

SURGERY

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REVIEW ARTICLE

- 129 **CRISPR-mediated gene editing for the surgeon scientist**
S.J. O'Brien, MB, BCh, BAO, M.B. Ekman, S. Manek, BS,
S. Galandiuk, MD

This review article summarizes the landscape of gene editing, with a particular focus for the surgeon scientist. The importance of this report is that gene editing will be a critical part of basic and clinical research during the coming years.

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- 147 **Preoperative epigenetic preparation of patients is a current reality**
M. Chaudhary, MD, V.K. Goel, MD, G.P. Victorino, MD, FACS,
A.H. Harken, MD, FACS

A patient's preoperative demographic profile identifies epigenetic targets that are becoming pharmacologically accessible with promising improvements in surgical risk and outcomes.

PANCREAS

Presented at the Academic Surgical Congress 2019

- 150 **High expression of Annexin A2 is associated with DNA repair, metabolic alteration, and worse survival in pancreatic ductal adenocarcinoma**
H. Takahashi, MD, E. Katsuta, MD, PhD, L. Yan, PhD,
S. Dasgupta, PhD, K. Takabe, MD, PhD

We found that Annexin A2 high expression is associated with worse prognosis owing to cell proliferation, DNA repair, and metabolic alteration in pancreatic cancer. The importance is that Annexin A2 can be a potential prognostic biomarker to predict survival.

- 157 **Management of small asymptomatic nonfunctioning pancreatic neuroendocrine tumors: Limitations to apply guidelines into real life**

S. Partelli, MD, PhD, M. Mazza, MD, V. Andreasi, MD,
F. Muffatti, MD, S. Crippa, MD, PhD, D. Tamburrino, MD,
M. Falconi, MD

The study reported that one-third of patients with small, incidentally found panNET <2 cm underwent surgery. The importance of this study is the demonstration of the challenges in the conservative management of these entities.

- 164 **Editorial: Small, asymptomatic, nonfunctioning pancreatic neuroendocrine tumors: Observation becoming standard of care?**
C.N. Clarke, MD, MS, D.B. Evans, MD

Presented at the Academic Surgical Congress 2019

- 166 **The laparoscopic approach to distal pancreatectomy is a value-added proposition for patients undergoing care in moderate-volume and high-volume centers**
E. Eguia, MD, MS, MHA, P.C. Kuo, MD, MS, MBA,
P. Sweigert, MD, M. Nelson, MD, G.V. Aranha, MD,
G. Abood, MD, MS, C.V. Godellas, MD,
M.S. Baker, MD, MBA

We aimed to examine the cost of care for patients undergoing distal pancreatectomy by surgical approach. The importance of this finding is that the laparoscopic approach is associated with significant cost savings only in high-volume centers.

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OUTCOMES

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- 172 **Trends in perioperative opioid and non-opioid utilization during ambulatory surgery in children**
Y.K. Rizeq, BS, B.T. Many, MD, J.C. Vacek, MD, I. Silver, S.D. Goldstein, MD, MPhil, F. Abdullah, MD, PhD, MPhil, M.V. Raval, MD, MS
In pediatric patients undergoing ambulatory surgery, opioid utilization is decreasing in favor of non-opioid analgesics. The importance of these findings is related to pain management strategy and resource utilization.
- 177 **Missed psychosocial risk factors during routine preoperative evaluations are associated with increased complications after elective cancer surgery**
P.M. Meyers, BA, I.L. Leeds, MD, MBA, ScM, Z.O. Enumah, MD, MA, R.A. Burkhart, MD, J. He, MD, PhD, E.R. Haut, MD, PhD, J.E. Efron, MD, F.M. Johnston, MD, MHS
We assessed concordance between patient-reported and documented psychosocial risks and found high discordance with worse postoperative outcomes for missed risk. The importance of this report affects patient safety and the financial burden of care.
- 184 **Glycemic variability and mortality in patients hospitalized in general surgery wards**
A. Akirov, MD, T. Shochat, I. Dotan, MD, T. Diker-Cohen, MD, PhD, A. Gorshtein, MD, I. Shimon, MD
Our study shows high glycemic variability is associated with longer hospitalization and increased short-term and long-term mortality among patients hospitalized in surgical wards. The increased risk was important in those with and without diabetes.

GLOBAL SURGERY

Presented at the Academic Surgical Congress 2019

- 193 **A cross sectional survey of factors influencing mortality in Rwandan surgical patients in the intensive care unit**
G.J. Bunogerane, MMed, J. Rickard, MD, MPH
This is an observational study of surgical patients admitted to a Rwandan intensive care unit. This study is important because understanding patient characteristics and risk factors for mortality can guide management and use of scarce intensive care unit resources.

VASCULAR

- 198 **Peripheral arterial occlusive disease operative case volume in the final years of 5+2 and 0+5 vascular training paradigms**
J. Phair, MD, M.L. Carnevale, MD, V.G. Teveris, MD, I. Koleilat, MD, J.E. Indes, MD
This study shows that vascular surgery fellows are performing more endovascular and open cases than integrated residents. The importance of this finding is that training programs may need to re-evaluate their curricula to address this discrepancy.
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G.R. Upchurch Jr

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J.E. Locke, MD, MPH, R.D. Reed, MPH, A.B. Massie, PhD, P.A. MacLennan, PhD, D. Sawinski, MD, V. Kumar, MD, J.J. Snyder, PhD, A.J. Carter, BS, B.A. Shelton, MPH, M.N. Mustian, MD, MPH, C.E. Lewis, MD, MPH, D.L. Segev, MD, PhD
Obese donors had a 30% increased risk for postdonation mortality versus nonobese living donors. These findings may help to inform selection criteria and discussions with obese persons considering living kidney donation.
- 209 **Invited Commentary: Concurrent nephrectomy and bariatric surgery for obese living kidney donors**
S.A. Waits, MD, M.J. Englesbe, MD

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Presented at the Academic Surgical Congress 2019

- 211 **Effect of insurance type on perioperative outcomes after robotic-assisted pulmonary lobectomy for lung cancer**
P.S. Deol, BA, J. Sipko, BS, A. Kumar, MD, PhD, A. Tsalatsanis, PhD, C.C. Moodie, PA-C, J.R. Garrett, MPH, ARNP-C, J.P. Fontaine, MD, E.M. Toloza, MD, PhD
This study analyzed the effect of insurance type on perioperative outcomes after robotic-assisted pulmonary lobectomy for lung cancer. The importance of this report will help determine any disparity in surgical outcomes based on insurance type.

EDUCATION

Presented at the Academic Surgical Congress 2019

- 218 **Screening surgical residents' laparoscopic skills using virtual reality tasks: Who needs more time in the sim lab?**
H. Mohamadipanah, PhD, K.H. Perrone, MD, J. Nathwani, MD, C. Parthiban, PhD, K. Peterson, MS, B. Wise, BS, A. Garren, BS, C. Pugh, MD, PhD, FACS
The goal of this study was to investigate the possibility of using virtual reality as a screening tool for laparoscopic ability. Our findings support the notion that virtual reality could be used as a screening tool for the perceptual-motor skills required in laparoscopic surgery.

INTESTINE

Presented at the Academic Surgical Congress 2019

- 223 **Pancreaticoduodenectomy outcomes for locally advanced right colon cancers: A systematic review**
M. Khalili, MD, L. Daniels, MD, E.M. Gleeson, MD, MPH, N. Grandhi, BS, A. Thandoni, BA, F. Burg, BS, MS, L. Holleran, BS, W.F. Morano, MD, W.B. Bowne, MD
We have evaluated outcomes of en bloc pancreaticoduodenectomy and right hemicolectomy for the treatment of locally advanced right colon cancer. The importance of this systematic review is that it demonstrates safety and efficacy of en bloc pancreaticoduodenectomy and right hemicolectomy for the treatment of locally advanced right colon cancer.

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