting. 'All the trends look in favour of stenting,' he said in an interview.

The SAPHIRE trial, a ran-

Vascular experts urge caution over stent placement to prevent stroke

Karen Dente reports from New York



Dr Frank J Veith

domised study comparing stenting to surgery in symptomatic patients with over 70% occlusion of the carotid artery, paved the way for FDA-approval and reimbursement this year. However, it has been the subject of much debate, and the value of the study has come under heavy scrutiny by many opponents in the field of vascular surgery, who have performed the surgical procedure to remove plaque for many years with a very low risk of complications.

Carotid stenting is rapidly becoming a high-volume operation in the United States, hastened on by device-manufacturers promulgating it as a minimally invasive procedure. Frank J Veith MD, host of the symposium and Vice Chairman at the department of

continued on page 2

New link between gum and cardiovascular diseases

Dental treatment has decreased in many areas where dental services have suffered health service cut-backs, but this, in turn, this could dent healthcare budgets in a bigger way.

In the December issue of the *Journal of Lipid Research*, researchers at the Virginia Commonwealth University (VCU) reported finding that patients with generalised aggressive periodontitis generally had elevated plasma levels of a particularly bad subclass of the low density lipoprotein (LDL) called small-dense LDL. Severe periodontitis is characterised by chronic infection and inflammation of the gums - and this may contribute to these patients' elevated risk for heart disease and stroke. The researchers suggest that it may be beneficial to test periodontitis patients for changes in their plasma lipoprotein profiles, so that available medication can be taken if necessary.

'Previous research has shown that people who have predominantly small-dense LDL in their blood are at a three- to six-fold increased risk of heart disease and stroke,' said lead author Rik van Antwerpen PhD, an assistant professor of biochemistry at VCU. 'A person may have predominantly small-dense LDL without having alarmingly high blood levels of cholesterol. Therefore, unhealthy levels of small-dense LDL are not always detected in regular cholesterol tests.'

According to the study, a second factor influencing the cardiovascular risk of patients with severe periodontitis may be platelet activating factor acetylhydrolase (PAF-AH), an enzyme that is associated with small-dense LDL. PAF-AH is able to break down some of the inflammatory, atherogenic components of LDL. Dr Van Antwerpen said that the enzyme may lower the athero-

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Cervical cancer vaccine - soon?

USA - Cervical cancer, caused by Human Papilloma Viruses (HPV), might become the first cancer type to be prevented by a vaccine.

The results of a clinical study of a vaccine named Gardasil, involving 12,000 women from 13 countries, were presented at the Annual Meeting of The Infectious Diseases Society of America, held in San Francisco this October.

Gardasil is still under development, but was said to work against the most widespread kinds of the viruses HPV16 and HPV 18 - responsible for about 70% of all cervical carcinomas - by inhibiting the preliminary stages and early forms of this disease.

After breast cancer, the cervical carcinoma comes second as the cause of death from cancer in women in Europe. 33,000 new illnesses and around 15,000 deaths are registered annually.

Report: Holger Zorn

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EH 6/05

NEWS

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surgery at the Albert Einstein College of Medicine, describes it as '...a feeding frenzy'.

The fact that carotid stenting is generally perceived to be a lesser procedure than surgery raises the fear of implementation of widespread stenting - even in asymptomatic patients who may not be at high enough risk to justify treatment. Dr Veith shares the belief, along with other surgeons, that symptomatic patients should be treated, but that caution is warranted in implementing a stent device in asymptomatic patients. 'I don't know if I would go against level 1 evidence. Level 1 evidence is pretty strong,' he stated in an interview.

'If you leave patients with a low risk for stroke alone, then the risk of getting a stroke per year is about 1.5%, which is low,' said Peter R F Bell MD, a vascular surgeon at the Leicester Royal Infirmary in the United Kingdom, and leading opponent to the SAPPPIRE trial. In Europe there is the tendency not to operate on low risk patients, while in the US, historically, such patients have been operated on, he explained. 'A 3% risk for stroke and death has been established as the acceptable rate of complications associated with surgical treatment,' he pointed out, referring to results from the recent European ACST trial. 'There has never been a good study showing that carotid stenting reduces stroke rate to that level,' Dr Veith added.

The industry's apparent push to replace it by a procedure that remains yet to be proven in prospective, randomised trials, has many stroke experts alarmed, particularly since the procedure is not without inherent risks, such as embolisation to the brain, a complication affecting up to 80% of patients.

In a scathing rebuttal to Dr Ouriel's defence of SAPPPIRE at

the symposium, Dr Bell contended that SAPPPIRE was industry-funded and its investigators lacking in equipoise. 'It is just not the trial on which you should base a whole trend of treatment, which is what they are suggesting.'

A recent Cochrane systematic review found insufficient evidence to support widespread change in clinical practice away from recommending carotid endarterectomy as the treatment of choice for suitable carotid artery stenosis. 'It is ethical and necessary that randomised trials comparing endovascular treatment with surgery continue to recruit patients,' authors concluded.



Dr Peter Bell

Most experts at the symposium agreed that patient selection for intervention remains crucial, since inappropriate selection of patients or poor surgery could obviate any benefits.

The potential problem of over-treatment looms large. 'Invasive treatment should not be given where it causes more trouble than it's worth,' Dr Bell said.

Invoking the conscience of physicians and their professional ethos, and in a critique of the SAPPPIRE trial, Dr Bell declared at the symposium, 'It is our duty as physicians to protect our patients from these risks and do a proper trial that actually tells us what's the right thing to do. The only person who actually is responsible for what happens to the patient is you, the doctor. The industry doesn't care, the government doesn't care - nobody cares apart from the doctor.'

Well, what about the patient? The patient foremost needs to understand and become knowledgeable about the risks and benefits related to both stenting and surgery, which will hopefully emerge with greater clarity as more data is revealed from ongoing trials.

ACST and ACAS trials cut the 5-year stroke risk in half with very low peri-operative morbidity. These trials showed that you can treat asymptomatic disease with a stroke and death rate of around 2-3%. 'That's the ball park,' said Peter A Schneider, Managing Director of the Hawaii Permanente Medical Group, speaking at the symposium. 'You've got to be in the ball park to have something that I think will be of value to the patient.'

In the end, it all depends on how the risks and benefits are phrased by the doctor to the patient. 'If you tell them, look, I have something that is going to work 95 percent of the time, they'll say they want it. And that can be a stent at this point. It has that kind of success rate,' Peter Schneider explained. 'But if, on the other hand, you say you can have a stent, but the risk of stroke or death is going to be twice as high, they'll say 'I'd rather have the surgery'. So it all depends on how you present the data to them.'

Stenting proponent Dr Ouriel acknowledges that SAPPPIRE did not show superiority of stenting over surgery, but 'did show non-inferiority.' He stated in an interview, '...it doesn't show we shouldn't be choosing endarterectomy in these [high risk] patients, but it does say we should consider stenting and we certainly should be offering that to the patients as a viable option. I personally try to give my patients that data and most of them will pick stenting - almost all - will pick stenting over endarterectomy.'

NEW LINK BETWEEN GUM AND CARDIOVASCULAR DISEASES

continued from page 1

genetic effects of LDL, and that the observed decrease of LDL-associated PAF-AH activity in patients with severe periodontitis may increase the cardiovascular risk of these patients.

The study involved only 12 patients with generalised aggressive periodontitis and 12 control subjects without periodontal disease. Currently, Dr van Antwerpen and his colleagues are evaluating a greater number of patients with varying degrees of periodontal infection and inflammation, as they work towards establishing testing guidelines for periodontitis patients.

In the research, supported by grants from the National Institutes of Health, Dr Van Antwerpen collaborated with Harvey A Schenkein PhD, Director of the Clinical Research Centre for Periodontal Diseases, and chair of the Department of Periodontics, VCU School of Dentistry. And, at the VCU School of Medicine: Suzanne E Barbour PhD, associate professor in the Department of Biochemistry, and John G Tew PhD, professor in the Department of Microbiology and Immunology. Experiments were conducted by Miguel Rufail, a graduate student in the VCU Department of Biochemistry.

Source: Virginia Commonwealth University

22nd Annual Korea International Medical & Hospital Equipment Show -

KIMES 2006

16-19 March 2006 - will draw 1,000 medical equipment companies and over 65,000 visitors from 35 nations to the COEX exhibition Centre in Seoul

This annual event, first held 26 years ago, has contributed to the expansion of medical-equipment exports and imports. Concurrent with the show, medical conferences and seminars will be held at the COEX conference centre to promote the exchange of new medical-related information and technologies.

In addition, the organizer Korea E & EX, Inc. received the official membership status from UFI - The Global Association of the Exhibition Industry, in the category of trade fair/exhibition organizers and KIMES was given the status of 'UFI approved events'. The organiser was also selected by the Ministry of Commerce, Industry and Energy to develop this exhibition to an international competitive brand exhibition. Only nine exhibitions were chosen from all industries and KIMES is the only one of its kind for the medical related industry.

This year, the show will occupy around 28,746m² of exhibition space, in three exhibition halls, where over 25,000 products will be on show in 1,500 medical categories, including diagnostic and treatment equipment (including those for Oriental medicine) as well as IT solutions for healthcare.

Show and education details:
www.kimes.info



137,000
visitors
swarm in

Medica and ComPaMED

Germany - The organisers of Medica, the world's largest medical trade fair, and ComPaMED, the international trade fair for components, parts and raw materials for medical manufacturing, have reported that 137,000 visitors from around 100 countries attended these events in November. Almost 40% of the visitors were from countries other than Germany, and these included a particularly high number from overseas markets such as the USA, India, China or Taiwan, and Arab countries.

Future?' and over 1,500 participants gained perspectives on DRGs, increasing competition and demands for the quality care.

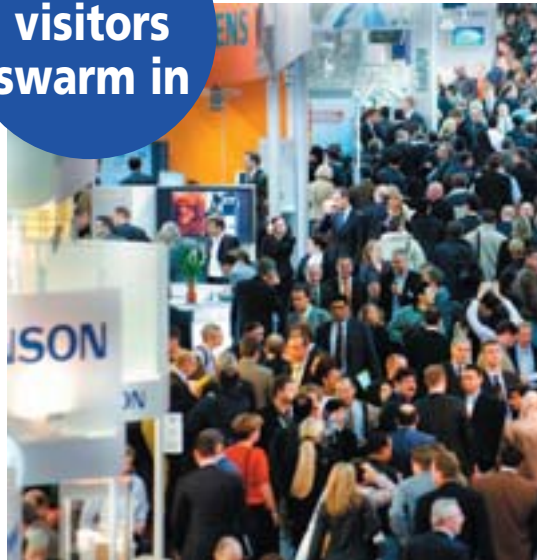
ComPaMED had 302 exhibitors this year, visited by around 9,000 people.

The trend towards miniaturisation and ever more compact, yet increasingly complex systems was the central theme of the joint stand and Forum of IVAM - Germany's Professional Association for Microtechnology.

Details for 2006:

<http://www.medica.de>

<http://www.compamed.de>



Sent your donation to UNICEF?

Germany - After the new UNICEF campaign *You and me against AIDS* (Du und ich gegen Aids) was launched, at Biotechnica and Medica Eppendorf donated €1 for each campaign bracelet worn by their customers, which raised €10,000,- for UNICEF.



You still have time to donate. If you 'Add your personal Christmas candle' - to help light up the Dräger Medical virtual Christmas tree, each candle will make that tree grow 0.6 metres. Based on the height of the tree by Christmas, Dräger Medical will donate a gift to that level to UNICEF. Websites to visit: www.unicef.de/aids www.draeger-medical.com www.eppendorf.com



'The industry, with its innovative power, has sent out exactly the right signals countering the discussions about healthcare costs, said Wilhelm Niedergöcker, Managing Director of Messe Dusseldorf, who said he had conducted numerous talks with exhibitors during the event. 'The interest taken by visitors in more efficient and higher quality diagnosis and therapy procedures was enormous and therefore spirits among exhibiting firms were correspondingly high.'

The Medica Media section virtually served as a point of departure for an electronic health card route, the organisers noted. 'Visitors along this route were able to network with various exhibits covering the card theme.' Companies explained the functions and procedures associated with the card explained, including, for example, card processes, electronic prescription, data-protection, physicians' digital signatures etc.

Other new innovations viewed by visitors was a heart implant with built-in transmitter that automatically sends cardiac data to a medical care centre; ultrasound devices with optimised sound heads for improved 3-D imaging, and more compact laboratory equipment for low-cost rapid tests at doctors' practices.

The Congress There were over 500 speakers and 170 workshops, and much else, and discussions ranged over cancer types; worldwide infectious diseases; pain therapy and disease in old age. 'The presentation of the latest state-of-the-art research in stem cell therapy by experts from the Dusseldorf Heinrich-Heine University was very well received,' said Gerd Fischer, Secretary General of the German Society for Medical Diagnostics. 'The pros and cons had already been exhaustively debated in the run-up and now at the event itself the focus was on an exchange of ideas about current options.'

The 28th Deutsche Krankenhausstag (German Hospital Congress) followed the theme 'Hospital 2006 - Closure or

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MANAGEMENT

Faced with rising costs, diminished resources and growing demands, health systems around the world are under siege and many will be unsustainable within 15 years unless fundamental change occurs. The crisis, according to PricewaterhouseCoopers Health Research Institute, is prompting healthcare organisations and policymakers to seek urgent solutions in unlikely places — outside their own borders. In the Institute's recent report *'HealthCast 2020: Creating a Sustainable Future'*, the researchers have identified best practices and unveiled the result of surveys and interviews with 700 health leaders in 27 countries.

'Everyone we spoke with, in every country, told us they are afraid their current health system was not built to last,' said Jim Henry, global leader for Healthcare, PricewaterhouseCoopers. 'Most countries have some aspects of their health system that are working, but no one country has the magic bullet. We need to rise above nationalism and turf protectionism, learn the lessons of other countries and sectors, and build on

There is wide support for shared financial responsibility among private and public payers. More than 75 percent of health leaders and policy makers believe that financial responsibility for healthcare should be shared. Only a minority of industry leaders in the US, Canada and Europe think that a mostly tax-funded system is sustainable. Even in systems where healthcare is primarily tax-funded, such as in Europe and Canada, only 20 percent of respondents favour that approach. Despite calls for universal healthcare in the US, only 6 percent of US respondents favour a mostly tax-funded system.

Examples in Practice: US health spending already is 46 percent tax-funded and growing as Medicare/Medicaid programs expand. Market reforms in government-run systems such as England, the Netherlands and Germany are increasing use of co-pays or providing compulsory insurance coverage with the option to add services through supplemental private insurance.

Innovative, flexible care models are emerging. Many countries are exploring more innovative, adaptable care models to increase access and productivity and to circumvent

Examples in Practice: Norway is using telemedicine to provide healthcare in remote areas. A German company is buying smaller hospitals and connecting them to specialised, centralised high-tech medical units. More than 100 smaller, specialty hospitals have been built in the US in the past five years. In Australia, 45 hospitals now offer 'Hospital in the Home'.

'Innovative solutions to common healthcare problems are emerging in the global healthcare market,' said Simon Leary, the firm's UK partner, who is also part of the research team. 'Governments and healthcare organisations across industries and sectors must find a way to share ideas and work together in ways that they have not in the past.' Healthcare is going global, just as other industries such as manufacturing and technology did before it, he pointed out. 'The UK is

Global healthcare report identifies BEST PRACTICES

Health organisations and governments should seek solutions beyond their own borders



Simon Leary



Jim Henry

the best ideas. What's clear is that no one government can solve the healthcare problem. It will be up to governments, working together with private industry and consumers who not only have a bigger financial stake but also a greater responsibility in their healthcare.'

The report finds a convergence

of trends and solutions in the global healthcare market, including the way healthcare is funded.

Countries are moving toward greater shared financial responsibility among the government, the private industry and consumers, even in historically taxpayer- and employer-funded systems. The

Consumerism is changing the way healthcare will be delivered. As patients pay more for their own healthcare, they are demanding accountability and information about pricing, safety and quality to make better decisions about what they are 'buying.' Healthcare organisations will have to publish or perish and, like the automobile and airline industries, are beginning to report their prices, error rates and safety standards. Eight in 10 executives surveyed said that transparency will be one of the most important features of a sustainable health system. Two-thirds believe hospitals are currently unprepared to meet the challenges of empowered consumers.

Examples in Practice: To promise world-class care to its citizens, Hamad Medical Corp. in Qatar is working to be a Joint Commission International-accredited hospital. As part of a safety assurance initiative, the United Kingdom has adopted a non-punitive medical error-reporting system based on a model used by the US Federal Aviation Administration.

workforce shortages. This includes hospital redesign, use of technology, outsourcing of elective procedures and importing of nurses and other clinical staff.

importing resources from South Africa and across the EU to reduce waiting lists and bolster access for NHS patients. We are also increasingly exporting expertise to the Middle East and elsewhere to support their emerging health economies.'

In terms of quality and performance, he added: 'Getting incentives right is proving a key theme across the world. The increasing interest in pay-for-performance models in driving up quality and delivering cost effective care has really taken off in the last few years. Globally, our survey suggests a doubling of the effort in this area since 2002 and in the UK the roll out of Payment by Results and the Quality and Outcomes framework in primary care suggest we are catching up fast.'

researchers also found that consumerism, the use of information technology, incentive realignment and new reimbursement models such as pay-for-performance are soaring globally as nations seek to reduce healthcare costs and improve access, safety and quality for their citizens.

More than half of those surveyed by PricewaterhouseCoopers expect health spending to accelerate at a greater rate in the future than in the past. Health spending patterns also are becoming more similar among countries in the Organisation for Economic Cooperation and Development (OECD), although US spending remains the highest in the world. Americans spend 53 percent more per capita on healthcare than the next highest country, Switzerland and 140 percent above the median for OECD countries.

PricewaterhouseCoopers projects that global healthcare spending will triple over the next 15 years to \$10 trillion, consuming 21 percent of gross domestic product (GDP) in the U.S. and 16 percent of GDP in other OECD countries.

The report highlights best practices and common trends in health systems around the world - highlighted here in colour.

Pay-for-Performance is soaring. Misaligned incentives are identified as a root cause of gaps in the quality in healthcare and inequitable sharing of risk and rewards. Eighty-five percent of organisations surveyed say they have begun moving toward pay-for-performance initiatives, a significant increase in the past two years.

Examples in Practice: Physicians in California receive bonuses for screening patients for conditions that are expensive to treat, such as cervical cancer and coronary heart problems. The Dutch will introduce a new health insurance system in 2006 that realigns their incentive structure. Spain is using patient choice as a lever for changing physician behaviour.

Information technology is the backbone of care. Lack of care integration was cited as the biggest problem facing health delivery systems, according to more than 80 percent of respondents. Three-quarters of respondents viewed information technology as most important to integrating care (74 percent) and information sharing (78 percent).

Examples in Practice: The National Health Service (NHS) in the United Kingdom is committing \$12 billion over 10 years to build a national healthcare information network and requires some physicians to use computers to get paid. The Canadian government is building the Canadian Health Infoway. The US has a goal to build a national medical record system. Australia is considering making electronic reimbursement mandatory.

Focus is shifting to wellness and prevention. Preventive care and disease management were cited by two-thirds of respondents as the most important ways to reduce healthcare costs and manage demand on health systems. Health promotion and wellness initiatives are being sought voluntarily by employers and mandated by governments.

Examples in Practice: Ireland was first to place a countrywide ban on smoking indoors, and this has since spread to other countries. The Swiss are considering a tax on food with high glycaemic content. The UK is considering a 'traffic light' nutritional labelling system on foods to make it easier for consumers to make healthy choices.

HealthCast 2020 identifies seven common features for sustainability that include: the need for common ground among stakeholders; a digital backbone; incentive realignment; quality and safety standardisation; strategic resource deployment; innovation and process change; and adaptable models of care delivery centred on the needs of patients.

Along with the survey responses from 578 healthcare executives, policymakers and employers from 27 countries to assess their opinions about health systems sustainability, PricewaterhouseCoopers also conducted in-depth interviews with over 120 healthcare thought leaders in 16 countries, including Australia, Canada, Europe, India, Japan, Singapore, South Africa, the United Kingdom, the United States, as well as in the Middle East.

*** PricewaterhouseCoopers Health Research Institute**

(www.pwcglobal.com) provides new intelligence, perspective and analysis on trends affecting all health-related industries, including healthcare providers, pharmaceuticals, health and life sciences and payers. The Institute is part of PricewaterhouseCoopers' larger initiative for health-related industries that brings together expertise and allows collaboration across all sectors in the health continuum

AUTOMATICITY PUTS PATIENTS AT RISK

United Kingdom - A new study has raised serious questions about how clinicians understand failures in safety checking tasks in the healthcare system.

One way to manage patient safety involves challenge-response protocols. This is a process of verbal challenge, made by one colleague to another, as and when a course of action is proposed. This technique of double-checking is also called 'witnessing'. Errors that occur in this process are typically attributed to

negligence on the part of the checker.

Automaticity is a term given to skilled action that people develop through repeatedly practising the same activity - such as driving a car.

Writing in *Health Services Management Research*, Professors Brian Toft and Hugo Mascie-Taylor argue that individuals who fail in this system are the victims of a socio-psychological mechanism. The researchers labelled this 'involuntary automaticity'. When it occurs, only superficial attention is given and

errors happen without the checker realising it.

Given that this situation is induced by the repetition of a job itself, the study suggests that some of the serious adverse incidents in healthcare occur because the verbal double-checking protocols do not provide the level of safety envisaged.

The study also argues that the healthcare system, and those who manage it, is responsible rather than the individual clinician. This phenomenon poses a major challenge to the

National Health Service and the authors have urged the introduction of measures to reduce involuntary automaticity, thereby reducing the risk to patient safety.

'Involuntary automaticity: a work-system induced risk to safe healthcare', by Brian Toft and Hugo Mascie-Taylor, was published in the November edition (vol. 18) of *Health Services Management Research (HSMR)*, a quarterly publication produced by Britain's Royal Society of Medicine.



Brian Toft

IRELAND'S BIGGEST PATIENTS' SURVEY

In December, An Tánaiste, and the Minister for Health and Children, Mary Harney, will launch The Irish Society for Quality and Safety in Healthcare's national report,

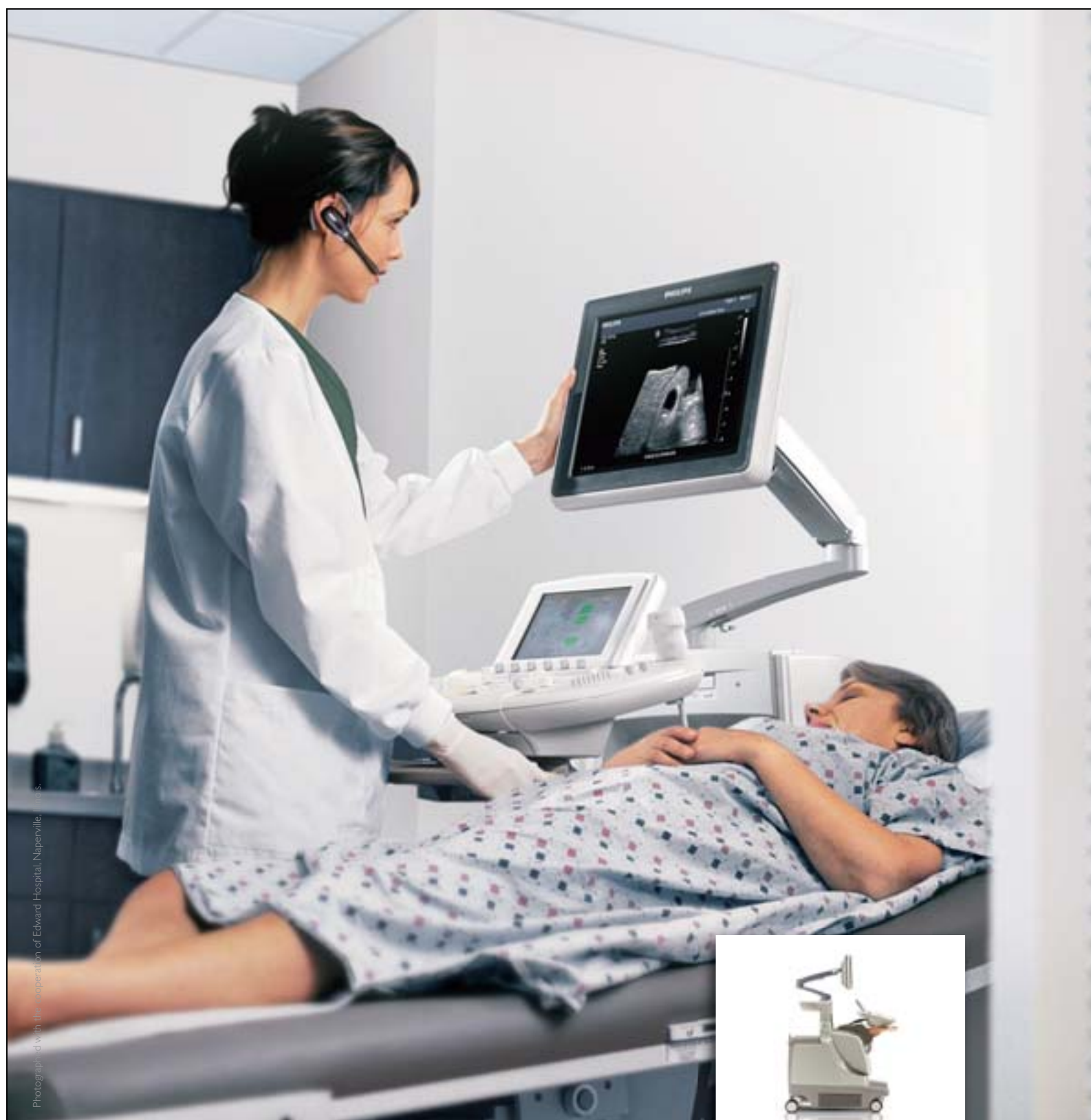
'The Patient's View', in which 4,820 patients tell of the quality of care and service they received during hospital stays in 26 Irish hospitals during 2004.

Founded in 1994, the Irish Society for Quality and Safety in Healthcare, is a not for profit, members-based charitable organisation that promotes quality and safety improvement throughout the Irish health service. It currently has in excess of six hundred members nationwide, and includes public, voluntary and private sector representation, all of whom believe in the benefits of networking and sharing information and best practice in healthcare. The Society also serves as an umbrella organisation for many other organisations involved in the quality in healthcare field and has strong affiliate links with both the International (ISQua) and European Societies for Quality in Healthcare (ESQH).

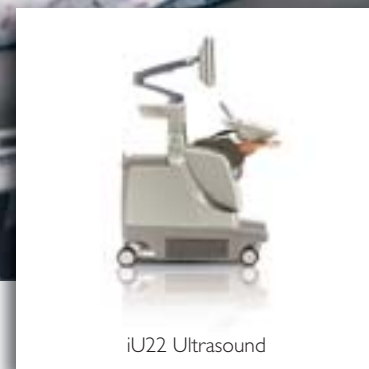
Its new report identifies certain areas of care and service that are perceived by the patient to be functioning well and others that need improvement. The findings illustrate the challenges that face healthcare service providers in building a culture that puts patients first and values their input, feedback and participation.

Key areas for improvement include:

- Communication issues, including adequacy and clarity of information
- Levels of cleanliness, privacy and general services in hospitals e.g. car parking, food etc.
- Patients' safety and patients' rights



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THE NATIONS HEALTHCAREER ALUMNI MEETING

'International Management Approaches to Health Services: Accreditation, Certification, Quality and Performance Management'

Healthcare accreditation The JCI External Quality Evaluation Model



Paul R vanOstenberg DDS MS, Managing Director of the International Office of Joint Commission International (JCI). In September 2004, he was the first to take up this post, after his appointment in Ferney-Voltaire, France. In his role, he is responsible for the co-ordination of European projects and the furthering of JCI recognition as a partner in healthcare quality and patient safety issues.

The topic of healthcare accreditation appears on the agenda of healthcare conferences around Europe. Why? The principle reason is that the World Health Organisation, World Bank and many other international organisations view accreditation methodology as the most powerful tool available to bring about sustained change for quality improvement in healthcare organisations. Accreditation and its standards are derived from the health professions for healthcare organisations and is equally applicable in developed and developing countries.

What are the unique characteristics of the accreditation model of Joint Commission International (JCI)? The model reflects, first and foremost, the clear mission of JCI: To improve the safety and quality of care in the international community through the provision of education, publications, consultation, evaluation, and accreditation services. The philosophy underpinning this mission includes; a focus on the patient in the context of their family, using standards that focus on functions and systems rather than people and the risk points of healthcare processes, setting expectations that push organisations toward excellence however are achievable with effort, and an evaluation process that stresses measurement — what is not measured cannot be improved — and finally, standards that embed in organisations a sustainable quality framework.

Accreditation is, by definition, a voluntary process granting recognition for meeting standards that require continuous improvement in structures, processes and outcomes. The accreditation methodology is based on consensus standards and, in the case of JCI, the standards are developed and maintained by an international task force with representatives from around the world to ensure that those standards can be interpreted and applied in different cultures, under diverse laws and regulations. The standards address hospitals, emergency transport, clinical laboratories, ambulatory care, the care continuum, and disease or condition-specific programmes, and have been applied in over 18 countries (including seven in Europe).

The tools of JCI accreditation are the standards, indicator measures, patient safety goals and education for leadership. The JCI standards are divided into two sections, those that focus on the patient and their care process and a second section that focuses on the management of the organisation. The on-site evaluation of the standards is a convergent validity model with a physician, nurse and administrator evaluating all the standards, from their own unique perspective, through observ-

ing care, talking to leaders and staff, talking to patients, and conducting group interviews on priority topics.

The JCI indicator measures were introduced in 2005 on a voluntary basis. The first sets include acute myocardial infarction and heart failure and community acquired pneumonia. Measures for pregnancy and related conditions, paediatric asthma, and in-patient psychiatric care will follow. An international database will be available for comparison. The JCI patient safety goals were also introduced in 2005 and include: the correct identification of patients prior to obtaining lab sample and prior to administering medications or starting surgical procedures; improvement in communication between health workers through the use of 'read back' of critical information, and the avoidance of look and sound-alike symbols and abbreviations; the removal of high-alert medications from patient care units; the use of checklist prior to surgery to ensure the right patient, right procedure and right surgical site; the reduction of hospital acquired infections through hand hygiene, and the reduction of patient falls through better fall risk assessment.

Finally, the education for leadership builds on the accountability and authority of leaders described in the standards and assists them to create a more safety-oriented culture in their organisation; engage in proactive system analysis and risk reduction; standardise processes and equipment; promote communication; ensure effective staffing and encourage and support patient involvement in quality and safety initiatives.

In summary, the JCI methodology supports organisations in their quality and safety efforts through the use of standards and related tools that bring about practical solutions to the quality and safety issues at all levels of the organisation. P.v.O

If you ever thought that quality topics and certification issues might be boring, stressful or even harmful for any organisation, being in Frankfurt for this meeting (29 October) would have taught you otherwise.

First, you learn that one 'certification expert' cannot handle certification and accreditation: It involves the entire company or hospital, beginning with the CEO. Second, once you start thinking about getting your organisation certified, you are already half way towards creating a better organization. One way or another, these points were emphasised by all the speakers, including Paul van Ostenberg and Eirian Lewis, whose articles are printed on this page.

Professor Sibbel, Fresenius Chair for International Health Management at HfB, underlined the struggles of German hospitals as they move towards becoming service and market-oriented institutions, which demands legally-driven quality management.

For further details on this lively, in-depth seminar, go to: www.nations-healthcareer.com. Or contact: Dagmar Möller at HfB. Phone: +49-(0)6171-9704217

Cheong Choy Fong, Director of Human Resource Development, Alexandra Hospital, Singapore, who presented an integrated approach to the implementation of quality management from Asia, summarised the level of effort needed to get a service-oriented and patient-friendly institution thus: 'Image you will have to bring your mother to the hospital!' The Alexandra hospital has been so ambitious in its outcome improvements, that besides its ISO 9001 and 14000, EQM, JCI, Six Sigma certification, it has even participated in Toyota's production system.

Hospital managers from Germany, Austria and Dubai also presented experiences on the long route to full accreditation. Finally, theoretical aspects of data collection and the diversity of European Healthcare systems were presented by Dr Nikolas Matthes (see page 7) and Dr Ann-Lise Guisset, of the Ministry of Health, Brussels.

ACHIEVING EXCELLENCE

There is much talk about the quality of healthcare services. Organisations need to respond pro-actively and rapidly to constantly changing demands and environments, whilst continually improving their levels of service.

But what do we really mean by quality, and how should you go about it? And if, as must surely be the case, quality is about the services you provide for patients, how does this balance with other targets and performance measures that healthcare organisations must meet - not to mention financial constraints? Some managers seem so focused on meeting targets and measuring performance that they forget there is a customer who makes use of your service. The patient is the final arbiter of product and service quality. So quality is best optimised through a clear focus on the needs of current and potential customers.

It's probably easier to start by identifying the pitfalls. There are a plethora of quality systems, standards and awards 'on the market'; some are healthcare-specific, others (such as ISO9000) generic to organisations of all kinds. However, many of these take a limited view of the organisation, for example concentrating on clinical processes, research and innovation, staff training, leadership standards and so forth. The truth is that really excellent organisations need to have all of these things working together.

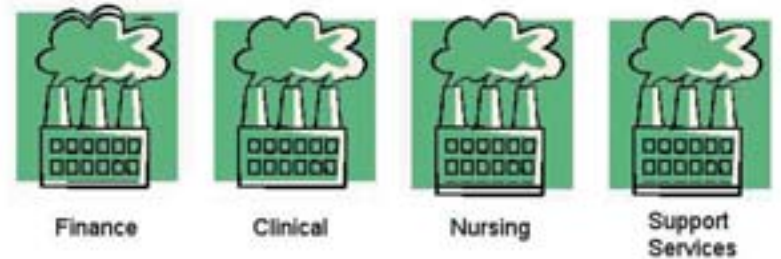
The danger of this approach is that of the 'silo effect' - people focusing their efforts on particular aspects of quality, possibly disconnected from other organisational priorities, and potentially seen just as a 'flavour of the month'.

To achieve a more holistic approach to quality improvement, ask yourself:

- 'What key things should we do, and do well, in order to succeed?'
- 'How well do we do these, and how can we improve?'

The answers to these questions

could be wide-ranging, but should enable you to consider what models or frameworks will work best for you. Will your chosen approach help people establish implementation strategies, set up the necessary linkages between individuals and groups, understand the enablers, develop co-ordination and build commitment to the successful delivery of outcomes?



Some fundamental thoughts: There needs to be on-going commitment from the top and, once started, there is no room for complacency. The behaviour of an organisation's leaders creates a clarity and unity of purpose within the organisation and an environment in which the organisation and its people can excel. This requires personal commitment from the organisation's most senior leaders - it is not something that can be delegated to a Quality Manager. The whole concept needs the buy-in of all and leaving it to the Quality Manager is not the solution (although if you have one, they have a role). Leaders have to live and breathe it and be a role model for what you intend to

Eirian Lewis is a director of Teal Consulting Ltd, which works with health organisations, local authorities, central government departments and in the private sector, and lists its services as: Performance Management, Transforming Service Delivery, Adaptive Change, EFQM Excellence Model and Balanced Scorecard, and Leadership strategy and development. Here, he describes the firm's concepts regarding the internal ethos needed to upgrade an organisation towards excellence

achieve. Also, beware of silos of another kind. It is far too easy to think of quality only in the context of your particular function within the organisation. There is a whole value stream which contributes to delivering successful outcomes. You need to think about how to move from a set of separate functions, to a more integrated system that works together:

The message is 'Make it work for you'. Think about what your organisation needs to achieve, and how it needs to operate. There needs to be a clear focus - quality is not about collecting 'badges', but about integrating it into the culture of the organisation. Never be caught, as we once heard someone say, by the idea: 'We're not doing quality today - we're too busy!'

Every organisation is special - different because of its objectives, its environment, and its culture. Really understanding the implications of these differences is the key to effective change and improvement.

You cannot buy it off the shelf. The most effective system is not one that does things straight from the textbook or by copying others. It is one that really allows an organisation to achieve its objectives, and is adapted and applied to deliver on-going improvement. E.L.



MEASURING HOSPITAL PERFORMANCE

In many countries, performance measurement for hospitals is now high on the agenda of policy makers, regulators, payers, patients, and other stakeholders. External drivers include demand for value from payers and the public, increased competition between providers, patient safety concerns, increasing evidence of variation in medical practice, questions about appropriateness and effectiveness of care, and methodological advances in the science of measurement that make assessment and comparison on the basis of indicators more feasible.

In the USA, performance measurement for hospitals has been on the agenda since at least the 1980s, when States started to publish hospitals mortality data for coronary artery bypass grafts, and the federal government released hospital-wide mortality rates. In the private sector the Quality Indicator Project, a co-operative programme, began in 1985 to help hospitals understand their performance. Its emphasis on standardised performance measures that reflected important aspects of care and its comparative database proved popular; by the mid-90s, over 1,000 hospitals in the USA were using its performance measures for acute in-patient, psychiatric, and long term care. The Project has shifted its approach in the USA, providing patient-level and disease-specific indicators to its US participants and, since 1992, also serves several hundred hospitals in Europe, using aggregate clinical performance indicators like nosocomial infections in intensive care, or unexpected returns to the operating theatre, for benchmarking purposes.

Accreditation and performance measurement are often considered mutually exclusive when, in reality, they are complementary concepts approaching performance from different perspectives. Accreditation tends to focus on structure and process based on intermittent assessment. Accreditation occurs at certain intervals with no, or little, assessment or monitoring of how processes are maintained. On the other hand, performance measurement seeks to measure processes and outcomes on a continuous basis, thus building momentum for ongoing assessment of processes and outcomes of care. Hospitals are to use data, evidence, to drive improvement and, ultimately, cultural change within their organisation.

Over the past five years the USA has moved to a strictly regulated framework of standardised performance measurement for hospitals. National Hospital Quality Measures were developed and implemented.

These clinical, patient-level, performance measures focus on certain services or diseases. Currently measures for pneumonia, heart failure, acute myocardial infarction, pregnancy, and surgery are available, with measures for the ICU, childhood asthma, and psychiatric in-patient care to follow soon. These uniform measures serve multiple purposes: The Federal Government requires participation for reimbursement, the Joint Commission made it a

requirement for accreditation, and many other stakeholders such as States use the data for public reporting and regulatory purposes.

Two trends are of particular importance. First, data from these National Hospital Quality Measures is being publicly reported - by States, by the Federal Government, and the Joint Commission - and are available for any patient to see. Patients are supposed to compare hospitals' performance for the areas mentioned, to

support decisions as to which hospital to select. However, the jury is still out on whether patients really understand or use this information for decision-making. Second, data is increasingly used for pay-for-performance. Reimbursement levels for a disease are tied to performance levels. Pilot projects are in progress. Challenges include low volume, random variation of performance, and to disincentivise poor performance but offer the opportunity to improve performance.

By Dr Nikolas Matthes

Nikolas Matthes MD PhD MSc is an Associate of the Johns Hopkins Bloomberg School of Public Health, where he is affiliated with the Department of Health Policy and Management. His professional experience and research cover clinical performance measurement, disease-specific and patient-level clinical performance indicators, performance improvement, statistical process control, international health systems.



3rd Hospital Administrator Symposium

Hospital and Radiology Management -
Future challenges for innovation, transparency,
personnel management, training and finance

Austria Center Vienna, Austria
March 3 - 7, 2006

Presented and organised by:

ECR 2006
March 3-7, Vienna, Austria

EUROPEAN HOSPITAL



Preliminary programme

Welcome and introduction by Prof. Andy Adam,
President of the ECR 2006

Session 1

March 4, 12:15 - 13:45

Management

This session is dedicated to the "hottest" controversies in hospital management. Can public hospitals learn from private ones? Is the focus on profitability the panacea for hospitals and radiologists? Do private hospital groups invest sufficient resources in training and education? Do alliances, cooperations, mergers and outsourcing help to tackle spiralling costs?

Session 2

March 4, 14:00 - 15:30

IT-Solutions

Session 2 will show that in the end integrated IT, workflows and so-called Enterprise Solutions will determine the future of the hospital. PACS sharing - the integration of all imaging modalities in a system and its impact on interdisciplinary work in the hospital. How far along are we on the road towards the electronic patient record? IT follows the hospital structures; departmental and enterprise solutions will bring together image- and patient-related data.

Session 3

March 5, 14:00 - 15:30

Finance

Session 3 will focus on the question whether private funding of healthcare and medical technology can complement/replace public funding. Innovative financing, procurement and maintenance of medical facilities. What are the pros and cons of leasing, private investments, private equity, PPP, fund raising etc.?

Preliminary list of sponsors:



In his opening speech Dr David H Hussey, president of the RSNA, indicated that he hopes for closer co-operation between the doctors involved in diagnosis and therapy. 'If diagnostic radiology and radio-oncology co-operated more, this could only be for the benefit of cancer patients,' he emphasised. This is why, he said, he would be pleased if more radio-oncologists played an active role in the RSNA. Over 700 companies presented their latest products at this year's event in Chicago.

The co-operation between **Agfa** and **Siemens** is already successful. The Agfa exhibition stand - still adorned with the Siemens logo - displayed Mammomat Novation. The co-operation between the two companies envisages that Agfa will offer their customers the digital mammography system manufactured by Siemens and that in return, Siemens will include Agfa's range of digital storage systems in their portfolio. However, emphasis at Agfa was on its Impax Enterprise, which includes Impax RIS (radiology information system) and the new release 6.0 of Impax PACS as important parts of the electronic patient file.

Aycan, well known in Germany as a pioneer of the DICOM concept, introduced the Xerox Dokucolor 240 - the new flagship product for the printing of X-ray images on paper. The DC 240 prints bones and soft tissue in colour or black and white on DIN A3 or DIN A4 paper.

Barco, manufacturer of display solutions, presented colour monitors with three million pixels. These new, high-resolution colour displays are calibrated with the DICOM-

THE RSNA 2005



Not revolution, but superb evolution

Late in November and into early December, as icy air streamed over the shores of Lake Michigan - affirming the nickname 'windy city' for Chicago - radiologists continued to immigrate here en masse for their biggest annual gathering. This year the Radiological Society of North America (RSNA) held its 91st annual meeting, parallel with the scientific congress and trade fair. The exhibition alone involved 28,700 staff - almost as many people as the 32,800 visitors to the event.

Manufacturers regularly launch new products at this international radiology fair, before introducing them to Europe. On behalf of European Hospital, Guido Gebhardt* toured this important event to report on developments and innovations.



like looking at holiday snaps. However, the new digital, complete product range DR 3000, DR 7500, CR 850 and CR 950 seems to lack that certain something which would make it stand out from the competition. The same fate befell **Konica-Minolta**. Their strategists reacted too late to new trends. Admittedly, digital radiography has only really achieved a notable turnover in the last three or four years, but the trust that a customer requires in a company would have been built up long before that. However, Konica-Minolta is now also back, with two digital storage systems and a digital mammography scanner.



Grayscale.

The radiologist can use the same monitor to make a diagnosis viewing images of the lungs, or to view 3-D reconstructions of the heart in colour. Barco's 3-D image display and analysis software, Voxar, impresses with its sheer range of functions - leading to its demonstration at numerous other exhibition stands as well.

Eizo was another manufacturer presenting 3 Megapixel displays. All display manufacturers have one thing in common - they do not simply offer the hardware (the panels) but also useful software features. Eizo's LEA (Lifetime Expectancy Analyzer), for instance, can predict the lifetime of the screen's sensitive backlighting.

Fujifilm was the first company to introduce digital storage systems in radiography. The Japanese company intro-

duced two new readers in Chicago, the Capsula and Clearview systems. The innovative company, with its European headquarters in Dusseldorf, has also had a lot of success with its Synapse PACS system over the last few months.

It would be almost impossible to name all the highlights produced by **General Electric**. Their dominance in the American market was obvious from their huge exhibition stand. GE's new range of products for digital radiography is called Definium - which ranges from mobile systems to fully-fitted X-ray rooms. The LightSpeed series is now complemented by a BrightSpeed range with a 4-, 8- and 16-slicer. GE is now offering its flagship product - the volume scanner VCT - in combination with a PET (positron emission tomography).

The three large manufacturers, Philips, Siemens and General Electric, see molecular imaging combined with personalised medicine as one of the most important growth segments. In the future, molecular imaging will enable all oncology patients to receive fully personalised therapy. In their technology pavilion, GE demonstrated to RSNA visitors how they envisage the care cycle will look in 10-15 years.

The German-Pavilion: For the last five years the RSNA has been part of the international trade fair programme run by the German Federal Government. This means that the Federal Ministry of Economics and Technology (BMWt) as well as the Federal Ministry of Food, Agriculture and Consumer Protection (BMVEL) make quite substantial subsidies available to smaller companies that hope to exhibit abroad. Among the firms exhibiting in the German Pavilion were IT specialists Medavis, Medos and Visus, as well as the contrast media manufacturers Medtron and Ulrich.

Whilst **Medavis** as a radiology information systems (RIS) manufacturer, and Visus, as a PACS manufacturer, co-operate in Germany, **Medos** can supply department management systems as well as digital imaging archives. In



May 2005, Medos was taken over by the Swedish Ortivius group, a company that offers, amongst other products, complete solutions for primary control units, ambulances and telematic systems for the transmission of patient and vital data from an ambulance directly to electronic patient files used by the hospital information system (HIS).

Visus entered into a large contract with the Diagnostic-Network AG, a teleradiology service provider from Dillingen/Saar, which already provides CT and MRI image analysis to 50 German clinics, day and night.

Medtron and **Ulrich** manufacture innovative contrast media injection concepts for medical imaging.

Hitachi used to attract a lot of attention (in the early 1990s) as the supplier of basic technology for Philips Tomoscan computed tomographs (CT), but then they apparently retreated from the European market. However, the firm has returned to Germany with a new product range of computer and magnetic resonance tomographs.

Although **Kodak** offers a complete product range for digital radiography, the company is a long way from the days where the name Kodak stood for innovation in radiological imaging. Holding a Kodak X-ray, mammography or dry laser film used to be

Compared with Barco, Eizo, Planar and Totoku, **NEC Displaysolutions** is one of the newer players in the medical imaging manufacturers market. Their range of grayscale and colour monitors is adequate, by all means, but there are no particular highlights. However, Planar can offer just that. Their 30-inch display with four Megapixels, framed by high sheen, black casing,

clearly stands out. The landscape format is large enough to display two images side by side. With this product, the unsightly dividing line that occurs when images are displayed across two monitors has become history. A dream to look at, but at around €10,000.- not cheap!

Philips hit the headlines last year when they acquired the American companies Epic and Stentor. Epic produces hospital information systems. Stentor (digital imaging archive, PACS) is a long-standing winner of the KLAS report, an American classification system for PACS systems. The integration of all imaging systems into the IT infrastructure is part of the vision of this Dutch company. The test-runs of the German versions of Xtenity (Epic-KIS) and iSite (Stentor-PACS) are due to start in 2007/2008. Despite





rather than revolution. All manufacturers have developed their modalities, as well as their IT systems, to an extremely high, technical level over the last few years. The keyword DICOM (Digital Imaging and Communication in Medicine), up until recently a synonym for data connectivity, is hardly mentioned these days. Exchange of data within radiology and interdisciplinary across different areas of medicine is now the reality. So, we can get on with the business of making diagnoses in peace.
*Editor: www.radiologieforum.de



the fact that it has been marketed for about a year, the magnetic resonance tomograph Panorama 1.0 Tesla manufactured by Philips is still a particular magnet for visitors at the RSNA.

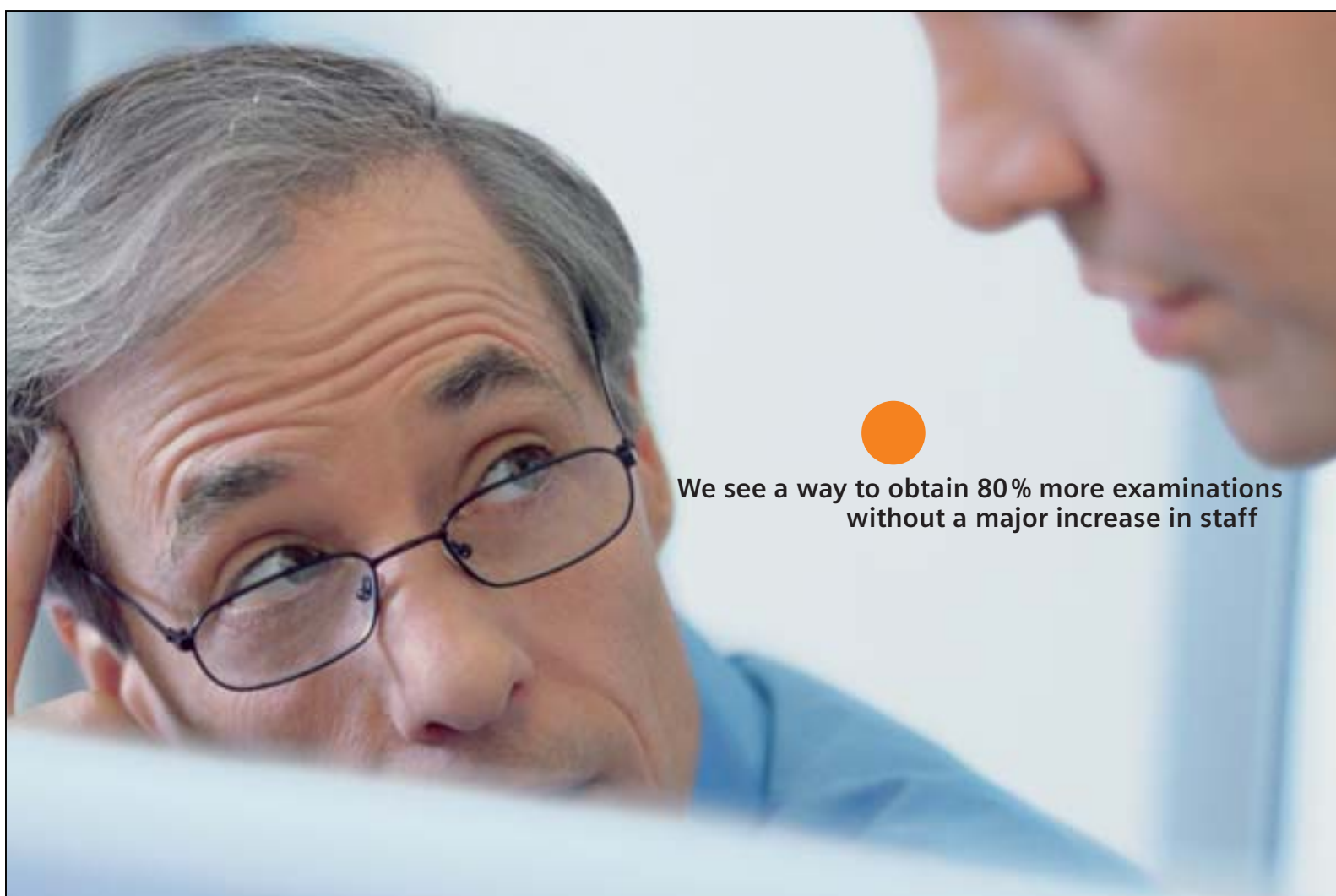
Sectra has released its PACS Release 10.2, which has been adapted to the new requirements of multislice CTs. Computer tomograms with a full resolution of 64 slices produce several thousand cross-sectional images during examination. The 'Smart Caching' function of Version 10.2 is aimed in particular at working with large sets of data. Moreover, as of now, Sectra offers a new 3-D application as well as an integrated cardiology solution. The Swedish company's 'Microdose Mammography' system is a digital mammography machine of the highest quality.

The only real surprise for most visitors at the exhibition came from **Siemens**. For the first time, the Dual Source CT, a computed tomograph with two tubes and detector systems was introduced to the international public. The German premiere happened just prior to this, at Medica 2005. The system is likely to significantly improve quality in coronary imaging. In the field of magnetic resonance imaging, the Erlangen-based company is banking on their two workhorses Magnetom Espree, a 1.5 Tesla System with a gantry opening of 70cm and a gantry length of only 125cm and the Magnetom Trio. The 3 Tesla machine is now also equipped with TIM (Total Imaging Matrix) technology for whole body examinations. Siemens' combination of the PET scanner and the computed tomograph Sensation 64 is of particular interest, as it facilitates non-invasive imaging of coronary vessels and perfusion studies all in one examination.

Swissray is a Swiss X-ray system manufacturer with considerable success in the US and Eastern Europe. It now offers flat detectors based on silicon technology for its radiography systems. The company uses the tried and tested detectors produced by Trixell, which Siemens and Philips are also using in their systems. The new technology, along with innovative product design, should enable the Swiss company to penetrate the Germany market as well.

Last but not least, **Toshiba**. The Japanese have a complete range of X-ray systems, modalities and ultrasound scanners. A regular cycle of innovation ensures up-to-date technology. Be it digital X-ray systems, 64-slice CT or open MR, Toshiba has it all.

All in all, visitors at RSNA 2005 had the impression that the motto of the congress was evolution



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Diabetes mellitus is strongly associated with the development of coronary artery disease (CAD) - up to one third of patients attending cardiac catheterization laboratories have diabetes. In addition, treatment outcomes are significantly poorer in this group of patients compared with the general population (restenosis rates [RR] are higher and clinical outcomes are worse). Thus patients with CAD and diabetes present a particular therapeutic challenge. Recent advances in percutaneous coronary intervention (PCI) may offer a new approach to treating this complex group of patients.

PCI started with balloon angioplasty, but this was associated with high RR. The introduction of 'bare metal stents' (BMS) improved clinical outcomes and lowered RR, but the treatment success of this procedure is still limited in high-risk populations. Drug-eluting stents (DES), which release antiproliferative agents, offer lower RR, and a reduced need for re-intervention. The most widely used DES to date are 'Taxus' (eluting paclitaxel) and 'Cypher' (eluting sirolimus).

The TAXUS V study - DES in complex cases

TAXUS V compared Taxus with a BMS specifically in higher risk groups, including patients with diabetes, small vessel disease, and where overlapping stents were required. The study included 356 diabetic patients. Over a 9-month follow up period, Taxus was found to have significantly lower RR (53% lower than BMS, $P < 0.0001$) and target lesion revascularisation (TLR) rates (46% lower than BMS, $P < 0.09$). In the sub-population of 102 insulin-dependent patients, RR was reduced by 55% and the need for TLR was reduced by 52%. This reduction was similar to that seen in the orally treated and non-diabetic population suggesting that Taxus has a similar significant benefit in orally-treated diabetic, insulin-

Coronary artery disease in diabetes mellitus - The emerging role of drug-eluting stents

By Dr Akhil Kapur of the London Chest Hospital, United Kingdom

dependent diabetic and non-diabetic populations.

Pooled analyses

A recent meta-analysis of four TAXUS clinical trials (TAXUS II, IV, V, and VI), involving 3,545 patients, including 814 diabetic patients, demonstrated clear superiority of Taxus over BMS for the overall population during 9-month follow up (in terms of TLR and RR). When diabetic and non-diabetic sub-populations were examined, TLR was similarly reduced in non-diabetic (61% reduction) and diabetic patients (59% and 66% for orally-treated and insulin-dependent patients).

Pooled data are also available for Cypher. This analysis included diabetic patients from the RAVEL, DIRECT, SIRIUS, E SIRIUS, and SVELTE studies. The TLR rate in all diabetic patients treated with Cypher was 5.8%, and the TLR rate for the insulin-dependent population was 10.1%.

While both DES offer significant benefits for diabetic patients, comparison of the Cypher and Taxus pooled analyses suggest that the Taxus stent may offer a small efficacy advantage in insulin-dependent diabetes.

Independent studies of DES in diabetes

A number of independent studies have also examined the use of DES

in diabetic populations. These include ISAR-DIABETES, DIABETES, SIRTAX and PORTO. While these independent studies often provide valuable supporting data for the use of DES in patients with diabetes, their conclusions are sometimes limited by issues such as lack of statistical power, clinical primary endpoints, blinding, or randomization. Given the large amount of data in this fast moving field, recent guidelines for PCI from the European Society of Cardiology (ESC) recommend the use of DES based upon the level of available evidence from clinical trials. Both Cypher and Taxus are recommended for de-novo lesions in native coronary arteries. In addition, Taxus is recommended for long lesions. The ESC guidelines provide a useful tool for assessing the weight of evidence suggested by clinical trials in this field when selecting a DES.

Registries

Cardiology registries provide valuable insights into the meaning of clinical practices in the 'real world'. ARRIVE, an FDA-mandated US registry of patients using Taxus, found that Taxus was associated with a 6-month re-intervention rate of 3.1% for diabetic patients, compared with 3.0% for non-diabetic patients. Similarly only small differences were found in the European MILESTONE II

registry, where Taxus was associated with a re-intervention rate of 6.2% in diabetic patients compared with 5.5% for all patients at 12-month follow up. The E-Cypher registry demonstrated similar results in diabetic patients. Taxus and Cypher are the only two DES to have proven benefit in this high-risk group of patients in both randomized and large registry studies. These findings further support the application of DES in diabetic patients with CAD.

What next?

DES with improved deliverability are now being developed. These include Taxus LibertÉ, which is available in a range of diameters as low as 2.25 mm, launched in Europe in September 2005. These stents are designed to treat small, tortuous vessels that are otherwise very difficult to reach. This should further

Economics of using DES

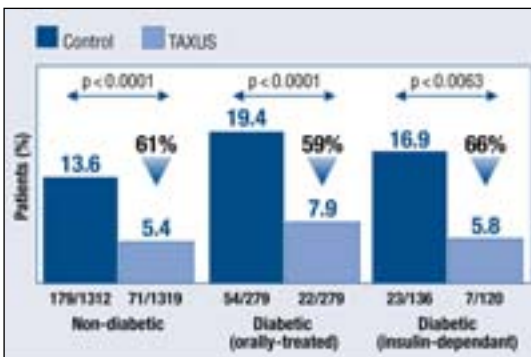
When considering the financial case for PCI, it is vital to consider the follow up costs as well as the initial expense. Repeat interventions are very expensive to perform - in Europe CABG costs an average €13,000 and PCI costs approximately €3-5,000. High-risk patients are also at greater risk of needing re-intervention, increasing this cost still further.

Compared with BMS, the lower rate of re-intervention with DES means that costs are vastly reduced - in high-risk patients, the average 24-month follow up cost with Taxus was calculated as €625, compared with €1,960 for BMS. These cost savings associated with DES outweigh the higher initial procedural costs, with overall costs at 24 months for high-risk Taxus recipients calculated as €6,490, compared with €6,600 for BMS.

The financial case for using DES, rather than CABG, has recently been explored in two studies from Italy and Germany. In the Italian model, total health system costs were projected to decrease by 2.1% if 60% of PCI procedures were converted to DES, and 15% of CABG to DES. Studies such as SYNTAX will provide a stronger basis for economic analyses of DES vs CABG.

Conclusions

DES offer a major advance in the treatment of CAD in patients with diabetes and further improvements have already been made in DES with improved deliverability such as Taxus LibertÉ. Higher initial procedural costs for DES are expected to be compensated for by lower costs during follow-up, especially in patients at highest risk such as those with diabetes.



TAXUS meta-analysis - effect of diabetic status on 9-month TLR

improve the treatment of CAD in diabetic patients who are known for their complex coronary anatomy. A paradigm shift away from coronary artery bypass grafts (CABG) to PCI as the first line approach for CAD in more complex patients will require convincing data from large, multicentre randomized controlled trials including SYNTAX, CARDia and FREEDOM. SYNTAX, which is ongoing and recruiting well, compares DES with CABG in approximately 4,200 patients with surgical-type disease in up to 90 centres worldwide. This study is expected to report its first data at the American Heart Association annual meeting in 2007.

Mitral valve disease

Austria - The first Cardiac Surgery Update and Progress (CSUP) Meeting, which will take place in Lech-Zürs, from 25 February to 4 March 2006, will focus on mitral valve disease. Congress details and the registration form are available on www.csup-lech-zuers.org

Representing the CSUP team, Guenther Laufer and Martin Grabenwoeger report that they are encouraging online-submission of abstracts associated with either mitral valve disease or cardiac surgery. **Deadline: 31 January.** The best eight abstracts will be presented orally, all other abstracts are to be displayed as posters throughout the conference.

Hi-tech patient transport

Just one person makes the move

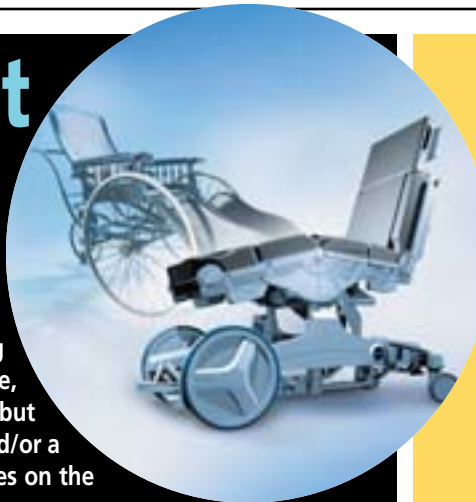
Patient transportation to the operating theatre often involves up to three people, not necessarily for nursing care en route, but frequently because a ward bed is used, and/or a hospital is old and presents many obstacles on the journey.

Maquet - which began making transportation systems in 1880, and up to 1950 produced a 'patient transport chair' with an operating table surface that served as a sitting or lying area during patient transportation - decided to resurrect that long-proven concept, but to fit the new model with state-of-the-art technology to match today's hospital demands. The company launched this new operating theatre table system at Medica 2005 in November.

Named Magnus, the table surface can be used for sitting or lying on, and despite tight spaces, elevators and obstacles, just one person can manoeuvre it; even when surfaces are uneven, the large wheels keep the journey smooth. Once in the operating theatre, the table's surface can be shifted safely and comfortably from the transporter to the operating table column, and preparation for surgery can begin immediately.

'Magnus is defining a new independent class for operating theatre table systems,' Maquet pointed out. 'Ease of handling and a wide range of settings for optimum patient positioning make it the most modern and powerful operating theatre table and transport system on the market.'

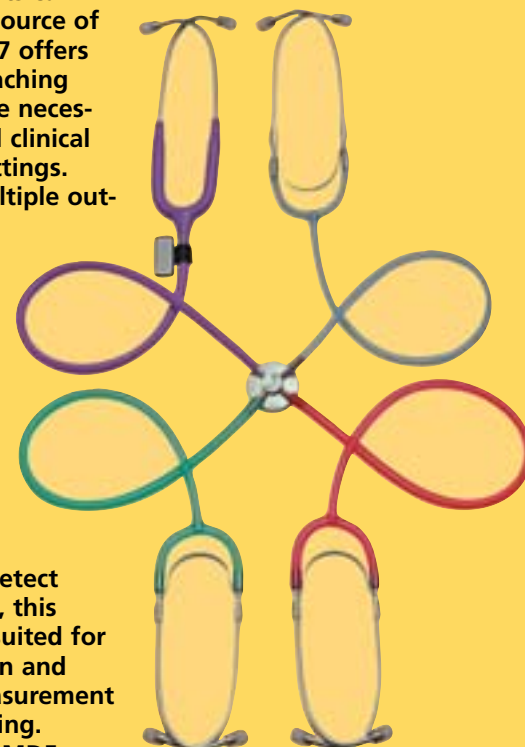
(In addition to marketing Magnus, the company confirmed that, due to the international success of its Alphamaquet models, it would also continue to sell its Alphamaquet 1150 models).



Do you hear what I hear?

Medical instructors don't have to describe the faint sounds to students any longer. With the new bowles-type teaching/training stethoscope, instructor and up to 3 students can listen to the same source of sound. The MDF 757 offers multi-functional teaching applications and the necessary flexibility in all clinical and educational settings. **Chestpiece:** The multiple output acoustic stems, available in 2, 3 or 4 outlets, is combined with an anodized aluminum bowles (4.cm) chestpiece fitted with ultra-thin fiber diaphragm (4.3 cm). Designed to increase acoustic amplification and detect high-pitched sound, this instrument is well suited for general examination and blood pressure measurement in an academic setting. Also available in in MDF

757 PT (with Pulse Time chestpiece)
www.mdfinstruments.com -
 contact: teigelkamp@unit-medienhaus.de



Implant for chronic treatment-resistant depression

USA - According to the World Health Organisation, depression is the leading cause of disability in the US, with direct and indirect costs relating to medical expenses and lost productivity due to days missed from work reaching \$80 billion per annum. The figures are not surprising, since around 19 million of the country's adults suffer a depressive disorder - which affects nearly twice as many women than men.

Many patients, particularly those with mild-to-moderate depressive disorders respond to psychotherapy and antidepressant medications. However, some with severe depression do not. 20% of Americans with depression - about four million people - experience treatment-resistant depression (TRD), defined as a major depressive episode that has not had adequate response to at least two different classes of antidepressants.

NEW

Articular cartilage probe

A new, minimally invasive device called the Glider Articular Cartilage Probe, designed to treat articular cartilage disease, has been launched by Smith & Nephew.

To devise this new probe the designers had to find a way to effectively smooth diseased tissue whilst preserving surrounding healthy tissue. The firm's endoscopy team, working with Dr James H Lubowitz, founder and director of the Taos Orthopaedic Institute in Taos, New Mexico, first conducted a study of how factors such as probe design and generator power settings, as well as speed and force of application affect the procedure. Their study indicated that those design features could be optimised to ensure retention of the maximum amount of healthy cartilage.

Their research earned the *Richard C O'Connor Award*, the highest award bestowed by AANA at the group's 2005 spring meeting in Vancouver, British Columbia.

The Glider features a pivoting head that emits radiofrequency (RF) energy as it follows the contoured surfaces of the joint. Then, through controlled application of energy, it restores smoothness to a damaged cartilage surface while preserving the maximum amount of healthy tissue, the firm reports. A flexible wire frame, supporting the pivoting head, operates as a kind of shock absorber, which allows the electrode in the pivoting head to maintain consistent contact along the cartilage surface. The frame also enables the probe to reach parts of the joint surface that rigid probes cannot access.

The new, recently FDA-approved VNS (vagus nerve stimulation) Therapy is being used for the long-term treatment of treatment-resistant depression. The indication is specifically for the adjunctive (add-on) long-term treatment of chronic or recurrent depression, for patients 18 years of age or older, who are experiencing a major depressive episode and have not had an adequate response to four or more antidepressant treatments.

By Karen Dente

This pacemaker-like device is surgically implanted into the chest. A thin wire is connected to the vagus nerve in the left neck area and guided under the skin to connect with the device, which sends out gentle pulses back to the vagus nerve, modulating activity in brain zones such as the hypothalamus and hippocampus, thought to be responsible for regulating mood.

Several studies have shown that VNS Therapy may modulate neurotransmitters such as serotonin and norepinephrine in the brain.

So far it has been used to treat over 32,000 patients worldwide. While it does not claim to cure depression, some patients have shown 'tremendous improvement' of their depressive symptoms.

With a history of 25 years of treatment-resistant depression Charles E Donovan, 47, received the implant during the clinical trial. 'It changed my life,' he said. 'We couldn't care less about any side effects related to continual vagal nerve stimulation.' His book, *Out of the Black Hole*, recounts his experiences with depression



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FASTER WEANING ENHANCES PATIENT CARE

an ICU. The software could also '... help with planning elective procedures if we can be more confident when beds will become free for post-operative recovery', he added.

However, Dr Jolliet said that not all cases need weaning via software use. 'Some only need to be intubated and ventilated for a very short period prior to a natural and speedy recovery and transfer out of the ICU. Others, because of the severity of their disease, associated conditions, and additional complications, such as

the nurses - so it was not unusual for certain checks to be missed. This could lead to a missed opportunity to alter the settings and potentially shorten the weaning time.' SmartCare, he observed, represents a 'real world' approach to protocol-driven weaning. 'It is, after all, based on the pooled clinical experience of some of the world's leading intensivists and pathophysiologists!' he exclaimed. Using the software means the EvitaXL ventilators can be left to control the process, providing medical teams with more time to patient care and other tasks, he pointed out, adding that some of the nurses had joked that the system would leave



Intensive care specialist **Dr Philippe Jolliet** (right), a senior member of the medical staff of the Medical Intensive Care Unit (MICU) at Geneva's University Hospitals, recently participated - along with a dozen other physicians in European hospitals - in the multicentre, randomised, controlled study 'Computer-driven ventilation reduces duration of weaning'. This involved the use of the software SmartCare, introduced at Medica 2004 by Dräger Medical.

Dr Jolliet has reported that he was not surprised when the results of the 12-month study into the benefits of using SmartCare software on the hospital's EvitaXL critical care ventilators indicated a reduction in weaning time. However, he said: 'Even I was shocked by the results. On average, we had cut the time between starting and completing the weaning process by around 50%. If we achieve this while maintaining patients in a pathophysiological comfort zone, and reduce the period when they are most at risk of contracting a nosocomial infection, this has to be a major benefit. Furthermore, if we can constantly tailor the exact level of pressure support to their exact needs, it will reduce the discomfort associated with intubation and assisted ventilation.'

Dr Jolliet also observed that cutting time spent on the ventilator usually reduces the total length of stay in



Before a patient session begins the clinician enters a menu to tailor the 'Zone of Respiratory Comfort', which is defined by the patient's breathing frequency, tidal volume and end-tidal CO

infection, may need to spend three weeks or more on a ventilator, and thereafter be very difficult to wean. I feel SmartCare would be inappropriate for both patient categories. However, there is a large ICU patient population that falls between these two ends of the spectrum, who I would describe as being either average of moderately difficult to wean. I believe these patients would benefit considerably from the use of SmartCare.'

Asked whether equivalent results could have been achieved using his previous weaning methods, Dr Jolliet replied: 'We employed a protocol-driven system, and posted the details all around the ICU. It worked well, but relied on nurses following it to the letter. Unfortunately, as patients' conditions improve, they tend to draw less attention to themselves - there are always plenty of others to distract

them with nothing left to do. Significantly, the nurses had reported finding the software easy to follow, despite early on blaming any complications they experienced on that same software.

In addition to weaning, Dr Jolliet said he saw a potential for elements of the software to be used within non-invasive ventilation, where its ability to titrate the exact level of pressure support required might lead to far more patient comfort.

In summary he compared the software with an autopilot on an aircraft. 95% of the time, he said, it could do a good job, but it could not quite replace the hands-on approach needed when landing in lashing rain with a strong side wind. So, he quipped, he and his colleagues would not start to look for careers beyond the ICU: 'Many aspects of patient care will always need the human touch.'

Neonatal ventilation

The SERVO-i ventilator has been continuously upgraded since its launch by Maquet Critical Care, over four years ago. The latest version, for neonatal ICU patients, includes nasal continuous positive airway pressure (Nasal CPAP), an option that can be used with various patient interfaces.

New hardware has also been introduced. A new Y-piece measurement sensor for all SERVO-i models allows near-patient measurements of pressure and flow with minimal dead space.

Additional new features to improve clinical efficiency and safety in ICUs include:

- FiO2 trend values can be stored and viewed
- Reference loops can be presented on screen together with the current loop
- The patient circuit can be tested independently of the pre-use check
- Alarms for airway pressure upper limit can be muted
- Apnoea alarm limit has been extended from 15 to 45 seconds



ANAESTHESIOLOGY MERGING MULTIPLE FUNCTIONS AND EPRS

GE Healthcare recently launched Aisys - a new peri-operative system, integrates electronic gas and agent control and delivery with advanced ventilation, vital signs monitoring and breathing system. Electronic delivery measures and checks the gas and agent at five different stages in the delivery system before it reaches a patient. The system also identifies the agents and gases based on molecular weight, a very accurate way of determining the gas and agent selected for delivery to the patient, GE points out. Omar Ishrak, president and CEO, GE Healthcare Clinical Systems, explained: 'Using input from hundreds of clinicians, we designed Aisys as a complete patient care solution, integrating all elements of anaesthesia, monitoring and electronic patient records (EPRs) into one collective unit.'



GE's platforms enable software and technology sharing across its anaesthesia products including, the 7900 SmartVent Ventilator and Advanced Breathing System (ABS). The former, says GE, is flexible enough to accommodate a broad range of patients. The latter provides a low circuit volume that delivers fast-response, ideal low-flow anaesthesia. 'The design of the Aisys system also provides a clear visual of the rising bellows, controlled by microprocessors, for immediate feedback about the patient's status,' GE adds.

Aisys integrates with hospital information systems (HIS) and Centricity anaesthesia systems, to automatically collect and document anaesthesia delivery and physiological data.

The equipment was designed for maximum mobility and economy of size. CableCare holds the cables, and INview Patient Displays are mounted on a moveable arm with 360 degrees of rotation.



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NEW

Infinity PiCCO SmartPod

Dräger Medical and Pulsion Medical Systems, which specialises in intelligent medical diagnosis and therapy management systems, launched the Infinity PiCCO SmartPod at Medica 2005. This device integrates Pulsion's PiCCO-Technology with Dräger's Infinity patient monitoring.

PiCCO-Technology provides continuous monitoring of cardiac output (C.O.), cardiac filling status, and water content in the lungs. 'PiCCO can replace the right heart catheter, which is currently used for advanced haemodynamic monitoring, by providing a lower risk but more comprehensive approach for guiding therapy in critical care patients,' Pulsion explained.

When the PiCCO Pod (which supports adults and paediatric patients) is plugged in to the Infinity patient monitor, clinicians can immediately access the range of PiCCO-Technology parameters.



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Piezoelectric shockwave system



devices such as cameras, light and operating theatre (OT) table from within the sterile field of the operating theatre and provides the basis for immediate intra-operative preparation of the OT report. The consistent use of this module ensures the immediate postoperative availability of the electronic operating report, including images of findings, and allows increased efficiency in the documentation from a forensic perspective.'

Medimage (PACS) - 'With Medimage, complete, digital patient picture and

document management is possible. Starting from workstations for picture acquisition, processing and archiving and progressing to server, network and telecommunications solutions, it provides every form of image data management, as well as tailored, customised solutions. Medimage unites all types of pictures, films and reports from radiology, cardiology and surgery. The possible intra-operative visualisation of pre-operative image data (X-ray, CT) on suitable monitors in the operating field of the physician plays

just as great a role in cost reduction as in increased operating safety.'

The system can be variably installed in ceiling supply units, distributed nurse stations and mobile system trolleys, and theatre tables and other peripheral devices can be integrated.

The core team provides specialist consultation and planning services, and additional services include the organisation of installation '... and commissioning of the customer's system solution and formulation of tailored service concepts'.

The PiezoLith 3000, launched by Richard Wolf GmbH, has a new high-performance piezo power source that enables fast, accurate and effective high-energy therapy, with minimum tissue damage. The firm reports the following benefits:

- Multifunctional diagnosis and therapy centre for urology and ESWT
- Unmistakable diagnosis and therapy in ESWL and ESWT
- Best possible patient positioning
- Short treatment times
- Continuous location during treatment
- No anaesthesia
- Simultaneous ultrasound and X-ray location with real-time display
- Radio translucent
- Optimum working height
- When necessary, auxiliary procedures can be carried out immediately with the X-ray unit

Richard Wolf also adds that it is 'Right on target even with small urinary stones.'

New features include the X-ray unit with LithoArm, for precise, stable attachment of the therapy source. This enables the C-arm to be used as stand-alone unit, by swinging out the therapy source from the X-ray path.

The new shockwave source has a multiple focal area and selectable focal zone, which allows focal adjustment to the stone size, for better stone disintegration, as well as treatment without anaesthesia.

The therapy head is easy to remove and features two layers of piezo elements and an integrated ultrasound transducer for real-time monitoring.

The Comfort Stretcher has a low table height that allows even low-mobility patients to get on easily. It is also multi functional, allowing auxiliary procedures combined with the X-ray unit.

The integrated operating theatre

Richard Wolf is an early innovator in minimally invasive surgery (MIS), well-known for its development of *core* - a complete operating theatre concept that centralises control via a modular, integrative structure. This networks individual theatre devices and provides interactive monitoring. The widely adopted communications standard CAN Open BUS protocol is used - an excellent platform for continuous integration of further components, the firm points out.

The networking of the devices and the unique visualisation and operating concept allow the centralised control of the entire system from one central operator panel. *core* brings with it a further significant increase in efficiency in the form of voice control that is not dependent on the speaker. This allows the direct operation of

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Posters: Deadline for abstract submission: December 15, 2005

APRIL 5-7, 2006

Med-e-Tel



Professor Michael Nerlich, President International Society for Telemedicine & eHealth (ISfTeH) and Dean of the Medical Faculty at Regensburg University



Dr Jean-Claude Healy, Director, Office of the Assistant Director-General External Relations and Governing Bodies of the World Health Organization, at the opening of Med-e-Tel 2005

Luxembourg - Next year's Med-e-Tel - the International Exhibition and Conference for eHealth, Telemedicine and Health ICT - will present a multitude of ICT healthcare applications for debate.

eHealth standardization and interoperability issues will be tackled by the IHE initiative (Integrating the Healthcare Enterprise) whose experts will explain the IHE process and the industry's role in this, and what IHE has to offer for Regional Health Information Networks.

The European Commission will use Med-e-Tel as a forum to present results of recent health ICT research, and this, together with European ehealth projects (e.g. standard and interoperable satellite solutions to deploy healthcare services over wide areas), knowledge sharing and decision support for healthcare professionals (Doc@Hand), and new generation telemedicine services for homecare (Interlife).

The role of advanced technology in global healthcare challenges and opportunities will be addressed by the Telemedicine and Advanced Technology Research Centre (TATRC), an element of the US Army.

A returning topic at Med-e-Tel is 'eHealth for Developing Countries'. eHealth is an important tool to cope with the specific healthcare problems that exist in the developing world (shortage of qualified doctors and specialists, AIDS/HIV pandemic, etc.). Previous Med-e-Tel editions already saw participants from El

Salvador to Tanzania and from Zambia to Indonesia gaining a wealth of information at the event. The 2006 session will again draw large numbers from developing countries. This session is co-organized by the World Health Organization (WHO), International Telecommunication Union (ITU), International Society for Telemedicine & eHealth (ISfTeH) which are at the forefront of telemedicine and ehealth implementation in the developing world.

In addition, the role of satellite communication and space-based technology applications, especially for developing countries, will be explored by the United Nations Office for Outer Space Affairs (UNOOSA).

The information, communications and technology sectors, are an integral and important part of the telemedicine and ehealth landscape. "What are the implications of ehealth for the ICT industry?" and "What will (or should) be the impact of ehealth on ICT regulation and policy?" are questions that form the basis of a session that the International Telecommunications Society (ITS) is presenting in the frame of Med-e-Tel 2006. ITS regroups professionals and researchers from the concerned ICT industries.

The Luxembourg Institution for Healthcare Research (CRP-Santé) will conduct a regional seminar aimed at hospitals, health insurers, industry, and policy makers. The seminar will look at how health IT leads to new solutions, patient

empowerment, and new marketing strategies for hospitals, mutualities and insurance providers and the industry. Business cases will illustrate successful applications in automated appointment bookings, online consultation of patient records, CRM in the hospital, e-learning, telemonitoring, image transfer, mobile applications, e-prescribing and health portals.

The above conference sessions will be complemented with various additional sessions on the topics of home telehealth, disease/health management, legal and ethical aspects of ehealth, and practical telemedicine and ehealth applications in various medical disciplines.

The Med-e-Tel exhibition floor will showcase medication compliance products, imaging/PACS systems, home telehealth and remote monitoring systems and services, clinical software packages, electronic medical records, results of telemedicine and ehealth projects, and much more.

Details: info@medetel.lu or www.medetel.lu

The importance of administrative modules

As the global healthcare industry increasingly moves towards integrated care, there is a growing trend among hospitals to replace outdated systems with modern and comprehensive hospital information systems (HIS), writes research analyst Konstantinos Nikolopoulos, research analyst at the global growth consultancy Frost & Sullivan. The goal is to have sophisticated solutions in place that include both clinical and business modules and support clinical as well as business functions. 'Hospitals and vendors alike are beginning to recognise the actual business benefits that the sum of the functions of modern administrative and clinical systems can bring to healthcare organisations,' he adds. 'With administrative systems increasingly incorporating advanced capabilities and offering greater functionality, administrative software vendors can look forward to a whole new range of opportunities.'

As implementation of HIS proactively continues in major European markets such as the United Kingdom, Germany and France, F&S believes that the hospital administrative systems market will see steady growth, increasing from \$1338.9 million in 2004 to \$2069.0 million by 2010, at a compound annual growth rate (CAGR) of 7.5 per cent from 2004-2008.

'Investing in back-office administrative applications makes eminent business sense as it can give hospitals a strong competitive advantage. These modules more or less form the foundation for electronic medical records (EMR), picture archiving and communications systems (PACS) and

other clinical modules. In fact, hospitals cannot really move to full EMR, PACS and other clinical systems implementation without first having a modern administrative system in place,' the report points out, adding: 'Therefore, doctors and hospitals would do well to ensure that they first implement these building blocks, even though the appeal of clinical modules, which are directly linked to enhanced quality of care, might be greater. Hospitals that follow this approach will be able to take advantage of the full benefits of modern software.'

The report discusses many interesting aspects of IT upgrading, (including progressively complex billing processes due to DRGs, pointing out that HIS developments in Europe tend to be 'patient-rather than billing-centric, which can create difficulties for international vendors in terms of adapting US products for use in Europe and vice versa').

A virtual brochure, which provides manufacturers, end-users, and other industry participants with an overview of the latest analysis of the European Hospital Administrative Systems Market (B662-48), is available. Simply send an e-mail to Radhika Menon Theodore, Corporate Communications, at rmtheodore@frost.com, which must include your name, company name, title, telephone number, fax number and e-mail address.

F&S Report: The European Hospital Administrative Systems Market B662-48. <http://healthcare.frost.com>.

Partnership to progress mobility



Volker Geyer, Managing Director of T-Systems SFH (right) with Andreas Dahm, Sales Director of Kodak GmbH's Health Group

A co-operation agreement between T-Systems SFH GmbH and the Health Group of Kodak GmbH will combine the companies' complementary hospital information systems (HIS) and PACS/RIS Solutions, (Kodak GmbH) resources, so that hospitals can opt for an integrated solution for KIS/RIS and PACS. The firm's reported: 'The certified interfaces will benefit customers by avoiding nuisance, loss of time and, not least, loss of money.' Announcing the agreement at Medica, in November, they also said this is a first step towards a countrywide common archiving solution for Germany, which healthcare institutions may either manage themselves, or handle according to an outsourcing business model.

T-Systems - The information and communication technology (ICT) firm has taken care of the corporate customer segment of the Deutsche Telekom Group since January 2005. Employing 51,000 co-workers in over 20 countries, the company reported 13 billion euros sales in the fiscal year 2004.

Kodak Health Group - IT products include PACS, RIS, company-wide and division-wide medical information systems, computed radiography systems (CR), digital radiography systems (DR), laser imagers, mammography systems, and X-ray film systems for general X-ray diagnostics.

Speeding medical communications

Siemens Communications (Com) and Dräger Medical have extended their partnership. The firms intend to use the latest Wi-Fi WLAN technology to create a wireless hospital infrastructure through which medical teams can access clinical applications and real time patient monitoring data throughout the hospital.

Siemens Com is a certified solutions partner for Infinity OneNet, providing expertise in wireless network planning and customer service to the hospitals that implement this new

technology. Dräger Medical will provide its in-depth clinical experience in patient monitoring and clinical applications for the acute point of care.

As an example of potential integrated solutions, the firms said that, using Infinity Gateway technology, alarms triggered by a patient monitor could be automatically routed through the hospital network using the intelligence built into the nurse call system - thus directly alerting the most appropriate caregiver in an emergency.

NEW

WOUND TRACKING SIMPLIFIED



wound, is then peeled away and disposed of as clinical waste. The tracing grid is placed on the Visitrak Digital and the traced lines of the wound are followed with the supplied stylus. When the outline is completed, the device beeps and displays the area measurement in cm² in its digital display. Functions are also provided to allow calculation of percentage wound area that is

necrotic, and width and length measurements. **Visitrak Depth** - This disposable, foam-tipped, sterile depth indicator is placed into the deepest part of the wound and depth is measured according to the scale.



The more accurately the rate of wound healing is documented, the faster non-responsive wounds can be identified. A percentage wound area reduction of less than 20-40% over the first two to four weeks is a reasonable indicator that the wound is showing a low response to treatment.

Methods of tracking wound progress include length and width measurements and counting grid squares. However, the most accurate method is to measure changes in precise wound area.

Visitrak, a new digital system launched by Smith Nephew, is likely to simplify the task of wound measuring considerably. The company reports that it provides accurate, reproducible data for tracking wound progress. Components:

Visitrak Digital - a neat, battery-operated portable digital tablet to help measure the area, length, width and depth of wounds. This produces a visible record of wound dimensions by converting traced lines into a true area measurement, which is then used to calculate the percentage area change since the last measurement. Percentage non-viable tissue, or other wound regions can also be measured.

Visitrak Grid - This transparent, three-layer sheet is placed over a wound, and the edge of the wound is traced, using a permanent marker pen. The white sterile backing of the grid, which creates a barrier between the grid and

THE PAINT THAT KILLS

Nanotechnology combats MRSA



A synthetic surface coated with biocide. Colonies of *Staphylococcus aureus* are coloured red. The untreated control sample (left) shows uninhibited cell growth. The coated sample (right) shows a 100 times reduction in the number of germs. The test was carried out according to guidelines for spray tests.

Although physically very small bacteria, such as *Staphylococcus aureus*, often wreak havoc in hospitals and can cost around €37,000 per case to treat. However, nanoparticles are a thousand times smaller and these are now being used in paints and coatings to wipe out bacteria. 'The effect is mainly based on the well-known antibacterial properties of metallic silver, combined with the characteristics of nanoparticles,' explained Helmut Schmid, chemist and head of the energy systems department at the Fraunhofer Institute for Chemical Technology (Germany), which developed the new technology with paints/coatings manufacturer Bioni CS GmbH. This September, the first commercial product using this technology - named Bioni Hygienic - was launched at a nanotechnology meeting in Dubai. 'Over a hundred manufacturers are interested in fitting their products - catheters and heart valves, bone and dent implants - with our technology,' Helmut Schmid reported.

PROJECT ISIS

The endoscope cleaner

The UK firm Labcaire Systems Ltd has launched a new Automated Endoscope Reprocessor (AER), which '... radically redraws the performance and usability limits for this type of instrument,' the firm reports. 'Developed as *Project Isis*, the new unit will still be the only AER to offer users a choice of detergent and disinfectant type and be constructed throughout from anti-microbial coated materials.'

The unit's BioCote anti-microbial coating inhibits bacterial growth, and the machine meets the HTM 2030 & prEN ISO 15883 washing and validation requirements.

'A kinetic cleaning process ensures thorough cleaning that does not depend on the presence of detergent,' the firm adds. 'An elevated temperature capability ensures that optimum operating conditions can be achieved for every detergent and disinfectant type. Process efficiency is also guaranteed by automatic leak testing of every endoscope, individual monitoring of each channel throughout the cycle, thorough rinsing after the disinfection cycle to ensure that chemicals are not carried across to the next patient and an automatic channel drying cycle.'

Although with a footprint of under a square metre, the Isis can take one or two endoscopes on individual load carriers. Washes can be either at room or elevated temperatures.

As a dual-sided unit the Isis can be installed as a pass-through type design between a pre-processing area and clean storage facility - particularly useful in new-build projects in which the pass-through design is being increasingly adopted.



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The European trade fair and conference *Analytica* focuses on analysis, laboratory technology, biotechnology and the life sciences, high-tech laboratory automation and data and process management. In 2006, this event, which includes the *Analytica Conference*, will celebrate its 20th anniversary. The *20th Trade Fair for Analysis, Laboratory Technology and Biotechnology* intends to continue to play an important role internationally as a basis for investment decisions in industrial and commercial laboratories. 'Dealing with a growing number of tasks more quickly - and if possible at increasingly affordable prices - is especially important in the analysis sector,' the organisers point out. 'For this reason, *Analytica 2006* will focus on economical solutions, which will apply to the sectors for classic instrumental analysis as well as microscopy and special applications in process control and quality assurance. *Analytica 2006* will present the latest trends including new techniques, new integration potential and a new understanding of the term service.'

Klaus Dittrich, Managing Director of the event's organising group Munich International Trade Fairs, said: 'We are looking forward to presenting the industry and all of its facets to decision-makers from the analysis, laboratory-technology and biotechnology sectors. And instead of gigantomania, we are focusing on content depth and positioning *Analytica* as a force that promotes transfer between research and applications.' Subjects to be covered include:

Analysis using standard browsers
Researchers can now control high-performance analysis equipment

from their desks and retrieve data using the mouse. Additional steps or modules are no longer necessary to network the electronics used to take measurements and analyse results. In the latest generation of equipment for high-performance liquid chromatography (HPLC), all equipment can be controlled using a standard browser, and without having to install additional software. A communications module that serves as a central control unit for the system provides the necessary intelligence in the form of a web server. Entering the systems' IP address the researcher can call up the start page over an intranet. Once logged on, s/he has access to all HPLC functions. Methods and sample tables can be compiled and read out as XML files.

Online analysis - in real time
Molecules that must be analysed very quickly and, if possible, online, are becoming increasingly complex. While conventional offline analysis provides information about a single state, online analysis makes it possible to follow an entire process and call up data in real time. Besides processing and cost advantages, in some cases by-products can be discovered that would have gone undetected in a routine analysis of products. Not all processes are suitable for online analysis because it generally has to do without any form sample preparation. Furthermore, having to deal with media that might be aggressive calls for sturdy equipment with a long service life. These requirements are best met using optical techniques, such as infrared, UV-Vis and Raman spectroscopy. Specially customised software can analyse raw data automatically - even as part of



Analytica 2004 München Photo: Alex Schelbert.de

20th TRADE FAIR FOR ANALYSIS, LABORATORY TECHNOLOGY & BIOTECHNOLOGY

25-28 APRIL 2006

a multi-component analysis that uses multiple measuring parameters to find the desired data in real time.

High-speed gas chromatography using short columns

Even 'very advanced' classic techniques like gas chromatography are being developed further. Due to capillary columns and efficient detection systems this is now one of the most efficient separation and analysis techniques. Short analysis times combined with unreach precision, play an important role, particularly in food and environmental samples. Combined with mass spectrometry (GC-MS), this technique is unrivaled when it comes to analysing volatile mixtures, the *Analytica* report points out, adding: During the past few years, shorter

columns have made it possible to speed up separation considerably. Two-dimensional GC using two columns with different retention capacities increases separation performance for complex compounds enormously: At the same time, both physical and physicochemical analyte properties such as boiling point, structure and polarity can be used during separation.

Capillary columns with increasingly smaller dimensions are also used for high-performance liquid chromatography (HPLC). They make it possible to reduce solvent consumption on the one hand, and in most cases, only extremely small sample quantities are available on the other. Capillary columns make it possible to perform analyses in the pictogram

range. And coupling them with systems such as a nuclear magnetic resonance spectroscope (LC-NMR) improves detection sensitivity. New online coupling techniques for separating and analysing the structures of complex compounds can be used to identify even the smallest quantities of biologically active substances gently and without destroying the sample.

Service providers and full-line suppliers

Modern analysis equipment is increasingly functional, providing easy operation, high throughput rates and improved performance. In a growing number of devices the technology itself remains concealed from the user. Analysis is now a service that many companies take advantage of, instead of viewing it as a core competency, '...although analysis information provided by laboratories is the basis for decisions of considerable economic and ecological significance,' Klaus-Peter Jäckel, Head of the BASF Group's worldwide competence centre for analysis, explained. *Analytica 2006* will showcase the latest analysis techniques and solutions, as well as serve as a venue for industry representatives to discuss the latest applications with companies that need specific services and identify future requirements. That includes distributing tasks and redefining the roles to be played by university research and industrial operations as well as the new market orientation in the chemical industry. Klaus-Peter Jäckel, for example, is working with the German Chemical Society (GDCh) to strengthen the role that analysis plays at German universities. Further details: www.analytica.de

Saliva pre-analytics standardised

At *Medica* in November, Greiner Bio-One launched the world's first patented Saliva Collection and Quantification System to be based on a liquid collection medium, which, the firm explained, enables

standardisation of saliva pre-analytics for the first time: 'This applies to standardised collection, preparation as well as storage of saliva samples. It is the prerequisite for development of new and innovative saliva diagnostics.'

The easy method of collection, together with permanent availability, makes saliva an interesting alternative to other specimen materials, such as blood or urine, Greiner Bio-One explains. 'The areas of application are varied, ranging from therapeutic drug monitoring to drug tests in traffic controls or at work. Furthermore, many clinical chemical parameters, e.g. electrolytes or hormones in saliva can be detected in addition to bacteria and viruses. Previously, the problem with saliva was that the collected sample quantity was subject to variations. Due to this, it was difficult to determine the quantity of saliva for the analysis. Our pre-analytics product experts have found the solution: The world's first collection system based on a saliva extraction solution as well as a method for quantitative determination of the saliva quantity allow the standardisation of saliva pre-analytics.'

Collection is non-invasive, so is totally painless. In addition, HIV infection via saliva is virtually impossible, the firm points out, adding that, unlike urine collection, the presence of a supervisor during saliva collection does not pose an invasion of privacy. 'Corruption of the sample, either intended or unaware, is prevented. In contrast to other saliva collection systems, a dry mouth, which can occur, for example if a person is under the influence of drugs, is generally not a problem with the Greiner Bio-One system.'

The, based in Kremsmünster, Austria), Greiner Bio-One International AG, is an independent concern owned by the Greiner family, which was formed in 2001 when the *Labortechnik* branch left the Greiner Holding AG.

Details: www.gbo.com/preanalytics



Balkan Clinical Laboratory Federation (BCLF) 2005 held in September, attracted over 250 clinical laboratory professionals from 14 countries to the venue in Tirana, Albania.

'The opening ceremony, and speeches by Professor Anyla Bulo, president of the meeting, Prof. T. Gruev, the BCLF president, and Prof. V. Blaton, the FESCC president, were followed by two excellent plenary lectures, from V. Blaton (Belgium), speaking on the cardio protective effect of HDLs, and S. Danev (Bulgaria) giving insights into atherosclerosis research, diagnosis, prevention and treatment in the proteomic era,' Dr Cojocaru reported, adding that the research studies that followed had contributed to the advance by numerous new and interesting observations, studies, and discoveries in all laboratory medicine branches.

Dr Cojocaru himself presented 'Asymptomatic chronic hepatitis with C virus associated with anticardiolipin antibodies and ischaemic stroke'. We do not have the space to highlight all those he mentioned in his report. However he did point out: 'For the further advancement and collaboration in Balkan region, an active inclusion of many European scientists was of great significance.'

During the BCLF Executive Board Meeting Professor Nada Majkic-Singh (Serbia & Montenegro) was elected President of the BCLF (for three years).

The 14th BCLF meeting will be held in Sofia in September 2006.

In October, Dr Cojocaru opened the 2nd Danubian Symposium of the Romanian Society of Laboratory Medicine, held jointly with the 4th National Congress of Laboratory Medicine and 3rd Symposium on Quality Assurance in Laboratory

BALKAN EVENTS

During the General Assembly of Romanian Society of Laboratory Medicine, last September, Professor M. Cucuianu, of Cluj-Napoca, was elected an honorary President, Prof. Gheorghe Benga became President, and Manole Cojocaru MD PHD was elected vice-president of the Society and IFCC/FESCC National Representative. Dr Cojocaru subsequently reported on several Balkan events

Medicine, held under the auspices of IFCC, FESCC, Romanian Academy of Medical Sciences and Vasile Goldis West University, Arad, which was attended by around 200 scientists.

The Annual Meeting Organising Committee, said Dr Cojocaru, had developed an exceptional educational programme. 'Everything you need to stay ahead of changes in clinical laboratory science, medicine and management.' The main topics, he said, encompassed laboratory medicine, integrative discipline for disease diagnosis, and trace-ability and standardisation in the European concept of laboratory medicine. Among the many outstanding plenary lectures (too many to report on this page), Dr Manole remarked that Professor M. Cucuianu, from Cluj-Napoca, presented an 'excellent' address on the metabolic risk factors and thrombo-atherosclerosis - a mini review.

5th FESCC Continuous Postgraduate Course in Clinical Chemistry.

Evidence-based medicine has resulted in a huge body of knowledge, so diagnostics are expanding, including those for auto-immune diseases, Dr Cojocaru pointed out. 'I think the lab is becoming a centre for technical and clinical advice to clinicians. Diagnostic tests are fast becoming more important and more appropriate. How can they be used to reduce treatment costs? In Romania, auto-immune diseases represent an excellent model for postgraduate education.'

This was the focus of postgraduate weekend courses, held in Dubrovnik in October, and organised by the Croatian Society of Medical Biochemists and Slovenian Association for Clinical Chemistry, with the FESCC (IFCC in Europe). Programme:

1. Basic concepts - New aspects of the immunopathogenesis of auto-immune disease; genetics; auto-immune aspects of pregnancy and infertility; apoptosis and autoimmunity, etc.
2. New approach to diagnosis contents; laboratory standards in the diagnosis and therapy monitoring of auto-immune diseases, e.g. celiac, rheumatoid arthritis, vasculitis, multiple sclerosis and systemic lupus erythematosus.
3. Evidence-based diagnosis, quality assurance and organisation of the auto-antibody laboratory; statistical management of auto-immune diseases data; guidelines for ANA testing; therapeutic potential in auto-immune disease.

The FESCC and Dubrovnik's Inter-university Centre presented participants with Handbooks and Certificates.

EUROPE'S MAJOR MEDICAL DEVICE MARKETS

Espicom Inc has published a 260-page strategic report that provides growth prospects and valuations for seven key markets in the next five years, as well as financial forecasts, regulatory developments, product sectors, healthcare expenditure and costs, comprehensive population and demographic indicators, comparative regional and international overviews, etc. The *Major Medical Device Markets in Europe* report includes information on France, Germany, Italy, the Netherlands, Spain Switzerland and the United Kingdom. Cost: \$1,625 ISBN: 1 85822 233 8

A catalogue of courses



Going International's new 'Medicine & health' course catalogue for advanced training in healthcare, which includes around 2,500 courses offered by 700 renowned universities and international organisations from 43 countries, is now available.

The publication presents recent trends and offers in training and advanced training, with courses selected according to current needs in the healthcare sector and adhere to quality criteria approved by experts in the field. It also includes scientific articles that are not only interesting, but also act as background information to courses.

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Details:
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Those who care for relatives with Alzheimer's disease often pay a high price in terms of increased demand, stress and personal distress. This book is a treasury of powerful ideas, information, and techniques designed to emotionally strengthen the person who cares for someone with Alzheimer's disease. 'Strength in Caring', a new 244-page book, has been written to help them. The author, Mark Matloff PhD, is a psychologist in private practice, who has over 28 years of experience. Since his graduate studies in gerontology, he has worked with adults, elderly clients, nursing home residents, Alzheimer's caregivers, and a large number of support agencies. 'People who care for a person with Alzheimer's disease have to deal with two challenges: the practical demands of care-giving, and the emotional and psychological toll of extended nurturing,' Dr Matloff points out. The chapters cover areas

Help for Alzheimer's carers



Dr Mark Matloff PhD

such as: medical and legal aspects of the disease; where to go for more help; psychological approaches to gain more personal power and control of their stress; dealing with grief; combating the negative feelings of depression, self-blame, self-pity, hopelessness, anxiety, anger, and guilt; turning perfectionism into acceptance; going from procrastination into action; stress-busting; building happiness; and constructing a working plan for empowerment. Each chapter contains an overview of a particular problem, followed by ideas, techniques, and/or powerful questions that caregivers can use to cope and help themselves.

In addition to his psychology practice, US-based Dr Matloff is a consultant, coach, and adjunct psychology professor. He has conducted public workshops, written a weekly newspaper column, and been featured on Syracuse TV and radio. In November, he was the keynote speaker at the 'Power Caregiving: Rising to the Challenge' workshop put on by the Central New York Alzheimer's Association and Onondaga County Department of Aging and Youth.

ISBN 1-59800-162-0. Price: \$18.95

Ebook website: www.StrengthinCaring.com

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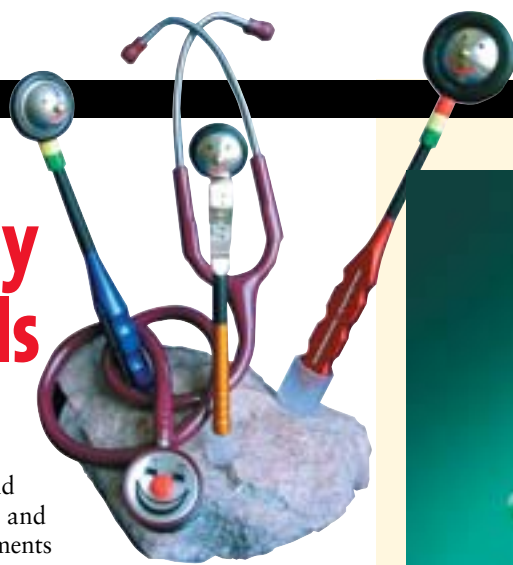
INNOVATIONS

Patient-friendly diagnostic tools

Zellamed, of Zella-Mehlis, Germany, which has produced medical instruments since 1884, specialises in stethoscopes and reflex hammer for the newborn, children and adults. All of this firm's high-tech instruments present a face.

The 'Trabant' child stethoscope is a very small, double ring stethoscope with a soft, warm, silicon 35-mm external ring, and an internal ring that measures only 15 mm diameter - which is covered with an antibacterial coating. The firm reports that this stethoscope readily adapts to the dermal anatomy of infants - from premature babies to seven year-olds. The firm's 'Satellite' - a 45:25mm double silicon bell - has been developed for older children and adults patients. The universal 'Kosmolit' has a new double bell and intercostal membrane.

The firm's hammers have a flexible handle, so that very soft areas can be tapped, and they have red/green eye-check and Babinski-reflex. Eight different weights are also available for each user, from 50-125 grams. The firm also reports that it produces very soft bumpers, with its original child friendly look.



Easier births for all

The aesthetic, functional Ave Delivery Bed provides patient comfort as well as meeting the professional needs of a delivery team. New technical developments include the asymmetric positioning of the lifting post, very low minimum height and an entirely new concept of foot adjustment, which makes patient handling easier during delivery. The design, plus materials used, speed up adjustments, cleaning, and ultimately servicing.

The many Ave delivery bed accessories allow for conventional or alternative positions: recumbent on back; half-seated; on all four limbs-back; lying on the side; suspended bent-knee, and bent-knee with partner's support. Details: www.borcad.cz



Designed by Jiří Španihel, the bed has received an 'excellence' award from the Czech Design Centre

Automated deliveries



Intelligent vehicle distributes supplies aided by laser technology

The innovative TransCar LTC 2 Automated Guided Vehicle (AGV) has an on-board IPC that stores navigation/destinations information. The system also includes radio communication, and the new network-compatible TCMS control (TransCar Management System) with visualisation.

After the daily workflow - plus any ad hoc itineraries - are downloaded from a central system controller, supplies such as medicines, meals, linen, bulk supplies and trash are loaded into containers and placed into sending stations. Jobs are automatically generated by reading the specific targets from RFID-tags and are automatically assigned to vehicles. The

vehicles pick-up the load fully automated. Then, using its on-board electronic map and laser guidance technology this intelligent vehicle travels, at a walking pace, to its pre-programmed destinations. Although these may be on different floors of a hospital, or in other buildings within the complex, TransCar navigates its way, through narrow aisles, around passers-by, and, adds its manufacturer Swisslog, it will safely inter-



Latex allergy prevention



Natural Rubber Latex (NRL) is still the recommended choice for barrier protection. However, at the Medica trade fair this year, Ansell Healthcare, which specialises in hand barrier protection, pointed out: 'Scrubbing with soaps and anti-septics combined with continued glove use (which can result in soggy, easily eroded skin) contributes to attacking healthy skin's protective barrier. The resulting dry, cracked skin opens a migration path for irritants, allergens and micro-organisms.' At the fair, Ansell presented three new approaches to such glove-related allergies, which include information, prevention, and alternative materials. (To provide information, the company has also launched a multi-language international online educational programme: www.anselleurope.com).

Improving on prevention, Ansell has produced NRL gloves with an integrated hydrating solution - HydraSoft. This helps to protect the

skin's natural barrier. The firm also pointed out that Hydrasoft improves the comfort and flexibility of the neoprene, accelerator-free product DermaPrene Ultra, also used in the glove, and explains that this is a unique formula of neoprene that is free of vulcanisation accelerators - a source of Type IV allergies.

Laboratory tests of the Ansell High-Temperature Post Washing Process indicated that this development has reduced the NRL allergen content of NRL gloves in some cases by over 20 times more than DPNR (Deproteinised and purified natural rubber latex).

Take your research



The European Space Agency (ESA) was at Medica 2005 (Dusseldorf) to present the European Commission funded SURE project (The International Space Station (ISS): a Unique Research Infrastructure). This provides the opportunity for new research in space, primarily for East European countries, researchers and industry.

The group reported that, far above the constraints of the atmosphere, and free from the effects of gravity, the Space Station provides a unique infrastructure for performing research in weightless conditions - unachievable on the ground - and developing and testing new products and innovative technologies. 'From life and physical sciences to health and nutrition, the facilities and resources available onboard the Station not only allow scientists to carry out groundbreaking research, but also offer companies the oppor-



Professor Harald zur Hausen

Thai award for cancer researcher

Professor Harald zur Hausen, 69, former Chairman and Scientific Member of the Management Board of the German Cancer Research Centre (Deutsches Krebsforschungszentrum, DKFZ) has won this year's *His Royal Highness Prince Mahidol of Songkla Award* (worth US\$ 50,000) for his contributions to public health. In January 2006, King Bhumibol Adulyadej of Thailand will present the prize, on behalf of the Prince Mahidol Award Foundation.

Prof. Zur Hausen's cancer research is focused on papilloma viruses, considered the cause of cervical cancer.

The Deutsches Krebsforschungszentrum has fostered scientific relationships with Thailand for some years. In 1995 the Centre concluded a cooperation agreement with the Chulabhorn Research Institute covering a joint project to study the chemical constituents of Thailand's flora. The Thai

Princess, Professor Chulabhorn Mahidol, visited the DKFZ in October 2000 to learn about research into natural substances that can prevent or slow down the development of tumours. She also gained an overview of the diagnosis and therapy of lung cancer, and of cancers that affect women. With this transfer of knowledge, the DKFZ is supporting the development of a cancer centre in Bangkok.

Prince Mahidol of Songkla, father of the present King of Thailand, was responsible for modernizing Thailand's healthcare and health education systems. In his honour the Prince Mahidol Award Foundation was founded in 1992 and the prize bearing his name was introduced.

The Deutsches Krebsforschungszentrum in Heidelberg (German Cancer Research Centre, DKFZ) systematically investigates the mechanisms of cancer development and works to identify cancer risk factors. 90% of the centre's finance comes from the Federal Ministry of Education and Research and 10% from the State of Baden-Wuerttemberg. It is a member of the Helmholtz Association of National Research Centres (Helmholtz-Gemeinschaft Deutscher Forschungszentren e.V., HGF).

Journalists raise COPD awareness

Chronic obstructive pulmonary disease (COPD) is the fastest growing cause of death in the world's advanced economies and projected to be the world's third leading cause of death by 2020. Early diagnosis and treatment can greatly improve the quality of life for COPD patients, yet many are unaware they have the disease - up to 50% of Americans and 75% of Europeans with COPD are estimated to be undiagnosed. Indeed, the number of people who know about this disease is low '...which is why the media play a crucial role in raising awareness and educating the public about COPD,' said Leonardo Fabbri, Professor of Respiratory Medicine, University of Modena & Reggio Emilia, Italy, and Chair of the Judging Panel for the annual Eloquium awards for communication, presented by the pharmaceutical firm Boehringer Ingelheim.

This year, a panel comprised of international COPD experts and healthcare media specialists judged 69 submissions from 17 countries.



The winners

1st: Rosalina Grilo, for 'Over 600,000 Portuguese people suffer from COPD' published in Saúde Pública, Portugal. 2nd: Michael Baggeler, for 'When air is in short supply, give the lungs a chance to breathe deeply again', published in Neue Welt, Germany, and 3rd, Riwa Al-Atrash, for overviews on COPD, for Future TV, Alam Al-Sabah, Sohtak, in the Lebanon.

HEART CAMPAIGN WINS AWARD

The Geneva-based NGO, The World Heart Federation, and Cohn & Wolfe, an international public relations consultancy, have received a Third Sector Excellence Award for the international campaign, 'A Heart for Life', focused around their World Heart Day campaign.

In 2004, over 350 articles and broadcast features were generated, reaching over 395 million parents, children and adolescents with educational messages about the risks of unhealthy lifestyles and the link to heart disease and stroke.

During World Heart Day (involving over 100 countries) in Brazil, for example, participants in

a walk carried red heart-shaped balloons to a city park where they were given fruit, tips on living a healthy lifestyle and a free yoga and dance class; in Egypt, text messages (SMS) containing health tips were sent to cell phone users by a mobile network company, and in Cameroon over 800 people received free screenings for obesity, diabetes and hypertension.

Left to right: Lauren O'Brien, Cohn & Wolfe PR; Liz Hazell, Director, Charities Group, PWC; Victoria Dix, Cohn & Wolfe PR; Helen Alderson, World Heart Federation, and journalist Kate Silverton



into space



tunity to increase their competitive advantage by using the space environment as a platform for applied R&D and technology demonstrations,' ESA pointed out.

With the co-operation of the European Commission, the four-year SURE project will enable ESA to broaden access to the ISS to a wider international community. Priority will be scientists, small & medium enterprises (SMEs) in the new European Member States (EU10), and Romania and Bulgaria.

ESA Astronaut Frank de Winne described his life and work in space and spoke of research activities currently performed onboard the ISS. Speakers from ESA and the European Commission also introduced the SURE project. Future projects will be selected on the basis either of scientific excellence or of their potential for industrial applications.

Details: www.spaceflight.esa.int/sure.

KIMES 2006

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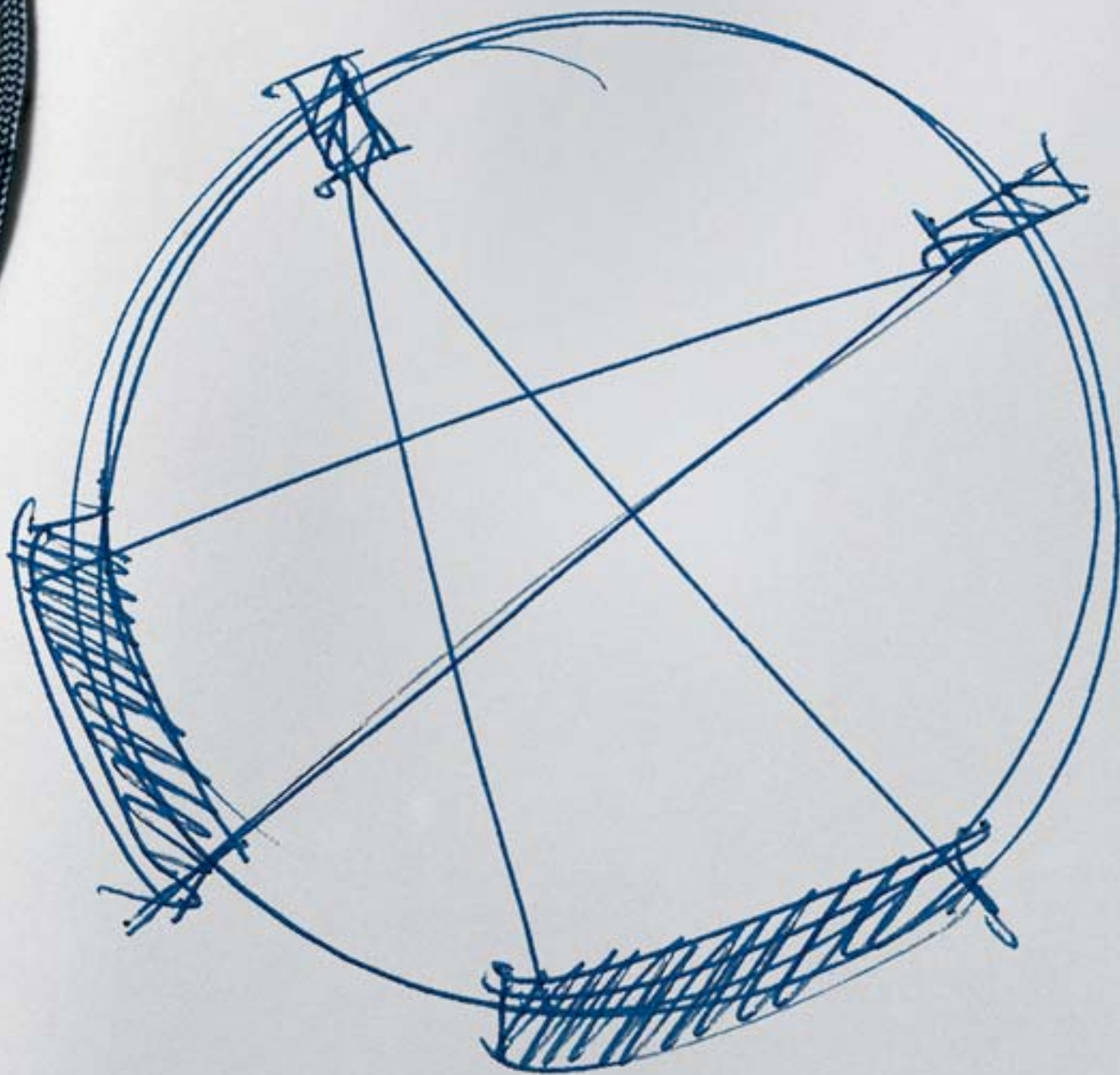
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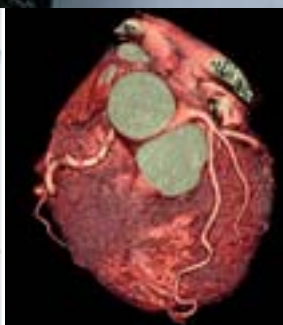
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