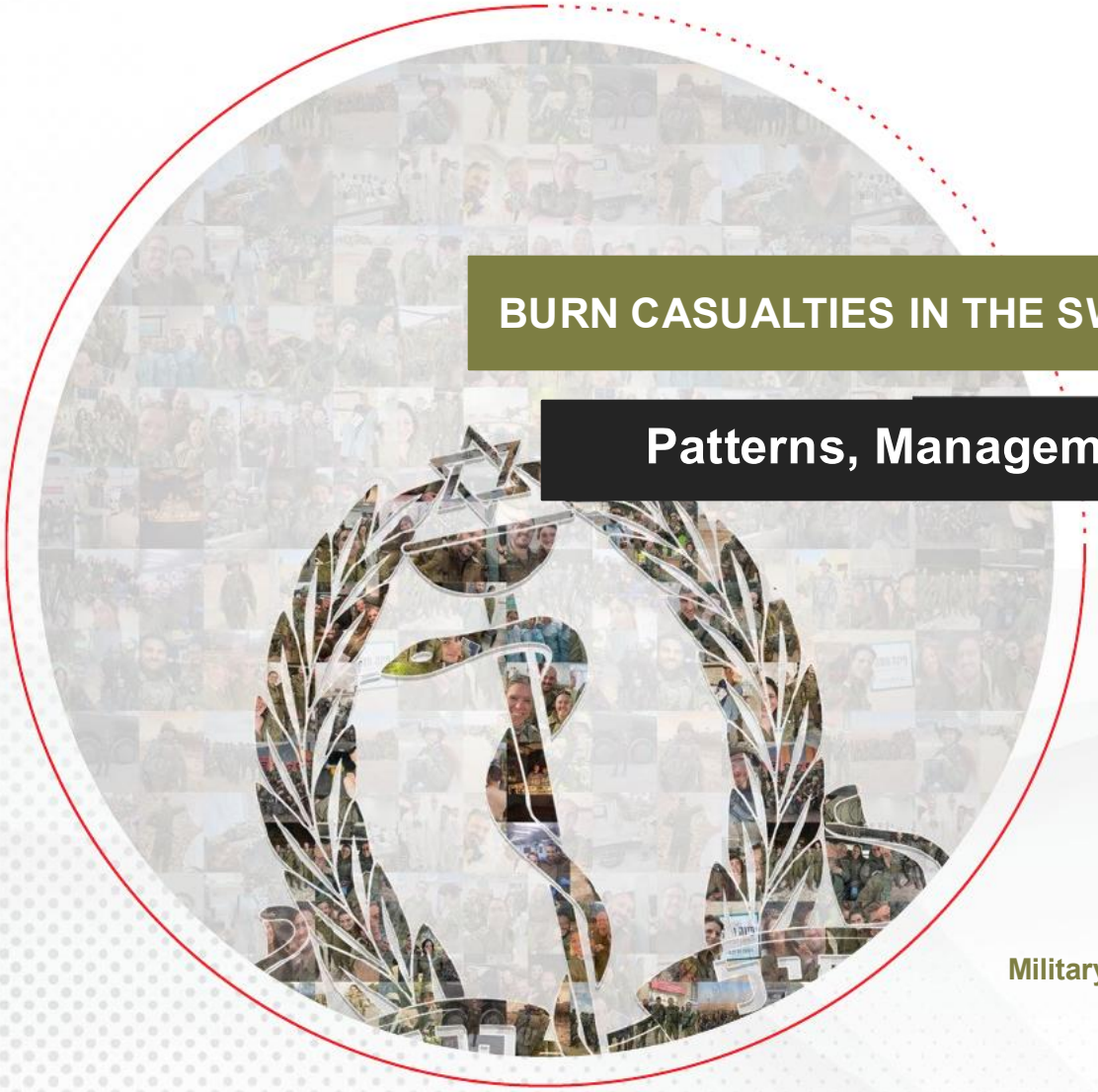

BURN CASUALTIES IN THE SWORDS OF IRON WAR

Patterns, Management, and Outcomes

MHSRS 2026

Mor Rittblat, MD, MPH[1] | Dmitry Kotovich, MD[1] | Stav Sarna Cahan, MD[2] | Alexander Margulis, MD[2] | et al.

Presenter: Daniel Gelman, MD

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At the moment of truth,
IDF MEDICAL CORPS.

DISCLOSURES

Financial relationships

Presenter and co-authors report no relevant financial relationships with ineligible companies related to this educational content.

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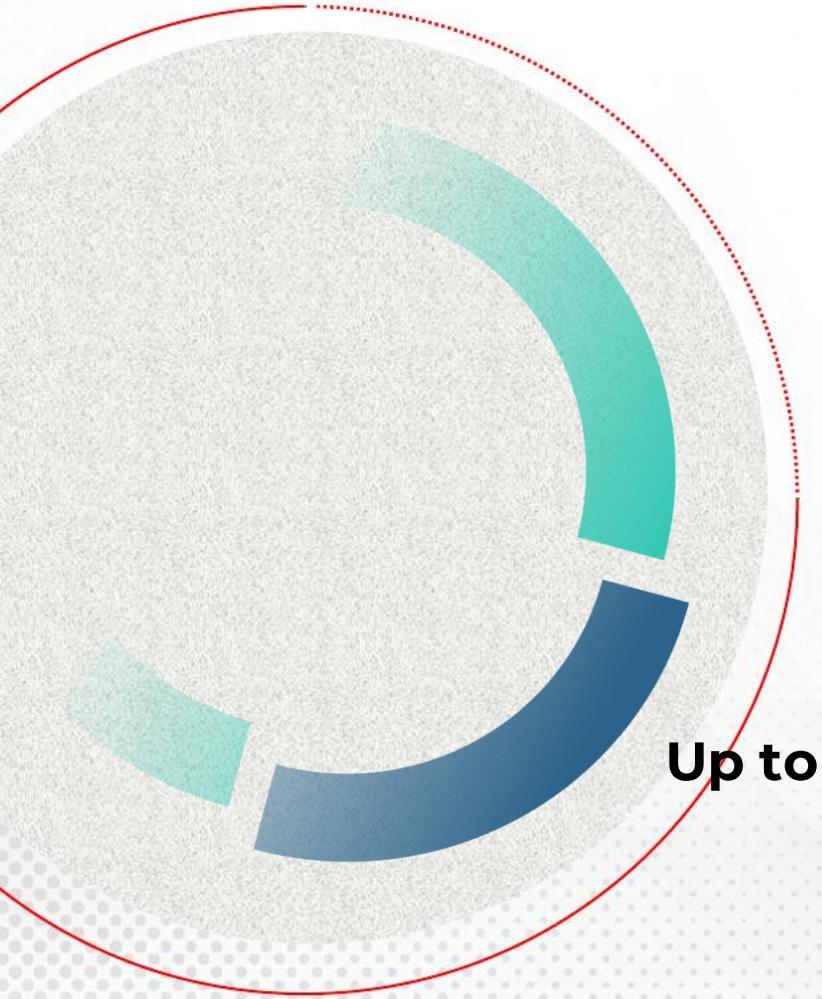
This study was performed as part of the IDF Medical Corps effort to improve combat casualty care. No commercial product, device, or company is promoted in this presentation.

Content standard

Generic terminology is used throughout. No product logos, trade names, or manufacturer screenshots are included.

CLINICAL CONTEXT



Modern combat burns are often part of combined blast trauma rather than isolated thermal exposure

High - Energy Munitions

Protective Gear Improvement

Evacuation Time Improvement

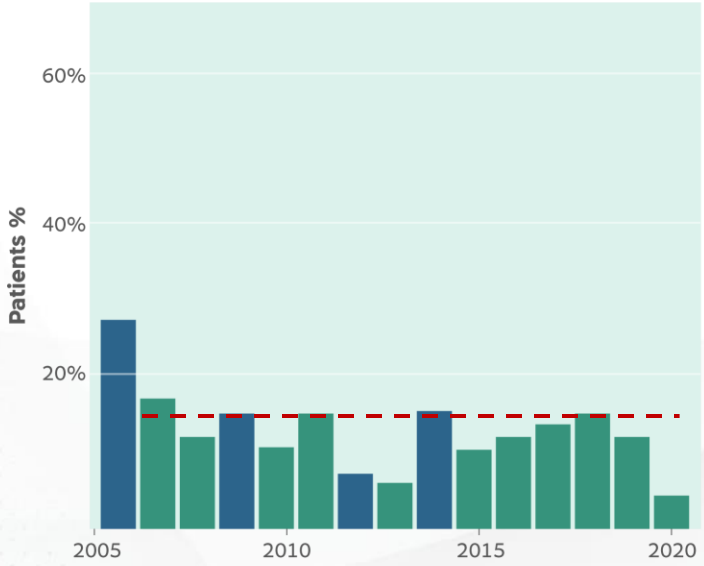
Multiple & Penetrating Injuries

Up to 20% of Casualties – Burn Injury

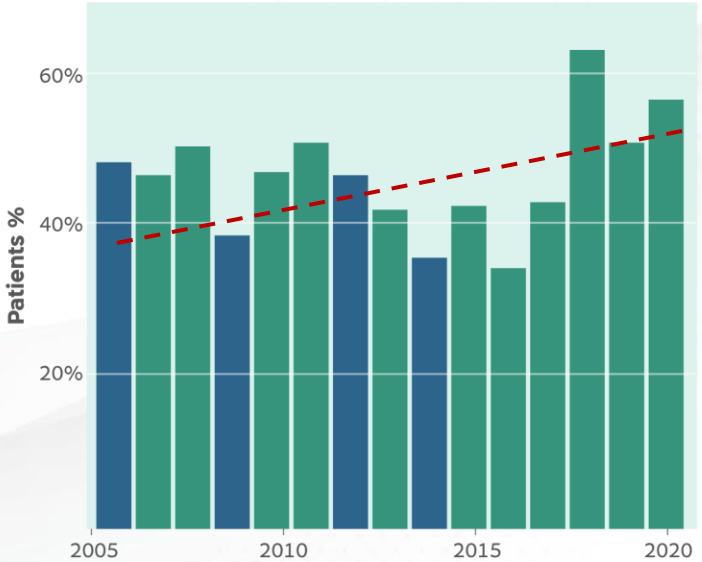
- Face
- Extremities

HISTORICAL BASELINE

Earlier Israeli conflicts show persistent burn burden and rising severe-burn proportion



Any burn among all patients



Severe burns among burn patients

The Swords of Iron War adds a contemporary pattern of urban combat and explosive-related injuries to this historical sequence.

Severe Burn = Above 10% disability score

RESEARCH AIM

Analyze burn injury patterns, treatment, and outcomes during the Swords of Iron War

Epidemiology	Acute prehospital care	Hospital care and Recovery

STUDY METHODOLOGY

IDF Trauma Registry

Point-of-injury data, prehospital physiology, interventions, medications, and evacuation variables.

Israel National Trauma Registry

Hospital diagnoses, injury severity, operations, ICU admission, length of stay, and disposition.

Cohort window

October 2023 - August 2025, (exclusions for death on scene, minor injuries, or missing records).

Analytic objective

Create a clinically usable picture of burn-system burden across evacuation, acute care, surgery, and rehabilitation.

DEFINITIONS

Burn-only / Isolated burns

Burn injury with **no major associated injury**, or other AIS 1-2 injuries only.

Burn + major trauma

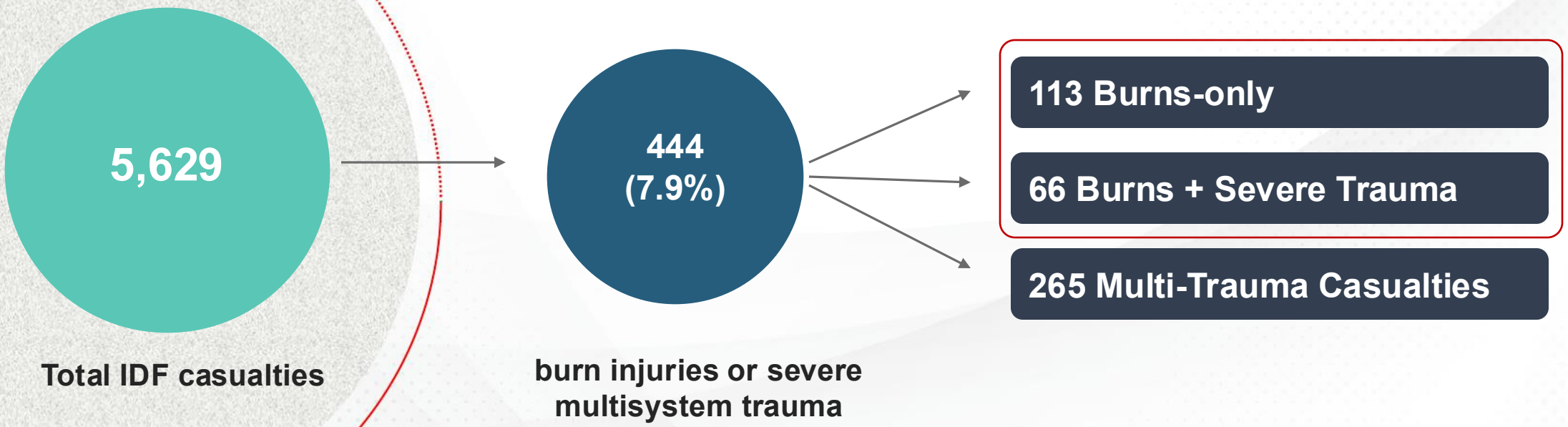
Burn injury **with associated AIS 3+ non-burn trauma**. This group reflects combined thermal-blast.

Major trauma without burns

Casualties **without burns** who sustained **severe multisystem trauma** (AIS score ≥3 in at least two body regions)

OPERATIONAL SCALE

Burns account for a meaningful component of IDF casualty care

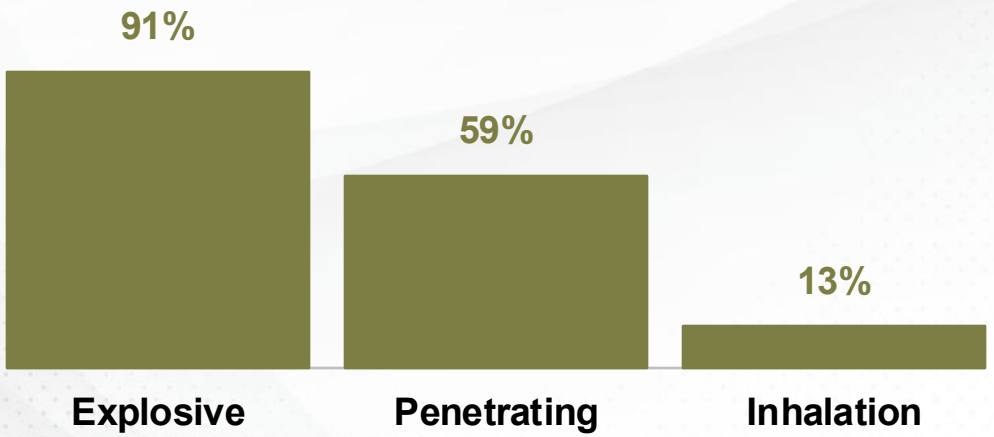


COHORT PROFILE

Burn casualties in the integrated retrospective analysis, Oct 2023-Aug 2025

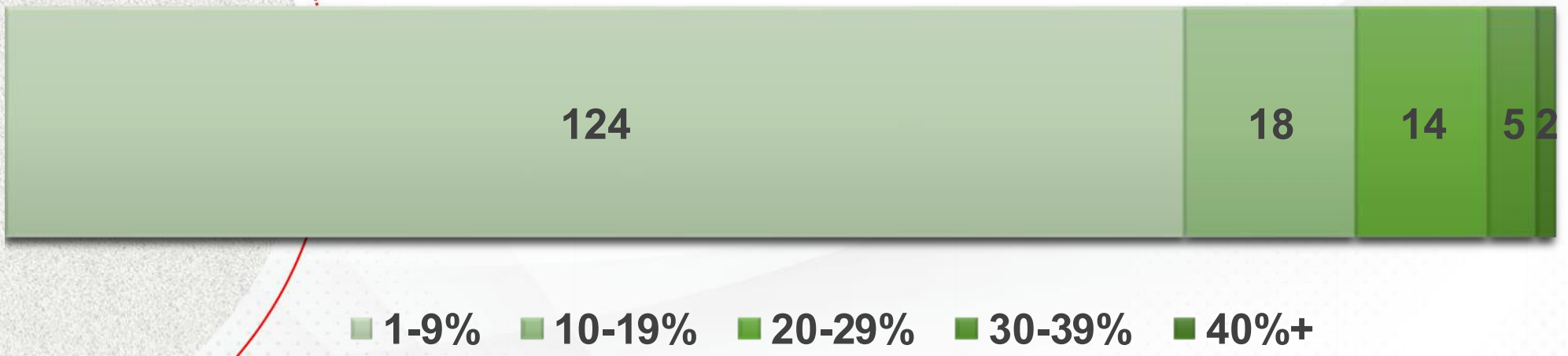
179 **Total burn patients**	**100%** **male**	**64%** **reserve**	**23%** **conscript**

Injury mechanism and complexity

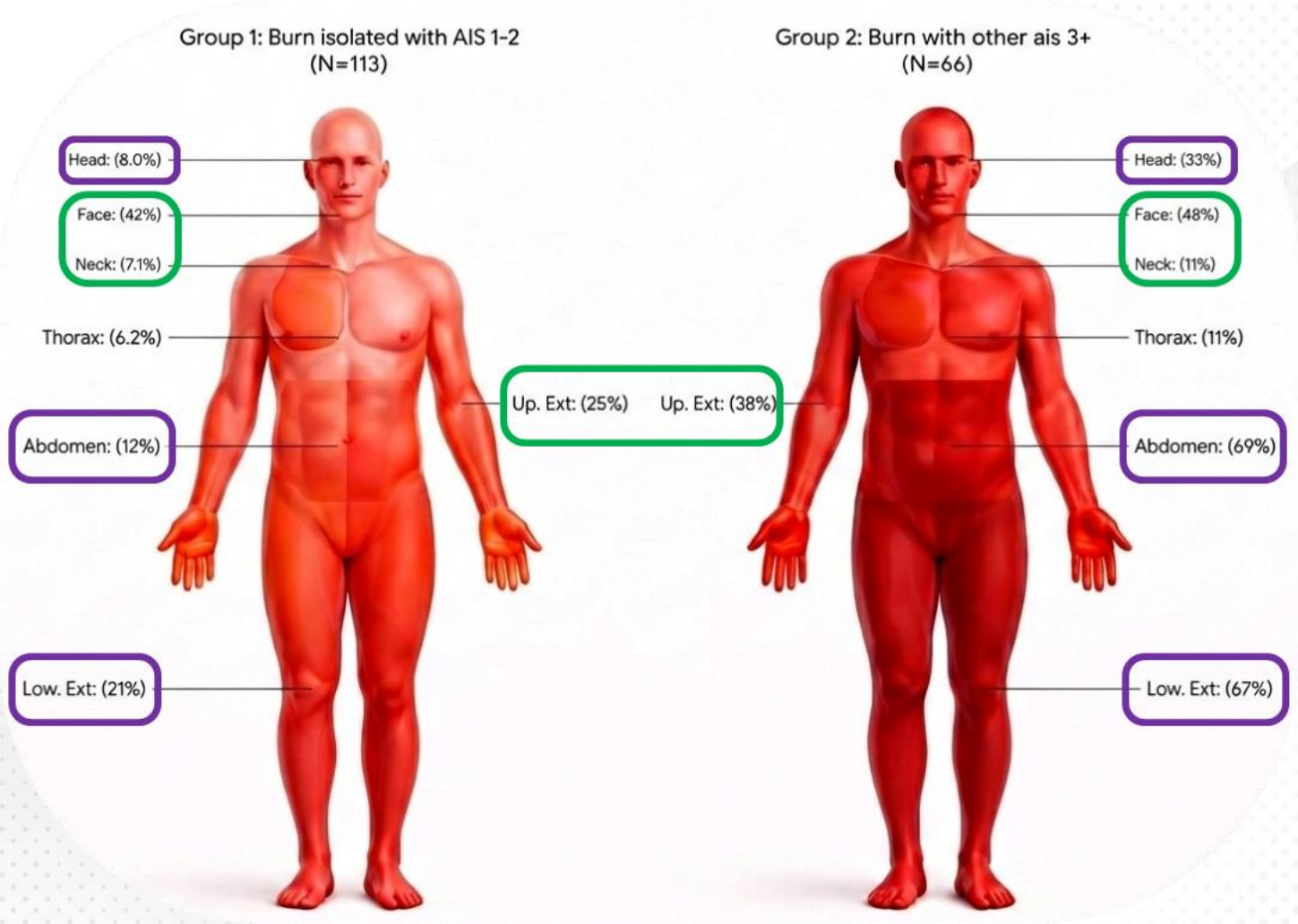


TBSA DISTRIBUTION

TBSA distribution was similar between groups (Isolated burns / Burns with Major trauma)



ANATOMICAL DISTRIBUTION



PREHOSPITAL TREATMENT

Oral transmucosal fentanyl	IV ketamine	Tourniquet	Whole blood
51.3% - isolated burns 44% - burns + trauma	35.4% - isolated burns 56% - burns + trauma	7% - isolated burns 47% - burns + trauma	4% - isolated burns 32% - burns + trauma
VS 33% for major trauma (without burns)	VS 46% for major trauma (without burns)	VS 46% for major trauma (without burns)	VS 49% for major trauma (without burns)

HOSPITAL CLINICAL BURDEN

Burn casualties generated substantial ICU, operative, and rehabilitation demand

ICU admission	ER to OR	LOS 7+ days	Rehabilitation	Death
34% - isolated burns 77% - burns + trauma	13% - isolated burns 67% - burns + trauma	43% - isolated burns 83% - burns + trauma	38% - isolated burns 73% - burns + trauma	none - isolated burns 8% - burns + trauma
VS 78% for major trauma (without burns)	VS 73% for major trauma (without burns)	VS 77% for major trauma (without burns)	VS 71% for major trauma (without burns)	VS 15% for major trauma (without burns)

SURGICAL PROCEDURES

Treatment intensity differed between burn + trauma and isolated burn groups

	Burn + trauma (66)	Isolated burns (113)
Initial wound management	66 (100%)	37 (32.7%)
Definitive wound coverage / reconstruction	31 (47%)	19 (16.8%)

ISOLATED BURNS ARE NOT MINOR INJURIES

Absence of major trauma does not eliminate burn-specific morbidity

34% **ICU signal**	**13%** **surgical need**	**38%** **Rehabilitation**

OPERATIONAL IMPLICATIONS

1. Trigger early airway review

Face burns and blast exposure should prompt airway-risk escalation **independent of TBSA.**

2. Treat pain aggressively

Analgesia is a casualty-stabilization intervention, not a comfort-only measure.

3. Preserve burn OR capacity

Direct ED-to-OR burden requires coordinated burn and trauma operating-room planning.

4. Plan for Rehabilitation

Rehabilitation demand approximates acute-care demand and should be tracked as a system endpoint.

5. Train for mixed injury

Burns should be taught as blast-trauma presentations with burn-specific needs.

CONCLUSIONS

Thank you!

Take-home message

- **Explosive mechanisms dominate** and **frequently involve exposed regions** such as the face and extremities.
- TBSA remains important, but triage must also prioritize location, inhalation risk, pain, and **associated trauma**.
- Combat burns require coordinated **trauma, burn, and rehabilitation** systems