Guidelines for Intra-Articular Injections

Indications for autologous conditioned serum (ACS) therapy using the Orthogen® Device [1, 2]

- Chronic or acute joint inflammation
- Synovitis
- Post-operative care following joint surgery

Recommendations for intra-articular injection in dogs

1. Needle size [3]

- Small dog: 25–22G needle
- Medium to large dog: 22–20G needle
- Giant-breed dog: spinal needle may be required

2. Dosage of ACS [2, 5, 6]

Size of dog	**Large Joint** (Shoulder, Elbow, Hip and Stifle), mL of ACS	**Medium Joint** (Carpus and Tarsus), mL of ACS
Small dog (up to 10 kg)	1	0.5
Medium dog (11-25 kg)	2	1
Large dog (26-40 kg)	3	2
Giant dog (> 41 kg)	5	3

* These volumes are approximate and may vary based on specific clinical situations and the veterinarian's judgment. It's essential to adjust the volume based on the joint's capacity and the dog's overall size and health condition.

3. Dosage of Glucocorticoids [4] for concomitant injection approach

Triamcinolone acetonide

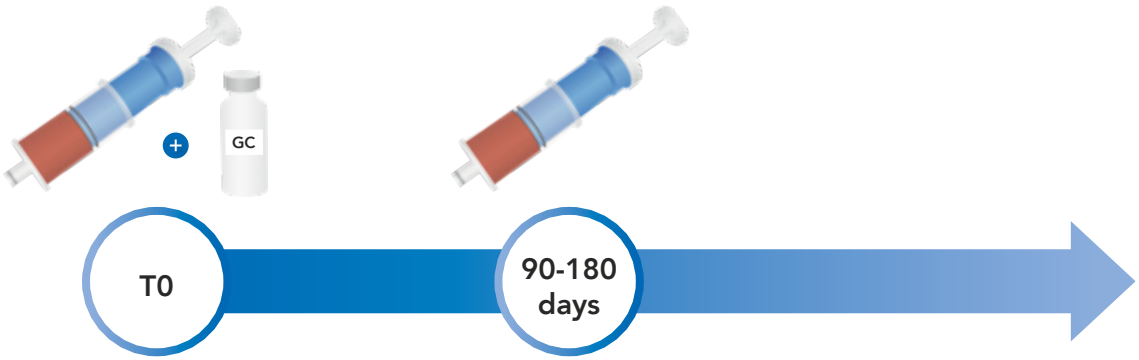
- Single-joint treatment: 0.5 mg/kg body weight
- Double-joint treatment: 0.25 mg/kg body weight

Orthogen's recommendations

- When puncturing a joint, withdraw as much synovial fluid as possible. This aids in thorough diagnostic evaluation and relieves joint pressure. Consequently a high concentration of administered therapeutic proteins contained in ACS is guarenteed.
- After an ACS injection, any remaining ACS can be stored for later use at -18°C.

Therapeutic application regimen

- Initial treatment: single intra-articular injection combined with glucocorticoids.
- Follow-up treatment: second intra-articular injection suggested (ACS only) at 3-6 months post-initial injection, for maintenance and OA management.



References

1. Wehling P et al.: ***Autologous Conditioned Serum in the Treatment of Orthopedic Diseases***. BioDrugs 21, 323–332 (2007). https://doi.org/10.2165/00063030-200721050-00004
2. Alves JC et al: ***A Comparison of Intra-Articular Blood Cell Secretome and Blood Cell Secretome with Triamcinolone Acetonide in Dogs with Osteoarthritis: A Crossover Study.*** Animals 2022, 12, 3358. https://doi.org/10.3390/ani12233358
3. Torres BT, Duerr FM: ***Arthrocentesis Technique.*** In: Duerr FM, editor. Canine Lameness, Wiley; 2020, p. 93–104. https://doi.org/10.1002/9781119473992.ch7
4. Gamble LJ et al.: ***Assessing the Systemic Effects of Two Different Doses of Intra-Articular Triamcinolone Acetonide in Healthy Dogs.*** VCOT Open, 2020; 03(02): e96-e102. https://doi.org/10.1055/s-0040-1716375
5. Kim S er al.: ***Intra-Articular Injections of Allogeneic Mesenchymal Stromal Cells vs. High Molecular Weight Hyaluronic Acid in Dogs With Osteoarthritis: Exploratory Data From a Double-Blind, Randomized, Prospective Clinical Trial.*** Front. Vet. Sci. 2022 9:890704. https://doi.org/10.3389/fvets.2022.890704
6. Zeira O et al.: ***Intra-Articular Administration of Autologous Micro-Fragmented Adipose Tissue in Dogs with Spontaneous Osteoarthritis: Safety, Feasibility, and Clinical Outcomes.*** STEM CELLS Translational Medicine 2018, 7: 819-828. https://doi.org/10.1002/sctm.18-0020

ORTHOGEN Veterinary GmbH
Ernst-Schneider-Platz 1 | 40212 Düsseldorf | Germany
T +49 211 3870050 | **F** +49 211 3870051
info@orthogen.vet | www.orthogen.vet

OV_Orthogen_Device_vet_Guidelines_i-a-injection_en_Ver001 | 07.2024