



SURGERY GRAND ROUNDS

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

“The Space Between Us: Health, Geography, and Policy”

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Research Publications:

1. Hyer JM, Tsilimigras DI, **Diaz A**, Mirdad RS, Azap RA, Cloyd J, et al. High Social Vulnerability and “Textbook Outcomes” after Cancer Operation. *Journal of the American College of Surgeons*. 2021 Jan;S1072751520325783.
2. Azap RA, Hyer JM, **Diaz A**, Paredes AZ, Pawlik TM. Association of County-Level Vulnerability, Patient-Level Race/Ethnicity, and Receipt of Surgery for Early-Stage Hepatocellular Carcinoma. *JAMA Surgery*. 2021 Feb 1;156(2):197–9.
3. **Diaz A**, Chhabra KR, Dimick JB, Nathan H. Variations in surgical spending within hospital systems for complex cancer surgery. *Cancer*. 2021;127(4):586–97.
4. **Diaz A**, Hyer JM, Barmash E, Azap R, Paredes AZ, Pawlik TM. County-Level Social Vulnerability is Associated with Worse Surgical Outcomes Especially Among Minority Patients. *Annals of Surgery* [Internet]. 2021 Feb 23; Publish Ahead of Print. Available from: https://journals.lww.com/annalsofsurgery/Abstract/9000/County_Level_Social_Vulnerability_is_Associated.93835.aspx
5. **Diaz A**, Nuliyalu U, Dimick JB, Nathan H. Variation in Surgical Spending Among the Highest Quality Hospitals for Cancer Surgery. *Annals of Surgery* [Internet]. 2021 Feb 23; Publish Ahead of Print. Available from: https://journals.lww.com/annalsofsurgery/Abstract/9000/Variation_in_Surgical_Spending_Among_the_Highest.93985.aspx
6. Mirdad RS, Hyer JM, **Diaz A**, et al. Postoperative imaging surveillance for hepatocellular carcinoma: How much is enough? *J Surg Oncol*. n/a(n/a). doi:<https://doi.org/10.1002/jso.26433>
7. Ricci KB, Oslock WM, Ingraham AM, Rushing AP, **Diaz A**, Paredes AZ, et al. Importance of Radiologists in Optimizing Outcomes for Older Americans with Acute Abdomen. *Journal of Surgical Research*. 2021 May 1;261:361–8.
8. Rice DR, Hyer JM, **Diaz A**, Pawlik TM. End-of-Life Hospice Use and Medicare Expenditures Among Patients Dying of Hepatocellular Carcinoma. *Ann Surg Oncol* [Internet]. 2021 Feb 2 [cited 2021 Feb 28]; Available from: <https://doi.org/10.1245/s10434-021-09606-7>
9. Shah R, **Diaz A**, Phieffer L, Quatman C, Glassman A, Hyer JM, et al. Robotic total knee arthroplasty: A missed opportunity for cost savings in Bundled Payment for Care Improvement initiatives? *Surgery* [Internet]. 2021 Feb 16 [cited 2021 Feb 28]; Available from: <https://www.sciencedirect.com/science/article/pii/S0039606021000118>
10. Tsilimigras DI, Hyer JM, **Diaz A**, Moris D, Bagante F, Ratti F, et al. Impact of time-to-surgery on outcomes of patients undergoing curative-intent liver resection for BCLC-0, A and B hepatocellular carcinoma. *Journal of Surgical Oncology*. 2021;123(2):381–8.
11. Tsilimigras DI, Hyer JM, **Diaz A**, Moris D, Abbas A, Dillhoff M, et al. Impact of cancer center accreditation on outcomes of patients undergoing resection for hepatocellular carcinoma: A SEER-Medicare analysis. *The*

- American Journal of Surgery [Internet]. 2021 Jan 13 [cited 2021 Feb 28]; Available from: <https://www.sciencedirect.com/science/article/pii/S0002961021000337>
12. Tsilimigras DI, Hyer JM, **Diaz A**, Bagante F, Ratti F, Marques HP, et al. Synergistic Impact of Alpha-Fetoprotein and Tumor Burden on Long-Term Outcomes Following Curative-Intent Resection of Hepatocellular Carcinoma. *Cancers*. 2021 Jan;13(4):747.
 13. Tsilimigras DI, Hyer JM, Chen Q, **Diaz A**, Paredes AZ, Moris D, et al. Inter-surgeon variability is associated with likelihood to undergo minimally invasive hepatectomy and postoperative mortality. *HPB* [Internet]. 2020 Dec 3; Available from: <http://www.sciencedirect.com/science/article/pii/S1365182X20312284>
 14. Santry HP, Strassels SA, Ingraham AM, Oslock WM, Ricci KB, Paredes AZ, et al. Identifying the fundamental structures and processes of care contributing to emergency general surgery quality using a mixed-methods Donabedian approach. *BMC medical research methodology*. 2020;20(1):1–19.
 15. **Diaz A**, Pawlik TM. ASO Author Reflections: Centralization of High-Risk Cancer Surgery and Implications for Vulnerable Communities. *Annals of Surgical Oncology*. 2020;27(3):844–5.
 16. Tameron AM, Ricci KB, Oslock WM, Rushing AP, Ingraham AM, Daniel VT, et al. The association between self-declared acute care surgery services and critical care resources: Results from a national survey. *Journal of Critical Care*. 2020;60:84–90.
 17. Tsilimigras DI, Hyer JM, Paredes AZ, **Diaz A**, Moris D, Guglielmi A, et al. A Novel Classification of Intrahepatic Cholangiocarcinoma Phenotypes Using Machine Learning Techniques: An International Multi-Institutional Analysis. *Ann Surg Oncol*. 2020 Dec;27(13):5224–32.
 18. Mirdad RS, Tsilimigras DI, Hyer JM, **Diaz A**, Azap RA, Pawlik TM. Refusal of Surgery Among Patients with Early-Stage Hepato-Pancreato-Biliary Cancers: Predictive Factors and Outcomes. *J Gastrointest Surg*. 2020 Nov 23;1–3.
 19. Chhabra KR, **Diaz A**, Byrnes MA, Rajkumar A, Yang P, Dimick JB, et al. Challenges and Opportunities for the Academic Mission Within Expanding Health Systems: A Qualitative Study. *Ann Surg*. 2020 Nov 12;
 20. Azap RA, Paredes AZ, **Diaz A**, Hyer JM, Pawlik TM. The association of neighborhood social vulnerability with surgical textbook outcomes among patients undergoing hepatopancreatic surgery. *Surgery*. 2020 Nov 1;168(5):868–75.
 21. **Diaz A**, Pawlik TM. Insurance status and high-volume surgical cancer: Access to high-quality cancer care. *Cancer*. 2021;127(4):507–9.
 22. **Diaz A**, Syrjamaki J, Yaser J, Weng W, Nathan H. Hospital quality and payment variation for pancreaticoduodenectomy in michigan. *HPB*. 2020;22:S109.
 23. Azap RA, Hyer JM, **Diaz A**, Tsilimigras DI, Mirdad RS, Pawlik TM. Sex-based differences in time to surgical care among pancreatic cancer patients: A national study of Medicare beneficiaries. *J Surg Oncol*. Published online 2020
 24. Hyer JM, Kelly EP, Paredes AZ, Tsilimigras DI, **Diaz A**, Pawlik TM. Mental illness is associated with increased risk of suicidal ideation among cancer surgical patients. *The American Journal of Surgery* [Internet]. 2020 Oct 20 [cited 2021 Feb 28]; Available from: <https://www.sciencedirect.com/science/article/pii/S0002961020306681>
 25. **Diaz A**, Pawlik TM. Rural Surgery and Status of the Rural Workplace: Hospital Survival and Economics. *Surgical Clinics*. 2020;100(5):835–47.
 26. Paredes AZ, **Diaz A**, Pawlik TM. COVID-19 pandemic and mental health: Surgeons role in re-engaging patients. *American journal of surgery*. 2020;
 27. Paredes AZ, Hyer JM, **Diaz A**, Tsilimigras DI, Pawlik TM. Examining healthcare inequities relative to United States safety net hospitals. *The American Journal of Surgery* [Internet]. 2020 Jan 26 [cited 2020 Mar 3]; Available from: <http://www.sciencedirect.com/science/article/pii/S0002961020300568>
 28. **Diaz A**, Barmash E, Azap R, Paredes AZ, Hyer JM, Pawlik TM. Association of County-Level Social Vulnerability with Elective Versus Non-elective Colorectal Surgery. *J Gastrointest Surg* [Internet]. 2020 Aug 10 [cited 2020 Sep 3]; Available from: <https://doi.org/10.1007/s11605-020-04768-3>
 29. **Diaz A**, Chavarin D, Paredes AZ, Pawlik TM. Utilization of High-Volume Hospitals for High-Risk Cancer Surgery in California Following Medicaid Expansion. *J Gastrointest Surg* [Internet]. 2020 Jul 23 [cited 2020 Sep 7]; Available from: <https://doi.org/10.1007/s11605-020-04747-8>
 30. Yang P, Chhabra KR, **Diaz A**, et al. Assuring Surgical Quality in Expanding Health Systems. *J Am Coll Surg*. 2020;231(4):S135-S136.
 31. **Diaz A**, Neiman P, Scott JW. Association Between Loss of Inpatient Surgical Services and Timely Access to Surgery. *J Am Coll Surg*. 2020;231(4):S133
 32. Shah R, **Diaz A**, Tripepi M, Bagante F, Tsilimigras DI, Machairas N, et al. Quality Versus Costs Related to Gastrointestinal Surgery: Disentangling the Value Proposition. *Journal of Gastrointestinal Surgery*. 2020;1–10.
 33. **Diaz A**, Ejaz A, Cloyd JM, et al. Disparities in Travel Patterns to Reach High-Volume Centers Among Patients

- Undergoing Complex Oncologic Surgery. In: *Annals Of Surgical Oncology*. Vol 27. Springer One New York Plaza, Suite 4600, New York, Ny, United States; 2020:S46-S46.
34. **Diaz A**, Chavarin D, Paredes AZ, Tsilimigras DI, Pawlik TM. Association of neighborhood characteristics with utilization of high-volume hospitals among patients undergoing high-risk cancer surgery. *Annals of surgical oncology*. 2020;1–15.
 35. **Diaz A**, Paredes AZ, Hyer JM, Pawlik TM. Variation in value among hospitals performing complex cancer operations. *Surgery*. 2020;
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 39. **Diaz A**, Chhabra KR, Scott JW. The COVID-19 Pandemic And Rural Hospitals—Adding Insult To Injury | *Health Affairs* [Internet]. [cited 2020 May 31]. Available from: <https://www.healthaffairs.org/doi/10.1377/hblog20200429.583513/full/>
 40. **Diaz, A.**, Ricci, K.B., Oslock, W.M., Paredes, A.Z., Baselice, H.E., Rushing, A.P., Ingraham, A.M., Collins, C., Daniel, V.T., Heh, V.M., Santry, H.P, Re-examining “never letting the sun rise or set on a bowel obstruction” in the era of Acute Care Surgery *J. Gastrointest. Surg In press*
 41. **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 Nov; In press
 42. **Diaz A**, Pawlik TM. ASO Author Reflections: Centralization of High-Risk Cancer Surgery and Implications for Vulnerable Communities. *Ann Surg Oncol*. 2020;27(3):844-845.
 43. **Diaz A**, Chaffee SM, Santry HP. Mitigating the health shock of traumatic injury. *Am J Surg*. 2020;220(3):509-510.
 44. **Diaz A**, Cloyd JM, Manilchuk A, et al. Travel Patterns among Patients Undergoing Hepatic Resection in California: Does Driving Further for Care Improve Outcomes? *J Gastrointest Surg Off J Soc Surg Aliment Tract*. Published online 2020.
 45. **Diaz A**, Pawlik TM. Regionalization of Pancreatectomy for Pancreatic Cancer—Reply. *JAMA Surg*. Published online 2020.
 46. **Diaz A**, Cochran A. Leaky Pipelines and Emptying Wells: Concerns from a Survey of the US Surgeon Workforce. *J Am Coll Surg*. 2020;230(3):293-294. doi:10.1016/j.jamcollsurg.2019.12.002
 47. **Diaz A**, Pawlik TM. Optimal Location for Centralization of Hospitals Performing Pancreas Resection in California in California. *JAMA Surg*. 2019;In Press.
 48. **Diaz A**, Schoenbrunner A, Dillhoff M, Cloyd JM, Ejaz A, Tsung A, et al. Complex hepato-pancreato-biliary caseload during general surgery residency training: are we adequately training the next generation? *HPB* [Internet]. 2019 Sep 21
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 50. Marks IH, **Diaz A**, Keem M, Ladi-Seyedian S-S, Philipo GS, Munir H, et al. Barriers to Women Entering Surgical Careers: A Global Study into Medical Student Perceptions. *World J Surg* [Internet]. 2019 Oct 15
 51. Farooq, A., Paredes, A.Z., Merath, K., Mehta, R., Moro, A., Wu, L., Sahara, K., Hyer, J.M., Tsilimigras, D.I., **Diaz, A.**, et al. (2019). Hepatopancreatobiliary Surgery: the Role of Clinical Resources and Variation in Performance of Hospitals Located in “Distressed” Communities. *J. Gastrointest. Surg*
 52. Oslock, W.M., Paredes, A.Z., Baselice, H.E., Rushing, A.P., Ingraham, A.M., Collins, C., Ricci, K.B., Daniel, V.T., **Diaz, A.**, Heh, V.M., et al. (2019). Women surgeons and the emergence of acute care surgery programs. *Am. J. Surg*. 218, 803–808.
 53. **Diaz A**, Schoenbrunner A, Pawlik TM. Trends in the Geospatial Distribution of Adult Inpatient Surgical Cancer Care Across the United States. *J Gastrointest Surg*. Published online August 8, 2019. doi:10.1007/s11605-019-04343-5
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56. Daniel VT, Rushing AP, Ingraham AM, Ricci KB, Paredes AZ, **Diaz A**, et al. Association between Operating Room Access and Mortality for Life-Threatening General Surgery Emergencies. *Journal of Trauma and Acute Care Surgery* [Internet]. 2019 Jun 3 [cited 2019 Jun 13]; Publish Ahead of Print.
57. Ricci KB, Rushing AP, Daniel VT, Ingraham AM, Paredes AZ, **Diaz A**, et al. The Association between Self-Declared Acute Care Surgery Services and Operating Room Access: Results from a National Survey. *Journal of Trauma and Acute Care Surgery*. 2019 May 29; Publish Ahead of Print.
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59. Schoenbrunner A, **Diaz A**, Chetta M. Evaluating the Variability of Surgical Education in US Plastic Surgery Training Programs. *Plastic and Reconstructive Surgery - Global Open*. 2019;7:9-10. doi:10.1097/01.GOX.0000568992.04776.23
60. Gani F, **Diaz A**, Johnston FM, Pawlik TM, Canner JK. Comparison of Clinical and Financial Outcomes at Urban and Rural Hospitals among Patients Receiving Inpatient Surgical Care. *J Am Coll Surg*. 2018;227(4):S140-S141.
61. **Diaz A**, Schoenbrunner A, Cloyd J, Pawlik TM. Geographic Distribution of Adult Inpatient Surgery Capability in the USA. *J Gastrointest Surg*. January 2019. doi:10.1007/s11605-018-04078-9
62. **Diaz A**, Merath K, Bagante F, Chen Q, Akgul O, Beal E, Idrees J, Olsen G, Gani F, Pawlik TM. Surgical Procedures in Health Professional Shortage Areas: Impact of a Surgical Incentive Payment Plan. *Surgery*. 2018 May 15. pii: S0039-6060(18)30141-7. doi: 10.1016/j.surg.2018.03.017. [Epub ahead of print] PubMed PMID: 29776596.
63. Chen Q, Bagante F, Merath K, Idrees J, Beal EW, Cloyd J, Dillhoff M, Schmidt C, **Diaz A**, White S, Pawlik TM. Hospital Teaching Status and Medicare Expenditures for Hepato-Pancreato-Biliary Surgery. *World J Surg*. 2018 Mar 21. doi: 10.1007/s00268-018-4566-1. PubMed PMID: 29564518.
64. **Diaz A**, Corredor M, Jackson D, Whitehurst-Cook M, Strauss JF. Lessons Learned From the VCU School of Medicine Latino Medical Student Association: A Roadmap for Increasing Diversity in Medical School. *J Hisp High Educ*. September 2017;1538192717729736. doi:10.1177/1538192717729736
65. Bentounsi Z, Marks I, **Diaz A**, Wanjau W. Letter to the editor: How much do LMICs need HICs? *BMJ Global Surgery* (2016)
66. Khan S, **Diaz A**, Archer KJ, Lehman RR, Mullins TC, Cardenosa G, Bear HD. Papillary lesions of the breast: To excise or observe?, *The Breast Journal*, 24(4).
67. Indeyeva Y, **Diaz A**, Imbrey T, Gao G, Coelho DH., Tinnitus Management with Percutaneous Osseointegrated Auditory Implants for Unilateral Sensorineural Hearing Loss, *American Journal of Otolaryngology– Head and Neck Medicine and Surgery* (2015), doi: 10.1016/j.amjoto.2015.06.003
68. **Diaz, A.** (2014). A Challenge for Tomorrow's Physicians. *American Medical Student Research Journal*, 1(1), 85-87.

Research Presentations:

1. **Diaz A**, Ricci KB, Rushing AP, Paredes AZ, Ingraham AM, Daniel VT, Ayturk MD, Baselice HE, Strassels SA, Santry HP “Re-examining “never letting the sun rise or set on a bowel obstruction” in the era of Acute Care Surgery” Jan 2019 Presented at the 32nd EAST Annual Scientific Assembly, Austin, TX
2. Ricci KB, **Diaz A**, Rushing AP, Paredes AZ, Ingraham AM, Daniel VT, Ayturk MD, Baselice HE, Strassels SA, Santry HP. (Feb 2019) "CT scans in the modern management of appendicitis: Do they really matter?". Presented at the 14th Annual Academic Surgical Congress, Houston TX
3. Ricci KB, Paredes AZ, Ayturk MD, Ingraham AM, **Diaz A**, Rushing AP, Daniel VT, Baselice HE, Strassels SA, Santry HP. (Feb 2019) "Hospital Level Diagnostic Radiology Associated Outcomes for Acute Cholecystitis". Presented at the 14th Annual Academic Surgical Congress, Houston TX.
4. Rushing AP, Baselice HE, Daniel VT, Ingraham A, Ricci KB, Paredes AP, **Diaz A**, Strassels SA, Santry HP. “Peri-operative critical care practices and mortality among patients with general surgery emergencies.”(Feb 2019) Presented at 48th Annual Critical Care Congress of the Society of Critical Care Medicine, San Diego, CA
5. Daniel VT, Rushing AP, Ingraham AM, Ricci KB, Paredes AZ, **Diaz A**, Ayturk MD, Baselice HE, Strassels SA, Santry HP. “Association between enhanced overnight operating room access and mortality for true life-threatening surgical disease”. (Jan 2019) Presented at the 32nd EAST Annual Scientific Assembly, Austin, TX.
6. **Diaz, A.** Schoenbrunner A, Cloyd J, Pawlik TM *Trends in the Geospatial Distribution of Inpatient Adult Surgical Services across the United States 2005-2015* Presented at the 14th Annual Academic Surgical Congress, Houston TX.

7. **Diaz, A.** Schoenbrunner A, Cloyd J, Pawlik TM *Access to Surgical Services across the U.S.: How Far Do You Need to Go for High-Volume Care?* To be presented at the American College of Surgeons Clinical Congress 2018.
8. **Diaz, A,** Schneider, E, Cloyd, J, Pawlik, T. M. *Surgical Procedures in Health Professional Shortage Areas: Impact of a Surgeon Incentive Payment Plan.* Presented at the Academic Surgical Congress 2018.
9. **Diaz A,** Khan S, Anand R. *Preparing M1 and M2 students for the surgical wards – An on call shadowing program.* VCU Health – First Annual Medical Education Symposium. April 26, 2017.
10. **Diaz A,** Haynes AB. *Geospatial analysis of surgeons and surgical facilities in Virginia: a novel approach to assessing policy implications.* VCU School of Medicine I2CRP Capstone. April 5, 2017 – **Awarded top Capstone Project**
11. **Diaz A,** Haynes AB. *Spatial analysis of surgery service areas in Virginia.* Academic Surgical Congress 2017.
12. **Diaz A,** Khan S, Anand R. *Preparing M1 and M2 students for the surgical wards – On call shadowing program.* The
13. Association for Surgical Education - Thinking Out of The Box session 2016
14. **Diaz A,** I. H. Marks, M. Keem, et al. *Trends in and barriers to medical students' surgical education: a global survey.* Academic Surgical Congress 2016.
15. **Diaz A,** Loomis J, Schmidtmayerova H. *Evaluating vimentin in the establishment of HIV-1 infection, 2010.* Nova Southeastern University research symposium 2010 – 1st place
16. Indeyeva Y, **Diaz A,** Imbery T, Coelho D. *Tinnitus Management by Percutaneous Osteointegrated Auditory Implants for Single Sided Deafness.* Combined Otolaryngology Spring Meetings 2015

Research Awards:

1. American Society of Clinical Oncology Resident Travel Award – 2020
2. NIH/National Hispanic Medical Association Travel Award – 2020
3. Moses Gunn Research Conference – Top presentation – 2020

