



Modified Frailty Index and Postoperative Complications in Seniors Undergoing Elective Aesthetic Surgery



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BACKGROUND

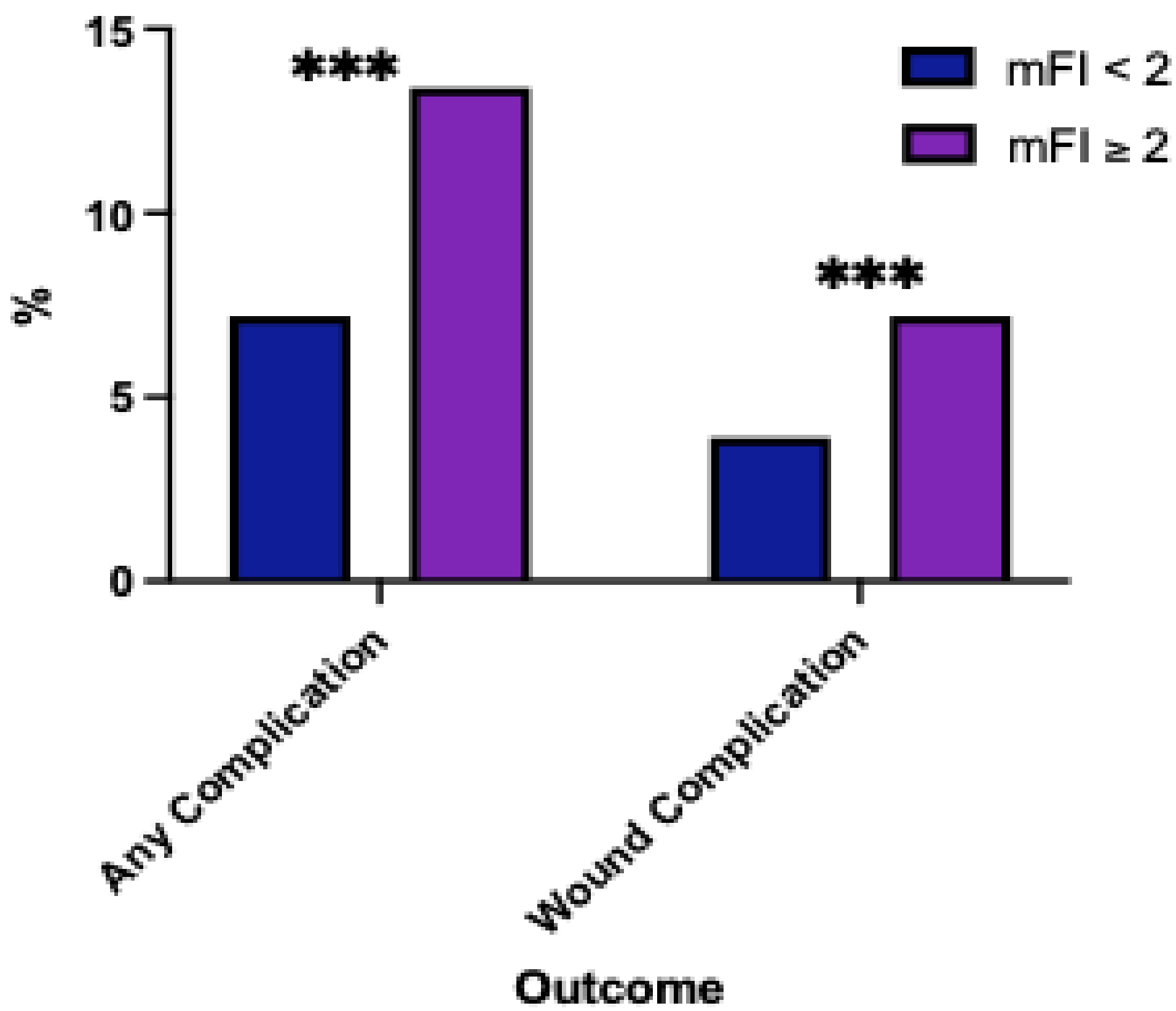
- Demand for aesthetic surgery in adults ≥ 65 is rising
- Current risk stratification relies on age, BMI, and ASA class, which may not fully capture physiologic vulnerability.
- Frailty (mFI-5) has emerged as a more comprehensive predictor of postoperative risk, but its role in aesthetic procedures remains poorly defined.
- **Objective:** Evaluate whether mFI-5 predicts 30-day complications in seniors undergoing aesthetic breast/body procedures.

METHODS

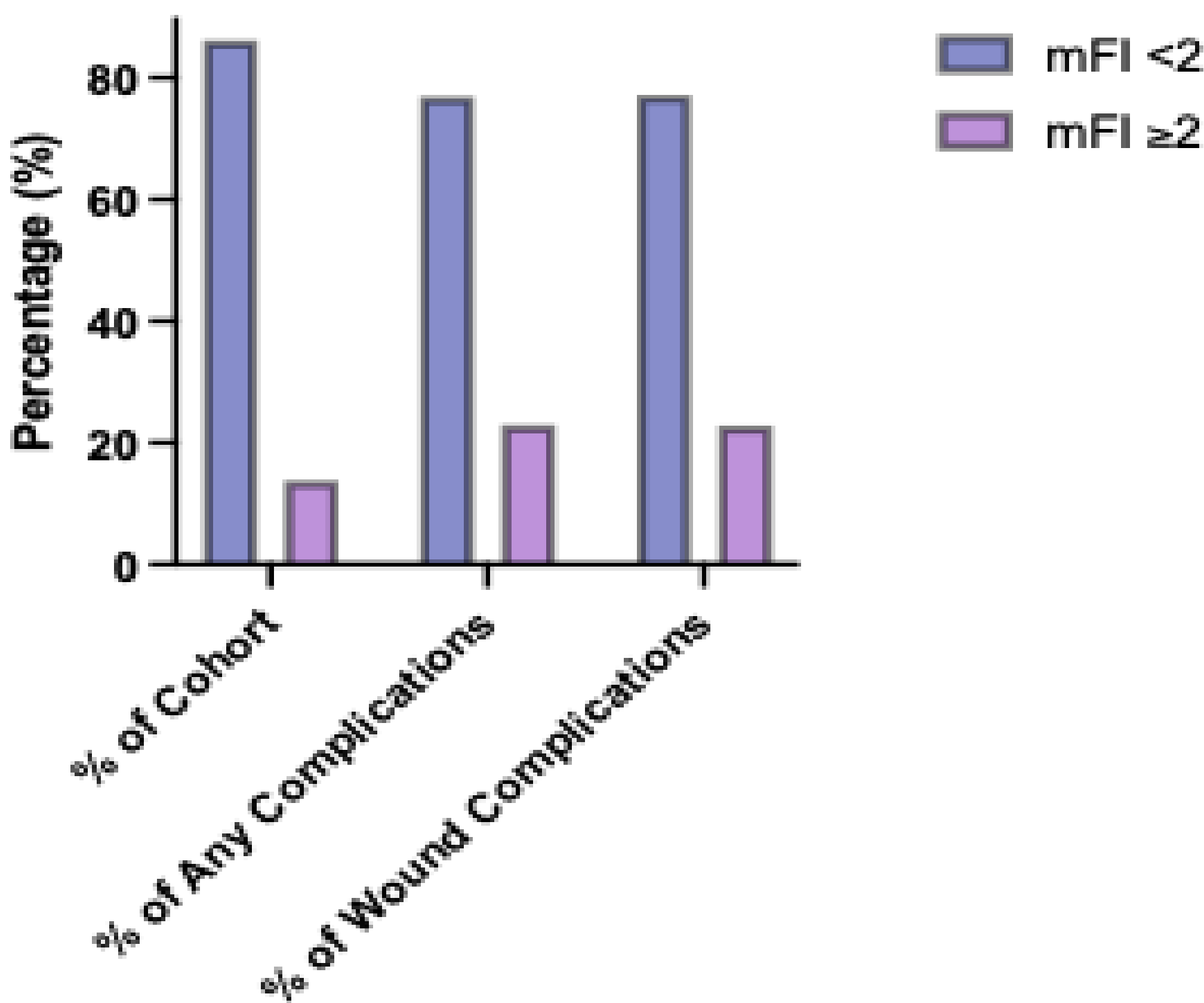
- **ACS-NSQIP Database (2009–2023)**
- Included procedures: elective aesthetic breast and body by CPT codes
- Frailty assessed using mFI-5; dichotomized as mFI < 2 , and mFI ≥ 2 (frail subgroup)
- Primary outcomes: wound complications and any 30-day complication (inclusive of wound events, medical complication, and reoperation)
- **Statistical analysis:**
- Bivariate analysis: chi-square/Fisher’s exact tests (categorical) and Mann-Whitney U tests (continuous)
- Multivariable logistic regression: any complication, wound complication
- Linear regression: length of hospital stay

RESULTS

Increased Postoperative Complication Rates in Frail Patients



Frailty and Disproportionate Complication Burden



RESULTS

- A total of 111,173 patients underwent elective aesthetic breast and body procedures, including 7,703 (69%) aged ≥ 65 years
- Among older adults, 1065 (13.8%) had mFI-5 ≥ 2 , while 6,638 (86.2%) had mFI-5 < 2
- Patients with mFI-5 ≥ 2 were more likely to undergo body procedures compared to those with mFI-5 < 2 (39.1% vs. 18.8%, $p < 0.001$)
- Although compromising 13.8% of the cohort, patients with mFI-5 accounted for:
 - 23.0% of all complications
 - 22.8% of all wound complications

On multivariable analysis, mFI-5 ≥ 2 remained an independent predictor of:

- Any complication (OR 1.32, 95% CI 1.03-1.70, $p = 0.028$)

Increasing BMI was also independently associated with higher odds of:

- Any complication (OR 1.28 per 5-unit increase)
- Wound complication (OR 1.34 per 5-unit increase)

($p < 0.001$)

CONCLUSION

- Frailty (mFI-5 ≥ 2) is an independent predictor of postoperative complications in patients ≥ 65 undergoing aesthetic surgery
- Frail patients represent a small proportion of the cohort but contribute disproportionately to complication burden
- Frailty assessment may improve preoperative risk stratification and patient selection in aesthetic surgery