CONVENIA®
exceptional efficacy
through guaranteed compliance

One single injection to fight infection

- High efficacy against skin and soft tissue infections\textsuperscript{1,2,3}
- Demonstrated success in the treatment of urinary tract infections\textsuperscript{4,5}
- Assured course of treatment\textsuperscript{*}

\textsuperscript{*} equivalent to a fully compliant daily, oral antibiotic regimen prescribed for common skin and soft tissue infections (SSTI) and urinary tract infections (UTI)
Optimising Treatment Efficacy

CONVENIA’s unique pharmacokinetic profile represents a profound advance in companion animal antibiotic therapy

How does Convenia achieve this unique pharmacokinetic profile?

- Convenia is rapidly and completely absorbed from the subcutaneous injection site.
- Convenia exhibits a high degree of binding to plasma proteins (≥ 96%), creating a plasma reservoir to provide a full course of treatment in a single injection.
- Plasma protein-bound Convenia molecules are in equilibrium with active, free drug, maintaining effective levels at the site of infection for up to 14 days.
- Only free drug is eliminated via the kidneys, thus contributing to the unique, long elimination half-life of Convenia.

* S. intermedius, P. multocida
Highly efficacious against a wide range of bacteria

Against Gram+ and Gram- aerobes and anaerobes¹

<table>
<thead>
<tr>
<th></th>
<th>Dog SSTI**</th>
<th>Cat SSTI**</th>
<th>Dog UTI**</th>
<th>Cat UTI**</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Staphylococcus intermedius</em></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>β-haemolytic Streptococcus spp.</em></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pasteurella multocida</em></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli</em></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td><em>Proteus spp.</em></td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td><em>Prevotella spp.</em></td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Fusobacterium spp.</em></td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Bacteroides spp.</em></td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** SSTI = skin and soft-tissue infections, UTI = urinary tract infections

Convenia covers the key pathogens (including *β*-lactamase producing strains) in canine and feline SSTI and UTI.

Key pathogens are more susceptible to CONVENIA

**MIC₉₀ results for key pathogens²**

<table>
<thead>
<tr>
<th>Bacterial isolate**² (n)</th>
<th>MIC₉₀ (µg/ml)</th>
<th>Cefovecin</th>
<th>Cephalexin</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Staphylococcus intermedius</em> (270)</td>
<td>0.25</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>β-hemolytic Streptococcus spp.</em> (86)</td>
<td>0.12</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Pasteurella multocida</em> (193)</td>
<td>0.12</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli</em> (260)</td>
<td>1</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td><em>Proteus spp.</em> (71)</td>
<td>0.25</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td><em>Prevotella spp.</em> (75)</td>
<td>1</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><em>Fusobacterium spp.</em> (26)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Bacteroides spp.</em> (32)</td>
<td>2</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

Convenia was more potent than cephalexin when tested *in-vitro.*

¹ NZ CONVENIA ACVM approved label
Clinical Efficacy in skin and soft tissue infections in dogs and cats

Clinical efficacy studies, involving over 2,250 dogs and cats have confirmed the efficacy of Convenia in the treatment of skin and soft tissue infections.

Convenia’s efficacy has been shown to be comparable or better than an oral cephalosporin, amoxicillin/clavulanic acid and, orbifloxacin when taken in highly compliant controlled conditions.1-5,8,9

Case study

Patient information
Age: 7 months
Breed: Fox Terrier

Before

Generalised demodicosis with secondary pyoderma

After

After 1 injection of Convenia and the administration of ivermectin
Poor compliance is widespread

Human compliance studies show...

- Regardless of the disorder, the nature or cost of the treatment, or the cultural background of the patient, compliance with treatment recommendations is not assured.\(^\text{10}\)

- Similarly, condition severity does not indicate likely treatment compliance:
  - In one study, 40% of cancer patients did not adhere to the recommended treatment regimen\(^\text{11}\)
  - 25% of patients with renal transplants were non-compliant with prescribed medication, which may cause transplant rejection\(^\text{12}\)

- Regardless of the emotional tie, compliance with medical advice is not guaranteed:
  - Only 7% of 300 children with acute otitis media received the medication from their parents exactly as prescribed\(^\text{13}\)

... and in veterinary medicine

Percentage of dog owners that were fully compliant in 3 studies

- Up to two thirds of dog owners failed to give medication at the correct time intervals\(^\text{15,16}\)

Poor owner compliance and insufficient length of treatment are cited by veterinarians as the most important factors in antibiotic treatment failure.
Poor compliance is difficult to measure or predict

- Just as in human medicine,\textsuperscript{17,18,19} research from veterinary medicine shows that a veterinarian’s prediction of compliance was no better than chance.\textsuperscript{20}

"Unfortunately our ability to predict good compliance is not better than chance… The only practical answer is to treat every client as a potential poor complier."

Dr Jill Maddison: BVSc, Dip. Vet. Clin. Stud, PhD, FACVSc, MRCVS, Director of Professional Development, CPD Unit, Royal Veterinary College, UK

Compliance problems in dogs are more common than many veterinarians might think.\textsuperscript{14,20}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{pie_chart}
\caption{Difference between self report and pill count\textsuperscript{20}}
\end{figure}

71% of pet owners reported compliance with treatment recommendations; yet only 10% of these owners were confirmed to be compliant by electronic monitoring of pill counts.
Efficacy is lost with poor compliance

Poor compliance substantially raises the risk of treatment failure.

Data from studies in humans show that the success rate of an antibiotic treatment is directly linked to treatment compliance.\textsuperscript{21,22}

![Success rates in compliant and non-compliant human patients](image)

Optimal efficacy can only be achieved when antibiotics are taken for the full course of treatment.
CONVENIA has an excellent safety profile, typical of β-lactam antibiotics

Administration:
Convenia allows for an entire treatment course in the hands of the veterinarian, removing the potential of owner administration error and an associated inadequate response.

Local tolerance:
Convenia is well-tolerated: it is a low volume (1mL/10kg), subcutaneous non-depot aqueous solution that is rapidly and completely absorbed from the site of injection. Even at 22.5 times the label dose, no significant adverse reactions were observed.\textsuperscript{23,24}
Systemic tolerance:
In registration safety studies involving over 1,000 dogs and cats, no serious adverse reactions were noted.

Repeated dosing at 7-day intervals at 1.5, 4.5 and 7.5 times the recommended dose was well tolerated in dogs and cats.²⁵-²⁸

Convenia has been concurrently administered with a variety of other commonly used veterinary medicines including flea control products, heartworm preventatives, sedatives and tranquillisers, anaesthetic agents, routine immunisations, and non-steroidal anti-inflammatories, without evidence of drug interactions.*

At the time of the New Zealand launch over 4 million doses of Convenia will have been administered in dogs and cats worldwide, confirming the excellent tolerance suggested in the extensive registration studies. Consistent with other cephalosporins, uncommon occurrences of diarrhoea, vomiting, anorexia and lethargy have been reported.

* The safe use of this product administered concomitantly with other protein bound drugs has not been formally evaluated.
How to use CONVENIA

• Convenia is presented in a multi use vial containing lyophilised cefovecin sodium for reconstitution with 10mL of Sterile Water for Injection. For convenience, 10mL of Water for Injection is packaged with Convenia.

• Following reconstitution, refrigerate between 2 – 8°C in original packaging to protect from light and use within 28 days.

• Convenia is administered subcutaneously at a dose rate of 8mg/kg bodyweight, equivalent to 1mL/10kg.

• After reconstitution the colour of Convenia will darken over time, in common with other injectable cephalosporins. This does not affect the potency of the product.

Example of colour change after reconstitution.

The colour change has no impact on safety or efficacy provided that Convenia is stored as directed.
A single injection of CONVENIA provides a full course of therapy for the following:

<table>
<thead>
<tr>
<th>Dog</th>
<th>Cat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skin &amp; soft tissue infections:</strong></td>
<td><strong>Skin &amp; soft tissue infections:</strong></td>
</tr>
<tr>
<td>including pyoderma, wounds, and abscesses caused by susceptible strains of <em>Staphylococcus intermedius, β-haemolytic Streptococci, Escherichia coli</em> and/or <em>Pasteurella multocida.</em></td>
<td>abscesses and wounds caused by susceptible strains of <em>Pasteurella multocida, β-haemolytic, Streptococci Fusobacterium</em> spp., <em>Bacteroid</em> spp., <em>Prevotella oralis</em> and/or <em>Staphylococcus intermedius.</em></td>
</tr>
<tr>
<td><strong>Urinary tract infections</strong> associated with susceptible strains of <em>Escherichia coli</em> and/or <em>Proteus</em> spp.</td>
<td><strong>Urinary tract infections</strong> associated with susceptible strains of <em>Escherichia coli.</em></td>
</tr>
</tbody>
</table>

- For dog SSTI's, a single subcutaneous injection is recommended. Subject to clinical response, three further doses may be administered if necessary at 14 days intervals.
- For cat SSTI's, a single subcutaneous injection is recommended. If indicated, a further dose of Convenia may be administered.
- For dog and cat urinary tract infections a single subcutaneous injection of Convenia is recommended.
CONVENIA - now you’re in control

Convenia eliminates non-compliance as a potential cause of treatment failure because a single injection provides an assured course of antibiotic therapy, thus giving you the best chance of success.

CONVENIA

• Provides a greater chance of treatment success in real life conditions
• Provides satisfaction to the vet as you now control the treatment
• Provides relief to the pet owner as it relieves the stress and burden of treatment administration

Convenia is the only antibiotic to provide an assured course of treatment with a single injection lasting 14 days across a broad range of skin and soft tissue infections.

References: