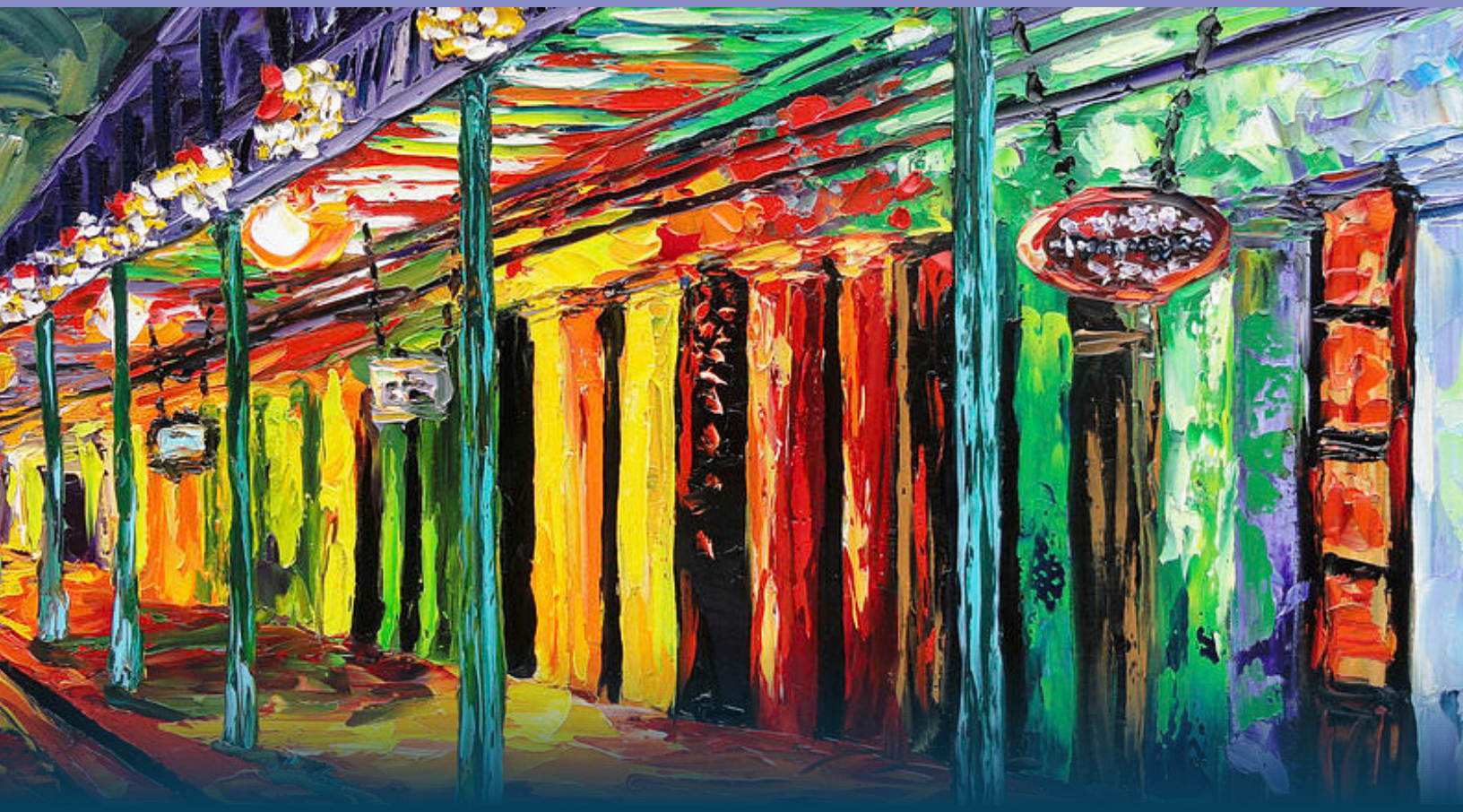
PODIUM ABSTRACTS



LOUISIANA CHAPTER
ACS 74TH ANNUAL MEETING

RENAISSANCE NEW ORLEANS ARTS WAREHOUSE DISTRICT HOTEL

President's Session | Abstract | Education | Surgical Education

Assessing and Simplifying Surgical Resident Language in Informed Consent Using Large Language Models

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Background: Effective patient communication is essential for meaningful informed consent, yet surgical explanations often exceed patients' average literacy levels. This mismatch can hinder understanding and compromise shared decision-making.

Objective: To evaluate the readability of spoken language used by surgical residents during simulated informed consent discussions, assess variation by training level, and examine the use of large language models (LLMs) to simplify and optimize this language for patient comprehension.

Methods: Surgical residents were recorded explaining laparoscopic appendectomy, laparoscopic cholecystectomy, and open inguinal hernia repair. Deidentified transcripts were analyzed using AI-based natural language models to quantify readability (Flesch-Kincaid Grade Level, Gunning Fog Index, SMOG Index, Flesch Reading Ease). The same models generated revised versions targeting a 6th–8th grade reading level while preserving medical accuracy. AI tools also identified complex phrasing, passive voice, and unexplained jargon.

Results: AI-assisted revisions significantly improved readability across all samples. The Flesch-Kincaid Grade Level decreased by 4.8 grade levels (11.1 → 6.3), the Gunning Fog Index by 4.3 (12.7 → 8.4), and the SMOG Index by 2.6 (11.0 → 8.4). The Flesch Reading Ease improved by > 26 points (49.9 vs 76.0). Sentence length and total word count were reduced by 40.3% and 39.0%, respectively, and passive voice use decreased by 54.3%.

Conclusion: LLMs provide an efficient, scalable method to evaluate and revise consent language. Integration of AI tools into surgical education may enhance patient understanding, standardize consent materials, and improve communication training across all levels of surgical training.

President's Session | Abstract | Basic/Transactional Science | Breast

Persistent Circulating Tumor Cells in Early Luminal Breast Cancer: Indicator of Homeostasis, Therapeutic Resistance, or Future Relapse?

Kristine Von Maltzen, Kattryn Baldwin, Adam Zulli, Tracy Caillouet, Keith White, and Sarah Thayer*,

Background: Estrogen receptor–positive (ER+) breast cancer carries a prolonged risk of late recurrence, often linked to acquired endocrine resistance. Circulating tumor cells (CTCs) may represent minimal residual disease contributing to this risk. Our group previously identified FISH-characterized CTCs sharing genomic alterations with the primary tumor, confirming malignant origin. This longitudinal study examined CTC prevalence and persistence during and after anti-estrogen therapy to assess their relevance to disease recurrence.

Objective: To detect and characterize CTCs in peripheral blood of breast cancer patients with minimal residual disease.

Methods: After IRB approval, women with early-stage luminal breast cancer were enrolled at diagnosis or following completion of primary therapy, up to 10 years post-diagnosis. CTCs were isolated by size-based filtration and reviewed by breast pathology.

Results: Peripheral blood samples from 45 women were collected at 0–12 months (n=17), 13–60 months (n=19), and >60 months (n=9) after treatment. CTCs were detected in 76%, 79%, and 67% of patients across these intervals. Persistence was independent of tumor stage, grade, or treatment duration. No patient developed clinical recurrence during follow-up.

Conclusion: CTCs remain detectable in most women for years after therapy, indicating these are not transient cells shed from the primary tumor but a persistent population enduring even under endocrine suppression. Two hypotheses may explain this stability: (1) cellular homeostasis or dormancy—a balance with host and therapeutic control; and (2) therapy-resistant subclones surviving endocrine pressure but pharmacologically constrained. Ongoing molecular studies aim to distinguish dormancy from early resistance and define their clinical significance.

President's Session | Abstract | Clinical Science | Colon and Rectal Surgery

Projected Financial Impact of Medicaid Expansion and Potential Repeal on Colorectal Cancer in Louisiana

A Zulli, K Baldwin, S Thayer, K White,

Background: Louisiana's Medicaid Expansion (ME) improved access to colorectal cancer (CRC) screening, driving earlier detection, reducing late-stage burden, and decreasing uncompensated care. Advanced-stage CRC costs $90,000–$175,000 per patient—nearly five times higher than early-stage care—resulting in substantial pre-expansion annual losses for the Louisiana healthcare system.

Objective: To quantify ME's effect on the financial burden of CRC care in Louisiana by evaluating changes in stage distribution and uncompensated care, and to project the impact of potential policy reversal.

Methods: Data were drawn from the Louisiana Tumor Registry, Louisiana Department of Health cost reports, 2019 Louisiana CRC Legislative Report, and Act 540 Uncompensated Care datasets. Pre-post comparisons assessed insurance status, stage at diagnosis, and care costs. Multivariable logistic regression evaluated stage shifts and treatment odds. Annualized uncompensated CRC care and direct treatment costs were modeled by stage.

Results: ME led to a 60% reduction in uninsured CRC hospitalization, lowering the uninsured CRC rate from 5.5% to 1.9%. Curative surgery for localized disease rose 65%, while advanced-stage presentations and emergency surgeries declined. These changes saved approximately $10–15 million annually in uncompensated care and $26 million in avoided late-stage spending. Modeling predicts ME repeal could raise uncompensated CRC care costs by $18–22 million/year and erase early detection gains, with a five-year fiscal impact >$100 million.

Conclusion: Medicaid Expansion has conferred major population health and economic benefits for CRC in Louisiana, reducing late-stage diagnoses and uncompensated care. Policy reversal would reintroduce tens of millions in annual losses and disproportionately impact the state's most vulnerable residents.

Measure	2015	2016	E	2017	2018	2019	2020	2021	2022
Medicaid Enrollment (N, % population)	1485012 (31.9%)	1602954 (34.3%)	X	1790956 (38.3%)	1856480 (39.6%)	1853660 (39.8%)	1883015 (40.5%)	1953276 (42%)	2057869 (44.5%)
Expansion Enrollment (N, % of Medicaid Enrollees)	N/A	299992 (N/A)	P	499175 (23.24%)	456785 (N/A)	605269 (31.5%)	632716 (28.9%)	694824 (32.4%)	781760 (38.9%)
% Individuals Screened for Colorectal cancer	64.2 (2014)	64.1	A		69.3		73.1		69.3
Colorectal Cancer Incidence (Deaths) in Louisiana - All stages	2150 (810)	2170 (790)	N	2150 (830)	2310 (830)	2340 (830)	2370 (880)	2440 (860)	2440 (880)
Colorectal Cancer Incidence in Louisiana with Medicaid Insurance	129	130	S	241	259	262	265	273	273
Colorectal Cancer Incidence in Louisiana with Medicaid Insurance based on Stage			I						
In situ (11.2%)	14	15	O	27	29	29	30	31	31
Local (24.1%)	31	31	N	58	62	63	64	66	66
Regional (38.0%)	49	49		92	98	100	101	104	104
Distant (26.7%)	34	35		64	69	70	71	73	73
Estimated cost per stage within 12 months of diagnosis for Individuals in Louisiana with Medicaid Insurance									
In situ ($37,200)	$537,466	$542,465		$1,003,269	$1,077,931	$1,091,930	$1,105,929	$1,138,594	$1,138,594
Local ($52,756)	$1,640,131	$1,655,388		$3,061,578	$3,289,417	$3,332,136	$3,374,856	$3,474,535	$3,474,535
Regional ($76,639)	$3,756,844	$3,791,791		$7,012,775	$7,534,656	$7,632,509	$7,730,361	$7,958,684	$7,958,684
Distant ($113,889)	$3,922,679	$3,959,169		$7,322,334	$7,867,252	$7,969,424	$8,071,596	$8,309,997	$8,309,997
Early stage total	$2,177,597	$2,197,854		$4,064,848	$4,367,348	$4,424,067	$4,480,785	$4,613,129	$4,613,129
Late stage total	$7,679,523	$7,750,960		$14,335,109	$15,401,908	$15,601,932	$15,801,957	$16,268,682	$16,268,682
Total	$9,857,119	$9,948,814		$18,399,956	$19,769,255	$20,025,999	$20,282,743	$20,881,811	$20,881,811

President's Session | Abstract | Education | Education

Predicting General Surgery Residents' Competence and Autonomy in Core Endovascular Surgery Procedures

A Syed, P Guduri, R Moreci, T Sun, M Kiguchi, B George, M Sheahan III, B Smith,

Background: Vascular surgery remains a core component of general surgery training as required by the ACGME. With the increasing shift toward endovascular techniques, the extent of endovascular exposure among general surgery residents (GSRs) remains unclear.

Objective: To evaluate the competence and autonomy of GSRs in performing core endovascular surgery procedures and to identify areas for improvement in training.

Methods: Operative evaluations from categorical GSRs between 2015 and 2024 were obtained from the Society for Improving Medical Professional Learning (SIMPL) database. Procedures were categorized into arteriovenous (AV) access, cerebrovascular, endoaortic, endovenous, and peripheral vascular intervention (PVI) of the lower extremity. Ratings were analyzed using generalized linear mixed models. Primary outcomes were graduating residents' probabilities of achieving competence and meaningful autonomy in each category.

Results: A total of 1,312 SIMPL operative assessments were analyzed. For average-complexity cases, adjusted probabilities of competence were 92% for endovenous, 92% for AV access, 76% for PVI procedures, 66% for endoaortic, and 62% for cerebrovascular.. Corresponding probabilities for meaningful autonomy were 90%, 87%, 76%, 52%, and 29%, respectively.

Conclusion: Graduating GSRs exhibit the highest competence and autonomy in AV access and endovenous procedures, with lower performance in cerebrovascular and endoaortic cases. These results highlight variability in endovascular training exposure. As

endovascular demand grows, general surgery curricula should evolve to ensure broader, standardized endovascular competency among trainees.

President's Session | Abstract | Clinical Science | Endocrine

Permanent Hypoparathyroidism After Total Thyroidectomy Is Associated with Higher Risk of Chronic Kidney Disease

Jessan Jishu, Mina Liao, Dara Bruce, Emily Persons, Marcela Herrera, Alexandra LaForteza, Emad Kandil,

Background: Permanent hypoparathyroidism (PHPT) is a well-known complication following total thyroidectomy (TT). Recently, there have been reports of chronic kidney disease (CKD) as a long-term consequence of this.

Objective: We aim to assess the risk of CKD in patients experiencing PHPT after TT in a large-scale population throughout the United States.

Methods: Adult patients who underwent TT for thyroid cancer, goiter, or thyrotoxicosis were retrospectively identified from the TriNetX US Collaborative Network, a database of de-identified electronic medical records from 67 healthcare organizations. Propensity score matching was performed on age, sex, race, and major medical comorbidities. The incidence of CKD was compared between patients with and without PHPT.

Results: We identified 81,592 patients who underwent TT, of whom 3,280 developed subsequent PHPT. After propensity matching, there were 3,259 patients in each cohort. Over a follow-up period of 10 years, PHPT was associated with a 2.75-fold increased risk of developing CKD (OR 2.75, 95% CI 2.24-3.38) when compared to the non-PHPT cohort. This risk was elevated for both early-stage (OR 2.91, 95% CI 2.31-3.66) and late-stage CKD (OR 4.37, 95% CI 2.38-8.00). When stratifying by indication for TT, this increased risk persisted in patients with thyroid cancer (OR 2.70, 95% CI 1.98-3.69), goiter (OR 2.60, 95% CI 2.07-3.25), and thyrotoxicosis (OR 2.78, 95% CI 1.79-4.33).

Conclusion: PHPT after TT for both benign and malignant thyroid diseases are associated with substantially greater risks of developing CKD.

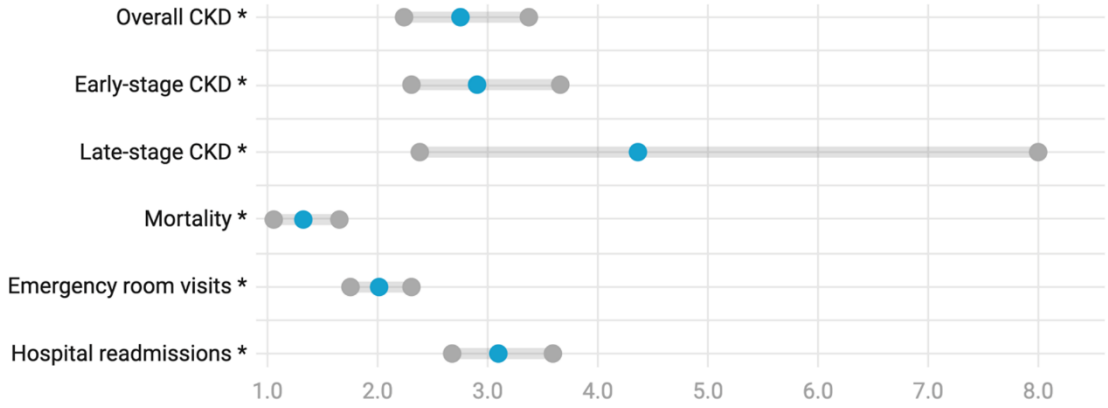


Figure 1. Complications of thyroidectomy in propensity matched cohorts of patients with and without post-operative permanent hypoparathyroidism. Forest plot displaying odds ratios with 95% confidence intervals for 5-year complications. Asterisks indicate statistical significance $p < 0.05$. CKD: chronic kidney disease.

President's Session | Abstract | Clinical Science | Pediatric Surgery

Duration of Coma Predicts Outcomes in Pediatric and Adolescent Traumatic Brain Injury

Luz de Luna Lawes, Meagan Kelly, Gerald Sibley, Lindsey Elliott, Scott Schultz, Ann Tilton, Jerome Volk, David C Yu, Jessica A Zagory,

Background: Traumatic brain injury (TBI) is a leading cause of pediatric morbidity and mortality in the United States, but little is known about long-term neurorecovery. In this study, we investigated the duration of post-TBI coma on outcomes.

Objective: This study aims to determine the role of coma duration in the recovery of pediatric patients following a TBI.

Methods: We performed a retrospective review of pediatric and adolescent trauma patients (< 18 years old) admitted to an accredited pediatric inpatient rehabilitation (IPR) unit after TBI between January 1, 2018, and December 31, 2023. Outcomes include Pediatric Functional Independence Measure (WeeFIM) scores measured at IPR admission and discharge.

Results: 122 patients were included. When comparing patients who had duration of coma <7 (short, N=62) versus >/=7 days (long, N=60), we found patients with long duration had lower Glasgow Coma Scale at admission, have longer hospital (38.2±29.0 vs 15.2±10.7 days, p<0.0001) and IPR length of stay (LOS, 47.7±26 vs 27.2±20 days, p<0.0001), need a wheelchair (65 vs 29%, p=0.0001), and require botulism for spasticity (43.3 vs 22.5%, p=0.0203). WeeFIM scores across all domains (self-care, mobility, and cognition) were significantly worse for patients with longer duration of coma at both IPR admission and discharge (all p<0.01), and these patients were less likely to attain school/community reintegration (76 vs 93%, p=0.01). When analyzed for initial GCS, the findings were not reproduced.

Conclusion: Duration of coma greater than 7 days after TBI predicts worse outcomes for pediatric and adolescent patients.

	Coma <7 days (62)	Coma >/=7 days (60)	P value
Male	45	41	0.6926
Blunt force injury	52	48	0.7038
Initial GCS	7±3.6	4.5±1.8	<0.0001
WeeFIM self-care at discharge	34.1±16	24.1±15.5	0.0004
WeeFIM mobility at discharge	20.5±9	14.8±9	0.0001
WeeFIM cognition at discharge	19±9.7	14.7±8.9	0.005

President's Session | Abstract | Basic/Transactional Science | Surgical Oncology

Histological analysis of resected neuroendocrine tumors to study low objective response rates to anti-angiogenics such as sunitinib.

K Avanzino, N Skill, Y Bren-Mattison, J Boudreaux, R Thiagarajan, M Maluccio,

Background: Neuroendocrine tumors (NETs) are a group of rare cancers where surgical resection is the primary treatment for localized and metastatic disease. NETs are highly vascular, and anti-angiogenic therapies such as the VEGFR1 inhibitor sunitinib have been explored to improve outcomes. However, clinical response rates remain low (~9% in pancreatic NETs; ~2% in small bowel NETs). .

Objective: The purpose of this study was to utilize our tissue repository to investigate possible associations between VEGFR1 expression and ex-vivo sunitinib effectiveness, with the goal of improving biological stratification and adjuvant therapy selection.

Methods: Residual NET tissue obtained at surgery was cultured ex-vivo for 14 days ± sunitinib. Angiogenesis was quantified by microscopic measurement of vascular sprouts, and percent inhibition was calculated relative to matched untreated fragments. Tumors were ranked using waterfall plots. Tissue from the 5 strongest responders (>80% inhibition) and 5 weakest responders (<20% inhibition) underwent immunohistochemistry for synaptophysin and VEGFR1, quantified using HALO image analysis.

Results: Among 315 NET samples, sunitinib significantly suppressed angiogenesis initiation (70±7% untreated vs 37±9% treated, $p<0.001$) and angiogenic growth (4.2±0.1 vs 1.2±0.1 a.u, $p<0.001$). All tumors expressed synaptophysin and VEGFR1. However, VEGFR1 expression did not differ between sunitinib-sensitive and sunitinib-resistant tumors.

Conclusion: While Sunitinib reduced NET ex-vivo angiogenesis, its effectiveness is not explained by tumor VEGFR1 expression alone. These findings suggest additional biological mechanisms determine response and that VEGFR1 is not a sufficient biomarker for patient selection. Future molecular profiling, including next-generation sequencing, may enable biological stratification of NETs and more precise use of anti-angiogenic therapies.

President's Session | Abstract | Basic/Transactional Science | Surgical Oncology

Effects of Short-Chain Fatty Acid and FOLFIRINOX therapy on Pancreatic Cancer in Murine Models

Garima G. Sinha, Sina Aslanabadi, Connor Hartupee, Damla Ustunsoz, Sudhakar Ammanamanchi , Joycelynn Coleman-Barnett, Ian A. Hodgdon, Ira Spector, Alla Arzumanyan, Mark A. Feitelson, Omeed Moaven,

Background: Pancreatic ductal adenocarcinoma (PDAC) is a deadly malignancy with limited treatment success. Emerging evidence suggests that short-chain fatty acids (SCFAs), which are gut microbiota-derived metabolites, may modulate tumor biology and enhance therapeutic responses.

Objective: This in vivo study evaluated the effects of daily oral administration of a SCFA mixture (sodium acetate, sodium propionate, and sodium butyrate), alone or combined with FOLFIRINOX chemotherapy, on tumor progression, tissue pathology, and survival in murine models of pancreatic cancer.

Methods: Twenty-eight immunocompetent mice were inoculated with KPC murine pancreatic cancer cells, and twenty nude mice were inoculated with MiaPaCa-2 human pancreatic cancer cells. Once tumors reached 50–100 mm^3, animals were randomized into four groups: (1) Control, (2) Chemotherapy (FOLFIRINOX), (3) SCFA, and (4) Combination (SCFA + FOLFIRINOX). Treatments were administered for three weeks; nude mice in the SCFA and Combination groups received two additional weeks of SCFA in drinking water. Tumor volume, weight, and survival were monitored; major organs were assessed for toxicity.

Results: Combination therapy significantly prolonged survival compared with Control ($p < 0.0018$), SCFA ($p < 0.0018$), and FOLFIRINOX ($p < 0.0026$) monotherapies. Median days survived in nude mice increased from 40 (Control) and 55 (both monotherapy groups) to 70 (Combination). Tumor growth suppression was greatest in the Combination group, with moderate effects in the monotherapy groups.

Conclusion: These findings demonstrate that SCFA supplementation enhances FOLFIRINOX efficacy in murine PDAC models, reducing tumor growth and extending survival. This protocol provides a foundation for further investigation of microbiota-derived metabolites as adjuncts to pancreatic cancer therapy.

President's Session | Abstract | Clinical Science | Trauma/Burn/Critical Care

Whole Blood for Trauma Resuscitation: A Cost-Dominant Strategy to Reduce Complications

Z Zhang, A Campbell, V Menard, L Gragert, S Lawicki, C Mills, D Tatum, K Harrell, J Zhang, J Duchesne, S Taghavi,

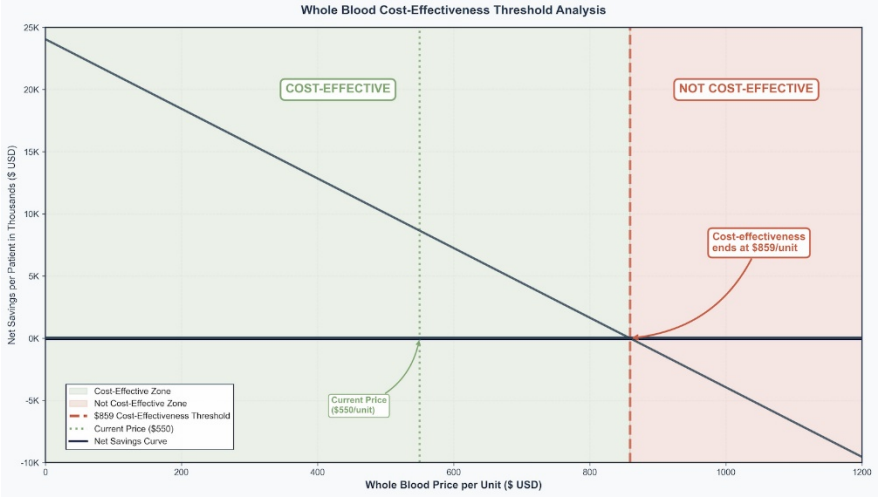
Background: Whole blood (WB) is increasingly used in trauma resuscitation and appears to reduce complications versus balanced component therapy (BCT).

Objective: Given WB's higher cost and shorter shelf life, this study examined the cost-effectiveness of WB compared to BCT. We hypothesized that WB transfusion would be more cost-effective than BCT due to the significant reduction in costly complications.

Methods: Clinical outcomes were derived from a propensity-matched cohort of 4,434 trauma patients in the Trauma Quality Improvement Program database (2018–2021), with a time horizon of index hospitalization. Complication costs were obtained from the 2022 Healthcare Cost and Utilization Project National Inpatient Sample. BCT component costs were based on the 2021 National Blood Collection and Utilization Survey, adjusted to 2022 dollars. WB cost estimates were obtained through consultation with an expert in Transfusion and Apheresis Services. Transfusion costs used were $550 per unit of WB and $499.50 for equivalent BCT (1:1:0.25 ratio). Comprehensive one-way and probabilistic sensitivity analyses were conducted.

Results: WB was more effective at preventing complications and produced lower overall costs than BCT. After accounting for an additional $126 per patient in transfusion costs, WB yielded net savings of $6,022,171. WB remained cost-dominant up to $859 per unit. Event-level savings per 1,000 patients were $166,127 (ARDS), $62,758 (DVT), $57,644 (cardiac arrest with CPR), and $21,605 (AKI), corresponding to $48.70 returned for every additional dollar spent on WB.

Conclusion: Whole blood transfusion appears to be more cost-effective than BCT, preventing major in-hospital complications while reducing overall healthcare costs.



President's Session | Abstract | Basic/Transactional Science | Hepatobiliary and Pancreas

Trib3 Identified as a Key Therapeutic Target for Pancreatic Cancer Stem Cells

Nirjhar M. Aloy, Kyle McAndrews, Adam Zulli, Kat Baldwin, Kristine Von Maltzen, Keith White, Tony Hollingsworth, Sarah Thayer,

Background: Pancreatic ductal adenocarcinoma (PDAC) is among the most lethal cancers, exhibiting early dissemination and chemoresistance. These features are attributed to a specialized subpopulation of cancer stem cells (CSCs). Our lab has defined the cell of origin for PDAC within the pancreatic duct gland (PDG) stem cell compartment, a region crucial for epithelial renewal. Creation and maintenance of the CSC pool is hypothesized to underlie aggressive tumor biology, but transcriptional networks in this compartment remain poorly characterized.

Objective: To define molecular pathways unique to pancreatic cancer stem cells (CSCs), such as Trib3, that can be exploited as targeted therapies to eradicate CSCs while sparing normal pancreatic stem cells.

Methods: A genetically engineered mouse model and single-cell RNA sequencing were used to trace and compare CSC-enriched (TTKS) and normal (TT) PDG organoids. Key findings were validated in human PDAC models.

Results: Single-cell analysis revealed broad upregulation of stem cell and CSC markers (Mthfd2, Slc7a5, Gadd45a), supporting conserved stem-like signatures in CSCs. Fifteen genes were uniquely upregulated in PDAC CSCs, revealing new CSC-selective pathways. Trib3 was most strongly and widely upregulated among these, with multiple downstream regulators (β-catenin, FOXO1, ATF4) also enriched, indicating robust Trib3-driven network activation.

Conclusion: Identification of a discrete PDG stem cell origin for PDAC enables detailed interrogation of CSC biology. Our model demonstrates that PDAC CSCs activate unique survival and adaptation pathways, with Trib3 emerging as a central regulator. Collectively, this provides new mechanistic insight and positions Trib3 as a compelling CSC-targeted therapeutic candidate.

Surgical Potpourri I | Abstract | Clinical Science | Vascular Surgery

A Retrospective Single Institution Analysis of Risk Factors Associated with Major Lower Extremity Amputations in Patients with Peripheral Artery Disease

M Minvielle, C Virk, P Perkowski, R Duhon, J Campbell, J Tolson, J Cerrone,

Background: Peripheral artery disease (PAD) affects 8.5 million Americans. Chronic limb threatening ischemia (CLTI), its most severe form, is associated with 25% limb loss and 25% mortality within one year, increasing to 45% with major amputation. In 2013, Shreveport's hospital referral region ranked in the highest quintile nationally for amputations and lowest for vascular care intensity.

Objective: To identify trends in vascular care, risk factors, and demographic predictors of major amputation among PAD patients in North Louisiana.

Methods: Following IRB approval, PAD patients from 2021–2024 were identified using Epic Slicer Dicer. Patients undergoing major lower extremity amputation were compared to non-amputees. Data were analyzed using chi-squared and Fisher exact. A heat map was generated with Tableau.

Results: Of 1,133 PAD patients, 80 underwent major amputation. African American race and ZIP code significantly predicted amputation risk (p=0.004). These patients were less likely to undergo CTA (p=0.028) or angiography (p=0.014). Female patients were more likely to have ESRD (p=0.001), undergo AKA (p=0.036), and less likely to have open revascularization (p=0.034). 46% of all amputees were not on a statin, and 30% of African American patients lacked outpatient antiplatelet/anticoagulant therapy (p=0.013).

Conclusion: Disparities in vascular care persist in North Louisiana. PAD patients undergo amputation earlier and with suboptimal medical therapy. Targeted strategies are needed to reduce preventable limb loss in vulnerable populations.

Table 1. Baseline demographics, co-morbidities, screening, and interventions in PAD patients undergoing major lower extremity amputations between 2021-2023	
Total # of Major Lower Extremity Amputees	80
Mean Age, years	60
Sex	
Male	55 (68.75%)
Female	25 (31.25%)
Race	
Black or African American	59 (73.75%)
White	21 (26.25%)
Insurance Type	
Medicare	41 (51.25%)
Medicaid	26 (32.5%)
Private	8 (10%)
Uninsured	2 (2.5%)
VA	3 (3.75%)
Primary Care Physician – Following	44 (55%)
HLD	61 (76.25%)
HTN	68 (85%)
DM	46 (57.5%)
CKD	24 (30%)
ESRD	10 (12.5%)
CAD	27 (33.75%)
CHF	20 (25%)
Smoking History	57 (71.25%)
Preoperative Statin	43 (53.75%)
Preoperative Antiplatelet or Anticoagulant	55 (68.75%)
Prior ABI	36 (45%)
Prior Arterial Ultrasound	43 (53.75%)
Prior CTA	52 (65%)
Prior Dx Angiogram	49 (61.25%)
Prior Endovascular Revascularization	43 (53.25%)
Prior Open Revascularization	23 (28.75%)
Vascular Surgery Consulted or Following	63 (78.75%)
Above Knee Amputation	31 (38.75%)
Below Knee Amputation	49 (61.25%)

Surgical Potpourri I | Abstract | Clinical Science | Colon and Rectal Surgery

Randomized Controlled Trial of Liposomal Bupivacaine vs. Standard Injection on Postoperative Pain After Excisional Hemorrhoidectomy

C Ianiro, J Paruch, C Whitlow, B Kann, M Zelhart, W Johnston, W Kethman, D Kay, D Vargas, S Schuetz, A Broussard, C Shao,

Background: Postoperative pain control after excisional hemorrhoidectomy remains a significant challenge. Previous trials have shown improvement with liposomal bupivicaine (LB); however, it is unclear whether this remains true with modern multi-modal pain strategies.

Objective: This study evaluates the impact of LB on postoperative pain following excisional hemorrhoidectomy in patients receiving a multi-modal pain regimen.

Methods: This single-institution, single-blinded randomized controlled trial compared patients receiving LB mixed with bupivacaine (experimental) and bupivacaine mixed with lidocaine with epinephrine (control). Anesthetic type, block technique, and intraoperative adjuncts were administered at the discretion of the anesthesiologist and surgeon. Multimodal pain regimen included acetaminophen, ibuprofen, gabapentin, and oxycodone or hydromorphone.
Postoperative data were collected via REDCap surveys and phone calls. The study was powered to evaluate a difference in total morphine equivalents (mEq) required within 24 hours postoperatively. Secondary outcomes included postoperative pain scores, time to first opioid use, patient satisfaction scores, and rate of narcotic prescription refills. Statistical analysis was performed using independent t-tests.

Results: A total of 69 patients were randomized (Table 1). There was no significant difference in total morphine equivalents between the groups at 24 hours: 16.2 mEq vs. 22.5 mEq, respectively ($p = 0.28$). Patient satisfaction scores did not differ significantly. Subgroup analysis showed that within the control group, use of intraoperative ketorolac demonstrated improved pain scores across all measures, whereas in the experimental group, only time to first opioid use was significantly improved. Discharge with a complete multimodal pain regimen occurred in 57.1% of experimental patients and 55.8% of controls. Among these, maximum pain scores, narcotic refill prescriptions, and total refill mEq were all reduced, particularly within the control group.

Conclusion: In this randomized trial, the use of liposomal bupivacaine did not significantly reduce postoperative opioid requirements compared to standard local anesthetic following excisional hemorrhoidectomy. However, intraoperative ketorolac use and discharge with a multimodal pain regimen were associated with improved pain and reduced opioid consumption, highlighting the importance of multimodal analgesic strategies.

		Experiment (n = 35)	Control (n = 34)
Sex			
Male		12 (34.2%)	19 (55.8%)
Female		23 (46%)	15 (44.1%)
Age, mean		55.4	54.5
BMI (kg/m2), mean		29.8	28.2
Race/Ethnicity			
White/Caucasian		27 (77.1%)	29 (85.2%)
Black/African American		8 (22.8%)	4 (11.7%)
Other		0 (0%)	1 (2.9%)
Medical Comorbidites			
Liver Failure		0 (0%)	0 (0%)
Renal Failure		0 (0%)	2 (5.8%)
Anxiety		9 (25.7%)	8 (23.5%)
Depression		5 (14.2%)	4 (11.7%)
Other Psychological Disorder		4 (11.4%)	2 (5.8%)
History of Analgesic Adjuncts		8 (22.8%)	7 (20.5%)
Intra-op			
# of Columns Excised			
	1	5 (14.2%)	7 (20.5%)
	2	15 (42.8%)	18 (52.9%)
	3	16 (42.8%)	9 (26.4%)
Ligasure Used		19 (55.2%)	14 (40%)
Technique			
Open		15 (42.8%)	11 (32.3%)
Closed		20 (57.1%)	23 (67.6%)

Surgical Potpourri I | Abstract | Clinical Science | Trauma/Burn/Critical Care

Assessment of Risk Factors and the LRINEC Score in Necrotizing Fasciitis: A Large Propensity-Matched Cohort Study

J Godfried, D Bruce, J Jishu, D Tatum, E Toraih, K Harrell, S Taghavi,

Background: The Laboratory Risk Indicator for Necrotizing Fasciitis (LRINEC) score was developed to aid in early diagnosis of necrotizing soft tissue infections (NSTI), but its performance in broader clinical settings is unclear.

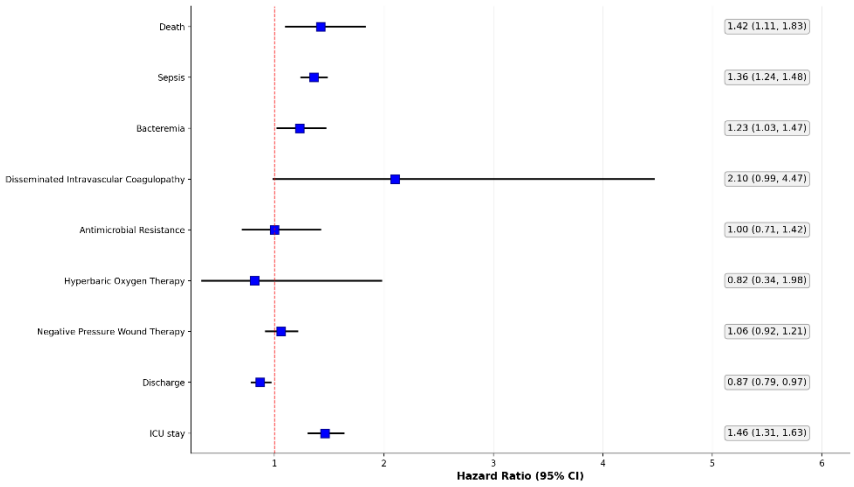
Objective: To evaluate the diagnostic performance of the LRINEC score and assess whether additional clinical presentation factors could improve early NSTI detection.

Methods: This retrospective cohort study used the TriNetX United States Collaborative Network from 2015–2025 to identify adults with first-time NSTI or cellulitis via ICD-10 and CPT codes. Sensitivity, specificity, and diagnostic odds ratio (DOR) were calculated for an LRINEC cutoff ≥8. Propensity score matching (1:1) controlled for demographics and

comorbidities. NSTI and cellulitis matched cohorts were compared for clinical characteristics and 30-day outcomes.

Results: Of the 13,190 patients who met inclusion criteria, 3,287 (25.0%) had NSTI and 9,903 (75.0%) had cellulitis. The LRINEC cutoff showed sensitivity 55.5%, specificity 93.6%, and DOR 18.2. After matching (n=2,436 patients per group), NSTI was associated with obesity, elevated hemoglobin A1C, acidosis, kidney injury, and respiratory failure (all $p<0.05$). NSTI was more common following major lower-body trauma and with Enterococcus, E. Coli, or Klebsiella infection. At 30 days, NSTI correlated with increased mortality (HR 1.42), sepsis (HR 1.36), bacteremia (HR 1.23), and reduced discharge likelihood (HR 0.874).

Conclusion: An LRINEC score of ≥8 was highly specific but missed most NSTI cases, indicating limited standalone diagnostic utility. Our results identified additional features associated with NSTI at presentation. Integrating clinical and microbiologic features may improve diagnostic accuracy and facilitate earlier intervention.



Understanding Obesity Stigma: The Use of Natural Language Processing and Text Mining

S Notani, M Alnaeem, C Holmes, E Toriah, J Baker, D Hennings, S Levy, A Attia,

Background: Obesity stigma significantly affects individuals' psychological, social, and physical health. Studies indicate that weight-based discrimination has become increasingly prevalent, with consequences comparable to those of racial or gender-based bias. Approximately 42% of U.S. adults report experiencing weight stigma, which extends to those seeking evidence-based treatments such as GLP-1 receptor agonists (GLP-1 RAs) and bariatric surgery.

Objective: This study utilizes natural language processing (NLP) to analyze social media data, uncovering sentiments and patterns of stigma related to medical and surgical treatments for obesity.

Methods: The study analyzed one million Reddit posts, including confessional-style data downloaded from HuggingFace. GLP-1 Receptor Agonist (GLP-1RA) and bariatric surgery discussions were extracted via the RedditExtractor package in R. Text preprocessing in Python involved tokenization and stopword removal. Sentiment analysis was performed using the TextBlob library to classify posts as positive, neutral, or negative and Latent Dirichlet Allocation was used to identify key themes and narratives.

Results: From the analysis, 44,378 posts (4.4%) discussed weight-related topics, and 7,538 posts focused on GLP-1RA and bariatric surgery. Sentiment analysis revealed that 54% of weight-related posts expressed negative sentiments, while 44% were positive. Bigram analysis highlighted frequent terms like "lose weight" (2,208 occurrences), "mental health" (3,231 occurrences), and "fat people" (3,775 occurrences). Trigrams exposed stigmatizing language, such as "I hate fat people" (2,104 occurrences), reflecting overt bias toward individuals with obesity. Mental health-related phrases like "depression and anxiety" co-occurred frequently, indicating significant overlap. GLP-1RA discussions centered on stigma from family and political stigma concerns, alongside financial and healthcare access challenges. Bariatric surgery posts highlighted immediate weight-loss benefits but raised concerns about the lengthy qualification process, nutritional deficiencies, and post-surgical lifestyle adjustments.

Conclusion: Analyzing social media discussions helps us better understand societal attitudes, patterns of bias, and disparities. This deeper insight is crucial for addressing these challenges and improving care for individuals with obesity.

Surgical Potpourri I | Abstract | Basic/Transactional Science | Otolaryngology

Everolimus Sensitizes Anti-PD-1 Resistant Head and Neck Squamous Cell Carcinoma by Suppressing HIF-1α/PD-L1 Signaling and Inducing Immunogenic Cell Death

Claire Brescher, Priyatosh Nath, Chun Li, Tara Moore-Medlin, Alok Khandelwal, Cherie-Ann Nathan,

Background: HPV-negative HNSCC is associated with poor outcomes (63% five-year survival rate with less than 50% in locally advanced disease). mTOR inhibitors result in initial tumor inhibition, but long-term use results in acquired resistance. New therapies are needed to treat HNSCC.

Objective: 1. To evaluate whether Everolimus pretreatment decreases the expression of HIF-1α and PD-L1 on HNSCC tumor cells.
2. To determine if Everolimus induces ferroptosis and the release of HMGB1, an immunogenic signal, in HNSCC cells.

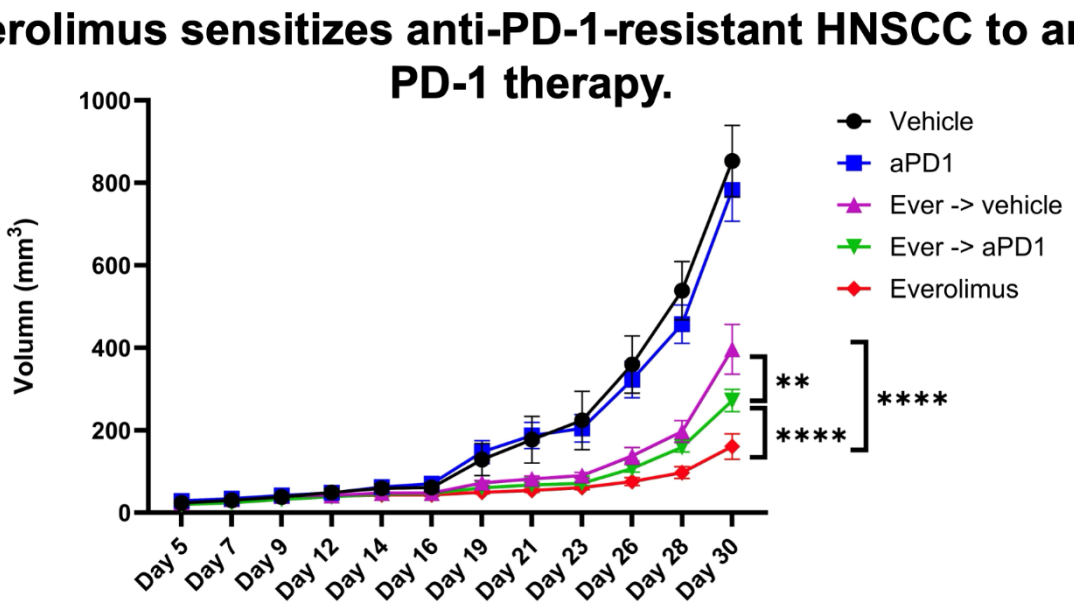
Methods: ROC-1 tumors in a mouse xenograft model were separated into five treatment groups: control, anti-PD-1 monotherapy, Everolimus monotherapy, Everolimus primed followed by vehicle, and Everolimus primed followed by anti-PD-1 therapy. Tumors were harvested and sectioned for analysis.
Immunohistochemistry was performed on tumor sections to assess the nuclear expression HMGB1.

An ELISA was performed on ROC-1 cells to quantify extracellular HMGB1, a marker for immunogenic cell death, in samples from vehicle-treated cells and Everolimus-treated cells. Western blotting was used to quantify intracellular HMGB1.

The protein levels of HIF-1α and PD-L1 in vehicle-treated and Everolimus-treated ROC-1 cell lysate groups was determined using Western blotting and normalized against the loading control protein α-Tubulin.

Results: Priming with Everolimus significantly downregulates the protein levels of HIF-1α and its downstream target, PD-L1 in TP53-mutant HNSCC. Secondly, we observed a significant increase in both intracellular and extracellular HMGB1.

Conclusion: Our findings demonstrate that pretreatment with Everolimus significantly enhances the efficacy of anti-PD-1 therapy in TP53 mutant HNSCC by reducing the tumor's ability to evade immune surveillance and inducing immunogenic cell death, likely ferroptosis.



Implementing Normothermic Regional Perfusion in Louisiana; Advancing Abdominal Organ Recovery

K Capalbo, D Sonnier, J Ngo, H Bohorquez,

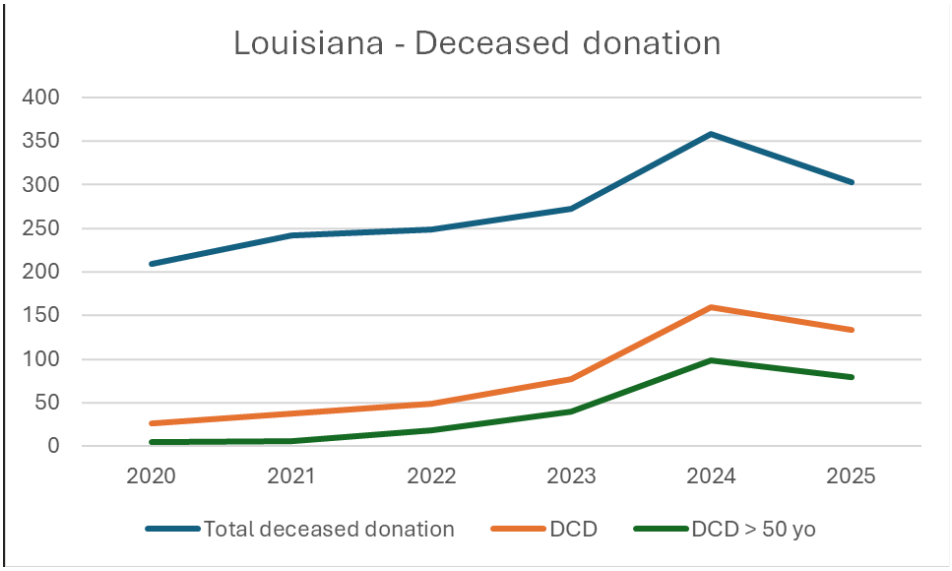
Background: The adoption of advanced technologies for organ recovery—Normothermic Regional Perfusion (NRP)—and organ preservation—Normothermic Machine Perfusion (NMP)—in donors after cardiac death (DCD) has significantly expanded organ utilization. These innovations have enabled the use of organs from older and/or obese donors, longer ischemia times, and improved viability of marginal organs.

Objective: To evaluate the impact of implementing NRP and NMP on the utilization of abdominal organs from DCD donors in the state of Louisiana.

Methods: Abdominal DCD data from the OPTN-SRTR database for Louisiana were analyzed from January 2020 through September 2025, with projections extending to December 2025. NRP was introduced in Louisiana transplant programs in April 2024, followed by NMP in June 2025.

Results: Over the past five years, the increase in total deceased donations (brain death + DCD) in Louisiana has been primarily driven by a rise in DCD donors. A notable surge occurred in 2024, with a 19% increase in total deceased donations and a 207% increase in DCD contributions. Importantly, DCD organ utilization from donors over 50 years old rose significantly (2023: N=40; 2024: N=99; $p<0.05$). The implementation of NRP/NMP facilitated the use of 19% more DCD organs that would have previously been discarded under stricter acceptance criteria. Both liver and kidney acceptance and transplant rates improved in this new era.

Conclusion: The integration of NRP and NMP has broadened DCD donor criteria and substantially increased abdominal organ utilization in Louisiana.



Surgical Potpourri I | Abstract | Clinical Science | Colon and Rectal Surgery

Socioeconomic Drivers of Colorectal Cancer Incidence in Rural Louisiana

Connie Shao, Andrew Broussard, Cora Ianiro, W Forrest Johnston, Brian Kann, William Kethman, Charles Whitlow, Danielle Kay, David Vargas, Steven Schuetz, Jennifer Paruch,

Background: Colorectal cancer (CRC) continues to be a major public health concern in the United States, with disparities in incidence across geographic and sociodemographic contexts.

Objective: This study compares CRC incidence in 2020 between urban and rural Louisiana parishes as defined by 2023 United States Department of Agriculture.

Methods: CRC incidence from the Louisiana state cancer registry were age-adjusted (2000 U.S. standard population) and compared among urban (n=35) and rural (n=23) parishes. Additional variables included access to exercise, food environment index, environmental (air and water) pollution, unemployment rate, obesity rate, and sex and race distribution were cross-referenced from the County Health Rankings and Roadmaps dataset. Parishes were compared using t-tests and chi-square tests, CRC incidence was analyzed with multivariable regression using t-test and F-test to look for independent variables and overall model fit.

Results: In 2023, rural parishes had significantly higher age-adjusted CRC incidence rates compared to urban parishes (mean 31.8 vs 27.2 per 100,000; p=0.003) without significant difference in late-stage presentations (58% vs 58.9%; p=0.6). Rural parishes had smaller populations (mean 30,000 vs. 110,000; p<0.001), lower median household incomes ($47,600 vs. $60,400; p<0.001), higher uninsured (10.5% vs. 9.6%; p=0.02) and unemployment (4.2 vs 3.7; p=0.009) rates, lower food environment index (6.1 vs 7.1; p<0.001), less access to exercise (51.4% vs 64.9%; p=0.01), greater water violations (as reported by the EPA's Safe Drinking Water Information System, 100% vs 0%; p<0.001), higher rates of obesity (43.2% vs 40.9%; p=0.005), and more smoking (23.3% vs 19.9%, p<0.001). Rural parishes were older (18.7% over age 65 vs 17.6%, p=0.08), with similar distributions by race and sex. On multivariable analysis, CRC incidence in each parish was significantly associated with worse food environment index (β = 3.08, 95% CI 1.30–4.85, p = 0.001) and water access (β = 4.52, 95% CI 1.72–7.32, p = 0.002), and inverse associated with percent of Black residents (β = –0.18, 95% CI –0.32 to –0.04, p = 0.014). Rural versus urban status was not significant by t-test (p = 0.535), though the F-test suggested it improved overall model fit (p < 0.001). Other predictors, including access to exercise, insurance status, obesity, smoking, age, and sex, were not significantly associated with increased CRC incidence.

Conclusion: Rural counties experienced higher CRC incidence and socioeconomic disadvantages. Worse food environments and the presence of water violations were consistently associated with higher CRC incidence, suggesting that structural and environmental determinants play a key role in disease risk. Conversely, a higher proportion of Black residents was associated with lower incidence, potentially reflecting demographic or detection differences. Better understanding environmental contributors to CRC may help reduce the burden of disease in rural Louisiana through strategic environmental policies.

Trauma & Critical Care | Abstract | Basic/Transactional Science | Trauma/Burn/ Critical Care

DMSO Preserves Hemodynamics and Tissue Perfusion in a Rat Model of Uncontrolled Hemorrhage

L Sabbagh, S Taghavi, O Jackson-Weaver,

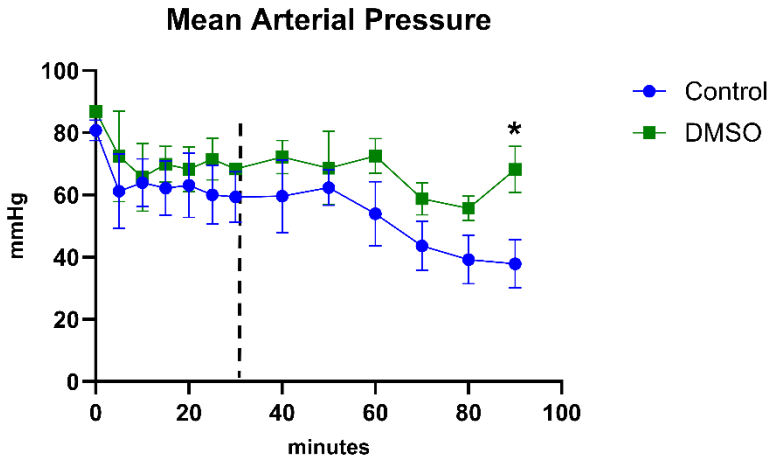
Background: Endothelial glycocalyx degradation plays a critical role in trauma-induced coagulopathy (TIC) through increased fibrinolysis, vascular permeability, and inflammation.

Objective: We hypothesize that the administration of dimethyl sulfoxide (DMSO) in a rat model of uncontrolled hemorrhage may mitigate glycocalyx shedding and therefore organ damage and TIC.

Methods: Male Sprague-Dawley rats were anesthetized with isoflurane in 100% O. Right internal jugular vein and femoral artery lines were placed. A midline laparotomy was performed to expose the spleen, which was transected transversely. Preweighed gauze was placed inferiorly to the spleen, then weighed and exchanged at predefined intervals. After 30 minutes, 2 mL of either LR or 200 µL/kg DMSO in LR was infused. 0.5 mL blood samples obtained at baseline and 90 minutes were analyzed using Abbot i-STAT1 for blood gases, hematology, and metabolites.

Results: Control rats lost 4% more of their total blood volume than DMSO-treated rats. The DMSO- group maintained higher MAPs (68.2 ± 7.4 vs 37.8 ± 7.6 mmHg, p=0.04). The control group demonstrated a 438% lactate rise (0.9 ± 0.2 to 3.5 ± 0.5 mmol/L, p=0.01), while the DMSO-treated rats exhibited a smaller increase of 190% (1.2 ± 0.2 to 2.3 ± 0.6 mmol/L, p=0.2). DMSO appeared to be a protective influence on BUN and potassium levels, although this effect did not reach statistical significance

Conclusion: This study uses a rat model of uncontrolled hemorrhage to demonstrate a protective effect of DMSO against trauma-induced coagulopathy. Our results indicate a relative preservation of hemodynamic stability and lactate levels in DMSO-treated vs non-treated rats.



KetaMinding the Gap: Exploring the EfWicacy, Safety and Practical Considerations of Ketamine in the prehospital setting in the Geriatric Population

Introduction: Ketamine has emerged as a valuable pharmacologic agent in the prehospital management of trauma patients, offering unique benefits due to its analgesic, dissociative, and hemodynamically stable profile. Unlike traditional opioids, ketamine preserves airways reflexes, supports cardiovascular function, and provides rapid, effective pain control- key advantages in the dynamic and resource-limited prehospital environment. Studies suggest ketamine is particularly beneficial for geriatric patients with hemorrhagic shock, polytrauma, or those requiring procedural sedation or airway management. Adverse effects in this patient population, such as emergence reactions and potential for increased intracranial pressure, have been studied in recent literature with no support to these concerns. Despite this evidence the use of ketamine in the prehospital setting for geriatric patients is still limited. The aim of this study was to analyze the use of ketamine in geriatric trauma patients.

Methods: This was a retrospective analysis utilizing data from a prospectively maintained multicenter trauma registry through the Western Trauma Association. The registry includes prospectively collected data from 16 Levels I and Level 2 trauma centers across the United States. All trauma patients aged 65 years or older who were transported to participating centers by prehospital emergency medical services and received prehospital ketamine were eligible. Patient demographics, injury severity, and clinical outcomes were analyzed.

Results: There were 259 patients in the geriatric population (65-95 years, median 75 years) and 925 in the non-geriatric population (1-64 years, median 37 years). The average Injury Severity Score (ISS) was 13 and 15 in geriatric and non-geriatric respectively, while the Abbreviated Injury Scale of the Head (AIS head) of only 1 in both groups. About 80% of patients received ketamine due to complaints of pain in both groups. There was no significant change in the average systolic blood pressure, heart rate, respiratory rate, GCS (median or average) and SaO2 prehospital (prior to ketamine) when compared to initial hospital assessment for both geriatric and non-geriatrics ($p>0.05$). On subgroup analysis, there was a total of 48 patients that had a change greater than one in their GCS prior to ketamine, 18 of which had improvement. Of those that had a worsening GCS after ketamine ($n=30$), their ISS was 22 and their AIS head was 4.

Conclusions: Ketamine is an emerging medication for prehospital analgesia and sedation in trauma patients. Despite historical concerns regarding the use of ketamine in older adults, the results from this study do not demonstrate that ketamine was unsafe in the geriatric trauma population. Future large-scale prospective studies are needed to further evaluate its safety profile and optimize dosing in this vulnerable group.

Angioembolization vs. Surgical Repair in Pediatric Liver Trauma: A Propensity Score–Matched Analysis of TQIP

A Al-Shammari, Z Zhang, X Zhang, D Tahan, S Kim, D Tatum, K Harrell, J Zhang, C McGinness, D Yu, S Taghavi, Tulane School of Medicine

Background: Liver trauma is a leading cause of pediatric mortality, yet angioembolization (AE) remains underutilized in children with these injuries despite its established role in adults. This study aims to compare the in-hospital health outcomes of AE and SR in pediatric liver trauma management using TQIP. We hypothesized that AE would be associated with lower in-hospital mortality compared to surgical repair (SR).

Objective: This study aims to compare the in-hospital health outcomes of AE and SR in pediatric liver trauma management using TQIP. We hypothesized that AE would be associated with lower in-hospital mortality compared to surgical repair (SR).

Methods: We conducted a multi-center retrospective cohort study using the ACS TQIP database (2018-2021) to identify pediatric patients (<18 years) with liver trauma who underwent AE or SR (N=842). The primary outcome was in-hospital mortality; secondary outcomes included discharge disposition, ICU/hospital length of stay, early blood product use, and in-hospital complications. One-to-one propensity score matching and multivariable logistic regression were used to adjust for confounding.

Results: In the matched cohort (N=294), AE was associated with lower mortality (6.8% vs 19.7%; p=0.001). AE patients were more often discharged home (68.0% vs 39.5%; p<0.001) and required fewer transfusions within four hours: packed red blood cells (56.3% vs 77.8%; p<0.001), plasma (38.7% vs 67.1%; p<0.001), and platelets (19.0% vs 49.3%; p<0.001). AE remained independently associated with reduced mortality (OR=0.30, 95% CI 0.13–0.63; p<0.01), with Injury Severity Score (ISS) predicting mortality (OR=1.06, 95% CI 1.02–1.09; p<0.01). Age, sex, and penetrating injury were not significant predictors. Model performance was strong (AUC=0.789).

Conclusion: AE was associated with lower mortality and transfusion needs than SR in pediatric liver trauma. Our findings support AE as a viable adjunct for stable patients, warranting prospective validation.

Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

Am I too old for this: What is the Survival of Older Patients Receiving Resuscitative Thoracotomies?

S Jackson, H Megison, J Robinson, C Zino, S Baker, J Schoen, L Stuke, P Greiffenstein, A Marr, JP Hunt, AA Smith,

Background: For patients with traumatic cardiac arrest, the success rate of Resuscitative Thoracotomy (RT) for penetrating trauma is poor. When deciding to perform RT, current guidelines only focus on injury mechanism and duration of cardiac arrest. Data is limited on the impact of patient specific factors, including age, on survival after RT. This study aims to determine if there is an age threshold beyond which RT after penetrating trauma does not provide clinical benefit.

Objective: 1. Describe current indications for Resuscitative Thoracotomy
2. Discuss factors and improve and worsen outcomes in patients undergoing Resuscitative Thoracotomy
3. Analyze extremes of age as a marker of decreased survivability in Resuscitative Thoracotomies

Methods: The Trauma Quality Improvement Program (TQIP) Participant Use File (PUF) from 2020-2021 was used to identify thoracotomies via common procedural terminology codes. Resuscitative thoracotomies were defined as patients arriving to the emergency department with prehospital cardiac arrest, zero systolic blood pressure, and pulse rate. Inclusion criteria were patients undergoing RT secondary to penetrating trauma mechanism. Patients were stratified by age (<70 years, ≥70 years), with mortality calculated for each cohort. Bivariate analyses were then performed to compare mortality between cohorts.

Results: A total of 5,860 RTs after penetrating trauma were identified within the study period. Overall mortality was 99.2%. Patients over 70 years of age with penetrating trauma exhibited a 100% mortality as compared to younger patients (p=0.01).

Conclusion: We present the first study utilizing TQIP data to demonstrate no survival benefit for patients over 70 undergoing RT with a penetrating trauma mechanism. These results underscore the need to redefine RT guidelines, particularly regarding age-specific considerations, optimize clinical decision-making and mitigate potential morbidity for the clinician.

Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

Multicenter Analysis of Standard of Care versus Oxandrolone versus Testosterone in burn hypermetaboliSm (MASCOTS): First Interim Analysis

A Hong, P Hannan, A Ivanko, D Danos, A DeWitt Davis, G DeFelice, J Schoen, J Carter, V Miles,

Background: After a major burn injury, patients experience a hypermetabolic response leading to extensive immunosuppression, inflammation, and muscle wasting. Historically, oxandrolone has been used to combat these deleterious effects in severely burned patients. However, in June 2023, the FDA abruptly removed Oxandrolone from the market. Other anabolic supplements have shown some promise in inducing a similar blunting effect of the hypermetabolic response; however, no research has directly compared these anabolic alternatives to oxandrolone.

Objective: This study aims to compare outcomes in patients receiving oxandrolone, testosterone, or the standard of care (SOC, no anabolic supplements).

Methods: An IRB-approved, multicenter retrospective and prospective study is currently reviewing patients >18 years of age who suffered >20% total body surface area (TBSA) thermal burn injuries from 6/2022 to 9/2025. Patients taking hormonal modulating therapy and non-thermal injuries were excluded. Primary outcome was inpatient weight loss > 5kg. Propensity score-matched comparison was conducted between patients treated with oxandrolone or testosterone and SOC. Inpatient weight loss in the matched cohort was compared using logistic regression. Analysis was conducted in 9/2025 by the primary site.

Results: The study included 527 patients: 199 received oxandrolone, 59 received testosterone, and 269 received SOC. Full thickness burns were present in 90.3%, with 19.2% having an inhalation injury and 12.5% experiencing concomitant trauma. The median hospital length of stay was 36 days for oxandrolone, 36 days for testosterone, and 25 days for SOC patients ($p<0.0001$). Median absolute weight change from admission to discharge was -4kg in oxandrolone, -2.4kg in testosterone, and -0.25kg in SOC patients, with a significant difference between the three groups ($p = 0.0002$). 110 patients treated with oxandrolone or testosterone were propensity score-matched to SOC controls; the odds of >5kg inpatient weight loss was not significantly different ($p=0.1126$).

Conclusion: MASCOTS is the first study in the literature comparing outcomes of various anabolic steroids in the treatment of burn hypermetabolism. This analysis gives an overview about how anabolic supplements could affect outcomes in severely burned patients. As this study progresses and our dataset grows, we hope to further explore the effects of these anabolic agents on the hypermetabolic response and overall burn patient outcomes.

Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

Impact of Alcohol on Intubation Risk in Trauma Patients Treated with Prehospital Ketamine: A Multicenter Study

K Andre, D Demessie, C Cook, J Aiken, R Rodriguez, T Hightower, A McNickle, J Murry, B Pero, B Martinez, B Allen, M Muir, T Vaughn, R Tseng, B Axtman, J Knudsving Partida, J Haan, K Lightwine, T Schroeppel, Z Stillman, P Bjordal, J Guido, M Charles, K Knoten, A Cavalea, J Griepentrog, T Lian, M Schreiber, S Briggs, M Ahmeti, A Smith,

Background: Ketamine is increasingly used for acute pain management in trauma patients. Unlike opioids and benzodiazepines, it generally does not cause respiratory depression, potentially making it a safer drug for intoxicated patients.

Objective: This study aimed to evaluate whether intoxicated trauma patients who received prehospital ketamine have an increased likelihood of requiring intubation.

Methods: This retrospective, multicenter study included adult trauma patients who received prehospital ketamine for pain management from EMS and presented to eight level 1 and level 2 trauma centers over a two-year period. Trauma transfers and patients with an initial GCS of less than 8 were excluded. Patients were classified as ethanol positive (EtOH+) or ethanol negative (EtOH-) based on a BAC of 80 mg/dL upon presentation to the ED. ED intubation was the primary outcome; bivariate and multivariable logistic regression was used to estimate adjusted ORs with 95% CIs.

Results: From a total of 1,187 patients, 629 (53%) were included in the analysis. 91 (14.5%) were EtOH+. EtOH+ patients were significantly younger (median 35 vs 47.5 years, $p < 0.0001$) and sustained more severe injuries (ISS 10 vs 9, $p = 0.065$). Ketamine dosing was similar between groups (25 mg vs 25 mg, $p = 0.45$). Most injuries were blunt in both groups (EtOH+ 89.0% and EtOH- 85.5%, p=0.56). The prevalence of TBI (6.6% vs 7.5%, p=0.77) and male gender (68.1% vs 63.7% p=0.42) did not differ significantly between groups. Opioid and benzodiazepine use were similar between groups (43.9% vs. 49.3%, p=0.35). Fluid or blood resuscitation occurred more frequently among EtOH+ patients (54.9% vs. 36.3%, p=0.001). Of the 45 patients (7.2%) who were intubated, a slightly higher proportion were EtOH+ (9.9% vs. 6.7%, p=0.28). In multivariable analysis, intoxication was not significantly associated with intubation (OR 1.63, 95% CI 0.71–3.72; p=0.25). Higher ISS (Per 5 unit OR 1.69, 95% CI 1.43–1.99; $p<0.001$) and mechanism of injury (OR 2.70, 95% CI 1.06–6.90; p=0.038) were independently associated with intubation in the ED.

Conclusion: Intoxicated trauma patients receiving prehospital ketamine were younger in age and sustained more severe injuries, but alcohol was not independently associated with ED intubation. These findings suggest that while alcohol use may influence subtle patient physiology and initial presentation, it does not independently drive the need for emergent intubation in this population.

Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

A Multicenter Study of Early Respiratory Culture in Intubated Trauma Patients

K Harrell, A Mortemore, T Vanooteghem, M Gujju, N Jiabao, N Truong, J Nahmias, A Buttress, J Raine, E Maxwell, M Rippy, R Maxwell, S Taghavi,

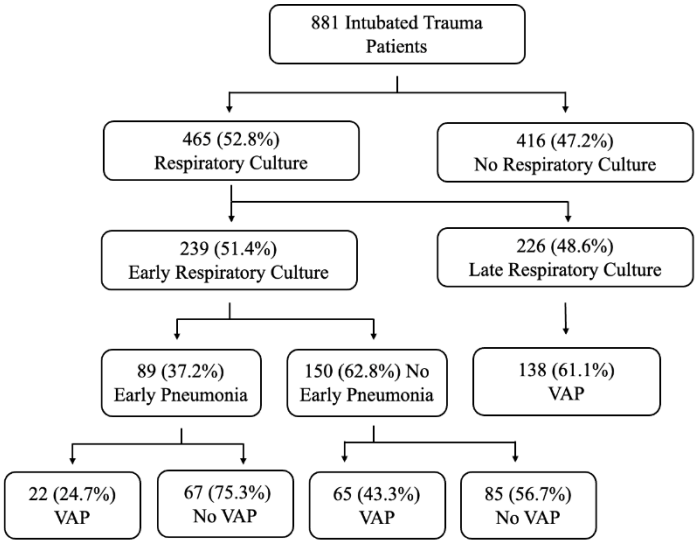
Background: Trauma patients have unique risk factors for ventilator-associated pneumonia (VAP) including traumatic brain injury (TBI) and a high risk of aspiration especially during emergency intubation.

Objective: We hypothesize that early respiratory culture (ERC) will decrease the rates of ventilator-associated pneumonia diagnoses.

Methods: Trauma patients who were emergently intubated and underwent mechanical ventilation for at least 2 days from July 2022 – June 2024 at three Level 1 trauma centers were included. ERC was defined as lower respiratory cultures within 1 day of intubation and VAP was defined as ≥104 CFU on a respiratory culture obtained >2 days after intubation. Logistic regression identified factors associated with VAP development.

Results: Over two years, 881 intubated patients were included. Respiratory culture was obtained in 465 (53%) patients, of these 239 (51.4%) were ERC (Figure). ERC patients had decreased ventilator days (7 vs. 12 days, $p<0.001$) but similar in-hospital mortality (30% vs. 26%, $p=0.502$) compared to late respiratory culture patients. ERC patients had a 60% lower rate of VAP diagnosis (37% vs. 61%, $p<0.001$). On multivariable regression analysis controlling for age, rib fractures, and ISS, longer ventilator days and TBI were associated with increased odds of VAP while ERC was associated with a decreased odds of VAP.

Conclusion: ERC was obtained in 53% of urgently intubated trauma patients, with 10% of the total cohort diagnosed with early pneumonia. Patients with ERC had a 60% lower rate of VAP diagnosis. The preponderance of early respiratory infections in the trauma population necessitates heightened awareness and better treatment protocols.



Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

Every Hour Counts: Venous Thromboembolism Prophylaxis After Spinal Trauma

A Campbell, M Rubsamen, R Adkins, K Sparling, E Brown, D Tatum, K Harrell, J Zhang, C McGinness, B Shammassian, S Taghavi,

Background: Spinal trauma patients are at risk for venous thromboembolism (VTE) due to immobility, endothelial injury, and hypercoagulability. Current guidelines recommend initiating VTE prophylaxis (VTEp) 24-72 hours after injury, yet optimal timing remains uncertain.

Objective: We sought to investigate the optimal time to administer VTEp in patients with isolated, blunt spinal trauma (IBST) requiring surgery and hypothesized that early VTEp would be associated with fewer VTE events.

Methods: This is an observational study of patients ≥16 years old with IBST (Abbreviated Injury Scale Spine ≥3, ≤2 for other regions) that required surgery within the TQIP database (2018-2022). The time from admission to VTEp initiation was evaluated in four categories: no VTEp, early VTEp (< 24 hours), intermediate VTEp (24-72 hours), and late VTEp (> 72 hours). Multivariate logistic regression was used to evaluate the relationship between VTEp timing and incidents of VTE or in-hospital mortality after adjusting for age, injury severity score, abbreviated injury scale spine, injury type/region, and pharmacologic agent. The primary exposure was VTEp timing. Outcomes included VTE events and in-hospital mortality.

Results: Among 46,868 IBST patients who underwent surgery, 35,367 (75.5%) received pharmacologic VTEp. There were 1,246 VTE events (2.6%) and 1,243 deaths (2.7%). On multivariate analysis, early VTEp (< 24 hours) was associated with significantly lower odds of VTE compared to intermediate VTEp (24-72 hours) and late VTEp (> 72 hours), respectively (OR: 1.40, 95% CI: 1.15-1.73, $p = 0.001$; OR: 1.97, 95% CI: 1.61-2.43, $p < 0.001$). When time was measured continuously, there were 0.2% increased odds of VTE events per hour of delay in administering VTEp ($p < 0.001$).

Conclusion: Preoperative initiation of VTEp in operatively managed spinal trauma patients was associated with reduced mortality. Delays in VTEp increased odds of both VTE events and mortality. These findings support early pharmacologic VTEp in this high-risk population.

Bariatric Surgery | Abstract | Clinical Science | Bariatric/Foregut

Incidence and Predictors of Portal Vein Thrombosis following Bariatric Surgery: Analysis of TriNetX (2014-2023)

H Garcia Navas, C Galvani, D Danos, P Schauer, V Albaugh, M Cook,

Background: Portal vein thrombosis (PVT) is a rare but serious postoperative complication following bariatric surgery.

Objective: This is the largest study to date that aims to identify specific risk factors for PVT following bariatric surgery.

Methods: This study was conducted using TriNetX to identify patients ≥ 18 who underwent laparoscopic sleeve gastrectomy (SG) or Roux-en-Y gastric bypass (RYGB) from 2014-2023. Demographic and clinical characteristics were summarized using descriptive statistics. The primary outcomes were PVT incidence and time to PVT within 12 months post-surgery. Incident PVT within 8 weeks following surgery was used for sensitivity analyses. Data analysis was conducted using TriNetX tools.

Results: 97,080 cases were identified: 66% underwent SG and 34% RYGB. PVT was diagnosed in 186 individuals. 12-month PVT incidence was 0.19%. SG was associated with increased PVT risk at 8 weeks (HR 3.40, 95%CI 2.12-5.45) and 12 months (HR 2.77, 95%CI 1.86-4.13). Black patients had elevated risk at 8 weeks (HR 1.72, 95%CI 1.24-2.38) and 12 months (HR 1.71, 95%CI 1.26-2.31). Additional 12-month risk factors included fibrosis/cirrhosis, and history of venous thrombosis/embolism (VTE). Lipid disorders were protective of PVT at 8 weeks (HR 0.59, 95%CI 0.39-0.89) and 12 months (HR 0.60, 95%CI 0.42-0.86). Ischemic heart disease was also protective at 12 months. Notably, 29% of PVTs occurred after 4 weeks post-op (Figure 1).

Conclusion: SG, black race, fibrosis/cirrhosis, and VTE history are associated with elevated PVT risk. Extended chemoprophylaxis past 4-6 weeks may be warranted in high-risk patients.

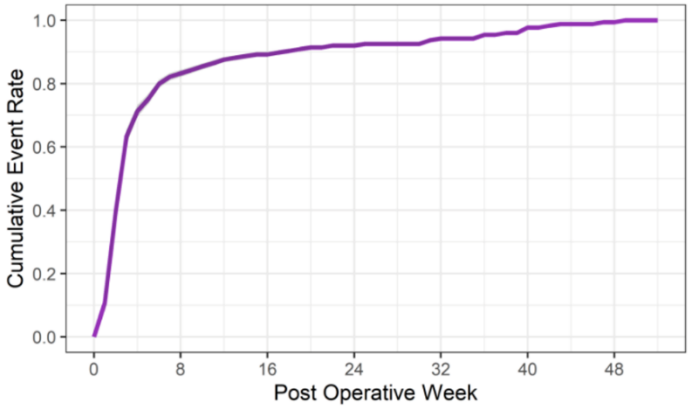


Figure 1. Timing of post-operative PVT after bariatric surgery

Abbreviation: PVT: portal vein thrombosis

Bariatric Surgery | Abstract | Clinical Science | Bariatric/Foregut

Preoperative Use of MBSAQIP Risk Calculator and Its Impact on Metabolic and Bariatric Surgical Outcomes

C Cook, S Notani, M Alnaeem, D Bruce, A Attia, D Hennings, S Levy,

Background: Bariatric surgery is the most effective solution for obesity when conservative treatments fail. It is generally safe and significantly improves weight loss and obesity-related conditions. However, it is underutilized due to patient concerns about surgical risks. To address this, risk calculators were developed to provide personalized outcomes based on patient characteristics and comorbidities. The Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) created a risk calculator to predict surgical risks using patient data. By using this tool pre-operatively, surgeons can offer detailed, individualized risk information to patients.

Objective: This study used the MBSAQIP database to evaluate the calculator's effectiveness in predicting preoperative risk factors and their impact on 30-day adverse events and readmission rates.

Methods: This was a retrospective analysis of 324,624 bariatric patients from the MBSAQIP database from 2021-2022 comparing those counseled with the risk calculator to those who were not. Key differences in demographics, clinical characteristics, and postoperative complications were highlighted. Univariate and multivariate regression analyses identified factors linked to 30-day readmission.

Results: Out of 324,642 patients, 61,153 used the calculator and 263,489 did not. The average age was 43 years for the calculator group and 42 years for the control group ($p<0.001$). The average BMI was 47.8 in the calculator group and 47.3 in the control group. Significant differences were found in age, race, diabetes, immunosuppressant use, COPD, OSA, GERD, surgical history, and procedure type. The study demonstrated that adverse events occurred in 2.8% of both groups ($p=0.56$). Readmission within 30 days was 3.0% for the control group and 2.8% for the calculator group ($p=0.005$). Univariate and Multivariate analysis demonstrated that the MBSAQIP risk calculator significantly reduced 30-day readmissions (OR=0.85, 95% CI 0.80-0.90, $p<0.001$). Sleeve gastrectomy also lowered readmission likelihood (OR=0.57, 95% CI 0.49-0.67, $p<0.001$). Independent predictors of increased readmission included BMI, African American race (OR=1.35, 95% CI 1.20-1.52, $p<0.001$), insulin-dependent diabetes (OR=1.32, 95% CI 1.23-1.42, $p<0.001$), and immunosuppressive therapy (OR=1.42, 95% CI 1.28-1.59, $p<0.001$). No significant differences were found in other adverse events including leaks, bleeds, and re-operations.

Conclusion: The MBSAQIP calculator significantly reduced the likelihood of 30-day readmissions and identified key characteristics that may influence adverse events. In the future, expanding the study to address the racial disparities in calculator use and implementing it in more diverse populations could improve patient outcomes and highlight areas for further research.

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Evaluation of Machine Learning Models for Predicting Postoperative Adverse Events in Conversion and Revision Bariatric Surgery Using MBSAQIP Data

Chiamaka Udedibor, Ibrahim Yazgan, Mahmoud Abd Alnaeem, Danielle Tatum, Dietric Hennings, Shauna Levy, Abdallah Attia,

Background: Accurate prediction of postoperative complications in metabolic and bariatric surgery (MBS) is integral to enhance patient safety and optimizing outcomes. Machine learning (ML) techniques offer potential improvements in pattern detection over traditional statistical methods.

Objective: This study evaluates the performance of various advanced ML models in predicting postoperative complications following conversion or revision MBS. We hypothesize that addressing class imbalance and collinearity will reduce the sensitivity of these models and that significant differences in predictive performance will exist among them.

Methods: A retrospective analysis of MBSAQIP database from 2020 to 2022 was conducted, including demographic, clinical, and surgical variables. The ML models evaluated were Generalized Linear Models (GLM), Support Vector Machines (SVM), Extreme Gradient Boosting (XGBoost), and Deep Learning (DL) neural networks. Each model underwent hyperparameter optimization using grid search. Models were trained and tested under three conditions: unbalanced data, balanced data (using sampling techniques), and after applying anomaly detection to remove outliers. Performance metrics assessed included Area Under the Receiver Operating Characteristic Curve (AUC), accuracy, precision, recall, and F1-score.

Results: A total of 68,498 patients were included of which 11,411 (16.7%) patients developed adverse events. Balancing the data improved the AUC for predicting complications across all models. However, models trained on unbalanced data exhibited higher accuracy but significantly lower sensitivity. For instance, the DL model on unbalanced data achieved an accuracy of 83% but a recall of 0.2%, indicating poor detection of patients who experienced complications. In contrast, balancing the data increased the recall to 61% for the DL model but reduced accuracy to 59%. Anomaly detection did not markedly improve model performance. Feature importance plots from GLM and SVM models consistently identified a history of pulmonary embolism as a significant risk factor for postoperative adverse events. Conversely, patients with a history of adjustable gastric banding (AGB) procedures were less likely to develop complications compared to those with a history of Roux-en-Y gastric bypass (RYGB).

Conclusion: ML models demonstrated limited performance in predicting postoperative complications using the current MBSAQIP dataset, likely due to class imbalance and collinearity among variables. Additionally, the MBSAQIP dataset is not specifically structured for ML model applications, which further impedes their effectiveness. The high accuracy observed with unbalanced data was misleading due to low sensitivity, highlighting the necessity of addressing class imbalance. Future research should focus on enhancing data quality by incorporating additional explanatory variables, and rigorously testing for collinearity to improve ML model performance.

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Outcomes and Patterns Associated with Hiatal Hernia Repair in MBS Conversion/ Revision Cases

D Bruce, M A Alnaeem, C Udedibor ,S Notani, A Attia, D Hennings, S Levy,

Background: Hiatal hernia repairs (HHRs) are increasingly performed in patients undergoing conversion or revision (C/R) metabolic and bariatric surgery (MBS). Despite the rising prevalence of HHRs in this population, its impact on postoperative outcomes remains underexplored.

Objective: This study sought to investigate factors associated with HHRs in patients underwent C/R-MBS, while also evaluating predictors for HHR development.

Methods: A retrospective analysis was conducted on The MBSAQIP dataset of patients undergoing C/R-MBS between 2020 and 2022. The primary outcome is examining patterns and trends of HHRs, with secondary outcomes including incidence of postoperative complications. Stratified analyses were performed by sex, and BMI (<50 vs. ≥50). Procedural history, C/R-related findings, and patients' demographics were considered. Multivariate logistic regression was used to investigate predictors of HHRs. Statistical significance was set at the level of $p < 0.05$.

Results: A total of 71,737 patients were included, of whom 16,442 (23%) underwent HHR during C/R-MBS. The mean (SD) age for the HHRs group was 49.3 years (10.6) with a mean BMI of 40.5 (8) Kg/m2 when compared to No-HHRs group (48.1 years (10.6), 43.3 Kg/m2 (8.8) ,respectively $p < 0.001$). The frequency of HHRs steadily increased 2020 to 2022 (22% vs 35%, $p<0.001$). The majority of HHR patients were female (90.5%) and non-Hispanic (77.9%). The most common performed C/R-procedures were C-RYGB (62%) and C-SG (14.3%). GERD-related findings were strongly associated with HHRs ($p<0.001$). History of SG showed significant association with HHR (OR = 1.45, 95%CI:1.16-1.81, $p < 0.0001$). Postoperative outcomes between the HHR and non-HHR groups showed significant differences in bowel obstruction (1.3% vs 0.8%; $p < 0.001$). Subgroup analysis by BMI revealed no major adverse outcome differences between patients with BMI <50 and those ≥50 ($p>0.05$), despite minor trends in anastomotic leaks in the higher BMI group (1.1% vs 0.7%, $p = 0.046$), respectively. Additionally, no significant sex disparities in outcomes were observed.

Conclusion: The increasing prevalence of HHR in C/R- MBS does not appear to significantly affect postoperative complication rates, regardless of BMI, sex, or race. However, patients with a history of SG and GERD are more likely to undergo HHRs with minor risk of bowel obstruction and leaks. Future studies should focus on long-term outcomes to further clarify the role of HHRs in C/R-MBS as well as its recurrence rates.

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Comparative Risk of Psychiatric Disorders Following GLP-1 Receptor Agonist Therapy vs Bariatric Surgery: A Propensity Score-Matched Analysis

C Holmes, M Alnaeem, C Udedibor, D Tatum, J Baker, D Hennings, A Attia, S Levy,

Background: Psychiatric disorders are prevalent among individuals with obesity, and treatment modality may influence mental health outcomes.

Objective: This study compares the risk of psychiatric disorders in patients treated with GLP-1 receptor agonists (GLP-1 RA) versus metabolic and bariatric surgery (MBS) over a five-year follow-up.

Methods: A retrospective cohort analysis using the TriNetX database compared patients undergoing MBS to those initiating GLP-1 RA therapy. Propensity score matching was employed to balance demographic and clinical characteristics. Patients with history of psychiatric disorders were excluded to assess new-onset conditions. GLP-1 RAs included semaglutide, liraglutide, and dulaglutide. The follow-up period lasted up to five years. Psychiatric outcomes were evaluated using risk ratios (RR), odds ratios (OR), hazard ratios (HR), and Kaplan-Meier survival analysis.

Results: After propensity score matching, each cohort included 33,600 patients. MBS was associated with significantly lower risk of anxiety disorders (HR: 0.60, 95% CI: 0.55–0.66), substance use disorders (HR: 0.61, 95% CI: 0.54–0.71), and cognitive deficits (HR: 0.36, 95% CI: 0.23–0.58). The risk of mood disorders trended lower with surgery (HR: 0.67, 95% CI: 0.64–0.75). Psychotic disorders (HR: 0.6, 95% CI: 0.31–1.3) and PTSD showed no significant differences. Rare conditions, including dissociative and impulse-control disorders, showed no differences between groups.

Conclusion: MBS confers psychiatric benefits compared to GLP-1 RA therapy, particularly for anxiety, substance use, and cognitive disorders. These findings emphasize the need to consider mental health outcomes when selecting treatment modalities for individuals with obesity. Future research should explore mechanisms underlying these benefits to guide personalized treatment strategies.

Pediatric Surgery | Abstract | Clinical Science | Pediatric Surgery

Racial and Ethnic Disparities of Ostomy Creation in Pediatric Patients with Crohn's Disease

L Gammada, Y Gely, L Johnson, D Danos, J Zagory,

Background: Crohn's disease (CD), historically more common in non-Hispanic white populations, is increasing in incidence among non-white groups. Racial disparities exist in hospitalization and postoperative outcomes, but diagnostic delays and related complications remain understudied.

Objective: To evaluate racial and ethnic disparities in diagnostic timing among pediatric CD patients and their association with emergent surgery and ostomy creation.

Methods: The National Surgical Quality Improvement Program Pediatric Database was queried for patients <18 years with a primary International Classification of Disease, tenth revision (ICD-10) diagnosis of CD from 2015 to 2021. Patients were stratified by race. The primary outcome was emergent versus non-elective ostomy creation, identified using Current Procedural Terminology (CPT) codes. Perioperative factors were analyzed.

Results: Among 1,356 patients with CD requiring surgery, 75.6% were White, 15.5% were Black, 6.6% were Hispanic, 1.6% were Asian, and 0.7% were classified as other. Most were 13–18 years old (90.6%, p=0.0103). Asian (31.8%) and Hispanic (12.2%) patients more often required a non-elective ostomy compared to white patients. Non-white patients more often needed nutritional support (23.0% vs 17.8%, p=0.0360) and had hematologic disorders (27.2% vs 20.7%, p=0.0134) when compared to white patients. Asian patients had increased odds of emergent (OR 4.17 [1.10, 15.84], p=0.0363) and non-elective (OR 5.15 [1.86, 14.25], p=0.0016) ostomy creation. Dirty/infected wounds were associated with emergent (OR 5.48 [1.18, 25.47], p=0.0299) and non-elective (OR 9.76 [2.72, 35.08], p=0.0005) procedures.

Conclusion: Asian race was associated with emergent and non-elective ostomy creation. Further research should investigate diagnostic timing and access-related disparities.

Tables:

Odds ratios and 95% confidence intervals from logistic regression models of emergent and non-elective ostomy creation in cases of Crohn's disease with surgical intervention, National Surgical Quality Improvement Program Pediatric, 2015-2021 (n=1,356).

	Emergent		Non-elective	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Age				
0-5 years	5.80 (1.07,31.57)	0.0420	2.12 (0.50,9.08)	0.3107
6-12 years	1.32 (0.49,3.53)	0.5783	0.74 (0.34,1.60)	0.4412
Sex				
Male	1.41 (0.80,2.48)	0.2302	1.01 (0.70,1.46)	0.9683
Race				
Asian	4.17 (1.10,15.84)	0.0363	5.15 (1.86,14.25)	0.0016
Black or African American	1.34 (0.64,2.81)	0.4400	1.23 (0.74,2.03)	0.4291
Hispanic	0.71 (0.20,2.47)	0.5865	1.26 (0.62,2.55)	0.5202
Other	2.33 (0.25,22.08)	0.4601	0.83 (0.09,7.36)	0.8667
Nutritional Support				
Yes	1.09 (0.56,2.11)	0.7972	1.46 (0.95,2.24)	0.0847
Heme disorder				
Yes	1.27 (0.69,2.36)	0.4446	0.88 (0.57,1.37)	0.5752
Crohn's Location				
Large intestine	0.82 (0.29,2.36)	0.7145	0.77 (0.41,1.44)	0.4151
Overlapping	1.39 (0.70,2.74)	0.3471	0.80 (0.51,1.24)	0.3164
Unspecified	1.18 (0.57,2.47)	0.6559	0.51 (0.30,0.84)	0.0091
ASA Class				
3-5	1.09 (0.62,1.91)	0.7712	1.36 (0.93,1.97)	0.1089
Wound Class				
Clean/Contaminated	0.59 (0.13,2.80)	0.5103	1.32 (0.37,4.65)	0.6681
Contaminated	1.21 (0.25,5.85)	0.8139	2.90 (0.81,10.40)	0.1023
Dirty/Infected	5.48 (1.18,25.47)	0.0299	9.76 (2.72,35.08)	0.0005

Injury Mechanism and Ischemia Negatively Impact Neurorecovery After Traumatic Brain Injury

M Kelly, L Lawes, G Sibley, L Elliott, S Schultz, A Tilton, J Volk, D Danos, D Yu, J Zagory,

Background: Trauma is the leading cause of pediatric morbidity and mortality in the United States. Although the initial management of traumatic brain injury (TBI) is well-documented, less is known about neurorecovery after severe TBI.

Objective: To evaluate cognitive outcomes in pediatric patients with severe TBI and identify injury-related factors associated with differences in neurorecovery

Methods: We retrospectively reviewed pediatric trauma patients (≤18 years) admitted to an accredited pediatric inpatient rehabilitation after severe TBI between January 2018 and December 2023. Outcomes included Pediatric Functional Independence Measure (WeeFIM) scores for cognition, mobility, and self-care at rehabilitation admission and discharge.

Results: 111 patients met inclusion criteria, including 91 blunt and 20 penetrating injuries. 26 sustained ischemic injury, 97 had hemorrhage, and 35 had seizures. Blunt injuries were more frequent among White patients (39.6% vs 10%, p=0.01) and associated with lower initial Glasgow Coma Score (5.6±2.9 vs 7±4, p=0.04). Initial cognitive WeeFIM scores were lower in blunt versus penetrating injury (10.5±7.2 vs 14.2±8.5, p=0.02) but were similar at discharge (17±9.4 vs 20±9, p=0.10). Memory subscores remained lower for blunt injuries at both admission (2±1.4 vs 3.1±2, p=0.002) and discharge (3.3±1.8 vs 4.3±1.7, p=0.02). Patients with ischemic injury were younger (6.5±5.2 vs 9.6±5.7 years, p=0.01), had longer coma (10.8±9.5 vs 7.2±6.5 days, p=0.02), and had lower cognitive scores at admission (8.5±6 vs 12±7.8, p=0.02) and discharge (13.5±9.7 vs 18.8±8.9, p=0.01). Seizures and hemorrhage did not significantly affect cognitive outcomes.

Conclusion: Blunt mechanism and ischemic injury are associated with poorer neurorecovery following pediatric TBI, emphasizing the importance of targeted rehabilitation strategies.

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Implementation of a Firearm Safety Initiative in an Urban Louisiana City

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Background: In Louisiana, firearm injuries have represented the primary cause of pediatric death since 2013. Literature demonstrates that public awareness, firearm safety counseling, and free gun locking device distribution enhance secure storage practices.

Objective: This study evaluated the impact of a community program providing free biometric gun safes (GS) and education on secure storage practices.

Methods: In 2023, an urban Louisiana city's health department and children's hospital launched a community program distributing GS and education. Participants completed an initial survey, including demographics, baseline knowledge of secure storage options, current firearm storage practices, and number of children in the home, with follow-up surveys at 6-12 weeks and 3-5 months evaluating changes in knowledge and storage practices.

Results: Of the 840 distributed GS, 100 participants completed both follow-up surveys (11.9%). The cohort was majority female (51%), >41 years old (71%), and Black (87%). Before receiving the GS, 31% reported personal firearm violence, and 72% had children in the home with firearms. Of those, 40% stored firearms loaded, and only 30% used a GS. Among those, 75% had children in the home. On initial follow-up, 83% reported using the GS, 70% found the setup easy, and 100% were satisfied with their safe. Subsequently, 94% continued using the safe for firearm storage, 96% reported improved knowledge, and 100% reported feeling their children were safer.

Conclusion: Implementation of a GS distribution community program improved safe storage practices and reduced children's access to unsecured firearms, leading to a feeling that children were safer.

Comparative Analysis and Post Surgical Outcomes of Tracheoesophageal Fistula with or without Esophageal Atresia: A Multi-Institutional National Surgical Quality Improvement Program Pediatric Study

T Mohammed, Y Gely, H Roberts, D Danos, S Bonitto, D Yu, J Zagory.,

Background: Tracheoesophageal fistula (TEF) with or without esophageal atresia (EA) and isolated EA are often grouped. However, literature describing whether associated conditions equally affect patients with TEF/EA is sparse.

Objective: We aim to describe associated anomalies, particularly those associated with VACTERL (vertebral, anorectal, cardiac, TEF, renal, skeletal), age at surgery, and postoperative outcomes in TEF+EA, TEF without EA (H-type), and isolated EA.

Methods: National Surgical Quality Improvement Program-Pediatric deidentified data were utilized. Patients were identified using ICD-10 codes for isolated EA (Q39.0), TEF+EA (39.1), and H-type (Q39.2).

Results: Of 1,771 patients with TEF/EA malformations, 68.8% (n=1,236) had TEF+EA, 17.4% (n=308) had H-type, and 12.8% (n=227) had EA only. All three groups had major or minor cardiac risk factors (p=0.0156); however, EA only patients were more likely to have previous cardiac surgery (8.4%, n=19), p=0.0028. H-type and TEF+EA patients were more likely to be ventilator dependent (p=0.0464). H-type (3 days [IQR 1-35.5]) and TEF+EA (2 days [IQR 1-4]) children were more likely to have surgery at an earlier age than EA-only (61 days [QR 2-117)) children (p<0.0001). Isolated EA patients were more likely to develop post-operative organ space infections, require blood transfusions, and develop sepsis (p <0.05); however, there were no differences in wound dehiscence, reoperation, readmission, or 30-day mortality.

Conclusion: This national analysis of pediatric patients with tracheoesophageal anomalies found that children with TEF+EA, H-type, and isolated EA have different associations with conditions we expect as part of VACTERL, and isolated EA has an increased risk of postoperative complications.

Pediatric Surgery | Abstract | Education | Pediatric Surgery

Re-defining practice readiness in pediatric surgery: An exploratory study

C Nguyen, R Moreci, P Rollins, G Sandhu, B Zendejas, J Zagory,

Background: Practice readiness is a concept frequently discussed in surgical education, yet it remains ambiguously defined. Previous work interviewing academic pediatric surgeons who train fellows yielded key themes, however it remained unclear if pediatric surgeons who work at non-fellowship programs share similar interpretations of this concept.

Objective: In this study, we aimed to better understand how practicing pediatric surgeons at non-fellowship programs perceive practice readiness and competency compared to the perspective of second-year pediatric surgery fellows.

Methods: Pediatric surgeons who do not train fellows and second-year pediatric surgery fellows were recruited using a snowball sampling technique. A 15-question interview guide was developed focusing on defining overall competence, technical competency, practice readiness, and struggling. Demographics were collected using Qualtrics. Interviews were conducted and transcribed on Zoom®, cleaned by two researchers and uploaded to NVivo coding software. Inductive coding was performed in dyads. The entire research team participated in generating major themes.

Results: Transcripts from 11 pediatric surgeons and 11 pediatric surgery fellows were analyzed. Six major themes were identified. Faculty and fellow themes with specific quotes supporting each theme are included in Table 1.

Conclusion: In both groups, practice readiness is a concept that remains poorly understood. Future work includes comparing perspectives of multiple groups (fellows, faculty, and leaders of national pediatric surgery organizations) in order to establish a more clear and unified definition. As we move toward competency-based training in Pediatric Surgery, clarity around the concept and expected readiness is critical.

Table 1. Faculty and Fellow Major Themes.

Faculty Themes	Examples	Fellow Themes	Examples
Practice Readiness Expectations May Differ Based on Practice Type	*"I know the board has a blueprint for what they expect a general pediatric surgeon to do. And I think that blueprint is good, you know, it's a good start. But I still think practice patterns vary a lot across the country... So I just, I kind of think it's so varied. That it's just, you're never gonna get someone who's perfectly suited to your practice. At some level you have to help them."* *"I don't think every pediatric surgery fellow has to come out the same product. Because not all the jobs are the same. So there... it's not a... and there's probably no place where you can train where you can come out and be perfect for every job out there either."* *"You know a lot of pediatric surgery fellows coming out, they come out very different. Some come out feeling like they can take on the whole world and they've done everything and others come out, you know, kinda scared to death. Both are appropriate. And both are normal for different people, but, again, the fit on the other side of that, how those pieces come together, the practice that they select is important because if they come out one way and they join a practice that it doesn't work with that, that can be a big problem."*	Inconsistency and Variability in the Interpretation of Practice Readiness	*"I think that, you know, practice ready...yeah, I mean, it means different things to different people. But I think, you know, I think most people would accept that terminology means that you're able to go into practice and be safe."* *"I mean, I guess in my opinion, you know, it's sort of, again, it goes back to what type of practice....And so I think the skill sets, you know, are interchangeable in some degree, but may emphasize one attribute versus another."* *"What is practice readiness to you? What is practice readiness to me? What is practical readiness to the other fellows who you've interviewed? I think those answers are so varied and so widely defined because it's an individual decision that I think it's gonna be very difficult to nail down, but I think the important thing is to identify that it exists. It's like financial planning. It exists, but it's different for each individual family, each individual person. But it is a concept that leads to success, but I think identifying someone who wants to practice in certain scenarios, that practice readiness is this."*
Informal and Formal Mentorship can both Provide Meaningful Support to Junior Faculty	*"Don't confuse the lack of structure with the lack of support. I knew that I could call anybody, any one of my partners at any time and say, "Hey, I'm drowning. Come take a look at this." I didn't call all that much, but I did. I mean, there were times when I got them out of the gym. A couple times when I got to manage it. Or they got me and vice versa. So what I would say from my own personal experiences is we have no particular support structures for these types of things. There is no formal sit down and have a discussion. But that doesn't mean the support isn't there."*	General Sense of Uncertainty if Fellows are Practice Ready at the Completion of Fellowship	*"I think we're all hoping that we're ready by the time that we're done. I don't think anyone's asking for more training time...But I think a lot of us are just hoping that we'll find a good mentor wherever we land for our first job"* *"Like I said, you might feel ready but you actually are not, and who knows? That's just a self-perception. So yeah, it's hard for one to assess the readiness of another"*
Asking for Help is Expected and Respected	*"Probably the most important question is do they know their own limits? If there were some way of somebody saying this person knows their capabilities and they know their limits. To me, that's one of the most important pieces of information. I don't worry about people getting into trouble, because they're gonna get into trouble. I need to know can they get out of it, and do they know when they're in trouble."* *"And also the third thing which I would also ask about is do they know when to call? And as a junior partner, I don't mind, I never mind being called. I mind not being called."* *"And someone who has the maturity to understand when they might need to ask for help. If they haven't had significant experience with a specific procedure, specific disorder, they have the insight to know that I'm going to need some assistance here. So you don't have to be able to do everything from go, but you have to be pretty straight about what you can and can't do."*	Internal and External Contributions to Perceiving Practice Readiness	*"I think that everybody's a little bit different about how they assess themselves. I think obviously you need to be very honest with yourself about what your abilities are and limitations are."* *"I think, I sort of break down to 2 fold. One is sort of decision making outside of the operating room and then the other is sort of more technical skills within the operating room."* *"So whether it's managing patients on the floor, ICU, or in the operating room, I think getting more autonomy is certainly been helpful in assessing like Am I ready to do this case? Is the attending really passively helping or are they mostly watching or are they even in the room?"*

Pharmacological activation of Transient Receptor Potential Ankyrin 1 increases endothelial glycocalyx levels in cultured endothelial cells.

L Parekh, L Sabbagh, S Chunduri, R Shackett, D Engelhardt, S Tran, O Jackson-Weaver,

Background: The endothelial glycocalyx is a critical extracellular matrix lining of the vascular lumen that plays an essential role in regulating vascular physiology, including coagulation, vascular tone, leukocyte adhesion, and inflammatory signaling. Glycocalyx degradation is a hallmark of various disease states—such as sepsis, trauma, hemorrhage, and ischemia–reperfusion injury—and its loss is increasingly recognized as a driver of endothelial dysfunction and trauma-induced coagulopathy (TIC). 1-5 A previous study conducted in our lab6 tested the effects of blocking various cellular calcium channels and its effect on glycocalyx preservation. We found that calcium release from the endoplasmic reticulum (ER) promotes glycocalyx shedding, while extracellular calcium influx through endothelial plasma membrane TRP (transient receptor potential) channels appeared to have the opposite effect. Blocking inositol 1,4,5-triphosphate (IP3) receptors in the endoplasmic reticulum (ER) preserved the glycocalyx from hypoxia-reoxygenation insult. Conversely, inhibition of transmembrane transient receptor potential ankyrin 1 (TRPA1) and related TRP channels correlated with increased glycocalyx degradation, suggesting that TRPA1 activity may play a role in maintaining glycocalyx integrity.

Objective: Based on these observations, we hypothesized that activation of TRPA1 would increase glycocalyx levels in cultured endothelial cells under normoxic conditions.

Methods: Human umbilical vein endothelial cells (HUVECs) were cultured in 2% gelatin-coated plastic dishes using M200 medium To promote glycocalyx formation, the culture medium was supplemented with 1% bovine serum albumin (BSA). Cells were treated with either vehicle control or 10 μM of the selective TRPA1 agonist JT010 for 30 min under normoxic conditions. Cells were fixed in situ with formaldehyde. Glycocalyx was stained with fluorescent wheat germ agglutinin (WGA) in PBS/1% BSA . WGA intensity was imaged using an fluorescence microscopy and mean fluorescence intensity (MFI) was quantified as a measure of endothelial glycocalyx levelsusing ImageJ. A two-tailed t-test was performed to test for significance with $p<0.05$ considered statistically significant.

Results: TRPA1 activation with JT010 induced a marked increase in endothelial glycocalyx staining. There was no observed change in cell morphology or confluence between treatment groups, indicating that the enhancement in WGA signal reflected increased glycocalyx rather than nonspecific alterations in cell number or health. These findings demonstrate that stimulation of TRPA1 can promote glycocalyx accumulation on the endothelial surface under normoxic conditions.

Figure 1: A graph of WGA staining intensity showing statistically increased levels of glycocalyx in the presence of TRPA1 activator, JT010. Approximately 2000 cells were measured per treatment group.

Conclusion: This study provides initial evidence that extracellular calcium influx through TRPA1 channels supports glycocalyx formation, in contrast to ER-derived intracellular

calcium signaling which has been linked to glycocalyx degradation. Pharmacologic activation of TRPA1 significantly enhanced endothelial glycocalyx levels in vitro under normoxic conditions, supporting our hypothesis and identifying TRPA1 as a potential therapeutic target for preserving endothelial barrier integrity. Ongoing studies will extend these findings into animal models of trauma-hemorrhage to determine whether TRPA1 agonists can attenuate glycocalyx loss and improve coagulopathy outcomes in vivo.

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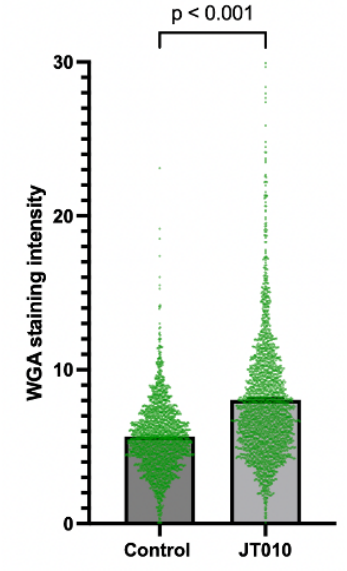


Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

4-Year Study of Changing Patterns in Penetrating Trauma at an Urban Level 1 Trauma Center

J Wang, G Gianfrate, D Scarboro, A Scheuermann, JP Hunt, P Greiffenstein, L Stuke, A Marr, A Smith,

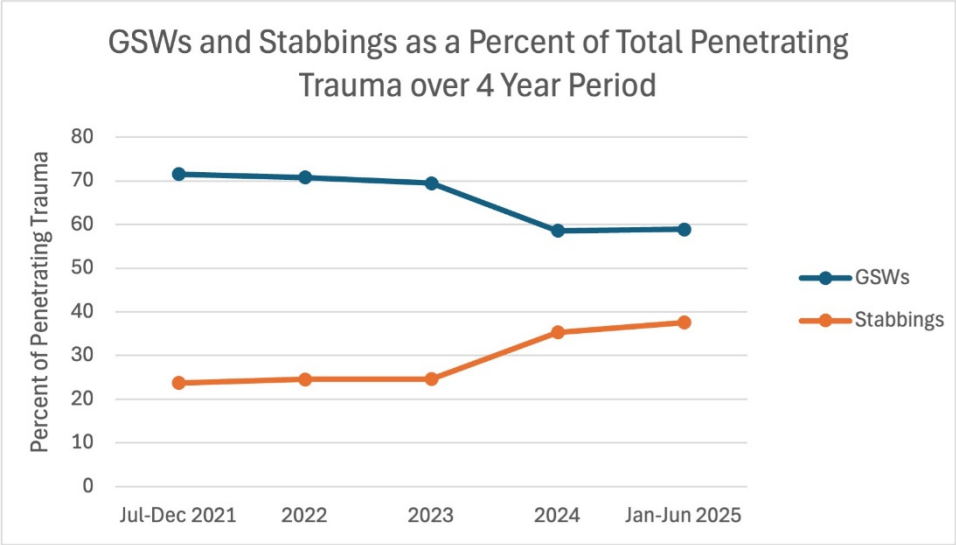
Background: Penetrating trauma represents a major source of morbidity and mortality in urban areas. Understanding trends in violent trauma over time is critical for optimizing patient care and resource allocation at trauma centers.

Objective: This study's objective was to provide an analysis of trends in occurrences of gunshot wounds (GSWs) and stab wounds (SWs) in patients presenting with penetrating trauma to a Level 1 Trauma Center in a major urban city.

Methods: A retrospective review of trauma registry data submitted to the Trauma Quality Improvement Program of the American College of Surgeons from July 2021 through June 2025 was performed. The total number of penetrating traumas, the number of GSWs, and the number of SWs were recorded. Results were compared using a Chi-squared test.

Results: A total of 17,517 trauma patients were included between July 2021 and June 2025. Penetrating trauma comprised 24.6% (n=4307/17517) of all trauma patients during the study period, peaking in 2022 and declining steadily to 19.0% in the first half of 2025 ($p<0.01$). The percentage of penetrating traumas caused by GSWs showed a significant decrease over the course of the study ($p<0.01$). Concomitantly, the percentage of penetrating trauma caused by SWs increased significantly ($p<0.01$).

Conclusion: The decline in GSWs and concurrent rise in SWs reflects a changing pattern of penetrating trauma in our community. Although penetrating traumas as a percent of total trauma decreased during the study period, a significant shift in the means warrants further investigation. Recognizing these trends is critical in guiding future prevention efforts and trauma system preparedness.



Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

RISK FACTORS FOR ASPIRATION IN TRAUMA INTENSIVE CARE UNIT PATIENTS RECEIVING SUPPLEMENTAL ENTERAL NUTRITION

J Mehta, G Holleman, D Tatum, S Taghavi, J Zhang, C Mcginness, R Reily, K Harrell,

Background: Aspiration of enteric contents and subsequent pneumonia or pneumonitis has been shown to increase morbidity and mortality. Trauma intensive care unit (ICU) patients represent a unique population with factors such as traumatic brain injury, facial fractures, altered mental status, and prolonged need for supplemental nutrition which may worsen their risk of aspiration. Specific risk factors for aspiration in a trauma population have not been investigated, and the aim of this study is to identify.

Objective: We hypothesize that longer duration of enteral nutrition will increase the risk of aspiration.

Methods: Trauma ICU patients receiving supplemental enteral nutrition at a single, urban level 1 trauma center were retrospectively reviewed from 2018-2023. Patients with a length of stay (LOS) less than one day and age less than 18 years were excluded. The primary outcomes of interest were aspiration and mortality. Patients with a recorded aspiration event (AE) were compared to patients without an aspiration event (NAE). AE was defined by a diagnosis of aspiration made during their admission along with imaging findings with evidence of aspiration. A subgroup analysis was performed on patients with traumatic brain injury (TBI). A logistic regression analysis was performed to investigate risk factors associated with AE.

Results: Over the 6-year study period, 410 patients received supplements nutrition of which 62 (15%) had an AE. For the total patient cohort, the patients were majority male (77%), median age was 41.5 years, and median BMI was 26.1. Patients with an AE had significantly higher rates of emesis (56.5% vs 29.2%, $p < 0.001$) and tracheostomy placement (39.3% vs 23.8%, $p=0.017$) compared to the NAE group. Median tube feed duration was significantly longer in the AE group (408 vs. 192 hours, $p=0.005$) compared to NAE patients. The AE and NAE groups had similar rates of intrabdominal injuries, TBI, and chest wall injury. Median hospital length of stay (LOS) (24.5 vs 19 days, $p=0.022$) as well as ICU LOS (18.5 vs 14 days, $p=0.002$) was significantly increased in the AE group, but mortality (21.4% vs 19.4%, $p=0.848$) was not different between the two groups. When stratified by TBI, the median duration of feeding was overall longer in the TBI group (240 vs 168 hours, $p=0.015$). In a multivariable logistic regression analysis controlling for age, ISS, tracheostomy placement and TBI, longer duration of supplemental nutrition was found to be an independent predictor of AE (OR 1.001, 95% CI 1.000-1.002, $p=0.018$) (Table).

Conclusion: Aspiration occurred in 15% of trauma ICU patients receiving supplemental enteral nutrition and was associated with longer hospital and ICU LOS. Duration of supplemental nutrition was independently associated with increased risk of aspiration, but with a negligible effect. TBI patients had a longer duration of tube feeds, but not a higher rate of aspiration. Future studies are needed to further elucidate trauma related risk factors for aspiration and the effect on clinical outcomes.

Variable	Odds Ratio	95% CI	p-value
Age (years)	1.004	0.990-1.018	0.584
ISS	0.976	0.850-1.003	0.076
TBI	0.606	0.341-1.078	0.088
Tracheostomy	1.441	0.709-2.930	0.313
Supplemental nutrition duration (hours)	1.001	1.000-1.002	0.018

Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

Stroke After Blunt Cerebrovascular Injury in Older Adults: A Multi-Center Evaluation of a Prospective Database

D Demessie, K Andre, D Ash, E Stevens, L Paul, C Lemon, L Smith, T Kashikar, A Knight, R Wu, C Witt, Z Draper, S Smith, W Holyfield, B Jimenez, M Welch, K Zreik, K Zillmer, M Littlejohn, K Richards, J Guido, P Bjordahl, B Maqbool, A Mang, S Talebinejad, B Martinez, D Jafari, D Gusmano, E Margiotta, M Bank, R Rodriguez, A Hertzler, A Sandau, T Hess, M Tucker, G Miles, T Schroeppel, Z Stillman, S Farach, M Bright, M Braverman, B Sloan, G Chang, M Knight, M Chopko, M McCracken, B Blackwood, C Duran, D Hamilton, A Tanner II, J Nie, J Nahmias, D Turay, I Delgado, P Patel, P Millan, D Hunt, J Rahm, G Stettler, A Grimes, D Lumbard, B Thunstrom, C Hall, G Ng, C Butts, A Muller, M Tabrizi, S Abdullah, J Martucci, K Matsushima, P Udekwu, C Shell, S Ellen Williams, C Bell, C Knapp, E Whetten, M Farrell, A Skoczek, K Minoza, P Farley, L Fernandez, B Pero, L Jacobson, J Williams, S Chowdhury, S Varghese, A Hynes, P Murphy, B Axtman, L Huber, M Fleming, C Davis, M Gomez, D Mederos, N Polite, R Deci, J Nash, M Moorman, S Taghavi, A Marr, A Smith,

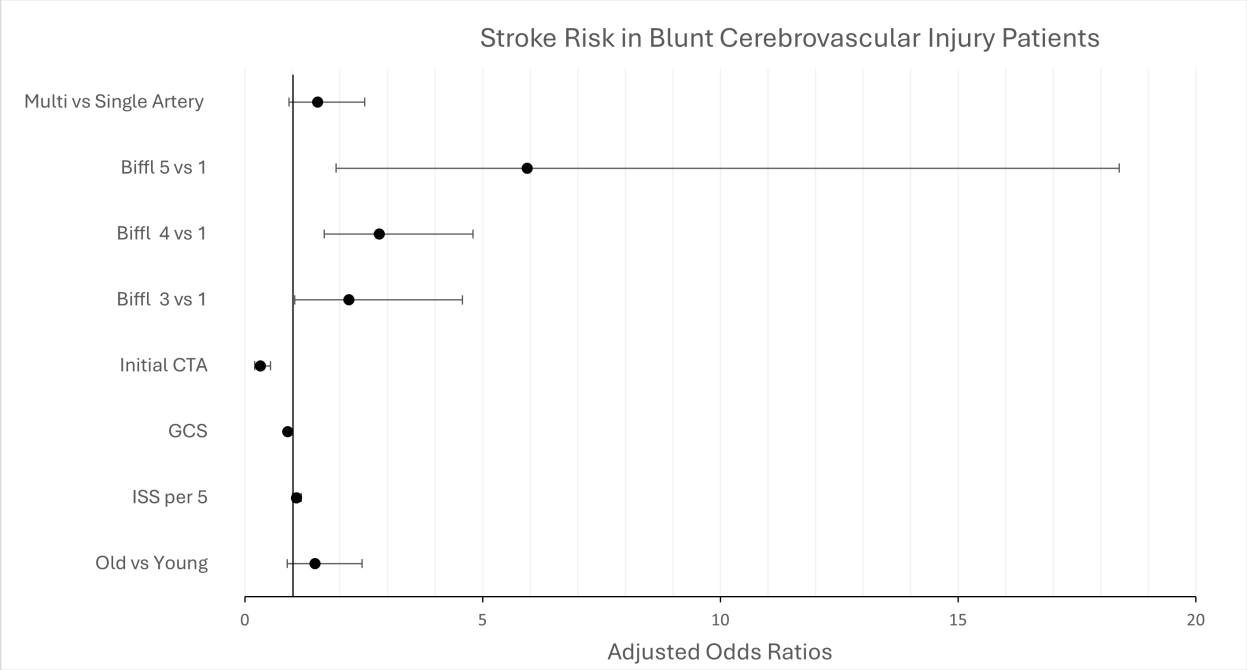
Background: Blunt cerebrovascular injury (BCVI) carries a substantial risk of stroke, but whether older age modifies this risk remains uncertain.

Objective: We compared stroke incidence between older and younger adults undergoing BCVI screening after trauma.

Methods: Adult trauma patients with BCVI diagnosed on CT angiography were identified from a multicenter database (46 trauma centers from May 2024 - August 2025). Age was dichotomized as ≥65 (old) and <65 years (young). Stroke during admission was the primary outcome.

Results: Of 13,235 screened patients, 1,741 patients were included in the analysis. Older patients (n=499, 28.7%) had higher GCS on arrival (15 vs 14; $p < 0.0001$) and lower ISS (17 vs 22, $p < 0.0001$) compared with younger patients. Older patients more often had higher Biffl grades ($p = 0.0008$), multi-arterial injuries ($p = 0.0002$), involvement of vertebral arteries ($p < 0.0001$), and bilateral injuries ($p = 0.0026$). Overall, 92 (5.3%) patients developed stroke (6.2% vs 4.9%, p=0.27). In a multivariable analysis, older age was not independently associated with stroke (OR 1.50, 95% CI 0.91-2.47; $p = 0.11$). Initial CTA was significantly associated with reduced stroke risk (OR 0.31, 95% CI 0.20-0.50; $p < 0.0001$), whereas higher BCVI severity (Biffl 3-5) strongly increased the risk (OR 2.35-5.79; $p \leq 0.002$).

Conclusion: Stroke risk was determined primarily by BCVI severity and early detection rather than age. These findings emphasize the importance of systematic and timely initial CTA for optimal identification and management of BCVI.


Stroke Risk in Blunt Cerebrovascular Injury Patients
Multi vs Single Artery
Biffl 5 vs 1
Biffl 4 vs 1
Biffl 3 vs 1
Initial CTA
GCS
ISS per 5
Old vs Young
0
5
10
15
20
Adjusted Odds Ratios

Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

Female Sex is Associated with an Increased Stroke Incidence Following Blunt Cerebrovascular Injury

D Scarboro, G Gianfrate, J Hunt, P Greiffenstein, A Marr, A Scheuermann, L Stuke, A Smith,

Background: Blunt cerebrovascular injury (BCVI) carries a substantial risk of ischemic stroke if undiagnosed. Advances in screening and early antithrombotic therapy have reduced stroke incidence, but risk stratification remains challenging. Sex differences influence stroke severity and outcomes in other cerebrovascular contexts, yet their role in BCVI-related stroke is unclear.

Objective: The aim of this study was to investigate the incident of stroke following BCVI based on sex.

Methods: A prospectively maintained multicenter BCVI database which includes data from 46 Level 1 and Level 2 trauma centers was analyzed over a three year period. Stroke rates were compared between male and female patients diagnosed with BCVI. Statistical significance was assessed using a two-proportion z-test.

Results: A total of 12,761 patients were included in the study with a total incidence of 1.7% (n=219). Among males, 117 of 8,555 (1.4%) suffered a stroke, compared with 102 of 4,646 females (2.2%), a statistically significant difference ($p<0.001$).

Conclusion: This study found that female BCVI patients experienced a higher stroke rate than males. These findings suggest sex may be an independent risk factor for BCVI-related stroke and support consideration of sex-specific risk stratification and management strategies. Additional studies are warranted to validate these results and guide tailored interventions.

Characteristic	Stroke	n	Incidence
Male	117	4,646	1.4%
Female	102	8,555	2.2%
Total	219	12,761	1.7%

Trauma & Critical Care | Abstract | Clinical Science | Trauma/Burn/Critical Care

An Analysis of Lipidomics in Burn Patients

Chloe DiMaggio, Cara Ramos, Dhanushka Vitharana, Amirsalar Mansouri, Abdul-Razak Masoud, Jiri Adamec, Sabyasachi Chatterjee, Jeffery Carter, Jonathan Schoen, M. Victoria Miles, Alison Smith,

Background: Patients who sustain major burn injuries experience a pathological stress response marked by a hypermetabolic state. This change in metabolism can disrupt normal plasma lipid profiles and lead to alterations in certain biochemical processes requiring lipids.

Objective: The goal of this study was to gain a better understanding of the underlying lipid metabolism dysregulation among burn patients so that we might identify potential targets for therapeutic intervention. It is hypothesized that plasma from burn patients will demonstrate significantly altered lipidome compared with healthy controls.

Methods: Plasma samples were collected from 21 burn patients and matched with 16 healthy control-group participants using DUO plasma separation cards. Targeted lipidomics analysis was performed using an Agilent 1290 Infinity II LC system coupled with Agilent 6495 LC/TQ mass spectrometer following methyl-tert-butyl ether (MTBE) extraction. Lipid profiles were processed with an in-house R script, and statistical analysis was performed using the limma package ($p < 0.05$).

Results: Ultimately, among the 770 identified lipids, 82 species from 10 different main classes were found to be dysregulated in patients with prior burn injuries. Burn patients' plasma samples demonstrated significant increases in concentration of glycerolipids and sphingolipids while also demonstrating significant decreases in the concentration of glycerophospholipids.

Conclusion: These results demonstrate that patients with prior burn injuries have altered plasma lipid profiles. Increases in both glycerolipids and sphingolipids and simultaneous decreases in glycerophospholipids point towards several metabolic differences. Primarily, these variations in lipid concentrations suggest that there is dysregulation in processes such as lipolysis, inflammatory signaling, and insulin resistance. Future studies are needed to further characterize this novel finding and determine how it can be used to improve burn care.

Robotic-Assisted Living Donor Kidney Transplantation: Early Experience and Perioperative Outcomes

Rahim Abdul, MS4; Emily Bugeaud, MD; Dennis Sonnier, MD

Background: Robotic-assisted kidney transplantation represents an emerging minimally invasive approach providing less surgical trauma and improved patient recovery. We report on our initial experience with this approach, examining perioperative outcomes and early complications.

Objective: To describe perioperative outcomes, early complications, and operative metrics in this series.

Methods: We retrospectively reviewed 10 consecutive robotic-assisted living donor kidney transplants and summarized demographics, operative data, and short-term outcomes.

Results: Ten patients (60% male; mean age 53.4 ± 11.1 years and BMI 29.7 ± 5.7 kg/m2) underwent transplant; 40% were pre-dialysis. All patients had living donors (40% biologically related) with a mean LKDPI score of 43.7 ± 20.7. Mean operative time was 6.6 ± 0.9 hours with robotic vascular anastomosis time of 53.9 ± 6.6 minutes. Conversion to open surgery occurred in 30%, two before insertion of the kidney due to difficult exposure and difficulty in the donor operation and one due to an arterial thrombosis after reperfusion. One patient had a takeback for bleeding that was managed open and another had DGF due to hyperkalemia on postop day 2. Mean hospital length of stay was 2.7 ± 0.7 days. 30-day mean serum creatinine was 1.55 ± 0.32 mg/dL with estimated mean GFR of 48.5 ± 11 mL/min/1.73m2. Acute cellular rejection occurred in one patient.

Conclusion: Robotic-assisted kidney transplantation yields acceptable early graft function and low complication rates. Conversion to open is an expected part of the early experience phase of this operation. Focusing on recipient safety and careful protocol planning is essential to optimizing outcomes as this approach evolves.

Table 1: Demographic, clinical, surgical, and post-operative characteristics of the study cohort (n = 10). Values are shown as mean ± standard deviation or as a count of each category.

Variable	Value
Pre-Operative	
Age (Mean ± SD)	53.4 ± 11.1
Gender (M/F)	6/4
Race (W/B/H)	7/2/1
BMI (Mean ± SD)	29.7 ± 5.7
Dialysis Mode (PreD/HD/PD)	4/5/1
Dialysis time (Years) (Mean ± SD)	1.3 ± 1.9
Donor LKDPI (Mean ± SD)	43.7 ± 20.7
Biologically Related (T/F)	4/6
Peri-Operative	
OR time (hrs) (Mean ± SD)	6.6 ± 0.9
Anastomosis Time (mins) (Mean ± SD)	53.9 ± 6.6
Intraop: Intraperitoneal Placement (T/F)	7/3
Intraop: Conversion to Open (T/F)	3/7
Post-Op: Complication (T/F)	3/7
Post-Op: Delayed Graft Function (T/F)	1/9
Hospital LOS (Mean ± SD)	2.7 ± 0.7
Post-Discharge	
GFR 30 days (mL/min/1.73m^2) (Mean ± SD)	48.5 ± 11.0
Cr 30 days (Mean ± SD)	1.55 ± 0.32
Cr nadir (Mean ± SD)	1.22 ± 0.26
Rejection (T/F)	1/9
Readmission (T/F)	5/5

Appendiceal neuroendocrine tumor (ANET) Post-Surgical Survival

Farhan Mohiuddin, Nicholas J. Skill, Yvette Bren-Mattison, J. Philip Boudreaux, Ramcharan Thiagarajan, and Mary Maluccio,

Background: Appendiceal Neuroendocrine Tumors (ANET) are a group of understudied rare cancers (<1/100,000). Treatment is predominantly surgical (appendectomy with/ without right hemicolectomy (RHC).

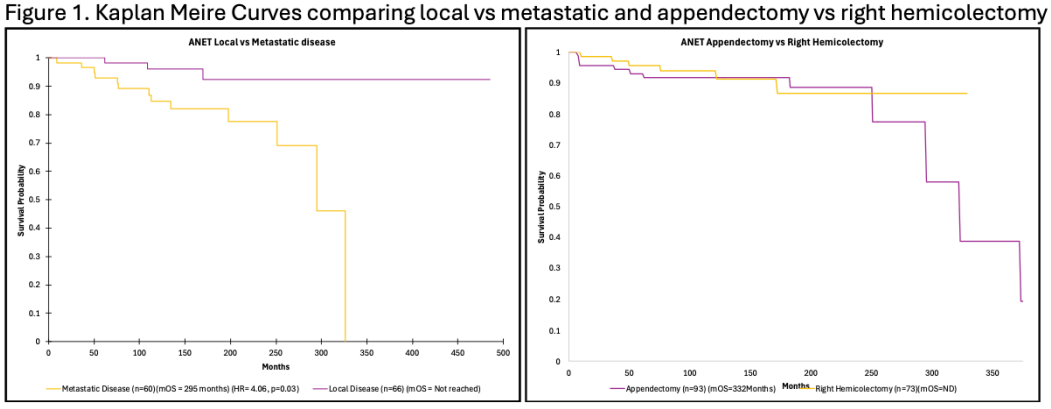
Objective: The purpose of this study was to identify clinical variables that would drive treatment decision-making pertaining to surgical aggressiveness.

Methods: A retrospective review of medical records was performed. Demographics, tumor characteristics, treatments, and overall survival information were extracted and analyzed. Kaplan Meier curves and hazard ratio analysis were performed to compare tumors and surgical approach.

Results: (n=211). Median follow-up was 11±7 years. Median survival probability (mOS) = 326months. The 5-, 10-, 15-, and 20-year survival rates were 94%, 89%, 86%, and 82% respectively. Metastatic disease was linked to a reduced mOS (295months) when compared to patients with local only disease (mOS not-reached). Hazard ratio 4.06 (95%CI: 1.14-14.4, p=0.03). Ten-year survival - local disease = 95%, metastatic disease = 81%. Fifteen-year survival - local disease = 87%, metastatic disease = 67%. mOS was not reached after stratifying by grade (G1(n=84), G2(n=21) G3(N=2), and unknown(n=114)). Five-year survival G1=93%, G2=80%. Median time between appendectomy and RHC=69days. The mOS trended higher in patients that received RHC (mOS=not-reached) (n=73)) when compared to patients that received appendectomy only (323months, (=93) (Hazard ratio=1.4 (95%CI: 0.5-3.9)). However the increase did not reach statistical significance (p=0.49).

Conclusion: ANET is a rare cancer and surgery is linked to substantial survival. However, increase hazard ratios were computed in relation to metastatic disease and surgical approach. Future study's will focus on patients that had poorer survival in order to identify/compute additional risk factors.

Figure 1. Kaplan Meire Curves comparing local vs metastatic and appendectomy vs right hemicolectomy



Surgical Potpourri II | Abstract | Clinical Science | General Surgery

Novel Use of Injectable Bulking Agent to Alleviate Gastrostomy Tube Leakage

C Evensky, D Sorrells, M Smith,

Background: Persistent gastrostomy tube (G-tube) leakage presents a significant challenge in clinical practice and may lead to patient discomfort, skin breakdown, and repeated interventions.

Objective: To evaluate the feasibility and preliminary outcomes of using a liquid injectable solution as a bulking agent to reduce G-tube leakage.

Methods: A prospective, single-patient interventional case was conducted with serial follow-up over ten weeks. The intervention was performed in a general surgery clinic under local anesthesia. Solution was injected circumferentially around the gastrostomy tract in a bulking fashion. The procedure was repeated once following initial improvement. Leakage volume was quantified by pre- and post-intervention dressing weights. Skin integrity and wound condition were evaluated photographically and clinically at each visit.

Results: Pre-intervention leakage measured 9.73 g using standardized gauze collection. Following two injections, leakage decreased to 1.01 g at ten-week follow-up ($p = 0.01$). Subjective improvement in skin integrity and patient comfort was observed. No adverse effects were reported.

Conclusion: This case demonstrates that injection of a bulking agent is a promising, low-risk technique for mitigating G-tube leakage. Further enrollment in this study will further clarify the efficacy of this therapy

DATA-INFORMED ABDOMINAL WALL TRAINERS IMPROVE PERCEPTION OF REALISM IN SIMULATION-BASED SURGICAL EDUCATION

K Kriener, H Finley, W Richardson, M Williams, T Simmers, C Astin, M Midwinter,

Background: Haptic fidelity is central to effective surgical simulation, yet it remains poorly defined and predominantly assessed through subjective judgement. Although expert opinion helps gauge the realism of simulated tissues, quantitative data describing required and achieved haptic properties are limited. Additionally, surgical simulators often overlook essential procedural steps. In simulation-based minimally invasive surgery (MIS) training, a commonly neglected component is abdominal access using trocars. Complications from improper trocar placement frequently result from inadequate tactile feedback and limited appreciation of fascial resistance. Developing data-informed trainers that replicate the mechanical and sensory characteristics of human tissue may enhance both the realism and educational value of MIS simulation.

Objective: The main objective was to evaluate whether synthetic abdominal wall mimics developed with biomechanical properties derived from human fascial tissues outperformed mimics developed without incorporation of these relative mechanical characteristics.

Methods: This was a within-subjects, mixed-methods observational study conducted between May 28 and July 17, 2024, as part of the SAVE program. A convenience sample of seven consultant surgeons employed in Brisbane, Australia evaluated seven iterations of synthetic abdominal wall mimics. Mimics varied in the number of fascial layers, overall layer thickness, and the extent to which their mechanical properties reflected those of cadaveric abdominal tissue. Objective performance metrics were collected using force and motion sensors, and these metrics were compared with data from trocar placement into human abdomens. Subjective perceptions of realism of the mimics were collected using a Likert scale, as well as open feedback.

Results: Among the tested abdominal wall mimics, the data-informed design that most closely matched the mechanical properties of cadaveric tissue demonstrated the highest objective fidelity to human performance metrics, which included puncture force, trocar insertion angle, and surgeon forearm biomechanics. In addition, mimics developed using cadaveric tissue data received consistently higher surgeon-rated realism scores when compared to those fabricated without such data. Surgeons reported improved tactile discrimination of fascial planes and more realistic resistance patterns in the data-informed mimics.

Conclusion: In this simulation-based study, data-informed synthetic trainers demonstrated superior realism across both objective performance metrics and subjective surgeon evaluations. Incorporating biomechanical data into simulation designs offers a scalable approach to enhance the haptic fidelity of tissue mimics used in surgical education.

Surgical Potpourri II | Case Report | Clinical Science | Surgical Oncology

Clear Cell Adenocarcinoma of the Abdominal Wall following a Cesarean Section: A Rare and Unusual Case

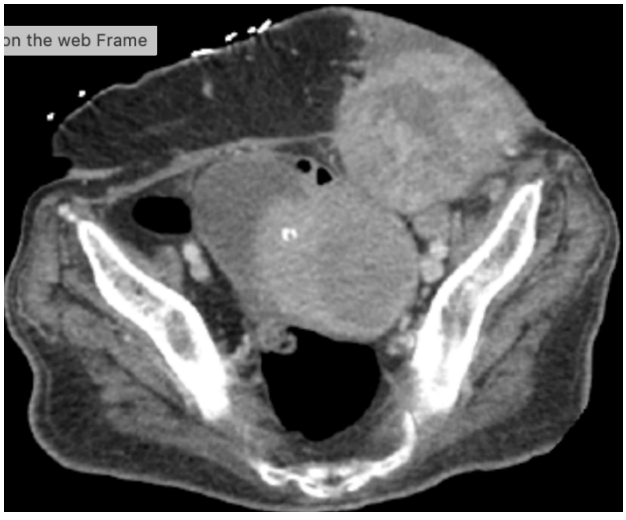
L Gonzalez, M AlEfishat, R Sanchez

Introduction/Objective: Malignant transformation of endometrial tissue within a cesarean-section scar is exceedingly rare. We describe a case of clear cell adenocarcinoma arising in the abdominal wall of a patient with multiple prior cesarean deliveries and no other identifiable risk factors.

Case Presentation: A 55-year-old African American female presented with a 30-lb unintentional weight loss over six months and a fungating left abdominal-wall mass arising from the lateral aspect of a Pfannenstiel incision. Her past history included hypertension and four cesarean deliveries. Imaging identified a 9.2 x 6.0 x 7.7 cm mass invading adjacent musculature without distant metastases. Biopsy revealed clear-cell adenocarcinoma, suggestive of a gynecologic primary. She underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy, radical en bloc tumor resection with anterior abdominal-wall reconstruction, and bilateral iliac lymph-node sampling. Pathology demonstrated adenocarcinoma of the abdominal wall with two of seven positive lymph nodes and no malignancy in the uterus or adnexa. The patient declined adjuvant systemic therapy. She remained disease-free for eight months until recurrence was detected recently during evaluation for anemia.

Discussion: This presentation likely reflects malignant transformation of ectopic endometrial tissue implanted during prior cesarean delivery, given that the TAHBSO specimen was free of malignancy. As few comparable cases exist in the literature, this case adds valuable insight into the diagnostic evaluation and management of this rare and aggressive pathology.

Conclusion: We report a rare case of abdominal-wall clear cell adenocarcinoma following cesarean section. Emphasizing the need for further research is needed to understand the etiology, natural history, and role of adjuvant therapy.



Surgical Potpourri II | Abstract | Basic/Transactional Science | Otolaryngology

mTOR Inhibition Augments T-cell Cytotoxicity by Lowering PD-1 Expression on Tumor-Infiltrating T-cells in Immune-Cold ROC-1 Tumors

C Dial, P Nath, C Li, T Moore-Medlin, A Khandelwal, C Nathan,

Background: TP53-mutant head and neck squamous cell carcinoma (HNSCC) has high recurrence rates (50-60%) due to treatment resistance. However, the mTOR inhibitor (mTORi) shows promise in treating advanced-stage HNSCC. Our study found that mTORi reduces PD-1+ T cells in tumors, potentially improving treatment outcomes.

Objective: To determine whether the mTORi-mediated decrease in PD-1 expression on tumor-infiltrating T-cells affects their cytotoxicity in immune-cold tumors.

Methods: ROC-1 cells were injected into the flank of C57BL6/j mice and grew to 150 mm^3 before beginning treatment with an mTORi drug, everolimus, or vehicle for 1 week. Tumor cell suspension was subjected to T-cell sorting for cytotoxicity testing and flow analysis for expression of perforin, granzyme-B, and IFN-γ on T cells. Additionally, T-cells from the spleen of naïve mice proliferated in vitro, and the effect of mTORi on T-cell cytotoxicity and PD-1 expression across the T-cell population was determined by flow analysis.

Results: mTORi enhanced T-cell infiltration into ROC-1 tumors while decreasing the number of exhausted (PD-1+) CD4+ and CD8+ T-cells. CD8+ T-cells isolated from mTORi-treated tumors showed significantly higher cytotoxicity against ROC-1 tumor cells compared to vehicle-treated tumors. Furthermore, in splenic cell-derived T-cells, mTORi treatment reduced PD-1 expression and increased cytotoxicity.

Conclusion: This study demonstrates that mTORi therapy suppresses TP53-mutant head and neck carcinoma growth by regulating the expression of exhaustion and cytotoxicity markers on T-cells. The reduced expression of PD-1 and increased expression of IFN-γ indicate improved T-cell cytotoxicity.

Oncology | Abstract | Education | Breast

Projected Impact of Medicaid Expansion Repeal in Louisiana on Breast Cancer Diagnosis, Treatment, and the Resulting Uncompensated Healthcare Costs

K Baldwin, A Zulli, K Von Maltzan, N Aloy, R White, S Thayer,

Background: Louisiana expanded Medicaid eligibility in 2016 to include adults earning up to 138% of the federal poverty level (FPL), providing healthcare access to over 780,000 residents by 2022. Proposed budget reductions could reduce or eliminate Medicaid Expansion, threatening screening and cancer care for low-income populations. Breast cancer treatment costs vary markedly by stage—estimated at $71,000 for Stage I, $97,000 for Stage II, $153,000 for Stage III, and $182,000 for Stage IV—underscoring the financial impact of delayed diagnosis.

Objective: To evaluate the projected impact of Medicaid Expansion repeal on breast cancer diagnosis stage and resulting healthcare costs in Louisiana.

Methods: Data from the Louisiana Tumor Registry, Department of Health, and Medicaid Annual Reports (2014–2022) were analyzed to assess changes in screening mammography, breast cancer incidence by stage, and Medicaid enrollment. Cost modeling estimated savings attributable to stage migration following expansion.

Results: By 2019, mammography screening rates increased by approximately 3% (71,000 additional women) after expansion. Breast cancer incidence rose modestly, with a notable shift toward early-stage diagnoses. Cost analyses indicated a cumulative $17.5 billion in healthcare savings between 2016 and 2022, primarily due to reductions in advanced-stage treatment and hospitalization.

Conclusion: Louisiana's Medicaid Expansion improved access to screening and early cancer detection, yielding significant cost savings. Repeal would likely reverse these gains, increasing late-stage disease, treatment costs, and uncompensated care across the state.

Measure	2015	2016	2017	2018	2019	2020	2021	2022
Medicaid Enrollment (N, % LA population)	1,485,012 (31.9%)	1,602,954 (34.3%)	1,790,956 (38.3%)	1,856,480 (39.6%)	1,853,660 (39.8%)	1,883,015 (40.5%)	1,953,276 (42%)	2,057,869 (44.5%)
Expansion Enrollment (N, % of Medicaid enrollees)	N/A	299,992 (N/A)	499,175 (23.24%)	456,785 (N/A)	605,269 (31.5%)	632,716 (28.9%)	694,824 (32.4%)	781,760 (38.9%)
% Women Screened by Mammography (Medicaid covered)	55.55%	55.84%	56.03%	57.70%	58.13%	55.43%	54.04%	55.83%
Breast Cancer Incidence - All stages (age-adjusted rate)	3,559 (129.4)	3,538 (127.2)	3,643 (131.0)	3,817 (136.3)	3,755 (132.6)	3,532 (122.7)	3,822 (133.3)	3,839 (132.5)
Estimated Breast Cancer Incidence - Individual stages								
In situ	587	584	601	641	631	593	642	645
Local	1833	1822	1876	2065	2032	1819	1968	1977
Regional	925	920	947	874	860	809	875	879
Distant	214	212	219	214	210	198	214	215
Early-Stage Total	2420	2406	2477	2706	2663	2412	2610	2622
Late-Stage Total	1139	1132	1166	1088	1070	1007	1089	1094
Estimated Cost for All Individuals in LA for Treatment According to Stage								
In situ	$35,608,471.88	$35,398,061.49	$36,448,900.70	$38,884,082.62	$38,252,245.08	$35,980,783.06	$38,935,017.70	$39,107,833.15
Local	$150,518,759.69	$149,630,210.47	$154,071,314.15	$169,579,865.00	$166,825,526.66	$149,376,456.58	$161,641,227.93	$162,360,607.89
Regional	$119,726,966.58	$119,020,513.56	$122,552,778.66	$113,095,882.83	$111,259,881.30	$104,652,087.21	$113,244,677.88	$113,747,993.31
Distant	$28,759,994.28	$28,590,294.96	$29,438,791.56	$28,788,277.50	$28,320,930.96	$26,638,752.78	$28,825,988.46	$28,953,936.36
Early-stage total	$186,127,231.57	$185,028,271.96	$190,520,214.85	$208,463,947.62	$205,077,771.74	$185,357,239.64	$200,576,245.63	$201,468,441.04
Late-stage total	$148,486,960.86	$147,610,808.52	$151,991,570.22	$141,884,160.33	$139,580,812.26	$131,290,839.99	$142,070,666.34	$142,701,929.67
Total	$334,614,192.43	$332,639,080.48	$342,511,785.07	$350,348,107.95	$344,658,584.00	$316,648,079.63	$342,646,911.97	$344,170,370.71

Oncology | Abstract | Clinical Science | Surgical Oncology

Improving outcomes for Neuroendocrine Patients: 25-year review of 1699 NET surgical cytoreduction patients at a single institution

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Background: Surgical cytoreduction for neuroendocrine tumors (NETs) remains a standard of care. However, patient selection and long-term expectations of survival have relied on relatively small series of primarily abdominal tumors.

Objective: The objective of this study was to evaluate the value of surgical cytoreduction from a large cohort of patients at a single institution with strong surgical experience, robust clinical variables, and long term follow up data on survival.

Methods: NETs who underwent surgical cytoreduction from 1999 to present were reviewed. From 5290 patients, 1699 were identified to have documented grade, primary site and overall survival data. Kaplan Meier curves were constructed, median overall survival (mOS) and % OS were calculated.

Results: From 1699 patients complete demographic data was identified in 1472. Mean age of diagnosis was 56±13.2years. Average follow up was 8±6years. Median overall survival (mOS) of G1/G2/G3 NETs was 230months, 148months, and 109months respectively ($p<0.01$). G1/G2/G3 small bowel NET had a mOS of 18.5, 16.3, and 9.6years. G1/G2/G3 PNET patients had a 10-year survival of 69.8%, 50%, and 18% respectively. Furthermore, G1/G2 bronchopulmonary primary NETs had a 10-year percentage OS of 80% for G1 vs 48% for G2.

Conclusion: Surgical cytoreduction remains an important treatment option in NETs patients with long-term survival data showing increasingly improved outcomes over 25-year follow-up, including in G3 well-differentiated tumors and metastatic bronchopulmonary NETs. Our data underscores the merits of care at a high-volume center with standard methods of patient selection and cytoreduction endpoints.

Oncology | Abstract | Clinical Science | Surgical Oncology

The Importance of Time to Treatment in Early-Onset Colon Cancer: A National Cancer Database Analysis

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Background: The incidence of colorectal cancer is on the rise among adults under the age of 50. As a largely unscreened population, they are at risk of clinically significant delays in receiving treatment. In this study, we utilize an administrative dataset to identify the factors that contribute to the delayed time-to-treatment (TTT) among young adults diagnosed with colon cancer.

Objective: To identify sociodemographic and clinical factors associated with delayed time-to-treatment among young adults diagnosed with early-onset colon cancer using a national administrative database.

Methods: Patients with colon cancer of all stages were included from the National Cancer Data Base (2010-20), who either underwent surgery or neoadjuvant therapy. Early onset colon cancer (EOCC) was defined as age at diagnosis below 50 years. TTT was defined as the duration between the tissue diagnosis and the first treatment. TTT was categorized into early and delayed groups based on the median TTT. Patients treated within 7 days were excluded to eliminate patients receiving emergency procedures.

Results: A total of 15,004 patients met inclusion criteria. The median TTT was 22 days. More than two-thirds of patients were of ages 40 to 49 and of good functional status (Charlson Deyo score [CDS] 0). On multivariable logistic regression analysis, factors associated with delay beyond the median TTT included older age (age 30-39 versus 40-49, odds ratio [OR]: 0.88), male gender (OR: 1.09), Black race (OR: 1.34), Hispanic ethnicity (OR: 1.28), poor functional status (CDS 1 and 2, versus 0, OR: 1.12, 1.55), Medicaid (OR: 1.27) and Medicare insurance (OR: 1.5), lower educational area of residence (OR: 1.11), and lower stage of disease at diagnosis (Stage II-IV versus stage I, OR: 0.62, 0.64, 0.53).

Conclusion: More than 1% of patients with EOCC have TTT exceeding four months. By identifying sociodemographic factors associated with delayed TTT, we can enhance treatment strategies tailored to this specific patient population.

Oncology | Abstract | Clinical Science | Thoracic Surgery

Does the Histologic Subtype of Esophageal Cancer affect Survival after Pathologic Complete Response?

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Background: Pathologic complete response (pCR) following neoadjuvant therapy (NAT) is associated with improved survival (OS) in esophageal cancer (EC). However, outcomes for esophageal adenocarcinoma (EAC) and squamous cell carcinoma (SCC) patients achieving pCR have not been directly compared.

Objective: We analyzed predictive factors and compared pCR outcomes between the two subtypes.

Methods: Stage II/III EC patients who received NAT followed by esophagectomy from 2018-2022 were identified within the National Cancer Database (NCDB). Baseline characteristics and outcomes between histologic subtypes were compared. OS among pCR patients was assessed using Cox proportional hazards modeling.

Results: We analyzed 7,181 patients. pCR rate was 22% for EAC and 43% for SCC. Among EAC patients, females had greater odds of pCR. In SCC, well- or moderately-differentiated tumors predicted pCR. In both subtypes, shorter interval between NAT initiation and surgery and advanced T stage had lower odds of pCR. Several predictors of OS varied based on subtype (Table 1); however, Medicaid, facility type, advanced T stage, and nodal positivity predicted worse OS in both subtypes. pCR was associated with improved OS in both subtypes. Among pCR patients, comorbidity score >1, age over 74, advanced T stage, and treatment at non-academic centers predicted worse OS. Five-year survival was the same for patients with pCR regardless of subtype (both 63%, p=0.32).

Conclusion: While pCR is predictive of improved OS in SCC and EAC, many factors predictive of achieving pCR and OS vary based on subtype. OS among patients who achieve pCR is similar regardless of subtype.

Table 1. Multivariate predictors of Overall Survival according to histologic subtype

	Adenocarcinoma		Squamous Cell	
Effect (reference)	HR (95% CI)	p-	HR (95% CI)	p-
Age at Diagnosis (75 and older)				
18-54	**0.74**	**0.002**	0.87	0.570
55-64	**0.75**	**0.000**	0.90	0.650
65-74	**0.79**	**0.000**	0.80	0.276
Sex (Male)				
Female	1.11	0.129	1.23	0.063
Race (White)				
Black or African American	1.01	0.978	0.94	0.692
Asian/Pacific Islander	0.93	0.775	0.81	0.343
Other	0.85	0.367	1.35	0.307
Hispanic (No)				
Yes	1.07	0.593	0.63	0.114
Charlson-Deyo Score (0)				
1 or greater	**1.20**	**<.000**	1.20	0.119
Primary Payor (Private)				
Not Insured	1.02	0.939	1.45	0.255
Medicaid	***1.24***	***0.008***	***1.60***	***0.002***
Medicare	**1.17**	**0.019**	1.15	0.383
Residence (Metropolitan)				
Non-metropolitan	1.02	0.700	1.22	0.147
Facility Type				
Academic	**0.81**	**<.000**	0.82	0.055
Primary site (Lower)				
Upper	0.62	0.340	1.28	0.376
Middle	**1.27**	**0.030**	1.04	0.743
Overlapping	1.10	0.360	0.74	0.249
Not otherwise specified	1.06	0.617	1.13	0.660
AJCC Clinical T (T1-2)				
T3-4	***1.27***	***<.000***	***1.68***	***0.000***
AJCC Clinical N (Negative)				
N1 or greater	***1.18***	***0.000***	***1.47***	***0.000***
AJCC Clinical Grade (Well)				
Moderate	1.04	0.729	1.19	0.439
Poor	**1.45**	**0.002**	1.08	0.758
Unknown	1.16	0.228	1.23	0.377
Time from diagnosis to start of therapy (≤ 1				
1-2 months	1.04	0.476	1.29	0.061
2-3 months	0.98	0.807	1.19	0.368
> 3 months	1.22	0.099	**1.83**	**0.037**
Time from start of therapy to surgery (3-4				
≤ 3 months	1.00	0.940	1.03	0.854
4-5 months	1.03	0.591	1.28	0.067
> 5 months	1.08	0.286	1.30	0.094
Pathological complete response (No)				
Yes	***0.52***	***<.000***	***0.55***	***<.000***

Oncology | Abstract | Clinical Science | Surgical Oncology

Implementation of a Hepatic Artery Infusion Pump Program at a Tertiary Care Center: Real World Experience

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Background: Hepatic artery infusion pump (HAIP) chemotherapy is a locoregional treatment for unresectable colorectal liver metastases (CRLM).

Objective: To describe outcomes of a newly implemented HAIP program at a tertiary care center.

Methods: We performed a retrospective review of patients who received HAIP from February 2024 - August 2025. Patient and tumor characteristics, treatment details, and postoperative complications were extrapolated.

Results: 17 patients underwent HAIP placement. All HAIPs were placed for unresectable CRLM. Primary tumors included 13 colon (10 right, 3 left) and 4 rectal. The median systemic chemotherapy cycles prior to HAIP were 15 (IQR 10-20). Concurrent procedures included colectomy (n=8), cholecystectomy (n=13), and minor hepatectomy (n=2). Eight patients had suspicious concomitant lung nodules. The starting floxuridine dose was 0.12 mg/kg. Median HAIP cycles received were 4 (IQR 3-8). At 3 months of follow up, 3-month liver radiographic responses by RECIST were: 3 partial responses, 7 stable disease, and 6 disease progression; at 6 months: 2 partial, 5 stable, and 4 progression. HAI-specific complications included 3 surgical site infections, 1 seroma, 1 pump malfunction, 1 pump migration at 268 days, and 3 biliary sclerosis events requiring endoscopic biliary stent placement (3/14, 21%) (175 ± 111 days). At last follow-up, 10 patients remained free of hepatic progression and 5 free of extrahepatic progression; 3 died of disease progression.

Conclusion: Implementation of an HAIP program is feasible with acceptable morbidity at a tertiary care center with no contemporary HAIP experience. The biliary sclerosis rate may be higher than recognized; reduced floxuridine dosing protocols should be considered.