

Comparison of Demographic and Procedural Factors, and Pain Outcomes Between Survey-Responders vs Survey-Nonresponders

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INTRODUCTION

- Survey-based research in surgical populations is often limited by low response rates.
- Nonresponse bias may threaten the validity and generalizability of reported outcomes.
- Surgical patients face engagement barriers, including psychosocial stressors not routinely captured in the electronic medical record.

OBJECTIVE

Evaluate differences in demographic, procedural, and perioperative pain between baseline survey responders and nonresponders in a surgical patients

METHODS

- Prospective IRB-approved cohort study of adults undergoing elective non-day surgery (LOS ≥ 2 days) at Mass General Brigham (7/2024–10/2025).
- Enrolled patients were asked to completed a set of preoperative baseline electronic surveys
 - PROMIS-29
 - Pain Catastrophizing Scale (PCS)
 - Brief Pain Inventory (BPI)
 - Douleur Neuropathique 4 (DN4)
- Responder status
 - Responder: completed all baseline surveys; n=217
 - Nonresponder: did not complete all baseline surveys; n = 83
- Continuous variables were analyzed using t-tests and categorical variables using chi-square tests

RESULTS

Figure 1. Survey completion by surgical service.

Patients who received orthopedic surgery services were more likely to be survey responders as opposed to non-responders

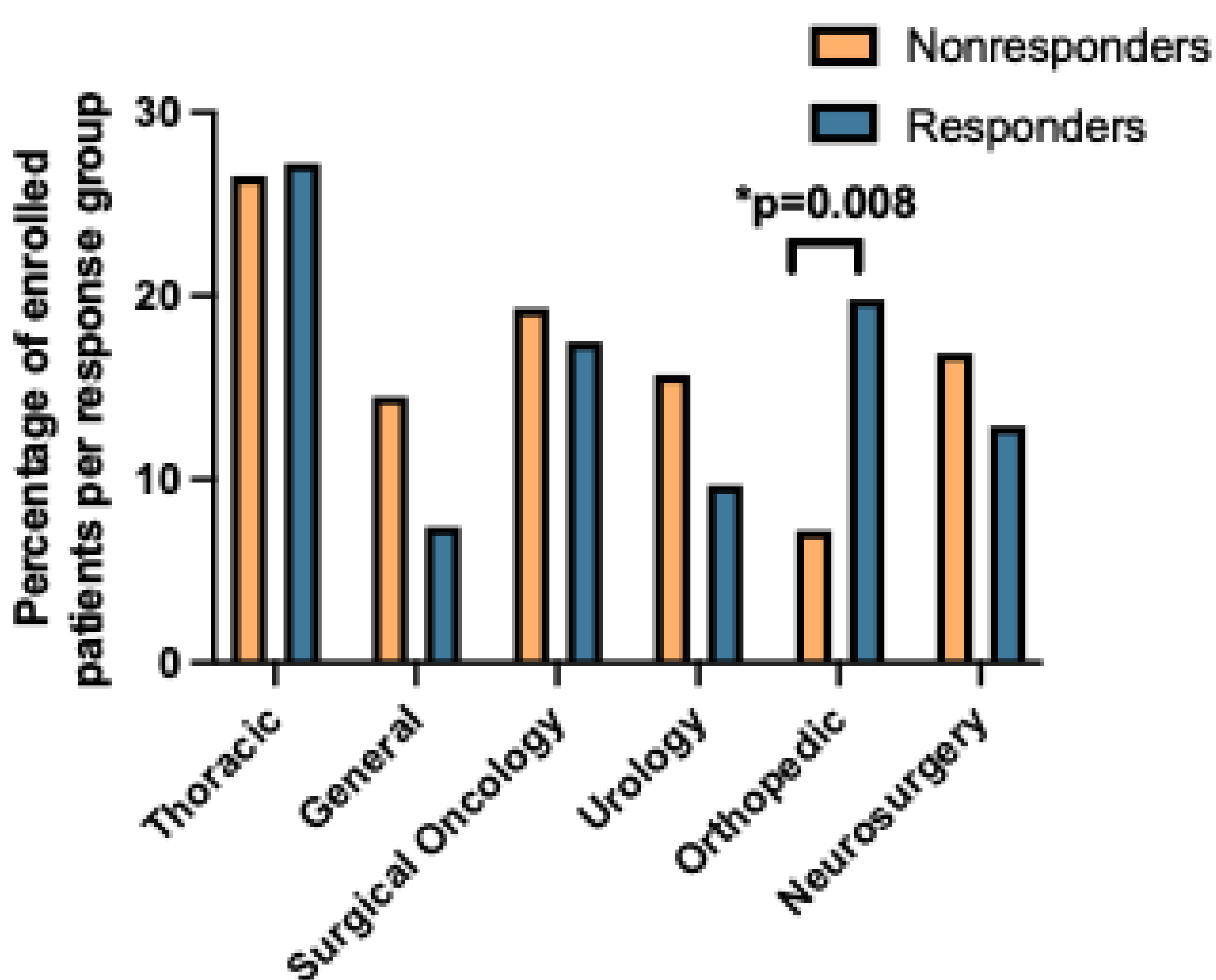


Figure 2. No difference in regional anesthesia delivery by survey responder status.

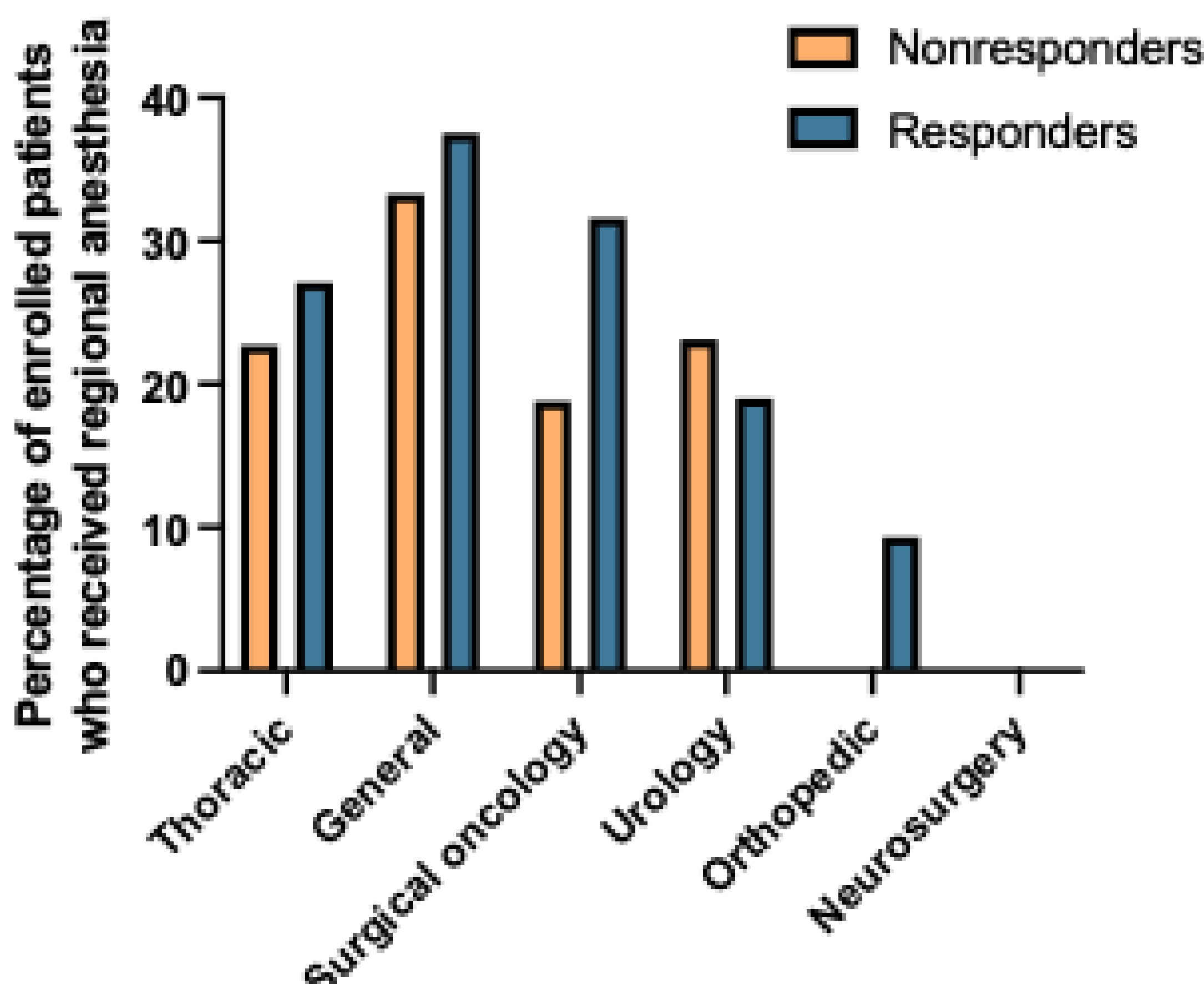


Figure 3. No difference in preoperative and postoperative day 1 (POD1) pain scores by survey responder status.

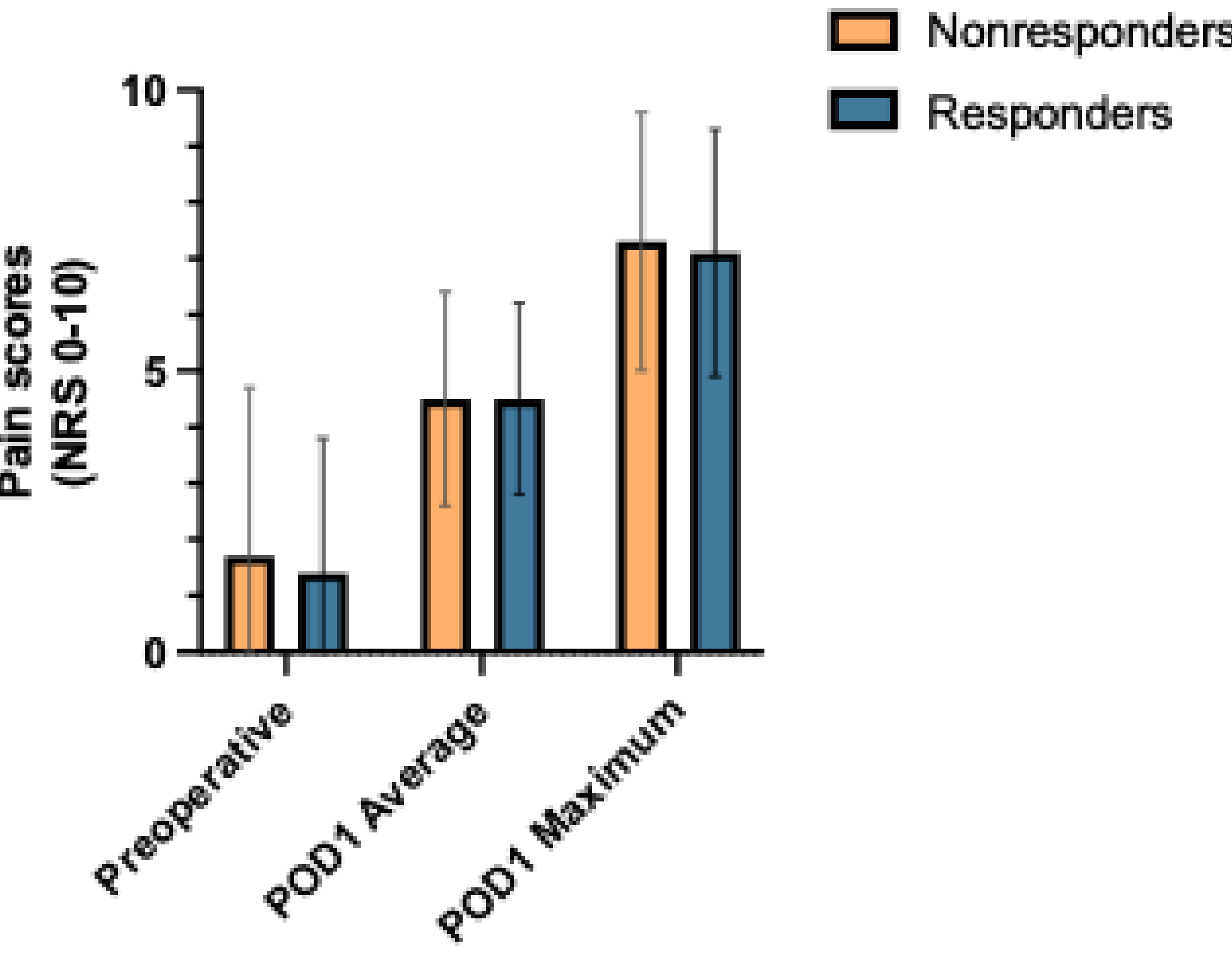


Table 1. Demographic, procedural, and outcomes by responder status

Variable	Responders (n = 217)	Nonresponders (n = 83)	p-value
Age (years)	63.5 $\pm$ 12.3	65.7 $\pm$ 10.6	0.337
BMI (kg/m ²)	28.3 $\pm$ 6.2	29.1 $\pm$ 6.5	0.545
Sex (n (%))			0.157
Male	102 (47.0)	37 (44.6)	
Female	115 (53.0)	46 (55.4)	
Surgical Duration (min)	241.1 $\pm$ 134.9	230.2 $\pm$ 137.4	0.488
Length of Stay (days)	5.4 $\pm$ 6.3	5.6 $\pm$ 4.9	0.665

CONCLUSION

- Responders and nonresponders were clinically similar across demographics, procedural factors, and outcomes, including length of stay and pain.
- Enrolled orthopedic patients were more likely to be baseline survey responders than nonresponders
- Focused retention efforts may improve engagement in select surgical groups.