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## 'BEST OF' OCTOBER ARTICLES

BEST OF BASIC SCIENCES ARTICLE

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**Traditional Regulators (i.e. IL-10)**  
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**Independent Predictors of Complicated Recovery**  
miR-21-3p and MCP-1

**Early Systemic Changes in microRNAs are Associated with Poor Outcomes and predictive of Complicated Recovery**

The identified microRNAs in complicated recovery patients potentially suppress PTEN, NF-κB, STAT3, Toll-like receptors, T-cell Activation, and Apoptosis signaling pathways.

These novel markers of inflammatory signaling in trauma patients prompts consideration of pre-clinical studies for therapeutic intervention.

Vicente et al. *Journal of Trauma and Acute Care Surgery*, March 2022  
@JTraumaAcuteSurg

**CELLULAR MICRORNAS CORRELATE WITH CLINICAL PARAMETERS IN POLYTRAUMA PATIENTS**

[https://journals.lww.com/jtrauma/Fulltext/2022/10000/Cellular\\_MicroRNAs\\_Correlate\\_with\\_Clinical\\_Parameters\\_in\\_Polytrauma\\_Patients.aspx?context=FeaturedArticles&collectionid=5](https://journals.lww.com/jtrauma/Fulltext/2022/10000/Cellular_MicroRNAs_Correlate_with_Clinical_Parameters_in_Polytrauma_Patients.aspx?context=FeaturedArticles&collectionid=5)



SCAN HERE TO VIEW A VIDEO OVERVIEW OF THE ARTICLE

<https://qr.page/g/4kenAKHqUQN>

### Fibrinogen Supplementation for the Trauma Patient: Should You Choose Fibrinogen Concentrate Over Cryoprecipitate?

**Study Population**  
• Adult Trauma Patients  
• Early Blood Transfusion  
• Fibrinogen Supplement  
N = 6,413

**Propensity Score Match**  
1:1 Ratio

**Fibrinogen Concentrate (N = 65)** VS **Cryoprecipitate (N = 170)**

**Matched Variables:**  
• Demographics • Comorbidities  
• ED Vitals • Interventions  
• Injury Severity • ACS Verification

**Fibrinogen Concentrate**  
• rRBC, FFP, PLT Requirements  
• Hospital & ICU LOS

**Time to Fibrinogen Supplementation**

**No Difference**  
• Mortality • DVT • PE

Obaid et al. *Journal of Trauma and Acute Care Surgery*, March 2022  
@JTraumaAcuteSurg

**FIBRINOGEN SUPPLEMENTATION FOR THE TRAUMA PATIENT: SHOULD YOU CHOOSE FIBRINOGEN CONCENTRATE OVER CRYOPRECIPITATE?**

[https://journals.lww.com/jtrauma/Fulltext/2022/10000/Fibrinogen\\_Supplementation\\_for\\_the\\_Trauma\\_Patient\\_Should\\_You\\_Choose\\_Fibrinogen\\_Concentrate\\_Over\\_Cryoprecipitate.aspx?context=FeaturedArticles&collectionid=5](https://journals.lww.com/jtrauma/Fulltext/2022/10000/Fibrinogen_Supplementation_for_the_Trauma_Patient_Should_You_Choose_Fibrinogen_Concentrate_Over_Cryoprecipitate.aspx?context=FeaturedArticles&collectionid=5)



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<https://qr.page/g/1kBBcSZhMR0>

BEST OF SCC ARTICLE

### Tracheostomy decreases continuous analgesia and sedation requirements

**Retrospective review from Level 1 Trauma Center**  
468 patients  
Cognitive Evaluation: GCS, RASS, CAM-ICU + Sedation, Anxiolytic, and Analgesic Medication Usage

**Compare 72 hours pre-operative to 72-hours post-operative tracheostomy**

**Early Improvements noted 24 hours after tracheostomy compared to 24 hours pre-tracheostomy**  
Propofol and Fentanyl utilization (dose and #patients)  
Total MME and continuous midazolam  
GCS, RASS, CAM-ICU

Taylor E. Wallen, MD et al. *Journal of Trauma and Acute Care Surgery*, October 2022 [10.1097/JTA.00000000000003673]  
@JTraumaAcuteSurg

**TRACHEOSTOMY DECREASES CONTINUOUS ANALGESIA AND SEDATION REQUIREMENTS**

[https://journals.lww.com/jtrauma/Fulltext/2022/10000/Tracheostomy\\_Decreases\\_Continuous\\_Analgesia\\_and\\_Sedation\\_Requirements.aspx?context=FeaturedArticles&collectionid=5](https://journals.lww.com/jtrauma/Fulltext/2022/10000/Tracheostomy_Decreases_Continuous_Analgesia_and_Sedation_Requirements.aspx?context=FeaturedArticles&collectionid=5)



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<https://qr.page/g/3Fq3uM90zzu>

### Validation qSOFA in EGS & proposal of qadSOFA

**Mortality in EGS with sepsis up to 30%**  
No data on qSOFA in EGS

**Validation of score qSOFA & proposal of new score**

**Independent predictors for mortality: mesenteric ischemia, GIT perforation, age ≥85years and increasing qSOFA**

**Proposal new qadSOFA**

Christian T. J. Magyar, MD et al. *Journal of Trauma and Acute Care Surgery*, October 2022 [10.1097/JTA.0000000000003742]  
@JTraumaAcuteSurg

**PERFORMANCE OF QUICK SEQUENTIAL ORGAN FAILURE ASSESSMENT (QSOFA) AND MODIFIED AGE DISEASE ADJUSTED QADSOFA FOR THE PREDICTION OF OUTCOMES IN EMERGENCY GENERAL SURGERY PATIENTS**

[https://journals.lww.com/jtrauma/Fulltext/2022/10000/Performance\\_of\\_Quick\\_Sequential\\_Organ\\_Failure\\_Assessment\\_and\\_Modified\\_Age\\_Disease\\_Adjusted\\_Qadsofa\\_for\\_the\\_Prediction\\_of\\_Outcomes\\_in\\_Emergency\\_General\\_Surgery\\_Patients.aspx?context=FeaturedArticles&collectionid=5](https://journals.lww.com/jtrauma/Fulltext/2022/10000/Performance_of_Quick_Sequential_Organ_Failure_Assessment_and_Modified_Age_Disease_Adjusted_Qadsofa_for_the_Prediction_of_Outcomes_in_Emergency_General_Surgery_Patients.aspx?context=FeaturedArticles&collectionid=5)



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<https://qr.page/g/LnPQleDcBc>

BEST OF TRAUMA ARTICLE

BEST OF EGS ARTICLE

### Cellular microRNAs Correlate with Clinical Parameters in Polytrauma Patients

**Severe Trauma**  
Systemic Inflammatory Response and Associated Differential Expression of >10,000 Genes  
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Uncomplicated Recovery

**Trauma Bay Blood Samples Evaluated from Tissue and Data Acquisition Protocol Patient with ISS >15 n = 180**  
Novel Markers of post-transcriptional Modification of Gene Expression (i.e. microRNAs)  
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Complicated Recovery (n = 60) vs. Uncomplicated  
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Vicente et al. *Journal of Trauma and Acute Care Surgery*.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**CELLULAR MICRORNAS CORRELATE WITH CLINICAL PARAMETERS IN POLYTRAUMA PATIENTS**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/CELLULAR\\_MICRORNAS\\_CORRELATE\\_WITH\\_CLINICAL.2.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/cellular_microRNAs_correlate_with_clinical.2.aspx)

### Scalable Precision Medicine using Radiomics: Deep Learning Algorithm to Compute Percent Pulmonary Contusion among Patients with Rib Fractures

**Study Population**  
Adults with multiple rib fractures & pulmonary contusions  
N= 332  
unlabeled chest CT scans

**Deep Learning Algorithm**  
Transfer learning to compute % pulmonary contusion  
automated segmentation

**% Pulm. Contusion\*:**  
mechanical ventilation  
aOR\*\* (95%CI): 1.5 (1.1-2.1)  
hospitalization > 9 days  
aOR\*\* (95%CI): 1.6 (1.1-2.2)  
\*quartiles | \*\*adjusted for age, Injury Severity Score, No. rib fractures

Open code sharing + transfer learning needed to validate algorithms at scale & bring precision medicine to bedside

Journal of Trauma and Acute Care Surgery.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**SCALABLE DEEP LEARNING ALGORITHM TO COMPUTE PERCENT PULMONARY CONTUSION AMONG PATIENTS WITH RIB FRACTURES**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/SCALABLE\\_DEEP\\_LEARNING\\_ALGORITHM\\_TO\\_COMPUTE\\_PERCENT\\_PULMONARY\\_CONTUSION\\_AMONG PATIENTS WITH RIB FRACTURES.6.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/scalable_deep_learning_algorithm_to_compute_percent_pulmonary_contusion_among_patients_with_rib_fractures.6.aspx)

### Burnout Reduction in Acute Care Surgeons: Impact of Faculty Schedule Change at a Level 1 Trauma and Tertiary Care Center

24-hour call changed to weekly block schedule of 12-hour day and night call with no other clinical duties

Surgeons surveyed at 0, 6, and 12 months to assess burnout and risk factors  
Friends and family also took surveys for extrinsic view of surgeons' burnout  
RVU assessment as secondary outcome

All burnout risk factors improved at 6 and 12 months compared to baseline without decrease in RVU production

Implementing a weekly, 12-hour call schedule can improve factors that lead to burnout without compromising clinical productivity

Jones et al. *Journal of Trauma and Acute Care Surgery*.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**BURNOUT REDUCTION IN ACUTE CARE SURGEONS: IMPACT OF FACULTY SCHEDULE CHANGE AT A LEVEL 1 TRAUMA AND TERTIARY CARE CENTER**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/BURNOUT\\_REDUCTION\\_IN\\_ACUTE\\_CARE\\_SURGEONS\\_IMPACT.3.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/burnout_reduction_in_acute_care_surgeons_impact.3.aspx)

### Establishing National Stakeholder Priorities for Quality Improvement in Pediatric Trauma Care: Consensus Results Using a Modified Delphi Process

Targets for quality improvement in pediatric trauma proposed by participants from ten national stakeholder organizations

Modified Delphi Process

Four Consensus Priorities Identified for Quality Improvement in Pediatric Trauma:

- Creation of Toolkits and Standardized Provider Training
- Develop Pediatric Emergency Care Coordinators (PECCs)
- Simple and Accessible Pediatric Best Practice Imaging Guidelines
- Minimum Standards for Non-Pediatric Centers

> 75% Consensus Prioritization

MEIC  
Medical Emergency and Improvement Center

Melhado et al. *Journal of Trauma and Acute Care Surgery*.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**ESTABLISHING NATIONAL STAKEHOLDER PRIORITIES FOR QUALITY IMPROVEMENT IN PEDIATRIC TRAUMA CARE: CONSENSUS RESULTS USING A MODIFIED DELPHI PROCESS**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/ESTABLISHING\\_NATIONAL\\_STAKEHOLDER\\_PRIORITIES\\_FOR\\_QUALITY\\_IMPROVEMENT\\_IN PEDIATRIC TRAUMA CARE: CONSENSUS RESULTS USING A MODIFIED DELPHI PROCESS.7.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/establishing_national_stakeholder_priorities_for_quality_improvement_in_pediatric_trauma_care_consensus_results_using_a_modified_delphi_process.7.aspx)

### Which Hospital-Acquired Conditions Matter the Most in Trauma? An Evidence-Based Approach for Prioritizing Trauma Program Improvement

ACS TQIP PUFs (2013-2016) Adult patients > 16 years (N=529,856) Hospitalized ≥ 5 days ISS ≥ 9

6 Hospital-Acquired Conditions (HAC) Evaluated

- Pneumonia
- Urinary tract infection
- Venous thromboembolism
- Surgical site infection
- Pressure ulcer
- Central line associated blood stream infection

Risk-adjusted population attributable fractions (PAFs) estimates derived for each HAC-outcome pair

Pneumonia had strongest association with:

- In-hospital outcomes
- Resource utilization

Prevention of pneumonia in this cohort would be anticipated to:

- End organ dysfunction (by 22.1%)
- Prolonged hospitalization (by 8.7%)
- Prolonged ICU stay (by 7.1%)
- Need for mechanical ventilation (by 6.8%)
- Mortality (by 7.8%)

Trauma QI programs should prioritize pneumonia prevention to improve patient outcomes and decrease resource utilization.

Lee et al. *Journal of Trauma and Acute Care Surgery*, March 2022.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**WHICH HOSPITAL-ACQUIRED CONDITIONS MATTER THE MOST IN TRAUMA? AN EVIDENCE-BASED APPROACH FOR PRIORITIZING TRAUMA PROGRAM IMPROVEMENT**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/WHICH\\_HOSPITAL-ACQUIRED\\_CONDITIONS\\_MATTER\\_THE\\_MOST.4.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/which_hospital_acquired_conditions_matter_the_most.4.aspx)

### Derivation and Validation of an Improved Pediatric Shock Index (PSI) for Predicting Need for Early Intervention and Outcomes in Pediatric Trauma

Existing Shock Indices (e.g. SIPA) derived from estimated vital signs (HR/SBP) and arbitrary age categories and lack precision.

Novel PSI derived from actual vital signs and AUC curves of TQP-PUF data by individual patient age

Kids 1-12 yrs use linear PSI equation  
Kids ≥13 yrs can follow adult SI of 0.9

1 - 12y: PSI > 1.55 - 0.05 x Age (yrs)  
≥ 13y: SI > 0.9

Georgette et al. *Journal of Trauma and Acute Care Surgery*.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**DERIVATION AND VALIDATION OF AN IMPROVED PEDIATRIC SHOCK INDEX FOR PREDICTING NEED FOR EARLY INTERVENTION AND OUTCOMES IN PEDIATRIC TRAUMA**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/DERIVATION\\_AND\\_VALIDATION\\_OF\\_AN\\_IMPROVED\\_PEDIATRIC\\_SHOCK\\_INDEX\\_FOR\\_PREDICTING\\_NEED\\_FOR EARLY INTERVENTION AND OUTCOMES IN PEDIATRIC TRAUMA.8.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/derivation_and_validation_of_an_improved_pediatricShock_index_for_predicting_need_for_early_intervention_and_outcomes_in_pediatric_trauma.8.aspx)

### Fibrinogen Supplementation for the Trauma Patient: Should You Choose Fibrinogen Concentrate Over Cryoprecipitate?

**Study Population**  
Adult Trauma Patients  
Early Blood Transfusion  
Fibrinogen Supplement  
N = 6,413

**Propensity Score Match**  
Fibrinogen Concentrate (N = 85)  
VS  
Cryoprecipitate (N = 170)  
1:2 Ratio

**Matched Variables:**

- Demographics
- Comorbidities
- ID Status
- Interventions
- Injury Severity
- ACS Verification

**Fibrinogen Concentrate**  
pRBC, FFP, PLT Requirements  
Hospital & ICU LOS  
Time to Fibrinogen Supplementation

**No Difference**  
Mortality  
DVT  
PE

Obaid et al. *Journal of Trauma and Acute Care Surgery*, March 2022.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**FIBRINOGEN SUPPLEMENTATION FOR THE TRAUMA PATIENT: SHOULD YOU CHOOSE FIBRINOGEN CONCENTRATE OVER CRYOPRECIPITATE?**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/WHICH\\_HOSPITAL-ACQUIRED\\_CONDITIONS\\_MATTER\\_THE\\_MOST.4.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/which_hospital_acquired_conditions_matter_the_most.4.aspx)

### Youth Violence Prevention can be Enhanced by Geospatial Analysis of Trauma Registry Data

**Results**  
Predictors of Census Tract Youth Violence:  
Language spoken at home  
Unemployment rate  
Poverty Level

**Conclusions**  
GIS analysis of registry data can identify high risk areas for youth violence and correlated social and structural determinants.

Can adding GIS data to Trauma Center Registries identify risk factors for Youth Violence?

Doucet et al. *Journal of Trauma and Acute Care Surgery*.  
@JTraumaAcuteSurg

The Journal of Trauma and Acute Care Surgery

**YOUTH VIOLENCE PREVENTION CAN BE ENHANCED BY GEOSPATIAL ANALYSIS OF TRAUMA REGISTRY DATA**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/YOUTH\\_VIOLENCE\\_PREVENTION\\_CAN\\_BE\\_ENHANCED\\_BY.9.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/youth_violence_prevention_can_be_enhanced_by_geospatial_analysis_of_trauma_registry_data.9.aspx)

**The Anchor Point Algorithm: A Morphometric Analysis of Anatomic Landmarks to Guide Placement of Temporary Aortic Rescue Stentgrafts for Non-Compressible Torso Hemorrhage**

Rapid damage control is essential for torso hemorrhage

External and vascular metrics for 203 trauma patients

Triage to pre-sized retrievable stentgrafts

Single point stent positioning

Balance rapid hemorrhage control and visceral perfusion

Expertise, inventory and imaging are limited in austere environments for retrievable stentgraft placement

Go, et al. *Journal of Trauma and Acute Care Surgery*.

The Journal of Trauma and Acute Care Surgery

**THE ANCHOR POINT ALGORITHM: A MORPHOMETRIC ANALYSIS OF ANATOMIC LANDMARKS TO GUIDE PLACEMENT OF TEMPORARY AORTIC RESCUE STENTGRAFTS FOR NON-COMPRESSIBLE TORSO HEMORRHAGE**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/THE\\_ANCHOR\\_POINT\\_ALGORITHM\\_A\\_MORPHOMETRIC.10.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/the_anchor_point_algorithm_a_morphometric.10.aspx)

**Prehospital Physicians Accurately use "Code Crimson" Activations to Alert Multidisciplinary Hospital Teams to Prepare for Patients with Severe Hemorrhage**

Population: (1) Hemorrhage-control surgery or death in 4 hours of hospital arrival (NSW Trauma Registry) or (2) Code Crimson activated by prehospital medical team (Aeromedical database)

**Prehospital Code Crimson Activation**  
"persistent hemodynamic instability secondary to ongoing hemorrhage"

Prehospital Interventions	Code Crimson activation predicts need for hemorrhage control surgery in unstable patients	Hospital Outcomes
Intubation: 78% vs 45%	PPV 0.82 +LR 6.42	Arrival SI: 1.19 vs 0.94
Transfusion: 98% vs 48%	NPV 0.7 -LR 0.55	Theatre: 60% vs 86%
Thoracostomy: 54% vs 21%		Hospital LOS: 21 days vs 13
(+) eFAST: 45% vs 17% versus no CC activation		Mortality: 20% vs 33% vs no CC activation / paramedic alone

Parkya & Miller et al. *Journal of Trauma and Acute Care Surgery*, October 2022

The Journal of Trauma and Acute Care Surgery

**PREHOSPITAL ACTIVATION OF A COORDINATED MULTIDISCIPLINARY HOSPITAL RESPONSE FOR PATIENTS WITH SEVERE HEMORRHAGE. A DATA LINKAGE STUDY OF THE NEW SOUTH WALES "CODE CRIMSON" PATHWAY**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/PREHOSPITAL\\_ACTIVATION\\_OF\\_A\\_COORDINATED.14.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/prehospital_activation_of_a_coordinated_multidisciplinary_hospital_response_for_patients_with_severe_hemorrhage_a_data_linkage_study_of_the_new_south_wales_code_crimson_pathway.14.aspx)

**Intravenous Lidocaine for the Management of Traumatic Rib Fractures (INITIATE Program of Research)**

Traumatic rib fractures (TRFs) are common with a 10% incidence in all trauma patients and are associated with significant morbidity and mortality. Adequate analgesia is paramount for preventing pulmonary complications and death.

A single-centre, double-blind, randomized control trial comparing IV lidocaine plus usual analgesics to placebo infusion plus usual analgesics for 72-96 hours was conducted for adult trauma patients diagnosed with two or more TRFs requiring hospital admission.

36 patients were enrolled, 17 per arm to evaluate the primary outcome: mean pain score at rest and with movement, as measured on the Visual Analog Scale (VAS). The study was powered to detect a 20% reduction in pain scores.

Comparison of the mean VAS pain scores demonstrated significant pain reduction with movement in the lidocaine group compared to placebo (7.05 ±1.72 vs 9.22 ±1.28, p=0.042). Although pain scores at rest were reduced in the lidocaine group, this difference was not statistically significant (3.37 ± 2.00 vs 3.82 ±1.97, p=0.519).

Overall, these results demonstrate that lidocaine has a beneficial analgesic effect in patients with TRFs, particularly during the critical period of mobility, which could reduce negative outcomes of this injury pattern.

Patton P et al. *Journal of Trauma and Acute Care Surgery*, December 2021

The Journal of Trauma and Acute Care Surgery

**INTRAVENOUS LIDOCAINE FOR THE MANAGEMENT OF TRAUMATIC RIB FRACTURES (INITIATE PROGRAM OF RESEARCH)**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/INTRAVENOUS\\_LIDOCAINE\\_FOR\\_THE\\_MANAGEMENT\\_OF.11.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/intravenous_lidocaine_for_the_management_of.11.aspx)

**A Novel Animal Model of Primary Blast Lung Injury and Its Pathological Changes in Mice**

Male C57BL/6 mice, n=48

0 h 2 h 4 h 6 h 12 h 24 h

Blast (self-design shock tube)

Scarified and harvest the lungs

The control group, n=8

The PBLI group, n=40

Edema Hemorrhage Inflammation NETs

Xiang-Yan Meng, Qian-Ying Lu, Jian-Feng Zhang et al. *Journal of Trauma and Acute Care Surgery*.

The Journal of Trauma and Acute Care Surgery

**A NOVEL ANIMAL MODEL OF PRIMARY BLAST LUNG INJURY AND ITS PATHOLOGICAL CHANGES IN MICE**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/A\\_NOVEL\\_ANIMAL\\_MODEL\\_OF\\_PRIMARY\\_BLAST\\_LUNG\\_INJURY.15.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/a_novel_animal_model_of_primary_blast_lung_injury.15.aspx)

**Differences in time-critical interventions and radiological examinations between adult and older trauma patients: a national register-based study**

Trauma systems should be assessed to fit increasing numbers of elderly

Norwegian Trauma Registry data 2015-2018 from all hospitals in a national trauma system.

Older trauma patients received less advanced prehospital management and air ambulance

Age-related management differences hold information about improvement targets

Pre- and in-hospital management. Age 16-64 vs 65-74; 75-84; 85+ n = 9543 patients, 28% ≥65 years

Improved dispatch and triage is a priority

Cuevas-Østrem et al. *Journal of Trauma and Acute Care Surgery*.

The Journal of Trauma and Acute Care Surgery

**DIFFERENCES IN TIME-CRITICAL INTERVENTIONS AND RADIOLOGICAL EXAMINATIONS BETWEEN ADULT AND OLDER TRAUMA PATIENTS: A NATIONAL REGISTER-BASED STUDY**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/DIFFERENCES\\_IN\\_TIME\\_CRITICAL\\_INTERVENTIONS\\_AND.12.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/differences_in_time_critical_interventions_and.12.aspx)

**Mortality of Adolescents with Isolated Traumatic Brain Injury Does Not Vary with Type of Level I Trauma Center**

**Study Population**

3,524 (15-17yo) patients with isolated severe TBI

National sample from 2013 - 2017 NTDB

Level I adult, pediatric & mixed trauma centers

**Results**

Adjusted odds of mortality equivalent across center types

Adult/mixed trauma center patients more severely injured

**Conclusion**

Adolescents with isolated severe TBI can be successfully treated at adult or pediatric trauma centers

Cuevas-Østrem et al. *Journal of Trauma and Acute Care Surgery*.

The Journal of Trauma and Acute Care Surgery

**MORTALITY OF ADOLESCENTS WITH ISOLATED TRAUMATIC BRAIN INJURY DOES NOT VARY WITH TYPE OF LEVEL I TRAUMA CENTER**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/MORTALITY\\_OF\\_ADOLESCENTS\\_WITH\\_ISOLATED\\_TRAUMATIC.16.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/mortality_of_adolescents_with_isolated_traumatic.16.aspx)

**Return visits in trauma patients discharged from the ED**

5550 patients assessed and discharged from the ED by trauma teams in Ontario, Canada between 2009 and 2020

Reasons for returning to ED:

- Wound care issue (17.2%)
- Head injury symptoms (15.6%)
- Substance misuse (6.8%)

Risk factors for returning to ED:

- Rural residence
- Anxiety disorder
- Frequent ED user
- Penetrating injury
- Extremity fracture

Within 14 days:

- 18% of patients had at least one ED return visit
- 1.8% of patients admitted to hospital

Evans et al. *Journal of Trauma and Acute Care Surgery*, Jan 2022

The Journal of Trauma and Acute Care Surgery

**EMERGENCY DEPARTMENT RETURN VISITS AND HOSPITAL ADMISSIONS IN TRAUMA TEAM ASSESSED PATIENTS INITIALLY DISCHARGED FROM THE EMERGENCY DEPARTMENT: A POPULATION-BASED COHORT STUDY**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/EMERGENCY\\_DEPARTMENT\\_RETURN\\_VISITS\\_AND\\_HOSPITAL.13.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/emergency_department_return_visits_and_hospital.13.aspx)

**Tracheostomy decreases continuous analgesia and sedation requirements**

Retrospective review from Level I Trauma Center

468 patients

Cognitive Evaluation: GCS, RASS, CAM-ICU + Sedation, Anxiolytic, and Analgesic Medication Usage

Compare 72 hours pre-operative to 72-hours post-operative tracheostomy

Early Improvements noted 24 hours after tracheostomy compared to 24 hours pre-tracheostomy

Propofol and Fentanyl utilization (dose and #patients)

Total MME and continuous midazolam

GCS, RASS, CAM-ICU

Taylor E. Wallen, MD et al. *Journal of Trauma and Acute Care Surgery*, October 2022 [10.1097/TA.0000000000003673]


The Journal of Trauma and Acute Care Surgery

**TRACHEOSTOMY DECREASES CONTINUOUS ANALGESIA AND SEDATION REQUIREMENTS**

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BEST OF SURGICAL CRITICAL CARE ARTICLE

**KABUL AIRPORT SUICIDE BOMBING ATTACK: MASS CASUALTY MANAGEMENT AT THE EMERGENCY'NGO HOSPITAL**




AFGHANISTAN is a war-torn country where mass casualties are common but largely underreported

EMERGENCY Kabul Hospital is a trauma centre for civilian war victims

On 26<sup>th</sup> of August 2021 a suicide bombing took place at the Kabul Airport: at least 184 people were killed

93 CAUSALITIES presented at the Hospital gate



A SELECTIVE TRIAGE, specific IN-HOSPITAL PATHWAYS for different categories of patients and a SURGERY CAPACITY PLAN are keys for the management of a Mass Casualty

Spagnolello et al. *Journal of Trauma and Acute Care Surgery*.  
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[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/KABUL\\_AIRPORT\\_SUI-CIDE\\_BOMBING\\_ATTACK\\_MASS.18.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/kabul-airport-suicide-bombing-attack-mass.18.aspx)

NO VISUAL ABSTRACT PROVIDED  
**ANOTHER MILESTONE REACHED: EMERGENCY GENERAL SURGERY VERIFICATION PROGRAM**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/ANOTHER\\_MILESTONE\\_REACHED\\_EMERGENCY\\_GENERAL.1.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/another-milestone-reached-emergency-general.1.aspx)

NO VISUAL ABSTRACT PROVIDED  
**PREGNANCY IN TRAUMA- A WESTERN TRAUMA ASSOCIATION ALGORITHM**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/PREGNANCY\\_IN\\_TRAUMA\\_A\\_WESTERN\\_TRAUMA\\_ASSOCIATION.21.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/pregnancy-in-trauma-a-western-trauma-association.21.aspx) NO VISUAL ABSTRACT PROVIDED

**DEVELOPING AND LEADING A SUSTAINABLE ORGANIZATION FOR EARLY CAREER ACUTE CARE SURGEONS: LESSONS FROM THE INAUGURAL AAST ASSOCIATE MEMBER COUNCIL**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/DEVELOPING\\_AND\\_LEADING\\_A\\_SUSTAINABLE\\_ORGANIZATION.22.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/developing-and-leading-a-sustainable-organization.22.aspx)

NO VISUAL ABSTRACT PROVIDED  
**LETTER TO THE EDITOR: WESTERN TRAUMA ASSOCIATION CRITICAL DECISION ALGORITHM FOR THE EVALUATION AND MANAGEMENT OF TRAUMATIC PNEUMOTHORAX**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/LETTER\\_TO\\_THE\\_EDITOR\\_WESTERN\\_TRAUMA\\_ASSOCIATION.23.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/letter-to-the-editor-western-trauma-association.23.aspx)

NO VISUAL ABSTRACT PROVIDED  
**REPLY TO LETTER TO THE EDITOR EARLY TRANSFUSION STRATEGY MAY HAVE ALSO AN IMPACT ON TRAUMA RELATED ORGAN FAILURE.**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/EARLY\\_TRANSFUSION\\_STRATEGY\\_MAY\\_HAVE\\_ALSO\\_AN\\_IMPACT.25.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/early-transfusion-strategy-may-have-also-an-impact.25.aspx)

NO VISUAL ABSTRACT PROVIDED  
**AUTHOR RESPONSE TO THE LETTER FROM DR SCHMITT: EARLY TRANSFUSION STRATEGY MAY HAVE ALSO AN IMPACT ON TRAUMA RELATED ORGAN FAILURE**  
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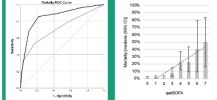
NO VISUAL ABSTRACT PROVIDED  
**LETTER TO EDITOR CONCERNING "THE FEASIBILITY AND RELIABILITY OF FRAILTY ASSESSMENT TOOLS APPLICABLE IN ACUTE IN-HOSPITAL TRAUMA PATIENTS: A SYSTEMATIC REVIEW"**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/LETTER\\_TO\\_EDITOR\\_CONCERNING\\_THE\\_FEASIBILITY\\_AND.27.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/letter-to-editor-concerning-the-feasibility-and.27.aspx)

NO VISUAL ABSTRACT PROVIDED  
**AUTHORS RESPONSE TO THE LETTER TO THE EDITOR CONCERNING "THE FEASIBILITY AND RELIABILITY OF FRAILTY ASSESSMENT TOOLS APPLICABLE IN ACUTE IN-HOSPITAL TRAUMA PATIENTS: A SYSTEMATIC REVIEW"**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/AUTHOR\\_S\\_RESPONSE\\_TO\\_THE\\_LETTER\\_TO\\_THE\\_EDITOR.28.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/author-s-response-to-the-letter-to-the-editor.28.aspx)

**Validation qSOFA in EGS & proposal of qadSOFA**

Mortality in EGS with sepsis up to 30%  
 No data on qSOFA in EGS

Validation of score qSOFA & proposal of new score




Independent predictors for mortality: mesenteric ischemia, GIT perforation, age >65years and increasing qSOFA

Proposal new qadSOFA


Christian T. J. Magyar, MD et al. *Journal of Trauma and Acute Care Surgery*.  
 October 2022 [10.1097/TA.00000000000063742]  
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**PERFORMANCE OF QUICK SEQUENTIAL ORGAN FAILURE ASSESSMENT (QSOFA) AND MODIFIED AGE DISEASE ADJUSTED QADSOFA FOR THE PREDICTION OF OUTCOMES IN EMERGENCY GENERAL SURGERY PATIENTS**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/PERFORMANCE\\_OF\\_QUICK\\_SEQUENTIAL\\_ORGAN\\_FAILURE.19.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/performance-of-quick-sequential-organ-failure.19.aspx)


**Ventilator Associated Pneumonia and Intubation Location in Adults with Traumatic Injuries: Systematic Review and Meta-analysis**



Are trauma patients intubated in the prehospital v. in hospital setting at higher risk of ventilator associated pneumonia?



Review and meta-analysis of 6 studies (N=2990). Overall quality weighted risk ratio 1.09 (95% CI 0.9-1.31)



Trauma patients intubated prehospital v. in hospital have similar risk of ventilator associated pneumonia

Author et al. *Journal of Trauma and Acute Care Surgery*.  
 Month Year [doi]  
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**VENTILATOR ASSOCIATED PNEUMONIA AND INTUBATION LOCATION IN ADULTS WITH TRAUMATIC INJURIES: SYSTEMATIC REVIEW AND META-ANALYSIS**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2022/10000/VENTILATOR\\_ASSOCIATED\\_PNEUMONIA\\_AND\\_INTUBATION.20.ASPX](https://journals.lww.com/jtrauma/fulltext/2022/10000/ventilator-associated-pneumonia-and-intubation.20.aspx)