



Volume 229
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2019

Named Lecture

- 231** Gut Microbiome and Colon Cancer: A Plausible Explanation for Dietary Contributions to Cancer
Heidi Nelson, MD, FACS, Nicholas Chia, PhD

Original Scientific Articles

- 236** Clustered Arrivals of Firearm-Injured Patients in an Urban Trauma System: A Silent Epidemic
Jessica H Beard, MD, MPH, Shelby Resnick, MD, MEd, Zoë Maher, MD, FACS, Mark J Seamon, MD, FACS, Christopher N Morrison, PhD, Carrie A Sims, MD, PhD, FACS, Randi N Smith, MD, MPH, Lars O Sjöholm, MD, FACS, Amy J Goldberg, MD, FACS

This study analyzed 14,217 firearm-injured patients in Philadelphia in the course of 11 years. One in 4 patients was clustered, presenting to the hospital within 15 minutes of another firearm-injured patient. Clusters involving 4 or more patients, which resemble mass shootings from the trauma system perspective, occurred multiple times per year.

- 244** Incidence and Cause of Potentially Preventable Death after Civilian Public Mass Shooting in the US
CME
E Reed Smith, MD, Babak Sarani, MD, FACS, FCCM, Geoff Shapiro, NREMT-P, Stephen Gondek, MD, MPH, Lisbi Rivas, MD, Tammy Ju, MD, Bryce RH Robinson, MD, FACS, Jordan M Estroff, MD, FACS, John Fudenberg, MBA, Richard Amdur, PhD, Roger Mitchell, MD

This study found a 16% potentially preventable death rate after public mass shooting events, mainly due to gunshots to the chest. Training civilian bystanders on ways to address all causes of potentially preventable death and rapid extrication of victims to professional medical care is the optimal strategy to minimize potentially preventable death after these events.

- 252** Plasma Transfusion Products and Contamination with Cellular and Associated Pro-Inflammatory Debris
Yong B Tan, MD, Richard R Rieske, MD, Jon P Audia, PhD, Viktor M Pastukh, PhD, Gina C Capley, MS, Mark N Gillespie, PhD, Alison A Smith, MD, PhD, Danielle M Tatum, PhD, Juan C Duchesne, MD, FACS, Matt E Kutcher, MD, Jeffrey D Kerby, MD, PhD, FACS, Jon D Simmons, MD, FACS

Stored plasma units from trauma center blood banks were highly contaminated with leukocytes and platelets at levels > 15-fold higher than sufficient to elicit ex vivo inflammatory responses.

259 Development and Validation of the Ventral Hernia Repair Outcomes Reporting App for Clinician and Patient Engagement (ORACLE)

Ivy N Haskins, MD, Molly A Olson, MS, Thomas G Stewart, PhD,
Michael J Rosen, MD, FACS, Benjamin K Poulouse, MD, MPH, FACS

Patient engagement is an increasingly important component of surgical decision making. Given the many factors associated with successful ventral hernia repair, we developed and validated the Outcomes Reporting App for Clinical and Patient Engagement (ORACLE) tool to help facilitate preoperative surgeon-patient discussion about ventral hernia repair.

267 **CME** Surgical Outcomes in Lateral Abdominal Wall Reconstruction: A Comparative Analysis of Surgical Techniques

Sahil K Kapur, MD, Jun Liu, PhD, Donald P Baumann, MD, FACS,
Charles E Butler, MD, FACS

This study demonstrates a clear superiority of the pillar-anchored repair technique compared with the direct repair technique in reducing hernia recurrence. The study also shows that closure type (bridged vs reinforced), defect area, and mesh type do not affect recurrence rate.

277 Management of Uncomplicated Acute Appendicitis as Day Case Surgery: Can Outcomes of a Prospective Study Be Reproduced in Real Life?

Charles Sabbagh, MD, PhD, Loréna Masseline, MSc, Gérard Grelpois, MSc,
Alexandre Ntoubas, MD, Jeanne Dembinski, MD, Jean-Marc Regimbeau, MD, PhD

The aim of this study was to evaluate the real-life feasibility of day case surgery for uncomplicated appendicitis. The proportion of patients with success was 95%. The unplanned consultation rate was 15%, the unplanned hospitalization rate was 4%, and the unplanned reoperation rate was 0%. Day case surgery constitutes progress in surgery.

286 **CME** Conditional Recurrence-Free Survival after Resection of Colorectal Liver Metastases: Persistent Deleterious Association with *RAS* and *TP53* Co-Mutation

Yoshikuni Kawaguchi, MD, PhD, Heather A Lillemoe, MD, Elena Panettieri, MD,
Yun Shin Chun, MD, FACS, Ching-Wei D Tzeng, MD, FACS, Thomas A Aloia, MD, FACS,
Scott Kopetz, MD, PhD, FACP, Jean-Nicolas Vauthey, MD, FACS

Conditional recurrence-free survival probability, that is, recurrence probability after a given interval without recurrence, is useful for updating prognosis in patients undergoing resection of colorectal liver metastases. *RAS/TP53* co-mutation has a persistent deleterious association with recurrence for patients free from recurrence at 1 year and 2 years.

295 **Determination of Optimal Weight-Based Enoxaparin Dosing and Associated Clinical Factors for Achieving Therapeutic Anti-Xa Assays for Deep Venous Thrombosis Prophylaxis**

CME

Audis Bethea, PharmD, BCPS, BCCCP, Damayanti Samanta, MS, Derek Deshaies, MD, Bryan K Richmond, MD, MBA, FACS

This study demonstrates that a dose of 0.4 mg/kg predicts a therapeutic anti-Xa level for deep venous thrombosis prophylaxis with enoxaparin. When regimens of 0.31 to 0.4 mg/kg/dose are administered in males with a creatinine clearance >90 mL/min, therapeutic results are 13.76 times more likely, suggesting that monitoring with anti-Xa assays might be unnecessary in this subgroup.

305 **Insulin-Like Growth Factor and *SLC12A7* Dysregulation: A Novel Signaling Hallmark of Non-Functional Adrenocortical Carcinoma**

Taylor C Brown, MD, MHS, Norman G Nicolson, MD, Adam Stenman, MD, PhD, C Christofer Juhlin, MD, PhD, Courtney E Gibson, MD, MS, FACS, Glenda G Callender, MD, FACS, Reju Korah, PhD, Tobias Carling, MD, PhD, FACS

This study analyzes the role of insulin-like growth factor signaling in adrenocortical carcinoma. Our results demonstrate that insulin-like growth factor 1 overexpression caused, in part, by gene copy amplification, is associated with non-functional, early-stage tumors, as well as aberrant expression of the metastasis promoting gene *solute carrier family 12 member 7*.

316 **Patient Satisfaction and Pain Control Using an Opioid-Sparing Postoperative Pathway**

Alexander Hallway, BS, Joceline Vu, MD, Jay Lee, MD, William Palazzolo, PA-C, Jennifer Waljee, MD, MS, MPH, FACS, Chad Brummett, MD, Michael Englesbe, MD, FACS, Ryan Howard, MD

This study examines an opioid-sparing postoperative pain-control pathway in which patients were instructed to manage their pain after surgical procedures without opioids. Of 190 patients surveyed, 52% used no opioids and 98% used fewer than 10 pills. Patients reported excellent satisfaction and pain control with this regimen.

Letters

323 **US Civilian Active Shooter Incidents Involving a Semiautomatic Rifle Are More Lethal Than Incidents Involving Other Firearms**

Elzerie de Jager, MBBS (Hons), Justin C McCarty, DO, Molly P Jarman, PhD, Eric Goralnick, MD, MS

324 **A Holistic Approach to Firearm Legislation Is Needed: In reply to de Jager and colleagues**

Babak Sarani, MD, FACS, E Reed Smith, MD

324 **Histogenetic Guidelines to Perform Sentinel Lymph Node Biopsy in T1b Melanomas of the 8th Edition American Joint Committee on Cancer**

Luca Roncati, MD, Francesco Piscioi, MD

325 Vertical Growth Phase and Sentinel Lymph Node Metastases: In reply to Roncati and Piscioi

Michael E Egger, MD, MPH, Kelly M McMasters, MD, PhD, FACS

326 Reluctance to Operate on Pregnant Women

Mary C Tolcher, MD, MSc, Alex C Vidaeff, MD, MPH, Steven L Clark, MD

327 Cholecystectomy in the Third Trimester: Delay Is Best for the Baby: In reply to Tolcher and colleagues

Zhi V Fong, MD, MPH, PhD, David C Chang, PhD, MPH, MBA, Henry A Pitt, MD, FACS

Continuing Medical Education Program

329 Conditional recurrence-free survival after resection of colorectal liver metastases: persistent deleterious association with *RAS* and *TP53* co-mutation. Kawaguchi Y, Lillemoe HA, Panettieri E, et al.

Determination of optimal weight-based enoxaparin dosing and associated clinical factors for achieving therapeutic anti-Xa assays for deep venous thrombosis prophylaxis. Bethea A, Samanta D, Deshaies D, Richmond BK

Additional Articles for September 2019 Online at <http://jacscme.facs.org>

Incidence and cause of potentially preventable death after civilian public mass shooting in the US. Smith ER, Sarani B, Shapiro G, et al.

Surgical outcomes in lateral abdominal wall reconstruction: a comparative analysis of surgical techniques. Kapur SK, Liu J, Baumann DP, Butler CE

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