Supplementary Table 1. GRADE evidence profile of the outcomes

Outcomes	No. of studies (participants)	Risk of bias	Inconsistency	Indirectness	Imprecision	Other	Certainty (overall score)	Effect summary (SMD with 95% CI)
Baseline pain intensity	7 (611)	Moderate	High (I^2 = 77%)	Direct	Precise	None	Low ⊕⊕⊖⊖	SMD: 0.18; 95% CI: –0.13 to 0.49; *P* = 0.25
Pain at 3 hours	3 (401)	High	High (I^2 = 67%)	Direct	Precise	None	Very low ⊕⊖⊖⊖	SMD: –0.40; 95% CI: –0.79 to –0.02; *P* = 0.04
Pain at 6 hours	4 (473)	Moderate	High (I^2 = 94%)	Direct	Precise	None	Low ⊕⊕⊖⊖	SMD: –0.29; 95% CI: –0.85 to 0.27; *P* = 0.31
Pain at 12 hours	5 (533)	Moderate	High (I^2 = 88%)	Direct	Precise	None	Low ⊕⊕⊖⊖	SMD: –0.37; 95% CI: –0.92 to 0.18; *P* = 0.18
Pain at 24 hours	7 (611)	Moderate	High (I^2 = 96%)	Direct	Precise	None	Low ⊕⊕⊖⊖	SMD: –0.76; 95% CI: –1.79 to 0.27; *P* = 0.15

CI: confidence interval, SMD: standardized mean difference

Supplementary Table 2. Study outcomes

No	Author, year	Pain severity at rest*		Pain severity at cough		Hospital length of stay		Opioid administration**	
		SAPB	Control	SAPB	Control	SAPB	Control	SAPB	Control
1	El Malla et al.[20], 2022	T0: 7 [6–7] T0.5: 3 [2–3.5] T2: 3 [2–3.5] T6: 2 [2–2.5] T12: 3 [3–4] T24: 4 [3.5–5]	T0: 6 [6–7] T0.5: 3 [2–3] T2: 1 [0–1.5] T6: 2 [1–2] T12: 3 [2–3] T24: 4 [3–4]	T0: 7 [6.5–8] T0.5: 3 [3–4] T2: 2 [2–3] T6: 3 [2–3] T12: 4 [4–5] T24: 5 [4.5–6]	T0: 7 [7–8] T0.5: 3 [3–4] T2: 1 [0–2] T6: 2 [1–2] T12: 3 [3–4] T24: 5 [3.5–5]	NR	NR	NR	NR
2	Zengin et al.[14], 2025	T0: 48.0 [15.5) T1: 21.5 [8.75] T2: 16.0 [14.2] T4: 13.5 [12.25] T8: 15.0 [10.0] T12:19.5 [5.5] T24: 20.0 [7.5]	T0: 49.5 [14.7]) T1: 20.5 [11.75] T2: 16.5 [8.75] T4: 15.0 [9.0] T8: 27.0 [23.5] T12: 31.0 [14.0] T24: 30.0 [7.75]	T0: 67.0 [17.25] T1: 40.0 [9.75] T2: 37.0 [14.75] T4: 32.0 [10.0] T8: 30.0 [12.75] T12: 33.0 [8.5] T24: 38.0 [8.0]	T0: 69.5 [16.5] T1: 39.5 [15.25] T2: 39.5 [15.25] T4: 39.5 [15.25] T6: 43.5 [24.0] T12: 49.0 [7.75] T24: 48.0 [7.75]	NR	NR	NR	NR
3	Tekşen et al.[11], 2021	T0: 5.5 [5–6.25] T0.5: 1 [1–2] T1: 1 [1–1] T2: 1 [1–1] T4: 1 [1–1] T6: 1 [1–2.25] T12: 1 [1–3.25] T24: 1 [1–1]	T0: 5 [3–6] T0.5: 3 [2–4] T1: 3 [2–4] T2: 3 [2–4] T4: 3 [2–4] T6: 2.5 [2–4] T12: 2 [2–3.25] T24: 2 [2–2]	NR	NR	NR	NR	Tramadol: 98.33±74.13	Tramadol: 148.30±87.68
4	Abu-Elwafa et al.[22], 2021	T0: 9.1±0.7 T24: 0.6±0.7	T0: 9.3±0.8 T24: 1.15±0.8	NR	NR	NR	NR	NR	NR
5	Serra et al.[21], 2024	T0: 8 [8–9] T3: 4 [2–5] T6: 3 [2–4] T12: 3 [2–4] T18: 3 [2–4] T24: 3 [2–4]	T0: 7 [5–8] T3: 5 [4–6] T6: 4 [2–6] T12: 4 [3–5] T18: 4 [3–5] T24: 4 [2–5]	NR	NR	4 [3–6]	5 [4–6]	0 [0–20]	20 [0–40]
6	Sadauskas et al.[23], 2024	T0: 8.5±1.1 T3: 4.9±0.9 T24: 3.5±0.8	T0: 5.6±2.6 T3: 4.7±1.1 T24: 3.8±1.0	NR	NR	2.9 (95% CI 1.5–4.5)	2.3 (95% CI −1.6–6.2)	6 h: 5.4 [3.1–7.8] 12 h: 9.7 [5.7–13.7]	6 h: 4.2 [1.9–6.6] 12 h: 7.0 [3.5–10.5]
7	Partyka et al.[12], 2024	T0: 7 [6–8.5] T0.5: 6 [3–8] T1: 4 [3–7] T2: 4 [2–6] T3: 4 [2–6] T4: 4 [2–6] T6: 4 [2–5] T8: 4 [1–5] T10: 3 [0–5] T12: 3 [0.3–6] T16: 4 [2–5.8] T20: 4 [2–6] T24: 3 [0–6]	T0: 7.5 [5.8–9] T0.5: 7 [5–8] T1: 7 [5–8] T2: 6 [4–8] T3: 6 [3–7] T4: 6 [4–8] T6: 5 [3–6] T8: 4.5 [2–6] T10: 4 [2–6] T12: 4 [2–6] T16: 4 [2–6] T20: 4 [2–6] T24: 4 [0.3–6]	NR	NR	4.2 [2.2–7.7]	5 [3–7.3]	4 h: 10 [0–25] 12 h: 22.5 [10–65] 24 h: 45 [18.8–117.5]	4 h: 16.3 [4.7–35] 12 h: 52.5 [21.4–94.4] 24 h: 91.25 [34.4–155]

*Data are presented as mean ± SD or median [IQR]
**Data are presented as the total mean tramadol consumption within 24 hours (mean ± SD) or as morphine milligram equivalents (MME) expressed as median (IQR). Sadauskas et al.[23] reported MME as a mean with 95% CI
SAPB: serratus anterior plane block, NR: not reported, SD: standard deviation, IQR: interquartile range, CI: confidence interval