

JTACS OCTOBER TABLE OF CONTENTS

'BEST OF' OCTOBER ARTICLES

BEST OF TRAUMA ARTICLE

Small versus Large-Bore Thoracostomy for Traumatic Hemothorax: A Systematic Review and Meta-Analysis

Traumatic Hemothorax is common	2,008 articles screened → 11 articles included	SBTT	LBTT
No consensus on optimal catheter size	1,847 patients	Failure rate	=
Hypothesis: small bore tube thoracostomy (SBTT) (≤14 F) is as effective as large-bore tube thoracostomy (LBTT) (≥20F)	714 SBTT, 1,233 LBTT	Mortality	=
		Complications	=
		Initial drainage	>
		Tube days	<
		SBTT may be as effective as LBTT for the treatment of traumatic HTX	

Lyons, N et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004412
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SMALL VERSUS LARGE-BORE THORACOSTOMY FOR TRAUMATIC HEMOTHORAX: A SYSTEMATIC REVIEW AND META-ANALYSIS
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/SMALL_VERSUS_LARGE_BORE_THORACOSTOMY_FOR_TRAUMATIC.19.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/small_versus_large_bore_thoracostomy_for_traumatic.19.aspx)



SCAN HERE TO WATCH A VIDEO OVERVIEW
[HTTPS://WWW.DROPBOX.COM/SCL/FI/KKM-H8Y4QBKVGJUPD6697H/VIDEO1430331392.MP4?RLKEY=70E2KQV8E90W4ZWYZ1E1W0XSR&ST=6P-J1UU4L&DL=0](https://www.dropbox.com/SCL/FI/KKM-H8Y4QBKVGJUPD6697H/VIDEO1430331392.MP4?RLKEY=70E2KQV8E90W4ZWYZ1E1W0XSR&ST=6P-J1UU4L&DL=0)

BEST OF SCC ARTICLE

Association of Timing and Agent for VTE Prophylaxis in Patients with Severe Traumatic Brain Injury on VTE, Mortality, Neurosurgical Intervention, and Discharge Disposition

Population & Methods	VTE Prophylaxis	Results
<ul style="list-style-type: none"> Adults ≥ 18 years old Severe TBI (AIS Head 3,4, or 5) 35 Level 1 & 2 Trauma Centers January 2017–June 2022 Propensity score matching 	<ul style="list-style-type: none"> ≤ 48 hours vs. > 48 hours Low Molecular Weight Heparin vs. Heparin vs. None 	<ul style="list-style-type: none"> LMWH ≤ 48 hrs Lowest mortality (4.1%) ↑ Favorable Discharge (79%) LMWH vs Heparin (≤ 48 hrs) ↓ VTE rate ↓ Mortality, Neurosurgical OR ≤ 48 vs > 48 hrs (LMWH) ↓ VTE rate ↓ Mortality ↓ Neurosurgical Intervention

Johnson PL et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004383
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ASSOCIATION OF TIMING AND AGENT FOR VTE PROPHYLAXIS IN PATIENTS WITH SEVERE TRAUMATIC BRAIN INJURY ON MORTALITY AND NEUROSURGICAL INTERVENTION
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/ASSOCIATION_OF_TIMING_AND_AGENT_FOR_VENOUS.15.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/association_of_timing_and_agent_for_venous.15.aspx)



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BEST OF BASIC SCIENCES ARTICLE

Endothelial Dysfunction Is Dampened by Early Administration of Fresh Frozen Plasma in a Rodent Burn Shock Model

Problem	Methods	Conclusion
When should plasma-inclusive resuscitation after large burn injury be initiated to alleviate endothelial dysfunction?	<ul style="list-style-type: none"> 40% TBSA Burn Injury LR+Early FFP: Immediate LR+Late FFP: Rescue Serial Blood Draws SDC-1 Plasma Levels Vascular Leakage Measured in End Organs 	<ul style="list-style-type: none"> Early administration of FFP leads to dampened endothelial dysfunction compared to late administration. Less SDC-1 shedding Less lung and spleen vascular leakage More SDC-1 shedding More lung and spleen vascular leakage

Kelly EJ et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004373
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ENDOTHELIAL DYSFUNCTION IS DAMPENED BY EARLY ADMINISTRATION OF FRESH FROZEN PLASMA IN A RODENT BURN SHOCK MODEL
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/ENDOTHELIAL_DYSFUNCTION_IS_DAMPENED_BY_EARLY.6.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/endothelial_dysfunction_is_dampened_by_early.6.aspx)

BEST OF EGGS ARTICLE

Timing to Surgery in Elderly Patients with Small Bowel Obstruction: An Insight on Frailty

Background	30-Day Mortality, Elderly Non-frail	30-day Mortality, Elderly Frail
<ul style="list-style-type: none"> The impact of frailty and advanced age on operative outcomes of small bowel obstruction (SBO) is uncertain. Explored the optimal timing to operation in elderly and/or frail patients. 	<p>Elderly non-frail: increased mortality risk after 2 days of postponed SBO surgery. Operate within 2 days if initial gastrografin challenge fails.</p>	<p>Elderly frail: increased risk of mortality after 4 days of postpone in SBO surgery. Operate before 4 days if initial gastrografin challenge fails.</p>

Li R et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004410
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TIMING TO SURGERY IN ELDERLY PATIENTS WITH SMALL BOWEL OBSTRUCTION: AN INSIGHT ON FRAILTY
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/TIMING_TO_SURGERY_IN_ELDERLY_PATIENTS_WITH_SMALL.18.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/timing_to_surgery_in_elderly_patients_with_small_bowel_obstruction.18.aspx)

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Ketamine for Acute Pain After Trauma (KAPT) Trial

Adult trauma patients admitted to the IMU or ICU.




Randomized to sub-dissociative ketamine infusion + usual care vs. usual care alone.

Ketamine group had 19% reduction in IMME per day and 20% reduction in total MME.



Pain scores similar between groups.

Sub-dissociative ketamine infusions can be used as a safe adjunct to decrease opioid exposure.



Klugh J et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004325
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Whole Blood: Total Blood Product Ratio Impacts Survival in Injured Children

Single-center observational study

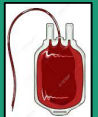
Pediatric recipients of low-titer group O whole blood

Calculated ratio: **Whole blood** / Total transfusion volume

95 severely injured children



Higher WB:TPV ratio independently associated with increased survival.



Consider using LTOWB for pediatric trauma resuscitation when available.

Feeney E et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004362
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KETAMINE FOR ACUTE PAIN AFTER TRAUMA (KAPT): A PRAGMATIC, RANDOMIZED CLINICAL TRIAL

HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/KETAMINE_FOR_ACUTE_PAIN_AFTER_TRAUMA_A_PRAGMATIC,,5.ASPX

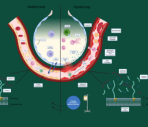
WHOLE BLOOD: TOTAL BLOOD PRODUCT RATIO IMPACTS SURVIVAL IN INJURED CHILDREN

HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/WHOLE_BLOOD_TOTAL_BLOOD_PRODUCT_RATIO_IMPACTS.9.ASPX

Endothelial Dysfunction Is Dampened by Early Administration of Fresh Frozen Plasma in a Rodent Burn Shock Model

Problem

When should plasma-inclusive resuscitation after large burn injury be initiated to alleviate endothelial dysfunction?



Methods

40% TBSA Burn Injury

LR+Early FFP: Immediate LR+Late FFP: Rescue

Serial Blood Draws

SDC-1 Plasma Levels

Vascular Leakage Measured in End Organs

Conclusion

Early administration of FFP leads to dampened endothelial dysfunction compared to late administration.

Less SDC-1 shedding
Less lung and spleen vascular leakage

More SDC-1 shedding
More lung and spleen vascular leakage

Kelly EJ et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004375
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ENDOTHELIAL DYSFUNCTION IS DAMPENED BY EARLY ADMINISTRATION OF FRESH FROZEN PLASMA IN A RODENT BURN SHOCK MODEL

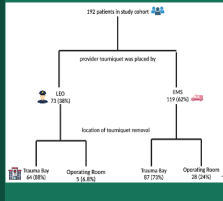
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Comparison of Law Enforcement Officer versus Emergency Medical Services Placed Tourniquets

BACKGROUND

- Tourniquet (TQ) use for hemorrhage control is a skill used by many law enforcement officer (LEO) and all EMS providers.
- There are no studies comparing TQ use by LEO versus EMS.
- Hypothesis: TQs are over-utilized by LEO.

METHODS AND RESULTS



CONCLUSION

- LEO are more likely than EMS to place TQs without the presence of an injury to a named vessel or severe bleeding.
- Improved training for LEO to know when a TQ is needed and allowing EMS to remove TQs that may not be necessary may lower the over-triage rate of these patients to trauma centers.

Shukla D et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004349
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COMPARISON OF LAW ENFORCEMENT OFFICER VERSUS EMERGENCY MEDICAL SERVICES PLACED TOURNIQUETS

HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/COMPARISON_OF_LAW_ENFORCEMENT_OFFICER_VERSUS.10.ASPX

Characteristics of Firearm Injury by Injury Intent: The Need for Tailored Interventions

Data Collected

- Multicenter Cohort Study
- State Firearm Laws
- Community Distress Measures

Objective: Are there patient differences by firearm injury intent?

Injury Intent

- Assault
- Self-inflicted
- Unintentional
- Law Enforcement


↑ Poverty Rates

↑ Mental Illness

↑ Mental Illness

↑ Mental Illness

Reducing firearm injury requires a multifaceted approach by injury intent.



Kirkendall SD et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004344
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CHARACTERISTICS OF FIREARM INJURY BY INJURY INTENT: THE NEED FOR TAILORED INTERVENTIONS

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Plasma Proteomics Profile-Based Comparison of Torso Versus Brain Injury: A Prospective Cohort Study

Objectives

- Comparing torso and TBI by proteomic analysis
- Derivation of endotypes by significant proteins

Methods

Proteomics (Olink Explore 3072*)

Collect blood within one hour of injury

Analysis of approximately 3,000 types of proteins

Design: Prospective cohort study

Patients: Blunt trauma patients (age ≥18 years)

Definitions: Torso trauma: Chest AIS ≥2 and/or Abdomen AIS score≥2 with no Head AIS score≥2; TBI: Head AIS score≥2 was the main trauma; Control: Without head or torso trauma AIS score≥2

Results

- Torso trauma: Up-regulated: 22 proteins; Down-regulated: 4 proteins
- TBI: Up-regulated: 38 proteins; Down-regulated: 30 proteins
- No overlapping proteins in torso trauma and TBI
- Five distinct endotypes were derived using significantly altered proteins


Tachino J et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004356
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PLASMA PROTEOMICS PROFILE-BASED COMPARISON OF TORSO VERSUS BRAIN INJURY: A PROSPECTIVE COHORT STUDY

HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/PLASMA_PROTEOMICS_PROFILE_BASED_COMPARISON_OF.11.ASPX

4 Factor Prothrombin Complex Concentrate is Non-Inferior to Andexanet Alfa for the Reversal of Factor Xa Inhibitors: An EAST Multicenter Trial

Injured trauma patients receiving apixiban or rivaroxaban



Multicenter, retrospective

263 patients

Transfusion Rate

AA: 23.7%
PCC: 19.5%

Units Transfused

PCC increases amount of RBC transfusion by 0.123 units.

PCC non-inferior to AA for RBC transfusion need.

Patients given PCC had lower ICU LOS.

Cost of AA high.

Prospective studies needed.

Estroff J et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004345
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4-FACTOR PROTHROMBIN COMPLEX CONCENTRATE IS NOT INFERIOR TO ANDEXANET ALFA FOR THE REVERSAL OF ORAL FACTOR XA INHIBITORS: AN EAST MULTICENTER STUDY

HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/FOUR_FACTOR_PROTHROMBIN_COMPLEX_CONCENTRATE_IS_NOT.8.ASPX

Research Priorities in Tranexamic Acid after Trauma: Secondary Analysis of the National Trauma Research Action Plan (NTRAP)

Background


NTRAP convened 11 different multidisciplinary Delphi panels to identify consensus research questions across the spectrum of injury care.

Aim

Identify TXA-related research questions across all NTRAP panels to guide future research on TXA use in trauma.

Results

73 TXA-Related questions in 7 NTRAP panels.



Future research and funding should focus on answering the questions identified by the NTRAP panels.

Outcomes, patient populations, setting/timing and dosing regimens for TXA in future studies should be carefully considered in the context of these identified questions.

Brito AMP et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004358
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RESEARCH PRIORITIES IN TRANEXAMIC ACID AFTER TRAUMA: SECONDARY ANALYSIS OF THE NATIONAL TRAUMA RESEARCH ACTION PLAN

HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/RESEARCH_PRIORITIES_IN_TRANEXAMIC_ACID_AFTER.12.ASPX

The Effects of Prehospital TXA on Mortality and Neurologic Outcomes in Patients with Traumatic Intracranial Hemorrhage: A Subgroup Analysis from the Prehospital Tranexamic Acid for Traumatic Brain Injury Trial

Prespecified secondary analysis of patients with intracranial hemorrhage enrolled in the prehospital TXA for TBI trial.

Placebo n=171
1g bolus/1g infusion n=174
2g bolus n=196

Regression models adjusted for site, age, sex, penetrating injury, out-of-hospital GCS score, ISS, AIS head.

Examined mortality and long-term neurologic outcome.

2g TXA bolus associated with:

- Lower mortality rate
- 8.5 percentage points vs placebo
- 10.2 percentage points vs 1g/1g
- Better neurological recovery
- Lower median Disability Rating Scale score at 6mo
- No difference in intracranial hemorrhage progression

Rowell SE et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004354

The Journal of Trauma and Acute Care Surgery

THE EFFECTS OF PREHOSPITAL TXA ON MORTALITY AND NEUROLOGIC OUTCOMES IN PATIENTS WITH TRAUMATIC INTRACRANIAL HEMORRHAGE: A SUBGROUP ANALYSIS FROM THE PREHOSPITAL TXA FOR TBI TRIAL

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/THE_EFFECTS_OF_PREHOSPITAL_TXA_ON_MORTALITY_AND_NEUROLOGIC_OUTCOMES_IN_PATIENTS_WITH_TRAUMATIC_INTRACRANIAL_HEMORRHAGE_A_SUBGROUP_ANALYSIS_FROM_THE_PREHOSPITAL_TXA_FOR_TBI_TRIAL](https://journals.lww.com/jtrauma/abstract/2024/10000/the_effects_of_prehospital_txa_on_mortality_and_neurologic_outcomes_in_patients_with_traumatic_intracranial_hemorrhage_a_subgroup_analysis_from_the_prehospital_txa_for_tbi_trial)

Harnessing eCIRP by PS-OME miR130: A Promising Shield Against Hemorrhage-Induced Lung Injury

Hemorrhagic shock causes systemic inflammation and leads to organ injury and mortality.

miRNA 130b-3p binds to eCIRP and inhibits systemic inflammation.

miRNA 130b-3p was modified to enhance its stability and thus termed PS-OME miR130.

30 mm Hg for 90 min/ resuscitation

4 h after resuscitation

PS-OME miR130 is a novel therapeutic to decrease HS-induced inflammation and lung injury.

Blood → Organ Injury Indicators
Inflammatory cytokine

Lungs → Inflammation
Injury
Neutrophil infiltration
Apoptosis

Hu Z et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004361

The Journal of Trauma and Acute Care Surgery

HARNESSING ECIRP BY PS-OME MIR130: A PROMISING SHIELD AGAINST HEMORRHAGE-INDUCED LUNG INJURY

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/HARNESSING_EXTRACELLULAR_COLD_INDUCIBLE_RNA.14.ASPX](https://journals.lww.com/jtrauma/abstract/2024/10000/harnessing_extracellular_cold_inducibile_rna)

Association of Timing and Agent for VTE Prophylaxis in Patients with Severe Traumatic Brain Injury on VTE, Mortality, Neurosurgical Intervention, and Discharge Disposition

Population & Methods

- Adults ≥ 18 years old
- Severe TBI (AIS Head 3,4, or 5)
- 35 Level 1 & 2 Trauma Centers
- January 2017–June 2022
- Propensity score matching

VTE Prophylaxis

≤ 48 hours vs. > 48 hours

Low Molecular Weight Heparin vs. Heparin vs. None

Results

LMWH ≤ 48 hrs

- Lowest mortality (4.1%)
- ↑ Favorable Discharge (79%)

LMWH vs Heparin (≤ 48 hrs)

- ↑ VTE rate
- ↑ Mortality, Neurosurgical OR

≤ 48 vs > 48 hrs (LMWH)

- ↓ VTE rate
- ↓ Mortality
- ↓ Neurosurgical Intervention

Johnson PL et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004383

The Journal of Trauma and Acute Care Surgery

ASSOCIATION OF TIMING AND AGENT FOR VTE PROPHYLAXIS IN PATIENTS WITH SEVERE TRAUMATIC BRAIN INJURY ON MORTALITY AND NEUROSURGICAL INTERVENTION

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Gun Violence Revictimization in New York State: What Increases the Risk of Being Shot Again?

Survivors of gun violence have a high risk of "revictimization"—being shot again, but risk factors for revictimization are unknown.

Identified victims of gun violence in the 2005–2020 New York state (NYS) hospital discharge database

38,974 total gun violence victims

Single n = 36,731
Revictimization n = 2,243

65% Black
75% Black

98% Urban
99% Urban

SDI 82.1
SDI 84.8

Community-level interventions over individual-level interventions for prevention of gun violence revictimization are needed

Underdeveloped communities are in need of reinvestment

Dependent Variables: Demographics, Environment, Social Deprivation Index (SDI)

Depression (red = high) vs # incidents (intensity)

L'Huillier JC et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004370

The Journal of Trauma and Acute Care Surgery

GUN VIOLENCE REVICTIMIZATION IN NEW YORK STATE: WHAT INCREASES THE RISK OF BEING SHOT AGAIN?

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/GUN_VIOLENCE_REVICTIMIZATION_IN_NEW_YORK_STATE.16.ASPX](https://journals.lww.com/jtrauma/abstract/2024/10000/gun_violence_revictimization_in_new_york_state)

Acute Colonic Pseudo-Obstruction in Polytrauma Patients

Case control study to establish risk factors of acute colonic pseudo-obstruction (ACPO) in polytrauma patients.

Key Variables

- Shock Index (SI)
- Injury Severity Score (ISS)
- Retropertitoneal bleeding (RPB)
- Pelvic fractures
- Lower spine fractures (T10–S5)
- Opioid administration
- Cecal diameter

Key Findings

- Significant association found between ACPO and SI > 0.9, ISS > 18, RPB, pelvic fracture and opioid administration.
- A cecal diameter of ≥ 12 cm was a significant predictor for ischemia or perforation.

Johnny CS et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004392

The Journal of Trauma and Acute Care Surgery

ACUTE COLONIC PSEUDO-OBSTRUCTION IN POLYTRAUMA PATIENTS

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/ACUTE_COLONIC_PSEUDO_OBSTRUCTION_IN_POLYTRAUMA.17.ASPX](https://journals.lww.com/jtrauma/abstract/2024/10000/acute_colonic_pseudo-obstruction_in_polytrauma)

Timing to Surgery in Elderly Patients with Small Bowel Obstruction: An Insight on Frailty

Background

- The impact of frailty and advanced age on operative outcomes of small bowel obstruction (SBO) is uncertain.
- Explored the optimal timing to operation in elderly and/or frail patients.

30-Day Mortality, Elderly Non-Frail

30-day Mortality, Elderly Frail

Elderly non-frail: increased mortality risk after 2 days of postponed SBO surgery. Operate within 2 days if initial gastrografin challenge fails.

Elderly frail: increased risk of mortality after 4 days of postponed SBO surgery. Operate before 4 days if initial gastrografin challenge fails.

Li R et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004410

The Journal of Trauma and Acute Care Surgery

TIMING TO SURGERY IN ELDERLY PATIENTS WITH SMALL BOWEL OBSTRUCTION: AN INSIGHT ON FRAILTY

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/TIMING_TO_SURGERY_IN_ELDERLY_PATIENTS_WITH_SMALL_BOWEL_OBSTRUCTION:AN_INSIGHT_ON_FRAILTY](https://journals.lww.com/jtrauma/fulltext/2024/10000/timing_to_surgery_in_elderly_patients_with_small_bowel_obstruction)

Small versus Large-Bore Thoracostomy for Traumatic Hemothorax: A Systematic Review and Meta-Analysis

Traumatic Hemothorax is common

2,008 articles screened → 11 articles included

1,847 patients

714 SBTT, 1,233 LBTT

Hypothesis: small bore tube thoracostomy (SBTT) (≤14 F) is as effective as large-bore tube thoracostomy (LBTT) (≥20F)

Failure rate =

Mortality =

Complications =

Initial drainage >

Tube days <

SBTT may be as effective as LBTT for the treatment of traumatic HTX

Lyons, N et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004412

The Journal of Trauma and Acute Care Surgery

SMALL VERSUS LARGE-BORE THORACOSTOMY FOR TRAUMATIC HEMOTHORAX: A SYSTEMATIC REVIEW AND META-ANALYSIS

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/SMALL_VERSUS_LARGE_BORE_THORACOSTOMY_FOR_TRAUMATIC.19.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/small-versus-large-bore-thoracostomy-for-traumatic)

Early major fracture care in polytrauma - priorities in the context of concomitant injuries: A Delphi consensus process and systematic review

12,476 articles screened → 73 articles included

Systematic Review and Expert Panel

Timing of fracture fixation in the context of concomitant injuries?

20 Consensus Statements:

- Traumatic Brain Injury (n=5)
- Abdominal Trauma (n=4)
- Thoracic Trauma (n=3)
- Multiple Fractures (n=3)
- Spinal (Cord) Injuries (n=3)
- Vascular Injuries (n=2)

17 international multidisciplinary experts






Pfeifer R and Klingebiel F K-L, et al., *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/JA.0000000000004428

The Journal of Trauma and Acute Care Surgery

EARLY MAJOR FRACTURE CARE IN POLYTRAUMA - PRIORITIES IN THE CONTEXT OF CONCOMITANT INJURIES: A DELPHI CONSENSUS PROCESS AND SYSTEMATIC REVIEW

[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/EARLY_MAJOR_FRACTURE_CARE_IN_POLYTRAUMA_PRIORITIES.20.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/early_major_fracture_care_in_polytrauma_priorities)


Predicting Blood Transfusion Following Traumatic Injury Using Machine Learning Models: A Systematic Review

<p>Accurately predicting the need for blood transfusion following injury can be challenging.</p>  <p>Machine learning can be used to develop accurate prediction models.</p> 	<p>25 machine learning models were identified.</p> <p>8 models have excellent predictive performance.</p> <p>4 models have been externally validated in hospital and pre-hospital settings.</p>  	<p>Machine learning models for blood transfusion prediction in trauma are diverse with promising performance.</p>  <p>Future research must aim to bridge the gap between development and clinical application.</p>
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Oakley W et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004385
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PREDICTING BLOOD TRANSFUSION FOLLOWING TRAUMATIC INJURY USING MACHINE LEARNING MODELS: A SYSTEMATIC REVIEW AND NARRATIVE SYNTHESIS
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/ABSTRACT/2024/10000/PREDICTING_BLOOD_TRANSFUSION_FOLLOWING_TRAUMATIC.21.ASPX](https://journals.lww.com/jtrauma/abstract/2024/10000/predicting_blood_transfusion_following_traumatic.21.aspx)

Beyond Surviving: A Scoping Review of Collaborative Care Models (CCMs) to Inform the Future of Post-Discharge Trauma Care

What We Learned	Knowledge Gaps	Call to Action
<ul style="list-style-type: none"> CCMs may enhance: <ul style="list-style-type: none"> patient engagement patient satisfaction mental health outcomes Impact on functional, social, and occupational outcomes yet to be fully understood Optimal trauma recovery care involves: <ul style="list-style-type: none"> collaborative clinic settings care coordination patient navigation 	<p>Future research on traumatic injury CCMs should determine their:</p> <ul style="list-style-type: none"> target population optimal time points and duration of follow-up optimal outcome measures cost-effectiveness barriers and facilitators for implementation 	<ul style="list-style-type: none"> Through key stakeholder engagement, professional organizations should lead the development of a standardized, cost-effective CCM for post-discharge trauma care. This model should incorporate risk-stratification tools to define the appropriate level of care for each patient. 

Ilkhani S et al. *Journal of Trauma and Acute Care Surgery*. DOI: 10.1097/TA.0000000000004384
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BEYOND SURVIVING: A SCOPING REVIEW OF COLLABORATIVE CARE MODELS TO INFORM THE FUTURE OF POST-DISCHARGE TRAUMA CARE
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NO VISUAL ABSTRACT PROVIDED
DECOMPRESSIVE CRANIECTOMY IN TRAUMA: WHAT YOU NEED TO KNOW
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/DECOMPRESSIVE_CRANIECTOMY_IN_TRAUMA_WHAT_YOU_NEED.2.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/decompressive_craniectomy_in_trauma_what_you_need.2.aspx)

NO VISUAL ABSTRACT PROVIDED
CONTEMPORARY DIAGNOSIS AND MANAGEMENT OF COLORECTAL INJURIES: WHAT YOU NEED TO KNOW
[HTTPS://JOURNALS.LWW.COM/JTRAUMA/FULLTEXT/2024/10000/CONTEMPORARY_DIAGNOSIS_AND_MANAGEMENT_OF.3.ASPX](https://journals.lww.com/jtrauma/fulltext/2024/10000/contemporary_diagnosis_and_management_of.3.aspx)

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NO VISUAL ABSTRACT PROVIDED
TISSUE-RESIDENT MEMORY AND MEMORY T STEM CELL SUBSETS MAY BE IMPORTANT PREDICTORS OF PULMONARY INFECTION AFTER THORACIC INJURY RATHER THAN T CENTRAL MEMORY CELLS
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VALUE IN ACUTE CARE SURGERY, PART 3: DEFINING VALUE IN ACUTE SURGICAL CARE: "IT DEPENDS ON THE PERSPECTIVE."
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