

Summer Student Research Program
Project Description

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PROJECT TITLE (200 Characters max):

Surgical Ergonomics

HYPOTHESIS:

There is lack of knowledge of ergonomics among surgeons and surgical trainees that will increase with an educational intervention.

PROJECT DESCRIPTION (Include design, methodology, data collection, techniques, data analysis to be employed and evaluation and interpretation methodology)

Current knowledge of ergonomics among surgeons/surgical trainees is variable and the realization that this is important for surgeon longevity and well-being is increasing. We will survey surgeons/trainees at a single institution, perform an educational intervention about ergonomics, and resurvey post-intervention to assess for changes.

SPONSOR'S MOST RECENT PUBLICATIONS RELEVANT TO THIS RESEARCH:

1. **Narula N**, Curran T, Nagle D. Return To The Hospital In Limited English Proficiency Patients After Inpatient Colorectal Surgery. *World Journal of Colorectal Surgery*. Volume 6, Issue 1, Article 1. Available at: <http://services.bepress.com/wjcs/vol6/iss1/art1>. 2016.
2. Ismael HN, Cox S, Cooper A, **Narula N**, Aloia T. The morbidity and mortality of hepaticojejunostomies for complex bile duct injuries: a multi-institutional analysis of risk factors and outcomes using NSQIP. *HPB*. Volume 19(4):352-358. Epub 2017.
3. Kim BJ, Day RW, Davis CH, **Narula N**, Kroll MH, Tzeng CWD, Aloia TA. Extended pharmacologic thromboprophylaxis in oncologic liver surgery is safe and effective. *Journal of Thrombosis and Haemostasis*. Volume 15(11):2158-64. Epub 2017.
4. **Narula N**, Kim BJ, Davis CH, Dewhurst WL, Samp LA, and Aloia TA. A Proactive Outreach Intervention that Reduces Readmission after Hepatectomy. *Surgery*. 2018. Volume 163(4):703-708. Epub 2018.
5. Kim BJ, Prakash L, **Narula N**, Davis CH, Kim MP, Aloia TA, Vauthey JN, Lee JE, Katz MH, Tzeng CW. Contemporary Analysis of Complications Associated with Biliary Stents During Neoadjuvant Therapy for Pancreatic Adenocarcinoma. *HPB*. Volume 21(6): 662-668. Epub 2018 December 3.
6. Lillemoe HA, Marcus RK, Kim BJ, **Narula N**, Davis CH, Aloia TA. Detours on the Road to Recovery: What Factors Delay Readiness to Return to Intended Oncology Therapy (RIOT) After Liver Resection for Malignancy? *Journal of Gastrointestinal Surgery*. Volume 23(12):2362-2371. Epub 2019 February 26.
7. Lillemoe HA, Marcus RK, Day RW, Kim BJ, **Narula N**, Davis CH, Gottumukkala V, Aloia TA. Enhanced recovery in liver surgery decreases postoperative outpatient use of opioids. *Surgery*. Volume 166(1):22-27. E-pub 2019 May 15.
8. **Narula N**, Lillemoe HA, Caudle A, Chemaly RF, Anderson J, Segal C, Porter C, Swisher S, Levenback C, and Aloia T. Postoperative urinary tract infection quality assessment and improvement: The S.T.O.P. UTI program and its impact on hospital wide UTI rates. *The Joint Commission on Quality and Patient Safety*. Volume 45(10):686-693. E-pub 2019 July 29.
9. Lillemoe HA, Markus RK, Kim BJ, **Narula N**, Davis CH, Shi Q, Wang XS, Aloia TA. Severe preoperative symptoms delay readiness to return to intended oncologic therapy (RIOT) after liver resection. *Annals Surgical Oncology*. Volume 26(13):4548-4555. E-pub 2019 August 14.
10. Robinson K, Hersey S, **Narula N**. Small bowel sigmoid colon fistula resulting from diverticulitis causing an internal hernia. *Journal of Gastrointestinal Surgery*. Volume 24(11): 2688-2689. E-pub 2020 April 22. Misra A, Cook CH, Cataldo TE, **Narula N**. Colon Resection with End Colostomy

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- in a Patient with a History of Imperforate Anus. *The American Surgeon*. E-pub 4 November 2020.
11. **Narula N**, Tsikis S, Jinadasa SP, Parsons CS, Cook CH, Butt B, Odom, SR. The Effect of Anticoagulation and Antiplatelet Use in Trauma Patients on Mortality and Length of Stay. *The American Surgeon*. Volume 88(6): 1137-1145. E-pub 1 February 2021.
 12. Tsikis S, Yin SH, Odom SR, **Narula N**. Intraoperative Cholangiography: A Stepping Stone to Streamlining the Treatment of Choledocholithiasis. *Surgical Endoscopy*. Volume 36(7):4885-4892. E-pub November 1, 2021.
 13. **Narula N**, Gibbs KE, Kong F, Mukherjee I. Appendiceal Intussusception, Diverticula, and Fecalith Associated With Appendicitis. *The American Surgeon*. E-pub September 9, 2022.
 14. Ore AS*, Liu BS*, Chen HW, Kent TS, Parsons CS, **Narula N**. General surgery Trainee Cases Over Time: Postgraduate Year Matters. *The American Surgeon*. E-pub December 23, 2022.
- *These authors contributed equally to this work.

THIS PROJECT IS: **Clinical** **Laboratory** **Behavioral** **Other**

THIS PROJECT IS CANCER-RELATED **No**
Please explain Cancer relevance

THIS PROJECT IS HEART, LUNG & BLOOD- RELATED **No**
Please explain Heart, Lung, Blood relevance

THIS PROJECT INVOLVE RADIOISOTOPES? **No**

THIS PROJECT INVOLVES THE USE OF ANIMALS **No**
PENDING APPROVED IACUC PROTOCOL #

THIS PROJECT INVOLVES THE USE OF HUMAN SUBJECTS? **Yes**
PENDING APPROVED IRB PROTOCOL # **M**
IRB to be submitted

THIS PROJECT IS SUITABLE FOR:
UNDERGRADUATE STUDENTS ENTERING FRESHMAN
SOPHOMORES ALL STUDENTS
Suitable for all years of medical students

THIS PROJECT IS WORK-STUDY: Yes or No

THIS PROJECT WILL BE POSTED DURING ACADEMIC YEAR
FOR INTERESTED VOLUNTEERS: Yes or No

WHAT WILL THE STUDENT LEARN FROM THIS EXPERIENCE?

The student will learn about conducting a literature search, designing a clinical study, collecting data, and research methodology. The student may also participate in writing an abstract or a manuscript and learn these skill sets. The goal is to have the project presented at a regional or national meeting and published in a peer-reviewed journal.