

# Hospimedia®

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

## Intramedullary Implant Stabilizes Fractures

An innovative patient-specific orthopedic implant system aids in the stabilization and treatment of bone fractures.

The minimally invasive Photodynamic Bone Stabilization System (PBSS) is intended for the setting of bone fractures in light- to low-load bearing indications, enabling clinicians to

*Cont'd on page 3*

## European Team to Seek New Approaches Against Colorectal Cancer

A European research project is directed at finding new diagnostic and therapeutic tools to better find and treat patients with colorectal cancer. Colorectal cancer (CRC) is the third most common cancer in Europe, and with approximately 200,000 deaths per year, it remains the second most common cause of

cancer death. More than half of all CRC patients develop distant metastases and have five-year overall survival of less than 5% because of ineffective treatments. A six million euro research project on CRC funded by the European Commission's Framework VII Program called MERCuRIC (<http://mercuric.eu>) is linked to a

*Cont'd on page 5*

## Novel Surgical Glue Helps Repair Heart Defects

A flexible, elastic, hydrophobic light-activated adhesive (HLAA) could help seal defects in the heart wall. Developed by researchers at Brigham and Women's Hospital (Boston, MA, USA; [www.brighamandwomens.org](http://www.brighamandwomens.org)), HLAA is a blood-resistant surgical glue for the minimally invasive repair of vessels and

*Cont'd on page 5*

## PET-CT Identifies Ruptured High-Risk Coronary Plaque

Scientists have discovered that the tracer <sup>18</sup>F-sodium fluoride (<sup>18</sup>F-NaF), used with positron emission tomography-computed tomography (PET-CT) imaging technology, offers the first noninvasive imaging modality to identify and localize ruptured and high-risk coronary plaque.

*See article on page 4*



Image: The Biograph mCT, a positron emission tomography-computed tomography (PET-CT) scanner

## Sensor Monitors Cerebral Fluid Pressure

A novel long-term implanted sensor can measure and individually adjust cerebrospinal fluid (CSF) pressure in the brain. Researchers at the Fraunhofer Institute for Microelectronic Circuits and Systems (IMS; Duisburg, Germany; [www.ims.fraunhofer.de](http://www.ims.fraunhofer.de)), working jointly with Christoph Miethke (Potsdam,

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Scan with Smartphone to Access Latest News

Image: Courtesy of Siemens Healthcare

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## ECG Tool Analyzes Ischemic Heart Disease

A multifunctional cardiac assessment system for exercise stress testing set new standards for the future of electrocardiography.

The CS-200 Excellence is equipped with the 3rd Generation Intel Core i7 CPU, which speeds up the entire system, as well as a very high sampling rate of 8,000 Hz per channel, allowing the accurate recording of even slight

*Cont'd on page 6*



## Stryker to Buy Major Tuttlingen Surgical Concern

Stryker has announced a definitive agreement to acquire Berchtold, a world-class surgical infrastructure equipment company. The purchase, for an enterprise value of USD 172 million, will merge the Berchtold portfolio of surgical tables, equipment booms, critical care, and lighting systems with the

*Cont'd on page 33*

## Developer of GI PillCam Acquired by Covidien

Healthcare company Covidien, plc, reported that it has acquired Given Imaging, Ltd., a company that develops diagnostic products for the visualization and detection of gastrointestinal tract (GI) disorders, providing Covidien with additional range to serve an important medical specialty, the

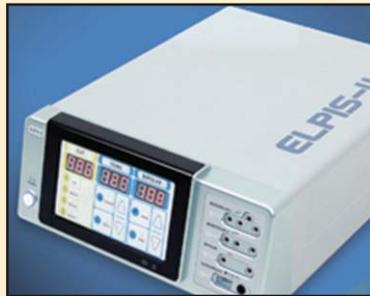
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### SURGICAL LAMP ACEM

The StarLED 3 NX features shadowless and homogeneous light for visual comfort and enhanced working conditions. The StarLED 3 NX produces a quality of light with a CCT of 4,500 K, CRI of 95, high illumination level of 130,000 lux, and a life cycle of 50,000 hours.

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### ELECTROSURGICAL GENERATOR Charmcare

The ELPIS-4/3/2 is designed to produce less heat and sparkle, resulting in less burned tissue. Additional benefits include smooth cuts on adipose tissue, enhanced safety and device control, along with various cutting, coagulation, and bipolar modes.

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### MOBILE C-ARM SYSTEM Siemens Healthcare

The Cios Alpha has a field of view that is up to 25% larger than conventional C-arms. The Cios is intended to increase the surgical team's confidence and enhance their operational workflow. Key features include a user-friendly touch screen interface, and an active cooling system.

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### SURGICAL TABLE Trumpf

The TruSystem 7000 mobile table features integrated carrying handles that make changing and carrying components more ergonomic and easier. In addition, a connect-and-lock system allows the surgical staff to clearly see whether the component is aligned correctly.

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## Mobile OR Lights Illuminate Surgical Field

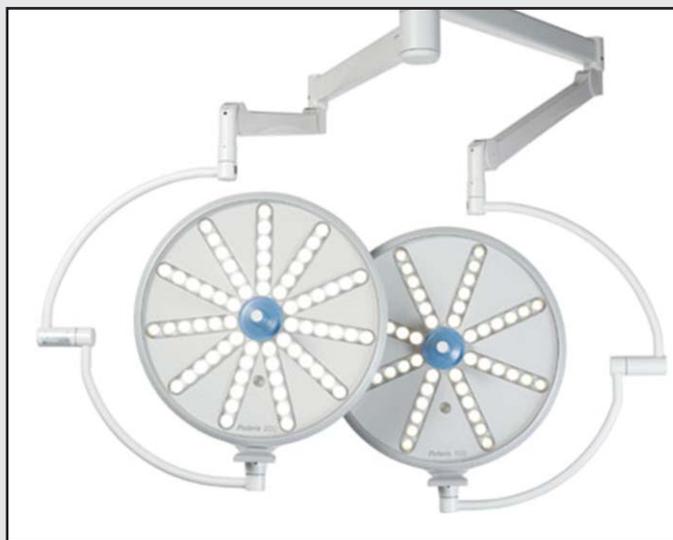
New mobile operating room (OR) lights can be adjusted in height depending on the situation in the OR and the size of the surgeon.

The Polaris 100 and Polaris 200 mobile and height adjustable OR lights can be used (in addition to ceiling-mounted) when the surgeon needs an additional light source for more complicated surgeries. In transport position, the light has a height of approximately 1.85 meters, so that clinical staff can easily push it through standard doors. In its operating position, the physician has a working height of up to 2.17 meters under the light body at the operation site or in the treatment room.

In the case of several adjacent treatment areas, such as in emergency rooms (ERs), the physician can move the Polaris 100 or Polaris 200 between the treatment areas and use it on site as a single light for minor surgeries. The Polaris 100 features 48 light emitting diodes (LEDs) with an output

range of 40,000–120,000 lux. The Polaris 200 has an additional 18 LEDs for a total of 66, for a maximum output of 160,000 lux. A built-in battery allows for mains-independent operation for at least three hours at full light intensity. A visual and acoustic warning informs the OR team when the battery charge falls below 25%.

The classic round design includes integrated handles for non-sterile personnel and touch panel controls for easy handling and operation. Sterile personnel can also position the Polaris 100/200 easily by using the central sterile handle. The smooth, seamless casing makes cleaning quick and simple, while its lightweight construction ensures practically effortless positioning. The Polaris 100 and



Polaris 200 are products of Dräger (Lübeck, Germany; [www.draeger.com](http://www.draeger.com)).

Image: The Polaris 100 and 200 systems provide cool, natural color light for surgical illumination (Photo courtesy of Dräger).

## Balloon Angioplasty After Carotid Stenting Deemed Dangerous

A new study suggests that inflating a balloon inside the carotid artery after placing the stent greatly increases patients' risk of serious complications.

Researchers at the Johns Hopkins University School of Medicine (Baltimore, MD, USA; [www.hopkinsmedicine.org/som](http://www.hopkinsmedicine.org/som)) analyzed data from 103 patients who underwent placement of a carotid stent between 2005 and 2012. All patients underwent pre-stent ballooning, and 75% also underwent post-stent ballooning. The results showed that the patients who underwent post-stent ballooning were four times more likely to suffer from dangerously low blood pressure and/or a dangerously slow heart rate during or immediately after the procedure.

Placing a carotid stent is a minimally invasive procedure that involves threading a catheter from the groin area up to the site of the blockage in the

neck. Physicians then gently inflate a balloon in the area that is constricted to open the artery wide enough to safely insert the stent. Those who again inflate the balloon afterward say it enables the stent to open as wide as possible and to show surgeons if the opening is large enough to reduce the risk of closing off in the future.

But according to the researchers, the metals used in the stent will naturally expand over time and the second ballooning step is unnecessary. There is also added risk that repeating the balloon step can send unstable plaque emboli into the brain, causing the very stroke the procedure is designed to prevent. An additional danger is that post-stent ballooning wreaks havoc on blood pressure and heart rate, since receptors around the carotid artery falsely sensing that blood pressure is high, which causes signals to the heart to slow down and to the peripheral small arteries to dilate, leading to

hypotension. The study was published ahead of print on December 13, 2013, in the *Journal of Vascular Surgery*.

"In my mind, this is a study that should change medical practice. Our work suggests that doctors should never balloon a stent after placing it. There is no upside," said lead author associate professor of surgery Mahmoud Malas, MD, MHS. "Every time we use the balloon, there can be a major drop in heart rate, so we have to use it judiciously. It's just not needed after the stent is in place."

Patients are typically referred for a carotid stent when they have a blockage of 70% or more in the carotid artery and are unsuitable candidates for endarterectomy, a procedure that involves general anesthesia, which could be dangerous for people with severe carotid blockages since they often also have blockages in other arteries, including the coronary arteries.