

New Data Suggest Minimally Invasive, Video-Assisted Thoroscopic Wedge Resections for Lung Cancer Provide Clinical and Economic Advantages to Patients, Hospitals and Payors

The Associated Press

Ethicon Endo-Surgery (EES), a leading provider of advanced surgical solutions for minimally-invasive and open procedures, announced today the results of a study suggesting that video-assisted thoroscopic surgery (VATS) wedge resections are associated with significantly shorter operative times, shorter lengths of stay and lower hospital costs than open wedge resections for lung cancer indications. VATS wedge resections for lung cancer indications are now performed nearly as often as traditional and open wedge resections. The study was funded by EES and has been published in the February issue of CHEST, the official publication of the American College of Chest Physicians.

(Logo: <http://photos.prnewswire.com/prnh/20110615/MM20233LOGO-b>) "In the past two decades, thoroscopic procedures for the diagnosis or treatment of lung cancer have been transformed by the ongoing refinement of VATS techniques and equipment, particularly high definition cameras and monitors. Thoroscopic procedures are now rarely performed without the use of video-assistance, but the adoption has been slower in procedures that would be considered traditionally 'thoracotomy settings,' such as deep wedge resections, segmentectomy, and lobectomy," said Dr. John Howington, Chief of Thoracic Surgery, NorthShore University HealthSystem, Evanston, Ill. "Any evidence supporting the advantages of VATS will further the adoption of these procedures, improving patient outcomes and lowering overall hospital costs." The study, entitled "In-hospital Clinical and Economic Consequences of Pulmonary Wedge Resections for Cancer Using Video-Assisted Thoroscopic Techniques vs. Traditional Open Resections: A Retrospective Database Analysis*," was authored by John A. Howington, MD1; Candace Gunnarsson, EdD2; Michael A. Maddaus, MD3; Robert J. McKenna, MD4; Bryan F. Meyers, MD5; Daniel Miller, MD6; Matthew Moore, MHA7 ; John A. Rizzo, PhD8; and Scott Swanson, MD9. The investigators assessed the current use of VATS in wedge resections for lung cancer indications by comparing the safety, utilization and cost profiles of VATS versus open thoracotomy for wedge resection in lung cancer among thoracic surgeons. The Premier hospital database was the data source; it contains clinical and utilization information on patients receiving care in more than 600 U.S. hospitals and ambulatory surgery centers across the nation.

Of the 8,228 eligible procedures in the database with inpatient lung resections for lung cancer, a total of 2,051 patients underwent wedge resections by a thoracic surgeon using open thoracotomy (n999) or VATS (n1,052).

Overall, hospital costs were significantly higher for open wedge resections than for

VATS: \$17,377 versus \$14,795 (p0.000). In addition, surgery time was significantly longer for open resections at 3.16 hours versus 2.82 hours for VATS. The same was true for length of stay: 6.34 days vs. 4.44 days, for open versus VATS. Also, for several categories of adverse events, patients in the VATS group had significantly lower frequencies than patients undergoing open surgery.

"EES believes strongly in the potential for VATS techniques to transform patient care in wedge resections, and lung cancer in general. Any time you can increase quality while simultaneously decreasing costs, you are benefiting all the stakeholders which are rare, and in this era of healthcare reform, it is an extremely important consideration," said Matt Moore, director of Reimbursement and Healthcare Economics at EES.

About the Study The study was a retrospective database analysis that shows VATS for wedge resections for lung cancer indications have both clinical and economic advantages compared to open thoracotomy. The protocol was submitted to and exempted by the New England Institutional Review Board and exemption was obtained. The Premier hospital database used to collect data contains complete patient billing, hospital cost and coding histories from more than 25 million inpatient discharges and 175 million hospital outpatient visits. Since VATS is such a new technology, the analyzable dataset was restricted to procedures occurring in 2007-2008. Only data that were anonymized with regard to patient identifiers were used.

Eligible patients were those of any age undergoing wedge resection by a thoracic surgeon for cancer diagnosis or treatment, via VATS methods or via open thoracotomy. Initial counts, percentages, means, and standard deviations for patient demographics, comorbid conditions, hospital characteristics, and safety, utilization, and cost outcomes were summarized for open wedge resection and VATS groups using descriptive statistics. The wedge resections studied were performed in 182 hospitals, with somewhat more performing open resections (n170) than VATS resections (n139). Hospitals in the open group did not appear to differ from those hospitals performing VATS, in terms of distribution of locations, sizes, or teaching status.

About Thoracic Surgery Historically, surgery involving the lung was accomplished in one of two ways, depending upon the clinical indication: via a thoracoscope inserted using a small incision, or via an open thoracotomy, involving a larger incision and rib-spreading to improve visibility and access for control of the surgical field. Thoracoscopic procedures were typically reserved for biopsies for diagnostic purposes, while open thoracotomies were performed for more extensive procedures such as wedge resection or lobectomy, often with therapeutic intent in severe emphysema or cancer.

About Ethicon Endo-Surgery Ethicon Endo-Surgery is the world's leader in providing advanced medical devices for minimally invasive and open surgical procedures, focusing on procedure-enabling devices for thoracic, general, bariatric and gynecology surgery. More information can be found at www.ethiconendosurgery.com.

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