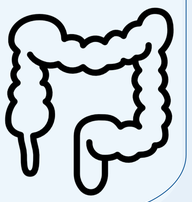
Modified Frailty Index for Patients Undergoing Surgery for Colorectal Cancer: Analysis of the National Inpatient Sample 2015-2019

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Introduction

- Frailty is increasingly recognized as a perioperative risk for numerous surgical diseases
- The modified frailty index **(mFI-11)** is used to capture this factors and provide important preoperative prognostic information
- We applied the mFI-11 to the National Inpatient Sample (NIS) for patients undergoing surgery for **CRC**
- This study aimed to compare frail and robust patients in terms of postoperative morbidity and mortality following operative intervention for CRC using the NIS



Results

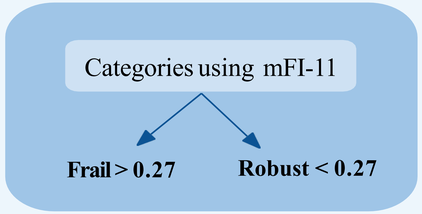
- **N = 53,652**
- **Frail = 11,178 (19%)**
- On adjusted analyses, frail patients were at **higher risk** of postoperative mortality



In-hospital mortality	(OR 1.96, 95%CI 1.68-2.30, p<0.001)
Morbidity	(OR 1.75, 95%CI 1.66-1.83, p<0.001)
Discharge to a skilled nursing facility	(OR 1.93, 95%CI 1.82-2.05, p<0.001)
Total length of stay	(OR 1.46, 95%CI 0.29-1.62, *p* <0.001)
Cost	$17,798.88 (15,458.44 - 20,139.33) p<0.001

Methods

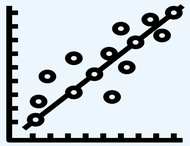
- NIS (2015 - 2019)
- CRC patients undergoing (elective or emergent) surgery



- Outcomes:
  - *Primary*: in-hospital postoperative morbidity and mortality
  - *Secondary:* System-specific postoperative morbidity, length of stay (LOS), in-hospital healthcare cost, and discharge disposition



- Univariable and multivariable regressions to compare frailty status



Discussion

- Frail patients had higher rates of postoperative complications, morbidity and mortality were more likely to require ICU admission, and were less likely to be discharged directly home following surgery, **higher healthcare utilization**
- **Prehabilitation** might have a beneficial role
- **mFI-11 score can be of value in predicting postoperative outcomes and medical expenses**



- **Screening** patients with frailty before surgery may improve outcomes and allow for the provision of individualized preoperative counselling

