INTUITIVE

New Studies Demonstrate Benefits of Robotics for Lung Surgery

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SUNNYVALE, Calif., April 28, 2014 (GLOBE NEWSWIRE) -- Two new studies on the effect of different surgical techniques on patient outcomes showed robotic-assisted lung surgery can deliver equal or better results compared with both open surgery and the most widely used minimally invasive surgical method. One of the studies showed that this result could be achieved by surgeons who are new to robotics and who work in community hospitals.

Both studies were on lobectomy, a procedure to remove cancerous lung tissue. A lobectomy requires access to the lungs through incisions made between the ribs of the thorax, or chest cavity.

The studies compared three types of surgical technique: open thoracotomy, which uses a large incision between the ribs; robotic-assisted thoracoscopic surgery, which is a minimally invasive approach using small incisions between the ribs; and the more widely used minimally invasive method, called video-assisted thoracoscopic surgery (VATS). VATS is performed with hand-held instruments.

One study, Farivar, *et al*, published in the January/February edition of *Innovations*, found a number of improved outcomes with robotic-assisted surgery, compared with both open surgery and VATS. The other study, Adams, *et al*, published in the April edition of *The Annals of Thoracic Surgery*, focused more on the surgeons' early cases and whether a community practice setting would affect their outcomes. Adams concluded that robotic-assisted surgery was safe and effective in a variety of settings, including community hospitals. In addition, even for surgeons who are new users, Adams concluded that robotic-assisted thoracoscopic surgery can deliver outcomes equal to VATS and better outcomes than open thoracotomy.

Both studies compared the authors' data with a national database of 5,913 patients who had open surgery and 4,612 patients who had VATS. The Farivar study collected data from 181 patients from two healthcare institutions. The Adams study specifically looked at the first 20 robotic cases of six surgeons at six institutions (120 robotic-assisted lung surgeries). Patients among the three surgical groups were similar in age, gender, body mass index, current and past smoking status, lung function and clinical tumor stage.

In both studies, robotic-assisted surgery was associated with improved outcomes compared with open surgery, including:

- Between 2 and 4 fewer days in the hospital
- Fewer blood transfusions
- Shorter use of a chest tube by a day or more; a chest tube is used to help the lungs re-inflate and return to normal function after surgery
- Fewer air leaks lasting more than 5 days; a persistent air leak in the lung is one risk of lung surgery

The limitations of these studies include the studies' design. Neither study randomized or case-matched their patients, but instead compared their institutions' robotic cases with database cases. The database of VATS and open surgeries used for comparison is a nationally administered repository and is subject to variations in reporting by individuals who voluntarily submit data. Additionally, Adams notes the relatively small size of their robotic-assisted surgery group. Farivar notes data suggesting that there were significantly more patients with advanced disease in their thoracotomy group than in the robotic-assisted group. This consideration may help explain some of the increased complications and the duration of chest tube use required in the Farivar open surgery group.

The funding for the Adams study was provided by Intuitive Surgical, Inc. Study authors Doctors Adams, Bolton and Stephenson have financial relationships with Intuitive Surgical. Farivar study author Robert J. Cerfolio, MD, is a consultant to Intuitive Surgical. Additional financial disclosures by the Farivar study authors are that Eric Vallières, MD, serves on the board of GSK-Bio, Philadelphia, PA USA, and Myriad, Salt Lake City, UT USA, and receives compensation as a member of the speaker's bureau of Genentech, San Francisco, CA USA, and Synthes, Inc, West Chester, PA USA. Alexander S. Farivar, MD; Ariel Knight, BA; Ayesha Bryant, MD; Vijaya Lingala, PhD; Ralph W. Aye, MD; and Brian E. Louie, MD, declared no conflicts of interest.

About Intuitive Surgical, Inc.

Intuitive Surgical, Inc. (Nasdaq:ISRG), headquartered in Sunnyvale, Calif., is the global leader in robotic-assisted, minimally invasive surgery. Intuitive Surgical develops, manufactures and markets the *da Vinci*® Surgical System. Intuitive Surgical's mission is to extend the benefits of minimally invasive surgery to those patients who can and should benefit from it.

About the *da Vinci* Surgical System

The *da Vinci* Surgical System is a surgical platform designed to enable complex surgery using a minimally invasive approach. The *da Vinci* Surgical System consists of an ergonomic surgeon console or consoles, a patient-side cart with three or four interactive arms, a high-performance vision system and proprietary *EndoWrist*® instruments. Powered by state-of-the-art technology, the *da Vinci* Surgical System is designed to scale, filter and seamlessly translate the surgeon's hand movements into more precise movements of the *EndoWrist* instruments. The net result is an intuitive interface with improved surgical capabilities. By providing surgeons with superior visualization, enhanced dexterity, greater precision and ergonomic comfort, the *da Vinci* Surgical System makes it possible for skilled surgeons to perform more minimally invasive procedures involving complex dissection or reconstruction. Potential benefits are specific to the procedure as well as the model *da Vinci* System referenced in the footnoted publications. For more information about clinical evidence related to *da Vinci* Surgery, please visit www.intuitivesurgical.com/company/clinical-evidence/.

Surgical Risks

All surgery presents risk, including *da Vinci*® Surgery and other minimally invasive procedures. Serious complications may occur in any surgery, up to and including death. Examples of serious or life-threatening complications, which may require prolonged or unexpected hospitalization, include injury to tissues and/or organs, bleeding, infection and/or internal scarring that can cause long-lasting dysfunction and/or pain. Risks of surgery also include the potential for equipment failure and/or human error. Results, including cosmetic results, may vary.

Risks specific to minimally invasive surgery, including *da Vinci* Surgery, include temporary pain and/or nerve injury associated with positioning; temporary pain and/or discomfort from the presence of air or gas; a longer operation and time under anesthesia and conversion to another technique. If your surgeon needs to convert the surgery to another technique, this could result in a longer operative time, additional time under anesthesia, additional or larger incisions and/or increased complications.

Patients who bleed easily, who have abnormal blood clotting, are pregnant or morbidly obese may not be candidates for minimally invasive surgery, including *da Vinci* Surgery. Patients should talk to their doctor about his/her surgical experience and to decide if *da Vinci* Surgery is right for them. Patients and physicians should review all available information on non-surgical and surgical options in order to make an informed decision. For important safety information, including surgical risks and indications and contraindications for use, please also refer to www.davincisurgery.com.

Forward-Looking Statement

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are necessarily estimates reflecting the best judgment of our management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. These forward-looking statements should, therefore, be considered in light of various important factors, including those under the heading "Risk Factors" in our annual report on Form 10-K for the year ended December 31, 2013, as updated from time to time by our quarterly reports on Form 10-Q and our other filings with the Securities and Exchange Commission. Statements using words such as "estimates," "projects," "believes," "anticipates," "plans," "expects," "intends," "may," "will," "could," "should," "would," "targeted" and similar words and expressions are intended to identify forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this press release. We undertake no obligation to publicly update or release any revisions to these forward-looking statements, except as required by law.

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