

THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER

DEPARTMENT OF SURGERY GRAND ROUNDS

Research presentation in partial fulfillment for the Master of Public Health degree:



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PGY-2, General Surgery Residency Training Program, OSU

Medical School: University of Illinois, Rockford, IL

Graduate: University of Florida, Gainesville, FL

Undergraduate: University of Florida, Gainesville, FL

Research Advisors: Timothy M. Pawlik, MD, MPH, PhD; Heena Santry MD, MS

“Variability In Inpatient Opioid Utilization Following Hepatopancreatic Surgery”

Manuscripts in Submitted:

Paredes AZ, Hyer JM; Tsilimigras DI, Pawlik TM. Preoperative Medical “Optimization” Visit Prior to Hepatopancreatic Surgery – Is it worth it? *Submitted to Journal of Gastrointestinal Surgery.*

Paredes AZ, Hyer JM, Tsilimigras D, Pawlik TM. Outcome Variation Following Hepatopancreatic Surgery in Critical Access Hospitals. *Submitted to American Journal of Surgery.*

Paredes AZ, Hyer JM, Tsilimigras DI, Dillhoff ME, Ejaz A, Cloyd JM, Tsung A, Pawlik TM. Variability in Inpatient Opioid Utilization Following Hepatopancreatic Surgery. *Submitted to Annals of Surgery.*

Hyer JM, **Paredes AZ**, Tsilimigras DI, White S, Cloyd JM, Ejaz A, Pawlik TM. Variations in Health Care Expenditures Among Medicare Beneficiaries Undergoing Resection of Pancreatic Cancer. *Submitted to Journal of Gastrointestinal Surgery.*

Paredes AZ, Hyer JM, Tsilimigras DI, Moro A, Bagante F, Guglielmi A, Ruzzenente A, Alexandrescu S, Makris E, Poulosides GA, Sasaki K, Aucejo FN, Pawlik TM. Alternative Clinical Risk Score to Predict Recurrence After Resection of Colorectal Liver Metastases: Multi-institutional Development and Validation of a Prognostic Model. *Submitted to British Journal of Surgery.*

Paredes AZ, Hyer JM, Palmer E, Lustberg MB, Dillhoff ME, Ejaz A, Bean J, Cloyd JM, Tsung A, Pawlik TM. Association of Pre-Existing Mental Illness with All-Cause and Cancer-Specific Mortality in Medicare Beneficiaries with Pancreatic Cancer. *Submitted to HPB.*

Research Publications:

Paredes AZ, Hyer JM, Palmer E, Lustberg MB, Pawlik TM. Racial/Ethnic Disparities in Hospice Utilization Among Medicare Beneficiaries Dying from Pancreatic Cancer. *Accepted for Publication at Journal of Gastrointestinal Surgery.*

Mehta R, **Paredes AZ**, Moro A, Tsilimigras D, Sahara K, Farooq A, Dillhoff M, Cloyd JM, Tsung A, Ejaz A, Pawlik TM. Influence of Hospital Teaching Status on Chance to Achieve a Textbook Outcome Following Hepatopancreatic Surgery Among Medicare Beneficiaries. *Accepted for Publication to SURGERY.*

Hyer JM, **Paredes AZ**, Cerullo M, Tsilimigras DI, White S, Ejaz A, Pawlik TM. Assessing Post-Discharge Costs of Hepatopancreatic Surgery: an Evaluation of Medicare Expenditure. *Accepted for Publication to SURGERY.*

Hyer JM, **Paredes AZ**, White S, Ejaz A, Pawlik TM. Assessment of Utilization Efficiency using Machine Learning Techniques: A Study of Heterogeneity in Preoperative Healthcare Utilization among Super-Utilizers. *Am J Surg.* 2020 Jan 27. [Epub ahead of print] [PMID: 32008721]

- Paredes AZ**, Hyer JM, Diaz A, Tsilimigras DI, Pawlik TM. Examining Healthcare Inequities Relative to United States Safety Net Hospitals. *Am J Surg*. 2020 Jan 26. [Epub ahead of print] [PMID: 32014296]
- Farooq A, **Paredes AZ**, Merath K, Hyer JM, Mehta R, Sahara K, Tsilimigras DI, Moro A, Wu L, Cloyd J, Ejaz A, Pawlik TM. How Safe Are Safety-Net Hospitals? Opportunities to Improve Outcomes for Vulnerable Patients Undergoing Hepatopancreaticobiliary Surgery. *J Gastrointest Surg*. 2019 Dec 2. [Epub ahead of print]. [PMID: 31792898]
- Mehta R, **Paredes AZ**, Tsilimigras DI, Farooq A, Sahara K, Merath K, Hyer JM, White S, Ejaz A, Tsung A, Dillhoff M, Cloyd JM, Pawlik TM. CMS Hospital Compare System of Star Ratings and Surgical Outcomes Among Patients Undergoing Surgery for Cancer: Do the Ratings Matter? *Ann Surg Oncol*. 2019 Dec 2. [Epub ahead of print]. [PMID: 31792714]
- Mehta R, **Paredes AZ**, Pawlik TM. Redefining the "Honor Roll:" do hospital rankings predict surgical outcomes or receipt of quality surgical care? *Am J Surg*. 2019 Nov 26. [Epub ahead of print]. [PMID: 31791549]
- Paredes AZ**, Hyer JM, Tsilimigras DI, Sahara K, White S, Pawlik TM. Interaction of Surgeon Volume and Nurse-to-Patient Ratio on Post-operative Outcomes of Medicare Beneficiaries Following Pancreaticoduodenectomy. *J Gastrointest Surg*. 2019 Nov 19. [Epub ahead of print] [PMID: 31745895]
- Diaz A, Burns S, **Paredes AZ**, Pawlik TM. Accessing surgical care for pancreaticoduodenectomy: Patient variation in travel distance and choice to bypass hospitals to reach higher volume centers. *J Surg Oncol*. 2019 Dec;120(8):1318-1326. [PMID: 31701535]
- Farooq A, **Paredes AZ**, Merath K, Mehta R, Moro A, Wu L, Sahara K, Hyer JM, Tsilimigras DI, Diaz A, Pawlik TM. Hepatopancreatobiliary Surgery: the Role of Clinical Resources and Variation in Performance of Hospitals Located in "Distressed" Communities. *J Gastrointest Surg*. 2019 Oct 16. [EPUB ahead of print] [PMID: 31621025]
- Bae J, Hyer JM, **Paredes AZ**, Farooq A, Rice DR, White S, Tsilimigras DI, Ejaz A, Pawlik TM. Evaluation of costs and outcomes of physician-owned hospitals across common surgical procedures. *Am J Surg*. 2019 Oct 8. [EPUB ahead of print] [PMID: 31619377]
- Moro A, **Paredes AZ**, Farooq A, Sahara K, Tsilimigras DI, Mehta R, Endo I, Guglielmi A, Aldrighetti L, Alexandrescu S, Marques HP, Shen F, Koerkamp BG, Sasaki K, Pawlik TM; other members of the International Intrahepatic Cholangiocarcinoma Study Group. Discordance in prediction of prognosis among patients with intrahepatic cholangiocarcinoma: A preoperative vs postoperative perspective. *J Surg Oncol*. 2019 Aug 13. [PMID: 31410852]
- Sahara K, **Paredes AZ**, Mehta R, Hyer JM, Tsilimigras DI, Merath K, Farooq SA, Wu L, Moro A, Beal EW, Endo I, Pawlik TM. Potential disease burden of patients with substance abuse undergoing major abdominal surgery: A propensity score-matched analysis. *Surgery*. 2019 Aug 1. [PMID: 31378476]
- Oslock WM, **Paredes AZ**, Baselice HE, Rushing AP, Ingraham AM, Collins C, Ricci KB, Daniel VT, Diaz A, Heh VM, Strassels SA, Santry HP. Women surgeons and the emergence of acute care surgery programs. *Am J Surg*. 2019 Jul 17. [PMID: 31345501]
- Paredes AZ**, Hyer JM, Tsilimigras DI, Mehta R, Sahara R, White S, Dillhoff ME, Ejaz A, Cloyd JM, Pawlik TM. Hospice utilization among Medicare beneficiaries dying from pancreatic cancer. *J Surg Oncol*. 2019 Jul 9. [PMID: 31290170]
- Paredes AZ**, Malik AT, Cluse M, Strassels SA, Santry HP, Eiferman D, Jones C, Vazquez D. Discharge Disposition to Skilled Nursing Facility After Emergent General Surgery Predicts a Poor Prognosis. *Surgery*. 2019 Jul 17. [PMID: 31326186]
- Paredes AZ**, Hyer JM, Tsilimigras DI, Merath K, Mehta R, Sahara K, Farooq S, Wu L, White S, Pawlik TM. Skilled Nursing Facility (SNF) Utilization and Impact of SNF Star-Quality Ratings on Outcomes Following Hepatectomy Among Medicare Beneficiaries. *HPB (Oxford)*. 2019 Jun 20. [PMID: 31231061]
- Paredes AZ**, Guzman-Pruneda F, Abdel-Misih S, Hays J, Dillhoff ME, Pawlik TM, Cloyd JM. Perioperative Morbidity of Gastrectomy during CRS-HIPEC: An ACS-NSQIP Analysis. *J Surg Res*. 2019 Apr 17; 241: 31-39. [PMID: 31004870]
- Paredes AZ**, Hyer JM, Tsilimigras D, Bagante F, Beal EW, Merath K, Mehta R, Pawlik TM. Predictors and Outcome of Nonroutine Discharge Following Hepatopancreatic Surgery. *Surgery*. 2019 Jun;165(6):1128-1135. [PMID: 30981416]

- Tsilimigras DI, Hyer JM, **Paredes AZ**, Moris D, Beal E, Merath K, Mehta R, Ejaz A, Cloyd JM, Pawlik TM. The Optimal Number of Lymph Nodes to Evaluate among Patients Undergoing Surgery for Gallbladder Cancer: Correlating the Number of Nodes Removed with Survival in 6531 Patients. *J Surg Onc.* 2019 Jun;119(8):1099-1107. [PMID: 30864246]
- Sahara K, **Paredes AZ**, Merath K, Tsilimigras DI, Bagante F, Ratti F, Marques HP, Soubrane O, Beal E, Lam V, Poultides GA, Popescu I, Alexandrescu S, Martel G, Aklile W, Guglielmi A, Hugh T, Aldrighetti L, Endo I, Pawlik TM. Evaluation of the ACS NSQIP Surgical Risk Calculator in Elderly Patients Undergoing Hepatectomy for Hepatocellular Carcinoma. *J Gastrointest Surg.* 2019 April 1. [PMID: 30937717]
- Tsilimigras DI, Ntanasis-Stathopoulos I, **Paredes AZ**, Moris D, Gavriatopoulou M, Cloyd JM, Pawlik TM. Disappearing Liver Metastases: A Systematic Review of the Current Evidence. *Surg Oncol.* 2019 Jun;29:7-13. [PMID: 31196496]
- Sahara K, **Paredes AZ**, Tsilimigras DI, Hyer JM, Merath K, Wu L, Mehta R, Beal EW, White S, Endo I, Pawlik TM. Impact of Liver Cirrhosis on Perioperative Outcomes among Elderly Patients Undergoing Hepatectomy: The Effect of Minimally Invasive Surgery. *J Gastrointest Surg.* 2019 Feb 4 [PMID: 30719676]
- Paredes AZ**, Hyer JM, Beal EW, Bagante F, Merath K, Mehta R, White S, Ejaz A, Cloyd JM, Tsung A, Dillhoff ME, Pawlik TM. Impact of Skilled Nursing Facility Quality on Post-operative Outcomes Following Pancreatic Surgery. *Surgery.* 2019 Jul;166(1):1-7. [PMID: 30704629]
- Paredes AZ**, Beal EW, Dillhoff ME, Cloyd JM, Pawlik TM. Patterns of Readmission among the Elderly after Hepatopancreatobiliary Surgery. *Am J Surg.* 2019 Mar;217(3):413-416 [PMID: 30262121]
- Paredes AZ**, Abdel-Misih S, Schmidt C, Dillhoff ME, Pawlik TM, Cloyd JM. Predictors of Readmission after cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. *J Surg Res.* 2019 Feb; 234:103-109. 2018 Oct 5. [PMID: 30527460]
- Paredes AZ**, Beal EW, Dillhoff ME. Epidermoid cyst within an intrapancreatic accessory spleen. *BMJ Case Rep.* 2018 Apr 5. [PMID: 29622708]
- Paredes AZ**, Idrees JJ, Beal EW, Chen Q, Cerier E, Okunrintemi V, Olsen G, Sun S, Cloyd J, Pawlik TM. Influence of English Proficiency on Patient Provider Communication and Shared Decision Making. *SURGERY.* 2018 Feb 23; 163(6):1220-1225 [PMID: 29482884]
- Book Chapters:**
- Chakedis J, Squires MH, Beal EW, Hughes T, Lewis H, **Paredes AZ**, Al-Mansour M, Sun S, Cloyd JM, Pawlik TM. Colorectal Liver Metastasis. *Current Problems in Surgery.* 2017 Nov; 54(11):554-602. [PMID: 29198365]
- Paredes AZ**, Aquina CT, Selby LV, DiFilippo S, Pawlik TM. Increasing Importance of Ethics in Surgical Decision-Making. *Accepted for Publication in Advances in Surgery v. 54.*
- Research Oral & Poster Presentations Accepted to Date:**
- Paredes AZ**, Hyer JM, Diaz A, Tsilimigras DI, Pawlik TM. The Impact of Mental Illness on Peri-Operative outcomes Among Medicare Beneficiaries - A Missed Opportunity to Help Surgical Patients? *Accepted for Oral Presentation to American Surgical Association Annual Meeting. April 2020*
- Paredes AZ**, Hyer JM, Palmer E, Lustberg MB, Dillhoff ME, Ejaz A, Bean J, Cloyd JM, Tsung A, Pawlik TM. Suicide and Suicidal Ideation in Medicare Beneficiaries with Pancreatic Cancer. *Accepted to Present at International Conference on Surgical Cancer Care. March 2020.*
- Paredes AZ**, Hyer JM, Dillhoff ME, Ejaz A, Bean J, Cloyd JM, Tsung A, Pawlik TM. Variation in Inpatient Opioid Consumption Following Hepatopancreatic Surgery. Oral Presentation at The Americas Hepato-Pancreato-Biliary Association Annual Meeting. Miami, Florida. March 2020.
- Paredes AZ**, Farooq A, Bae J, Rice D, Moro A, Crisp AL, Windholtz M, Sahara K, Tsilimigras DI, Hyer JM, Merath K, Mehta R, Parasidis E, Pawlik TM. Inside the Courtroom: An Analysis of Malpractice Litigation in Gallbladder Surgery. Oral Presentation at The 15th Annual Academic Surgical Congress. Orlando, Florida. February 2020.

Paredes AZ, Malik AT, Villarreal ME, Quatman C, Rushing AP, Vazquez KT, Vazquez D. Malignant Bowel Obstruction: Is Surgery The Answer? Oral Presentation at The 15th Annual Academic Surgical Congress. Orlando, Florida. February 2020.

Holliday SA, Li S, **Paredes AZ**, Hoholik S, Niedermier J, Mahan JD, Thomas AM, Clinchot DM. Combatting the Central Ohio Opioid Crisis: A multi-faceted Approach. Poster Presentation. AAMC National Workshop to Advance Medical Education to Combat Opioid Misuse: Working Together Across the Continuum. May 2019.

Li S, **Paredes AZ**, Hoholik S, Holliday SA. Effects of a "Pain Time-Out" on daily pain assessment, inpatient opioid use, and patient satisfaction scores. Poster Presentation. Annual Ohio State University Wexner Medical Center Trainee Research Day. April 2019.

Paredes AZ, Tsilimigras D, Hyer JM, Mehta R, Beal E, Merath K, Pawlik TM. Hospice Utilization Among Patients Dying from Pancreatic Cancer. Oral Presentation. Society for Surgical Oncology's 72nd Annual Cancer Symposium. March 2019.

Paredes AZ, Malik T, Cluse M, Santry HP, Eiferman D, Jones C, Vazquez D. Discharge Disposition to Skilled Nursing Facility after Emergent General Surgery: Predictor of Poor Prognosis? Oral Presentation. Central Surgical Association. March 2019

Paredes AZ, Hyer JM, Beal EW, Bagante F, Merath K, Mehta R, White S, Ejaz A, Cloyd JM, Tsung A, Dillhoff ME, Pawlik TM. Impact of Skilled Nursing Facility Quality on Post-operative Outcomes Following Pancreatic Surgery. Oral Presentation. Columbus Surgical Society. March 2019.

Research & Travel Awards:

Conquer Cancer Foundation ASCO Resident Travel Award for Underrepresented Populations
Award Date: 2019

Best New Member Paper- Central Surgical Association Annual Meeting
Award Date: 2019

AAS/AASF Fall Courses Travel Award Recipient
Award Date: 2018

Travel Award to attend the 77th Annual Meeting of the American Association for the Surgery of Trauma and Clinical Congress of Acute Care Surgery and 4th World Trauma Congress
Award Date: 2018

NIH/NMA Fellow Travel Award
Award Date: 2018



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