

Trends & Technology

Precision Plus™ SCS System for Pain

Precision Plus is the only system with SmoothWave™ Technology. There are eight contacts on each lead, and the therapy is delivered through the individual contacts. SmoothWave Technology gives your physician the ability to precisely control the stimulation being delivered from each and every contact on the implanted leads.

Precision Plus also offers a small implant with a contoured, oval shape. In fact, the Precision™ IPG has the smallest "footprint" of any rechargeable SCS device. Precision Plus is the only SCS system to offer a cordless remote with a 24-inch communication range. This remote is easy to use and is designed to put pain control at your fingertips. Precision Plus offers a cordless on-the-go charger.



New drug delivery system uses magnetism

Researchers in Children's Hospital Boston introduce a tiny implantable device whose membrane releases drugs with extreme precision, on demand, when triggered by a magnetic field, a tiny, implantable device that releases the medication through a membrane whose porosity responds to the switching on or off of a magnetic field. The membrane is embedded with nano particles that contain magnetite, a mineral with natural magnetic properties. When a magnetic field near the device turns on, the nanoparticles heat up, collapsing the gels in the membrane so that the drug can pass through the open pores. When the field turns off, the cooling membrane causes the gels to re-expand, thereby cutting off the drug.



TAP 20™

In many ambulatory care settings, blood sampling can be a significant barrier to adoption of point of care testing, as it requires trained personnel, creates anxiety and discomfort for patients, and can disrupt workflow.

TAP 20™, Seventh Sense's lead product in development, collects up to 20 microliters of whole blood – sufficient volume for many routine point-of-care blood tests, and has several advantages:

It is painless for the patient, sample is contained until used for testing, no sharps disposal. In addition to TAP 20™, Seventh Sense is developing TAP 100™ for point-of-care panels and tests requiring up to 100 microliters of blood; the development of TAP 100 is supported by a grant from the Gates Foundation <http://www.7sbio.com/products/tap-products.html>



New Cannula Design with Integrated Local Anesthetic Delivery System

Oliver Blackwell, an English product designer, has come up with a new device for easing the pain of intravenous cannula insertions by automatically delivering local anesthesia through a small needle before the big one is stuck in. <http://www.plymouth.ac.uk/pages/view.asp?page=38663>



NeuroSENSE NS-701 Electroencephalogram Monitor from NeuroWave

This bilateral brain monitor, designed with independent indices for each brain hemisphere, now comes with a 10.4 monitor screen.

Delay-free tracking of patient state via low-noise WAVCNS1 bilateral indexes WAVCNS (Wavelet Anesthetic Value for Central Nervous System) indexes provide instantaneous tracking of the patient state. Automatic trending facilitates immediate response without increasing the index noise. True bilateral monitoring with great inter-hemispheric reproducibility. Superior prediction of loss of consciousness. Linear response to increasing EEG suppression. Advanced automated artifact detection and removal. Electro-surgical interference detection and filtering. Cardiac defibrillation proof. Continuous measurement of electrode-skin contacts.

Compliant with the guidelines of International Federation of Clinical Neurophysiology (IFCN) and American Clinical Neurophysiology Society (ACNS). Availability of raw EEG data. Transparent, published algorithm. <http://www.medgadget.com/2011/09/the-new-neurosense-ns-701-electroencephalogram-monitor-from-neurowave.html>



Mindray A5 Anesthesia Device

Mindray out of Shenzhen, China has a 15" touchscreen for selecting settings, as well as a central brake and an integrated cable sweeps for mobility.

A5 is the first and only anesthesia machine that conforms to the IHE (Integrating the Healthcare Enterprise) Patient Care Domain (PCD) profile. At no additional charge, every A5 provides data output in the industry standard HL7 protocol. HL7, with the IHE PCD profile, is recognized among anesthesia information management systems (AIMS) and electronic medical records (EMR) systems as the demonstrated industry standard for unambiguous interoperability. The A5 provides a range of advanced ventilation modes enabling effective care across different patient acuity types. Integrated spirometry offers additional information which enhances careful decision making. The unique, auxiliary O2/Air Blender reduces the risk of surgical fires by controlling the oxygen concentration under the drape, near the patient's head and chest. <http://ir.mindray.com/phoenix.zhtml?c=203167&p=irol-newsArticle&ID=1532197&highlight=>



Continuous Hemoglobin Monitor

Masimo's noninvasive hemoglobin monitor is a part of Masimo Rainbow SET. SpHb monitoring clearly changes clinician behavior and results in lower intraoperative blood transfusion rates and lower overall blood utilization. http://www.medgadget.com/2010/10/masimos_continuous_hemoglobin_monitor_helps_reduce_blood_transfusions.html

