TROY, Mich. -- October 16, 2000 -- Somanetics Corporation (Nasdaq: SMTS) is showing its Model 5100 Cerebral Oximeter at the American Society of Anesthesiologists (ASA) Annual Meeting and associated meeting of the Society of Pediatric Anesthesia, its first U.S. tradeshow since receiving FDA clearance to market the Model 5100 in the U.S. The meetings began October 13th and run through October 18th in San Francisco. In addition, six clinical research studies involving the Cerebral Oximeter will be presented. The Model 5100 was developed for use on both pediatric and adult patients, while the other currently marketed Model 4100 was developed for use on adult patients only.

Somanetics manufactures and markets the INVOSÒ Cerebral Oximeter, the only noninvasive, continuous monitor of regional brain blood oxygen saturation that is commercially available in the U.S. Use of the patient monitoring system can help medical professionals identify low regional brain blood oxygen saturation and take corrective action. Such action can potentially prevent or reduce neurological injuries related to surgery and other critical care situations and reduce the associated cost of care.

"The ASA meeting offers us an excellent venue to showcase the progress we have made in the past twelve months, especially in the areas of new product development and clinical research," said Bruce Barrett, Somanetics' president and chief executive officer.

"This year we will display the Model 5100 and its monitoring capabilities for pediatric patients at our first U.S. tradeshow since obtaining FDA clearance in September. In addition, the clinical research has taken major strides forward in recent months. We now have our first prospective intervention outcome research showing that changing operative and perfusion techniques based on the information provided by the Cerebral Oximeter and maintaining brain oxygen saturation at adequate levels may be a simple and inexpensive way to prevent neurological injury and reduce health care costs," said Bruce Barrett, Somanetics' president and CEO.

On October 17, Terence M. Schmahl, M.D., cardiovascular surgeon at St. Luke's Medical Center, Milwaukee will present results of the first prospective intervention outcome study in cardiac surgery that indicates changing operative and perfusion techniques based on information obtained from the INVOS Cerebral Oximeter and aortic ultrasonography reduced the stroke rate from 9% to 1.9%. Study patients had been classified as "high risk" using a risk analysis method developed at the facility.

Based on the study, the hospital’s potential economic impact of this decrease in stroke rate for its high-risk cardiac surgery patients amounts to a more than 10% decrease in hospital charges, or $1.5 million total savings annually, primarily because the hospital stay for each patient was reduced by an average of 1.2 days.

"Perioperative stroke can be a devastating, permanent insult that has a profound impact on patients and their families. The Cerebral Oximeter alerted us to clinical situations that up to now we had no good way to evaluate. This information led to corrective action to avoid stroke while on cardiopulmonary bypass," said Dr. Schmahl.
Also being presented are results of the first correlative outcome study using the INVOS Cerebral Oximeter in major general surgery (non-cardiac surgery). Performed by Terri G. Monk, M.D., professor of anesthesiology in the department of anesthesiology at the University of Florida Medical College in Gainesville, the study indicates that significant cerebral oxygen desaturations in patients undergoing major surgical procedures are associated with a higher incidence of postoperative cognitive decline. In addition, patients who experienced significant brain oxygen desaturations during their surgery tended to stay in the hospital longer on average than those without desaturation events. The study results also showed that patients who experienced low brain blood oxygen levels were discharged to rehabilitation at a higher rate.

F.S. Yao, M.D, professor of anesthesia at the Weill Medical College of Cornell University, will present two studies on his continuing research in cerebral oximetry during cardiac surgery. His studies indicate that since cerebral oxygen desaturation is associated with cognitive and frontal lobe dysfunction and prolonged length of stay in the ICU and hospital following cardiac surgery, it is prudent to monitor and maintain adequate cerebral oxygen saturation.

Harvey L. Edmonds, Jr., Ph.D., from the University of Louisville, will present two studies in neurological monitoring and cerebral oximetry. One study compares neurological outcomes in conventional coronary artery bypass graft surgery to off-pump CABG. He evaluated the impact of neuromonitoring during these two procedures. Results suggest that when aided by neurological monitoring, excellent results can be achieved with either conventional or off-pump CABG surgery. The other study indicates that the use of cerebral oximetry may improve the detection of ischemia and hypoxia during anesthesia.

The Fall 2000 issue of Somanetics’ educational newsletter, Cerebral Oximetry News, also will be introduced during the meetings. The newsletter presents interviews with nine anesthesiologists and surgeons, focusing on the use of cerebral oximetry in cardiac and carotid endarterectomy surgery.

In one interview, when asked how the use of the INVOS Cerebral Oximeter has changed his clinical practice, Timothy Dowd, M.D., chairman of the department of anesthesiology at Vassar Brothers Hospital in Poughkeepsie, NY, responded that, "The surgeons now refuse to proceed with carotid surgery if the monitor is not available."

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