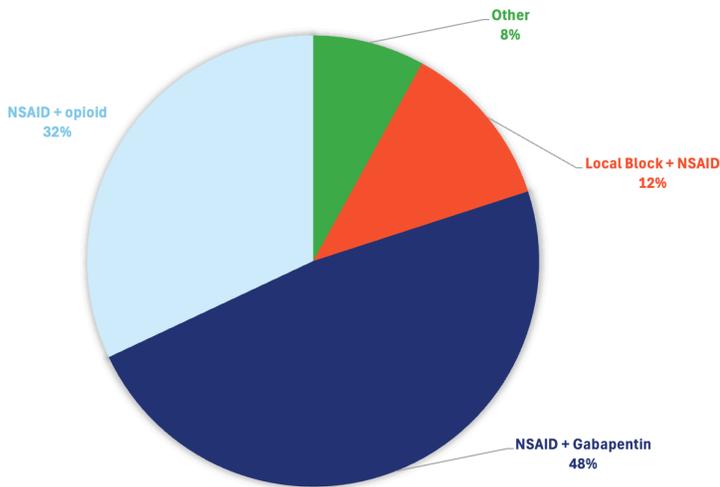
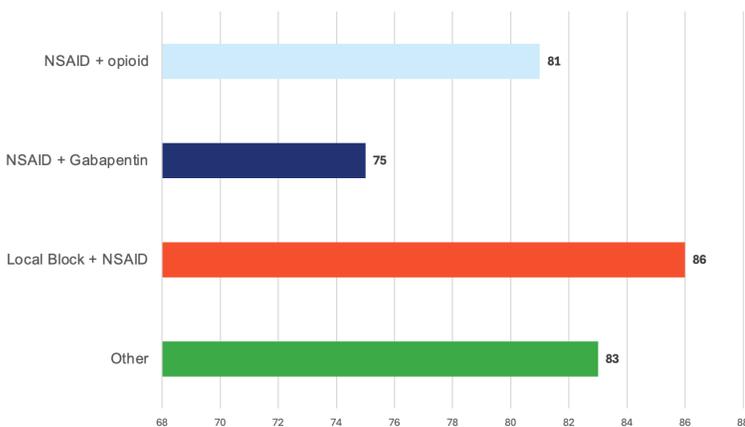


Postoperative Pain

Responding DVMs elected NSAID + Gabapentin as their primary choice for postoperative pain in canines, while a close second was NSAID + opioid depending on the case.



Treatment Selections



Effectiveness

Specialists Insight

For canine orthopedic surgery, the most reliable way to achieve consistent postoperative comfort is to treat pain from multiple angles— inflammation, nociception, and surgical-site transmission—rather than relying on a single drug class.

Why this approach works best

Contemporary pain management guidelines emphasize planning every orthopedic surgery around a multimodal framework, specifically:

- Opioid
- NSAID
- Local anesthetic technique

Local anesthetics are consistently highlighted as the most effective analgesic tools in small animal practice and should be incorporated into every orthopedic procedure, whenever feasible. Non-pharmacologic nursing measures (e.g., cold therapy, attentive postoperative care) further improve outcomes.



What specialists typically do in practice

For stifle and hip procedures, most specialists use:

- Ultrasound-guided femoral and sciatic nerve blocks or an epidural
- Systemic NSAID (if not contraindicated)
- Full μ -opioid in the immediate perioperative period

Randomized clinical studies show that femoral–sciatic nerve blocks provide analgesia comparable to epidural anesthesia for hind-limb orthopedic surgery, supporting either approach when properly performed.

Where common adjuncts fit (and don't)

Gabapentin

- Not first-line for acute postoperative orthopedic pain in dogs
- In a randomized TPLO study, adding gabapentin (20 mg/kg q8h) to carprofen did not improve pain scores or limb function
- Rescue analgesia use was low and similar between groups
- Current guidelines place gabapentin (and tramadol) as lower-tier or adjunctive options, not core analgesics

Ketamine CRI

- Useful in select high-pain cases (e.g., amputations)
- Low-dose ketamine CRI can reduce central sensitization and opioid requirements
- Supported by clinical evidence showing improved postoperative comfort in dogs undergoing more painful procedures

A practical “default” protocol for typical ortho cases

Premedication: Opioid

- Locoregional block: Femoral/sciatic block or epidural
- Intraoperative: Opioid \pm ketamine CRI (case-dependent)
- Postoperative: NSAID + opioid as needed
- Supportive care: Cold therapy and diligent nursing



How often does this approach produce positive outcomes?

If “positive” is defined as good to excellent pain control with minimal rescue analgesia and smooth recovery in the first 24–48 hours:

- Multimodal protocols incorporating locoregional anesthesia achieve effective analgesia in the majority of dogs (~80–90%)
- Rescue analgesia rates are relatively low, often $\leq 20\text{--}30\%$ in the first 24 hours, depending on procedure and assessment method
- Studies comparing femoral–sciatic blocks vs epidurals report similar pain scores and rescue requirements
- Adding gabapentin to NSAID-based protocols does not increase success rates in routine orthopedic cases
- In high-pain surgeries, adding a ketamine CRI can further improve comfort and increase the likelihood of a positive outcome

Bottom line (clinician take-home)

The most consistently effective, evidence-supported strategy for canine orthopedic postoperative pain is:

NSAID + opioid + locoregional anesthesia, tailored to the individual patient.

Adjuncts (ketamine CRI, alpha-2 agonists, lidocaine CRI in select scenarios) can be layered in for higher-pain cases. Routine gabapentin use for acute orthopedic postoperative pain has not demonstrated benefit in dogs and should not replace core analgesic strategies.

