

Veterinary Summary

Complete professional and owner-friendly compilation of all previous findings, treatment recommendations, medication overviews and supplementary information regarding leishmaniosis and long-term care.

Veterinary Findings Summary

Epicrisis and professional findings summary - Patient DOG

Patient	DOG
Species / Breed	Canis, mixed breed
Sex / Age	male, neutered; geriatric, approx. 14-15 years (as of 2025)

Reason for Referral

Presentation for professional assessment and further co-management of a geriatric patient with long-standing stable leishmaniosis, early chronic kidney disease, recurrent urinary tract symptoms during allopurinol therapy and suspected chronic subclinical pancreatitis.

Summary Assessment / Main Diagnoses

1	Chronic leishmaniosis (<i>Leishmania infantum</i>), serologically confirmed since approx. 2015; clinically stable under long-term allopurinol maintenance therapy.
2	Chronic kidney disease (CKD), compatible with IRIS stage I-II, currently early or compensated; normophosphatemic and non-proteinuric.
3	Iatrogenic xanthinuria with increased risk of urolithiasis; recurrent crystalluria and pollakiuria under allopurinol.
4	Suspected chronic pancreatitis with marked lipase elevation and no evidence of an acute clinical exacerbation.

1) Owner-friendly summary

2) Professional summary

Owner-Friendly Summary - DOG

Plain-language explanation of the previous findings and recommendations

How is DOG doing at the moment?

Overall, despite his advanced age and chronic diseases, DOG is in a pleasingly stable general condition. The examinations to date do not show any acute life-threatening organ disease.

Regular monitoring of the kidneys, urinary tract and long-term treatment remains particularly important.

Leishmaniosis

DOG has had known leishmaniosis for many years. The disease currently appears to be well controlled.

- No current evidence of a severe active disease flare-up
- Long-term therapy with allopurinol appears to be working well overall
- Regular check-ups remain important nevertheless

Kidneys & Urinary Tract

The kidney values are mildly altered, which is common in older dogs. At present, however, the situation still appears well compensated.

- No severe renal insufficiency
- No marked protein loss through the urine
- Regular monitoring remains important

However, crystals or stones can form in the urine during allopurinol treatment. Therefore, drinking habits and urine checks should receive particular attention.

Pancreas

One pancreatic laboratory value (lipase) was markedly elevated. Because no severe gastrointestinal symptoms were described at present, this is more consistent with a mild or chronic change.

- A low-fat diet and observation are important
- If vomiting, abdominal pain or loss of appetite occurs, veterinary assessment should be performed promptly

Thyroid

The thyroid values are currently in the lower normal range.

At present, there is no clear evidence of true hypothyroidism.

Pain Management & Age

Arthrosis and chronic pain often play an important role in older dogs.

Classic pain medications (NSAIDs) should be used cautiously because of the kidneys.

- Possible alternatives: Librela or low-dose gabapentin
- Cortisone only if needed and at the lowest possible dose
- Do not give cortisone and NSAIDs at the same time

What is especially important in daily life?

- Good fluid intake
- Wet food if possible
- Regular check-ups
- Monitor weight and muscle mass
- Normal, adapted exercise
- Pay attention to changes early

Recommended Check-ups

- Blood and urine tests every 3-4 months
- Monitoring of creatinine and SDMA
- Urinalysis and sediment examination
- Blood pressure measurements
- Ultrasound checks if needed

Overall Assessment

Despite chronic disease and advanced age, DOG currently shows a remarkably stable course. With adapted treatment, regular monitoring and good day-to-day support, there is a good chance of maintaining quality of life for a long time.

Leishmaniosis in Dogs - Briefly Explained

Owner-friendly information

What is leishmaniosis?

Leishmaniosis is a chronic infectious disease caused by parasites (Leishmania). It is usually transmitted by sand flies in southern countries such as Spain, Italy, Greece or Portugal.

Not every infected dog automatically becomes ill. Some dogs remain stable for a long time, while others develop symptoms only after months or years.

Common Symptoms

- Fatigue
- Weight loss
- Skin problems
- Hair loss
- Abnormal claw growth
- Eye inflammation
- Enlarged lymph nodes
- Kidney problems

Treatment

Leishmaniosis is usually not completely curable, but it can often be well controlled for many years.

- Allopurinol
- Miltefosine
- Antimony preparations

Many dogs can maintain a good quality of life with the right treatment and regular monitoring.

Important During Long-Term Treatment

- Regular blood and urine checks
- Monitoring of kidney function
- Good fluid intake
- Adapted diet

Prognosis

The prognosis mainly depends on how early the disease is detected, whether the kidneys are affected and how well the dog responds to therapy.

Many dogs live for many more years with stable disease and good quality of life despite leishmaniosis.

Plain-Language Medication & Treatment Overview for Pet Owners

Allopurinol - Treatment of Leishmaniosis

Allopurinol is commonly used in dogs with leishmaniosis. The medication helps control the disease over the long term.

Important points:

- usually given twice daily
- give at the same time whenever possible
- ideally with food
- adequate water intake is important

Possible warning signs:

Frequent urination, pain during urination, blood in the urine or straining to urinate.

Pain Medications (NSAIDs)

Medications such as meloxicam, carprofen or robenacoxib are often used for arthrosis or pain.

Important:

These medications can place strain on the stomach, intestines and kidneys - especially in older dogs.

- Always give with or directly after feeding

Seek veterinary assessment immediately if:

- vomiting
- black stool
- loss of appetite
- marked tiredness

Alternative Pain Therapies

Gabapentin: often used for chronic pain or nerve pain. Possible side effects include tiredness or unsteady walking.

Librela: monthly injection for arthrosis pain, often well tolerated.

Cortisone (Prednisolone)

Cortisone can reduce inflammation and discomfort, but it should be used at the lowest possible dose and not for an unnecessarily long period.

Important:

Cortisone should not be given at the same time as classic NSAID pain medications.

Possible side effects:

- increased thirst
- more frequent urination
- increased appetite
- muscle loss with long-term use

Thyroid (Hypothyroidism)

According to the available records, there is currently no confirmed evidence of primary hypothyroidism.

If thyroid disease is confirmed later, regular monitoring is important.

The following should be monitored in particular:

- weight
- activity
- heart rate
- general well-being

Main Treatment Goal

The aim of treatment is the best possible quality of life while placing the least possible strain on organs and metabolism.

Especially important are:

- maintaining mobility
- maintaining muscle mass
- as few side effects as possible
- long-term stability and quality of life

Professional Summary and Assessment

Clinical History

For his age and underlying diseases, the patient is in a remarkably stable general condition. Over the long term, the leishmaniosis has remained clinically silent. The history includes episodic mild dermatological and otological conditions (hotspots, otitis externa, conjunctivitis) as well as transient lameness, which were treated symptomatically. The main problem in recent years has been recurrent urinary tract symptoms with crystalluria, sediment formation and pollakiuria, strongly suspicious for xanthine urolithiasis secondary to allopurinol therapy.

Current Findings (Laboratory Profile 2024-2025)

- Hematology: No anemia; hematocrit and hemoglobin in the upper normal range, unremarkable leukogram. In 2024, mild eosinophilia as an indication of chronic immune stimulation, atopy or parasitosis.
- Retention parameters / kidney: Stable mild azotemia with chronically slightly elevated creatinine (183-186 $\mu\text{mol/L}$), compensated urea and normal phosphate. SDMA in 2025 elevated to 18 $\mu\text{g/dL}$ as an indication of reduced glomerular filtration rate.
- Urinalysis: UPC 0.08; no glomerular proteinuria. This is prognostically favorable in the context of chronic kidney disease.
- Pancreas: Lipase markedly elevated (1100 U/L), amylase within the reference range. In the absence of acute gastrointestinal symptoms, chronic subclinical pancreatitis is most likely.
- Liver / proteins: ALT, ALP and bilirubin unremarkable. Albumin within the reference range, globulins in the upper normal range. Cholesterol elevated (11.4 mmol/L).
- Endocrinology: Total T4 in the lower normal range (19-21 nmol/L). At present, there is no compelling evidence of primary hypothyroidism and no indication for substitution.

Current Overall Assessment

Overall, DOG presents as clinically pleasingly stable despite his geriatric age. Of particular clinical relevance is the balance between the necessary control of leishmaniosis with allopurinol and the associated risk of xanthine crystalluria or urolithiasis. In parallel, there is early chronic kidney disease without proteinuria and suspected chronic pancreatic involvement.

Recommended Further Management

Diet and fluid management

- Low-purine feeding strategy to reduce the risk of xanthine stones.
- Moderate protein and phosphorus reduction as renal support.
- Low-fat feeding to reduce pancreatic strain.
- Consistent encouragement of oral fluid intake, preferably via wet food and additional water sources.

Medication therapy

- Continue allopurinol maintenance therapy with critical risk-benefit assessment.
- If crystalluria or pollakiuria increases, reassess dose reduction or therapy interval under close leishmaniosis monitoring.

Control and monitoring plan

- Every 3-4 months: urinalysis including specific gravity, pH, sediment/crystal screening and UPC.
- Every 3-4 months: blood chemistry focusing on creatinine, SDMA, urea, phosphate and electrolytes.
- Every 6-12 months: abdominal ultrasound with focus on kidneys, urinary bladder and pancreas.

- Every 6-12 months: complete blood count including protein electrophoresis.
- Leishmania titer only if there is clinical suspicion of relapse.
- Regular blood pressure checks to rule out renal hypertension.
- If gastrointestinal symptoms occur, prompt Spec cPL testing and supportive pancreatitis management.
- If hypothyroidism is clinically suspected, additional determination of fT4 and cTSH.

Expanded Overall Therapeutic Summary - DOG

Veterinary Clinical Review & Future Management Plan

1. Allopurinol in Canine Leishmaniosis

Allopurinol has a leishmaniostatic effect and is often used long term.

Dosage

- Minimal geriatric dose: 5 mg/kg twice daily
- Standard long-term dose: 10 mg/kg twice daily
- Maximum usual dosage: 20 mg/kg per day

Timing & form of administration

- Oral administration as a tablet
- As consistently as possible every 12 hours
- With or after feeding
- Example: 08:00 and 20:00

Important long-term issues

- Xanthine crystals
- Xanthine stones
- Sediment formation
- Pollakiuria / dysuria

When to adjust therapy

Allopurinol should be critically reassessed in cases of:

- increasing crystalluria
- urinary stones
- dysuria/pollakiuria
- worsening kidney values
- intolerance

Possible Alternatives to Allopurinol

Miltefosine

- common alternative or adjunctive therapy
- no xanthine-stone risk
- can be administered orally

Meglumine antimoniate

- effective, but more burdensome
- often only of limited suitability in geriatric patients
- possible adjunctive therapy if needed

NSAIDs

NSAIDs should only be used cautiously and for as short a period as possible.

Typical NSAIDs

- Meloxicam
- Carprofen
- Robenacoxib

Administration

- Oral tablets or suspensions
- Some are also available as injectable preparations
- Always ensure the patient is as well hydrated as possible

Important risks

- Kidney damage
- Gastrointestinal ulcers
- Dehydration
- Reduced renal perfusion

Alternatives to NSAIDs

Gabapentin

- Dosage: 5-20 mg/kg every 8-12 hours
- Oral administration as capsule or tablet
- In geriatric patients, start low and increase slowly

Librela

- Monthly injection
- Particularly suitable for geriatric arthrosis patients

Cortisone

Use cortisone only symptom-oriented and at the lowest possible dose.

Prednisolone dosage

- Low-dose geriatric range: 0.1-0.3 mg/kg daily
- Use for as short a duration as possible

Form & timing of administration

- Oral tablets preferred
- Ideally in the morning
- With feeding

Important note

- Do not give at the same time as NSAIDs
- Allow a washout phase between NSAID and cortisone

T4 / Hypothyroidism

At present, primary hypothyroidism has not been confirmed.

If confirmed

- Levothyroxine standard: 0.02 mg/kg twice daily
- Geriatric starting range: 0.01 mg/kg twice daily

Timing & form of administration

- Oral tablets
- Preferably on an empty stomach
- Always at consistent times
- Typically morning and evening

Monitoring

- First check after 4-6 weeks
- Monitoring of T4, weight, activity and heart rate

Overall Recommendation

The most important strategy remains to minimize organ burden while preserving mobility, muscle mass, quality of life and clinical stability.

Supplementary Clinical Assessment - Possible Interactions Under Allopurinol

1. Allopurinol + Levothyroxine (T4)

No clinically relevant direct pharmacological interaction is known. However, chronic diseases such as leishmaniosis, chronic kidney disease or systemic inflammation can lead to reduced T4 values in the sense of “euthyroid sick syndrome” without primary hypothyroidism being present. Unnecessary levothyroxine substitution can lead to tachycardia, restlessness, muscle loss and increased cardiac strain, particularly in geriatric patients. Therefore, fT4, cTSH, clinical signs and the clinical course should be assessed together before initiating thyroid therapy.

2. Allopurinol + NSAIDs

No direct toxic interaction is known; however, there may be relevant additive strain on kidney function. Under allopurinol, there is a risk of xanthine crystalluria or xanthine urolithiasis. NSAIDs can additionally reduce renal perfusion and, especially in geriatric patients or those with pre-existing chronic kidney disease, may promote deterioration of glomerular filtration. The combination may therefore increase the risk of azotemia, urinary sediment formation and urinary tract problems. In addition, the risk of gastrointestinal side effects such as ulcers or inappetence increases. NSAIDs should therefore be used at the lowest effective dose, for a short duration where possible, and only with adequate hydration and close renal monitoring.

3. Allopurinol + Corticosteroids

Corticosteroids may promote reactivation of leishmaniosis through immunosuppressive effects. Allopurinol is primarily leishmaniostatic and usually does not fully eliminate the pathogens. Under systemic cortisone therapy, a clinical relapse with renewed organ involvement may therefore occur. In addition, corticosteroids can promote protein breakdown, muscle atrophy, hypertension, gastrointestinal side effects and pancreatic strain. Cortisone therapy should therefore be strictly symptom-oriented, at the lowest possible dose and time-limited.

Particularly Relevant Risk Combination

The combination of NSAIDs and corticosteroids is considered to carry a significantly increased risk of gastrointestinal ulcers, bleeding and acute renal failure, independently of allopurinol, and should be avoided whenever possible. An adequate washout phase should ideally be observed between the two forms of therapy.