



1. INTRODUCTION

- **Vulnerable Population:** Older adults (≥ 75 years) undergoing total joint arthroplasty (TJA) are at high risk for postoperative functional decline and loss of independence.
- **The Knowledge Gap:** The impact of anesthesia type on immediate in-hospital function and discharge disposition in patients ≥ 75 years remains unclear.
- **Objective:** To evaluate whether general anesthesia (GA) is associated with higher odds of early functional decline and non-home discharge compared to spinal anesthesia (SA) in patients aged 75 years and older undergoing elective TJA.

2. METHOD

- **Design:** Retrospective cohort study using the ACS NSQIP database (2021–2023).
- **Population:** Patients (age ≥ 75) undergoing elective total hip (THA) or knee (TKA) arthroplasty.
- **Exposure:** principal anesthesia type (general vs spinal)
- **Outcomes:** Primary outcome was functional decline (any reduction in ADL independence from baseline to discharge); secondary outcome was non-home discharge.
- **Analysis:** **Adjusted** for age, BMI, ASA class, comorbidities, and the 5-item modified frailty index (mFI-5).

3. RESULTS

N = 62,338 geriatric arthroplasty cases

Table 1: Selected Baseline Characteristics and Key Outcomes by Anesthesia Type

Variable	GA (n = 30,296)	SA (n = 32,042)	P value
Age, mean $\pm$ SD (y)	79 $\pm$ 6	79 $\pm$ 6	0.97
Female sex	18,752 (61.9%)	19,945 (62.3%)	0.52
BMI ≥ 30 kg/m ²	12,912 (42.6%)	12,874 (40.2%)	<0.001
ASA III–V	21,349 (70.5%)	19,161 (59.8%)	<0.001
Frailty (mFI-5 ≥ 2)	8,244 (27.1%)	6,456 (20.0%)	<0.001
History of dementia	1,485 (4.9%)	929 (2.9%)	<0.001
Preop functional	28,535 (94.2%)	31,147 (97.2%)	<0.001
Revision arthroplasty	4,516 (14.9%)	1,543 (4.8%)	<0.001
Length of stay >3 days	7,755 (25.6%)	4,197 (13.1%)	<0.001
Functional decline	11,666 (38.5%)	9,668 (30.2%)	<0.001
Discharge to non-home facility	6,836 (22.6%)	3,536 (11.0%)	<0.001

4. CONCLUSION

- In adults aged ≥ 75 years undergoing elective TJA, early functional outcomes is influenced by anesthesia type.
- Patients with general anesthesia was more likely to experience functional decline and non-home discharge after surgery.

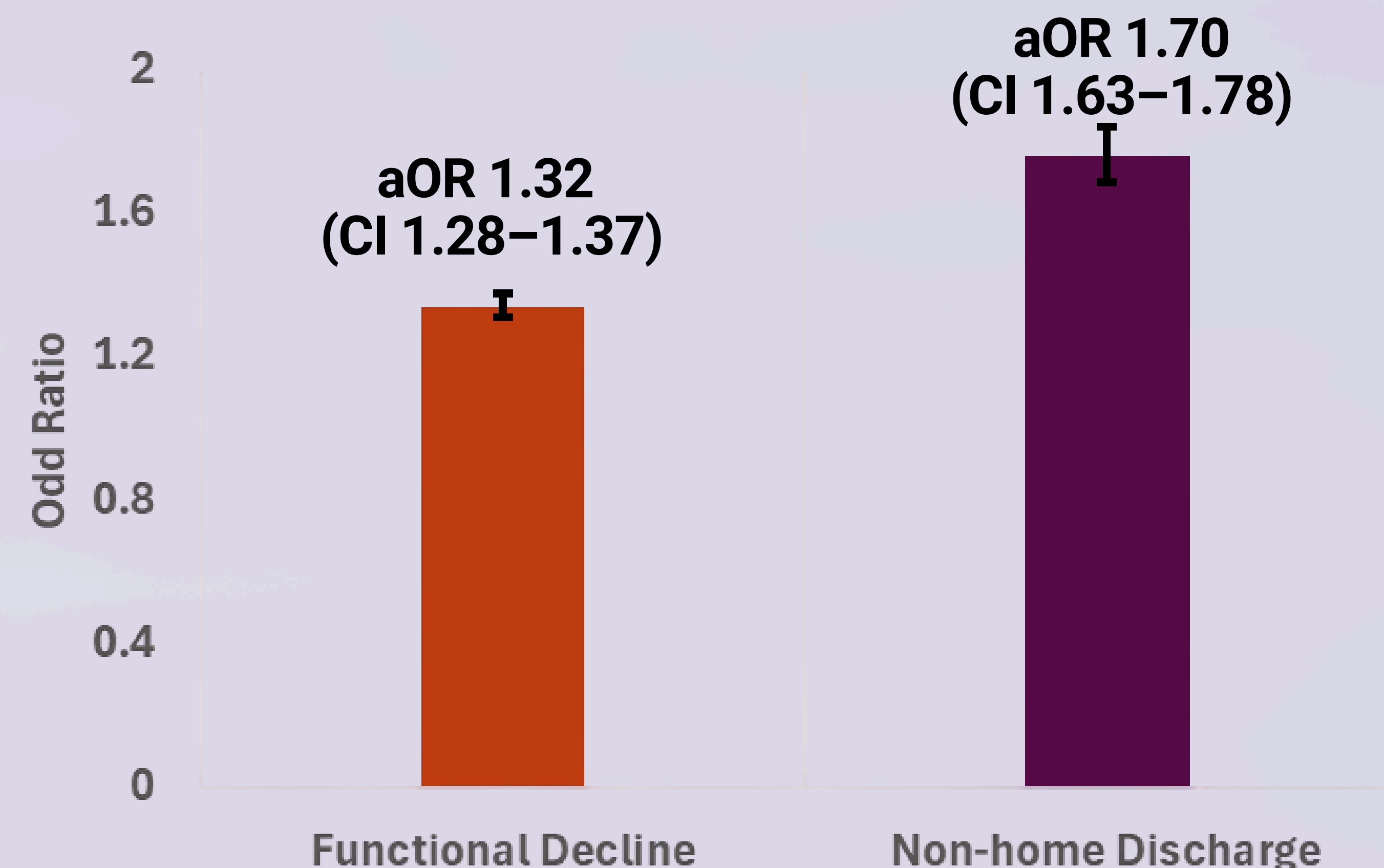


Figure 1: Association of General vs Spinal Anesthesia With Outcomes

