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**Study Finds Radio Frequency Technology Highly Effective in Preventing Retained Surgical Items in Bariatric Procedures**

*Study Demonstrates Benefits of Radio Frequency Technology in Detecting Retained Surgical Items in All Patient Types*

**BELLEVUE, Wash., February 10, 2011** — RF Surgical Systems, Inc., the market leader in the prevention and detection of [retained surgical sponges](#), today announced the first published data on the power of radio frequency technology to identify retained surgical items in all patient types. The prospective study, published in the February 1 edition of [American Journal of Surgery](#), found that the sensitivity and specificity of radio-frequency (RF) technology is 100 percent in patients of varying body size, including morbidly obese patients.

The study, *“Sensitivity of Detection of Radiofrequency Surgical Sponges: a Prospective, Cross-Over Study,”* included data from 210 subjects at an academic medical center and a U.S. Department of Veterans Affairs medical center. Results found that RF technology is superior to the reported accuracy of intraoperative radiography and has greater sensitivity than manual surgical counting. Key findings from the study include the following:

- A total of 840 readings were completed, with 404 of the readings taken from morbidly obese subjects. Of the 840 readings, there were no incorrect readings.
- Sensitivity of the detection of radio-frequency tagged sponges was 100 percent.
- Specificity of the detection of radio-frequency tagged sponges was 100 percent.

“Surgical count discrepancies can occur as often as one out of eight surgical cases, and sponges are more difficult to find in morbidly obese patients,” said [Victoria M. Steelman](#), PhD, RN., member of the Board of Directors of Association of periOperative Registered Nurses (AORN) and lead author of the study. “As adjunctive technology to

prevent retained surgical items is increasingly being used in the OR, it is important to ensure the specificity and sensitivity of the technology on all patients, including more challenging cases of those with higher BMI. Radio-frequency detection technology is a valuable check-and-balance for ensuring the prevention of RSI during bariatric procedures.”

Retained surgical items are especially a concern during bariatric procedures, as patients with higher body mass index (BMI) are at greater risk<sup>1</sup>. While manual counting by operating room personnel is the standard-of-care in preventing RSIs, adjunctive technology options, like RF technology, are needed to further improve patient safety. Last year, a new recommendation from the [AORN](#) advises that OR staff evaluate adjunct detection technologies to supplement surgical count procedures.

The RF Surgical System accommodates high body mass index patients and offers the only dual detection mode in the market. OR staff can use both the Blair-Port Wand to scan for tagged items as well as the [RF Assure](#) mat to automatically identify objects.

“We are pleased to see additional evaluation of the RF Surgical Detection system, particularly for bariatric procedures, a patient population at greater risk for a retained surgical item,” said Dr. Jeffrey Port, co-founder, RF Surgical Systems. “Dr. Steelman’s study is an important addition to the growing body of clinical evidence showing radio-frequency detection to be effective in preventing this dangerous medical error.”

#### **About the RF Surgical Detection System**

The RF Surgical Detection System safely and accurately reads through deep cavity tissue, fluids and bone to detect if any radio frequency tagged surgical sponges, gauze or towels remain in a patient following surgery. The system consists of a self-calibrating console, hand-held wand, RF-micro-tags and gauze, sponge supplies and is designed for all open-cavity surgeries including emergency, trauma, labor and delivery. Currently, the RF Surgical Detection System is used by more than 100 hospitals across the country.

#### **About RF Surgical Systems, Inc.**

RF Surgical Systems, Inc. is the market leader in the prevention and detection of retained surgical sponges. The RF Surgical Detection System is the preferred solution in more than 1,000 operating rooms, trauma and labor & delivery suites nationwide. RF Surgical Systems is based in Bellevue, Washington with R & D facilities in San Diego, California. The advanced technologies used in the RF Surgical Detection System are protected by U.S. patents. Regulatory clearance to market the system was granted by the U.S. Food and Drug Administration in November 2006. The company is online at [www.rfsurg.com](http://www.rfsurg.com).

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<sup>1</sup> Gwande AA, Studdert DM, Orav EJ, Brennan TA, Zinner MJ. Risk factors for retained instruments and sponges after surgery. N Engl J Med. 2003;348 (3):229-235.