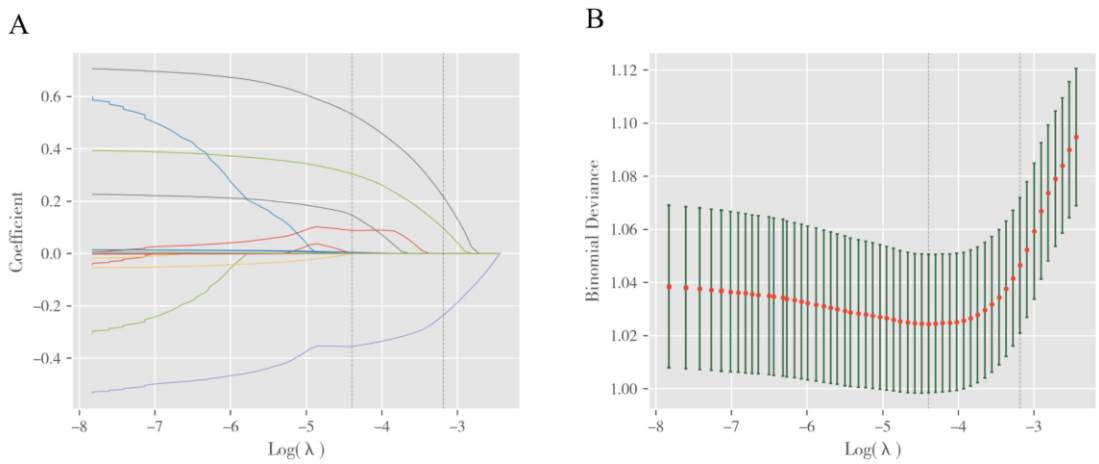

Supplementary Figure 1 Least absolute shrinkage and selection operator coefficient paths and cross-validation plots.

Supplementary Table 1 Distribution of nausea severity grades

Time	Grade 0	Grade I	Grade II	Grade III	Grade IV
POD 0	58.8%	25.0%	13.4%	2.7%	0.1%
POD 1a	41.6%	20.8%	20.8%	11.2%	5.7%
POD 1p	68.4%	17.4%	9.7%	3.8%	0.8%
POD 2a	77.7%	12.8%	7.1%	2.1%	0.3%
POD 2p	92.5%	4.9%	2.0%	0.5%	0.1%
POD 3a	96.1%	2.8%	1.0%	0.0%	0.0%
POD 3p	99.0%	0.7%	0.4%	0.0%	0.0%

POD 0, POD 1a, POD 1p, *etc.*, represent the day of surgery, post-operative day 1 at 8:00 AM, and post-operative day 1 at 8:00 PM, *etc.* a: 8:00 AM; p: 8:00 PM; POD: Post-operative day.

Supplementary Table 2 Distribution of vomiting severity grades

Time	Grade 0	Grade I	Grade II	Grade III	Grade IV
POD 0	78.7%	14.8%	6.1%	0.4%	0.0%
POD 1a	62.3%	16.3%	15.5%	5.8%	0.1%

POD 1p	85.1%	9.5%	4.6%	0.8%	0.0%
POD 2a	92.4%	5.4%	2.1%	0.1%	0.0%
POD 2p	98.8%	1.0%	0.2%	0.0%	0.0%
POD 3a	99.3%	0.7%	0.0%	0.0%	0.0%
POD 3p	99.6%	0.3%	0.1%	0.0%	0.0%

POD 0, POD 1a, POD 1p, *etc.*, represent the day of surgery, post-operative day 1 at 8:00 AM, and post-operative day 1 at 8:00 PM, *etc.* a: 8:00 AM; p: 8:00 PM; POD: Post-operative day.

Supplementary Table 3 Distribution of retching severity grades

Time	Grade 0	Grade I	Grade II	Grade III	Grade IV
POD 0	89.5%	7.2%	2.7%	0.6%	0.1%
POD 1a	76.2%	10.1%	7.8%	4.6%	1.3%
POD 1p	90.2%	5.5%	2.7%	0.8%	1.6%
POD 2a	94.7%	3.2%	1.9%	0.1%	0.1%
POD 2p	99.3%	0.4%	0.2%	0.1%	0.0%
POD 3a	99.1%	0.7%	0.3%	0.0%	0.0%
POD 3p	99.7%	0.3%	0.0%	0.0%	0.0%

POD 0, POD 1a, POD 1p, *etc.*, represent the day of surgery, post-operative day 1 at 8:00 AM, and post-operative day 1 at 8:00 PM, *etc.* a: 8:00 AM; p: 8:00 PM POD: Post-operative day.

Supplementary Table 4 Multivariable logistic regression analysis for moderate-to-severe postoperative nausea and vomiting (Index of Nausea, Vomiting, and Retching > 8)

Variable	Odds ratio (95%CI)	*P* value
Age	0.979 (0.962-0.997)	0.022
Dexmedetomidine		

No	Ref	
Yes	0.687 (0.524-0.900)	0.006
Preoperative INVR	1.101 (1.005-1.210)	0.040

PONV: Postoperative nausea and vomiting; INVR: Index of Nausea, Vomiting, and Retching.

Supplementary Table 5 Multivariable logistic regression analysis for vomiting-only outcome

Variable	**Odds ratio (95%CI)**	***P* value**
Apfel score		
0	Ref	
3	3.148 (1.079-10.529)	0.044
4	3.737 (1.272-12.565)	0.021
Duration of anesthesia	1.004 (1.000-1.007)	0.043
Dexmedetomidine		
No	Ref	
Yes	0.678 (0.520-0.883)	0.004