Study reveals probable benefits of surgery for high-risk cancer patients

Wanting to test the dominant notion that patients considered high-risk with early stage lung cancer should only be treated with nonsurgical therapies, Emory cardiothoracic surgeon Manu Sancheti, MD, led a study which compared clinical outcomes of patients considered to be high-risk with those of standard-risk patients after lung cancer surgery. The resulting article has been published in *The Annals of Thoracic Surgery* and concludes that surgical lung resection, in which part of a lung is removed, can be a safe and effective treatment option for high-risk patients with early stage lung cancer.

Previous research had suggested that high-risk patients—generally defined as aged 60 and older, long-term smokers, and having other health problems—are more likely to have complications or to die after lung surgery.

"Consequently, one in five patients with stage I non-small-cell lung cancer has been deemed inoperable or at high-risk for surgery," says Dr. Sancheti. "Our research shows these patients should not be denied surgery, because they may benefit from it."

Using Emory data from the General Thoracic Surgery Database of the Society of Thoracic Surgeons, the research team identified 490 patients who underwent surgical resection for early stage lung cancer at Emory from 2009 through 2013. Patients were classified as standard risk (310 patients) or high risk (180 patients), based on previously published criteria from the American College of Surgeons Oncology Group.

The researchers evaluated patient outcomes and survival following surgery and found that overall length of hospital stay was longer for high-risk patients (five days) compared to standard-risk patients (four days), but there was no difference among the two groups in post-operative mortality (two percent for high-risk patients; one percent for standard-risk patients).
"Importantly, we found that cancer that had spread to the lymph nodes was discovered during surgery in about 20 percent of the high-risk patients, a finding that was unexpected based on the pre-operative imaging tests," Dr. Sancheti says. "This group of patients was able to undergo chemotherapy, which is an important adjunct treatment for their cancer stage. This spread would not have been discovered and accordingly treated through a non-surgical approach."

At three years post-surgery, the researchers found that 59 percent of high-risk patients were still alive, and 76 percent of standard-risk patients had survived.

"These results clearly show that surgical resection is an acceptable treatment option for this group of patients, and that they should not be denied this treatment avenue," he says. "A multidisciplinary team should review each case to determine the best treatment plan for individual lung cancer patients."

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**Dr. Duwayri leading study of new branched aortic graft**

Since joining Emory in 2011, vascular and endovascular surgeon Yazan Duwayri, MD, has been involved with developing Emory’s use of customized fenestrated aortic endografts for treating juxtarenal aortic aneurysms. In 2012, he and Ravi Veeraswamy, MD, successfully implanted Georgia’s first FDA-approved fenestrated aortic endograft as a minimally invasive treatment for patients with complex abdominal aortic aneurysms (AAA). Since then, this team has performed approximately forty implants on patients referred from Georgia and neighboring states.

An aortic aneurysm is a swelling in the aorta that can stretch to the point of bursting, causing fatal bleeding. Repairing the enlargement with an endovascular, minimally invasive approach avoids the large abdominal or chest cavity incisions that are part of the traditional open method. However, certain patients with extensive AAA are not appropriate candidates for conventional endovascular repair. For them, the implantation of fenestrated and branched endografts—which have reinforced openings (fenestrations) or branches that attach to arteries that lead to other organs affected by the aneurysm—are an effective treatment. Using specialized imaging software, the fenestrations are customized to accommodate the anatomical specifications of each individual patient. The endograft is delivered to the site of the aneurysm using a catheter inserted through the skin in the groin area and threaded through a blood vessel.

"These customized grafts have been a great advance, since they have eliminated the need for open surgery for some complex aortic aneurysms," says Dr. Duwayri. "However, the design and production times can pose problems in patients requiring urgent or emergent repair. The current fenestrated technology also does not allow for treatment of aneurysms above the level of the renal arteries."

Working towards a solution to this problem, Dr. Duwayri has become the Principal Investigator of the Emory site in a multi-center trial to evaluate the safety and effectiveness of the Zenith® p-Branch® device for the treatment of pararenal aortic aneurysms, which could be the next generation of fenestrated graft. Unlike the current fenestrated graft, the Zenith device does not need to be customized for the patient. Instead, it has two distinct designs that feature...
different locations for the pivoting renal "windows," allowing it to fit more patients without delaying treatment. It can also treat aneurysms that extend to the level of the superior mesenteric artery.

"Due to the large number of patients referred to us with complex aortic pathology, I expect that participation in the trial will potentially benefit a significant portion of them," says Dr. Duwayri.

The P-branch endograft trial began enrolling patients in October 2015. Dr. Ravi Veeraswamy is Co-Investigator. For more information about the trial and for enrollment consideration, patients and physicians can contact carole.seeley@emory.edu or kbaio@emory.edu.

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**Dr. Davis new director of Emory Endosurgery Unit**

S. Scott Davis, MD, has been appointed director of the Emory Endosurgery Unit for Minimally Invasive Surgery. The former director, Edward Lin, DO, has stepped down to assume the role of the unit's associate program director, a position Dr. Davis had occupied since 2010.

Established in 1992, the Endosurgery Unit sponsors one of the longest standing laparoscopic fellowships in the country. In addition to giving young surgeons the opportunity to learn and apply laparoscopic methods in the operating room, the internationally recognized fellowship emphasizes the study of patient outcomes with the goal of critically validating minimally invasive techniques. Ultimately, many former fellows have joined other academic institutions and pursued similar research and education efforts.

Dr. Davis has been at Emory since 2005 and is considered a master educator and dedicated advocate of fellows and residents. He received the Emory Junior Resident Teaching Award in 2012 and a Recognition of Excellence Award of the Society of Gastrointestinal and Endoscopic Surgeons (SAGES) in 2014. He co-chairs the SAGES Publications Committee, is an associate editor of Bariatric Surgical Practice and Patient Care, and sits on the editorial board of Surgical Laparoscopy Endoscopy & Percutaneous Techniques. The principle focus of his practice is foregut surgery, bariatric surgery, and hernia repair.

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**CSAT medical illustrator creates animation for award winning video**

Rather than reflect the very serious subject matter in a stark and conventionally scientific style, Andy Matlock's animations in the Winship Cancer Institute's "Chasing Metastatic Cancer Cells" video have a pop-art, freehand feel that pleasantly attracts the viewer's eye and presents complex ideas in a simple and straightforward fashion, no mean feat when the visuals are supporting a story about working towards uncovering the secrets of cancer metastasis.
The video, which won first place in the GRAND Basic Research video contest of the Association of American Medical Colleges (AAMC), focuses on an imaging isolation technique for studying metastatic cancer cells developed by Adam Marcus, PhD, director of the Emory Integrated Cell Imaging Core, and Emory cancer biology graduate student Jessica Konen, PhD. In the video, the two researchers describe the development of an imaging tool that uses a laser to change chosen tumor cells from the green shade of imaging scans to red. This photo conversion allows the researchers to track the particular behavior of the cell, be it fast moving, fast growing, drug resistant, or a leader cell, which literally leads other cells to metastasize. Such analytical capability could support other experiments that could eventually yield the ability to stop cancer cells from spreading.

When Woodruff Health Sciences Center online producer and videographer Damon Meharg initially contacted Mr. Matlock about contributing to the video, the concept was to film him drawing on a whiteboard just as Dr. Marcus often does to describe components of his work.

"I liked the idea, but I thought it would be difficult to pull off in real-time," says Mr. Matlock, who is the medical illustrator for the Carlos and Davis Center for Surgical Anatomy and Technique (CSAT). "Instead, I suggested I reproduce the concept electronically, and came up with a hand with a lab coat sleeve drawing and shading the tumors and their cells, writing legends, and doing arrows and such as the doctors explain everything in voiceover. I think it works well, and we were all happy with it."

Watch the video here.

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**Dr. Srinivasan receives 2014-2015 Emory University SOM Dean’s Teaching Award**

After completing her Emory general surgery residency in 2006, Jahnavi Srinivasan, MD, joined our faculty and gradually became indispensable to the department’s training mission. In addition to being recognized by the residents with several teaching awards, she was appointed director of surgical simulation and elective programs in 2011, chair of the general surgery resident education
SOM Dean Christian Larsen, MD, DPhil, presents Dr. Srinivasan with the teaching award at the 2015 School of Medicine Celebration of Faculty Excellence.

Dr. Srinivasan manages various training opportunities at both the SOM’s Center for Experiential Learning (EXCEL) and the department’s own 24-hour simulation lab in the Office of Surgical Education, including fundamental surgical skills sessions, programs tailored to individual needs in open and endosurgical procedural skills, and OR-based team training.

Dr. Srinivasan has participated in Emory Medishare’s annual, month-long summer trips to Haiti’s L’Hôpital Sainte-Thérèse de Hinche as a leader and mentor since 2010. This consortium of faculty surgeons and anesthesiologists; surgery residents; anesthesiology fellows; medical students; and mid-level practitioners provides surgical care to residents of Haiti’s Plateau Central, the poorest and most medically underserved region in the country.

Recipients of the Dean’s Teaching Award are nominated by colleagues and students and chosen by the Teaching Awards Committee for their dedication to teaching and their many contributions as course directors and mentors.

Sabbatical residents receive Merit Awards

For the second year in a row, Emory PGY3 resident Lauren Postlewait, MD, has received a Conquer Cancer Foundation Merit Award. She is joined by first-time Merit Award winner and Emory PGY2 Cecilia Ethun, MD. Both residents are doing research sabbaticals in the lab of faculty surgical oncologist Shishir Maithel, MD.

Each year, a limited number of Merit Awards are awarded to fellows and residents who have submitted abstracts of significant scientific merit to the Gastrointestinal Cancers Symposium of the American Society of Clinical Oncology (ASCO). The award recipients will be honored with the opportunity to present their abstracts at the 2016 symposium in San Francisco, January 21-23.

Dr. Postlewait's abstract, entitled "A multi-center study of 349 pancreatic mucinous cystic neoplasms: Preoperative risk factors for adenocarcinoma," concluded that adenocarcinoma or high grade dysplasia is present in 15 percent of resected pancreatic mucinous cystic neoplasms (MCN). The investigators found that the pre-operative factors associated with adenocarcinoma and high grade dysplasia in an MCN included male gender, pancreatic head/neck location, larger MCN size, presence of a solid component or mural nodule, and duct dilation on imaging. MCN-associated adenocarcinoma also appeared to have decreased nodal involvement and
increased recurrence-free and overall survival compared to typical pancreatic ductal adenocarcinoma.

Dr. Ethun was first author of "A novel pathology-based preoperative risk score to predict distant and locoregional residual disease and survival for incidentally discovered gallbladder cancer: A 10-institution study from the U.S. Extrahepatic Biliary Malignancy Consortium." Gallbladder cancer lacks trustworthy screening for early detection, and typically presents at an advanced stage or is encountered during another procedure. Dr. Ethun and the consortium team evaluated a scoring system that was devised for instances when the cancer is discovered early enough to treat. They found that the score more accurately identified patients at risk for distant and locoregional residual disease by considering subtle pathologic variations within each T-stage rather than just T-stage alone. The team also observed the score to be a reliable predictor of long-term survival due to its redistribution of T1b, T2, and T3 disease across separate risk-groups based on additional biologic features, and concluded that it could help to better optimize treatment plans for these patients.

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**Call for abstracts: WCW Research Symposium**

The Annual William C. Wood Research Symposium will be held on March 31, 2016, and will showcase the basic and clinical science research of the Emory Department of Surgery's students, postdocs, residents, and fellows.

Trainees in a dedicated laboratory rotation are expected to submit their research, though the call for abstracts in both basic and clinical science categories is open to all trainees. Submissions will be reviewed by a panel of the Department of Surgery Research Advisory Committee (SRAC), and considered for both oral and poster presentation.

The submission deadline is midnight, January 8, 2016. Notifications will be sent on or before January 29, 2016.

First and second place cash awards will be given for best oral presentations in both clinical science and basic science categories, as well as for the top poster in each category. All winners will be invited to lunch with faculty and keynote speaker Justin Dimmick, MD, MPH, chief of minimally invasive surgery at the University of Michigan, immediately following the symposium.

Download the official symposium announcement for abstract and submission requirements. Questions or concerns should be addressed to Griselda McCorquodale at gmccorq@emory.edu.

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**Upcoming events**

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<td>7:00 a.m.-8:00 a.m., Dec. 3, 2015</td>
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<td>Surgical Society of Ethiopia: Help Wanted</td>
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<td>SURGICAL GRAND ROUNDS</td>
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<td>SURGICAL GRAND ROUNDS</td>
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