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BEST OF TRAUMA ARTICLE

**Thoracic Irrigation for Prevention of Secondary Intervention After Thoracostomy Tube Drainage for Hemothorax: A Western Trauma Association Multi-Center Study**

Carver TW et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.00000000000004364  
@JTraumaAcuteSurg

**THORACIC IRRIGATION FOR PREVENTION OF SECONDARY INTERVENTION AFTER THORACOSTOMY TUBE DRAINAGE FOR HEMOTHORAX: A WESTERN TRAUMA ASSOCIATION MULTI-CENTER STUDY**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/THORACIC\\_IRRIGATION\\_FOR\\_PREVENTION\\_OF\\_SECONDARY.10.ASPX?CONTEXT=FEATUREDARTICLES&COLLECTIONID=5](https://journals.lww.com/jtrauma/fulltext/2024/11000/thoracic_irrigation_for_prevention_of_secondary.10.aspx?context=featuredarticles&collectionid=5)

**Platelet Releasates Mitigate the Endotheliopathy of Trauma**

Gallagher LT et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.00000000000004342  
@JTraumaAcuteSurg

**PLATELET RELEASATES MITIGATE THE ENDOTHELIOPTHY OF TRAUMA**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/PLATELET\\_RELEASATES\\_MITIGATE\\_THE\\_ENDOTHELIOPTHY.12.ASPX?CONTEXT=FEATUREDARTICLES&COLLECTIONID=5](https://journals.lww.com/jtrauma/fulltext/2024/11000/platelet_releasates_mitigate_the_endotheliopathy.12.aspx?context=featuredarticles&collectionid=5)

BEST OF BASIC SCIENCES ARTICLE



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### BEST OF SCC

**No Benefit from the Addition of Low-Dose Ketamine Infusion to Standard Evidence-Based Care of Patients with Multiple Rib Fractures**

Macheel C et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.00000000000004398  
@JTraumaAcuteSurg

**NO BENEFIT FROM THE ADDITION OF LOW-DOSE KETAMINE INFUSION TO STANDARD EVIDENCE-BASED CARE OF PATIENTS WITH MULTIPLE RIB FRACTURES**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/NO\\_BENEFIT\\_FROM\\_THE\\_ADDITION\\_OF\\_LOW\\_DOSE\\_KETAMINE.16.ASPX?CONTEXT=FEATUREDARTICLES&COLLECTIONID=5](https://journals.lww.com/jtrauma/fulltext/2024/11000/no_benefit_from_the_addition_of_low_dose_ketamine.16.aspx?context=featuredarticles&collectionid=5)

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### Exposure to Statin Therapy Decreases the Incidence of Venous Thromboembolism after Trauma

Adults admitted 2018-2022 to Level 1 Trauma Center

**Matched Cohort**  
N= 158

Statin Users (N=79) → **3%** VTE Incidence

Non-Users (N=79) → **19%** VTE Incidence

Odds Ratio 0.14  
p = 0.01

**Conclusion**  
Statins could be an effective adjunct to prevent VTE and other complications

Cardenas J et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004319  
@JTraumaAcuteSurg

**EXPOSURE TO STATIN THERAPY DECREASES THE INCIDENCE OF VENOUS THROMBOEMBOLISM AFTER TRAUMA**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/EXPOSURE\\_TO\\_STATIN\\_THERAPY\\_DECREASES\\_THE\\_INCIDENCE.5.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/exposure_to_statin_therapy_decreases_the_incidence.5.aspx)

### Decreasing Opioids in Ventilated SICU Patients

**Study Population**  
Adult Level I Trauma Center  
SICU Patients on Ventilator

**Methods**  
Prospectively collected, comparing MME per patient for attendings day before & after implementation

Before 74 months (313 ptn = 1,091 vent days)  
After 104 months (473 ptn = 1,672 vent days)

Status Quo → Academic Detailing → Audit & Feedback

**Results**  
Opioids  
MME per Vent Day  
All Patients ↓ 20%  
Highest Rx'ers ↓ 31%

Kalkwarf KJ et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004365  
@JTraumaAcuteSurg

**USING IMPLEMENTATION SCIENCE TO DECREASE VARIATION & HIGH OPIOID ADMINISTRATION IN A SURGICAL ICU**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/USING\\_IMPLEMENTATION\\_SCIENCE\\_TO\\_DECREASE\\_VARIATION\\_AND\\_HIGH\\_OPIOID\\_ADMINISTRATION\\_IN\\_A\\_SURGICAL\\_ICU.9.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/using_implementation_science_to_decrease_variation_and_high_opioid_administration_in_a_surgical_icu.9.aspx)

### Prehospital Tranexamic Acid Is Associated with a Survival Benefit without an Increase in Complications: Results of Two Harmonized Randomized Clinical Trials

1744 patients harmonized analysis of the STAAMP and ROC-TXA trials

Randomization: 0, 1, 2 grams TXA

**Prehospital TXA**  
dose-dependent 28-day survival benefit and reduction in 24-hour transfusion requirements

Outcomes: 28-day mortality, 24-hour transfusion, adverse events

NO association with increased adverse events

Sperry JL et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004315  
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**PREHOSPITAL TRANEXAMIC ACID IS ASSOCIATED WITH A SURVIVAL BENEFIT WITHOUT AN INCREASE IN COMPLICATIONS: RESULTS OF TWO HARMONIZED RANDOMIZED CLINICAL TRIALS**

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### Thoracic Irrigation for Prevention of Secondary Intervention After Thoracostomy Tube Drainage for Hemothorax: A Western Trauma Association Multi-Center Study

462 adults with chest tube for HTX

11 center, prospective, observational study

Thoracic irrigation vs no irrigation

493 hemothoraces

No irrigation = 75%  
Irrigation = 25%

Propensity Weighted Analysis

Secondary Intervention for retained HTX

8% vs 13%  
OR = 0.56

Carver TW et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004364  
@JTraumaAcuteSurg

**THORACIC IRRIGATION FOR PREVENTION OF SECONDARY INTERVENTION AFTER THORACOSTOMY TUBE DRAINAGE FOR HEMOTHORAX: A WESTERN TRAUMA ASSOCIATION MULTI-CENTER STUDY**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/THORACIC\\_IRRIGATION\\_FOR\\_PREVENTION\\_OF\\_SECONDARY.10.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/11000/thoracic_irrigation_for_prevention_of_secondary.10.aspx)

### Whole Blood versus Balanced Resuscitation in Massive Hemorrhage: Six of One or Half Dozen of the Other?

Study Population: Retrospective study (2016-2021) Trauma patients 15+ years ≥ 3 units WB or RBCs 1<sup>st</sup> hour (CAT+)

Results: Mortality WB Component P-value  
24-hour 18% 15% p=0.5  
30-day 32% 31% p=0.5

Conclusions: Whole blood-based and balanced component-based resuscitation were associated with similar 24-hour and 30-day mortality rates.

WB resuscitation resulted in balanced resuscitation at all times, while CO required adept attention to ratios of products administered.

Barton CA et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004366  
@JTraumaAcuteSurg

**WHOLE BLOOD VERSUS BALANCED RESUSCITATION IN MASSIVE HEMORRHAGE: SIX OF ONE OR HALF DOZEN OF THE OTHER?**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/WHOLE\\_BLOOD\\_VERSUS\\_BALANCED\\_RESUSCITATION\\_IN.7.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/whole_blood_versus_balanced_resuscitation_in.7.aspx)

### Mechanism Matters: Differential Benefits of Cold-Stored Whole Blood for Trauma Resuscitation from a Prospective Multicenter Study

Trauma Patients (n=1616)

Penetrating (53%) Blunt (47%)

LTOWB VS BCT

Results: Decreased Overall and Interval Mortality with LTOWB (Overall and Interval) (p < 0.05)

Conclusions: LTOWB Improves Survival Following Penetrating Trauma

Dilday J et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004353  
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**MECHANISM MATTERS: DIFFERENTIAL BENEFITS OF COLD-STORED WHOLE BLOOD FOR TRAUMA RESUSCITATION FROM A PROSPECTIVE MULTICENTER STUDY**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/MECHANISM\\_MATTERS\\_DIFFERENTIAL\\_BENEFITS\\_OF.11.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/mechanism_matters_differential_benefits_of.11.aspx)

### Every Minute Matters: Improving Outcomes for Penetrating Trauma Through Prehospital Advanced Resuscitative Care

Prehospital Study Population: PHB = 2u PRBCs + 2g TXA + 2g Ca

Results: Time to First Blood Administration  
Mortality 7%  
Mortality 29% (p<0.01)

Conclusions: Odds In-Hospital Mortality  
Odds Ratio (95% CI) 1.11 (1.04-1.19)  
Every 1 Minute Delay = 11% increased mortality

Survival benefit can be achieved in patients with severe hemorrhage when blood is administered within the first 15 minutes of first patient contact

Duchesne J CA et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004363  
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**EVERY MINUTE MATTERS: IMPROVING OUTCOMES FOR PENETRATING TRAUMA THROUGH PREHOSPITAL ADVANCED RESUSCITATIVE CARE**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/EVERY\\_MINUTE\\_MATTERS\\_IMPROVING\\_OUTCOMES\\_FOR.8.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/every_minute_matters_improving_outcomes_for.8.aspx)

### Platelet Releasates Mitigate the Endotheliopathy of Trauma

The soluble environment formed by trauma platelet releasates attenuates thromboinflammation

mitigates trauma induced endothelial permeability

Through redox metabolism imbalance and decreased cellular and tissue destruction.

Gallagher LT et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004342  
@JTraumaAcuteSurg

**PLATELET RELEASATES MITIGATE THE ENDOTHELIOPATHY OF TRAUMA**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/PLATELET\\_RELEASATES\\_MITIGATE\\_THE\\_ENDOTHELIOPATHY.12.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/11000/platelet_releasates_mitigate_the_endotheliopathy.12.aspx)

### Quantifying the Benefit of Whole Blood on Mortality in Trauma Patients Requiring Emergent Laparotomy

<p>Severely Injured Trauma Patients</p> <p>Emergent Laparotomy + &gt;3U RBC Containing Product in 1st Hour (Whole Blood or RBC)</p> <p>Resuscitation With: &gt;50% Whole Blood VS &lt;50% Whole Blood</p>	<p>Posterior Probability of: 4 Hour Mortality Benefit 99% (RR 0.12; 95% CrI 0.02-0.53)</p> <p>24 Hour Mortality Benefit 99% (RR 0.23; 95% CrI 0.08-0.65)</p>	<p><b>How Whole Blood Is Utilized Matters</b></p> <p>Whole Blood Predominant Strategies During Initial Resuscitation</p> <p>99% Probability of Decreased Early Mortality</p>
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Lammers D et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004382  
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**QUANTIFYING THE BENEFIT OF WHOLE BLOOD ON MORTALITY IN TRAUMA PATIENTS REQUIRING EMERGENT LAPAROTOMY**  
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### Daily Quetiapine After Severe TBI Improves Learning and Memory

<p><b>Study Population</b></p> <ul style="list-style-type: none"> <li>35 male CD1 mice: Sham or CCI (traumatic brain injury)</li> <li>Treatment groups: Saline, QTP (10/20 mg/kg) IP BID for 2 weeks</li> <li>Assessment: Morris Water Maze for learning and memory.</li> </ul>	<p><b>Results</b></p> <ul style="list-style-type: none"> <li>Day 14 weight gain was highest in I+QTP20 (p&lt;0.01 vs I+P)</li> <li>I+QTP10 and I+QTP20 reached target zone faster in spatial learning (p&lt;0.01, p&lt;0.01 vs I+P)</li> <li>I+QTP20 reached target zone faster in probe memory (p&lt;0.05 vs I+P)</li> </ul>	<p><b>Conclusions</b></p> <p>QTP after TBI:</p> <ul style="list-style-type: none"> <li>Weight loss recovery</li> <li>Learning and memory</li> <li>? dose dependence</li> </ul>
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Belle P et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004400  
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**DAILY QUETIAPINE AFTER SEVERE TBI IMPROVES LEARNING AND MEMORY**  
 HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/DAILY\_QUETIAPINE\_AFTER\_SEVERE\_TBI\_IMPROVES.17.ASPX

### Patients with Type O Blood Exhibit Distinct Multi-Omics Signature Namely Downregulation of the Lectin Complement Pathway Following Traumatic Injury

<p><b>Trauma Activation Patients</b></p> <p>n = 288</p> <p>O Type Blood n = 146</p> <p>Non-O Blood n = 142</p> <p>Plasma Sample on Admit Clinical Variables Patient Outcomes</p>	<p><b>Clinical Comparisons</b></p> <p>Demographics Injury Severity Lengths of Stay Transfusion Requirement Ventilation Mortality</p> <p><b>Plasma Multi-Omics</b></p> <p>Extraction Mass Spec</p> <p>979 Proteins</p> <p>159 Metabolites</p>	<p><b>Clinical Outcomes</b></p> <p>Blood Type O Patients had:</p> <ul style="list-style-type: none"> <li>Demographics</li> <li>Injury Severity</li> <li>Length of Stay</li> <li>ICU Length of Stay</li> <li>TBI mortality</li> <li>Blood product transfusion</li> </ul> <p><b>Molecular Drivers</b></p> <p>Decreased Complement Activation Altered Hemostasis Processes Epithelial Damage Increased Proteolysis</p>
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Stocker BW et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004367  
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**TRAUMA PATIENTS WITH TYPE O BLOOD EXHIBIT UNIQUE MULTI-OMICS SIGNATURE WITH DECREASED LECTIN PATHWAY OF COMPLEMENT LEVELS**  
 HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/TRAUMA\_PATIENTS\_WITH\_TYPE\_O\_BLOOD\_EXHIBIT\_UNIQUE.14.ASPX

### The Fallacy of a Roadmap CT After an Abdominal Gunshot Wound: A Road That Leads to Nowhere

<p><b>Study Population</b></p> <p>Retrospective Review</p> <p>149 patients</p> <p>2017-2022</p>	<p><b>Results</b></p> <p>72.5% with clear indication for laparotomy</p> <p>Concordance: 57.0%</p> <p>CT missed injuries in 36.2% of patients.</p>	<p><b>Conclusions</b></p> <p>CT does not serve as a roadmap in patients who undergo a laparotomy.</p>
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Vasquez M et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004404  
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**THE FALLACY OF A ROADMAP COMPUTED TOMOGRAPHY AFTER AN ABDOMINAL GUNSHOT WOUND A ROAD THAT LEADS TO NOWHERE**  
 HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/THE\_FALLACY\_OF\_A\_ROADMAP\_COMPUTED\_TOMOGRAPHY\_AFTER.18.ASPX

### Observation-First vs. Angioembolization-First Approach in Stable Patients with Blunt Liver Trauma: A WTA Multicenter Study

<p><b>Study Population</b></p> <p>Hemodynamically stable adults with blunt liver trauma and contrast extravasation or blush on initial CT</p> <p>n=128</p> <p>Angioembolization (n=57)</p> <p>Observation (OBS) n=71</p>	<p><b>Results</b></p> <p>No difference in overall mortality in AE (6.5%) vs. OBS (5.7%)</p> <p>Higher rate of liver-related complications (LRCs) in AE (38.6%) vs. OBS (12.7%)</p> <p>Similar adjusted associated LRC risk between AE and OBS (OR 1.95, p=0.22)</p> <p>Higher rates of hospital re-admission at 30 days in AE (12.2%) vs. OBS (1.4%)</p>	<p><b>Conclusions</b></p> <p>AE-first approach was associated with:</p> <ul style="list-style-type: none"> <li>Increased rate of LRCs</li> <li>Similar adjusted associated risk of LRCs</li> <li>Equivalent mortality</li> <li>Higher re-admission rates</li> </ul> <p>Angioembolization may be over utilized in stable patients with blush on CT scan</p>
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Nguyen PD et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004372  
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**OBSERVATION-FIRST VERSUS ANGIOEMBOLIZATION-FIRST APPROACH IN STABLE PATIENTS WITH BLUNT LIVER TRAUMA: A WTA MULTICENTER STUDY**  
 HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/OBSERVATION\_FIRST\_VERSUS\_ANGIOEMBOLIZATION\_FIRST.15.ASPX

### Does Preperitoneal Packing Increase Venous Thromboembolism Risk Among Trauma Patients? A Multicenter Analysis Across 17 Level I Trauma Centers

<p>1,387 trauma patients with pelvic fractures in CLOT-1 database</p> <p>VTE risk with procedural intervention:</p> <ul style="list-style-type: none"> <li>Pre-peritoneal packing (PPP)</li> <li>Pelvic angioembolization (PA)</li> <li>Open reduction internal fixation (ORIF)</li> </ul>	<p>Overall VTE Incidence 5.6%</p> <p>PPP: 9.0%</p> <p>PA: 2.6%</p> <p>ORIF: 24.7%</p> <p>&gt; 1 intervention: 16.0%</p> <p>No intervention: 4.7%</p>	<p>Despite high rates of VTE, PPP and other pelvic interventions did not increase VTE risk in multivariate models</p> <p>Early administration of VTE prophylaxis (within 24 hours) reduced VTE incidence by 50%</p>
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Knowlton LM, et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004416  
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**DOES PREPERITONEAL PACKING INCREASE VENOUS THROMBOEMBOLISM RISK AMONG TRAUMA PATIENTS? A PROSPECTIVE MULTICENTER ANALYSIS ACROSS 17 LEVEL I TRAUMA CENTERS**  
 HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/DOES\_PREPERITONEAL\_PACKING\_INCREASE\_VENOUS.19.ASPX

### No Benefit from the Addition of Low-Dose Ketamine Infusion to Standard Evidence-Based Care of Patients with Multiple Rib Fractures

<p>Adult trauma inpatients with ≥ 3 rib fractures</p> <p>N = 25</p> <p>Saline placebo</p> <p>Low-dose ketamine infusion (LDKI)</p>	<p>Daily MME (mg) Use: Saline vs LDKI p = 0.236</p> <table border="1"> <tr> <th>Day</th> <th>Saline</th> <th>LDKI</th> </tr> <tr> <td>Day 1</td> <td>38.5 mg</td> <td>38.2 mg</td> </tr> <tr> <td>Day 2</td> <td>55.4 mg</td> <td>43.6 mg</td> </tr> </table>	Day	Saline	LDKI	Day 1	38.5 mg	38.2 mg	Day 2	55.4 mg	43.6 mg	<p><b>Summary</b></p> <p>Up to 48 hrs of LDKI did not decrease opioid use (morphine milligram equivalents, MME).</p> <p>LDKI also did not impact post-infusion MME, length of stay, pulmonary complications, or need for readmission.</p> <p><b>Conclusion</b></p> <p>Low-dose ketamine infusion had no added benefit over standard care in adults with multiple rib fractures.</p>
Day	Saline	LDKI									
Day 1	38.5 mg	38.2 mg									
Day 2	55.4 mg	43.6 mg									

Macheel C et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004398  
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**NO BENEFIT FROM THE ADDITION OF LOW-DOSE KETAMINE INFUSION TO STANDARD EVIDENCE-BASED CARE OF PATIENTS WITH MULTIPLE RIB FRACTURES**  
 HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/NO\_BENEFIT\_FROM\_THE\_ADDITION\_OF\_LOW\_DOSE\_KETAMINE.16.ASPX

### Are Trauma Centers Penalized For Improved Prehospital Resuscitation? The Effect Of Prehospital Transfusion On Arrival Vitals And Predicted Mortality

<p><b>Study Population</b></p> <ul style="list-style-type: none"> <li>Adult trauma patients receiving emergency-release blood products</li> <li>Patients grouped into those receiving prehospital blood (PB) transfusion and those receiving blood after arrival to ED</li> </ul>	<p><b>Results</b></p> <ul style="list-style-type: none"> <li>2,117 patients (1011 PB, 1106 no PB)</li> <li>PB patients:             <ul style="list-style-type: none"> <li>Injury severity</li> <li>Prehospital Hypotension</li> <li>Prehospital shock Index</li> </ul> </li> <li>PB associated with:             <ul style="list-style-type: none"> <li>ED Arrival Hypotension</li> <li>Improvements in Arrival TRISS Score</li> <li>3X ↑ Unexpected survivors</li> </ul> </li> </ul>	<p><b>Conclusions</b></p> <ul style="list-style-type: none"> <li>Current survival prediction models do not account for improved prehospital resuscitation</li> <li>Prehospital vitals should be considered in survival estimates</li> </ul>
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Clements TW et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.00000000000004435  
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**ARE TRAUMA CENTERS PENALIZED FOR IMPROVED PREHOSPITAL RESUSCITATION?: THE EFFECT OF PREHOSPITAL TRANSFUSION ON ARRIVAL VITALS AND PREDICTED MORTALITY**  
 HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/ARE\_TRAUMA\_CENTERS\_PENALIZED\_FOR\_IMPROVED.20.ASPX

**Health Service Use in Major Trauma Survivors: A Population-Based Cohort Study from Ontario, Canada**

55,060 major trauma survivors in Ontario, Canada between 2009 and 2021.

Population-based case-control study.

Four age and sex matched controls for every case.

Five-year follow-up.

Health services use peaked within a year of discharge but remained elevated relative to controls throughout follow up.

Trauma survivors had 56% overall increase in HSU (RR 1.56, 95% CI: 1.55–1.57).

Trauma survivors had 88% increase in hospital admissions (RR 1.88, 95% CI: 1.85–1.920).

Evans CCD et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000000438  
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**HEALTH SERVICE USE IN MAJOR TRAUMA SURVIVORS: A POPULATION-BASED COHORT STUDY FROM ONTARIO, CANADA**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/HEALTH\\_SERVICE\\_USE\\_IN\\_MAJOR\\_TRAUMA\\_SURVIVORS\\_A.21.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/health_service_use_in_major_trauma_survivors_a.21.aspx)

**Higher Energy Delivery Is Associated With Improved Long-term Survival Among Adults With Major Burn Injury: A Multicenter, Multinational, Observational Study**

Major burn injuries cause intense inflammation, immune dysregulation, and catabolism.

Despite focus on enteral nutrition to mitigate catabolism and improve survival, the precise dose of energy and protein for critically injured patients is unknown.

Higher doses of energy (20–30 kcal/kg/day) may improve 6-month survival.

Higher protein doses do not improve 6-month survival.

Higher energy/protein doses do not improve long-term functional recovery.

Stewart BT et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000000432  
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**HIGHER ENERGY DELIVERY IS ASSOCIATED WITH IMPROVED LONG-TERM SURVIVAL AMONG ADULTS WITH MAJOR BURN INJURY: A MULTICENTER, MULTINATIONAL, OBSERVATIONAL STUDY**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/HIGHER\\_ENERGY\\_DELIVERY\\_IS\\_ASSOCIATED\\_WITH\\_IMPROVED.22.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/higher_energy_delivery_is_associated_with_improved.22.aspx)

**Does Early Transfusion of Whole Blood Reduce the Need for Component Therapy in Trauma Patients?**

Problem? Trauma causes 10% of global deaths.

Uncontrolled hemorrhage is the leading preventable cause of death in trauma patients.

Whole Blood Therapy stands as a viable alternative for optimal resuscitation in patients with hemorrhagic shock.

11 identified studies

N = 4792 adult trauma patients

Seven studies reported a decrease in 24-hr transfusion requirements in patients receiving Whole Blood Therapy.

One study reported a significant decrease in 24-hr mortality in patients receiving Whole Blood Therapy.

Whole Blood Therapy addresses many logistical barriers associated with component therapy.

Risha M et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.00000000000004429  
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**DOES EARLY TRANSFUSION OF COLD-STORED WHOLE BLOOD REDUCE THE NEED FOR COMPONENT THERAPY IN CIVILIAN TRAUMA PATIENTS? A SYSTEMATIC REVIEW**  
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/DOES\\_EARLY\\_TRANSFUSION\\_OF\\_COLD\\_STORED\\_WHOLE\\_BLOOD.23.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/does_early_transfusion_of_cold_stored_whole_blood.23.aspx)

NO VISUAL ABSTRACT PROVIDED  
**THE DIFFICULT AIRWAY IN TRAUMA: WHAT YOU NEED TO KNOW**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/THE\\_DIFFICULT\\_AIRWAY\\_IN\\_TRAUMA\\_WHAT\\_YOU\\_NEED\\_TO.1.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/11000/the_difficult_airway_in_trauma_what_you_need_to.1.aspx)

NO VISUAL ABSTRACT PROVIDED  
**PERIMORTEM CESAREAN SECTION AFTER SEVERE INJURY: WHAT YOU NEED TO KNOW**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/PERIMORTEM\\_CESAREAN\\_SECTION\\_AFTER\\_SEVERE\\_INJURY\\_2.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/11000/perimortem_cesarean_section_after_severe_injury_2.aspx)

NO VISUAL ABSTRACT PROVIDED  
**CURRENT DIAGNOSIS AND MANAGEMENT OF NECROTIZING SOFT TISSUE INFECTIONS: WHAT YOU NEED TO KNOW**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/11000/CURRENT\\_DIAGNOSIS\\_AND\\_MANAGEMENT\\_OF\\_NECROTIZING.3.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/11000/current_diagnosis_and_management_of_necrotizing.3.aspx)

NO VISUAL ABSTRACT PROVIDED  
**BUILDING ON THE PAST: THE FUTURE OF THE WESTERN TRAUMA ASSOCIATION**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/CITATION/2024/11000/BUILDING\\_ON\\_THE\\_PAST\\_THE\\_FUTURE\\_OF\\_THE\\_WESTERN.4.ASPX](https://journals.lww.com/jtrauma/citation/2024/11000/building_on_the_past_the_future_of_the_western.4.aspx)

NO VISUAL ABSTRACT PROVIDED  
**TRAUMA CARE AND ITS FINANCING AROUND THE WORLD**

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/11000/TRAUMA\\_CARE\\_AND\\_ITS\\_FINANCING\\_AROUND\\_THE\\_WORLD.24.ASPX](https://journals.lww.com/jtrauma/abstract/2024/11000/trauma_care_and_its_financing_around_the_world.24.aspx)

