

# Safety and Hemodynamic Impact of a Multi-disciplinary PERT Model in Management of Intermediate-High and High-Risk Pulmonary Embolism:

## A Single Center Experience

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### BACKGROUND

Intermediate-high and high-risk pulmonary embolism (PE) are associated with significant morbidity and mortality from acute right ventricular strain and hemodynamic compromise. Pulmonary Embolism Response Teams (PERT) facilitate rapid multidisciplinary evaluation and coordination of advanced therapies, including **Catheter-Directed Thrombolysis (CDT/EKOS)** and **Mechanical Thrombectomy (MT)**. However, real-world data on the immediate hemodynamic impact and safety of PERT-guided catheter-based interventions remain limited. This study evaluates the safety and acute pulmonary artery pressure changes following catheter-based therapy at a single center.

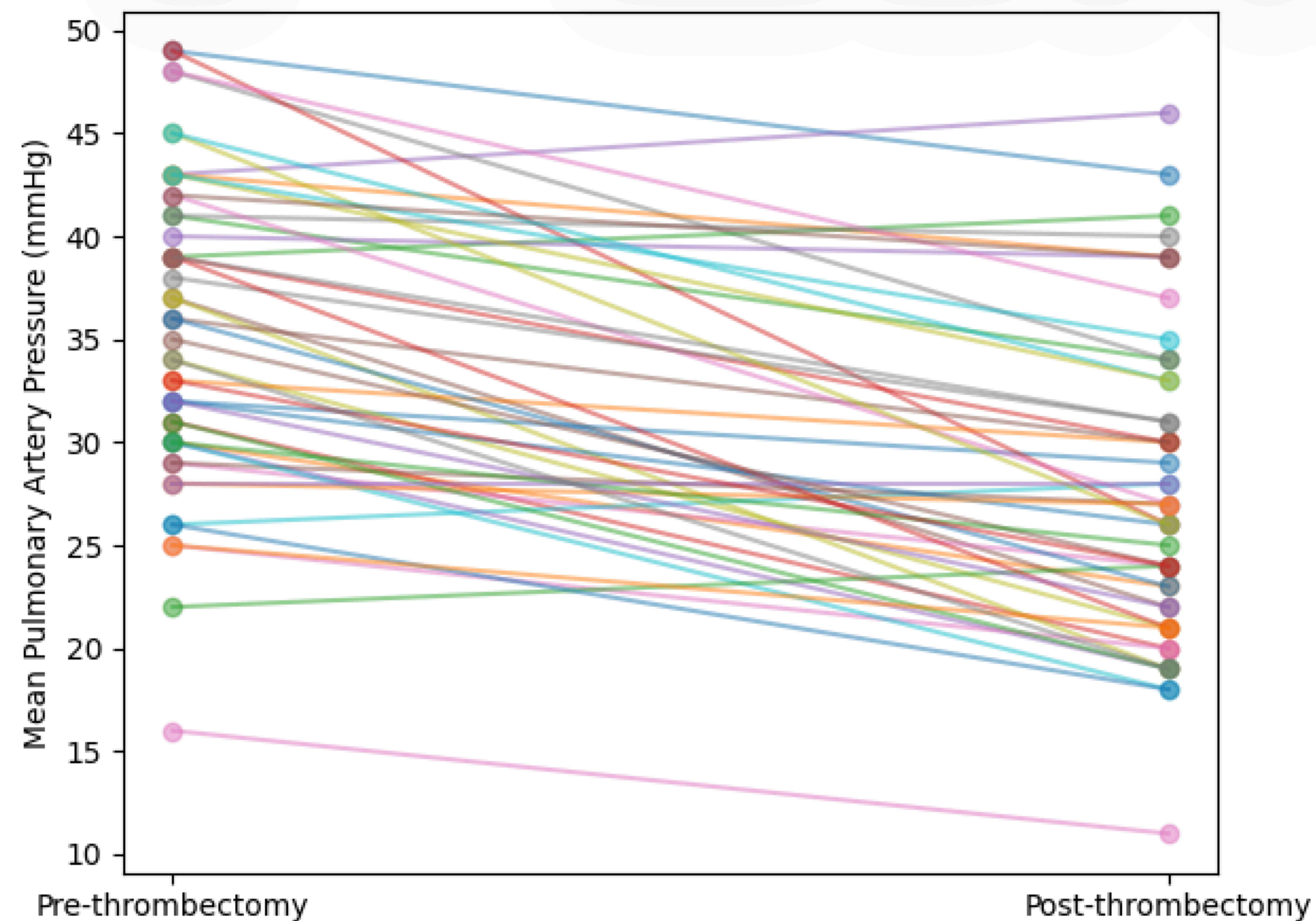
### METHODS

We conducted a **retrospective review** of **90 consecutive patients (mean age 65.4 years)** presenting with intermediate-high or high-risk PE. Risk stratification was performed using a PERT algorithm incorporating sPESI score, diagnostic imaging (CT, TTE), and clinical stability. Interventions included **MT (n=63)** and **CDT (n=27)**. Primary endpoints included changes in mean pulmonary artery pressure (mPAP) and in-hospital outcomes.

### CONCLUSION

PERT-guided catheter-based intervention was associated with **low in-hospital mortality** in selected intermediate-high and high-risk PE patients, with **procedural safety and clinical outcomes comparable to those reported in contemporary PE registries and catheter-based clinical trials**. These findings support catheter-based interventions as an important treatment strategy within PERT-guided management of higher-risk pulmonary embolism.

### PRE- AND POST-THROMBECTOMY mPAP (PAIRED ANALYSIS)



**PERT-guided catheter-based intervention was associated with significant immediate pulmonary hemodynamic improvement and low in-hospital mortality.**

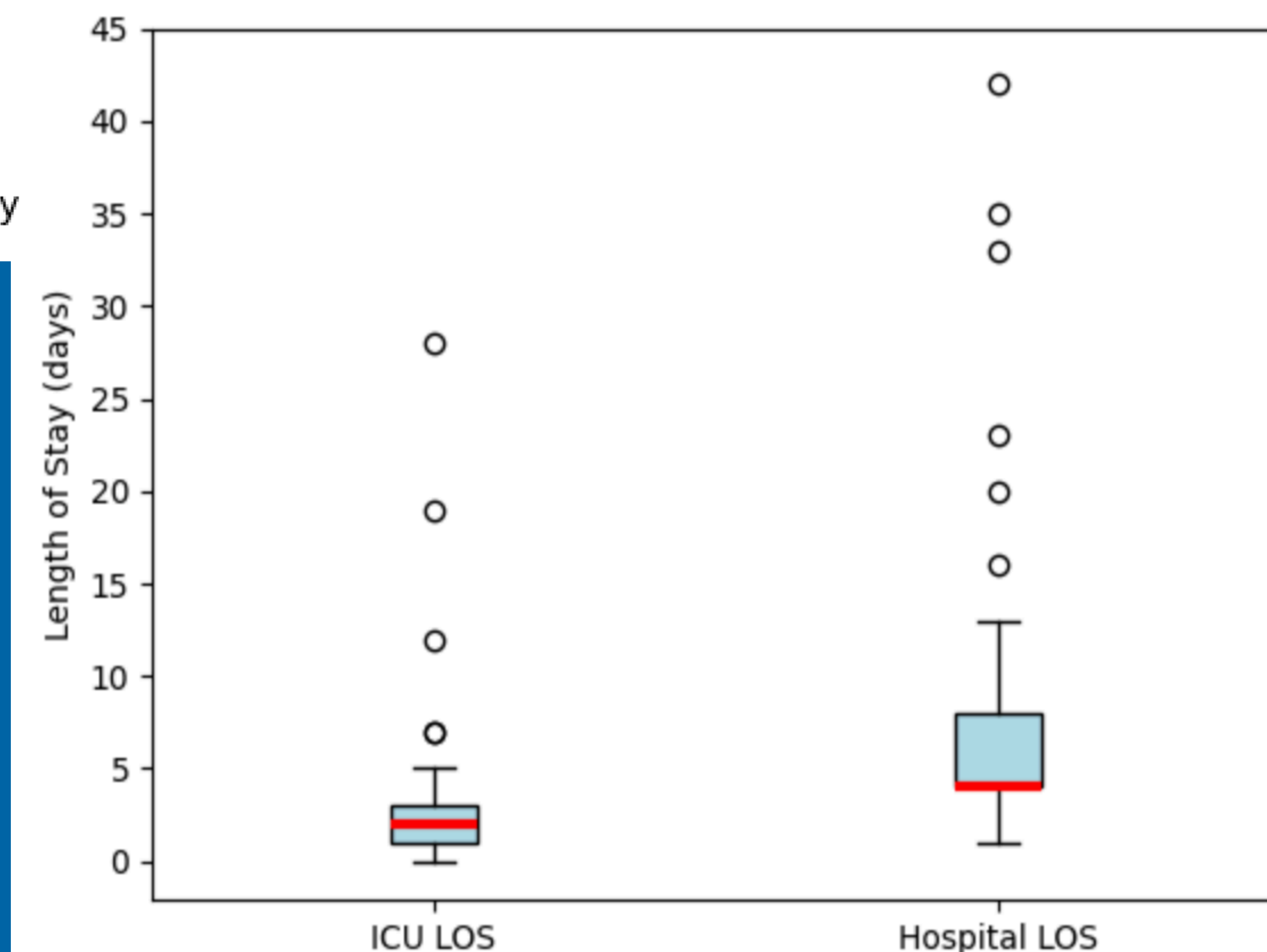
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### KEY STUDY RESULTS

Total Patients:	90
High-Risk (Shock):	17.8% (n = 16)
Intermediate-High Risk:	82.2% (n = 74)
Paired mPAP Cohort (MT):	n = 48
Pre-mPAP (mean):	35.5 mmHg
Post-mPAP (mean):	27.6 mmHg
Mean Reduction ( $\Delta$ mPAP):	-7.9 mmHg
Statistical Significance:	$p < 0.001$
Device-Related Complications:	No device-related complications observed
In-Hospital Mortality:	2.2% (n = 2)
ICU Length of Stay (mean):	2.91 days
Total Hospital LOS (mean):	6.8 days

### ICU AND HOSPITAL LENGTH OF STAY (BOX PLOTS)



### DISCLOSURES

Bret K Farrow-Cypel: no relevant disclosures