

EPOSTER ABSTRACTS

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ePoster #1 | Abstract | Clinical Science | Endocrine

Implementation of a standardized post-operative hypocalcemia protocol

Mohamad Abouelnaaj, MD, Svetlana Gannutina, MD, Avni Mody, MD, Pratima Kumar, MD, Samuel Long, MD

University of Texas Austin - Dell Medical School

Background: Patients undergoing total thyroidectomy or parathyroidectomy are at risk of developing post-operative hypocalcemia. Prevention of this complication involves calcium and calcitriol supplementation post-operatively, but a standardized guideline for this management does not currently exist.

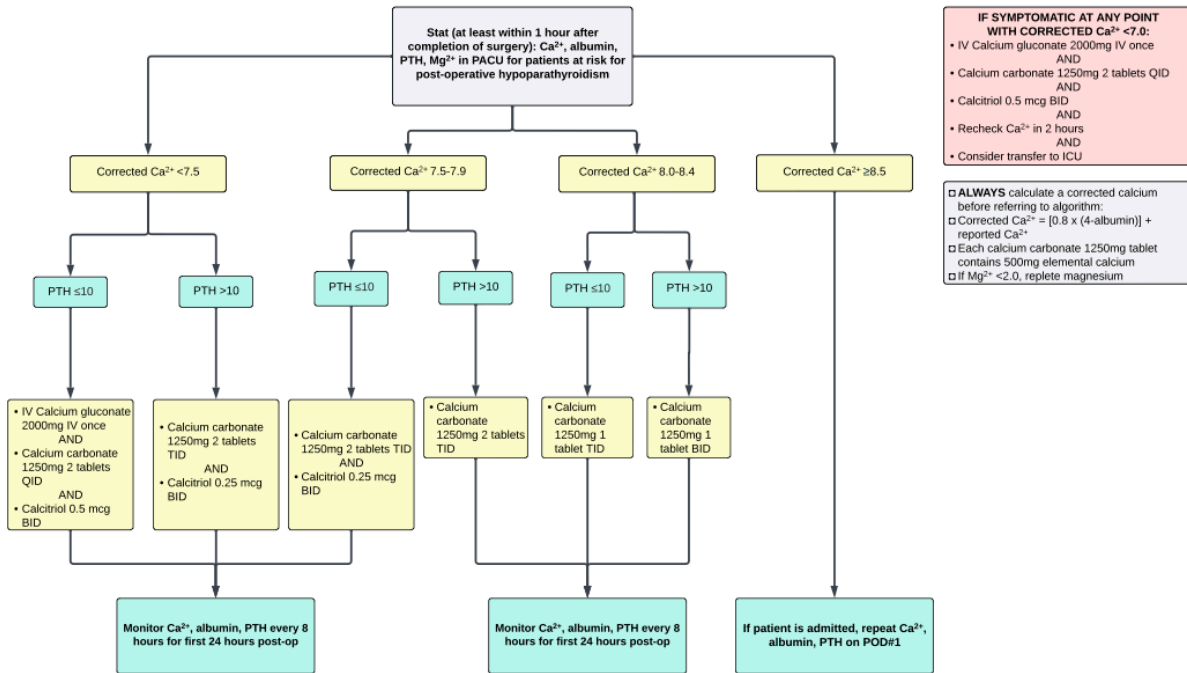
Objective: The protocol (Figure 1) was developed by a multidisciplinary collaboration involving an endocrine surgeon and endocrinologists at Dell Seton Medical Center (DSMC) and Seton Medical Center Austin (SMCA). We hypothesize that the incidence and severity of hypocalcemia post-operatively will be reduced because of initial and adequate supplementation. Outcomes are decreased overall hospital length of stay, 30-day readmission rates and symptomatic post-operative hypocalcemia.

Methods: Surgical cases involving either one of two surgeons at the previously described sites were reviewed by two physicians. 238 cases were reviewed from January 1, 2022 to January 1, 2025 as a part of our retrospective chart review. 165 met our inclusion criteria (i.e. total thyroidectomy, completion lobectomy or parathyroidectomy). Our prospective cohort is ongoing (began on January 1, 2025).

Results: Of the 165 cases reviewed in the retrospective part of this study, 3 cases were complicated by readmission within 30 days for hypocalcemia, 11 cases developed post-operative hypocalcemia, and the average length of stay was 1.4 days.

Conclusion: Our results thus far highlight an opportunity to improve outcomes in patients undergoing a total thyroidectomy or parathyroidectomy. Post-operative complications and length of stay in the three years prior to implementation of our protocol will be compared to those in the year after our protocol's implementation once data collection is completed.

Post-operative Hypocalcemia Algorithm
To be followed immediately after total thyroidectomy or parathyroidectomy



[ePoster #2](#) | [Abstract](#) | [Clinical Science](#) | [Abdominal/Laparoscopy](#)

A Structured Video-Based Data Dictionary Enables Objective Assessment of Surgical Performance in Cholecystectomy

B Blair, C Miller, EG Matthews, J Williams-Roberts, A Hari, E Canfield, D Lew, J Stulberg
University of Texas HSC - Houston

Background: Professional sports routinely use video analytics and event tagging to quantify performance, identify variability, and guide training. Surgical video lacks standardized methods to convert intraoperative activity into objective data. Without a defined structure for categorizing events and timing, opportunities for benchmarking, feedback, and technical skill development remain limited.

Objective: Develop a structured data dictionary for robotic cholecystectomy that enables operative video to be translated into standardized performance variables.

Methods: A procedure-specific framework was created to define and organize intraoperative activity into four domains: (1) Operative Phases (Retraction, Lysis of Adhesions, Cystic Triangle Dissection, Clipping, Liver Bed Dissection, and Extraction); (2) Operative Difficulty (Case-specific challenges e.g. large liver, distended gallbladder, aberrant anatomy); (3) Fixed Events (E.g. Achieving the Critical View of Safety); (4) Variable Events (Bleed Events e.g. bleeding episodes and interventions, Instrumentation Events e.g. instrument entries, exits, exchanges, and dwell times). Each domain was paired with consistent definitions for start/stop points, timing, frequency, and relational context to support temporal and comparative analysis.

Results: The data dictionary establishes a reproducible structure for categorizing operative video into measurable units of performance. Its modular design enables phase-level mapping, event clustering, and cross-case comparison without reliance on subjective interpretation. The framework supports the extraction of time-based metrics, frequency trends, and performance variability across cases and providers.

Conclusion: A structured data dictionary for cholecystectomy provides the foundation for transforming surgical video into analyzable performance data. By defining phases and events with precision, it creates a pathway for benchmarking, feedback, trainee assessment, and integration into educational and quality improvement initiatives.

ePoster #3 | Abstract | Clinical Science | Abdominal/Laparoscopy

Predictors of Failure During Nonoperative Management of Simple Acute Appendicitis

S Jayakumar, M Joe, L DeSplinter, D Nguyen, J Stulberg, D Ferguson

University of Texas HSC - Houston

Background: Nonoperative management (NOM) of acute appendicitis is an acceptable alternative to appendectomy; however, some patients ultimately require surgery. At our center, most patients elect for appendectomy, and we have noted a high failure rate of NOM.

Objective: We aimed to identify factors contributing to failure of NOM of simple acute appendicitis at our center.

Methods: We conducted a single-center retrospective case series using data from an institutional appendicitis database (January 2023 – May 2025). Adults diagnosed with simple acute appendicitis who underwent initial NOM with eventual surgery were included. Patients were categorized by early versus late failure of NOM, defined as transitioning to appendectomy during the index admission versus a subsequent admission. Reasons for failure included: clinical failure (failure to improve/clinical deterioration), change in patient preferences, recurrent appendicitis, or other. Descriptive statistics were performed.

Results: Early failure patients (n=5, median age 22 years [IQR 22, 40]) were younger than late failure patients (n=14, median age 44 years [IQR 31, 52]). Early failure patients underwent surgery due to clinical failure (40%), patient preferences (40%), or other reasons (20%), and the median time from admission to surgery was 37 hours (IQR 29, 45). All early failures underwent laparoscopic appendectomy with no intraoperative complications. With late failure patients, pathology indicated underlying chronic appendicitis in 21% and simple acute appendicitis in 79% of patients.

Conclusion: Among early failure patients, patient preferences led to the change in management as frequently as clinical failure, underscoring the importance of shared decision-making in the management of acute appendicitis.

ePoster #4 | Case Report | Clinical Science | Endocrine

Giant by Nature, Shocking by Function: A Massive Pheochromocytoma Case

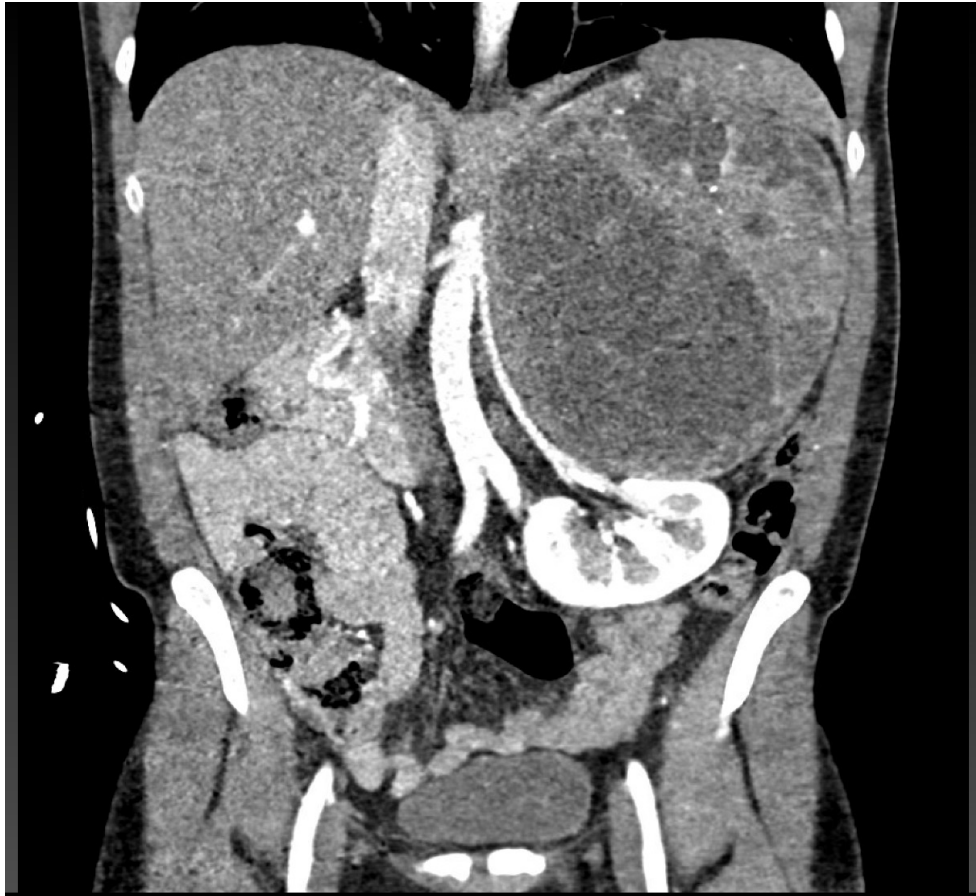
J Martinez-Paredes, A Vargas, V Phan, L Pert, B Gagen, M Angel, T Jie, H Chen, S Milan
Baylor Scott & White Health

Introduction/Objective: Pheochromocytomas are catecholamine-secreting neoplasms that arise from chromaffin cells in the adrenal medulla. Incidence is described to be 0.46 per 100,000 person-years. This rare entity can be fatal due to cardiovascular complications. Giant pheochromocytomas by definition are tumors > 7 cm in size.

Case Presentation: We present a case of a 46-year-old male with history of recent NSTEMI. A left heart catheterization revealed an EF 30%, global hypokinesis but no coronary artery disease. During this cardiac workup, an incidental large left suprarenal complex cystic mass was identified on imaging (18x14x17cm). Prior to our evaluation, an IR biopsy of the mass performed at an outside facility caused an unplanned ICU admission and was negative for malignancy. Biochemical testing at our institution confirmed a diagnosis of left-sided pheochromocytoma (plasma epinephrine: 873 pmol/L). After preoperative alpha-adrenergic blockade, surgical en-bloc resection of the mass (18.3 cm) was performed. He required postoperative care in the STICU and was discharged home on postoperative day seven. Final pathology confirmed pheochromocytoma with a PASS score of 7. Postoperatively, the patient developed a chyle leak that resolved with conservative management.

Discussion: Current guidelines emphasize the importance of a thorough biochemical evaluation for adrenal masses and advice against biopsy. Biopsy of an undiagnosed pheochromocytoma can lead to serious cardiac complications if this condition is untreated.

Conclusion: To our knowledge, only 22 cases of giant pheochromocytomas (>18 cm), including the present case, have been reported in the literature. Optimal outcomes rely on appropriate preoperative alpha-adrenergic blockade followed by surgical resection.



ePoster #5 | Case Report | Clinical Science | Abdominal/Laparoscopy

Abdominal Wall Transection: A Case Report and Repair Technique with Mesh Suture in a Contaminated Field

C Miller, M Zhao, M McGill, J Stulberg
University of Texas HSC - Houston

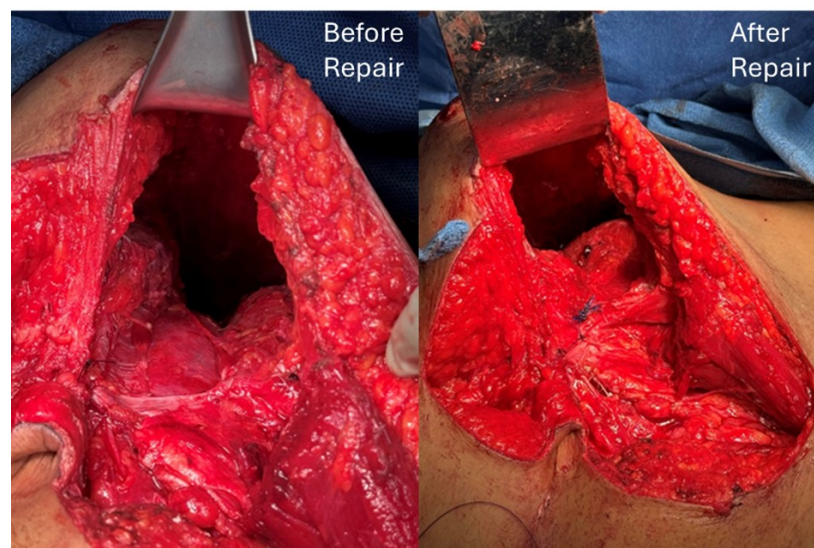
Introduction/Objective: We present a complete transection of the abdominal wall musculature with concomitant bowel injury requiring resection after blunt trauma. We resected bowel and then rebuilt the abdominal wall in layers demonstrating the successful use of a novel technique in a challenging situation.

Case Presentation: A 24-year-old male presented to a Level III trauma center after motor vehicle collision. Pertinent findings included transabdominal seatbelt sign and hemoperitoneum on CT scan, tachycardia and normotension. The patient was taken emergently to the operating room where injured segments of jejunum and sigmoid colon were resected and re-anastomosed.

We noted complete transection of the left abdominal wall musculature including transversus abdominis, internal and external oblique, and bilateral rectus muscles. Three myofascial advancement flaps were used to reapproximate all lateral layers using #1 Duramesh in a running fashion from the lateral boarder of psoas to the semilunar line. Rectus abdominis muscles were closed cranio-caudally. The midline was then closed. The patient was discharged on POD#5 and was seen in clinic post-op and has maintained function. We plan to obtain a CT scan to evaluate for hernia recurrence prior to the meeting.

Discussion: Traumatic abdominal wall hernias are rare and difficult surgical problems especially with concomitant bowel injuries. Mesh suture is a new tool with success in dirty-infected fields.

Conclusion: A layered repair with Duramesh suture following abdominal wall transection at the time of bowel resection successfully restored function in this patient and presents potentially a new paradigm for traumatic hernias.



Robotic SADI-S Revision with Proximalization of DI Anastomosis to Increase Nutrient and Vitamin Absorption and Correct Metabolic Acidosis

J Park, J Zubillaga, A Thapa, P Vega, A Goyal, M Koutentakis, T Sheets, R Oviedo
Sam Houston State University College of Osteopathic Medicine

Background: Single Anastomosis Duodeno-Ileal Bypass with Sleeve Gastrectomy (SADI-S) can lead to severe nutritional deficiencies and metabolic acidosis in some patients, even with a 300-cm efferent limb. Revision surgery with proximalization of the duodeno-ileal (DI) anastomosis, combined with the triple use of indocyanine green (ICG)—for identification of biliary anatomy, assessment of DI perfusion, and intraoperative leak testing—offers potential benefits to mitigate these complications without compromising bariatric efficacy.

Objective: To describe the feasibility, safety, and clinical outcomes of robotic revision of Single Anastomosis Duodeno-Ileal Bypass with SADI-S through proximalization of the duodeno-ileal anastomosis, utilizing triple ICG guidance to correct severe malnutrition, vitamin deficiencies, and metabolic acidosis while preserving weight loss efficacy.

Methods: We present a case of a patient who underwent robotic revision of SADI-S for severe malnutrition, refractory vitamin deficiencies, and metabolic acidosis. The patient initially presented with significant protein-energy malnutrition, multiple micronutrient deficiencies, and metabolic acidosis following primary SADI-S with a 300 cm efferent limb. The revision technique involved robotic resection of the DI anastomosis and proximal construction of a new DI extending the efferent limb length to approximately 450 cm from 300 cm to optimize nutrient absorption.

Results: The patient demonstrated significant improvement in nutritional parameters post-revision. Serum albumin normalized, vitamin deficiencies resolved, and metabolic acidosis corrected completely with normalization of acid-base parameters. Weight loss efficacy was maintained without weight regain. The procedure was completed without complications, and the patient had an uncomplicated recovery with a short hospital stay.

Conclusion: Robotic proximalization of the DI anastomosis is a safe and effective revisional approach for managing severe malabsorption following SADI-S. This technique successfully corrects nutritional deficiencies and metabolic complications while preserving the benefits of weight loss. The robotic approach combined with the triple use of ICG facilitates precise anastomotic revision with excellent outcomes and minimal morbidity.

ePoster #7 | Case Report | Education | Endocrine

The End of the Algorithm: Total Thyroidectomy for Medically Refractory Graves Hyperthyroidism during Pregnancy

L Pert, A Vargas, J Martinez-Paredes, B Gagen, S Milan
Baylor Scott & White Health

Introduction/Objective: Graves hyperthyroidism is defined by decreased levels of thyroid stimulating hormone (TSH), elevated T4 and identification of Thyrotropin Receptor Antibody (TRAb.) Higher TRAb levels in the second half of pregnancy may induce fetal hyperthyroidism, pre-eclampsia, or miscarriage.

Case Presentation: 22-year-old female presented to primary care physician for 25-pound weight loss, nausea, fatigue, and hair loss. She was diagnosed with hyperthyroidism, specifically concerned for Graves with Thyrotropin Receptor Antibody (TRAb) of 18.4 (<1.75 IU/L) and Thyroid Stimulating Immunoglobulin of >40 (<0.54 IU/L.) Patient became pregnant one month later with continued evidence of uncontrolled hyperthyroidism. Additionally, she was noted to have leukopenia, thus thioamides were avoided. She underwent successful total thyroidectomy and is progressing well with pregnancy thus far on thyroid replacement.

Discussion: Women with difficult to medically manage Graves hyperthyroidism on high doses of thioamides should consider definitive therapy prior to conception. Surgical intervention for medical refractory hyperthyroidism remains a safe treatment option, optimally during second trimester; however, strict follow up is paramount to ensure that post operative hypothyroidism is avoided and TRAb levels have decreased.

Conclusion: During pregnancy, with the increase in estrogen production, there is a subsequent increase in thyroid binding globulin (TBG), total T3 and T4 leading to transient drop in TSH levels. When encountering a pregnant patient with Graves hyperthyroidism, it is imperative to have a multidisciplinary team for evaluation of thyroid function tests at frequent, regular intervals to ensure euthyroid state of mother and fetus during the pregnancy and in post-partum care.

ePoster #8 | Case Report | Clinical Science | Endocrine

Reoperative Parathyroid Surgery: The Utility of Selective Venous Sampling in Complex Cases with Bilateral Nerve Injury

R Seniors III, K Holden, S Martinez Ugarte, Alexander Shestopalov, T Vaghaiwalla, J Buicko Lopez

University of Texas HSC - Houston

Introduction/Objective: Parathyroidectomy is the definitive treatment for primary hyperparathyroidism (pHPT), but reoperative surgery carries increased morbidity due to scarring and distorted anatomy. Parathyroid venous sampling (PVS) may aid localization when standard imaging is inconclusive, particularly in patients with prior nerve dysfunction.

Case Presentation: A 73-year-old male with persistent pHPT underwent prior bilateral neck exploration at an outside institution with removal of a normocellular right lower parathyroid gland. Postoperative parathyroid hormone (PTH) levels remained elevated. Six months later, calcium was 12.2 mg/dL with recurrent nephrolithiasis requiring hospitalization. Repeat ultrasound, sestamibi, and 4D CT were non-localizing. Preoperative laryngoscopy revealed bilateral vocal fold hypomobility, right greater than left, despite no hoarseness or aspiration. Given inconclusive imaging and high operative risk, PVS was obtained and demonstrated a ≥ 2 -fold PTH gradient on the right between the middle thyroid and lower internal jugular veins, corresponding to the prior excision site. Reoperative exploration was limited to the right side. Intraoperative neuromonitoring enabled safe dissection through scarred planes, and an ectopic hypercellular right superior parathyroid gland was excised. Intraoperative PTH decreased from 63.6 pg/mL to 14.1 pg/mL.

Discussion: This case illustrates the challenges of reoperative parathyroid surgery, where distorted anatomy and inconclusive imaging increase the risk of nerve injury and persistent disease. PVS provided biochemical localization, guiding a focused, nerve-sparing approach. Preoperative laryngoscopy identified subclinical dysfunction that informed operative strategy.

Conclusion: When conventional imaging fails, PVS can offer decisive localization, enabling targeted exploration, reducing operative morbidity, and improving the likelihood of durable cure.

ePoster #9 | Abstract | Basic/Transactional Science | Abdominal/Laparoscopy
Systematic Analysis of Differences in Laparoscopic Lens Occlusion Perception
M Srinivasan, S Palanikumar, R Virani, C Idelson, J Dhingra, A Ahmed, J Uecker
Texas A&M School of Medicine (EnMed)

Background: Suboptimal visualization in laparoscopic surgery caused by lens debris affects 31–53% of operative time. While technical variability has been quantified using the Objective Structured Assessment of Technical Skills (OSATS) and the Global Evaluative Assessment of Robotic Skills (GEARS), the cognitive factors guiding surgeons' decisions about when visualization requires lens cleaning remain unexplored.

Objective: This study quantified how surgeons, medical students, and the public perceive laparoscopic image clarity to inform surgical education and standardize visualization practices.

Methods: A web-based image scoring tool segmented laparoscopic images into 3×3 tiles. Participants selected tiles with 100% clear visualization. Clarity Score (CS) represented the percentage of responses classifying each tile as clear; Occlusion Score (OS) represented the percentage not classified as clear ($CS + OS = 1$). Tile-level scores were averaged across respondents, then aggregated across nine tiles to generate image-level scores. Twelve images from general surgery, thoracic surgery, and OB/GYN were analyzed. Group comparisons used Kruskal–Wallis and Dunn's post-hoc tests.

Results: Among 278 responses (95 surgeons, 88 students, 95 public), medical students rated images clearer than the public ($p = 0.01$) and surgeons ($p < 0.01$). Surgeons showed heightened sensitivity to clarity in central and corner regions. Surgeons and the public showed similar overall sensitivity, though optical aberrations or viewing conditions may have influenced these trends.

Conclusion: While surgical experience likely influences perception, high variability in assessing image clarity highlights a subjective element in current practices, emphasizing the potential for standardized, quantifiable methods to support objective and data-focused guidelines in the surgical visual sphere.

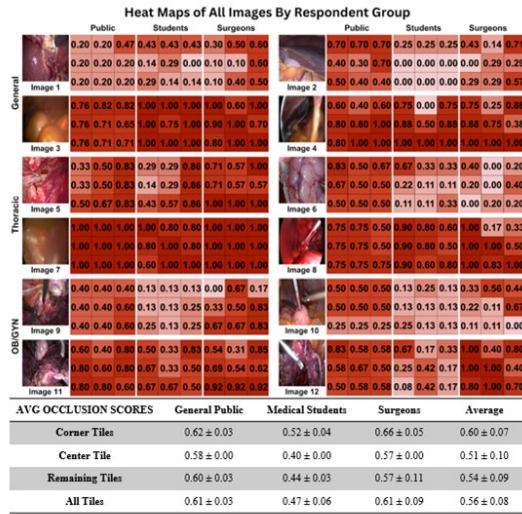


Figure 1. (Top) Occlusion heat maps showing response patterns for each image by group and by specialty. Average OS included in each tile; darker regions have higher OS values. (Bottom) Table assesses OS spatial scores between Corner Tiles, Center Tiles, and all Remaining tiles for images, separated by group

When Imaging Fails, Veins Tell the Truth: A Re-operative Parathyroidectomy Success Story

A Vargas, M Angel, D McDonald, S Milan
Baylor Scott & White Health

Introduction/Objective: Re-operative parathyroid surgery remains a challenging procedure, even for experienced surgeons. Accurate preoperative localization of the culprit gland is critical to achieving a successful outcome.

Case Presentation: A 68-year-old female with recurrent primary hyperparathyroidism and multiple prior neck surgeries presented with persistent hyperparathyroidism. Her surgical history included left parathyroid adenoma excision (2015), right inferior parathyroidectomy with thymectomy (2017), and a third exploration with left thyroidectomy complicated by left RLN injury and vocal cord paralysis (2018). She also had a history of nephrolithiasis and a recent right distal condylar fracture with failed ORIF requiring revision. Labs showed calcium 9.1 mg/dL, PTH 178 pg/mL, and normal vitamin D. 4DCT was non-localizing; venous sampling lateralized to the right upper neck. A fourth surgery was performed; a right superior parathyroid adenoma was identified and excised, confirmed by an intraoperative PTH drop. Parathyroid autotransplantation was also performed.

Discussion: In recent years, parathyroid venous sampling has emerged as a valuable diagnostic tool available at select centers. It offers a key advantage in cases where noninvasive imaging fails, by delineating regions of elevated PTH secretion and aiding in the localization of hyperfunctioning parathyroid tissue.

Conclusion: Parathyroid venous sampling is a valuable adjunct in complex re-operative parathyroid cases, particularly when prior imaging is inconclusive. A thorough understanding of previous surgical interventions and any associated nerve injuries is essential to planning and executing a successful reoperation.

ePoster #12 | Abstract | Clinical Science | Education

Evolving Ergonomics: Musculoskeletal Complaints Begin During Surgical Training, Continue into Practice

R Wu, P Munnangi, P Ganguly, V Dang, C Lannon, N Tapia
Houston Methodist Hospital

Background: Musculoskeletal injuries (MSKI) are prevalent across all surgical specialties. Previous studies focusing on surgical ergonomics investigated MSKI based on surgical specialty, procedure, and surgeon demographics. However, there is limited data evaluating the significance of career stage on surgery-related MSKI.

Objective: This study aimed to localize surgery-related MSKI based on career status.

Methods: A questionnaire was distributed to trainees and attendings across five surgical subspecialties. Data included surgeon demographics, practice characteristics, training or career stage, instrument experience, and presence/frequency of localized symptoms.

Results: Of the 21 surgical trainees and 11 attendings who completed the questionnaire, all attendings reported pain and stiffness. 95.2% of trainees reported pain, and 85.7% reported stiffness. Of reported pain, location in the neck was most common, with 45.5% of attendings and 61.9% of trainees affected ($p=0.465$). Neck stiffness was reported by 63.6% of attendings and 42.9% of trainees ($p=0.458$). Numbness, localized to the fingers and arms, was significantly increased in attendings (36.4%), compared to trainees (4.8%) ($p=0.037$). Despite 96.9% of surgeons attempting exercises and stretching, 75% still experienced persistent symptoms.

Conclusion: The findings show that surgeon participants experienced musculoskeletal discomfort regardless of training level. Neck pain was more prevalent in residents, while neck stiffness was more common in attendings. Limitations include a small number of respondents, limiting the power and significance of the study. However, these preliminary results demonstrate the need for further research on ergonomics during surgical training and practice.

ePoster #13 | Abstract | Clinical Science | Trauma/Burn/Critical Care

A Paradox: Outcomes of Early Serotonergic Antidepressant Use Following Burn Injury

A. Chowdhury, Z. Dhalla, H. Asgarali, E. Kim, C. Chavez, J. Lee

University of Texas Medical Branch - Galveston

Background: Depression and anxiety are highly prevalent in the burn population and are frequently managed with selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs). Previous literature has suggested these medications may impair wound healing through 5-HT_{1A} receptor dysfunction. However, there is limited understanding of its impact in post-burn care.

Objective: This study aimed to elucidate the association between the use of serotonergic antidepressants after recent burn injury and wound healing complications.

Methods: Burn patients (2010–2025) were identified within the TriNetX U.S. Collaborative Network, a globally federated research database. Patients who were prescribed an SSRI or SNRI within 14 days of burn injury were compared with those without. Propensity score matching was performed for sociodemographics, psychiatric disorders, comorbidities, as well as burn severity (total body surface area), location of injury, and burn depth. Outcomes at 30 days included wound disruption, wound infection, pruritus, mortality, muscle atrophy, and lactic acidosis. Hypertrophic scar formation and contractures were assessed at 1 year. Separate univariate logistic regressions were performed for each outcome, statistical significance was defined as $p < 0.05$.

Results: A total of 33,814 burn patients were in the SSRIs/SNRIs group and 658,091 were in the control group. Following 1:1 matching analysis, 30,152 patients remained in each cohort. Within 30 days following burn injury, the SSRI/SNRI cohort had higher risk of wound disruption ($p = 0.002$), wound infection ($p < 0.001$), pruritus ($p = 0.028$), muscle atrophy ($p = 0.008$), and lactic acidosis ($p = 0.007$). In contrast, 30-day mortality was lower in the SSRI/SNRI cohort ($p < 0.001$). At 1 year after burn injury, patients exposed to SSRIs/SNRIs experienced higher risk of hypertrophic scar formation and contractures compared to unexposed controls (both $p < 0.001$).

Conclusion: The use of serotonergic antidepressants following recent burn injury was associated with increased risk of wound complications at 30 days and long-term scar formation at 1 year. However, mortality was observed to be lower among patients given SSRIs or SNRIs after their burn injury. Clinicians should consider postponing the prescription of serotonergic antidepressants after recent burn injury and recommend alternative forms of psychiatric support or treatment, as further research is needed to affirm the effects of these medications on wound healing.

30-days			
Outcome	RR	95% CI	P-Value
Wound Disruption	1.83	1.24–2.71	0.002
Wound Infection	2.24	1.54–3.25	<0.001
Pruritis	1.19	1.02–1.38	0.028
Muscle Atrophy	2.24	1.24–4.74	0.008
Lactic Acidosis	1.41	1.01–1.82	0.007
Mortality	0.73	0.63–0.84	<0.001
1-year			
Hypertrophic Scar Formation	1.27	1.16–1.39	<0.001
Contractures	1.4	1.30–1.51	<0.001

Paradoxical Risk: Elevated Ejection Fraction and Outcomes After Geriatric Hip Fracture

G Dominguez, N Fulcomer, L Moore, M Wandling, S Ugarte, G Khraish, T Puzio
University of Texas HSC - Houston

Background: Older adults with isolated hip fractures (IHF) are at increased risk for postoperative complications and mortality. Preoperative echocardiography is widely used, but the prognostic role of ejection fraction (EF) in geriatric trauma remains unclear.

Objective: Evaluate the association between preoperative EF and postoperative outcomes in geriatric trauma patients undergoing surgical repair of IHF.

Methods: We retrospectively identified 545 patients ≥ 65 years old with IHF at our level I trauma center between April 1, 2023, through September 30, 2024. Patients without preoperative echocardiography were excluded. The remaining 323 patients were stratified into four groups based on the American Heart Association's classification of heart failure by EF. Various outcomes were compared according to EF using statistical analyses.

Results: Median age was 83 years (IQR 76–89) and 61.3% were female. EF distribution was 262 with normal EF (50-70%), 24 with reduced EF (40-49%), 28 with severely reduced (<40%), and 9 with supraphysiologic EF (>70%). Length of stay ($p = .050$) and ambulatory score ($p = .048$) differed by EF, with supraphysiologic EF showing the longest hospital stay and lowest ambulatory score (Table 1). Nadir hemoglobin also differed ($p = .042$) and was lowest in supraphysiologic EF (Table 1). Inpatient mortality varied by EF ($p = .012$), highest in severely reduced EF (14.3%) followed by supraphysiologic EF (11.1%).

Conclusion: Supraphysiologic EF was associated with lower nadir hemoglobin, longer hospitalization, worse ambulatory score, and higher mortality compared with normal or reduced EF. Preoperative echocardiography may help identify this high-risk subgroup and enable earlier perioperative optimization.

Table 1. Patient Characteristics and Postoperative Outcomes Based on Ejection Fraction

	Normal (N = 262)	Severely Reduced (N = 28)	Supra-physiologic (N = 9)	p value
Mortality	6 (2.3%)	4 (14.3%)	1 (11.1%)	.012
AKI Incidence	124 (47.3%)	11 (39.3%)	5 (55.6%)	.797
LOS	7 (5-9)	7 (4-8)	11 (9-13)	.050
Ambulatory Scores	14 (12-17)	14 (11.3-18)	11 (10-13)	.048
BMI (kg/m ²)	23.4 (21.1-26.7)	23.6 (21.6-25.4)	21.5 (19.6-25.8)	.593
Nadir Hemoglobin (g/dL)	7.7 (6.93-9.10)	8.55 (7.47-9.53)	6.9 (6.20-7.00)	.042

ePoster #16 | Abstract | Clinical Science | Trauma/Burn/Critical Care

Assessing the Impact of Nephrectomy versus Renal Salvage on Mortality and Dialysis in Traumatic Renal Injuries

G Isayeva, J DuBose, P Teixeira, T Cardenas, J Aydelotte, M Trust, S Ali, M Robert, C Brown
University of Texas at Austin Dell

Background: Nephrectomy and renal salvage represent the two options during the operative management of renal injuries. While nephrectomy provides definitive treatment by removing the injured kidney, renal salvage techniques (partial nephrectomy and renal repair), aim to preserve renal function.

Objective: The specific aim of this study is to compare outcomes of nephrectomy vs. renal salvage in operatively managed traumatic renal injuries.

Methods: The 2022 NTDB was used to identify adult trauma patients with operatively managed renal injuries. We classified patients into two groups: nephrectomy and renal salvage. Groups were compared using univariate and multivariate analysis.

Results: Among the 1,058 patients who underwent operative management of renal injuries, there 739 (70%) had nephrectomy and 319 (30%) had renal salvage. When comparing nephrectomy to renal salvage patients, there was no difference in age, gender, or race. However, nephrectomy patients more often sustained blunt trauma (32% vs. 14%, $p<0.001$), had a lower GCS (12 vs. 13, $p<0.001$), higher ISS (31 vs. 25, $p<0.001$), were more often hypotensive on arrival (30% vs. 19%, $p<0.001$), and received more packed red blood cells, plasma, and platelets (all $p<0.001$). Nephrectomy patients had a higher mortality (26% vs. 13%, $p<0.001$). However, after logistic regression controlling for age, mechanism, hypotension, GCS, and ISS, nephrectomy was not independently associated with mortality (1.48 [0.95-2.31], $p=0.08$) or the need for dialysis (1.69 [0.87-3.26], $p=0.12$). This held true for high grade (IV-V) as well as low grade (I-III) injuries.

Conclusion: When compared to renal salvage, nephrectomy as the operative management of renal injuries is not associated with mortality or dialysis. Regardless the grade of injury, nephrectomy should be considered a safe option for the operative management of renal trauma.

Clinical Outcomes in Geriatric Isolated Hip Fracture Patients: Association between Acute Kidney Injury, Chronic Kidney Disease, and Bleeding

H Kwon, G Dominguez, N Fulcomer, S Ugarte, M Wandling, T Puzio, G Khraish
University of Texas HSC - Houston

Background: Older adults undergoing hip fracture repair often develop acute kidney injury (AKI) and perioperative bleeding, with underlying chronic kidney disease (CKD) leading to adverse outcomes. While AKI and bleeding individually contribute to poor outcomes, their combined effects remain understudied.

Objective: We aim to examine whether AKI, CKD, and their coexistence are linked to greater bleeding risk and worse outcomes in geriatric patients with isolated hip fractures (IHF).

Methods: 545 geriatric IHF patients in our level I trauma center between April 1, 2023 and September 30, 2024 were classified into normal function, AKI, CKD, and AKI + CKD groups. Univariate and multivariate regression analyses were performed with Hemoglobin (Hgb) decline, nadir Hgb, length of stay (LOS), and the volume of blood product received.

Results: AKI group had a lower nadir Hgb ($p < 0.001$), greater Hgb decline ($p < 0.001$) and longer hospital stays ($p < 0.001$) compared to those with normal renal function. AKI + CKD group had a lower nadir Hgb ($p < 0.001$) and longer LOS ($p < 0.001$) than those with normal renal function. Total volume of blood products was similar among all groups.

Conclusion: AKI, with or without CKD, is associated with greater bleeding severity and longer hospital stays in older adults undergoing IHF repair. Renal function may be a valuable tool for perioperative risk stratification and discharge planning in this vulnerable population.

Table 1. Comparison of Clinical Outcomes by Renal Function Status

	Normal (N = 269)	AKI (N = 155)	AKI+CKD (N = 75)	<i>p</i> value
Nadir Hgb	8.55 (7.2, 10.4)	7.30 (6.80, 8.90)	7.70 (6.90, 8.35)	<.001
Hgb Decline	3.2 (1.80, 4.40)	3.90 (2.60, 5.30)	3.50 (2.45, 4.95)	<.001
LOS	5.0 (4.0, 8.0)	7.0 (5.0, 9.0)	8.0 (6.0, 10.0)	<.001
Blood Prod V.	500 (300, 600)	450 (300, 601)	300 (300, 600)	=0.173

ePoster #18 | Abstract | Clinical Science | Trauma/Burn/Critical Care

Impact of Preexisting Atopic Diseases on Hypertrophic Scarring Outcomes After Burns

P Nguyen, Y Tanas, J Wang, K Baker, N Gonzalez, S Iyer, G Villa, H Chan, J Lee
University of Texas Medical Branch - Galveston

Background: Atopic disease has been associated with impaired burn wound healing through barrier dysfunction, chronic inflammation, and immune dysregulation. This disrupted healing may increase susceptibility to hypertrophic scarring, yet the relationship has not been well defined. To date, no known study has specifically examined this relationship.

Objective: This retrospective cohort study evaluated the association between preexisting atopic disease and hypertrophic scarring after burn injury.

Methods: The TriNetX Research Network was queried to identify patients ages 18 years and older with burn injuries between 2010 and 2024. Two cohorts were defined: patients with a diagnosis of atopic disease (asthma, allergic rhinitis, atopic dermatitis, or eczema) within one year prior to injury, and patients without these conditions. Patients with prior steroid use were excluded. Propensity score matching (1:1) was performed to control for demographics, body mass index, comorbidities, substance use history, and total body surface area burned. Outcomes included hypertrophic scarring at 3 and 12 months. Cox proportional hazards models were used to calculate hazard ratios (HR) with 95% confidence intervals (CI), and statistical significance was set at $p < 0.05$. Cumulative incidence was reported for each cohort at both time points.

Results: After matching, each cohort included 9,660 patients. At 3 months, patients with preexisting atopic disease had higher rates of hypertrophic scarring than non-atopic controls (4.75% vs 3.68%, HR 1.31, 95% CI 1.11–1.55, $p=0.001$). By 12 months, this difference persisted and further widened (7.27% vs 5.31%, HR 1.38, 95% CI 1.20–1.58, $p < 0.001$).

Conclusion: Preexisting atopic disease is associated with a significantly increased risk of hypertrophic scarring after burn injury, underscoring the need for early surveillance and targeted scar management. Prospective studies should confirm causality and evaluate preventive interventions.

Table 1. 3-Month Postoperative Outcomes in Patients With Preexisting Atopic Skin Disease: Scarring Condition

Outcome	Cumulative Incidence in Atopic Cohort	Cumulative Incidence in Non-Atopic Cohort	Hazard Ratio	Confidence Interval	p-value
Primary Outcomes: Scarring Conditions					
Hypertrophic Scarring	4.75%	3.68%	1.31	1.11-1.55	0.001

Table 2. 12-Month Postoperative Outcomes in Patients With Preexisting Atopic Skin Disease: Scarring Condition

Outcome	Cumulative Incidence in Atopic Cohort	Cumulative Incidence in Non-Atopic Cohort	Hazard Ratio	Confidence Interval	p-value
Primary Outcomes: Scarring Conditions					
Hypertrophic Scarring	7.27%	5.31%	1.38	1.20-1.58	< 0.001

ePoster #19 | Abstract | Clinical Science | Trauma/Burn/Critical Care

Risk Factors for Tube Replacement after Percutaneous Gastrostomy Tube Placement: A Multi-Center Retrospective Study of over 100,000 Patients

David Dodson B.S., Braden Miller M.D., Ashley Montgomery D.O., Aashish Rajesh, M.B.B.S., Mark T. Muir, M.D., F.A.C.S.

University of Texas Medical Center - San Antonio

Background: Percutaneous endoscopic gastrostomy (PEG) tubes provide enteral feeding access in critically ill patients. While determinants for PEG tube complications are well studied, there is limited data on the risk factors of gastrostomy tube replacement.

Objective: To evaluate independent risk factors of repeat gastrostomy tube placement after PEG tube insertion.

Methods: The TriNetX database (comprising 134 million patient records) identified adult patients who underwent PEG placement. Patient clinicodemographic characteristics, pre-procedure laboratory values, and complication data were collected. Repeat gastrostomy tube placement (defined as either percutaneous, laparoscopic-assisted, fluoroscopy-guided or open Stamm gastrostomy) was evaluated at 6 months. Cox proportional hazards regression modeling was used to identify risk factors.

Results: 107,512 patients were identified, of whom 4,484 underwent repeat gastrostomy tube placement (4.2%). Repeat gastrostomy placement was performed fluoroscopically in 2,614 (2.4%), open in 854 (0.7%), laparoscopically in 621 (0.6%), and percutaneously in 395 (0.4%). The overall 1-month complication rate was 22.0%. On multivariate analysis, risk factors for repeat gastrostomy placement were presence of any complication (HR 1.958, $p < 0.0001$), male gender (HR 1.156, $p < 0.0001$), previous gastrostomy infection (HR 1.431, $p = 0.050$), CRP > 75 mg/dL (HR 1.191, $p = 0.049$), albumin < 3 g/dL (HR 1.144, $p = 0.0003$), and lymphopenia < 1 103/uL (HR 1.352, $p < 0.0001$). Protective factors included age (HR 0.996, $p < 0.0001$), and hemoglobin < 10 g/dL (HR 0.665, $p < 0.0001$). BMI was not an independent risk factor for gastrostomy replacement.

Conclusion: PEG tube complications are the most significant independent risk factor for replacement. Targeted strategies to address modifiable risk factors may reduce the burden of repeat interventions, improve patient outcomes, and lower healthcare utilization.

Covariate	HR	95% CI	p-value
Any complication	1.96	1.83–2.10	<0.0001
Age (per year)	0.996	0.994–0.997	<0.0001
Male sex	1.16	1.09–1.23	<0.0001
Gastrostomy infection	1.43	1.00–2.06	0.050
CRP >75 mg/L	1.19	1.00–1.42	0.049
Albumin <3 g/dL	1.14	1.06–1.23	0.0003
Prealbumin <15 mg/dL	1.12	1.00–1.26	0.050

Sex-Informed Trauma Resuscitation: Reevaluating Empiric Calcium Administration in Women

N Raghavan, D Limon, M Patel, P Patel, A Moreira, A Ciaraglia, S Nicholson, D Jenkins
University of Texas Medical Center - San Antonio

Background: Calcium is essential for coagulation and cellular stability in trauma, and both hypocalcemia and hypercalcemia have been independently linked to increased coagulopathy, transfusion needs, and mortality at 6 h, 24 h, and in-hospital. While early calcium replacement is often emphasized to counter hypocalcemia, empiric administration without a risk-stratified approach may cause more harm than benefit, particularly given sex-specific physiological differences in calcium regulation.

Objective: To determine whether biological sex independently predicts early post-traumatic hypocalcemia and to evaluate implications for sex-stratified calcium administration strategies.

Methods: A retrospective analysis of 1,082 Level 1 trauma patients (812 male, 270 female) was performed. Ionized calcium (iCa) was measured upon emergency department arrival prior to transfusion. Hypocalcemia was defined as iCa < 0.9 mmol/L. Univariate analysis and multivariable logistic regression assessed sex and Injury Severity Score (ISS) as predictors.

Results: Female sex was associated with 29% reduced odds of hypocalcemia (OR = 0.71, p = .026). Female patients demonstrated relative protection against early iCa depletion. In multivariable analysis, ISS remained an independent predictor (p = .030), while sex showed a trend suggestive of biological relevance (p = .076).

Conclusion: Female trauma patients are less prone to early hypocalcemia, suggesting greater calcium homeostatic stability. Given that both hypo- and hypercalcemia worsen coagulation and outcomes, empiric calcium administration in low-risk women may increase the risk of iatrogenic hypercalcemia. A sex-informed, measurement-guided approach may enhance precision and safety in trauma resuscitation.

Crossing the Threshold: Is Post-Laparotomy Hemoglobin Associated with Initial Physical Function after Abdominal Trauma?

WD Rieger, RW Green, AR Jeckovich, S Martinez Ugarte, MO Fajemisin, JD Scott, MW Wandling, LS Kao
University of Texas HSC - Houston

Background: Restrictive transfusion practices have shown benefit in stable, non-bleeding patients. How this practice affects physical function post-hemorrhage control after abdominal trauma is poorly understood. Physical function can be assessed during inpatient physical therapy by the Activity Measure Post Acute Care (AM-PAC), with scores >16 indicating adequate function without rehabilitative need.

Objective: We explored whether different hemoglobin thresholds correlated with physical function at initial mobilization in adult trauma patients. We hypothesized that hemoglobin >7 mg/dL is associated with adequate initial physical function.

Methods: We performed a single-center retrospective analysis of adult (≥ 16 years) trauma patients who underwent exploratory laparotomy and received physical therapy from 1/2022-6/2023. Injury and mobility data were collected from trauma registry and medical records. Univariate, and multivariable analyses were performed.

Results: Of 315 patients, 239 (76%) were male with median age of 33 (IQR 23-43). Patients were severely injured, with median injury severity score of 22 (IQR 12-32); 167 (53%) sustained a penetrating injury. Median mobilization hemoglobin was 9.2 (IQR 8.0-10.4) with median initial AM-PAC score of 16 (IQR 12-20). Of hemoglobin thresholds >7, >8, and >9 at mobilization, >9 showed greatest odds of adequate physical function, while >7 showed none (Table). Adjusting for pre-specified factors (injury severity and type, days to mobilization), hemoglobin >9 was associated with doubled odds (OR 2.39, CI 1.38-4.13) of adequate physical function.

Conclusion: Hemoglobin >9 g/dL was associated with improved initial physical function in post-laparotomy trauma patients. While higher hemoglobin levels may mark less severe injury, poor mobilization may be a symptom of post-traumatic anemia.

Factor	OR	95% CI	p-value
Hemoglobin >7 g/dL	0.37	0.09 – 1.41	0.15
Hemoglobin >8 g/dL	2.45	1.28 – 4.68	0.01
Hemoglobin >9 g/dL	3.37	2.00 – 5.65	<0.01

Table. Separate univariate regression analyses of initial AM-PAC scores >16 per hemoglobin >7, >8, and >9.

ePoster #22 | Abstract | Education | Trauma/Burn/Critical Care

Understanding Patient-Reported Outcome Measures: The Association with Health Literacy in the Inpatient Trauma Population

Jerome D Scott, BS; William D Rieger, MD; Renee W Green, MD; Marissa N Thibodeaux, BFA; Lillian S Kao, MD, MS, MBA, FACS; Krislynn M Mueck, MD, MS, MPH
University of Texas HSC - Houston

Background: Patient-Reported Outcome Measures (PROMs) capture health-related quality of life from patients' perspectives. However, little is known about how well injured patients understand these tools.

Objective: We aimed to evaluate PROM understanding in relation to health literacy. We hypothesized that low health literacy is associated with PROM understanding below 70%.

Methods: We conducted a prospective cross-sectional study of English-speaking adults (≥ 18 years) recovering from traumatic or burn injuries, excluding those with GCS < 15 . Participants completed the Brief Health Literacy Screening Tool (BRIEF) and were categorized as having low (4–12), marginal (13–16), or adequate (17–20) literacy. Each was randomly assigned to complete either the EuroQol 5-Dimension 3-Level (EQ-5D-3L) or the 12-item Short Form Survey (SF-12). Understanding was assessed via teach-back interviews scored independently by two reviewers using a predefined rubric; discrepancies were adjudicated. Acceptable understanding was defined as $\geq 70\%$. Associations between health literacy and PROM comprehension were analyzed using univariate and multivariable models.

Results: Of 77 eligible patients, 48 were enrolled (65% male; median age 58, IQR 37–79). Most sustained traumatic injuries (88%). Median BRIEF score was 16 (IQR 12–19, marginal range). Median PROM understanding was 80% (IQR 60–98%), with 35% demonstrating poor comprehension. Understanding was higher for EQ-5D (90%) than SF-12 (60%). On multivariable regression, low health literacy was associated with poor understanding (OR 20, 95% CI 3.6–110).

Conclusion: Low health literacy is associated with poor PROM understanding in injured patients. Ensuring PROM clarity is essential to achieving equitable, patient-centered outcome measurement.

ePoster #23 | Abstract | Basic/Transactional Science | Trauma/Burn/Critical Care
Platelet Inhibition Following Traumatic Brain Injury Does Not Independently Correlate with Intracranial Hematoma Expansion

J Spriggs, A Criscitiello, C Hall
Baylor Scott & White Health

Background: Traumatic brain injury (TBI) remains one of the leading causes of morbidity and mortality in trauma patients. Platelet mapping (PM), an adjunct to thromboelastography (TEG), is thought to be of particular relevance to this population. Previous studies have suggested that correction of platelet inhibition may improve outcomes in these patients.

Objective: We aimed to determine if platelet inhibition correlated with progression of intracranial hematoma expansion in TBI patients.

Methods: Our institution's TQIP database yielded 113 patients with TBI that had TEG with platelet mapping drawn at admission between 1/1/2023 and 10/31/2024 and a repeat CT head within 4-6 hours. We subdivided these patients based on whether the degree of platelet inhibition exceeded 60% and compared outcomes, with the primary outcome being stability vs progression of repeat CT head.

Results: There were 44 patients with platelet inhibition greater than 60%. 10 (22.7%) of these patients would have expansion of intracranial hematoma. This was compared to the 69 patients with platelet inhibition less than 60%, of whom 13 (18.9%) would have hematoma progression ($p=0.617$). Between these groups, there was no significant difference in demographic variables, hospital/ICU length of stay, GCS on presentation, head AIS, ISS, mortality, or in the rate of platelet, FFP, or DDAVP administration.

Conclusion: Platelet inhibition does not independently correlate with worse outcomes in TBI patients. These results suggest that correction of coagulopathy based solely on the level of platelet inhibition would not improve outcomes in TBI patients. Further prospective studies are needed to delineate the role of platelet mapping in TBI.

ePoster #24 | Abstract | Education | Trauma/Burn/Critical Care

Is Understanding of Injury-Related Discharge Education Materials Associated with Health Literacy?

M Thibodeaux, W Rieger, R Green, J Scott, L Kao, K Mueck
University of Texas HSC - Houston

Background: Lack of understanding of discharge patient education materials (PEMs) can lead to worse patient outcomes.

Objective: We hypothesized that low and marginal health literacy is associated with poor patient understanding of trauma- and burn-related PEMs, adjusting for PEM readability.

Methods: We performed a prospective study of English-speaking adult (≥ 18 years) trauma and burn patients discharged home. Patient demographics and injury data were obtained from medical records. Patient understanding of PEMs was assessed by a teach-back interview, with poor understanding set at $< 70\%$ correctness. Health literacy was assessed via the Brief Health Literacy Screening Tool with scores of low (4-12), marginal (13-16), or adequate (17-20). PEM readability was assessed using the Simple Measures of Gobbledygook (SMOG) formula. Descriptive, univariate, and multivariable statistics were performed.

Results: Of 50 patients, 68% were male, median age was 45 (IQR 18-74), and 74% sustained a traumatic injury. Median health literacy was 17 (IQR 12-20) with 12% of patients categorized as low, 30% marginal, and 58% adequate. Of 70 discharge PEMs, median readability was 8.9 (IQR 8.2-9.6). Median understanding score per teach-back interview was 85% (IQR 76-94); 12 patients (24%) having poor understanding ($< 70\%$). After adjusting for PEM readability, low and marginal compared to adequate health literacy was significantly associated with poor understanding (OR 6.2, 95% CI 1.4-28, $p=0.02$; Table).

Conclusion: Patients with low and marginal health literacy were more likely to have poor PEM understanding, suggesting a need for additional educational interventions. Assessment of patients' health literacy and understanding of PEMs should be considered prior to discharge home.

Table. Factors associated with poor understanding of PEMs ($< 70\%$)

Factor	OR	95% CI	P-value
Low/Marginal Health Literacy (ref Adequate)	6.2	1.4 - 28	0.02
PEM Readability (SMOG)	0.6	0.2 – 1.8	0.34
English as a 2 nd Language	1.0	0.1 – 7.2	0.99

ePoster #25 | Abstract | Clinical Science | Trauma/Burn/Critical Care

Review of National Quality Data Highlights Importance of Preoperative Risk Stratification and Optimization for Reduction of Postoperative Respiratory Failure

K Verma, J Spriggs, G Ng
Baylor College of Medicine

Background: Ongoing surgical quality improvement initiatives have identified postoperative respiratory failure as a priority for focused analysis and intervention. To better understand contributing factors, data from the Agency for Healthcare Research and Quality (AHRQ) and the National Surgical Quality Improvement Program (NSQIP) were reviewed. Previous studies have shown that reintubation and prolonged mechanical ventilation are associated with increased length of stay, morbidity, and mortality.

Objective: To utilize national quality database reports to identify modifiable factors and potential interventions aimed at reducing postoperative respiratory failure.

Methods: Patients meeting criteria for postoperative respiratory failure, defined by AHRQ Patient Safety Indicator 11 (PSI-11) or NSQIP metrics of mechanical ventilation greater than 48 hours or unplanned intubation within 30 days, were identified. Detailed case analyses determined whether opportunities for improvement existed in preoperative risk stratification or postoperative management, or if no modifiable factors were identified.

Results: From the AHRQ cohort, 11 of 20 patients (55%) were identified as likely to have benefited from improved preoperative risk stratification and optimization, while 2 patients (10%) could have benefited primarily from enhanced postoperative management. Of the 30 non-emergent cases in the NSQIP cohort, 12 (40%) showed potential benefit from similar preoperative optimization strategies. The two databases captured largely distinct groups, with only one overlapping case.

Conclusion: This review underscores the importance of targeted preoperative risk assessment in preventing postoperative respiratory failure. A multidisciplinary workgroup has been established to refine preoperative evaluation using standardized screening tools and to implement interventions such as incentive spirometry, nutritional optimization, smoking cessation, and prehabilitation for high-risk patients.

ePoster #26 | Case Report | Clinical Science | Colon and Rectal Surgery

A Report of Colonic Anastomotic Dehiscence Linked to Sevelamer Use

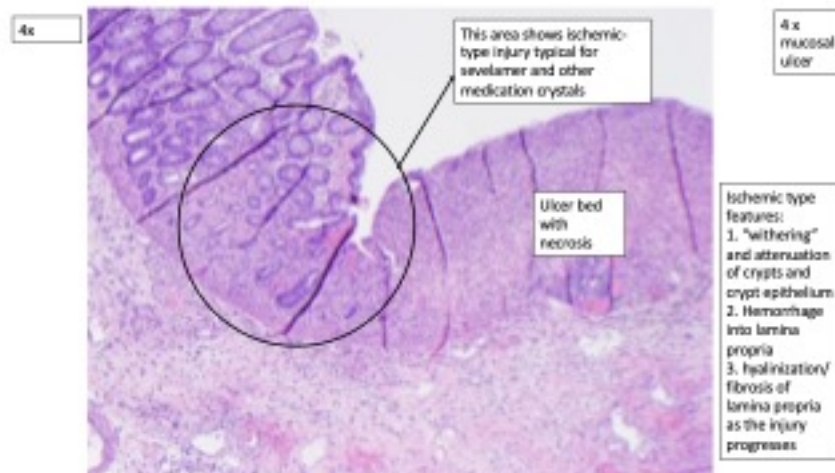
Nana-Yaw Bonsu MD, MPH, Jalan Carson BS, Alex Casella MD, MPH, Jeff Van Eps MD, FACS
University of Texas HSC - Houston

Introduction/Objective: We present a rare case of sevelamer-associated colonic perforation in a patient without end-stage renal disease (ESRD) after bowel anastomoses.

Case Presentation: A 65-year-old female presented with a 30-pound unintentional weight loss and bilateral lower extremity edema was found to have a 28 cm pelvic mass causing bilateral hydronephrosis. Given her hyperphosphatemia, she was initiated on sevelamer. Following bilateral nephrostomy tube placement, she underwent tumor excision via radical hysterectomy with en bloc low anterior resection. Postoperatively, she developed an anastomotic leak requiring emergent washout and end colostomy creation. Pathology revealed bowel wall necrosis and ulceration with crystalline material deposition consistent with sevelamer resin. She was ultimately discharged and started chemotherapy for metastatic endometrial cancer.

Discussion: Sevelamer is a non-calcium, non-metal phosphate binder that works in the GI tract and is used in chronic kidney disease patients. Common side effects include GI intolerance, abdominal pain, and constipation. Rare complications such as intestinal ulceration and perforation have been reported in the literature. These are believed to result from deposition of sevelamer crystals causing tissue inflammation beginning at the mucosa. Incidence rates are unknown, but a recent review found 28 reported cases in the literature. On histopathology, there is a characteristic fish-scale appearance. Similar phenomena can be seen with other sequestering agents such as cholestyramine and sodium polystyrene.

Conclusion: This case highlights the potential for bowel perforation associated with sevelamer use. Awareness of sevelamer-associated gastrointestinal injury is essential, as early recognition and prompt discontinuation of the medication may help prevent serious complications such as ulceration and perforation.



ChatGPT and Inflammatory Bowel Disease: A Pilot Study of Guideline Adherence and Clinical Agreement

L Hernandez-Flores, D Aillaud De Uriarte, M Cortes-Contreras, A Cendejas, E Acosta Marquez, H Manzano-Cortes Houston Methodist Hospital

Background: Inflammatory bowel disease (IBD) presents complex management challenges. While care is guided by expertise and guidelines, artificial intelligence (AI) is being explored as an adjunct. This study evaluates ChatGPT-5o's ability to provide IBD recommendations by comparing its outputs with real-world decisions and European Crohn's and Colitis Organisation (ECCO) guidelines.

Objective: To assess the AI capability to suggest IBD treatment and comparison with current guidelines.

Methods: We performed a retrospective analysis of 19 anonymized IBD cases spanning initial and complicated disease. ChatGPT-5o generated management recommendations, which were compared with clinician treatments and ECCO guidelines across seven therapeutic domains (5-ASA, steroids, antibiotics, thiopurines, anti-TNF, anti-integrins, anti-IL-23) plus diagnostic workup, symptom management, surgical consultation, and monitoring. Agreement was quantified using Cohen's kappa.

Results: ChatGPT-5o showed perfect agreement ($\kappa = 1.000$) with providers and/or guidelines for antibiotics, diagnostic workup, symptom management, surgical consultation, monitoring, and anti-IL-23. Substantial agreement ($\kappa \sim 0.6-0.8$) was observed for 5-ASA and steroids. Moderate to fair agreement ($\kappa \sim 0.3-0.5$) occurred for anti-TNF and anti-integrins, reflecting variability in complex scenarios. Thiopurines demonstrated the lowest concordance, with none-to-slight agreement in human-AI comparisons but higher alignment of ChatGPT-5o with ECCO, suggesting evolving practice patterns and safety considerations.

Conclusion: ChatGPT-5o closely aligns with clinicians and ECCO guidelines in multiple standardized domains, supporting its potential as a decision-support tool to enhance guideline adherence and broaden access to IBD expertise. Variability in biologic selection and thiopurine use underscores the need for expert oversight and patient-specific judgment. Prospective studies should assess longitudinal outcomes and integration strategies to ensure safe, patient-centered deployment.

Table 1: Summary of Cohen's Kappa Agreement for Each Category

Category	Human vs. Guidelines Kappa	Human vs. ChatGPT Kappa	ChatGPT vs. Guidelines Kappa	Agreement Level	Significance
5-ASA	0.689	0.689	0.604	Substantial	Yes
Steroids	0.406	0.578	0.771	Moderate to Substantial	Yes
Anti-TNF	0.289	0.345	0.685	Fair to Substantial	Yes
Anti-Integrins	0.486	0.336	0.771	Fair to Substantial	Yes
Anti-IL23	1.000	1.000	1.000	Perfect	Yes
Thiopurines	0.441	0.313	0.771	Fair to Substantial	No
Antibiotics	0.642	1.000	1.000	Substantial to Perfect	Yes
Diagnostic Workup	1.000	1.000	1.000	Perfect	Yes
Symptom Management	—	1.000	1.000	Perfect	Yes
Surgical Consult	—	1.000	1.000	Perfect	Yes
Continuous Monitoring	—	1.000	1.000	Perfect	Yes

Robotic Versus Laparoscopic Colorectal Surgery: A Systematic Review and Meta-Analysis of 259,476 Patients

K Chavez, Vásquez A, Mañuico V, Vega A, Beltran A, Alonso I, Faudoa R, Leiva J, Marines D
Houston Methodist Hospital

Background: The use of robotic surgery in colorectal procedures is on the rise, with the goal of enhancing accuracy and improving perioperative outcomes when compared to traditional laparoscopy. However, its true clinical advantage remains debated.

Objective: To evaluate key perioperative outcomes of robotic versus laparoscopic colorectal surgery, including surgical site infection (SSI), conversion, morbidity, mortality, anastomotic leak, postoperative ileus, readmissions, reoperations, and complication severity according to the Clavien–Dindo scale.

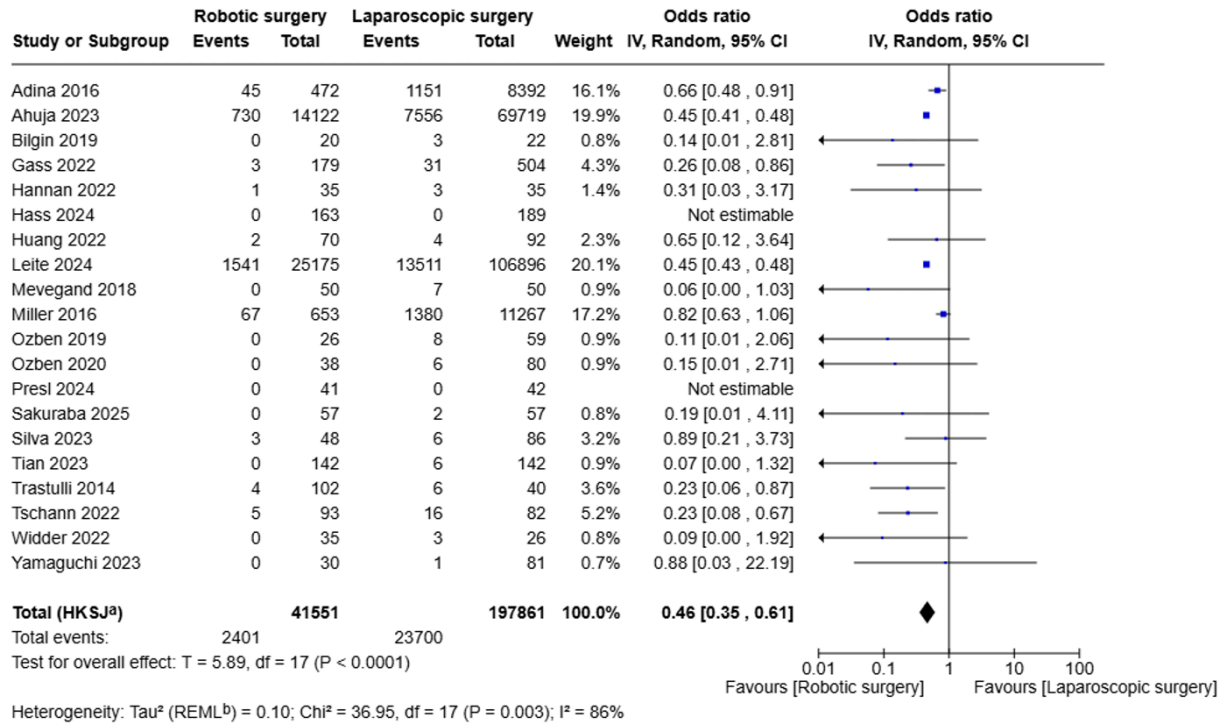
Methods: We systematically searched MEDLINE (PubMed), Embase, Scopus, Web of Science, and the Cochrane Library up to September 2025. Comparative studies directly reporting outcomes of robotic versus laparoscopic colorectal surgery were eligible. A total of 32 studies published between 2013 and 2025, comprising 259,476 patients, were included. Data extraction followed PRISMA guidelines. Analyses were performed with RevMan 5.4. For dichotomous outcomes, risk ratios (RRs) with 95% confidence intervals (CIs) were calculated; for continuous outcomes, mean differences (MDs) or standardized mean differences (SMDs) were used. Pooled effects were estimated with random-effects models. Statistical significance was set at $p < 0.05$. Heterogeneity was assessed using Cochran's Q and Higgins' I^2 statistic.

Results: Robotic surgery demonstrated significant perioperative advantages, markedly reducing conversion to open surgery (OR 0.46, 95% CI 0.35–0.61, $p < 0.0001$, $I^2 = 86\%$), overall morbidity (RR 0.86, 95% CI 0.83–0.88, $p < 0.0001$, $I^2 = 0\%$), and the risk of SSI (RR 0.78, 95% CI 0.64–0.94, $p = 0.009$, $I^2 = 18\%$). There was no statistically significant difference in mortality (RR 0.95, 95% CI 0.85–1.06, $p = 0.31$, $I^2 = 32\%$), supporting the comparable safety of both approaches. Anastomotic leak showed no significant difference in either the global analysis (RR 1.08, 95% CI 0.78–1.50, $p = 0.63$, $I^2 = 71\%$) or intracorporeal versus extracorporeal techniques (RR 0.96, 95% CI 0.55–1.67, $p = 0.89$, $I^2 = 0\%$). Similarly, postoperative ileus (RR 0.98, 95% CI 0.85–1.12, $p = 0.75$, $I^2 = 40\%$) and Clavien–Dindo complications (low-grade: RR 1.07, $p = 0.46$; high-grade: RR 0.92, $p = 0.63$; overall: RR 1.04, $p = 0.60$, $I^2 = 0\%$) were equivalent. While robotic surgery was associated with increased readmissions (RR 1.20, 95% CI 1.14–1.27, $p < 0.00001$, $I^2 = 0\%$) and reoperations (RR 1.33, 95% CI 1.12–1.58, $p = 0.001$, $I^2 = 24\%$), these drawbacks are modest compared to the consistent perioperative benefits observed.

Conclusion: Robotic colorectal surgery demonstrates clear perioperative advantages, including significantly lower conversion rates, morbidity, and SSI, with comparable outcomes for mortality, anastomotic leak, ileus, and complication severity. Although modest increases in readmission and reoperation were noted, these are outweighed by consistent perioperative benefits. Limitations include study heterogeneity, reliance on observational

data, and variability in surgical techniques. Further high-quality randomized trials are needed to validate and expand these findings.

Forest Plot – Conversion to open surgery (Robotic surgery vs Laparoscopic surgery)



Footnotes

^aCI calculated by Hartung-Knapp-Sidik-Jonkman method.
^bTau² calculated by Restricted Maximum-Likelihood method.

Figure 1. Comparing Conversion to open surgery between Robotic surgery and Laparoscopic surgery. |

Gastrointestinal Histoplasmosis Causing Colonic Obstruction: A Diagnostic Challenge in Immunosuppression

N Bonsu, J Naqvi, E Askenasy
Houston Methodist Hospital

Introduction/Objective: Disseminated histoplasmosis is an opportunistic infection in immunocompromised hosts, particularly in endemic regions. While pulmonary manifestations are common, gastrointestinal (GI) involvement is rare and can mimic other pathologies. We present a case of GI histoplasmosis in a renal transplant patient.

Case Presentation: 67-year-old male with a history of kidney transplant and diabetes presented for anemia workup. Initial colonoscopy revealed ulcerations in the ascending colon, with pathology initially interpreted as CMV colitis. Anemia persisted despite antiviral therapy and immunosuppressive adjustment. He subsequently presented with abdominal pain and anemia (Hb 7.4). A repeat colonoscopy identified a 5 cm, partially obstructing mass at the hepatic flexure for which he underwent a right hemicolectomy with end ileostomy.

Surgical pathology demonstrated fungal elements and PCR confirmed *Histoplasma capsulatum*. Workup also revealed positive cryptococcal antigen and cavitary lung lesion confirming disseminated disease. He was treated with a 2-week course of amphotericin B, followed by oral voriconazole.

Discussion: This case highlights the diagnostic challenge of histoplasmosis. It can present as a mass-forming lesion indistinguishable from malignancy; literature reviews note approximately 18% of histoplasmosis cases misdiagnosed as malignancies were in the GI tract. The ileum and colon are common sites due to abundant lymphoid tissue. Misdiagnosis as more common conditions like CMV colitis leads to diagnostic delays.

Conclusion: A high index of suspicion for disseminated fungal infections is crucial in immunocompromised patients from endemic areas, especially when symptoms persist despite standard therapy. Prompt, multidisciplinary evaluation is essential for diagnosis and managing complications like obstruction.

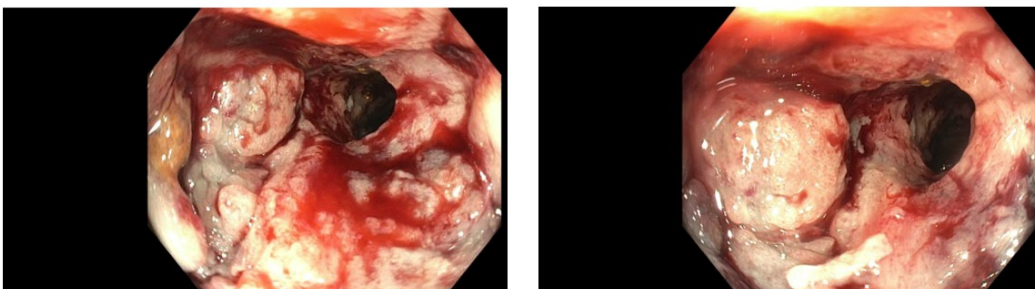


Figure: Images from colonoscopy of fungating, partially obstructing hepatic flexure colonic mass

Subpectoral vs. Prepectoral Tissue Expander Placement in Breast Reconstruction: A Systematic Review and Meta-Analysis

Y Tanas, G Gasper, L Dean, A Hagopian, W Stanton, A Spiegel

Anne Burnett Marion School of Medicine at Texas Christian University

Background: The optimal plane for tissue expander (TE) and implant placement in breast reconstruction remains debated, with mixed evidence comparing subpectoral and prepectoral techniques.

Objective: This meta-analysis evaluates postoperative complications and patient-reported outcomes between subpectoral and prepectoral TE placement.

Methods: PubMed, Scopus, and Web of Science were searched following PRISMA guidelines. Eligible observational studies compared the two TE planes and reported at least one primary outcome (surgical complications). Secondary outcomes included BREAST-Q scores, hospital stay, time to expansion completion, and drain removal. Data were analyzed using Review Manager 5.4. Risk ratios (RR) and mean differences (MD) were calculated with 95% confidence intervals (CI). Heterogeneity was assessed using I², applying random-effects models when significant.

Results: Twenty-three studies (10,476 TEs) met inclusion criteria. Subpectoral TE placement showed a lower risk of seroma (RR = 0.67, 95% CI 0.53–0.85, $p = 0.0009$) and wound dehiscence (RR = 0.74, 95% CI 0.56–0.97, $p = 0.03$) but resulted in a longer hospital stay (MD = 0.08 days, 95% CI 0.05–0.12, $p < 0.00001$) and time to complete expansion (MD = 24.66 days, 95% CI 15.39–33.92, $p < 0.00001$). No significant differences were found for hematoma, infection, necrosis, implant loss, readmission, malposition, capsular contracture, reoperation, BREAST-Q scores, or drain duration. Three studies reported lower pain scores with prepectoral placement, though heterogeneity precluded pooling.

Conclusion: Subpectoral TE placement may reduce seroma and wound dehiscence, while prepectoral placement offers shorter hospitalization, faster expansion, and less pain. Overall complication rates and satisfaction appear comparable between techniques.

ePoster #31 | Abstract | Clinical Science | Breast

Multicenter Pooled Comparative Analysis of Clinical and Economic Outcomes with AlloDerm® versus Cortiva® in 1,180 Breast Reconstructions

Y Tanas, K Rashidi, P Harris, G Gasper, L Cato, S Cervantes Valadez, P Nguyen, J Wang, S Swed, P Zak

Texas A&M School of Medicine (EnMed)

Background: AlloDerm® and Cortiva® are two commonly used human acellular dermal matrices (ADMs) for prosthetic breast reconstruction, yet their comparative clinical performance remains uncertain.

Objective: To systematically compare short-term clinical outcomes, patient-reported physical well-being, and peri-operative resource use between AlloDerm and Cortiva in immediate or delayed prosthetic breast reconstruction.

Methods: A systematic search of PubMed, Scopus, and Web of Science (inception – June 15, 2025) identified comparative studies of AlloDerm versus Cortiva. PRISMA 2020 guidelines were followed. Studies were included if they provided comparative data on complications, BREAST-Q scores, or cost. Random-effects meta-analyses estimated mean differences (MD) for continuous variables and odds ratios (OR) for binary outcomes. Heterogeneity was quantified with I². Cost data (reported heterogeneously) were summarized narratively.

Results: Five studies (one blinded randomized trial, one small interim RCT, three propensity-matched or retrospective cohorts) comprising 1,180 breast reconstructions in 1,072 patients met the inclusion criteria. Across all endpoints, no statistically significant differences were observed between the two ADMs in terms of complication rates and BREAST-Q scores. Four studies presented cost information. Two detailed economic evaluations showed that Cortiva's acquisition price was 10–22 % lower per sheet and translated into a 44–56 % reduction in total per-breast episode cost when operative and complication-related expenses were included.

Conclusion: Current evidence shows no clear difference between AlloDerm and Cortiva in terms of clinical outcomes but identifies a potential cost advantage for Cortiva. Pending long-term data, Cortiva represents the more economical choice.

ePoster #32 | Abstract | Clinical Science | Colon and Rectal Surgery

Assessing Colorectal Anastomotic Perfusion: A Comparison Between Oxygen Saturation Imaging and Indocyanine Green Angiography

A Vahibe, P Daher, U Phatak, A D'Andrea
University of Texas Medical Branch - Galveston

Background: Confirming perfusion to the anastomosis is a crucial step in colorectal surgery to prevent anastomotic leak. Indocyanine green (ICG) is widely used to evaluate perfusion to the anastomosis but may be limited by contrast allergy or supply shortage. Oxygen saturation imaging (OSI) is a multispectral imaging-based system that offers real-time assessment of tissue oxygen saturation (StO₂) without contrast injection.

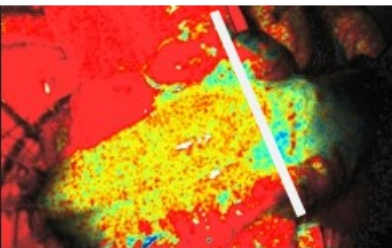
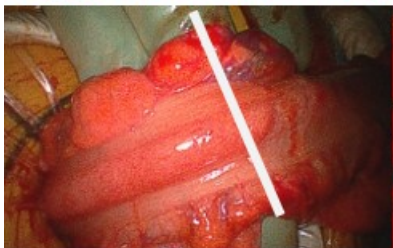
Objective: To compare OSI to ICG in evaluating the perfusion of colorectal anastomosis and to evaluate quantitative StO₂ differences between perfused and less-perfused bowel.

Methods: A retrospective case series was performed at a single academic tertiary referral center. Patients undergoing colorectal surgery requiring an anastomosis underwent perfusion assessment of a segment of bowel before transection and creation of an anastomosis using OSI and ICG. Cases where a demarcation line (DL) was apparent between perfused and less-perfused bowel were included. StO₂ levels in the perfused and less-perfused sides were measured postoperatively.

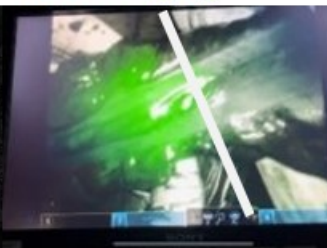
Results: Nineteen patients underwent colorectal surgery between 7/2023-5/2025 where DLs were identified with OSI. One did not receive ICG due to allergy, and ICG failed to show DL in another due to venous backflow. Concordance between OSI and ICG was observed in 17 of 18 evaluable cases (94.4%). Serosal StO₂ data was available in 18 patients. Mean serosal StO₂ was 77.1% ± 10.6 in well-perfused bowel and 42.1% ± 17.7 in less-perfused bowel (p < 0.001).

Conclusion: OSI demonstrates high concordance with ICG angiography for assessing bowel perfusion in colorectal surgery and provides quantitative, contrast-free evaluation of tissue oxygenation.

Oxygen Saturation Imaging



ICG Imaging



Robotic Appendectomy for Low-Grade Appendiceal Mucinous Neoplasm Using the Da Vinci Xi System

K Chavez, N Ibrahim, Z Amr, J Leiva
Houston Methodist Hospital

Background: Appendiceal mucoceles are rare lesions that may harbor neoplastic potential. Complete surgical excision is the treatment of choice to prevent rupture and peritoneal dissemination. Advances in robotic technology, particularly with the Da Vinci Xi platform, have enhanced precision, visualization, and control during minimally invasive procedures for rare appendiceal neoplasms.

Objective: To demonstrate the step-by-step technique and outcomes of a robotic-assisted appendectomy for a low-grade appendiceal mucinous neoplasm (LAMN), emphasizing key technical considerations and educational value for robotic surgical training.

Methods: CT scan revealed a distended appendix consistent with a mucocele. The patient underwent a robotic appendectomy using a four-port Da Vinci Xi setup: a 12 mm umbilical camera port—also utilized for specimen retrieval—and three 8 mm robotic working ports. The mesoappendix was dissected to the cecal base, and the appendix was transected with a 60 mm Endo GIA stapler. The specimen was retrieved intact in an Endo Catch bag through the umbilical port to prevent spillage.

Results: The procedure was completed without complications. Operative time was uneventful with minimal blood loss. Pathology confirmed a 9.5 cm LAMN confined to the muscularis propria with negative margins and no evidence of carcinoma. The patient had an uncomplicated recovery and was discharged home in good condition.

Conclusion: Robotic appendectomy for LAMN using the Da Vinci Xi system is safe and feasible. The robotic platform offers enhanced visualization, dexterity, and secure specimen handling, supporting its role in the management of rare appendiceal tumors.

Foregut perforation after initiation of a GLP-1 agonist: a case series

S Bellur, M Beyer, J Gauthier

University of Texas Medical Center - San Antonio

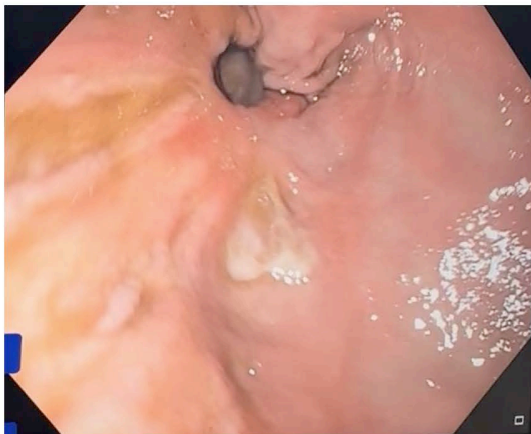
Introduction/Objective: The use of GLP-1 agonists for the treatment of obesity is rapidly increasing. Side effects of GLP-1 agonists include vomiting and gastroparesis. Esophageal and gastric perforation as a complication of GLP-1 agonists has not been reported. We describe two cases of foregut perforations due to Boerhaave's syndrome and gastric outlet obstruction in patients who recently started GLP-1 agonists.

Case Presentation: Patient A is a 66-year-old female with a history of a Toupet fundoplication for reflux who presented with chest pain and pneumomediastinum two weeks after starting tirzepatide. The patient had a gastric food bezoar causing gastric outlet obstruction and perforation of the fundus at the hiatus (Figure 1A). She was managed by primary repair of the gastric perforation and discharged on post-operative day 13. Patient B is a 62-year-old female who presented in severe septic shock following intractable emesis one day after starting semaglutide. The patient had a perforation of the left lateral distal esophagus consistent with Boerhaave's syndrome (Fig. 1B). She was managed by primary repair of the esophageal perforation and discharged on post-operative day 17.

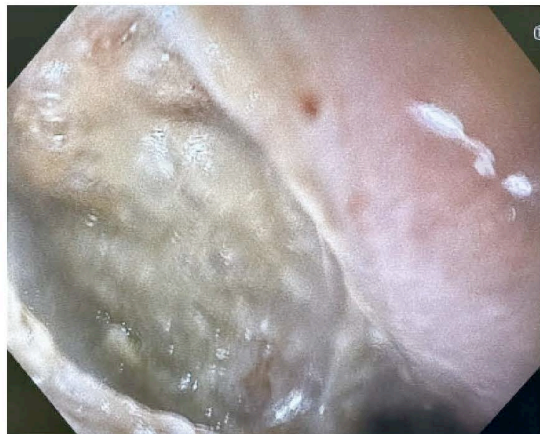
Discussion: While gastroparesis and recurrent emesis are reported side effects of GLP-1 agonists, progression to perforation has not been reported. We report the first cases of esophageal and gastric perforations shortly after starting GLP-1 agonists.

Conclusion: These cases highlight a possible link between GLP-1 agonists and foregut perforation. A high index of suspicion for these rare but severe complications should be maintained in all patients recently started on GLP-1 agonists.

A



B



Management of Massive Upper GI Bleed from Jejunal Diverticulum in a Rural Hospital

M Anthony, R Carter, S Parmar

Sam Houston State University College of Osteopathic Medicine

Introduction/Objective: Although gastrointestinal diverticulosis is most commonly found in the colon, small bowel diverticulosis is more rare, affecting only up to 1.5-2.3 % of the population. Amongst small bowel diverticulosis, the duodenum is most common location (76.5%) followed by jejunum (23.5%). While most small bowel diverticula remain asymptomatic, a potential life-threatening complication is severe gastrointestinal hemorrhage. Diagnosing and managing small bowel bleeding is challenging due to limited accessibility and scarce advanced diagnostic tools, especially in rural or resource-limited settings. This report describes a 70-year-old male with jejunal diverticular bleeding successfully managed with endoscopic intervention at a rural community hospital, highlighting an innovative adaptable approach in a resource-limited environment.

Case Presentation: A 70-year-old male presented with rectal bleeding and anemia (hemoglobin 6.5 g/dL). After transfusions and empiric treatment with PPI drip and Sucralfate, bleeding persisted. EGD and colonoscopy were non-diagnostic, but CTA and tagged RBC imaging localized the source to the proximal jejunum. Without advanced enteroscopy equipment and inability to transfer patient to higher level of care, the general surgeon performed a push enteroscopy using a pediatric colonoscope and discovered the bleeding source which was an actively bleeding visible vessel within a proximal jejunal diverticulum. The bleeding vessel within the diverticulum was successfully treated with bipolar cautery, hemoclip, submucosal epinephrine, and tattooed. The patient was stabilized and underwent elective laparoscopic small bowel resection of tattooed jejunal diverticulum to prevent future bleeding. The patient recovered successfully and was discharged home 2 days later. At 6 month follow up he continues to do well without any recurrence of bleeding.

Discussion: This case highlights the rarity of jejunal diverticular bleeding and the difficulty of its diagnosis and management in resource-limited hospitals. Current guidelines recommend stepwise localization techniques; however, capsule endoscopy and angiography may be unavailable or contraindicated in unstable patients. Pediatric colonoscopes provide a practical alternative for push enteroscopy, allowing diagnostic and therapeutic intervention in the proximal jejunum. In this scenario a rural general surgeon was able to perform EGD, colonoscopy, push enteroscopy for localization and control of hemorrhage, and ultimately definitive laparoscopic resection of bleeding diverticulum. This can be replicated at other rural hospitals that have limited or lack advanced GI capabilities, interventional radiology, etc. Adaptable approaches like this are critical for effective care when advanced modalities are inaccessible.

Conclusion: In settings with limited resources, pediatric colonoscope-assisted push enteroscopy represents a viable and effective alternative for both the diagnosis and management of small bowel hemorrhage. Its smaller caliber and increased flexibility allow for safe navigation into the proximal jejunum, providing a practical means of achieving

hemostasis when advanced enteroscopic or interventional modalities are unavailable. This case underscores the importance of tailoring diagnostic and therapeutic strategies to the patient's clinical urgency and the institution's available capabilities. By adapting techniques and utilizing existing equipment creatively, clinicians in rural or resource-limited hospitals can deliver timely, effective care for life-threatening small bowel bleeding, ultimately improving patient outcomes and expanding the scope of care achievable in these environments.

Blunt Trauma Precipitating Arterial Thoracic Outlet Syndrome: A Case Report

MT Olson, YB Lee, P Singh, J Scheidt, E Barbera, DJ Scott, TG Hart
Brooke Army Medical Center

Introduction/Objective: Arterial thoracic outlet syndrome (aTOS) is typically associated with congenital anomalies, leading to chronic arterial compression and thromboembolic complications. Acute aTOS resulting from blunt trauma is rare.

Case Presentation: A 39-year-old man was involved in an MVC, sustaining polytraumatic injuries including a grade I splenic laceration and acute thrombosis of the left subclavian artery adjacent to an undiagnosed hypoplastic cervical rib with an overlying seatbelt sign. The patient was transferred to our center with absent signals in the ulnar artery with sensory deficits.

Discussion: Due to concomitant traumatic injuries, nonoperative management with systemic anticoagulation was not feasible. We performed emergent exploration with cervical rib resection via supraclavicular exposure, resection of the injured subclavian artery segment with end-to-end anastomosis, and embolectomy of the subclavian and brachial arteries via an infraclavicular exposure with return of triphasic signals and normalization of exam. His course was complicated by possible hypercoagulable or vasospastic events with filling defects in the SMA, internal iliac, internal carotid artery, and the axillo-subclavian embolectomy site. Postoperatively, he developed progressive upper extremity sensorimotor deficits managed with re-exploration and subclavian-axillary bypass using prosthetic conduit. His exam normalized; he was discharged on hospital day 6 with aspirin and therapeutic anticoagulation. At 5-months, patient retained grossly normal sensorimotor function with a patent bypass on surveillance.

Conclusion: We highlight a rare presentation of blunt trauma-induced aTOS in the setting of an undiagnosed cervical rib treated with operative decompression and reconstruction. Recurrent thrombosis distal to the primary repair required bypass reconstruction to maintain limb perfusion.

ePoster #37 | Case Report | Clinical Science | Thoracic Surgery

Recurrent diaphragmatic hernia repair with incarcerated bowel requiring bowel resection and latissimus flap reconstruction: A case of recurrent congenital diaphragmatic hernia

V Lopez, B Abdelrahim, C Kroenke
DHR Health

Introduction/Objective: In the United States, rates of recurrent congenital diaphragmatic hernia requiring surgical re-exploration are not reliably captured due to varying factors by defect size and repair technique. Some studies report recurrence rates from 4% to over 50%. We report a rare case of recurrent congenital diaphragmatic hernia containing incarcerated bowel, with final defect repair by rotational latissimus flap.

Case Presentation: A 22-year-old male with history of dextrocardia and infantile right congenital diaphragmatic hernia repair, requiring second repair for recurrence at 4-months-old, presented with abdominal pain and nausea. Imaging revealed right diaphragmatic hernia recurrence containing colon causing partial mechanical bowel obstruction. After failed symptomatic resolution with conservative management, he underwent exploratory laparotomy with reduction of incarcerated bowel, right hemicolectomy. Diaphragmatic defect was found to be with imbedded mesh. Decision was made to leave abdomen open after intra-operative consultation with plastic surgeon for flap repair of diaphragmatic defect. After complicated post operative course requiring creation of end ileostomy for anastomotic leak, patient's diaphragmatic defect was closed by latissimus flap with rotation into right chest. Remainder of hospital course was uneventful with patient discharging home. Follow up after 6 months, CT of the chest showed no diaphragmatic hernia and patient remains asymptomatic at this time.

Discussion: Recurrent congenital diaphragmatic hernias vary in clinical presentation. Evidence regarding success rates between synthetic mesh versus muscle flap is conflicting.

Conclusion: Reverse latissimus dorsi (RLD) muscle flap repair has several benefits: (1) sustained blood supply by lumbar-perforating vessels minimizing flap atrophy, potential for 'neo diaphragmatic' function enabled by a phrenic to thoracodorsal neural anastomosis and ability to grow with the child.

ePoster #38 | Abstract | Clinical Science | Plastic & Maxillofacial Surgery

A Retrospective Comparison of Patient Outcome Studies Following ORIF Distal Radius Fracture Repair Between Orthopaedics- and Plastic Surgery-Trained Hand Surgeons

A Lee, V Cuello, N Black, J Faillace

University of Texas Medical Branch - Galveston

Background: Distal radius open reduction internal fixation (ORIF) is one of the most frequently performed hand surgical procedures and may be performed by a diverse group of surgeons. Prior studies have investigated variability in training and post-operative outcomes, but few examine long term outcomes.

Objective: To characterize long-term patient-reported outcomes following primary distal radius ORIF performed by hand-trained orthopedic surgeons, hand-trained plastic surgeons, and non-hand-trained orthopedic surgeons.

Methods: We conducted a single-center study of 213 patients who had undergone a primary distal radius (ORIF) procedure with one of three types of surgeons in the last five years. Institutional Review Board approval was obtained. Exclusions included incarcerated patients, pediatric patients, and polytrauma injuries. Included patients were contacted for current QuickDASH data. Chart review provided demographic information and mechanism of injury.

Results: Of 213 patients, 71 patients provided QuickDASH data. Twenty patients had surgery by a hand-trained orthopedic surgeon (\bar{x} = 53.15 years, 60% male), 10 patients by a hand-trained plastic surgeon (\bar{x} = 63.7, 70% male), and 41 patients by a non-hand-trained orthopedic surgeon (\bar{x} = 56.2, 73% male). Average QuickDASH scores were 14.06, 10, and 6.37, respectively, with no significant difference between the three by ANOVA ($p=0.12$).

Conclusion: Training background may not significantly influence outcomes following a distal radius ORIF. These findings may be reassuring for patient populations and physicians. Limitations include retrospective nature, single-center design and moderate response rate. This study supports diverse surgical training pathways while continuing efforts to standardize hand-fellowship curriculum to optimize patient outcomes.

Table 2: Analysis of QuickDASH Outcomes Between Specialty Groups

Specialty	Hand-Trained Orthopedic Surgery		Plastic Surgery		Non-hand Orthopedic Surgery		p-value
	Mean	SD	Mean	SD	Mean	SD	
Age	53.15	15.23	63.7	8.73	56.2	13.2	0.046479
QuickDASH Score	14.06	14.43	10	15	6.37	9.66	0.121298

ePoster #39 | Abstract | Clinical Science | Plastic & Maxillofacial Surgery

Endoscopic Versus Open Carpal Tunnel Release in Obese Patients

Matthew Q. Dao, BS; Arman Chowdhury, BS; Baijing Qin, MD

University of Texas Medical Branch - Galveston

Background: Obesity affects over 40% of U.S. adults and continues to rise. It is a well-established risk factor for carpal tunnel syndrome (CTS), yet limited evidence compares outcomes of open (oCTR) versus endoscopic carpal tunnel release (eCTR) in this group.

Objective: The present study sought to evaluate differences in postoperative complications between oCTR and eCTR among patients with obesity.

Methods: A national analysis was performed through the US Collaborative Network in the TRINETX Healthcare Database. Patients aged ≥ 18 years with body mass index (BMI) ≥ 30 who underwent oCTR or eCTR between 2010 and 2024 were included. A 1:1 propensity score matching approach was utilized to balance cohorts based on demographics, BMI, A1c levels, and comorbidities. Short-term outcomes included 30-day complications as well as emergency department visits and readmission. Long-term outcome was recurrence of CTS. Outcomes were compared using risk ratios (RR). Statistical significance was regarded as $p < 0.05$.

Results: A total of 72,174 obese patients were identified; after propensity matching, 29,836 patients remained (14,918 per group). Within 30 days after surgery, oCTR was associated with significantly higher rates of wound disruption (RR=2.62, $p < 0.001$), surgical site infection (RR=2.63, $p < 0.001$), reported postoperative pain (RR=2.04, $p < 0.001$), emergency department visits (RR=1.45, $p = 0.009$), and readmission (RR=1.58, $p = 0.001$) compared to the eCTR. At the 2-year follow-up, the recurrence of CTS was significantly lower in the oCTS group (RR=0.30, $p < 0.001$).

Conclusion: In patients with obesity, oCTR is associated with increased early complications and greater healthcare utilization, while eCTR confers a safer short-term profile but a higher likelihood of recurrence.

Surgical Correction of Stahl's Ear: A Systematic Review of Aesthetic and Procedural Outcomes

S Farhat, D Hill, P Andrawes, E Payne
Houston Methodist Hospital

Background: Stahl's ear deformity is a rare congenital auricular anomaly characterized by an abnormal third crus, absent superior crus, and helical and scaphal irregularities. Despite multiple described techniques, no consensus exists on the optimal surgical correction. The two main approaches—cartilage excision and reshaping—show variable outcomes, and comparative results remain unclear.

Objective: To systematically evaluate aesthetic and procedural outcomes of published cases of Stahl's ear correction and compare results between cartilage excision and reshaping techniques.

Methods: A PubMed search identified studies describing surgical repair of Stahl's ear with analyzable pre- and postoperative photographs. Each ear was assessed for correction of four key features: (1) abnormal third crus, (2) absent superior crus, (3) widened or convex scapha, and (4) helical rim deformity. Descriptive statistics were generated, and outcomes between excision and reshaping were compared using Fisher's exact test ($p < 0.05$).

Results: Twenty-one studies met inclusion criteria, encompassing 42 ears with adequate photographic documentation. Cartilage reshaping was performed in 52% and excision in 48%. Complete correction of all four features occurred in 24% of ears. A visible remnant of the third crus persisted in 38%, and a visible scar was noted in 36%. No significant difference in complete correction was observed between excision and reshaping groups ($p = 0.68$).

Conclusion: Stahl's ear correction remains technically demanding, with fewer than one-quarter of reported cases achieving complete aesthetic correction. Both techniques yield variable outcomes, highlighting the need for standardized evaluation and multicenter studies to establish reproducible, evidence-based repair methods.

ePoster #41 | Case Report | Clinical Science | Cardiac Surgery

Early VA-ECMO and Multidisciplinary Management of Postcardiotomy Cardiogenic Shock with Right Ventricular Dysfunction

R Ghamarian, A DeAnda

University of Texas Medical Branch - Galveston

Introduction/Objective: Postcardiotomy cardiogenic shock with right ventricular dysfunction is a life-threatening complication after complex cardiac surgery. This case highlights the management challenges and the importance of early venoarterial extracorporeal membrane oxygenation (VA-ECMO) in improving survival for high-risk patients.

Case Presentation: A 39-year-old male with hypertension, hyperlipidemia, obstructive sleep apnea, and coronary artery disease underwent aortic root replacement and single-vessel coronary artery bypass grafting. Postoperatively, he developed refractory cardiogenic shock with right ventricular dysfunction, requiring intra-aortic balloon pump and subsequent VA ECMO. Management included continuous renal replacement therapy for acute kidney injury, serial transesophageal echocardiography for biventricular function and ECMO weaning, and vascular surgery consultation for left lower extremity malperfusion. Additional procedures included mediastinal washout, sternal closure, and thoracostomy tube placement.

Discussion: VA-ECMO provided rapid hemodynamic stabilization, with lactate clearance from 9.46 to 1.62 mmol/L within 36 hours, indicating restored tissue perfusion. The patient required transfusion support and developed acute kidney injury, limb malperfusion, and transient monocular vision loss. Serial echocardiography showed preserved left ventricular ejection fraction (55–60%) and mild right ventricular dysfunction. ECMO was weaned using daily assessments and a structured protocol, with successful decannulation on postoperative day 4. He was extubated on day 5, weaned off vasopressors by day 15, and discharged home on day 17 in stable condition.

Conclusion: Early VA-ECMO initiation, echocardiographic monitoring, and multidisciplinary management can improve survival in postcardiotomy cardiogenic shock with right ventricular dysfunction. Standardized protocols and coordinated care are essential to optimize outcomes in this high-risk population.

Table 1. Timeline of Postoperative Interventions and Outcomes

Date	Post-op Day	Intervention/Procedure	Support Modalities	Outcome/Notes
6/9/2025	0	Aortic root replacement, CABG, intra-aortic balloon pump (IABP), VA-ECMO	VA-ECMO, IABP, CRRT started	Cardiogenic shock, hemodynamic support
6/10/2025	1	Chest exploration, mediastinal washout	VA-ECMO, CRRT	Vasopressor support, transfusions
6/13/2025	4	ECMO decannulation, vascular repair	CRRT, low-dose vasopressors	Successful decannulation
6/14/2025	5	Extubation to high-flow nasal cannula (HFNC)	CRRT discontinued POD 8	Hemodynamic stability
6/26/2025	17	Discharge	Off support	Ambulating, tolerating diet

ePoster #42 | Abstract | Clinical Science | Otolaryngology

Effect of Alcohol Dependence on Non-Bony vs Bony Flap Success and Post-Operative Secondary Outcomes

C Haines, R Africa, V Ranasinghe

University of Texas Medical Branch - Galveston

Background: Free flap reconstructive surgeries are complex surgeries that can have many complications that arise post-operatively. This multicenter retrospective cohort study utilized the TriNetX database evaluating postoperative outcomes of free flap reconstruction between patients with or without alcohol dependence.

Objective: To generate quantitative data to determine the relationship between alcohol dependence and the risk of post-operative revisions and secondary outcomes after a non-bony or bony free flap reconstructive surgery.

Methods: Patients with head and neck cancer who underwent non-bony or bony free flap reconstruction with varying alcohol dependence time windows including anytime, within one year, and within six months prior their flap procedure were included in the data. Risk ratios (RR), Odds Ratios (OR), and 95% confidence intervals (CI) were calculated to assess flap revisions and secondary outcome risks from one day to a month post-op.

Results: After propensity score matching, the non-bony flap only cohort showed an increased risk for the primary outcome of Other Flap Revisions, as well as increased risk of Sepsis, Cardiovascular Complications, Pneumonia, and UTI's. Bony flap only cohort showed an increased risk for the primary outcome of Other Flap Revisions, as well as increased risk for DVT's, Sepsis, Surgical Site Infection, and Pneumonia.

Conclusion: Both the non-bony and non-bony free flap groups had an increased risk of post-operative flap revisions as well as secondary outcomes due to alcohol dependence prior to the procedure. These results can inform surgeons performing flap procedures the increased risks in flap failure and post-operative complications in patients that have alcohol dependence diagnoses.

Rhabdomyomatous Mesenchymal Hamartoma Presenting as a Perianal Mass in a 4-year-old

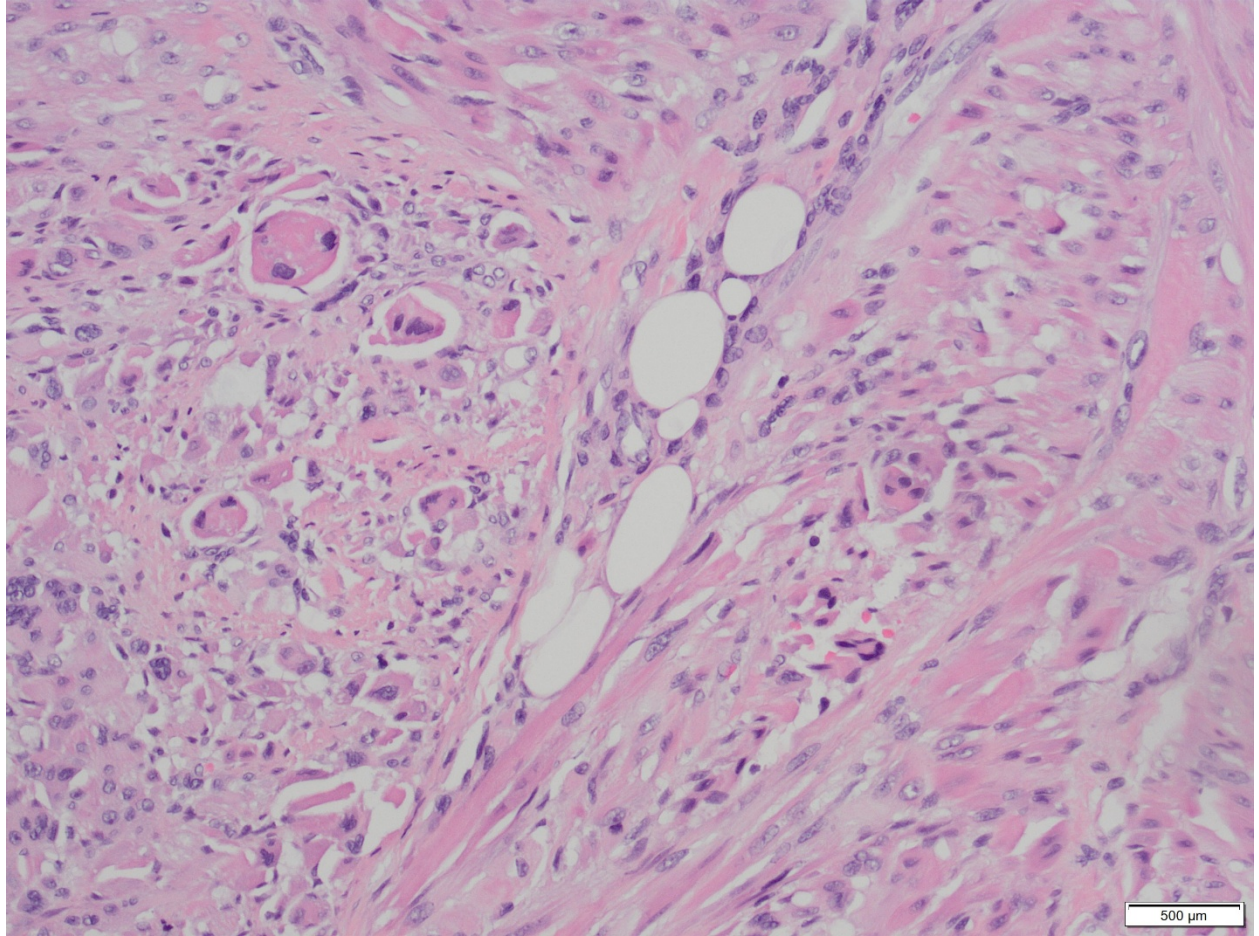
T Jones, E Stewart, T Hayes, I Mitchell
University of Texas Medical Center - San Antonio

Introduction/Objective: Rhabdomyomatous Mesenchymal Hamartoma (RMH) is a congenital, non-neoplastic growth first described in 1986, composed of intradermal skeletal muscle, fibrous, and adipose mesodermal and ectodermal elements with a preference for the head and neck of children. Cases of RMH in the perianal region have been previously reported, but virtually all were diagnosed in infancy. We present the first case of a non-congenital perianal RMH in a 4-year-old girl.

Case Presentation: The patient was referred to our surgical clinic with a non-tender, firm mass at the 9 o'clock position, initially diagnosed as an abscess. An MRI showed an ill-defined, right-sided perianal T2 hyperintensity with mild enhancement, which prompted surgical excision. Immunohistochemical staining with desmin, myogen, and MyoD1 revealed the presence of striated skeletal muscle. The lesion also contained mature adipose tissue, focally dense connective tissue, and a nerve at its periphery, which supported the diagnosis of RMH.

Discussion: Our case highlights the potential for RMH to present as an acquired perianal lesion in patients who lack any detectable congenital lesion at birth. Additionally, our case highlights the possibility of RMH that presents as a subcutaneous nodule which can be confused for other more common perianal soft tissue pathologies like infection.

Conclusion: Therefore, although rare, RMH should be considered in the differential diagnosis of both congenital and newly developed perianal subcutaneous nodules in children.



ePoster #45 | Abstract | Clinical Science | Pediatric Surgery

Forgotten but Fundamental: Evaluating Post-Surgical Debrief Adherence

P Menon, T Sweeney, A Sinnathamby, J Joly, K Sutyak, N Hebballi, E Morris, K Tsao
University of Texas HSC - Houston

Background: The three-phase WHO surgical safety checklist reduces errors and improves peri-operative patient safety. The post-surgical debrief (PSD) standardizes closed-loop communication and ensures proper handoff to the next care phase.

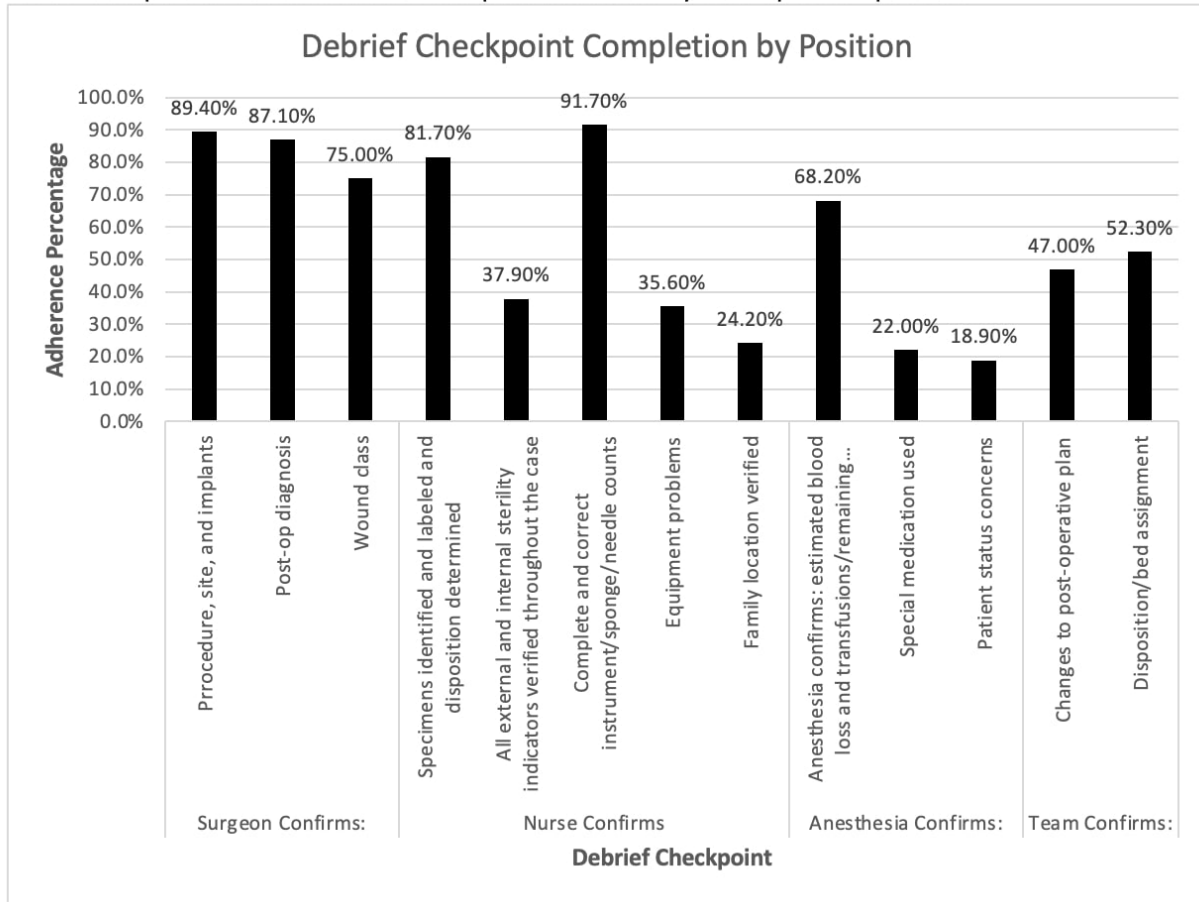
Objective: To evaluate adherence to the PSD checklist and identify improvement opportunities.

Methods: A prospective observational study was conducted of pediatric surgeries (05/2025-07/2025). The institutional PSD includes 13 role-specific items requiring surgeon, anesthesiologist, nurse, and technologist participation. PSD adherence was audited using convenience sampling of pediatric subspecialties. Descriptive statistics, univariate analyses were utilized.

Results: Overall, 144 pediatric surgeries were audited. The PSD was fully completed in 10 cases (7%), partially in 127 (85%), and not performed in 11 (8%). Median checklist completion was 7 of 13 items (IQR: 6–10). Neurosurgery had highest median completion (9, IQR: 7.5–10), while orthopedics (6, IQR: 2.5–7.5) and ENT (6, IQR: 2.75–8) had the lowest ($p = 0.39$). Attending surgeons initiated the PSD in 70 cases (54.7%), circulating nurses in 50 (39.1%), scrub technicians in 5 (3.9%), fellows in 1 (0.8%), and residents in 2 (1.6%). Participation was highest for nurses (87%) and surgeons (77%), lower for scrub technicians (56%) and anesthesiologists (11%). Six items were addressed in <50% of cases: patient status (19%), special medication (22%), family location (24%), equipment issues (36%), sterility (38%), and postoperative plan (47%). Instrument counts (92%), procedure (89%), and diagnosis (87%) were consistently addressed (FIGURE).

Conclusion: PSD adherence was poor. Nurses and surgeons had greater involvement than other roles. Improving participation and interdisciplinary communication could enhance peri-operative safety.

FIGURE. Proportion of checklist items completed stratified by intra-operative position



INDICATIONS AND OUTCOMES IN ENDOSCOPIC CARPAL TUNNEL RELEASE AT A VETERAN AFFAIRS MEDICAL CENTER

Kala T. Pham, BS; Raymond A. Lopez, MD; Umar M. Ghilzai, MD; Christine Yin, MD
Baylor College of Medicine

Background: Carpal tunnel syndrome (CTS) is commonly treated with carpal tunnel release (CTR). In civilian populations, endoscopic CTR (eCTR) offers reduced pain and faster recovery, but outcomes in veterans—who have a higher burden of comorbidities—are less defined.

Objective: This study evaluated clinical outcomes in veterans to identify factors associated with persistent symptoms or complications.

Methods: A retrospective review was conducted of eCTR and open CTR (oCTR) cases at the Michael E. DeBakey VA Medical Center from January to November 2024. Patients were identified using CPT codes 29848 and 64721. Collected data included demographics, comorbidities, electrodiagnostic findings, and complications or symptom recurrence. Primary endpoints were recurrence, early and late complications, and a composite of these outcomes. Statistical analyses were performed using Student's t-test and Chi-square in Stata.

Results: Eighty-two patients (95 wrists) were included. Mean age was 59.3 ± 14.1 years, mean travel distance 76.9 ± 193.8 miles, and mean follow-up 2.1 ± 3.0 months. No significant differences were observed between eCTR and oCTR in recurrence (OR 2.39, 95% CI 0.62–9.25, $p=0.207$) or early complication rates (OR 0.57, 95% CI 0.14–2.39, $p=0.444$). Travel distance >25 miles trended toward significance for the composite outcome (OR 0.38, 95% CI 0.13–1.14, $p=0.086$). Operative time >30 minutes was significantly associated with complications (OR 3.44, 95% CI 1.07–11.00, $p=0.038$).

Conclusion: Among veterans, outcomes were comparable between eCTR and oCTR. Most experienced favorable results with low recurrence and complication rates, though operative time over 30 minutes predicted higher complication risk.

Comparison of Cranial Vault Remodeling Versus Spring Cranioplasty for Non-Syndromic Unicoronal Craniosynostosis: Analysis of Outcomes

M Shrout, S Frommer, S Kuriakose, P Combs, E Tyler-Kabara, P Kelley
University of Texas Austin - Dell Medical School

Background: Unicoronal craniosynostosis (UCS) causes premature fusion of a single coronal suture, resulting in asymmetric forehead flattening, orbital dystopia, and nasal deviation. Traditional correction with fronto-orbital advancement and remodeling (FOAR) effectively restores cranial shape but is associated with longer operative times, higher blood loss, and greater morbidity. Spring-assisted cranioplasty has emerged as a less invasive alternative, using controlled distraction forces to remodel the cranial vault gradually. While this approach has shown success in other single-suture synostoses, its role in UCS remains less well defined. Given the unique asymmetry of UCS and the importance of restoring orbital and skull-base balance, this study compares outcomes of FOAR and spring cranioplasty to evaluate differences in surgical morbidity and postoperative craniofacial symmetry.

Objective: To compare outcomes of cranial vault remodeling via fronto-orbital advancement and remodeling (FOAR) versus spring cranioplasty in patients with non-syndromic unicoronal craniosynostosis (UCS), focusing on surgical parameters and craniofacial symmetry improvements.

Methods: Retrospective review comparing FOAR and spring-assisted cranioplasty outcomes in non-syndromic patients with UCS undergoing FOAR or spring cranioplasty, with complete pre- and postoperative imaging and surgical data. Statistical analysis was performed using Python (version 3.11). Main outcomes were surgical time, estimated blood loss (EBL), packed red blood cells (PRBC) transfused, intracranial volume (ICV), facial twist (FT), skull-base twist relative to palate (SBT-P) and nasion (SBT-N), and orbital morphology symmetry.

Results: Spring cranioplasty, when considering both placement and removal, significantly reduced operative time (157.9 ± 28.6 vs. 264.7 ± 48.3 minutes), EBL (5.5 ± 1.6 vs. 26.5 ± 9.2 mL/kg), and PRBC transfusion (2 ± 4.2 vs. 27.4 ± 5.9 mL/kg) compared with FOAR ($p < 0.001$). Postoperatively, patients who underwent spring cranioplasty demonstrated significant improvements in FT, SBT-P, and SBT-N ($p < 0.001$), whereas FOAR did not achieve significant changes. Intracranial volume did not differ significantly between groups. Spring cranioplasty patients demonstrated superior orbital symmetry improvement.

Conclusion: Spring cranioplasty offers a less invasive alternative to FOAR for UCS, with shorter surgery, less blood loss, and better craniofacial symmetry correction without compromising intracranial volume expansion.

Clinicopathologic Features and Tumor Size Associations in Children with Wilms Tumor at Kenyatta National Hospital

Z.Dhalla, N.Subramanian, B.Naik-Mathuria, T.Jumbi
University of Texas Medical Branch - Galveston

Background: Wilms' tumor is the most common pediatric renal malignancy globally. In low- and middle-income countries (LMICs), survival is below 50%. Understanding presentation and outlining associations, risks, best treatment actions improves care patients receive in LMICs.

Objective: To analyze the features of children with Wilms tumor at Kenyatta National Hospital (KNH) and explore associations between tumor size and histopathologic risk and type.

Methods: Retrospective review of 30 Wilms tumor patients at KNH. Variables included age, sex, tumor dimensions, volume, laterality, histology. Age was grouped at 3 years (≤ 3 vs >3). Tumor volumes ≤ 550 cm³ hypothesized to indicate lower risk, with a 550 cm³ cutoff. Laterality was divided into Right (1), Left (2), Bilateral (3). Histological subtypes were classified as cystic partially differentiated nephroblastoma, completely necrotic nephroblastoma, epithelial, stromal, mixed, regressive, focal anaplasia, blastemal, diffuse anaplasia. Associations between categorical variables were analyzed using 2x2 contingency tables and chi-squared tests.

Results: Median presentation age was 3 years. Sex distribution was balanced (F 18, M 17). Laterality was predominantly unilateral (n=30/31). Tumor volumes (n=30) ranged 229-5040 cm³. Tumor volume and risk stratification were compared (Table 1). Histologic subtypes included epithelial (6.7%), stromal (13.3%), mixed (60%), blastemal (16.7%), and anaplastic (3.3%). Sex and age were significantly associated (p=0.026), with females presenting later. Tumor size showed no association with sex, age, histology, or laterality.

Conclusion: In children with Wilms' tumor, larger tumor volume was not associated with higher histopathologic risk. This aids in risk stratification and counseling families at presentation.

Table 1. Association between Tumor Volume and Risk Group

Risk Group	Volume < 550 (n=9)	Volume \geq 550 (n=21)
Low Risk (1)	0	1
Intermediate Risk (2)	6	18
High Risk (3)	3	2

Note: $\chi^2 = 2.86$, $p = 0.24$. No statistically significant association was observed between tumor volume and risk group.

Osteomyelitis of Facial Bones: Contemporary Management and Reconstructive Strategies

H Marwan, C Mosquera, M Takeuchi
University of Texas Medical Branch - Galveston

Background: Osteomyelitis of the facial bones is a serious condition that can cause progressive bone destruction, compromise of function, and significant morbidity. Management can be complicated by variable clinical presentations and systemic comorbidities. The use of antibiotics usually fails and patients require surgical resection with reconstruction. Microvascular free flaps, virtual surgical planning, and dental implant rehabilitation have become the standard of treatment in complex cases, as they enable restoration of function and quality of life in a single procedure.

Objective: To present a contemporary approach to the management of osteomyelitis of the facial skeleton and analyze the microbiological results of the resected specimen

Methods: Retrospective analysis of all subjects with secondary chronic jaw osteomyelitis was collected. Exclusion criteria include pediatric patients, inmates, and the absence of microbiological results. A minimum follow-up within 6 months was required. Data were collected with a focus on microbial results and reconstructive methods. Postoperative quality of life was measured.

Results: In terms of recalcitrant osteomyelitis, microbial analysis was insignificant, and the host factors made a significant contribution to the failure of the antibiotic therapy. Regarding the reconstructive technique, virtual surgical planning enhances precision, and immediate implants with patient-specific prosthetics further improve outcomes.

Conclusion: Effective management of facial osteomyelitis requires a combination of medical, surgical, and reconstructive approaches. A deeper examination of microbial biofilm is crucial to understanding the reasons behind antibiotic treatment failure.