Galliprant® (grapiprant tablets)

Elevating the Standard in Canine Osteoarthritis Care

How to integrate Galliprant into an expert-recommended, staged approach to treatment

INDICATION: Galliprant controls pain and inflammation associated with osteoarthritis in dogs.

Elanco™

Galliprant Treats Both Inflammation and Pain Without Tradeoffs

Why Galliprant is a first-line choice for canine OA treatment.

Doesn't just mask pain; controls inflammation and pain at the source by targeting the EP4 receptor of PGE_2

Unique mode of action reduces the impact on organ health[1,2]

Proven effective at improving pain interference, pain severity, quality of life and veterinary assessments[1]

Safety of label dose supported by laboratory study in healthy dogs receiving ~15x the dose continuously for 9 months*

*No adverse event was serious enough to require removal from study. Treatment was associated with mild GI signs (soft stools with mucus and/or blood, vomiting) and mild, reversible decreases in total protein and albumin. There were no clinically significant changes in liver, kidney or coagulation parameters, or pathologic changes within the kidneys, liver or stomach.

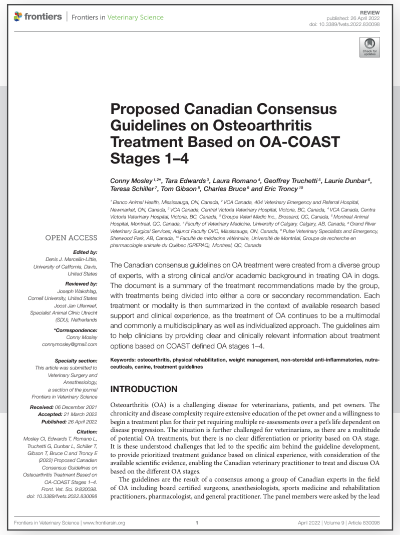
IMPORTANT SAFETY INFORMATION: For use in dogs only. Keep this and all medications out of reach of children and pets to prevent accidental ingestion or overdose. Galliprant is a non-COX inhibiting NSAID. As a class, NSAIDs may be associated with gastrointestinal, kidney and liver side effects. Evaluation for pre-existing conditions and regular monitoring are recommended. Do not use in dogs that have a hypersensitivity to grapiprant. Concomitant use of Galliprant with other NSAIDs or corticosteroids should be avoided. Concurrent use with other anti-inflammatory drugs or protein-bound drugs has not been studied. The safe use of Galliprant has not been evaluated in dogs younger than 9 months of age and less than 8 lbs (3.6 kg), dogs used for breeding, pregnant or lactating dogs, or dogs with cardiac disease. Owners should be advised to observe for signs of potential drug toxicity. Adverse reactions may include vomiting, diarrhea, decreased appetite, watery or bloody stools, and decreases in serum albumin and total protein. Please see product label or visit my.elanco.com/us/galliprant for full prescribing information.

Rethink Canine Osteoarthritis Treatment

Published Expert Treatment Guidelines by Stage of Disease[3,4]

The first treatment guidelines specific to canine OA are now available.

Proposed Canadian consensus guidelines on osteoarthritis treatment based on OA-COAST stages 1–4. Mosley C, Edwards T, Romano L, et al. *Front Vet Sci.* 2022;9:446.



COAST Development Group international consensus guidelines for the treatment of canine osteoarthritis. Cachon T, Frykman O, Innes JF, et al. *Front Vet Sci.* 2023;10:1137888.

CORE TREATMENTS: UNANIMOUS EXPERT CONSENSUS

	STAGE 1 ASYMPTOMATIC	STAGE 2 MILD OA	STAGE 3 MODERATE	STAGE 4 SEVERE OA
OWNER EDUCATION	✓	✓	✓	✓
LIFESTYLE MODIFICATIONS	✓	✓	✓	✓
First-line treatment options: NSAID: Treats joint inflammation and pain		✓	✓	✓
First-line treatment options: Anti-NGF mAb: Primarily treats pain			✓	✓

LIFESTYLE MODIFICATIONS

- Weight optimization
- Exercise/rehab appropriate for patient stage
- Administration of EPA-rich supplement or diet: minimum daily dose of 100mg/kg DHA/EPA

First-line treatment options

Consider individual patient needs and response to therapy

NSAID: Treats joint inflammation and pain

- Beginning with stage 2, administer NSAID daily for 1-3 moths before considering tapering dose or frequency of administration
  - Dogs in stages 3 and 4 are likely to require lifelong daily treatment

Anti-NGF mAb: Primarily treats pain

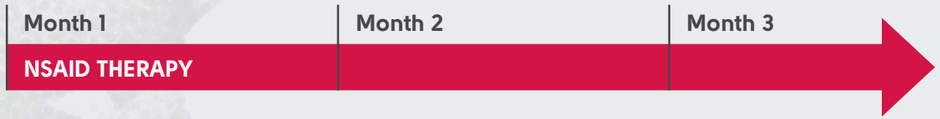
- Consider in stage 2 if refractory pain suggests neurogenic component
- Unknown if can be safely used with NSAIDs long-term

SECONDARY TREATMENTS[3,4]:

- Amantadine, gabapentin and cannabinoids should be reserved as secondary options after the recommended core treatments
- Due to limited evidence of beneficial effects and some quality and safety concerns, other joint supplements did not receive unanimous expert support

NSAID Use in Canine Osteoarthritis: What do the Experts Say?

Minimum of three months of daily NSAID therapy is recommended at first diagnosis



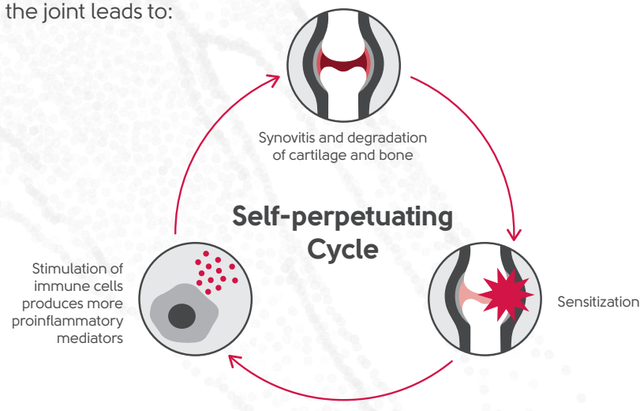
- Even in **mild stages of OA**, a minimum of three months of daily NSAID therapy is recommended before determining if the dose can be tapered.
- Dogs with **moderate to severe OA** are likely to require ongoing daily dosing for the long term.

"It's important to use NSAIDs long-term in dogs with OA, not just for 2 weeks or as needed. The goal isn't intermittent pain relief. It's to control pain and inflammation for a prolonged period."

Denis Marcellin-Little,DEDV, DACVS, DECVS, ACVSMR
Orthopedic Surgeon and Pain Management Expert

Inflammatory mediators play a pivotal role in OA pathogenesis.[5-7]

Increased **PGE_2** in the joint leads to:



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Galliprant is an ideal choice for long-term treatment because it works differently from other NSAIDs

"In our practice, Galliprant is a first-line, long-term NSAID because it doesn't interfere with production of prostaglandins, and our considerable experience reflects its impressive safety data."

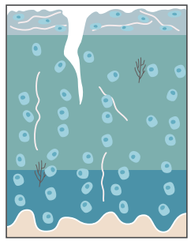
Mark Epstein, DVM, DABVP Canine, DABVP Feline, CVPP, DAAPM

"I think we're lucky Galliprant came to the market because it has a different mode of action than previously available NSAIDs. It blocks OA pain and inflammation without disrupting production of prostaglandins."

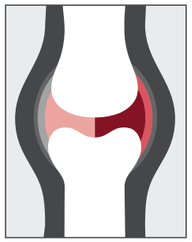
Carolina Medina, DVM, DACVSMR, CVA, CVPP
Sports medicine and pain management expert

NSAIDs treat pain and inflammation, while anti-NGF mAbs primarily treat pain

> **We diagnose dogs with OA after joint pathology has occurred, so there is already a moderate to highly inflammatory state in the joint. This should be addressed with NSAIDs first before considering adjunctive therapies such as blocking nerve growth factor, which targets pain sensation but is not directly anti-inflammatory so is reserved for later stages of OA."**
>
> **David Dycus,** DVM, MS, CCRP, DACVS

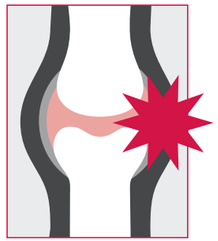


OA begins with Cartilage Damage[6]



Joint Inflammation

TREATMENT:
- NSAIDs



Nerve Sensitization

TREATMENT:
- NSAIDs
- Anti-NGF mAbs

Anti-NGF mAbs are not unanimously supported by experts until stages 3 and 4 because they target peripheral sensitization but not the underlying driver, joint inflammation.[3,4]

Despite proven analgesia, prior studies in humans, rodents and rabbits have demonstrated a detrimental effect of anti-NGF monoclonal antibodies on joint health, including:[8-12]

- Worsening cartilage degeneration and synovitis
- Altered osteoclast activity in subchondral bone
- Rapidly progressive osteoarthritis

In a recent study, dogs treated with Librela® (bedinvetmab) developed higher rates of radiographic OA compared to untreated control dogs following surgically induced femoral cartilage damage. The absence of a difference in weightbearing between groups in this study suggests a mechanism other than mechanical overloading may account for the radiographic changes associated with Librela® treatment, which included:[14]

- Osteophytosis
- Intra-articular mineralization
- Joint effusion
- Tibial subchondral sclerosis

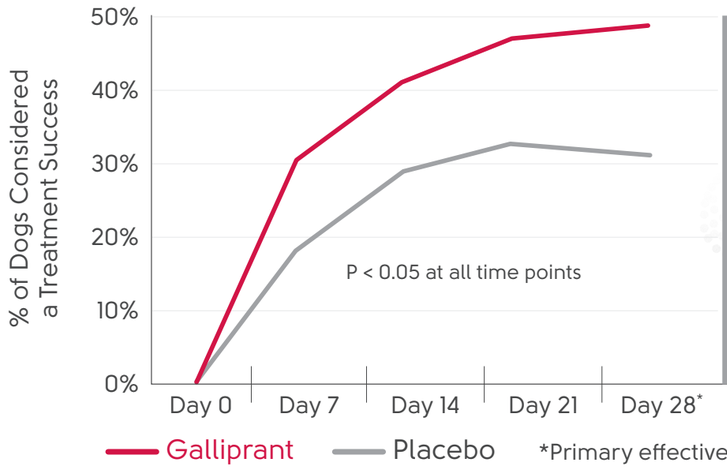
Clinical Implication:

NGF inhibition can be used to control OA pain, but further studies are needed to understand appropriate patient selection due to the potential for accelerated disease progression.

Galliprant: Long-term reliability and safety

Galliprant features a unique mode of action that effectively addresses inflammation and pain while reducing the impact on organ health.

Masked, randomized, placebo-controlled, multicenter field trial in 285 client-owned dogs[1]

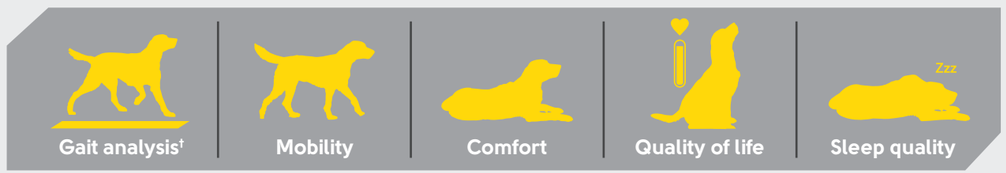


In a separate but similar study, carprofen showed a similar degree of efficacy[10]:

45.6% of treated dogs considered a success at Day 14 vs 23.7% in the placebo group

Treatment Success =Improvement in pain severity score of 1 or more **+** Improvement in pain interference score of 2 or more **+** Overall assessment same or better

In an Early Intervention Study[9], young dogs* treated with Galliprant continously for 4 months showed significant improvements in:



Early intervention with **Galliprant** as part of a **core treatment protocol‡** resulted in **significant improvements** in **young dogs with OA**

*Young dogs: 9-48 months
†Meaningful improvements in peak vertical force (force plate).
‡Study used three core treatments, unanimously recommended by experts: NSAIDs (Galliprant) to control joint pain and inflammation, an EPA-rich diet, and exercise.

Effectively control canine OA inflammation and pain at the source with Galliprant

	Galliprant (grapiprant tablets)	Rimadyl® (carprofen)	Previcox® (firocoxib)	Librela® (bedinvetmab)
FDA approved to control **pain** associated with canine OA	●	●	●	●
FDA approved to control **inflammation** associated with canine OA	●	●	●	
Does not disrupt production of prostaglandins important for organ health[1,2]	●			●
Safety of the label dose supported by a laboratory study in healthy dogs receiving up to ~15x the dose daily for 9 months*	●			
Stocked by more veterinary clinics in the U.S. than any other brand name NSAID[11]	●			

*No adverse event was serious enough to require removal from study. Treatment was associated with mild GI signs (soft stools with mucus and/or blood, vomiting) and mild, reversible decreases in total protein and albumin. There were no clinically significant changes in liver, kidney or coagulation parameters, or pathologic changes within the kidneys, liver or stomach.

Treating Canine OA Shouldn't be a Pain

- Galliprant is safe, effective, and easily given from the comfort of home without injections.
- It's a once-a-day, flavored chewable tablet that fits into your clients' daily routines.

See how a targeted approach to treating canine OA works.
Visit **my.elanco.com/us/galliprant** or contact your Elanco sales representative at **(800) 633-3796.**

References

[1]Rausch-Derra LC, Huebner M, Rhodes L. Evaluation of the safety of long-term, daily oral administration of grapiprant, a novel drug for treatment of osteoarthritic pain and inflammation, in healthy dogs. Am J Vet Res. 2015;76(10):853-9.

[2]Kirby Shaw K, Rausch-Derra LC, Rhodes L. Grapiprant: an EP4 prostaglandin receptor antagonist and novel therapy for pain and inflammation. Vet Med Sci. 2016;2(1):3-9.

[3]Mosley C, Edwards T, Romano L, et al. Proposed Canadian Consensus Guidelines on Osteoarthritis Treatment Based on OA-COAST Stages 1–4. Frontiers in Veterinary Science. 2022 Apr 26; 9:830098.

[4]Cachon T, Frykman O, Innes JF, Lascelles BD, Okumura M, Sousa P, Staffieri F, Steagall PV, Van Ryssen B. COAST Development Group's international consensus guidelines for the treatment of canine osteoarthritis. Frontiers in Veterinary Science. 2023 Aug 3;10:1137888.

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[12]Enomoto M, de Castro N, Hash J, et al. Prevalence of radiographic appendicular osteoarthritis and associated clinical signs in young dogs. Sci Rep. 2024 Feb;14(1):2827.

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[14]Elanco Animal Health. Data on file.

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