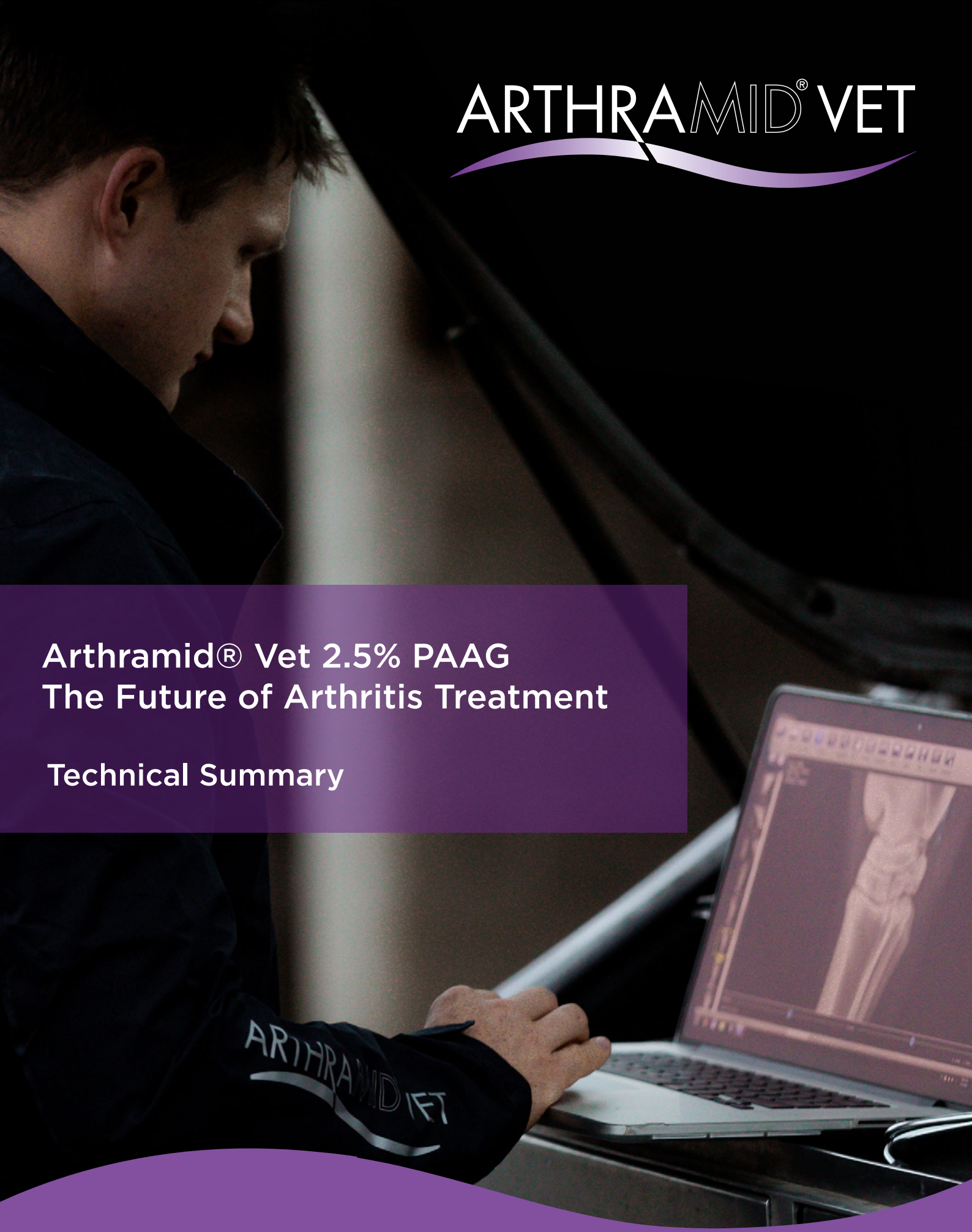
ARTHRAMID® VET

Arthramid® Vet 2.5% PAAG
The Future of Arthritis Treatment

Technical Summary



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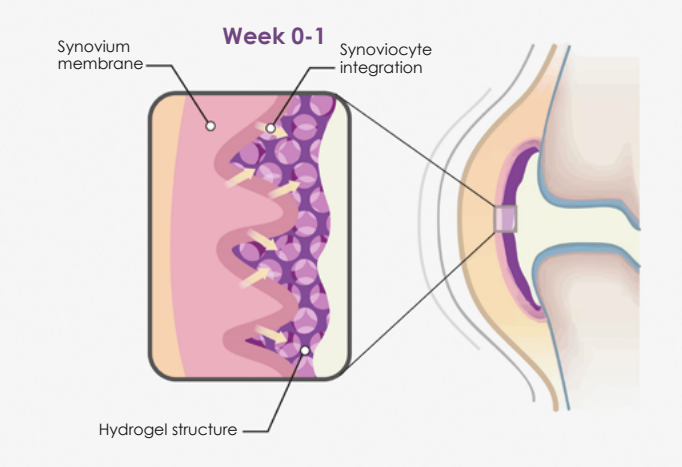
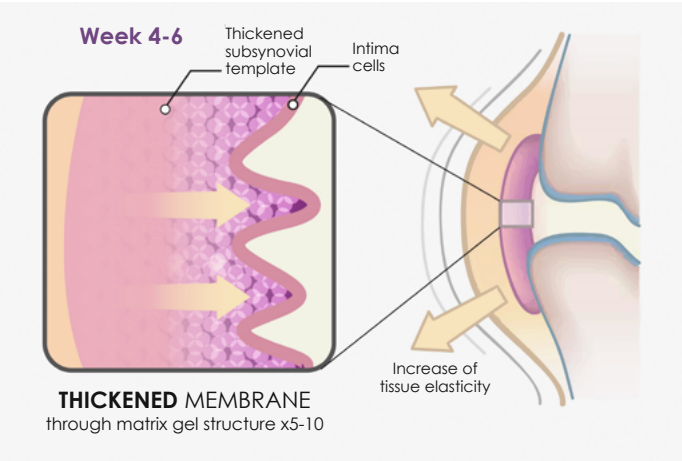
Arthramid® Vet

Arthramid® Vet is a unique and patented hydrogel offering an innovative, safe treatment option for veterinarians. It is used to manage arthritic joints in animals through its precise therapeutic action upon the synovium of the joint which results in improved joint function and modification of the disease process.

Sterile 1mL pre-filled syringe with a Luer-lock fitting

Arthramid® Vet is produced by a patented process called In-line Cross-Linking Technology (ILX Technology), forcing water molecules between the cross-linked polymers of polyacrylamide (CAS No. 9003-05-8), that provides the gel with exceptional and irreversible molecular stability and the ability to retain its viscoelastic properties in situ. It acts as a tissue scaffold that is inert, biocompatible, neuro-innocuous and non-pharmaceutical.

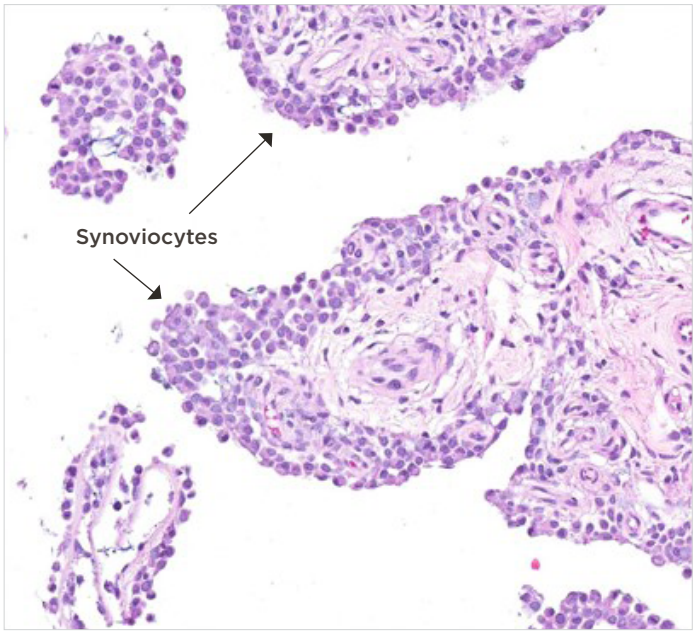




Mode of Action

Upon injection into the joint Arthramid® Vet adheres to the synovial lining, reducing exposure of synoviocytes to pro-inflammatory cytokines in the inflamed or diseased joint.

The infiltration of mononuclear cells may further lead to the release of anti-inflammatory cytokines (such as IL-1 receptor antagonist protein, transforming growth factor — beta 1, and insulin-like growth factor 1 amongst others).



Magnification of synoviocyte hyperplasia and hypertrophy (5-year old TB gelded horse; 42 days; RFC Prox. 20x).

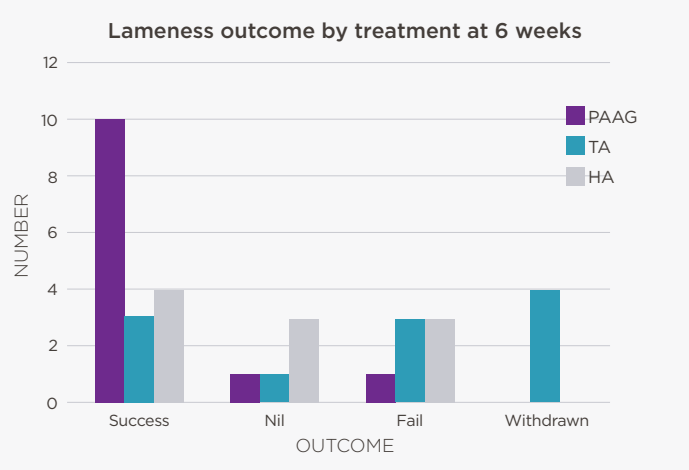
Throughout 14 up to 42 days the gel becomes fully integrated into the synovium and joint capsule by a combination of cell migration and vessel ingrowth forming a thick, cushion-like membrane consisting of blood vessel and collagen integrated gel covered by a new and hypercellular synovial cell lining.

> "increases the elasticity and tensile strength of the capsule improving its capacity to transfer load"

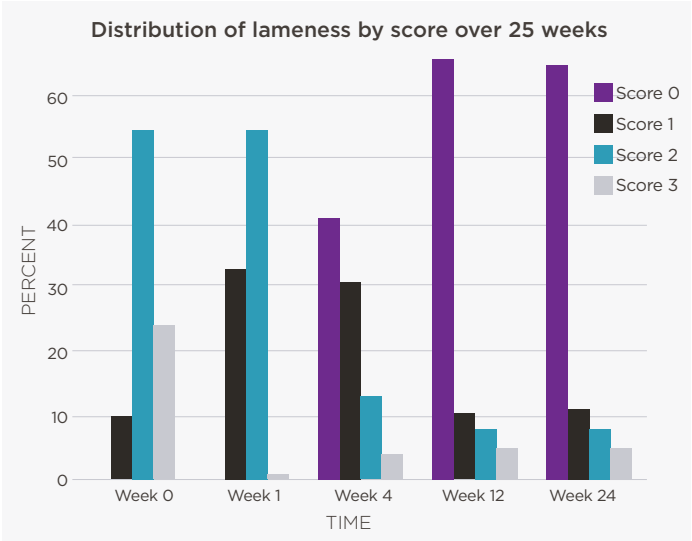
As a result, Arthramid® Vet has a long-lasting augmentation effect on both the joint capsule and synovium. It increases the elasticity and tensile strength of the capsule improving its capacity to transfer load resulting in a reduction in mechanoreceptor and nociceptor activation in the capsule itself. The formation of a new and hypercellular synovial cell lining further improves the nature of synovial fluid and, when combined these properties reduce the pain and inflammation of synovitis and restore joint function.

Clinical Efficacy

Multiple clinical studies have proven efficacy of > 82.5% in both humans and animals, with long-lasting and superior results compared to conventional treatments.



Comparison of 2.5% PAAG versus Triamcinolone (TA) and Hyaluronic Acid (HA) in a double blinded positive control study (pending publication) in horses showing 83.3% successful resolution of lameness at 6 weeks in Arthramid® Vet treated group.



Distribution of lameness scores at baseline (Week 0) and at 1, 4, 12, 24 weeks following treatment with Arthramid® Vet, showing 65.3% of horses still lame-free at 24 weeks, JEVS 77 (2019) 57-62.

"long-lasting and superior results compared to conventional treatments"

Case Selection

Arthramid® Vet can be used in any joint that is displaying clinical signs of dysfunction, such as effusion, reaction to flexion, lameness and those with abnormal findings detected using diagnostic imaging modalities such as radiology, ultrasonography, CT or MRI. It is recommended for use as early as possible in the joint disease process, e.g. synovitis and capsular stiffness.

Following treatment animals should be rested for 48 hours. After this time, the animal can return to low impact exercise until a response to treatment is seen — typically 2-4 weeks after treatment.

Animals will show a gradual reduction in lameness and a concurrent reduction in reaction to passive flexion. By 4 to 6 weeks no further improvement is expected, and re-examination at that time is indicated to either administer a second dose in those that have partially responded (around 15% of cases) or to reassess accuracy of the diagnosis.

It is important for owners to understand this time lag for a treatment effect to be seen as this contrasts with conventional therapies. One should also consider treating the animal during periods of reduced exercise demands or early in the animal's training programme.

When a more immediate reduction in joint inflammation is required, veterinarians can also still consider using conventional IA medications followed by treatment with Arthramid® Vet 2-4 weeks later (depending on the IA medication used) to assist longer term management of the affected joint(s).

Dose & Administration

Arthramid® Vet is for intra-articular injection only. The dose injected into each joint can be varied depending on the severity of disease, the size of the joint and duration of clinical signs. The following dosage recommendations have been made for horses based on observed clinical responses to treatment;

Distal Interphalangeal:	1-2mls
Proximal Interphalangeal:	1 mls
Metacarpo/tarso-phalangeal:	1-3 mls
Carpus:	1-3mls
Tarsometatarsal/Distal Intertarsal:	1 ml
Tarsocrural:	2-3 mls
Shoulder:	2-3 mls
Stifles:	1-2 ml/compartment

Repeated doses of Arthramid® Vet can be given at 6 to 12-month intervals if clinically indicated.

ARTHRAMID® VET

For further information, including our White Paper and User Guide scan the QR code above or visit
www.arthramid.com.au or **www.arthramid.co.nz**

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+61 (0) 408 899 940
sales@imsvet.com
www.arthramid.com.au

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+64 (0) 9 8013 253
sales@imsvet.com
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