

SEPTIC ARTHRITIS OUTCOMES: ASA OUTPERFORMS BIOMARKERS IN PREDICTING MORTALITY

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Introduction

- **Septic arthritis (SA)** remains a life-threatening condition with substantial mortality.
- Inflammatory markers are widely used clinically, but their prognostic value remains uncertain.

Aim: Evaluate mortality and identify predictors of adverse outcomes — focusing on clinical vs laboratory parameters.

Methods

- Retrospective, single-centre study.
- All patients undergoing surgery for SA, 2019–2025.
- Outcomes: in-hospital and 1-year mortality.
- Statistical analysis of associations with mortality.
- Data collected:

- Demographics;
- ASA classification;
- Comorbidities;
- Affected joint;
- Hospital stay.

- Laboratory parameters — white blood cell count, C-reactive protein;
- Synovial fluid analysis;
- Microbiology.

Results

N=49
Patients with orthopaedic infection

60.7 years
Mean age

55.1%
Male

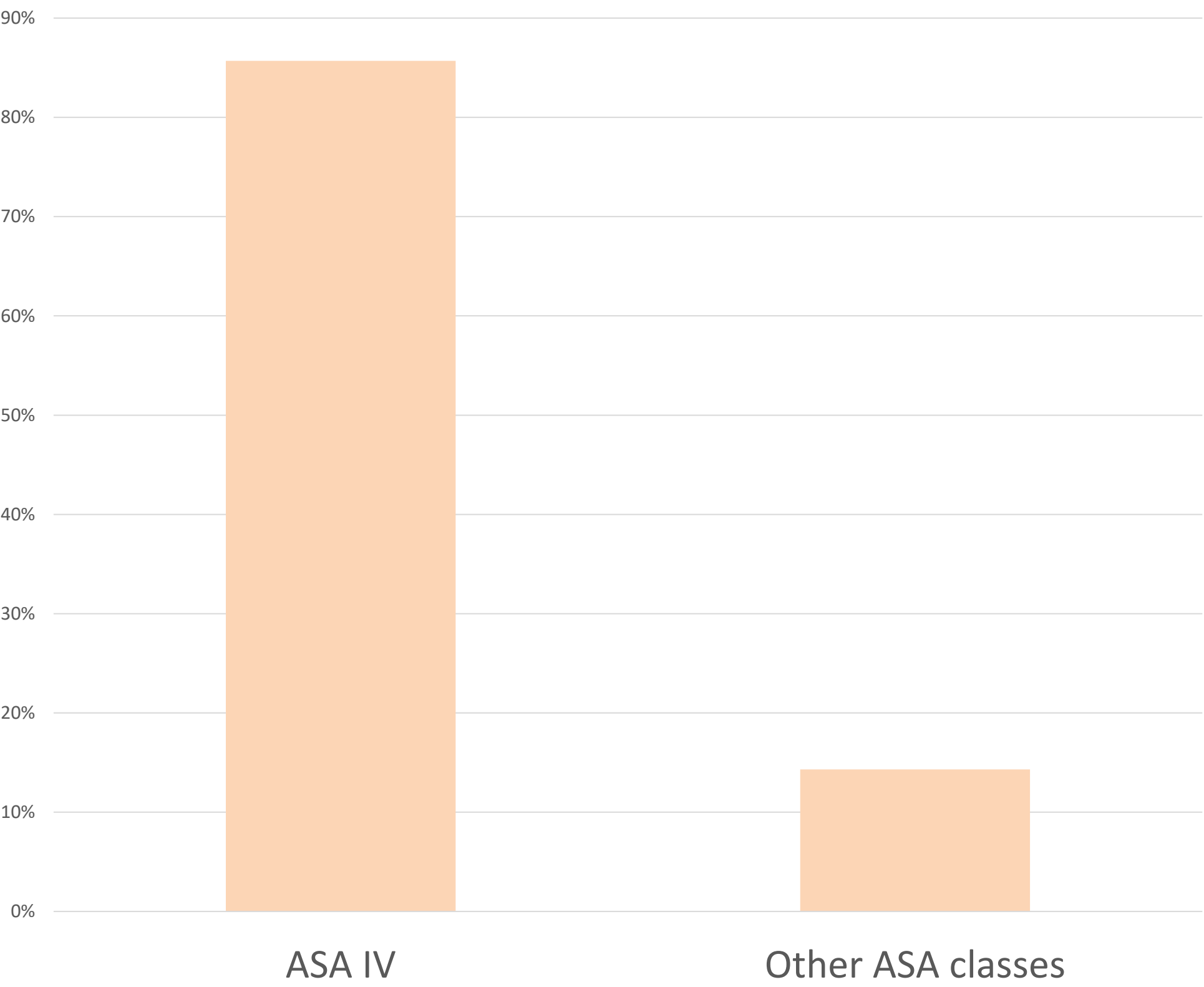
75.5%
Knee involvement

14.3%
In-hospital mortality (n=7)

9.5%
1-year mortality (n=4)

ASA Classification

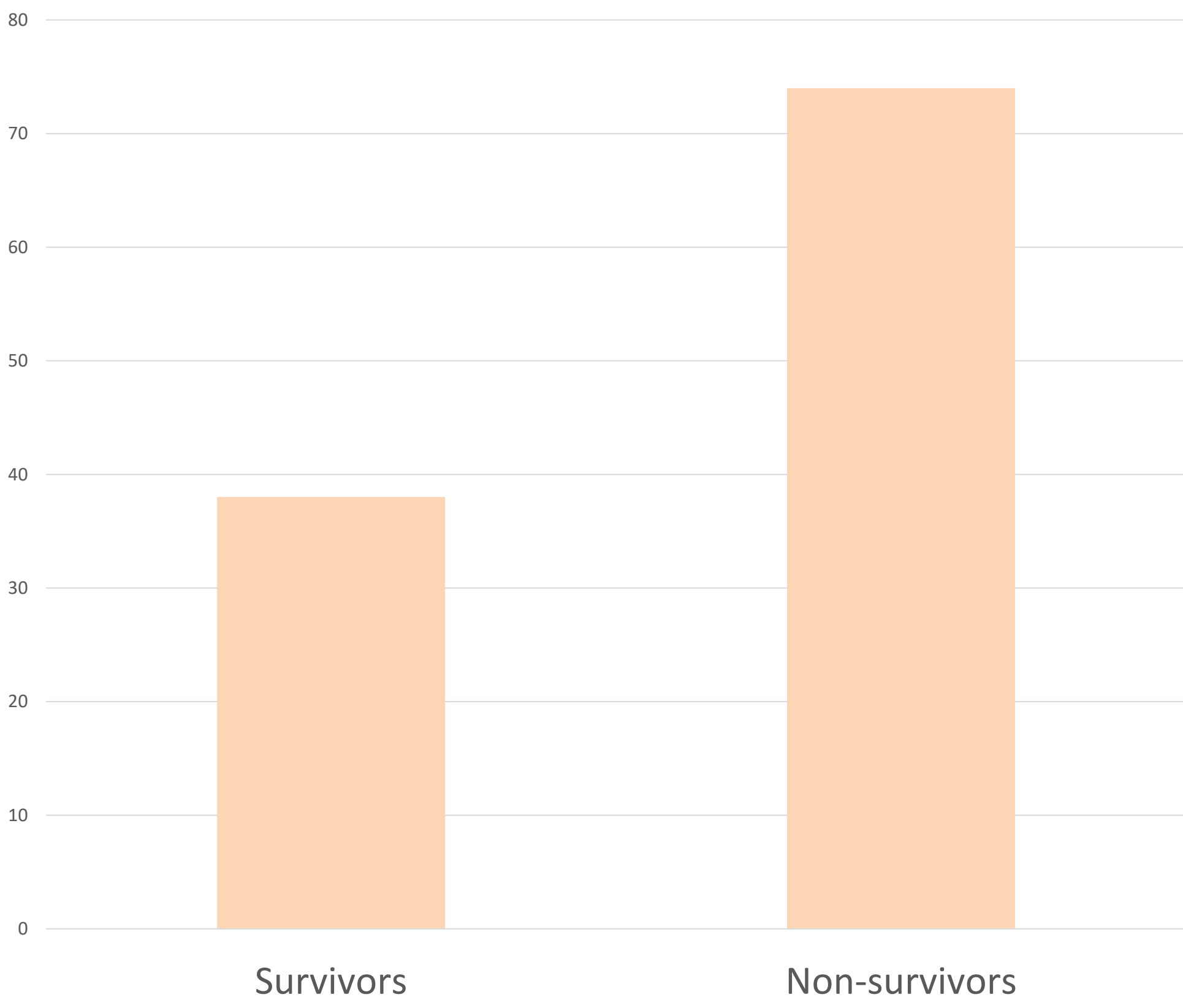
In-hospital mortality by ASA classification



85.7% of in-hospital deaths occurred in patients classified as ASA IV (p=0.001).

Hospital stay

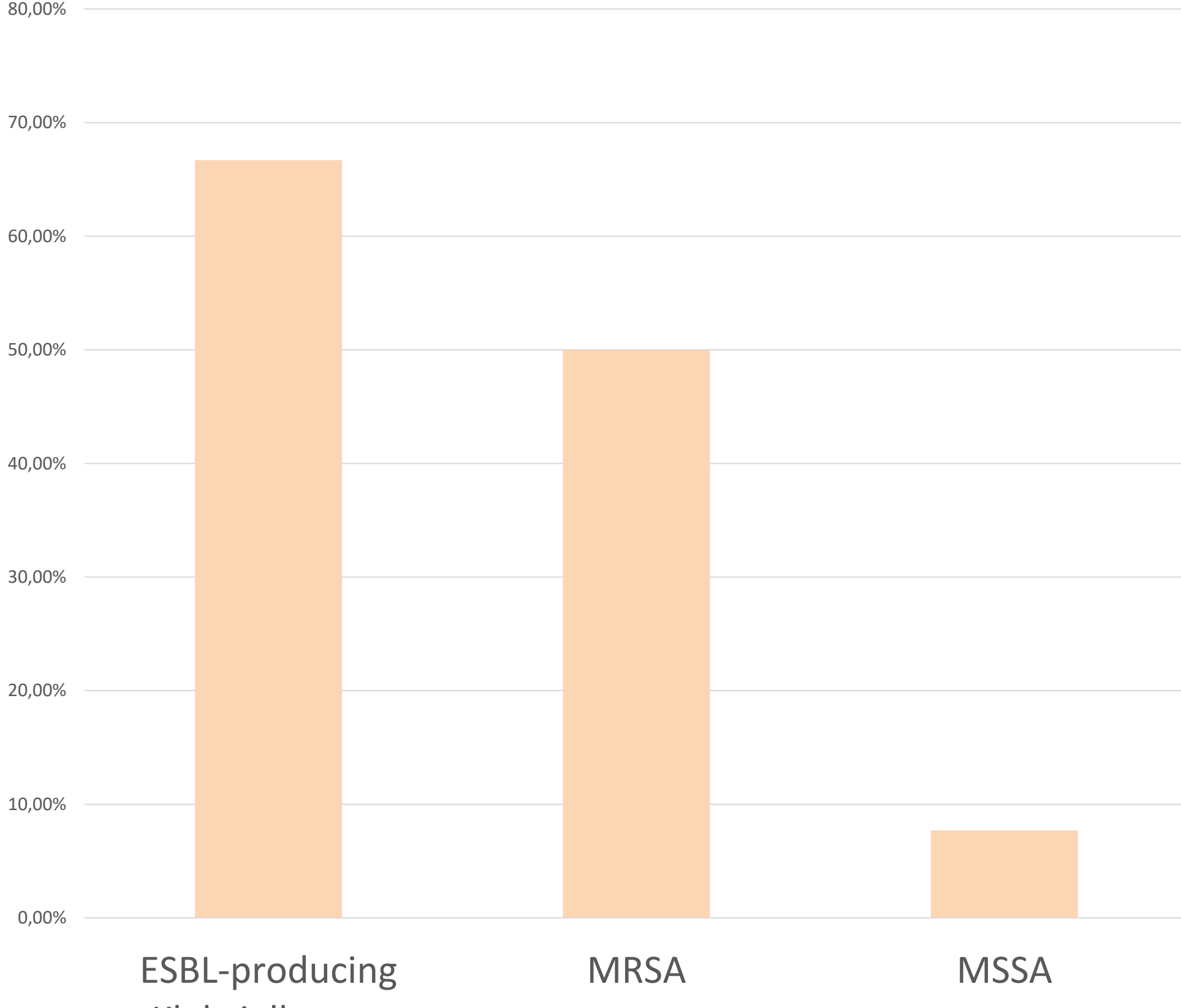
Length of hospital stay by survival status



85.7% of Patients who died had a significantly longer hospital stay (74 vs 38 days; p=0.026).

Microbiology

Mortality according to microbiological isolate



Mortality was numerically higher in ESBL-producing Klebsiella spp. and MRSA infections and lower in MSSA infection.

ASA IV: strongest predictor of mortality

1.9× longer hospital stay

Not statistically significant

Predicted mortality

Strong association

ASA IV

p = 0.001

Immunosuppression

p = 0.006

Hospital stay

p = 0.026

No association found

Laboratory & demographic markers

Age
C-Reactive Protein
Synovial differential

Leukocyte count
Synovial WBC count
Culture sterility

Conclusions

Septic arthritis carries significant mortality, particularly in patients with high ASA classification. **ASA IV status outperforms traditional inflammatory biomarkers in predicting in-hospital mortality**, underscoring the limited prognostic value of CRP and leukocyte counts. **Early risk stratification based on global patient status rather than laboratory parameters may improve clinical decision-making**. Multidrug-resistant pathogens may further increase risk and warrant close monitoring.

Literature

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