

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Nelio 5 mg tablet for cats

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains:

### Active substance:

Benazepril (as hydrochloride)..... 4.60 mg

(equivalent to benazepril hydrochloride..... 5.00 mg)

### Excipients:

<b><u>Qualitative composition of excipients and other constituents</u></b>
Pig liver flavour
Yeast
Lactose monohydrate
Croscarmellose sodium
Anhydrous colloidal silica
Hydrogenated castor oil
Microcrystalline cellulose

Clover shaped scored beige tablet, divisible into halves or quarters.

## 3. CLINICAL INFORMATION

### 3.1 Target species

Cats.

### 3.2 Indications for use for each target species

Reduction of proteinuria associated with chronic kidney disease.

### 3.3 Contraindications

Do not use in cases of hypersensitivity to the active substance or to any of the excipients.

Do not use in cases of hypotension, hypovolaemia, hyponatraemia or acute renal failure.

Do not use in cases of cardiac output failure due to aortic or pulmonary stenosis.

Do not use during pregnancy or lactation (section 3.7).

### 3.4 Special warnings

None.

### 3.5 Special precautions for use

#### Special precautions for safe use in the target species:

Efficacy and safety of benazepril have not been established in cats of weight less than 2.5 kg.

No evidence of renal toxicity to the veterinary medicinal product has been observed in cats during clinical trials, however, as is routine in cases of chronic kidney disease, it is recommended to monitor plasma creatinine, urea and erythrocyte counts during therapy.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:

Angiotensin converting enzyme (ACE) inhibitors have been found to affect the unborn child during pregnancy in humans. Pregnant women should take special care to avoid accidental oral exposure.

Wash hands after use.

In case of accidental oral ingestion, seek medical advice immediately and show the package leaflet or the label to the physician.

Special precautions for the protection of the environment:

Not applicable.

### 3.6 Adverse events

Cats:

Rare (1 to 10 animals / 10,000 animals treated):	Diarrhoea, Emesis Anorexia, Dehydration, Lethargy
Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Elevated creatinine <sup>1</sup>
Undetermined frequency (cannot be estimated from the available data):	Increased appetite, Weight gain

<sup>1</sup>At the start of therapy, in cats with chronic kidney disease. A moderate increase in plasma creatinine concentrations following administration of ACE inhibitors is compatible with the reduction in glomerular hypertension induced by these agents, and therefore is not necessarily a reason to stop therapy in the absence of other signs.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the national reporting system. See the package leaflet for respective contact details.

### 3.7 Use during pregnancy, lactation or lay

Pregnancy and lactation:

The safety of the veterinary medicinal product has not been established in breeding, pregnant or lactating cats.

Benazepril reduced ovary / oviduct weights in cats when administered daily at 10 mg / kg for 52 weeks. Embryotoxic effects (foetal urinary tract malformation) were seen in trials with laboratory animals (rats) at maternally nontoxic doses.

Do not use during pregnancy or lactation.

### 3.8 Interaction with other medicinal products and other forms of interaction

In humans, the combination of ACE inhibitors and Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) can lead to reduced anti-hypertensive efficacy or impaired renal function. The combination of the

veterinary medicinal product and other anti-hypertensive agents (e.g. calcium channel blockers,  $\beta$ -blockers or diuretics), anaesthetics or sedatives may lead to additive hypotensive effects. Therefore, concurrent use of NSAIDs or other medications with a hypotensive effect should be considered with care. Renal function and signs of hypotension (lethargy, weakness etc) should be monitored closely and treated as necessary.

Interactions with potassium preserving diuretics like spironolactone, triamterene or amiloride cannot be ruled out. It is recommended to monitor plasma potassium levels when using the veterinary medicinal product in combination with a potassium sparing diuretic because of the risk of hyperkalaemia.

### **3.9 Administration routes and dosage**

Oral use.

The veterinary medicinal product should be given orally once daily, with or without food. The duration of treatment is unlimited.

The veterinary medicinal product tablets are flavoured and are taken voluntarily by most cats.

Cats:

The veterinary medicinal product should be administered orally at a minimum dose of 0.5 mg (range 0.5-1.0) benazepril hydrochloride/kg body weight once daily according to the following table:

Cat weight (kg)	Number of tablets
2.5 – 5.0	0.5
>5. – 10.0	1

To ensure a correct dosage, body weight should be determined as accurately as possible.

In case of use of half tablets: Put the remaining half of the tablet back into the blister pocket and use for the next administration.

Instruction on how to divide the tablet: Put the tablet on an even surface, with its scored side facing down (convex face up). With the tip of the forefinger, exert slight vertical pressure on the middle of the tablet to break it along its width into halves. Then, in order to obtain quarters, exert slight pressure on the middle of one half with the forefinger to break it into two parts.

### **3.10 Symptoms of overdose (and where applicable, emergency procedures, and antidotes)**

The veterinary medicinal product reduced erythrocyte counts in normal cats when dosed at 10 mg/kg body weight once daily for 12 months, but this effect was not observed at the recommended dose during clinical trials in cats.

Transient reversible hypotension may occur in cases of accidental overdose. Therapy should consist of intravenous infusion with warm isotonic saline.

### **3.11. Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance.**

Not applicable.

### **3.12 Withdrawal periods**

Not applicable.

## **4. PHARMACOLOGICAL INFORMATION**

### **4.1 ATCvet code:**

## 4.2 Pharmacodynamics

Benazepril hydrochloride is a prodrug hydrolysed *in vivo* to its active metabolite, benazeprilat. Benazeprilat is a highly potent and selective inhibitor of ACE, thus preventing the conversion of inactive angiotensin I to active angiotensin II and thereby also reducing synthesis of aldosterone. Therefore, it blocks effects mediated by angiotensin II and aldosterone, including vasoconstriction of both arteries and veins, retention of sodium and water by the kidney and remodelling effects (including pathological cardiac hypertrophy and degenerative renal changes).

The veterinary medicinal product causes long-lasting inhibition of plasma ACE activity in cats, with more than 95% inhibition at peak effect and significant activity (>90%) persisting 24 hours after dosing.

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In cats with experimental renal insufficiency, the veterinary medicinal product normalized the elevated glomerular capillary pressure and reduced the systemic blood pressure.

Reduction in glomerular hypertension may retard the progression of kidney disease by inhibition of further damage to the kidneys. Placebo controlled clinical field studies in cats with chronic kidney disease (CKD) have demonstrated that the veterinary medicinal product significantly reduced levels of urine protein and urine protein to creatinine ratio (UPC); this effect is probably mediated via reduced glomerular hypertension and beneficial effects on the glomerular basement membrane.

No effect of the veterinary medicinal product on survival in cats with CKD has been shown, but the veterinary medicinal product increased the appetite of the cats, particularly in more advanced cases.

## 4.3 Pharmacokinetics

After oral administration of benazepril hydrochloride, peak levels of benazepril are attained rapidly (T<sub>max</sub> 2 hours) and decline quickly as the active substance is partially metabolised by liver enzymes to benazeprilat. The systemic bioavailability is incomplete due to incomplete absorption (<30%) and first pass metabolism.

Peak benazeprilat concentrations (C<sub>max</sub> of 110.0 ng/ml after a dose of 0.65 mg/kg benazepril hydrochloride) are achieved with a T<sub>max</sub> of 1 hour and half.

Benazeprilat concentrations decline biphasically: the initial fast phase (t<sub>1/2</sub>=2.4 hours) represents elimination of free drug, while the terminal phase (t<sub>1/2</sub>=29 hours) reflects the release of benazeprilat that was bound to ACE, mainly in the tissues.

Benazepril and benazeprilat are extensively bound to plasma proteins (85-90%), and in tissues are found mainly in the liver and kidney.

Repeated administration of the veterinary medicinal product leads to slight bioaccumulation of benazeprilat (R=1.36 with 0.5 mg/kg), steady state being achieved within a few days.

Benazeprilat is excreted 85% via the biliary and 15% via the urinary route. The clearance of benazeprilat is not affected in cats with impaired renal function and therefore no adjustment of the veterinary medicinal product dose is required in cases of renal insufficiency.

## 5. PHARMACEUTICAL PARTICULARS

### 5.1 Major incompatibilities

None known.

### 5.2 Shelf life

Shelf-life of the veterinary medicinal product as packaged for sale:

Polyamide-Aluminium-Polyvinylchloride/Aluminium heat-sealed blister pack 10 tablets per strip: 1 year.

Polyamide-Aluminium-Desiccant/Aluminium heat-sealed blister pack 10 tablets per strip: 2 years.

Shelf-life of divisions of the tablets: 72 hours.

### **5.3 Special precautions for storage**

Do not store above 25°C.

Store in original package in order to protect from moisture.

Any part-used tablet should be returned to the opened blister and used within 72 hours.

### **5.4 Nature and composition of immediate packaging**

Polyamide-Aluminium-Polyvinylchloride/Aluminium heat-sealed blister strip of 10 tablets  
or

Poylamide-Aluminium-Desicant/Aluminium heat-sealed blister pack 10 tablets per strip.

Box with 1 strip of 10 tablets

Box with 2 strips of 10 tablets

Box with 3 strips of 10 tablets

Box with 5 strips of 10 tablets

Box with 10 strips of 10 tablets

Box with 20 strips of 10 tablets

Box with 50 strips of 10 tablets

Not all pack sizes may be marketed.

### **5.5 Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products**

Medicines should not be disposed of via wastewater or household waste.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

## **6. NAME OF THE MARKETING AUTHORISATION HOLDER**

Ceva Santé Animale

## **7. MARKETING AUTHORISATION NUMBER(S)**

VPA10815/031/001

## **8. DATE OF FIRST AUTHORISATION**

03/06/2016

## **9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS**

19/02/2025

## **10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS**

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database.  
(<https://medicines.health.europa.eu/veterinary>).