

# SURGERY

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207 SURGERY ANNOUNCES NEW EDITOR-IN-CHIEF

208 A TRIBUTE TO OUR LONG-TIME CO-EDITOR AND FRIEND,  
MICHAEL G. SARR, MD  
K. Behrns, A.L. Warshaw

### COVID-19 PANDEMIC

209 Surgical outcomes after systematic preoperative severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) screening

G. Tilmans, MD, Q. Chenevas-Paule, MD, X. Muller, MD, A. Breton, MD, K. Mohkam, MD, PhD, C. Ducerf, MD, PhD, J.-Y. Mabrut, MD, PhD, M. Lesurtel, MD, PhD

In the context of the COVID-19 pandemic, this report shows feasibility and efficacy of systematic, preoperative screening for SARS-CoV-2 by chest computed tomography and real-time reverse transcriptase polymerase chain reaction on nasopharyngeal swabs. This screening strategy allowed for the safe performance of the majority of scheduled oncologic interventions for both the patients and the staff.

212 Reflections on the coronavirus disease 2019 (COVID-19) epidemic: The first 30 days in one of New York's largest academic departments of surgery

H. In, MD, MBA, MPH, P. Muscarella, MD, E. Moran-Atkin, MD, R.E. Michler, MD, W.S. Melvin, MD

The demands of the COVID-19 pandemic highlight the extraordinary resilience and adaptability of American health care providers and trainees while testing the capacity of the health care system. During the recent surge in New York City, the epicenter of the COVID-19 pandemic in the United States. Here we describe our experience during the first 30 days of the crisis

215 Primer for intensive care unit (ICU) redeployment of the noncritical care surgeon: Insights from the epicenter of the coronavirus disease 2019 (COVID-19) pandemic

D.K. DePeralta, MD, A.R. Hong, MD, C. Choy, MD, J. Wang, MD, J.P. Ricci, MD, B.V. Marcano-Benfante, MD, A.M. Lipskar, MD

On April 6, 2020, our seven-person team of non-intensivists consisting of two surgical oncologists, two pediatric surgeons, one pediatrician, a general surgeon, and a colorectal surgeon was redeployed to run a COVID-19 intensive care unit (ICU) at Long Island Jewish Medical Center (LIJMC), in Queens New York. The purpose of the paper is to share our observations and delineate some strategies that made our 4-week redeployment successful

218 The detrimental effect of COVID-19 on subspecialty medical education

B. Imielski, MD

During this pandemic, subspecialty trainees remain eager to return to full clinical productivity, and to taking care of their patients, but the true duration of this pandemic and its detriment on their education will only be understood with time. Despite this upheaval and its many unforeseen consequences, I remain confident that with forethought and adaptability all obstacles can be overcome to guarantee future generations of well trained, skillful, and thoughtful subspecialists.

220 Is the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) present intraperitoneally in patients with coronavirus disease 2019 (COVID-19) infection undergoing emergency operations?

B. Seeliger, MD, PhD, G. Philouze, MD, I. Benotmane, MD, D. Mutter, MD, PhD, P. Pessaux, MD, PhD

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus was not detected in intraoperative peritoneal fluid samples. This report is important, because it suggests that the operating room staff must continue to exercise care to prevent infection when emergency procedures are indicated in coronavirus disease 2019 (COVID-19) patients.

222 General surgery chief residents' perspective on surgical education during the coronavirus disease 2019 (COVID-19) pandemic

J. Zheng, MD, M. Hundeyin, MD, K. He, MD, T. Sachs, MD, FACS, D.T. Hess, MD, FACS, E. Whang, MD, FACS, G. Kristo, MD, MPH, FACS

The COVID-19 pandemic has negatively affected the training of general surgery chief residents. The importance of our findings is to improve surgical education in these challenging times.

### INNOVATION

226 Successful multistaged operative separation of 3-year-old craniopagus twins in a multidisciplinary, international collaboration

G. Pataki, MD, I. Hudák, MD, PhD, I. Valálik, MD, PhD, K. Czeibert, DVM, M. Csapody, MD, A. Jósvali, MD, A. Fekete, MD, A. Kalam, MD, H. Imam, MD, M. Hasan, MD, A.A. Salek, MD, S. Islam, MD, A. Csókay, MD, PhD

231 Commentary: Craniopagus separation, a model for innovation in surgery

P.J. Madsen, MD, G.G. Heuer, MD, PhD, J.A. Taylor, MD

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- 233 **Commentary: This is what we do**  
C. Moir, MD

### HEALTHCARE

- 234 **Palliative care is underutilized and affects healthcare costs in ruptured abdominal aortic aneurysms**  
S. Liu, MD, D.R. Heller, MD, R.A. Jean, MD, A.S. Chiu, MD, S.A. Khan, MD, A. Dardik, MD, PhD

We hypothesized that palliative care is associated with decreases in costs in patients with a ruptured abdominal aortic aneurysm (AAA) but is underutilized. This study is important, because our data show missed opportunities both for mitigating resource utilization as well as for providing quality end-of-life care for patients with a challenging disease.

- 237 **Commentary: Palliative care consults should be considered standard of care for patients presenting with ruptured abdominal aortic aneurysms**  
C.W. Hicks, MD, MS

- 238 **A model for the institutional adoption of innovative surgical techniques**  
M. Jain, MD, Q.-Y. Duh, MD, R. Hirose, MD, J.A. Sosa, MD, MA, I. Suh, MD

We developed a framework which guides the institutional implementation of new surgical techniques. The importance of this report is the need for methods which promote progress in surgery while preserving safety and appropriate oversight.

- 244 **Association between insurance cost-sharing subsidy and postoperative opioid prescription refills among Medicare patients**  
M. Kirsch, MD, MS, J.R. Montgomery, MD, H.M. Hu, PhD, MBA, M. Englesbe, MD, B. Hallstrom, MD, C.M. Brummett, MD, A.M. Fendrick, MD, J.F. Waljee, MD, MPH, MS

We evaluated the association of insurance cost-sharing subsidization with postoperative opioid medication refills, finding that patients with complete subsidization were more likely to refill their opioids than those patients without subsidy. These findings reflect the potential role of financial barriers in postoperative pain management and the need to ensure equitable access to care and analgesia.

- 253 **Decision analysis and reinforcement learning in surgical decision-making**  
T.J. Loftus, MD, A.C. Filiberto, MD, Y. Li, MS, J. Balch, MD, A.C. Cook, MD, P.J. Tighe, MD, P.A. Efron, MD, G.R. Upchurch Jr., MD, P. Rashidi, PhD, X. Li, PhD, A. Bihorac, MD

This review describes the challenges and opportunities in methods of surgical decision-making and clinical practice. Traditional decision-support tools are ill equipped to accommodate time constraints and uncertainty. Decision analysis and reinforcement learning theoretically can augment surgical decision-making across populations and for individual patients.

### PANCREAS

- 267 **The left splenorenal venous shunt decreases clinical signs of sinistral portal hypertension associated with splenic vein ligation during pancreaticoduodenectomy with venous resection**  
P. Addeo, MD, P. De Mathelin, MD, G. Averous, MD, M. Tambou-Nguipi, MD, A. Terrone, MD, C. Schaaf, MD, P. Dufour, MD, P. Bachellier, MD

We demonstrated that splenic vein ligation is associated with left portal hypertension after pancreaticoduodenectomy with venous resection. A left splenorenal shunt prevents left portal hypertension in these conditions based on splenic volume, platelet count, and varices.

- 274 **Summary perioperative risk metrics within the electronic medical record predict patient-level cost variation in pancreaticoduodenectomy**  
C.C. Stahl, MD, P.B. Schwartz, MD, G.E. Levenson, PhD, J.R. Barrett, MD, T. Aiken, MD, A.W. Acher, MD, S.M. Ronnekleiv-Kelly, MD, R.M. Minter, MD, S.M. Weber, MD, D.E. Abbott, MD

The authors compared automatically extracted electronic medical record data with manually abstracted National Surgical Quality Improvement Program data in a pancreaticoduodenectomy cohort and found them equivalent at predicting patient-level variation in cost outcomes. This finding is important because it will allow for rapid, scalable analysis of electronic medical record data to facilitate study of healthcare cost variation.

### GALLBLADDER

- 280 **Effect of Transfer Status on Outcomes of Emergency General Surgery Patients**  
J.L. Philip, MD, D.-Y. Yang, PhD, X. Wang, PhD, S. Fernandes-Taylor, PhD, B.M. Hanlon, PhD, J. Schumacher, PhD, M.C. Saucke, MA, J. Havlena, MS, H.P. Santry, MD, A.M. Ingraham, MD, MS

Utilizing the Nationwide Inpatient Sample, we demonstrated that emergency general surgery patients who are transferred experience increased in-hospital morbidity and mortality as well as increased durations of stay and cost. This finding is important, because as the emergency general surgery population increases and ages while the emergency general surgery workforce decreases, the need for interhospital transfers and strategies for performance improvement in the care of this vulnerable population with the finite resources available will increase.

### LIVER

- 287 **Predictors of unresectability after portal vein embolization for centrally located cholangiocarcinoma**  
A. Abdelrafee, MD, J. Nunez, MD, L. Cano, PhD, M.-A. Aillard, MD, PhD, G. Pittau, MD, O. Ciaccio, MD, C. Salloum, MD, A. Sa Cunha, MD, D. Castaing, MD, D. Azoulay, MD, PhD, D. Cherqui, MD, PhD, R. Adam, MD, PhD, E. Vibert, MD, PhD, N. Golse, MD

We aimed to identify predictors of unresectability (dropout or failure of resection) after portal vein embolization for centrally located cholangiocarcinoma, including perihilar cholangiocarcinomas and intrahepatic cholangiocarcinomas. This study is important, because we found that patients with 3 simple, objective, and inexpensive parameters, sarcopenia with a low psoas muscle mass, high BMI, and a low serum albumin, have a greater risk of unresectability.

**INTESTINE**

297 **Gastrointestinal Tract Reconstruction in Adults with Ultra-Short Bowel Syndrome: Surgical and Nutritional Outcomes**  
 R.J. Cruz Jr., MD, PhD, J. McGurgan, MS, RD, CNSC, LDN, L. Butera, MS, RD, CNSC, LDN, K. Poloyac, PharmD, M. Roberts, RN, CCTC, W. Stein, PA-C, M. Minervini, MD, D.R. Jorgensen, PhD, MPH, A. Humar, MD

Nutritional autonomy can be achieved in a substantial number of patients with ultra-short bowel syndrome (short bowel <50 cm) with surgical and/or hormonal therapy. This is important because restoration of gastrointestinal tract continuity has a positive impact on medical management and survival.

305 **Routine histopathologic examination of the appendix after appendectomy for presumed appendicitis: Is it really necessary? A systematic review and meta-analysis**  
 V.P. Bastiaenen, MD, W.M. Allema, BSc, C.E.L. Klaver, MD, PhD, S. van Dieren, PhD, L. Koens, MD, PhD, P.J. Tanis, MD, PhD, W.A. Bemelman, MD, PhD

This meta-analysis of 25 studies (n > 57,000 patients) showed that the pooled percentage of unexpected diagnoses on histopathologic examination at the time of appendectomy for suspected acute appendicitis (aberrant findings) was low (2.52%). The importance of this study is that, for now, it remains unclear how many of the unexpected diagnoses with clinical consequences would have been recognized intraoperatively by the surgeon, and, therefore, there is no good robust evidence for abandoning routine histopathologic examination of appendices after appendectomy for suspected acute appendicitis.

**COLON/RECTUM**

313 **Challenges to accomplish stringent fluid management standards 7 years after enhanced recovery after surgery implementation—The surgeon's perspective**  
 F. Grass, MD, M. Hübner, MD, K.L. Mathis, MD, D. Hahnloser, MD, E.J. Dozois, MD, S.R. Kelley, MD, N. Demartines, MD, D.W. Larson, MD, MBA

This study aimed to analyze fluid management standards in 2 high-volume enhanced recovery after surgery institutions and found that compliance with restrictive fluid thresholds remains challenging in patients with comorbidities undergoing open and long procedures. These findings highlight that efforts are mandatory because described thresholds are linked to adverse outcomes and appear to be potentially modifiable.

320 **Commentary: Optimal perioperative fluid administration for elective colorectal operations: A call for reason amidst the ERAS blitz**  
 W.C. Cirocco, MD

322 **Geriatric patients undergoing appendectomy have increased risk of intraoperative perforation and/or abscess**  
 S.M. Fan, BA, A. Grigorian, MD, B.R. Smith, MD, C.M. Kuza, MD, M. Lekawa, MD, S.D. Schubl, MD, N.T. Nguyen, MD, J. Nahmias, MD, MHPE

Geriatric patients undergoing appendectomy were more likely to have conversion to open surgery, a greater risk for presentation with intraoperatively discovered perforation and/or abscess, and the development of postoperative intra-abdominal abscess, but no difference in risk for mortality compared to a younger cohort. This highlights the differences in appendectomy outcomes in geriatric patients in a large national database that may help inform management and treatment of older patients presenting with appendicitis.

**ENDOCRINE**

328 **Genetic testing in endocrine surgery: Opportunities for precision surgery**  
 W. Alobuia, MD, J. Annes, MD, PhD, E. Kebebew, MD

This article reviews the role and clinical utility of genetic testing in the management of patients with endocrine surgical disorders. The importance of this article is to provide a simplified, germline testing framework for the surgeon in order to enhance patient management of potentially inherited endocrine diseases.

335 **Adrenalectomy during pregnancy: A 15-year experience at a tertiary referral center**  
 S. Gaujoux, MD, PhD, É. Hain, MD, L. Marcellin, MD, A. de Carbonnieres, MD, F. Goffinet, MD, PhD, J. Bertherat, MD, PhD, B. Dousset, MD

Our aim was to report maternal and fetal outcomes after adrenalectomy during pregnancy. This study is important, because we discuss the decision-making problems and show that maternal outcome is excellent, but that fetal outcome is determined by the underlying disease, with a worse outcome when the adrenalectomy is indicated for malignant lesions or Cushing's syndrome.

340 **Intraoperative application of inactivated *Pseudomonas aeruginosa* in patients undergoing lateral neck dissection for metastatic thyroid cancer: A randomized, parallel group, placebo-controlled trial**  
 L. Genpeng, MD, S. Jinen, MD, W. Tao, MD, L. Zhihui, MD, G. Rixiang, MM, L. Jianyong, MD, Z. Jingqiang, MM

We hypothesized that the intraoperative, prophylactic application of sprayed on, inactivated *Pseudomonas aeruginosa* would decrease the rate of postoperative chylous fistulas after a lateral lump node dissection during thyroid operations. This study is important, because our randomized study appeared to show a decrease in chylous fistulas, using this treatment.

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### TRAUMA

#### Presented at the Academic Surgical Congress 2020

- 347 **Role of interprofessional teams in emergency general surgery patient outcomes**  
W.M. Oslock, MBA, K.B. Ricci, MD, A.M. Ingraham, MD, MS, A.P. Rushing, MD, H.E. Baselice, MPH, A.Z. Paredes, MD, V.K. Heh, PhD, C.A. Byrd, DNP, ACNP-BC, S.A. Strassels, PharmD, PhD, H.P. Santry, MD, MS
- Emergency general surgery patients whose surgeons are assisted by residents alone or with advanced practice practitioners experience lower adjusted odds of systemic complication compared to those treated at hospitals where surgeons provide emergency general surgery care unassisted. This finding may aid in designing interprofessional emergency general surgery care teams to improve emergency general surgery quality.

### IMAGES IN SURGERY

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J. Khalloof, MD, S. Mantziari, MD, MSc, E. Uldry, MD, PD-MER

- e5 **A fungating micro-invasive ductal carcinoma in situ**  
I.A. Alameh, MD, J. Khoury, MD, N. Abdul Halim, MD, E. Sbaity, MD, H.I. Assi, MD
- e7 **An incarcerated inguinal hernia with unusual content**  
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- e9 **Wandering spleen in a pediatric patient**  
N.A. Wilson, PhD, MD, R.M. Antiel, MD, MSME, P.A. Dillon, MD

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Walter J. Pories, MD, *Greenville, NC*

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