

Determining the Benefit of VA Frailty Scoring in Post-Operative Outcomes

Madison Ballacchino BS; Chloe McQuestion BS; Jason Gershgorn BS; Csaba Gajdos MD, Matthew Giuca, MD,
Nader Nader MD, PhD, FACC, FCCP, FASA
University at Buffalo School of Medicine and Biomedical Sciences , Buffalo, NY



BACKGROUND

- Frail patients carry a higher early postoperative mortality and occurrence of complications
- The VA has a new screening tool called the risk analysis index to assess pre-operative frailty

OBJECTIVE

- To determine if this screening RAI tool accurately assess which patients have a higher risk of postoperative complications

METHODS

Design Retrospective chart review

Participants 4374 patients who underwent non-cardiac surgeries and procedures from 2019-2023 at the VA Western New York Healthcare

Methods Calculating risk analysis index scores for all patients. Currently, on the RAI tool, >37 is considered frail

Quantitative analysis Primary outcome: 30-day all-cause mortality. Chi-square analysis, student independent sample analysis, Mann-Whitney U test

RESULTS

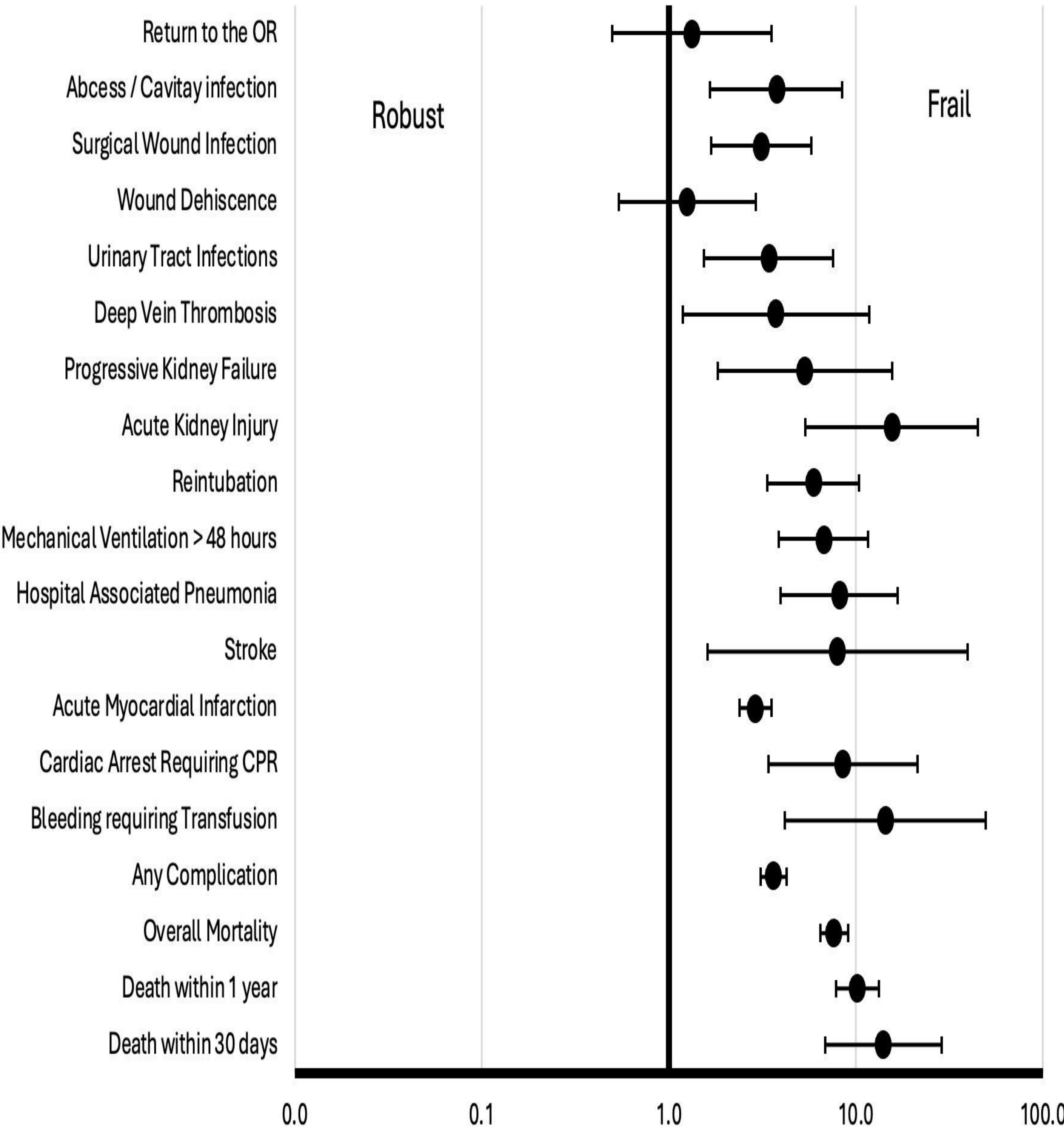


Figure 1. Forest plot depicting the odds ratios for the occurrence of adverse outcomes following surgery in Robust patients with an RAI score less than 31 and in Frail patients with an RAI score greater or equal to 31.

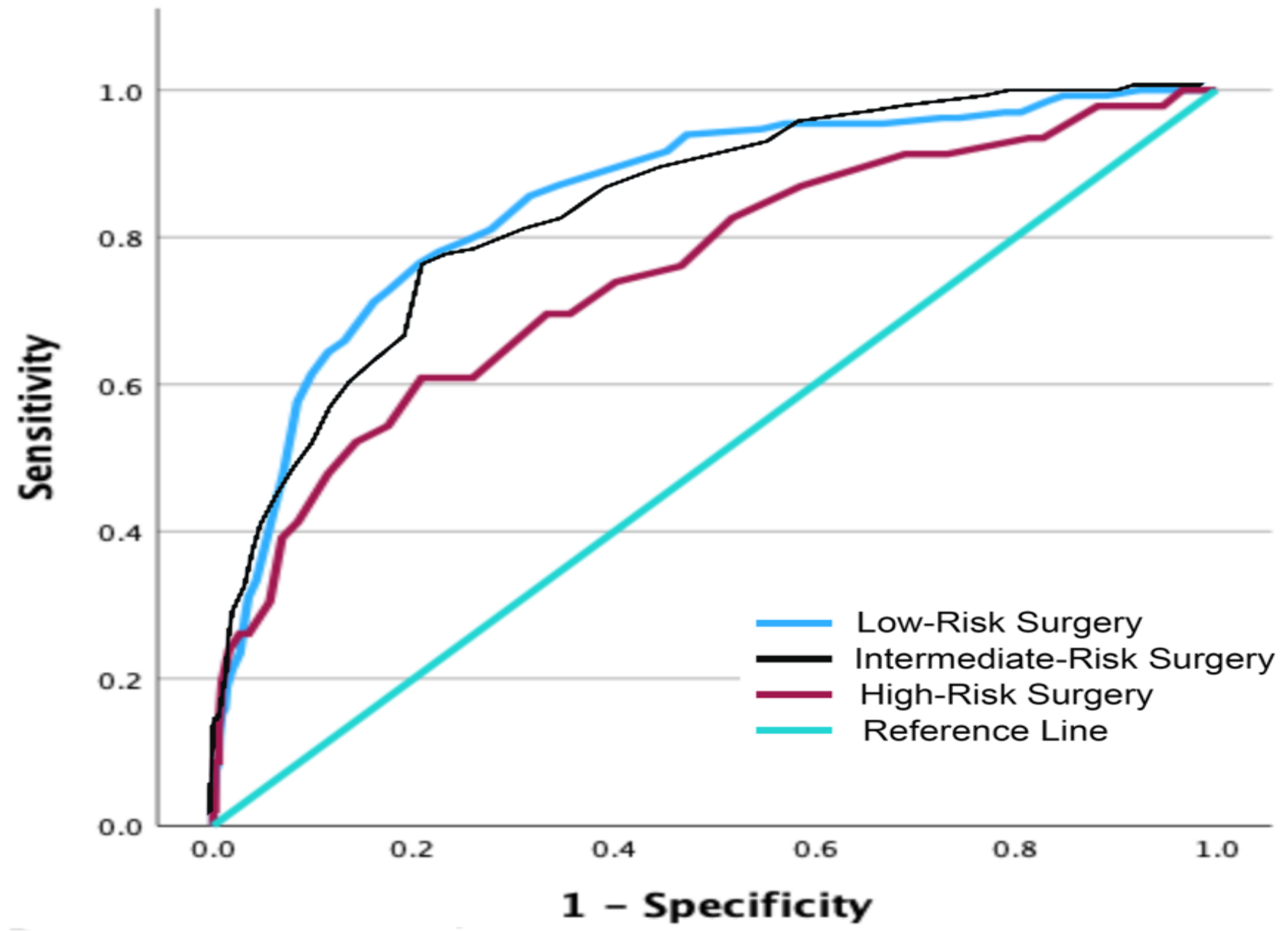


Figure 2. Risk Analysis Index Prediction Model for Low, Intermediate, and High-Risk Surgeries

FINDINGS

- Frail patients more likely to experience: 15.5x AKI, 14.3x bleeding requiring transfusion, 14.1x death within 30 days, and 10.2x death within 1-year
- Predictive model: AUC of RAI scores in 1-year mortality= 0.85 ± 0.02 in low-risk surgery (RVU < 12), and 0.83 ± 0.006 in intermediate-risk surgery (RVU between 12-24). 1-year mortality was 0.75 ± 0.04 in high-risk surgical procedure with an RVU > 24 units (P=0.002).

CONCLUSIONS

- The RAI tool can accurately assess 30-day, one year, and overall death risk for frail vs. robust patients
- Certain postoperative complications are more likely to occur in frail patients compared to robust
- The VA frailty tool has the superior predictive modeling power for low- and intermediate- risk surgeries. It has great predictive power for high-risk surgeries

REFERENCES

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