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I N T E R N A T I O N A L

Dangerous Arrhythmia Analyzed in a Heartbeat

Electrocardiographic Imaging (ECGI), a novel noninvasive functional imaging technology, can locate the source of ventricular tachycardia (VT) in just one second, according to a new study. The technique, developed in Washington University (WUSTL; St. Louis, MO, USA; www.wustl.edu) combines

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Analytics Healthcare Software Slashes Decision-Making Times

Innovative analytics software offers a visual interactive experience that helps professionals quickly discover new and actionable insights in information.

The TIBCO Spotfire in-memory analytics software empowers users with speed and freedom, with an approach that helps dis-

cover new insights from collected data and answer questions with accuracy. Spotfire also gives end users more control, which speeds "time to answers" while reducing typical bottlenecks, such as building new business intelligence reports or reconfiguring databases. Unlike traditional business

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Early Diagnosis of Osteoarthritis with MRI

A new method is set to help clinicians diagnose osteoarthritis at such an early stage that it will be possible to delay the progression of the disease by many years, or maybe even stop it entirely. The joint disease osteoarthritis is one of our most common chronic diseases and one of

Cont'd on page 8

Angiography Navigation System Offers Reduced Radiation Dose

An electromagnetic tracking procedure that determines the position of medical devices during minimally invasive intervention, combined with an angiography system, improves navigation of catheters during electrophysiology procedures.

See article on page 6



Image: The Artis zee angiography system, with integrated MediGuide technology

Virtual Reality Helps Arm Function of Stroke Patients

Primarily results of a new study indicate that using virtual reality (VR) human-computer interfaces may help adults who have suffered a stroke regain arm function and enhance their ability to perform standard tasks. Researchers at Flinders University (Adelaide, Australia; www.flinders.edu.au)

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Noninvasive System Watches Over Respiratory Patients

A novel wireless system monitors the breathing of surgery patients, adults with obstructive sleep apnea (OSA), and babies at risk of sudden infant death syndrome (SIDS).

Cont'd on page 4



CR Readers, Software Receive FDA Clearance

Novel, upgradable computed radiography (CR) readers are designed to fit any environment, especially in facilities with limited space availability.

3DISC Imaging (Dulles, VA, USA; www.3discimaging.com), a manufacturer of CR systems, has received

Cont'd on page 5

FDG-PET Predicts Prognosis of Inoperable Lung Cancer

The prognosis for patients with stage II and III inoperable non-small-cell lung cancer (NSCLC) is poor, with only about 15% of patients surviving at five years after treatment for the disease. Whereas new treatment strategies are being intensely studied, timely assessment

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EXAMINATION LIGHT ACEM

The SOLED is an LED exam light designed for a wide range of patient exams, and is available wall-, ceiling-, and trolley-mounted. The ergonomic light is considered ideal for use in minor surgery, intensive care, and in recovery room applications.

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ENDOSCOPY SYSTEM Aohua Photoelectricity Endoscope

The AQ-100 electronic video system features HD image, compound band imaging (CBI), and hemoglobin enhancement function (HbE). The system also offers electronic magnification function, outline enhancement function, and automatic brightness control function.

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LED HEADLAMP Optomic

The OP-HL7 is a lightweight and comfortable headlamp that uses powerful LED technology to produce intense white light. The head lamp is wireless, offers 3.5 hours of continuous operating time, multidirectional adjustment of the light, adjustable head band, and an includes an ion rechargeable battery.

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VIDEO LAPAROSCOPE Olympus

The Endoeye Flex 5 is a 5mm HD deflectable video laparoscope that uses digital chip technology to place the camera on the tip of the scope. The scope allows for 100-degree angulation in all directions, and delivers high-quality images, enabling doctors to see fine details during surgical procedures.

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Foley Catheter Induces Labor as Effectively as Vaginal Gel

For the induction of labor, use of a Foley catheter appears as efficient as vaginal prostaglandin E2 gel, but with fewer side effects, according to a new study. Researchers at Leiden University Medical Center (LUMC; The Netherlands; www.lumc.nl) conducted a randomized study that included 824 women in 12 Dutch hospitals with a term, singleton pregnancy and indication for induction of labor. The patients were randomized to either open-label use of Foley catheter or up to 3 mg of vaginal prostaglandin E2 gel. All women had cephalic presentation, intact membranes, and an unfavorable cervix without any prior cesarean section. None failed induction with their assigned method, but 15 patients did not receive the intervention in the

Foley catheter group, most of them due to inability to insert the catheter.

The results showed that women spent longer in labor after induction with the Foley catheter, at a median of 29 hours until birth, compared with 18 hours in the prostaglandin group, which appeared to be due to a later onset of active labor. Eventual Cesarean delivery rates were equal for both Foley catheter and prostaglandin gel use; most C-sections were done for failure to progress during the first stage of labor, which was also more common with Foley catheter induction. The rate of delivery with vaginal instruments was similar between groups, but the procedure tended to occur more often for fetal distress in the prostaglandin group. Operative deliv-

ery due to fetal distress was less common with the Foley catheter than with the prostaglandin.

"We think that some cesarean sections done for labor arrest in the Foley catheter group might have been done because of impatience of the attending obstetrician," explained lead author Kitty Bloemenkamp, MD.

Mechanical methods to prepare the cervix for birth are among the

oldest approaches known, but pharmacological methods have since replaced them in many first world countries, due to concerns of perforation and maternal infection. The Foley catheter is used to inflate a balloon behind the cervical wall that simulates the pressure of a baby's head to encourage the cervix to dilate, likely by stimulating endogenous prostaglandins.

Gastric Bypass Surgery Reduces Blood Pressure

A recently presented doctoral thesis has found that gastric bypass surgery for obesity also markedly reduces blood pressure (BP) by adjusting the production of urine after eating or drinking.

The thesis by a researcher at the Sahlgrenska Academy (Gothenburg, Sweden; www.sahlgrenska.gu.se) includes a study of 1,750 patients who underwent one of two types of obesity operations – gastric bypass or gastric banding; the results show that the elimination of urine increased after gastric bypass surgery. This is because the kidneys play an important role in the regulation of blood pressure by adjusting the production of urine after food and liquid consumption, so that the composition of bodily fluids and the blood does not vary too much.

After ten years, the researcher found that the decreased BP following gastric bypass was not related to the reduced weight, and was markedly larger than after gastric banding. This can be explained by the fact that food and drink no longer come into contact with the upper part of the digestive tract, thus break-

ing the link between this part of the digestive system and the kidneys. An unexpected finding was that consumption of salty food increased after gastric bypass surgery, even though BP went down. The researcher suggests that this is because the procedure also bypasses a link between the upper digestive tract and the brain, which is important for suppressing appetite for salt.

"We saw a long-term reduction in blood pressure after gastric bypass surgery, which could also be directly linked to the increase in patient's daily amount of urine after the operation," said thesis author Peter Hallerlund, PhD.

Gastric bypass involves the disconnecting of the stomach and part of the small intestine from the digestive system, so that food goes directly from the esophagus into the small intestine. The surgery significantly reduces appetite, partly through an increase in appetite-suppressing intestinal hormones as well as by causing the digestion to become less effective. On average, 75% of the excess weight disappears, and in many patients stays off.



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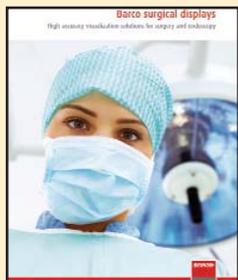
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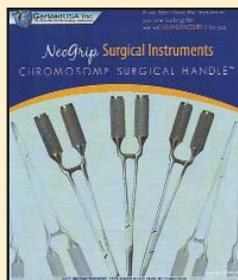


SURGICAL DISPLAYS

Barco

Products include near-patient surgical displays, large-screen OR displays, and clinical review displays. Options are intended to provide required images, as well as patient information.

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SURGICAL INSTRUMENTS

GerMedUSA

Products include the Chromosome Surgical Handle and PI surgical instrument lines. Specialties include ergonomic design, as well as optional left-handed instruments.

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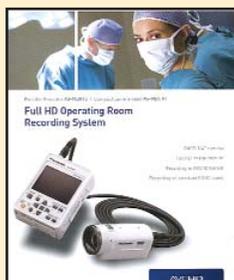


SHAVER DRILL SYSTEM

Joimax

The Shrii multifunctional drill and resection system is designed for the resection of soft and solid tissue, primarily in the area of the spine.

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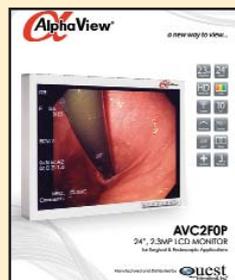


OR RECORDING SYSTEM

Panasonic

The full HD system includes a portable recorder and a compact camera head, allowing for enhanced documentation and viewing during various surgical procedures.

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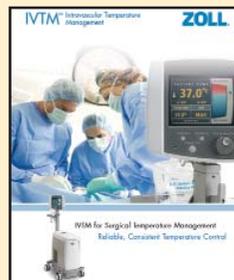


SURGICAL MONITOR

Quest International

The AlphaView AVC2F0P LCD monitor for surgical and endoscopic procedures features HD resolution, 2.3 MP, 24-inch screen, wide-angle viewing, and a three-year warranty.

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TEMPERATURE MANAGEMENT SYSTEM

ZOLL Medical

The intravascular temperature management system (IVTM) provides efficient and reliable hypothermia management before, during, and after surgery.

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Multifunction Mini Illuminator Facilitates Surgical Procedures

A new miniature surgical illuminator is designed for spine, hip, shoulder, plastic, maxillofacial and oral surgery, and other orthopedic procedures.

The Mini VersaLight is ergonomically designed for comfort in any hand position, with a straight horizontal profile and an extended tip for easy insertion and added reach in minimally invasive incisions. It provides a cool, bright, uniform, and shadowless light using patented Lumitex MicroLens lighting technology, and it can be inserted directly into deep cavities, small openings, under flaps, and in lateral margins. Built in irrigation, aspiration, and retraction capabilities help to access, visualize, irrigate, and clear the surgical site, while saving operative time, space, and cost.

Surgeons can choose suction power levels with a conveniently located finger-controlled aspiration hole. The mini light also irrigates the surgical zone at the push of a button, providing a controlled fluid stream on demand. The horizontally seamed design enables the device to withstand approximately four kilograms of retraction force without breaking, making it useful to reposition tissue for better access and visualization.

The Mini VersaLight attaches easily to standard hospital operating room (OR) tubing to provide sterile irrigation from a standard infusion pump and irrigation from a central suction tubing, and thus requires no additional capital investment, offering a lower cost-per-use. The Mini VersaLight is a product of Lumitex Medical Devices (Strongsville, OH, USA; www.LumitexMD.com).

Acoustic Separation Improves Stem Cell Transplants

Transplantation of hematopoietic stem cells is an effective treatment for patients with malignant blood diseases. The composition and quality of the transplanted cells are crucial to the outcome. Swedish researchers have now developed a method to improve the quality of the transplanted cells using ultrasound technology for cell separation.

For patients with blood cancer, a blood stem cell transplant is typically the only treatment that can cure the disease. The quality of the transplanted blood stem cells and the choice and composition of the transplanted cells can be crucial.

Current methods of collecting and processing stem cell products leave a lot to be desired. Recent results from Lund University indicate that it may be possible to improve significantly the quality of the blood stem cell product by using a method known as acoustic cell separation. "The method was developed in the field of microtechnology and builds on basic engineering research from Lund University," explained Prof. Thomas Laurell, research group leader at the faculty of engineering at Lund University (Sweden; www.lunduniversity.lu.se). The technique is expected to facilitate improvements in the processing of blood stem cells.

Associate professor Stefan Scheduling, senior consultant at the department of hematology at Skåne University Hospital and research group leader at the Stem Cell Center at Lund University, is in charge of the preclinical development of the new method, which aims to effectively separate and possibly remove or concentrate cell populations that are normally found in standard blood stem cells products. The first phase has been to demonstrate that the method works, by separating out platelets from stem cell products.

"Our hope is that it will become possible to produce the optimal stem cell product for each individual transplant patient," said Prof. Scheduling.

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