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# Optimising VA-ECMO care

sights from cardiac center without on-site cardiovascular surgeon

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## Declaration of conflict of interest

I herewith declare that concerning the topic of the presentation, I have  
no conflict of interests



# VA-ECMO program University Hospital Brno

**Established:** 2020

**Location:** Internal and Cardiology  
Department, University Hospital Brno

**Team:** Multidisciplinary team of  
cardiologists, intensivists, perfusionists, and  
nurses.

**Availability:** 24/7 emergency service  
(not a primary ECPR center)



# VA-ECMO program University Hospital Brno

Femoral-femoral approach + distal protection

Access to vasculature by interventional cardiologist

Care managed by CCU staff

Add-on of vascular surgery and interventional radiology

**Two** VA-ECMO Available



# Insights from cardiac center without on-site cardiovascular surgery

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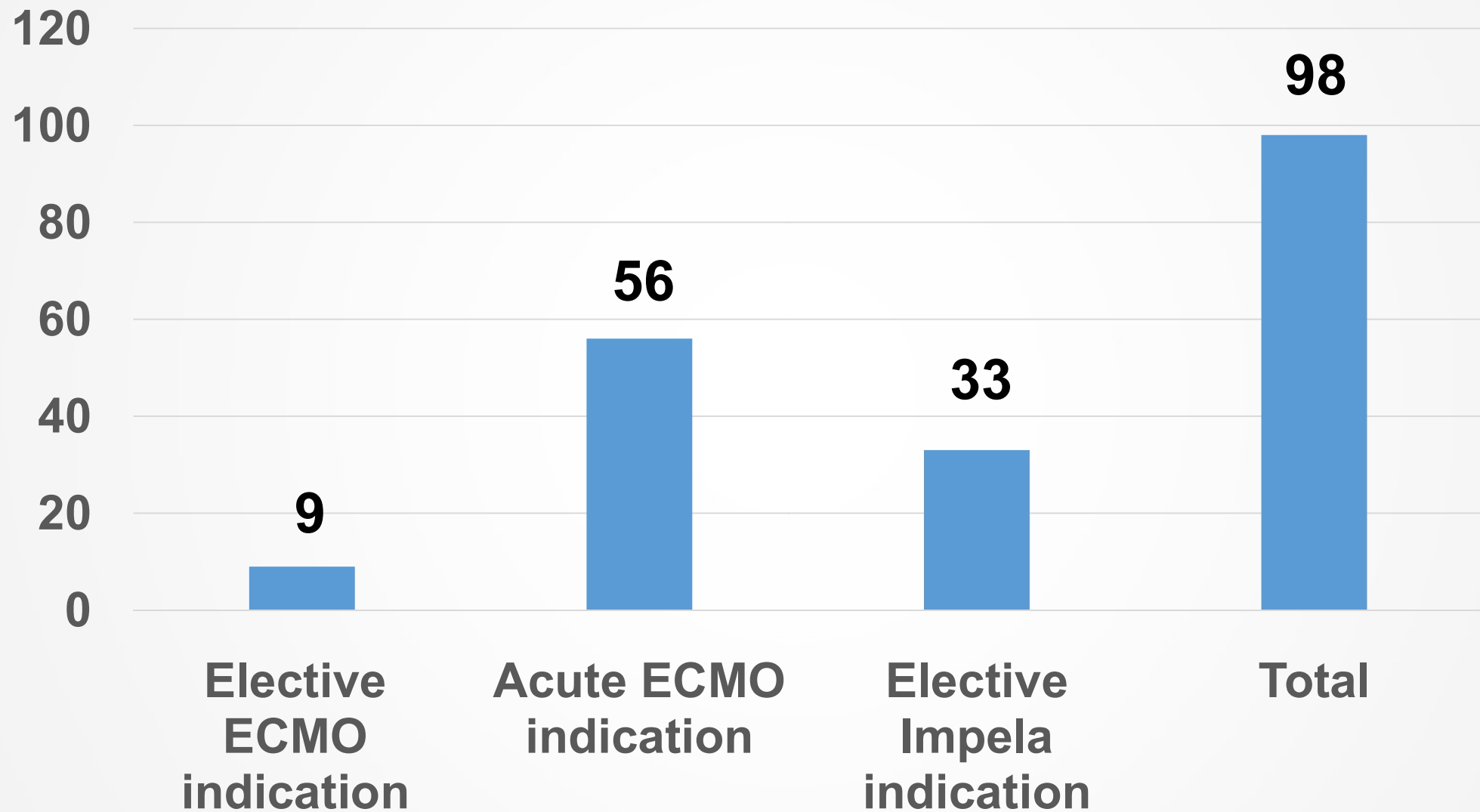
- 1 *Analysis of VA-ECMO data from 2020-2024*
- 2 *The positives*
- 3 *The negatives*

# Insights from cardiac center without on-site cardiovascular surgery

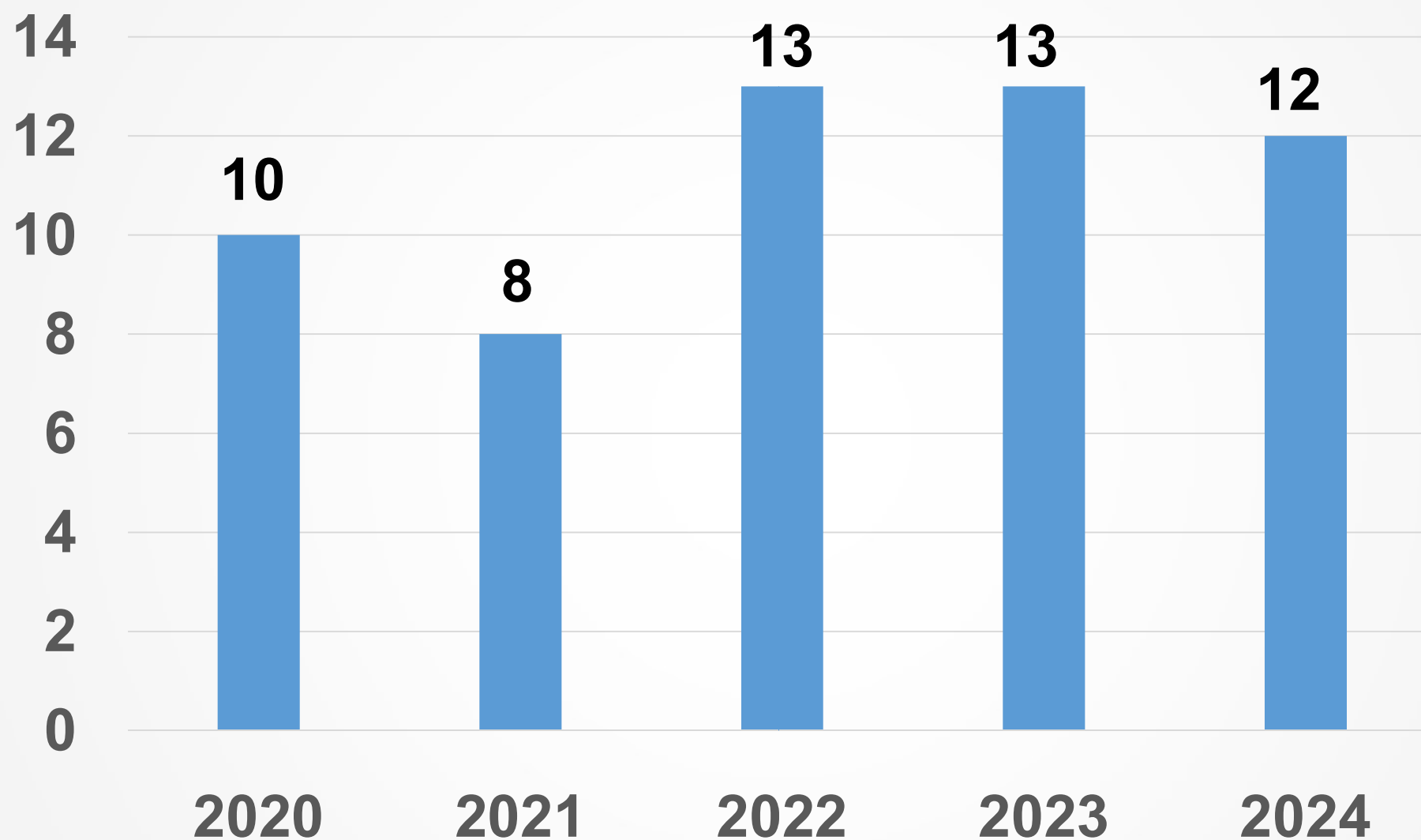
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## 1 Analysis of VA-ECMO data from 2020-2024

# Total number of patients with MCS (ECMO/Impella)



## ACUTE-VA-ECMO per year





Obstructive shock (Pulmonary embolism)

Sepsis induced cardiomyopathy

Acute coronary syndrome with CS

Fulminant myocarditis

Extensive burns associated with cardiogenic shock

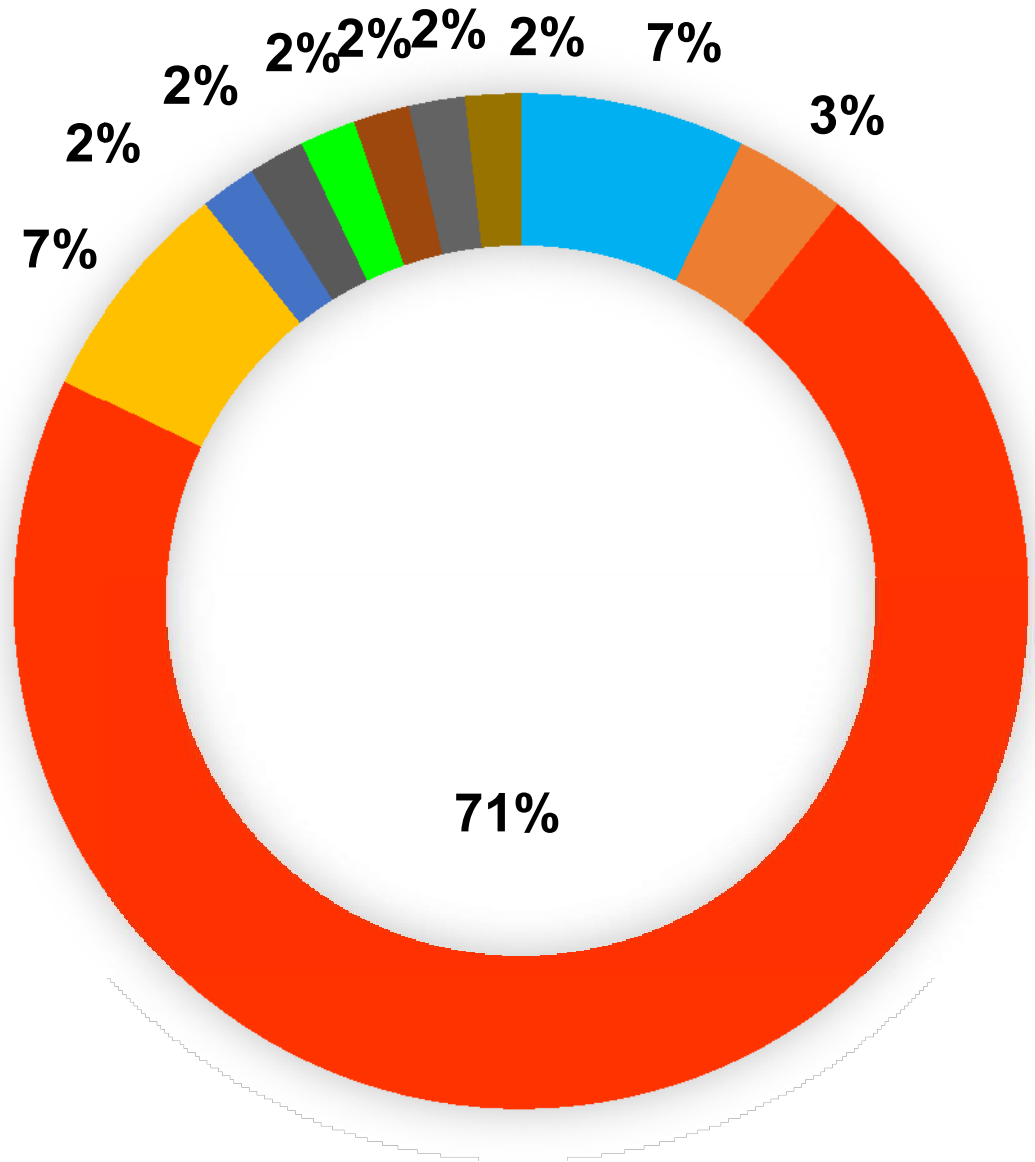
Refractory ventricular tachykardia with CS

Severe Hypothermia

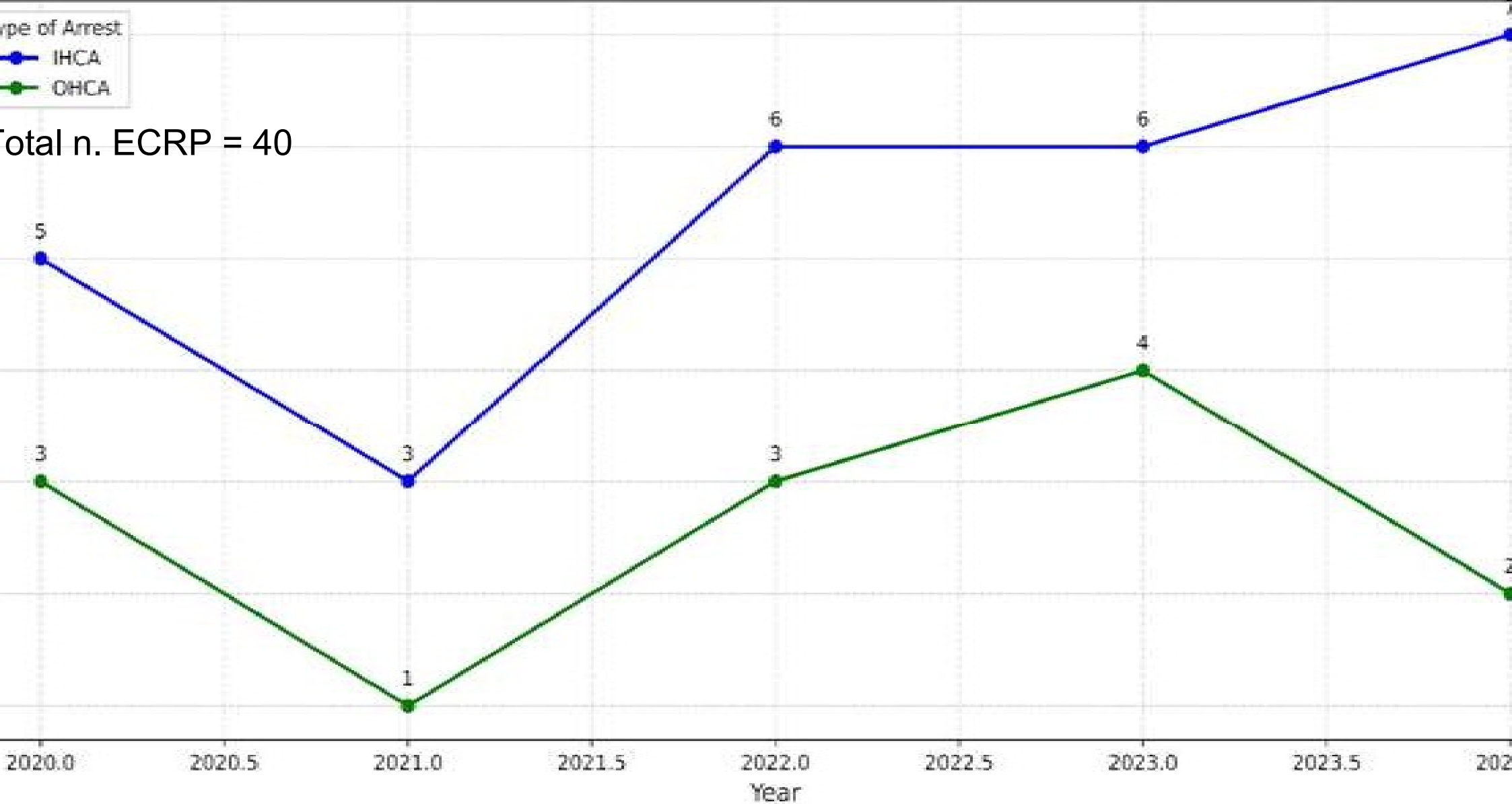
Fulminant peripartal CM

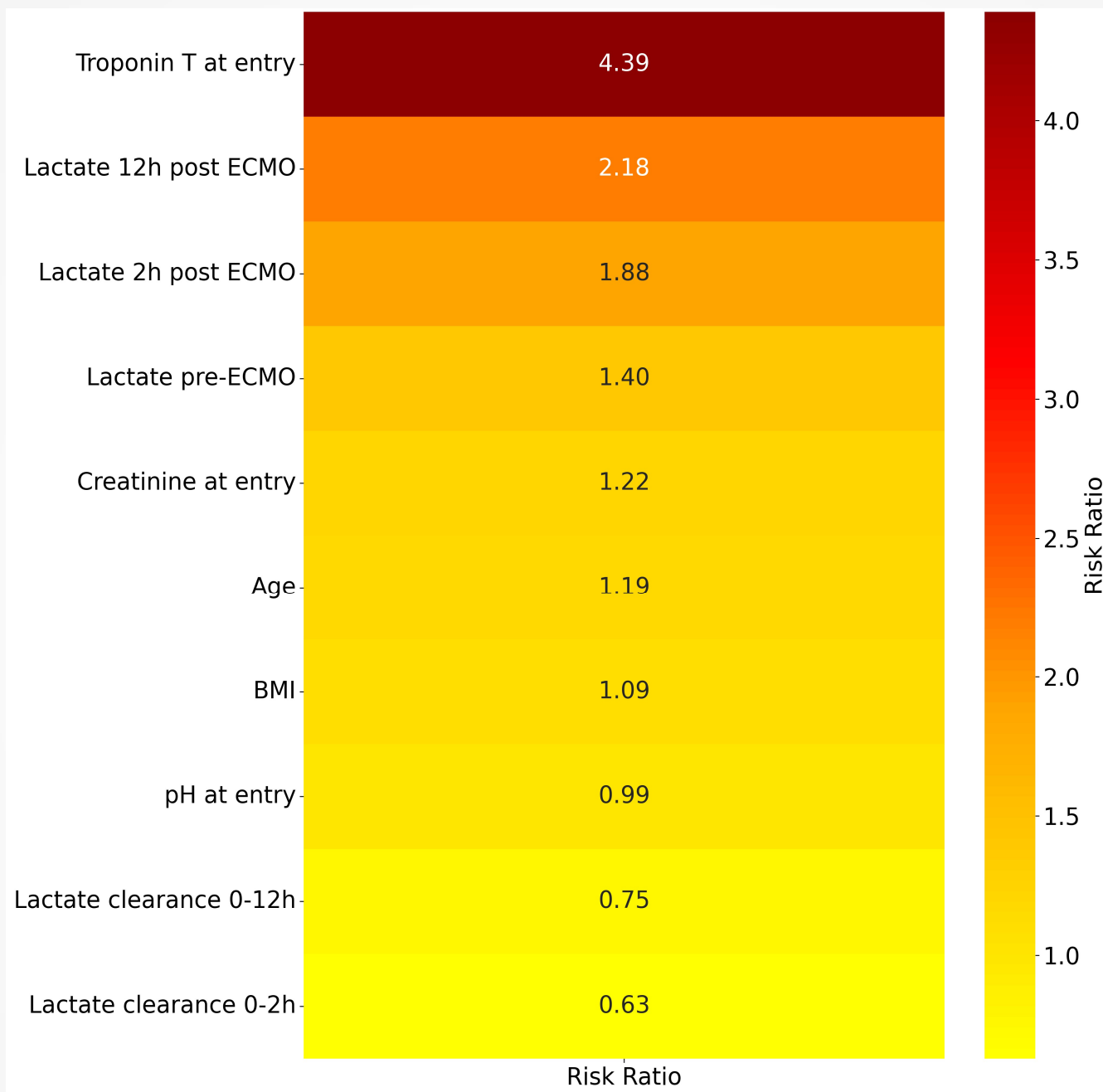
Fulminant TakoTsuboCM

EndStage dCM

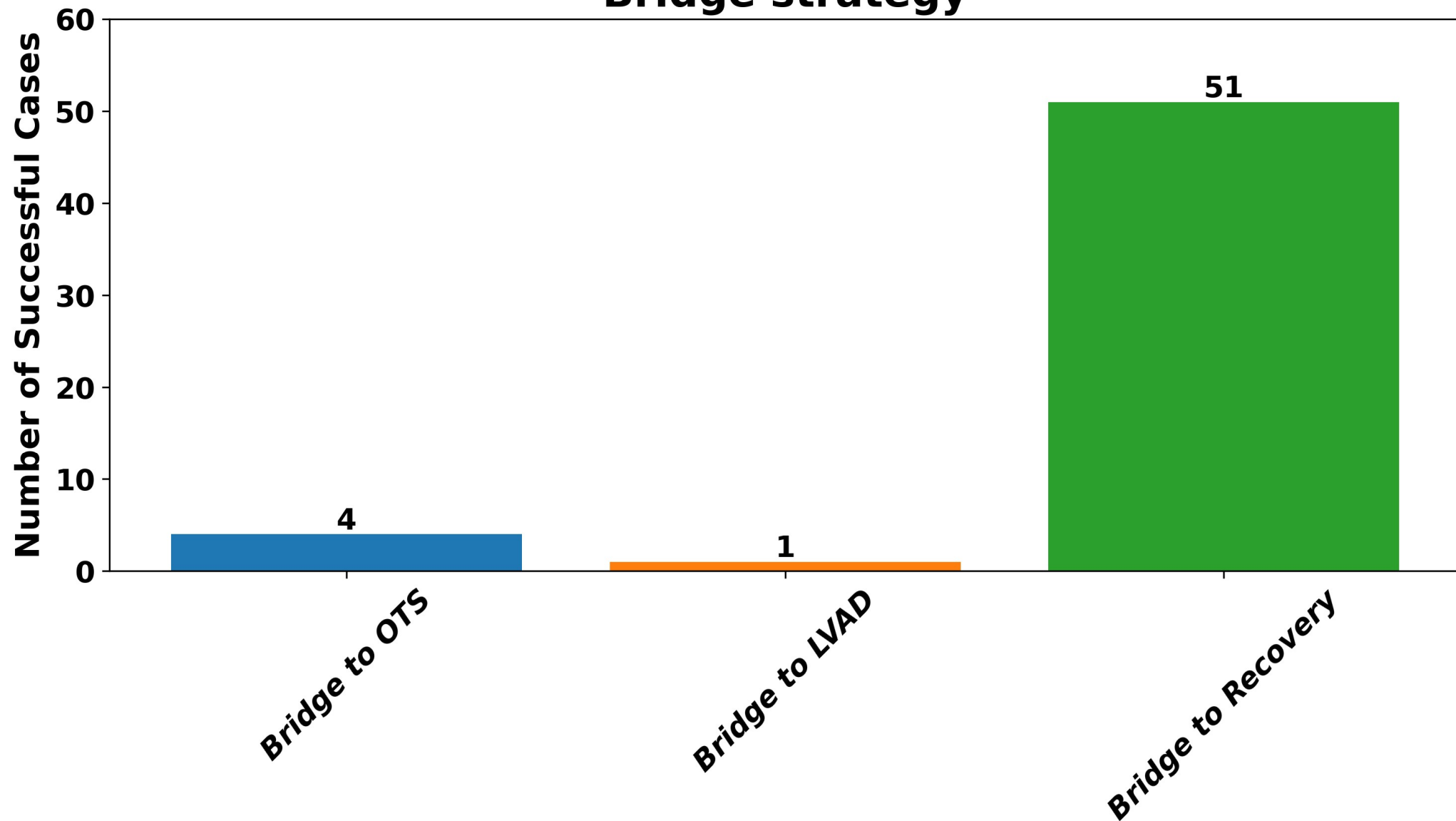


Trends in IHCA vs OHCA ECMO CPR Cases Over Years

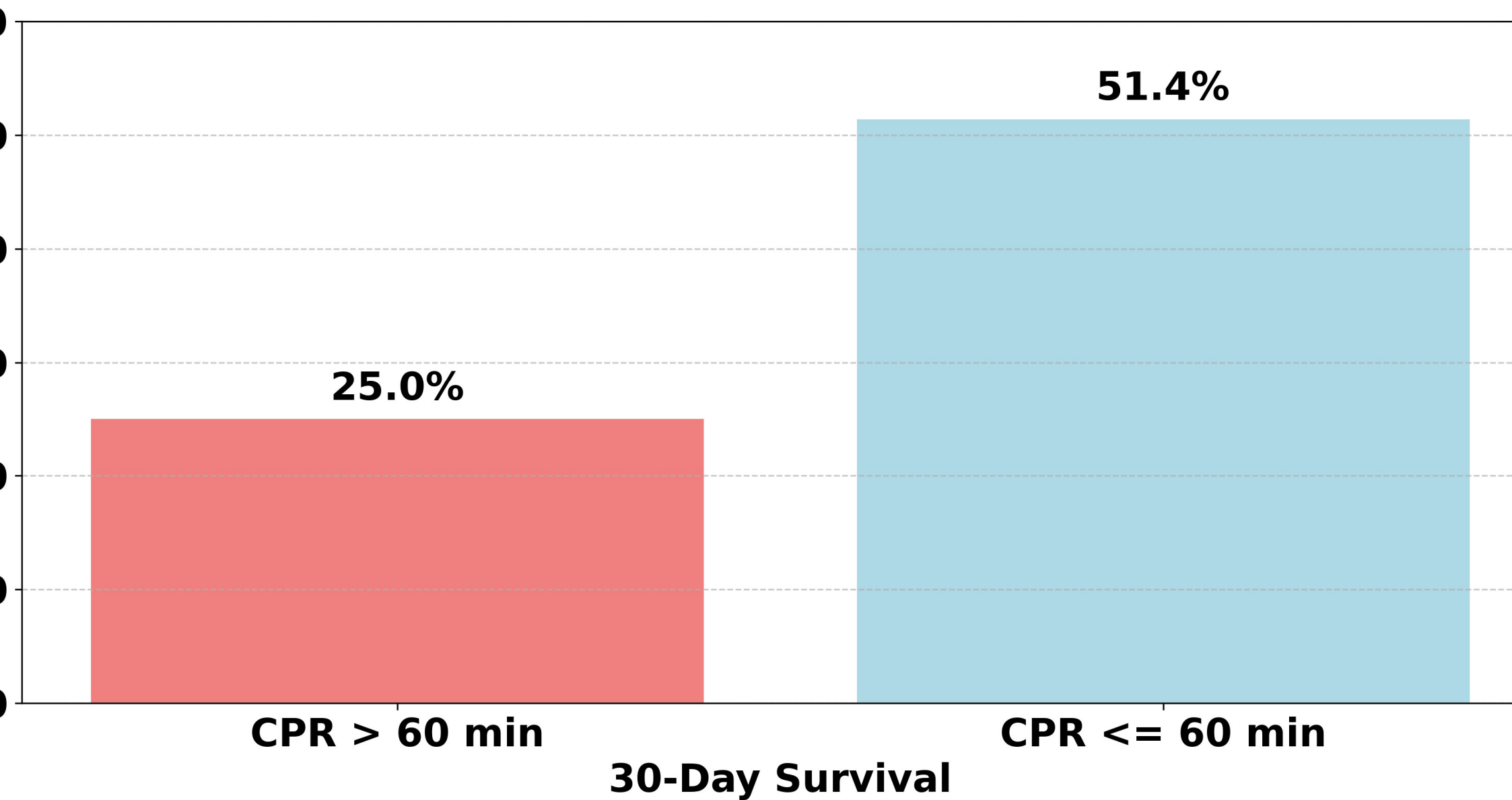




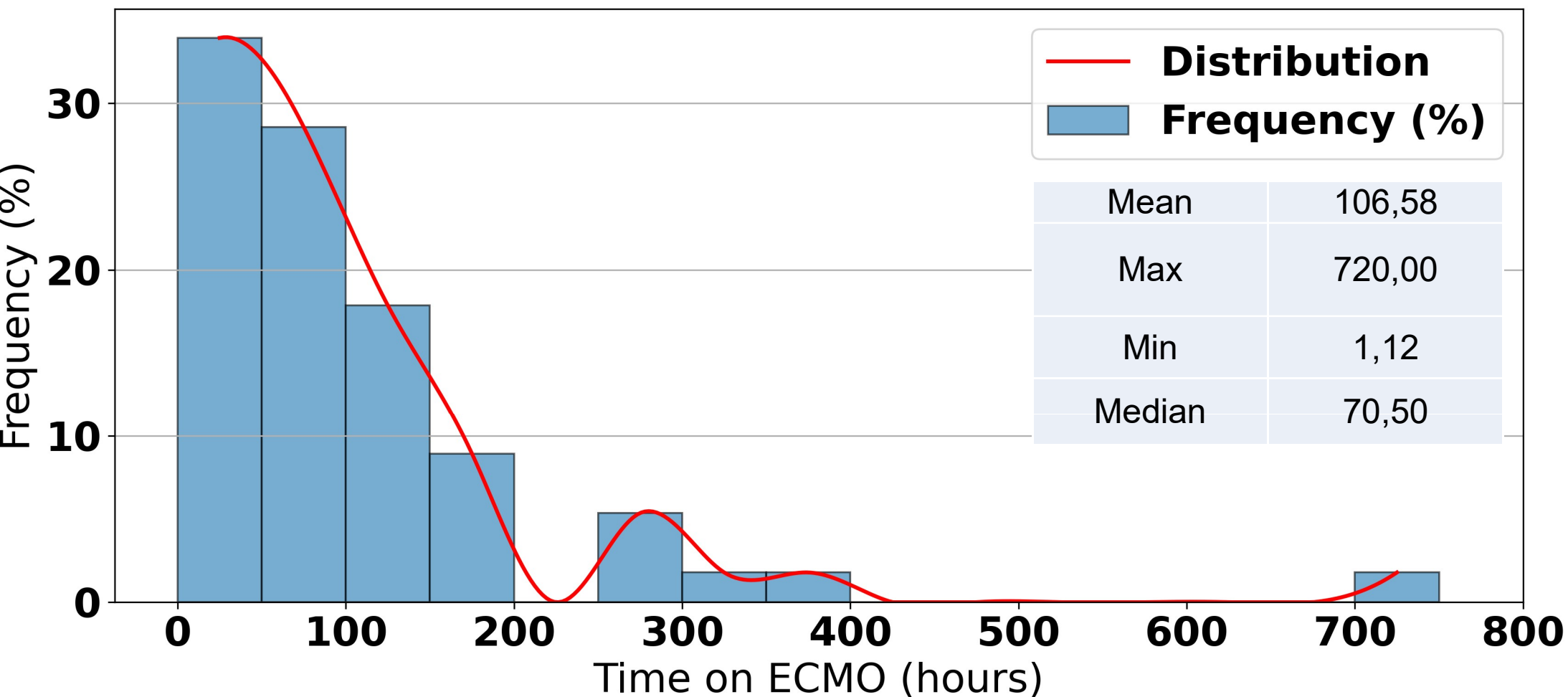
## Bridge strategy



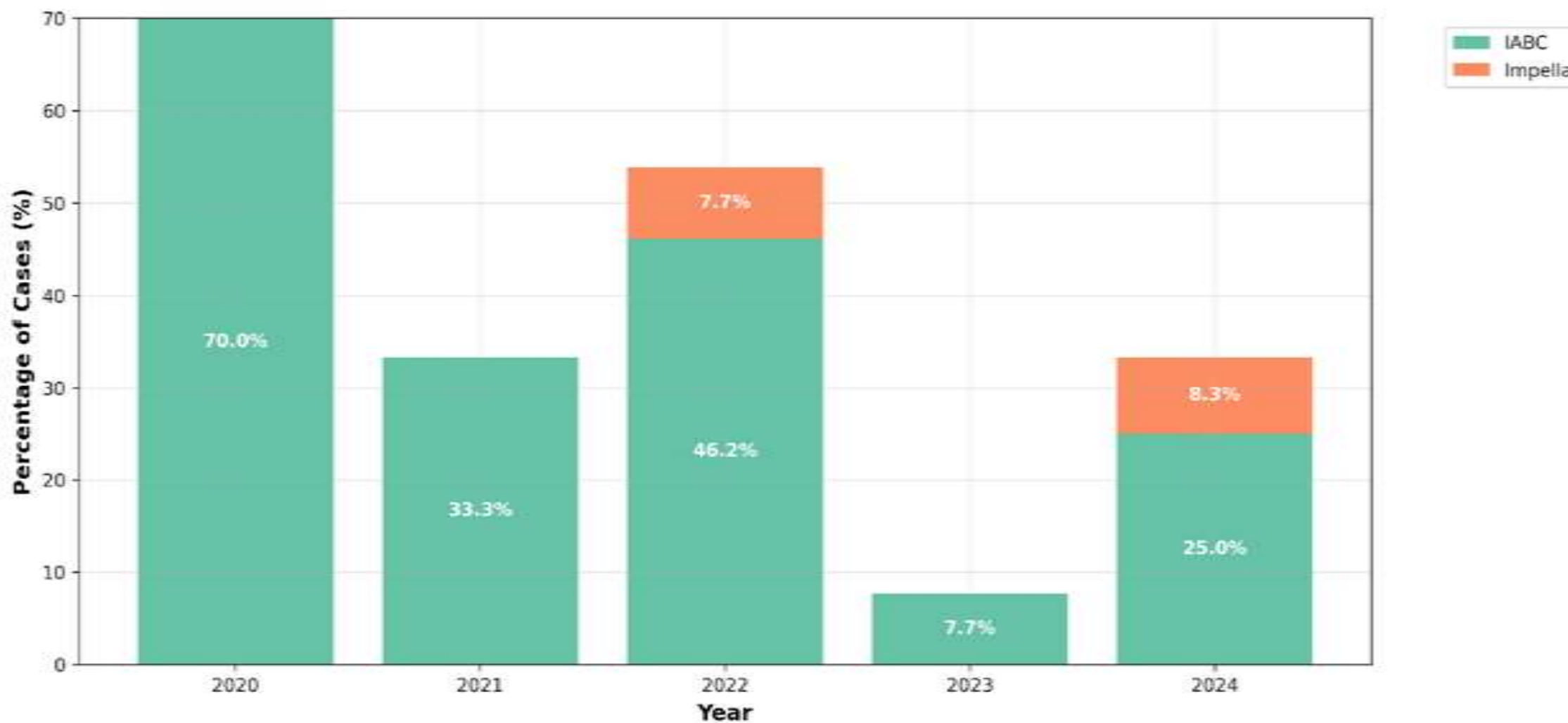
# Effect of Length of CPR (no flow/slow flow) on survival



## Distribution of Time on ECMO in Hours



Distribution of IABC and Impella Support by Year



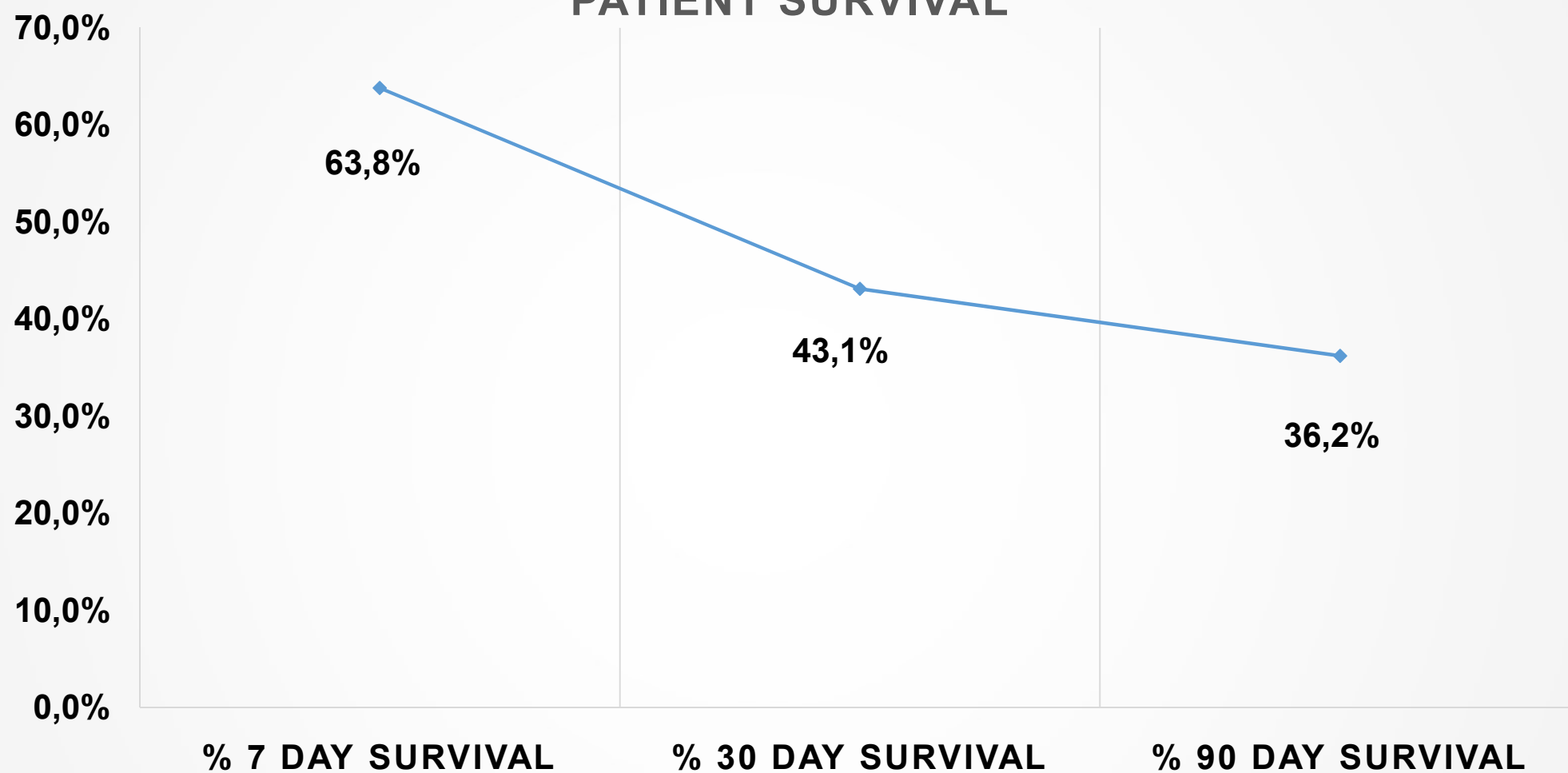
# Insights from cardiac center without on-site cardiovascular surgery

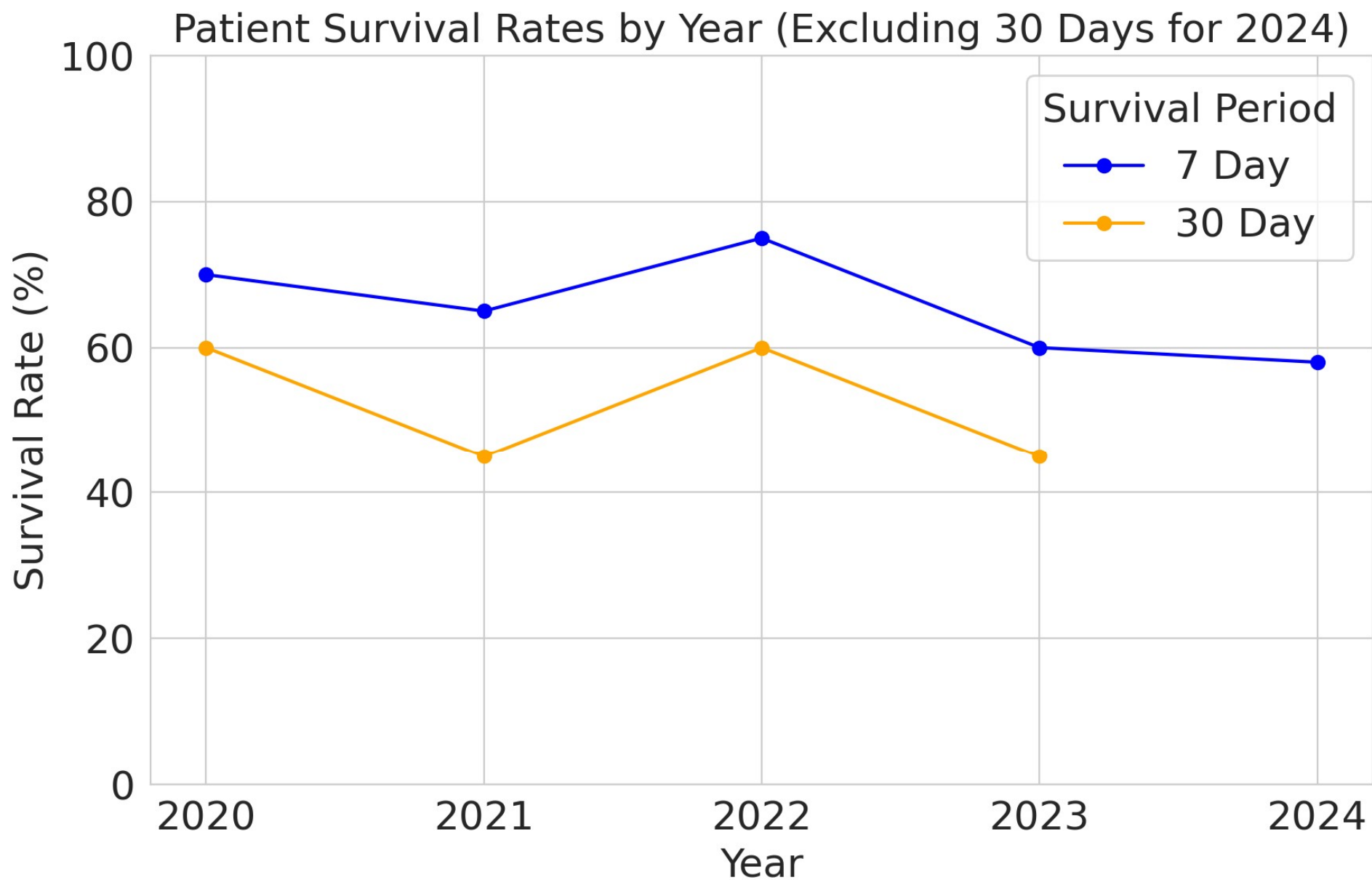
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## 2 The positives

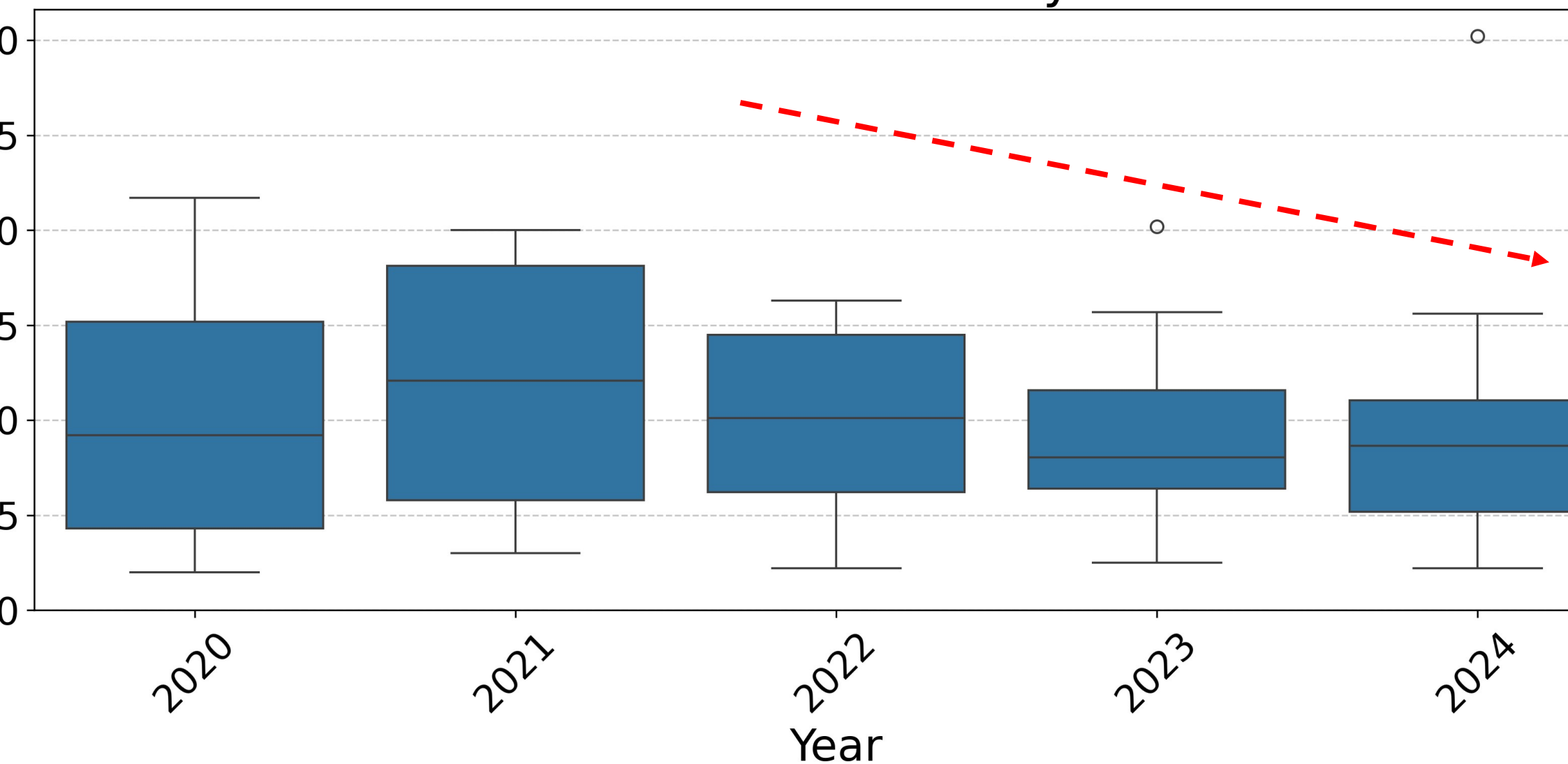


## PATIENT SURVIVAL

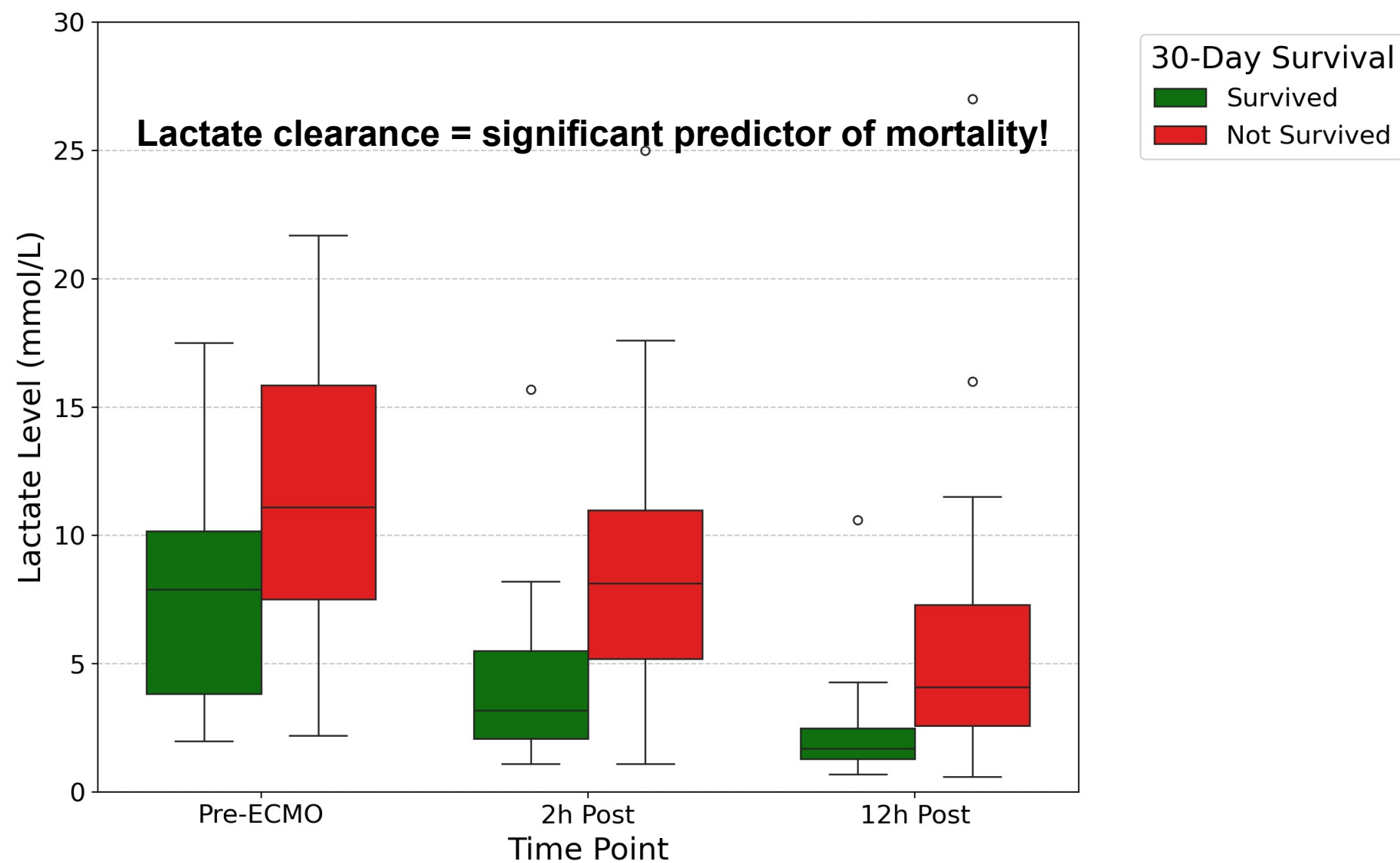




# Initial Lactate Levels by Year



## Distribution of Lactate Levels by Time Point and 30-Day Survival

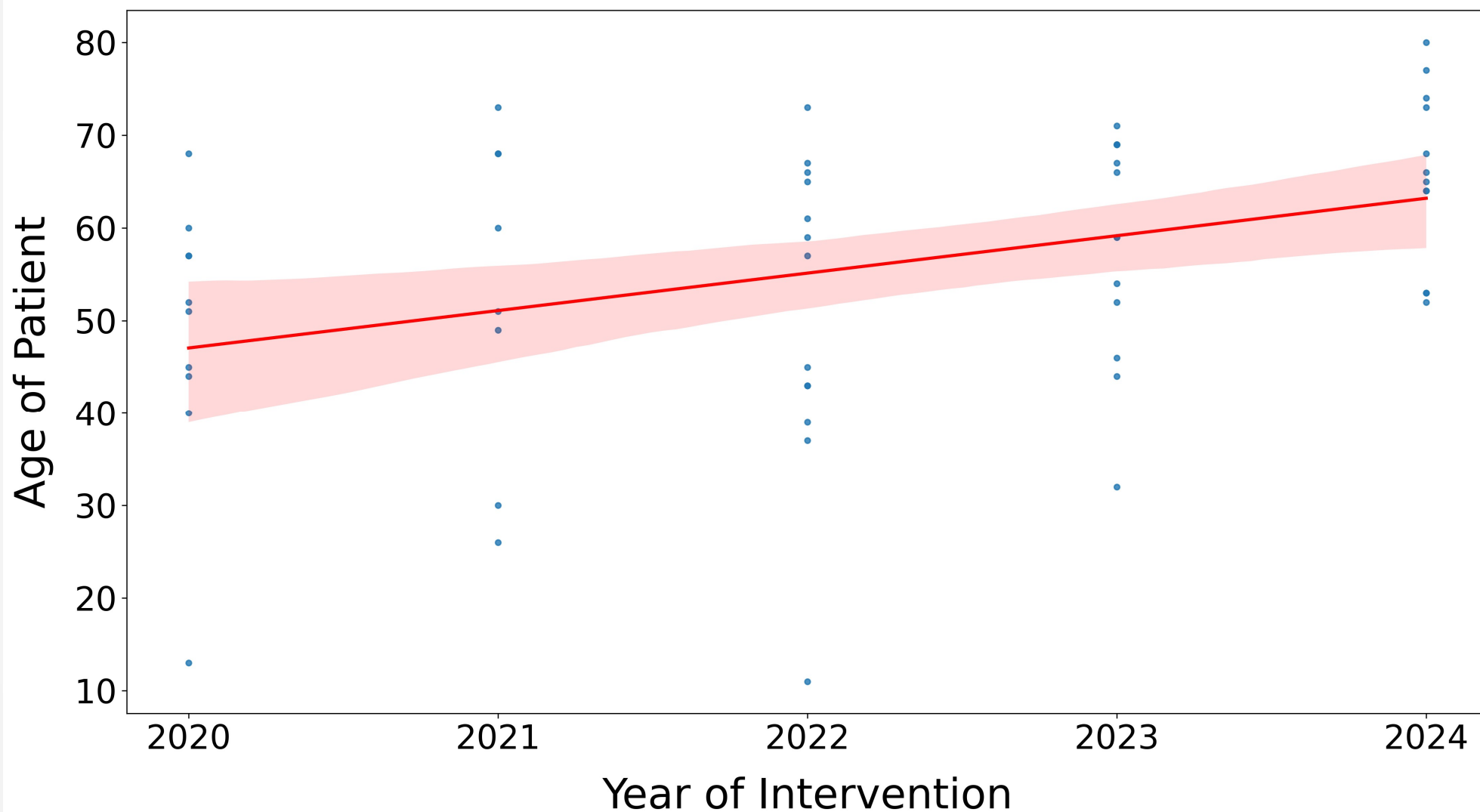


# Insights from cardiac center without on-site cardiovascular surgery

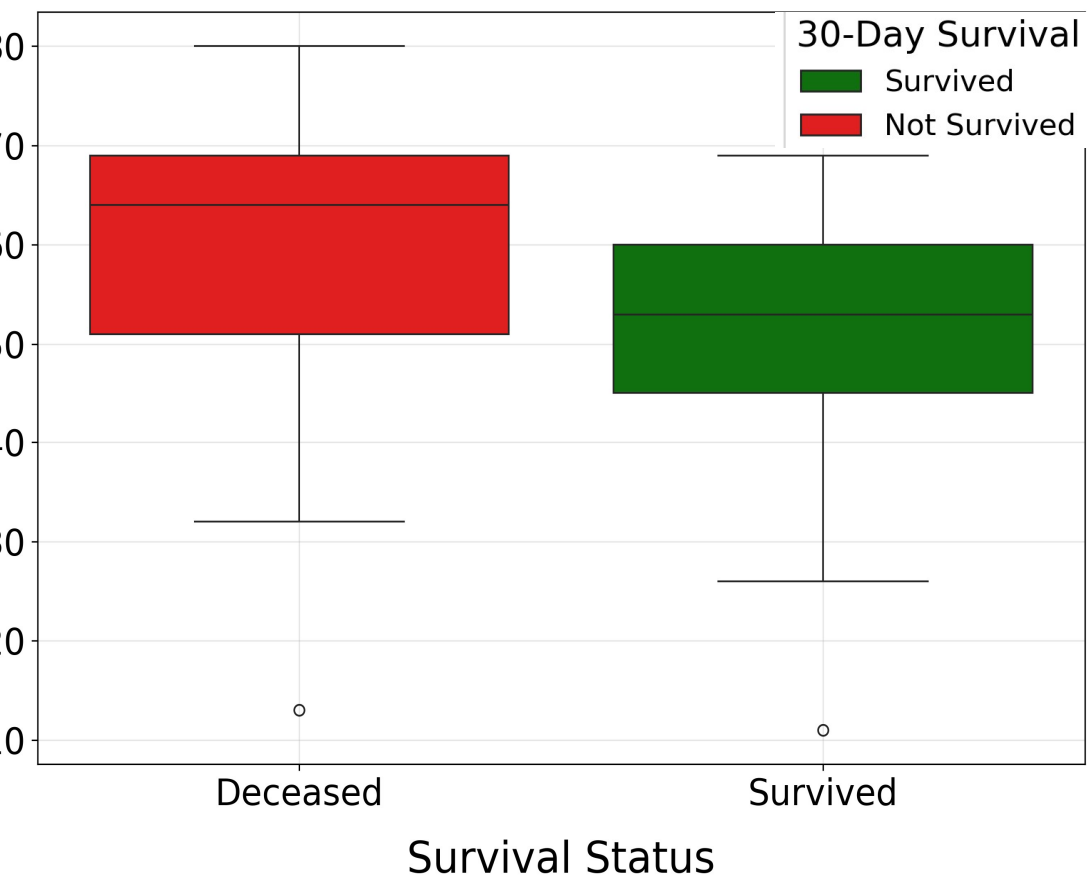
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## 3 The negatives

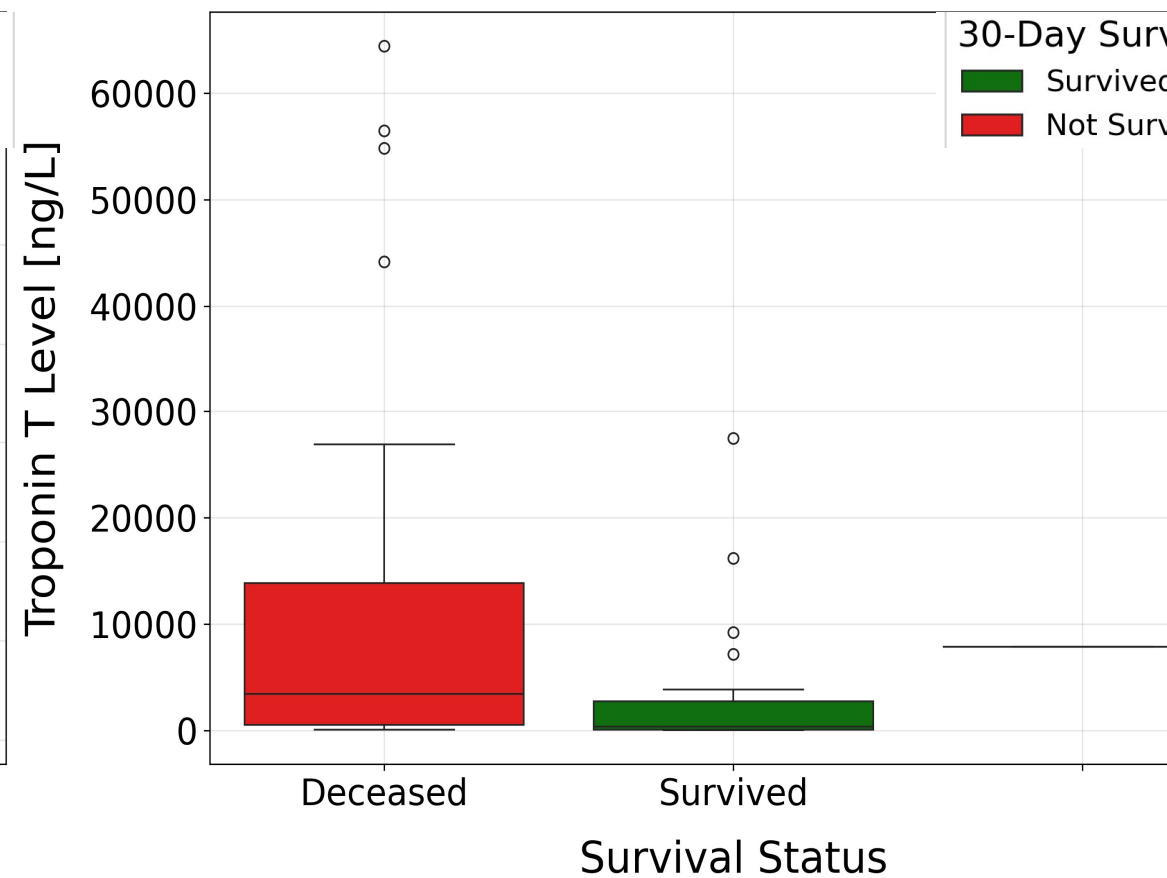
## Age Trend Over Years with Regression Line



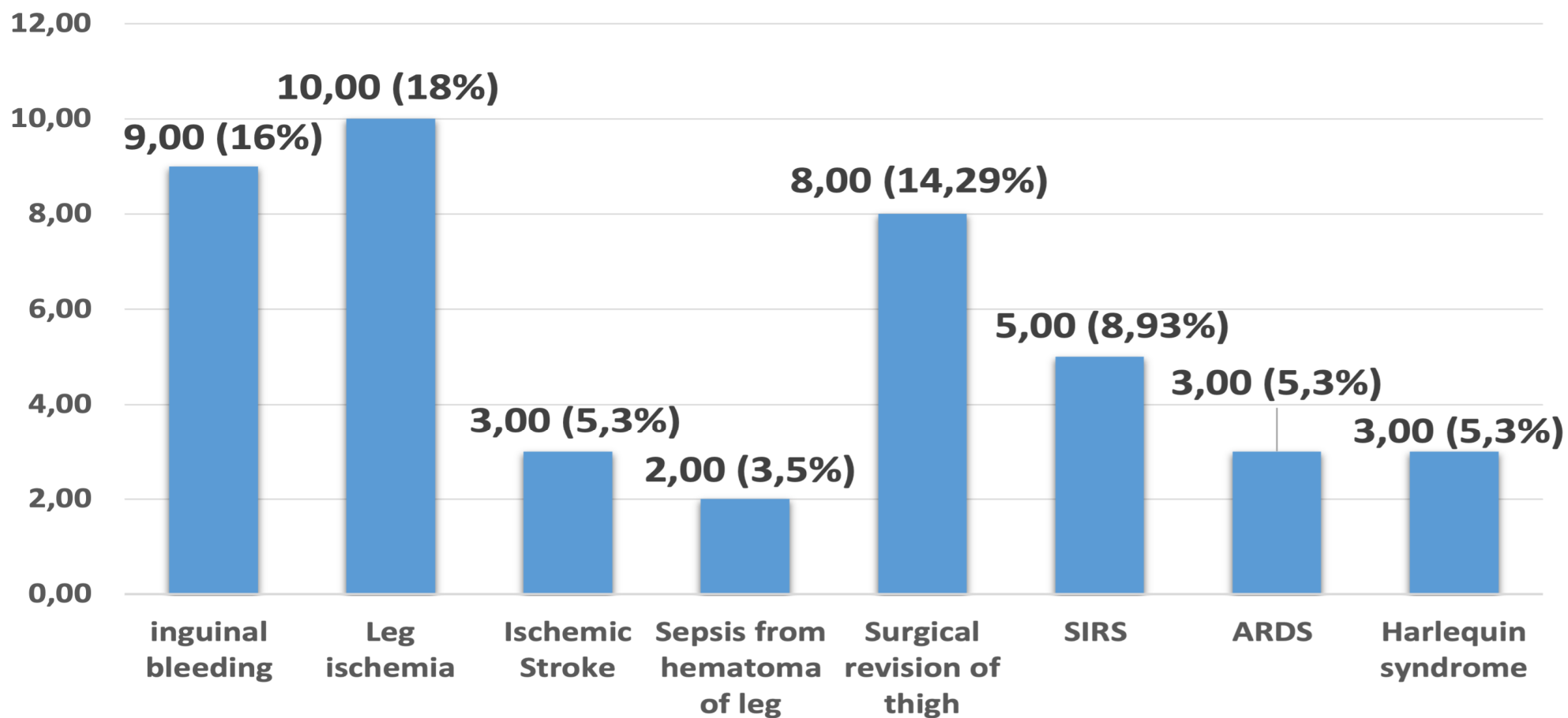
## Age Distribution by Survival Status



## Initial Troponin T Levels by Survival Status



## Complication of ECMO/Intensive Care



Need for vascular surgeon

7,00

12,50%

Need for vascular interventional radiologist

2,00

3,57%





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**Thank you for your attention**

