VETERINARY SPECIALIST ADVICE

FINAL REPORT

Signed off 2026 20:37 (UTC+1)

PATIENT INFORMATION

Patient		Patient ID	
Species	Feline	Breed	
Sex	F neutered	Birthdate / Age	
Weight	3.7 kg	Owner	

STUDY INFORMATION

Clinic

Case

Aug 2026 1:27 (UTC+1)

CONCLUSIONS

D**** is a complex patient with several concurrent conditions, and management therefore needs to take all of these aspects into account. Regarding the diabetes mellitus, the increase in fructosamine from approximately 450 to 550 suggests that control may currently not be optimal, although additional glucose measurements, ideally at home, would be helpful. Given the concurrent hypercholesterolaemia, I would consider starting fenofibrate at 5 mg/kg once daily, with repeat fructosamine and liver parameters after approximately 6-8 weeks. The possible gastrointestinal side effects of this medication should also be monitored.

The current gastrointestinal signs appear relatively limited in regards to the vomiting. I would investigate for parasitic disease with a faecal examination, repeat the T4 and TLI, ensure appropriate measurement of ionised calcium, and consider a hypoallergenic diet that is also suitable for lower urinary tract signs. The gallbladder sludge should be monitored by ultrasound, with sampling considered if it persists or increases.

At present, I am not overly concerned about the suspected CKD given the creatinine, urine specific gravity and only mild SDMA increase. Monitoring with repeat renal parameters, urinalysis and UPC in approximately three to four months is appropriate, without introducing a renal diet at this stage.

Finally, the urinary signs require further clarification, particularly to distinguish lower urinary tract signs associated with feline idiopathic cystitis from possible urinary incontinence. Given the apparent behavioural component, environmental

modification, increased access to water, appropriate litter-tray provision, Feliway and, if required, a trial of buspirone or gabapentin would be appropriate considerations.

COMMENTS / RECOMMENDATIONS

* Start fenofibrate at 5 mg/kg once daily for the hypercholesterolaemia.
* Recheck fructosamine and liver parameters after approximately 6-8 weeks of fenofibrate treatment.
* Monitor for potential adverse effects of fenofibrate, particularly worsening diarrhoea or increases in liver parameters.
* If possible, perform spot glucose measurements at home, even more ideal using a Freestyle.
* Do not reduce the Senvelgo dose at this stage.
* Perform a faecal examination for parasitic disease only.
* Repeat T4 and TLI, ensuring Duchess is fasted for 13–15 hours before sampling.
* Ensure that ionised calcium is measured using the correct protocol.
* Consider a trial of a hypoallergenic diet, with the Royal Canin hypoallergenic + urinary S/O diet being a suitable option for both the gastrointestinal and lower urinary tract considerations.
* Clarify with the owner whether Duchess is experiencing true urinary incontinence, particularly regarding urine loss while sleeping or when standing up or other unconscious urine loss.
* If amitriptyline does not provide the desired effect, consider a trial of buspirone or gabapentin.

CLINICAL HISTORY

PATIENT OVERVIEW

D*** is a 13-year-old neutered female domestic shorthair cat, weighing approximately 3.7 kg. The patient presents with a complex multi-system history spanning several years, characterised principally by poorly controlled diabetes mellitus, chronic gastrointestinal disease with inflammatory bowel disease as a leading diagnosis, and recurrent stress-related lower urinary tract signs. Recent abdominal imaging reveals several structural abnormalities of significant clinical importance.

ONGOING OR PAST ISSUES

Diabetes mellitus was diagnosed in March 2024 following weight loss, polyuria and polydipsia. Initial management with ProZinc insulin was attempted, but the current regime uses ProZinc (Senvelgo equivalent as SGLT2 inhibitor) and more recently insulin therapy at 3.5 units twice daily. Glycaemic control remains challenging, with fructosamine values in the 'fair' range (456–558 µmol/L) and blood glucose readings between 13–19 mmol/L. The patient shows persistent glucosuria and variable response to medication.

Chronic gastrointestinal disease has been a longstanding issue, characterised by intermittent vomiting (typically 1–2 times weekly), erratic faecal consistency ranging from constipation to soft stools and occasional haematochezia, and variable appetite despite generally maintained body weight at home. Previous investigations identified Clostridium perfringens alpha-toxin gene detection, Giardia infection, and documented enteritis/colitis. A specialist abdominal ultrasound performed 20 August 2026 revealed mild chronic enteropathy with preserved mural stratigraphy, occasional mucosal hyperechoic foci, and mild right colic lymphadenopathy, most likely reactive. Gastrointestinal lymphoma cannot be completely excluded by ultrasound, particularly low-grade disease. Additionally, a mild pancreatic micronodular appearance consistent with chronic nodular change or hyperplasia was noted, with no current evidence of acute pancreatitis. The ultrasound examination also identified mild hepatomegaly with diffuse hyperechogenicity compatible with diabetic-associated hepatic change or fatty infiltration, mild non-obstructive gallbladder sludge, and slight proximal common bile duct dilatation.

Bilateral chronic degenerative nephropathy was demonstrated on imaging, with cortical irregularity, hyperechoic foci and striations, reduced corticomedullary distinction, diminished cortical vascularity, and bilateral pyelectasia (left 0.44 cm, right 0.70 cm). No mechanical obstruction was identified. The imaging radiologist emphasised that renal abnormalities may precede or be more marked than biochemical azotaemia. Biochemical parameters (August 2026) showed raised urea (13 mmol/L, reference 6.1–12.5), high SDMA (16.4 µg/dL, reference 1–14), and elevated phosphorus (2.23 mmol/L, reference 0.7–2.1). A urine sample from June 2026 showed elevated urine protein creatinine ratio (0.87, reference ≤0.40), with no bacterial growth on culture but trace proteinuria on dipstick and modest glycosuria. The patient has received two doses of Convenia (cefovecin) for presumed recurrent bacterial urinary tract infection.

Recurrent stress-related lower urinary tract disease (feline idiopathic cystitis) is evident from the clinical record. The patient has experienced episodes of inappropriate urination both in the house and on soft furnishings, particularly when the owner is absent from home for extended periods. Two prior bacterial cultures produced no growth, supporting a stress-associated aetiology rather than persistent infection. The bladder appears structurally unremarkable on ultrasound. Multiple medications have been trialled to manage this problem, including amitriptyline, ondansetron, famotidine, and bladder supplements (Catease/Cystaid).

Additional gastrointestinal features noted include occasional hairball regurgitation (undigested food noted in vomitus) and sensitivity to diet changes. The patient's bowel habits have been difficult to optimise; softer stools have been attributed to SGLT2 inhibitor effects in addition to possible underlying IBD. Faecal consistency has improved with discrete meal feeding rather than free access to food.

Recent diagnostic findings from August 2026 revealed hyperproteinaemia (total protein 97 g/L, reference 56–81), elevated globulin (58 g/L, reference 15–57), persistent hypercholesterolaemia (>11.64 mmol/L), elevated glucose (19.5 mmol/L), mild hypersodaemia (160 mmol/L), low chloride (102 mmol/L), elevated haemoglobin and haematocrit, low platelets (26 × 10^9/L, likely instrument error), and high MCH. Liver

function tests have remained largely preserved. Lipase values (25 U/L) do not support active pancreatic inflammation. An elevated ionised calcium was noted (1.36 mmol/L, reference 1.2–1.4).

MEDICATIONS AND TREATMENTS

Medications currently dispensed or recently in use are as follows:

• ProZinc (Senvelgo) insulin 40 IU/ml: 3.5 units subcutaneously once daily — last dispensed August 2026

• Sustain sachets: one sachet daily mixed with food — last dispensed August 2026

• Famotidine 5 mg: one tablet once daily by mouth to reduce gastric acidity and vomiting — last dispensed August 2026

• Amitriptyline hydrochloride 25 mg/5 ml liquid: 0.8 ml once daily by mouth for stress relief, arthritis pain, and appetite stimulation — last dispensed July 2026

• Ondansetron 4 mg tablets: one tablet once daily to control nausea and vomiting — last dispensed July 2026

• Calmex for cats 60 ml oral solution: 1 ml once or twice daily around periods of stress — last dispensed September 2026

• Catease/Cystaid capsules: one capsule once or twice daily to support lower urinary tract health — dispensed July 2026

• Profender spot-on (emodepside/praziquantel) medium cat (2.5–5 kg): apply to skin at back of neck every three months for parasites — last applied March 2026

• Bravecto spot-on (fluralaner) medium cat (2.8–6.25 kg) 250 mg: apply to back of neck once every three months for fleas and ticks — last applied March 2026

Recent blood work (August 2026) included fructosamine assessment showing 546 µmol/L (fair glycaemic control over preceding weeks), B12 and folate levels (results not clearly reported but testing was performed), and a comprehensive biochemistry and haematology panel. In-house urine analysis via dipstick and specific gravity was completed; results from June 2026 showed specific gravity 1.029, significant glycosuria (four plus), trace proteinuria, elevated urine leukocytes (one plus), occasional bacteria, and trace blood. No growth occurred on bacterial culture.

Medication doses have been adjusted based on clinical response and blood glucose monitoring. The patient has progressed from Senvelgo monotherapy to combination insulin therapy, with gradual titration from 1 unit to 3.5 units twice daily, necessitated by persistently elevated blood glucose and fructosamine values. Medications for gastrointestinal symptoms have been added sequentially in response to vomiting and diarrhoea flares. Stress-related medications are continued at current doses. Multiple medications were prescribed during recent hospitalisation (May 2023) for severe gastritis; discharge medications included metronidazole, synulox (amoxicillin-clavulanate), panacur (fenbendazole), famotidine, and promax probiotics.

VACCINATIONS AND PREVENTIVE CARE

The patient's feline viral rhinotracheitis/calicivirus/panleukopenia (RCP) and feline leukaemia virus (FeLV) vaccination status is current. Leucofeligen FeLV/RCP 8WA7 was administered in May 2024 (expiring May 2025). Booster vaccination is noted as overdue; a reminder for annual booster

FINDINGS

Dear K*****,

I would be very happy to help with D****'s case. This is indeed a complex case with several comorbidities (I'm happy to see you are very invested in these patients). I will divide the report into four different subjects: diabetes mellitus, gastrointestinal disease, suspected chronic kidney disease, and the lower urinary tract signs, suspected to be feline idiopathic cystitis.

Diabetes mellitus

To start with the diabetes mellitus, I see that Duchess is currently receiving Senvelgo. I certainly understand that, due to the owner's lifestyle, this is the best option.

In regard to the Senvelgo, I see there was suspicion of urinary tract infections, but I just want to make a note on that. We actually know that these cats rarely do have clinical urinary tract infections (what is a bit counter intuitive considering their glucosuria), and also in this patient, for me it seems less likely. We need to have an active sediment and a positive urine culture, so I would not start any treatment without a positive urine culture being present, and treatment should then be based on the antibiogram. I will comment more on the other urinary signs later, but I just wanted to discuss this specifically in relation to the Senvelgo. It is, of course, slightly more complex in this patient with the suspected feline idiopathic cystitis as well.

In regard to the control of the Senvelgo, the fructosamine is something for which we know that the trend is more valuable in individual patients rather than the absolute value. We therefore prefer to look at the trend over time rather than deciding on one single value whether this correlates with good control or not.

I see we were around values of approximately 450 at one time and now around 550. This is significantly increased. We do know that fructosamine needs to go up or down by approximately 10-20% before we talk about a significant change in fructosamine, so mild increases or decreases are not relevant, but this change is.

The question here is whether the Senvelgo is still doing the job. The urine glucose will always be positive, so that is not of any help in monitoring of course. In an ideal world I would advise to place a continous glucose monitor, or at least try to have several spot glucoses during the day. However, I understand this is difficult for the owner.

I see that the glucose measurements that have been performed in the clinic are around 16-19 mmol/L. The question is whether this is related to stress or whether this is also what we see at home. The fructosamine does suggest that we do not have optimal control at this moment, but we would have to see a few glucose measurements, ideally at home as well, to be able to know for sure how well we are controlling the diabetes.

In this particular case, because of the hypercholesterolaemia, I would advise starting fenofibrate at 5 mg/kg once a day. We are seeing more recently, and this is something we mainly discuss at diabetes mellitus working groups and congresses, that we actually see quite a potential positive result if we treat the hypercholesterolaemia in these patients. I would therefore certainly consider doing this.

I would start the medication and then recheck the fructosamine approximately 6-8 weeks later to see if we have a downward trend. Again, it would be ideal to have a Freestyle or to do some spot glucose measurements at home, but I understand this is difficult for the owner.

In regard to possible side effects of fenofibrate, in human medicine it is mostly reported to potentially cause liver or muscle damage and digestive disorders. In the limited studies that have been performed in cats, they actually saw very rare side effects. We would have to monitor for any of these side effects, and if we see an increase in liver values or, for example, any worsening diarrhoea, this would of course be a reason to stop the medication. However, due to the potential very positive effect on the diabetes, it is worth considering this medication.

I would recheck the liver parameters at least at the same time as rechecking the fructosamine, or earlier if there are any concerns.

Gastrointestinal disease

If we are looking at the gastrointestinal disease, I see that the vomiting at this moment is limited, at about once to twice a month, and this is very positive. If any future worsening is noticed, I would highly recommend using maropitant rather than ondansetron or famotidine, because with these latter two medications, we actually do not know what the exact effect in cats and dogs is. We also do not know whether we truly reach sufficient plasma levels for ondansetron. And considering famotidine, in cats we do not think that gastric acid suppression is routinely necessary in cases of vomiting.

Regarding the weight, I see there is indeed a fluctuation of around 250 grams recently, but also previously up to 400 grams, if I am correct. If the body condition at this moment is 4/9, I am actually quite happy with that. Of course, it is very important to follow the trend.

I would still recheck the T4, because over time this could go up in senior cats. We need to make sure that this is not of influence, and I would at least check it once a year. In this case, I would not advise measuring free T4, as there are quite a lot of comorbidities, and these could falsely increase the free T4, which would make interpretation quite difficult.

I would advise performing a faecal examination only for parasitic disease. I would not include any bacterial investigations, as we do not have an indication for that at this moment. Indications would be, for example, haematochezia or general illness, but this is not something that is needed at this moment.

I see that there is some potential influence of the Senvelgo (although the diarrhea potentially existed already prior to the treatment, please correct me if that's incorrect). Diarrhoea is indeed described with Senvelgo. However, by far in most patients this is self-limiting, although in some patients it has been described that it is necessary to decrease the dose with 50%. However, at this point I would not decrease the dosage of the Senvelgo yet, as I we are not fully convinced that it is the Senvelgo causing the diarrhoea. We can try this potentially in the future, especially if the fenofibrates have a positive effect.

I would also want to add a TLI again. I know this has been performed in the past, but especially with a nodular appearance of the pancreas, this again could be something that evolves over time. I would therefore highly recommend checking the TLI and just want to make a note that the patient needs to be fasted for 13–15 hours before sampling.

I would also just want to make sure that the ionised calcium was appropriately measured with the correct protocol of the lab. Ideally, the ionised calcium would be checked on an in-house sample (this is more reliable often). It is important to verify because this could be of influence on the constipation that is noted at times. It is remarkable that the total calcium value was increased with a normal albumin, but the ionised calcium was normal. However, this has been reported in cats treated with Senvelgo so we could just have a normal iCa, but I would just like to confirm this.

Regarding the diet, I would certainly try a hypoallergenic diet. Royal Canin has a hypoallergenic diet that is also appropriate for lower urinary tract signs, so this would be a good option. I feel Hill's Biome could be a good option as well but this will not cover the urinary tract signs. Another option is a novel protein diet for example from Trovet, and if we pick the wet variant this could also help support the urinary tract.

Considering the sludge in the gallbladder, at this moment the liver values and the bilirubin are normal, which is positive. However, I would advise keeping an eye on the gallbladder with ultrasound and considering sampling if the sludge is persistent or increases in amount.

Chronic kidney disease

To move on to the suspected CKD, at this point I am actually not super concerned about the kidney function.

We often see these degenerative changes on ultrasound in elderly cats, and quite a lot

of the time these are actually not significant and do not correlate directly with impaired kidney function, as you mentioned yourselves as well.

If we look at all the results, we actually see that the creatinine relatively low, not even borderline high. The urine specific gravity is also acceptable at 1.030, which is again very positive.

I see that the SDMA is around 16 µg/dL, but we actually know that this is considered a mild increase and does not necessarily suggest renal impairment. There has also been some suggestion that the reference interval of the SDMA should probably be slightly adapted. Therefore, at this value, I am not overly concerned yet.

Regarding the kidney function at this point, I would just recommend monitoring, with another urinalysis and renal values, including the SDMA, in about three to four months.

At this moment, we do not need to use a kidney diet. The UPC, however, needs follow-up, so that is something that should be included in future rechecks as well and would potentially need treatment in the future.

Lower urinary tract signs / suspected feline idiopathic cystitis

Lastly, regarding the idiopathic cystitis, I was just wondering about a bit more detail regarding the urination, because I do see that the owner reports quite often that the tail is wet. This is something I would not immediately expect when they have feline idiopathic cystitis.

We need to make the differentiation between lower urinary tract signs and incontinence, because incontinence would not fit with idiopathic cystitis and could be, for example, related to urinary sphincter mechanism incompetence.

I would therefore certainly question the owner a bit more: is there unconscious loss of urine? I once saw a note that there was some urine after she was sleeping and she stood up.

However, I also certainly see that there is quite a significant behavioural component to the urination and also the inappropriate defecation reported at times.

In these cases, we indeed advise using the number of litter trays as one litter tray extra on top of the number of cats. They should be spread around the house, and we advise using different watering stations.

A water fountain would certainly be advised in for D****. We would advise having more watering stations, seperate from the feeding places. There should also be enough hiding places around the house.

I would advise using Feliway as well. Instead of amitriptyline, if we do not have the desired effect, we could consider trialing buspirone or gabapentin. We could potentially have a better effect with these.

This is a long report, and I would be more than happy to discuss this case further if you have any other questions. Please let me know in the future if I can be of any assistance.

Kind regards,
Lisa

REPORTED BY

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BVS, MS, DipECVIM-Ca, PhD, MRCVS

Signed off 26 Aug 2026 20:37 (UTC+1)



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