



# SURGERY GRAND ROUNDS

Research Presentation in partial fulfillment for the Masters of Integrated Systems Engineering degree:

“Leveraging The Principles of Cognitive Systems Engineering To Optimize Healthcare Delivery”

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**Birthplace:** Columbus, OH

**Undergraduate Education:** The Ohio State University, Columbus, OH (Biochemistry)

**Medical School:** The Ohio State University College of Medicine, Columbus, OH

**General Surgery Residency:** The Ohio State University College of Medicine, Columbus, OH

**Research Advisor(s):**

Katherine Deans, MD, MHSc; Peter Minneci, MD, MHSc; Michael Rayo, PhD

## Research Publications:

1. **Metzger GA**, Talbert EE, He WA, Guttridge DC. (2013). *Modeling human cancer cachexia in colon 26 tumor-bearing adult mice*. J Cachexia Sarcopenia Muscle. 10:1007. PMID: 24668658.
2. Carruthers KH, **Metzger G**, During MJ, Choi E, Kocak E. (2016) *A therapeutic role for suvivin in mitigating the harmful effects of ionizing radiation*. Sarcoma. 2016;2016:1830849.
3. Carruthers KH, **Metzger G**, During MJ, Muravlev A, Wang C, Kocak E. (2014). *Gene-directed enzyme prodrug therapy for localized chemotherapeutics in allograft and xenograft tumor models*. Cancer Gene Therapy. 10:1038. PMID: 25236494.
4. Horwood CR, Mansour D, Abdel-Rasoul M, **Metzger G**, Han J, Aggarwal R, Rittinger M, Shimizu-Saito S, Diaz P, Moffatt-Bruce S. *Long-Term Results After Lung Volume Reduction Surgery: A Single Institution's Experience*. Ann Thorac Surg. 2019 Apr;107(4):1068-1073. doi: 10.1016/j.athoracsur.2018.10.014. Epub 2018 Nov 17. PMID: 30458157.
5. **Metzger, G.**, et al., *The Need for Accurate Risk Assessment in a High-Risk Patient Population: A NSQIP Study Evaluating Outcomes of Cholecystectomy in the Patient With Cancer*. J Surg Res, 2021. **257**: p. 519-528.
6. Contreras, C.M., **Metzger, G.A.**, et al., *Telemedicine: Patient-Provider Clinical Engagement During the COVID-19 Pandemic and Beyond*. J Gastrointest Surg, 2020. **24**(7): p. 1692-1697.
7. **Metzger, G.**, et al., *Inter-rater Reliability of Sacral Ratio Measurements in Patients with Anorectal Malformations*. J Surg Res, 2020. **256**: p. 272-281.
8. **Metzger, G.A**, Sebastião, Y.V., et al., *Impact of ICD-9-CM to ICD-10-CM coding transition on trauma hospitalization trends among young adults in 12 states*. Injury Epidemiology, 2021. **8**(1): p. 4.
9. Metzger, G.A., et al., *Establishing Reference Values for Lean Muscle Mass in the Pediatric Patient*. J Pediatr Gastroenterol Nutr, 2020.
10. **Metzger, G.A.**, et al., *Does sarcopenia affect outcomes in pediatric surgical patients? A scoping review*. J Pediatr Surg, 2021.
11. **Metzger, G.A.**, et al. *The State of Telemedicine Use in Pediatric Surgery in The United States: Where We Stand and What We Can Gain from the COVID-19 Pandemic – A Scoping Review*. World J Pediatric Surgery. Accepted to World Journal of Pediatric Surgery February 2021
12. **Metzger, GA**, et al., *The Value of Telemedicine for the Pediatric Surgery Patient in the Time of COVID-19 and Beyond*. Accepted to Journal of Pediatric Surgery February 2021
13. Minneci, P.C., **Metzger, G.A.**, et al., *Treatment effect heterogeneity of non-operative management and surgery in pediatric uncomplicated appendicitis*. Accepted to JAMA March 2021

## Research Presentations:

1. **Metzger, GA**, et al. *Comparisons of the Colon-26 Cancer Cachexia Model in Young and Adult Mice*. International Conference on Cachexia and Muscle Wasting. 2012
2. **Metzger, GA**, et al. *A Potential Therapeutic Role For Survivin in Mitigating the Harmful Effects of Ionizing Radiation*. The American Society of Gene and Cell Therapy. 2013
3. Horwood, C, **Metzger, GA**, et al. *How Well are we Really Doing Since the NETT? Results of a High-Volume Single Academic LVRS Program*. OSUWMC Trainee Research Day. 2018
4. Chen, JC, **Metzger, GA**, et al. *Patients with Active Cancer and Emergent Appendectomy: A Case-Control Study of Surgical Outcomes*. American Surgical Congress. 2019
5. **Metzger, GA**, et al. *Surviving Ruptured Abdominal Aortic Aneurysm: Is There a Golden Hour To Operative Intervention?* American Surgical Congress. 2019
6. **Metzger, GA**, et al. *Inter-rater Reliability of Sacral Ratio Measurements in Patients with Anorectal Malformation*. Academic Surgical Congress 2020
7. Horwood, C, **Metzger GA**, et al. *Cholecystectomy for Acute Cholecystitis in Cancer Patients: A NSQIP Analysis*. Academic Surgical Congress 2020
8. **Metzger GA**, et al. *Establishing the Importance of Lean Muscle Mass in the Pediatric Patient*. The Ohio State University Department of Surgery Research Day 2020
9. **Metzger GA**, et al. *Personalized Electronic Health Record (PEHR)*. Human Factors in Healthcare 2020.
10. **Metzger GA**, et al. *The Before Picture: Assessing the Value of Telemedicine from the Perspective of the Caregiver Presenting to a Pediatric Surgery Clinic Prior to COVID-19*. American Academy of Pediatrics 2020
11. **Metzger GA**, et al. *Muscle Mass as a Potential Marker for Chronic Maltreatment in the Pediatric Non-Accidental Trauma Patient*. International Conference on Cachexia and Muscle Wasting 2021
12. **Metzger GA**, et al. *Room for Improvement: A Single-Institution Experience with the Trephination (Gip's) Procedure for Treating Pediatric Pilonidal Disease*. Academic Surgical Congress 2021
13. Knaus, M, **Metzger GA**, et al. *Outcomes of a telemedicine bowel management program during COVID-19*. American Pediatric Surgical Association 2021

## Research Awards:

2019-21	<i>NIH LRP Award: NICHD</i>	<i>\$70,000 over 2 years</i>
2019	<i>James King Award</i>	<i>\$2,000</i>