

Safety Comparison Of Primary Versus Redo Robotic Assisted Valve Surgery: Insights From A Single Center Study

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Introduction

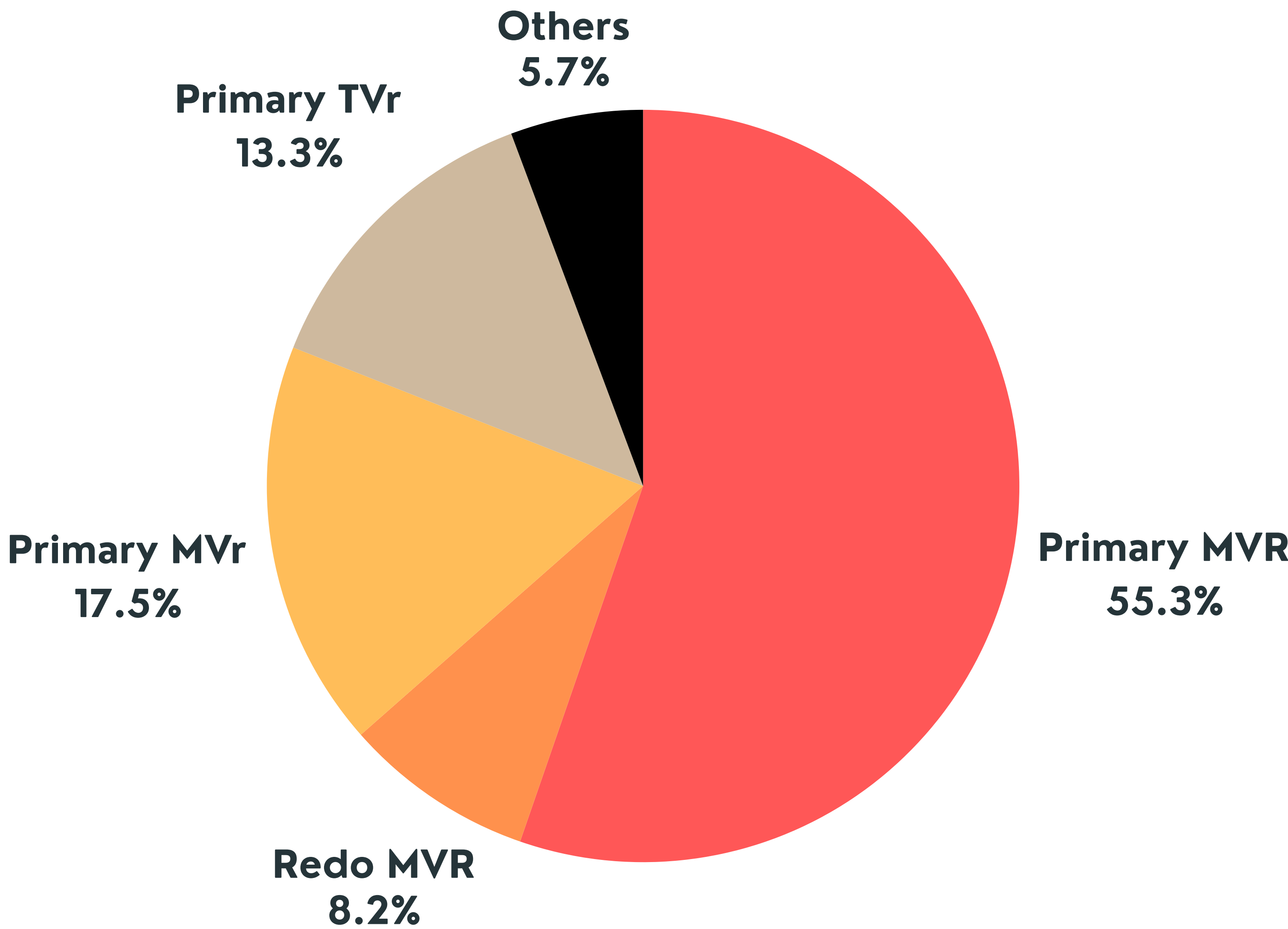
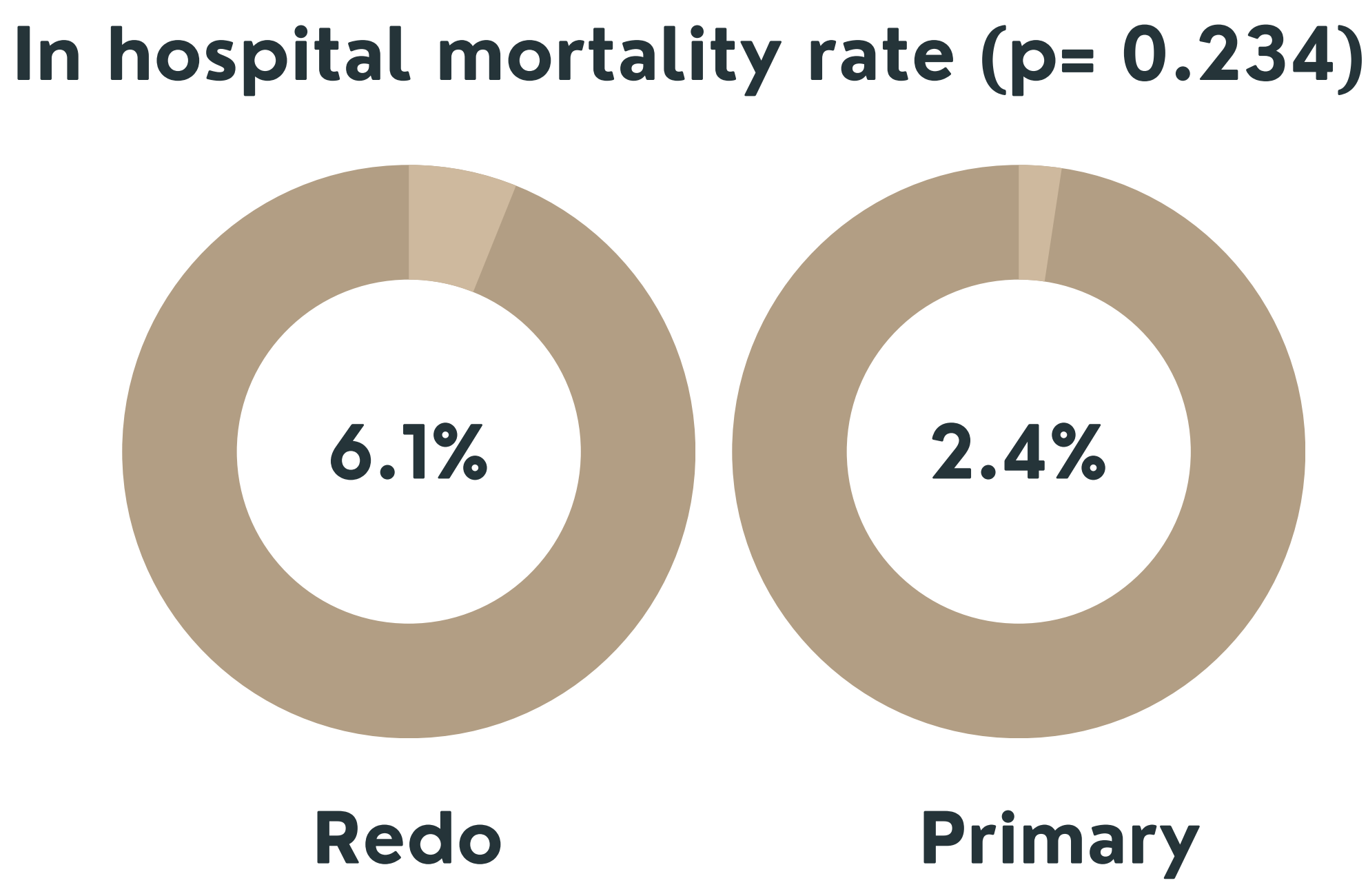
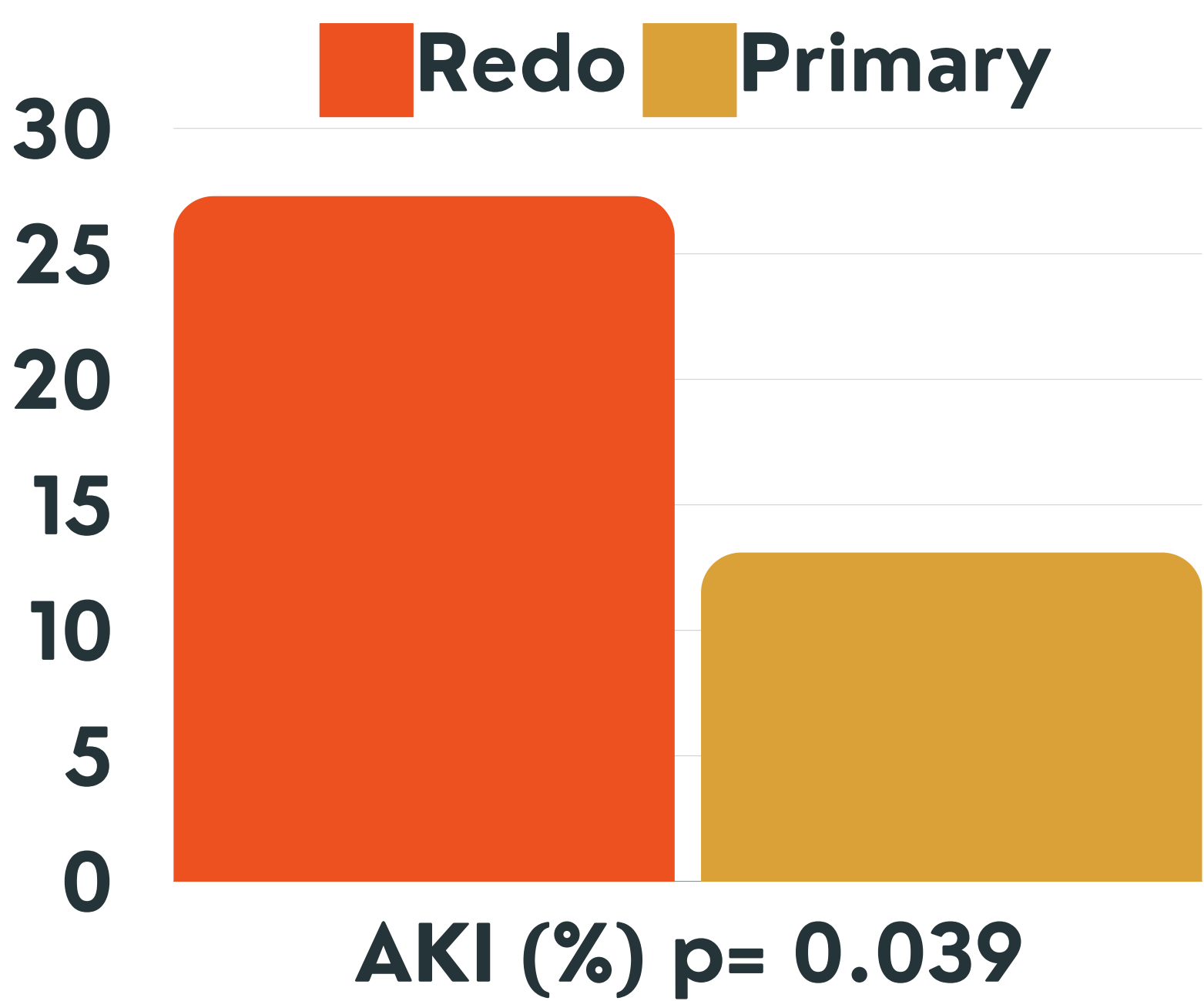
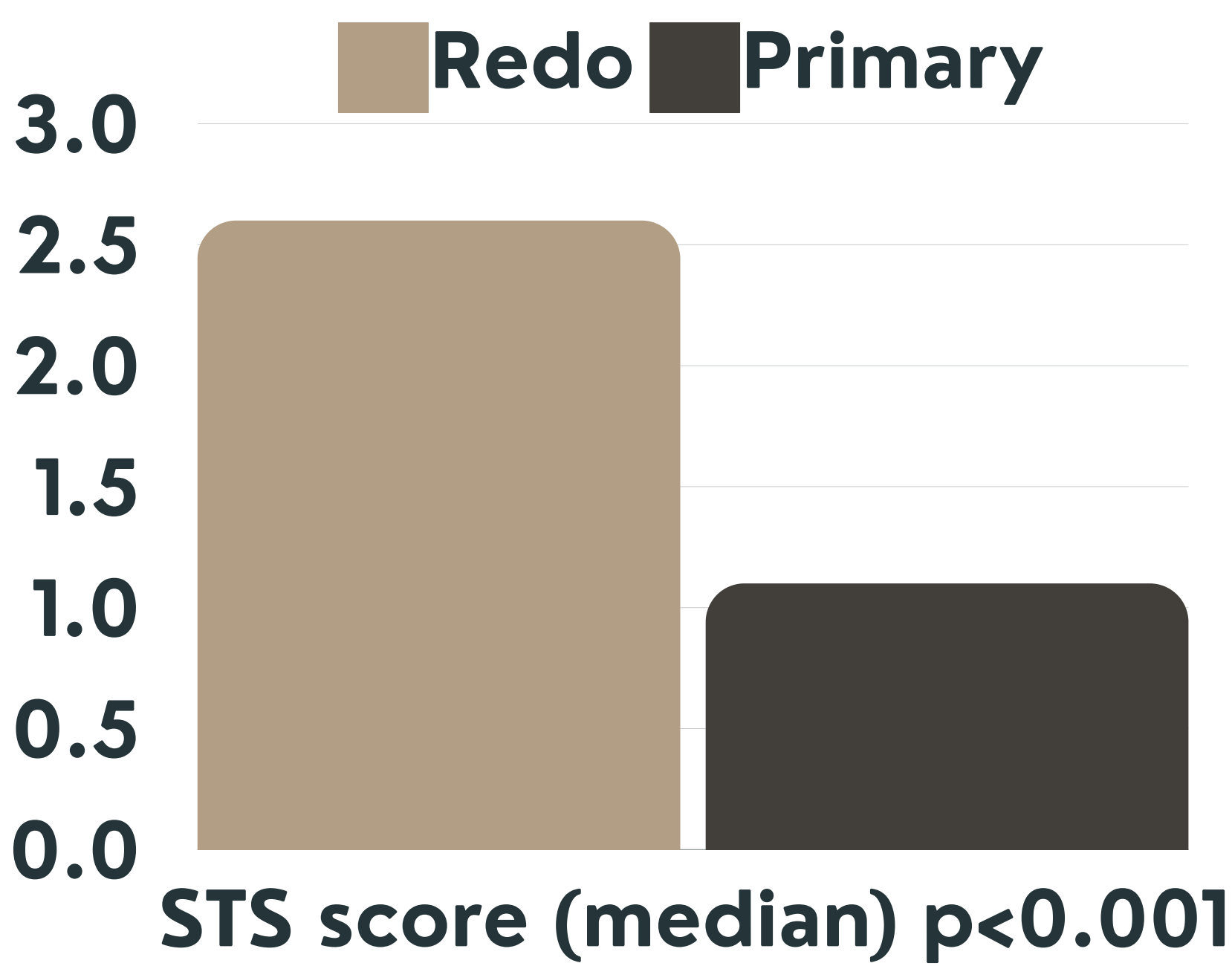
Our robotic cardiac surgery program began in early 2019. Recent reports suggest redo-robotic interventions may not be suitable for patients with prior sternotomy. We compared outcomes of primary vs. redo robotic assisted interventions post-sternotomy.

Methodology

Retrospective study on patients aged 14 and older who had intra-cardiac robotic assisted surgery at a Saudi Arabian cardiac center between February 2019 and November 2023.

Results/Findings

- Total of **331 patients** were included in the study, **76.1%** had primary valve interventions and **9.9%** had redo valve interventions.
- There was no significant difference between the two groups in terms of **gender** (33.3% males vs 24.2%, **p= 0.329**), **age** (median=51 years [IQR=37-61.2] vs 48 years [IQR=34-59], **p=0.56**), **BMI** (median=28 [IQR=23-33] vs 26 [IQR=23-32], **p=0.35**), or pre-operative comorbidities.
- There were no significant differences between the two groups in **post-operative outcomes** investigated, except for AKI.
- **After adjusting for demographics and pre-operative clinical factors, redo interventions were associated with poorer survival (HR= 2.59; 95% CI =0.34-19.83) compared to primary interventions. However, the difference was not statistically significant (p= 0.36).**



Our study confirms excellent early clinical outcome of primary and redo robotic assisted valve surgery and supports the safety of robotic assisted redo intervention. Despite the smaller size of the redo group in the study, there was no significant difference in mortality rates between the two groups.