

Comprehensive Management of Feline CKD: Part 2

Creating Collaborative Care Through Nutrition Conversations



A PANEL DISCUSSION

Board Certified Veterinary Nutritionist® Dr. Lindsey Bullen and internal medicine specialist Dr. Jessica Quimby reviewed diagnostic criteria and staging of feline chronic kidney disease (CKD), nutritional intervention, and communication with pet caregivers in Part 1 of this discussion moderated by feline internal medicine specialist Dr. Andrew Sparkes. The following continues the conversation focusing on additional aspects of nutritional management, including challenges such as inappetence, importance of an individualized plan, diet rotation, and how to empower pet caregivers to recognize changes in appetite and weight and to adhere to management recommendations.¹

MANAGING APPETITE



Andrew Sparkes, BVetMed, PhD,
Dipl. ECVIM, MANZCVS, MRCVS
(Chair/Moderator)

Dr. Andrew Sparkes: Veterinarians often find the most challenging aspect of feline CKD management is poor appetite. Why do these patients not eat well? How do we address this?

Dr. Lindsey Bullen: In general, in a primary practice, about a quarter of patients present with anorexia, dysrexia, or hyporexia. Any perceived changes to appetite warrant investigation.

Some in the veterinary and non-veterinary communities still have the misconception that when an animal becomes hungry, they will eat. However, these are critically ill animals, and many factors are negatively impacting their ability to sense ghrelin, the hunger hormone.

Appetite regulation and dysregulation are multifactorial in nature. Patients are not eating because they do not feel well. Uremic toxins contribute to nausea and vomiting due to their effects on the central chemoreceptor trigger zone. Many patients are also mature or geriatric, and during maturation, the sensory organs or cells start to decline.

Most cats of normal body condition and stature should be eating between 225 and 300 calories daily. Larger breeds have significantly higher caloric needs.

Dr. Jessica Quimby: Caregivers may not realize their cat has a poor appetite and/or they may not be offering enough food. If I calculate energy needs² and determine that the cat is not meeting its caloric goal, I discuss with the caregiver how many calories the cat is currently eating versus what the pet should be eating and what we need to do to promote weight gain and improve muscle mass.

The caregiver may be giving an appetite stimulant and anti-nausea medication occasionally “as needed,” but the medications may be needed proactively on a regular basis to return the cat to a healthy weight, body condition, and muscle condition.

Dr. Bullen: If the cat has a poor appetite, transdermal mirtazapine should be used daily. If the cat likes the flavor of the capromorelin oral solution, which has a different mechanism of action, we can use it in the morning and transdermal mirtazapine at night.

We can use multimodal antiemetic and anti-nausea therapy with both maropitant and ondansetron to ensure these patients are not actively vomiting or subclinically nauseous. It is a spectrum. The cat does not have to be vomiting to feel nauseous, but nausea and discomfort can negatively impact appetite. Vomiting is never “normal” nor is constipation, which may occur in CKD cats due to dehydration.



“We can use multimodal antiemetic and anti-nausea therapy. The cat does not have to be vomiting to feel nauseous, but nausea and discomfort can negatively impact appetite. Vomiting is never “normal” nor is constipation.”

Lindsey Bullen, DVM, DACVIM
(Nutrition)

Dr. Sparkes: In order to determine whether the cat is consuming enough calories, a full diet history should be obtained from the caregiver. Practically speaking, how do you do so in a short 10-minute consult?

Dr. Bullen: It does not have to fall to the veterinarian. By educating and utilizing your entire team, they feel empowered to optimize patient health, which will optimize support to the caregiver.

Various diet history forms are available—electronic³ and paper. We need to know how much food is being offered and consumed, and calorie content, which is where specific brand names and flavors are necessary.

The caregiver can complete the dietary history form while waiting for their appointment. However, sending the electronic diet history form prior to the appointment so the caregiver can complete it at home helps in getting a complete history and expedites the appointment.

Be sure to obtain feeding, treat, and litter box histories. If the cat is a picky eater, has the cat always been picky or is this a new behavior?

“Sending the electronic diet history form prior to the appointment so the caregiver can complete it at home helps in getting a complete history and expedites the appointment.”

Dr. Bullen

FORMULATING A NUTRITIONAL PLAN

Dr. Sparkes: How do you approach a nutritional plan for a cat with CKD?

Dr. Quimby: It is fundamental to success to formulate an individualized nutritional intervention plan based on information obtained from the diet history and to discuss implementing the plan with the caregiver.

Almost on a daily basis, we consult nutrient profile information that we have gathered on the various therapeutic diets. Remember that not all kidney disease diets are created equally. The practitioner can access this information and should formulate this individualized therapy for that particular patient, understanding what their needs might be.

I am not focused on feeding one specific diet. I provide multiple options and let the cat choose. We may need to rotate but as long as the cat stays within the parameters of the nutritional makeup of these different diets, we will meet our nutritional goals. I explain how much of each diet the cat should eat in order to meet minimum caloric goals plus when to utilize an appetite stimulant, etc.

Dr. Bullen: There are multiple options for renal therapeutic diets. We need to treat the whole patient and truly tailor our approach because these patients rarely have only CKD. They may also have chronic enteropathy or stone disease, for example. Multiple diets should be offered to identify the diet or diets that work best for the individual patient.



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Jessica Quimby, DVM, PhD, DACVIM

In a cat with CKD and calcium oxalate urolithiasis, to reduce calcium absorption, we should consider calcium content and calcium-to-phosphorus ratio, targeting around 1.2 to 1. If the diet contains too much calcium, phosphorus may be unable to bind it in the GI tract, resulting in more calcium absorbed and excreted in the urine, increasing urolith risk.

The new diet should be transitioned to slowly, over 10–14 days or even over months in some cats. Since nutrient profiles of diets can change, reach out to manufacturers periodically to inquire about any major changes. Adjunct therapy, including ensuring the cat is well hydrated by offering nutrient-enriched water and/or administering subcutaneous fluids, is also critical.

Nutrition and medicine are an iterative process. We should encourage caregivers to check in to make sure our medical, surgical, and nutritional therapies are helping.

“We need to treat the whole patient and truly tailor our approach because these patients rarely have only CKD.”

Dr. Bullen

Dr. Sparkes: How do you communicate how finding the right diet for an individual cat is an iterative process, mainly trial and error? How do you keep caregivers engaged during the process?

Dr. Bullen: It is a conversation about how much the caregiver can handle mentally, physically, financially. I try to give them at least several commercial diet options. I can create tailored homemade diets, but those present their own pros and cons.

Caregivers can rotate the diet. Eating something slightly less ideal is better than not eating at all, since that will potentiate the cachectic processes. We also should manage concurrent clinical signs, ensuring that cats are on appropriate anti-nausea medications if they are nauseous due to uremic toxins and that we are utilizing appetite stimulants and multimodal therapy.

Dr. Quimby: There is an aspect of food aversion in these cats. Anytime a cat has a medical condition, particularly when it relates to the GI tract, food aversion likely develops very quickly. That is part of where novelty is important.

We provide multiple kidney diet options and communicate that diet rotation is reasonable and expected. Offering a diet again that the cat ate for a few days two weeks ago may spark their interest.

Dr. Bullen: Cats in general are neophiles; they tend to like things that are new or novel.

“There is an aspect of food aversion in these cats. That is part of where novelty is important. We provide multiple kidney diet options and communicate that diet rotation is reasonable and expected.” **Dr. Quimby**

HELPING CAREGIVERS

Dr. Sparkes: Why can it be difficult for caregivers to recognize poor appetite or weight loss in their cats?

Dr. Bullen: The cat may be active and behaving normally. Changes in weight and physique may be disguised in medium and long hair cats. We should educate and empower caregivers to feel comfortable with body condition scoring,⁴ which is an assessment of adipose tissue and is different than muscle condition scoring⁵ or muscle mass index, so helping caregivers distinguish between a skinny cat versus active muscle loss.

We want to avoid loss of muscle because that indicates a cachectic process—increased metabolic need and active breakdown of muscle mass. That bodes very poorly in terms of clinical outcome.

Of course, we should be evaluating body and muscle condition scores as well as measuring body weight at every visit.

Dr. Sparkes: How can litter box monitoring systems help caregivers perceive issues?

Dr. Bullen: I like the litter box monitoring systems that measure weight of each cat and track frequency and type of eliminations. They can detect weight loss in fluffy cats. In multi-cat households, they can distinguish between whose urination or defecation is whose. They are a wonderful tool that we can recommend to our caregivers that are able to invest in them.

Dr. Quimby: Litter box monitoring systems have become integral to our monitoring. The caregiver uses the system as an early warning to know to bring the cat to us for further investigation.

Body weight is measured frequently. Knowing urination and defecation habits can help us identify increases in urination, decreases in defecation. Having this information when the cat presents is so valuable to interpreting current health status.

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Dr. Quimby

Dr. Bullen: Pets, especially cats, may hide when they do not feel well until it is a crisis. I would much rather have the ability, if possible, to track changes so that we can potentially intervene early, which usually warrants a greater chance for a better outcome.

Dr. Sparkes: Multiple medications may be indicated in a cat with CKD, especially those in advanced stages. How do we work around the caregiver's ability to administer those medications?

Dr. Quimby: We have been investigating the concept of caregiver burden and quality of life associated with chronically giving multiple medications. Caregiver burden definitively exists in CKD.

That is where individualized medicine is crucial—having a conversation with the caregiver about what care looks like for them with this particular cat, what works for them, what is easy, and what is not easy. Providing a prioritized list of prescribed medications is helpful. Making sure that they are aware that one medication might make a real difference for the cat, while another may not have much evidence of efficacy.

We must take the time to ask those questions, understand what their relationship is and what they can and cannot do, in order to individualize the management plan.

Dr. Bullen: I say to my clients on our first meeting that my job is to tell them what I feel is medically and nutritionally the best option. They need to tell me whether this plan will work. Because I can formulate a great plan, but if the cat does not like it, or if the pet parents work 24-hour shifts, then it will not be successful, and we have to reconvene.

I also make sure that they know that I am part of the team and am empathetic. This is a safe, non-judgmental environment. I rely on them to be honest with me. I let them know it is okay if they physically cannot do it.

Having a prioritized medication list, being empathetic, and letting them know that they are not bad caregivers if they struggle are vital to success of care.

PATHOGENESIS AND DIAGNOSTICS

Dr. Sparkes: Are there any recent developments in our understanding of feline CKD pathogenesis?

Dr. Quimby: We have some new learnings, but they may not yet be clinically applicable. For example, the concept that there is tubular lipid in the cat kidney that can be released into the renal parenchyma, which may then incite inflammation. That is likely key to the pathogenesis of kidney disease in the cat.

However, clinically, I don't know the relevance other than from the standpoint of being very cautious with the kidney. I am always considering what might damage the kidney—anesthetic events, medications, etc., causing tubular damage and lipid release into the interstitium. Small acute episodes of damage may occur over the lifetime of the cat and eventually culminate in clinical disease.

One of the biggest take-homes is that there is no one inciting cause.

Dr. Sparkes: Do you have any key points regarding diagnostics and staging?

Dr. Quimby: Full diagnostics are essential: blood pressure, complete blood count, full chemistry profile, urinalysis, total and ionized calcium. CKD is more common in older cats. If a young cat presents with CKD, particularly with ionized or total hypercalcemia, imaging is indicated as calcium oxalate nephrolithiasis may be a

concern. In a clinical practice scenario, radiographs can be valuable to assess for mineralization. If you are suspicious about the possibility of a GI comorbidity, assessment with ultrasound lets you look at both kidneys and GI health. Point-of-care ultrasound is much more popular and available now.

We should never IRIS stage (stage per International Renal Interest Society guidelines) a cat on first presentation. We first diagnose CKD and then perform staging only in a stable hydrated cat, based on at least two measurements of fasting serum creatinine and/or serum dimethylarginine.

It is important to remember serum creatinine can be affected by muscle wasting. Dehydration can impact kidney values. Alternatively, in a cat being administered subcutaneous fluids at home, we should consider when fluids were last given when interpreting lab work results.

Dr. Sparkes: Are serum fibroblast growth factor-23, or FGF-23, and urinary cystatin B valuable diagnostics?

Dr. Bullen: FGF-23, calcitriol, and parathyroid hormone regulate phosphorus balance in the body. Phosphorus regulation is linked to regulation of calcium.

FGF-23 is a newer diagnostic to assess phosphorus homeostasis. Even in patients that have blood phosphorus levels within reference range, I will measure FGF-23 because it is possible that their phosphorus level is more than their kidneys can handle, in which case we see an FGF-23 elevation.

Vitamin D is converted from cholecalciferol in the liver and is then converted in the kidneys via 1-alpha hydroxylase to calcitriol, the active form of vitamin D. FGF-23 will negatively impact production of that enzyme, negatively impacting calcitriol production, which can negatively impact the ability to absorb calcium. And the goal is to reduce absorption of phosphorus.

Dr. Quimby: Calcitriol supplementation has been removed from the IRIS guidelines for cats because we simply do not have enough evidence for its use at this time. With so many cats being hypercalcemic and many not actually vitamin D deficient, calcitriol supplementation could exacerbate this entire system. Ionized calcium and vitamin D concentrations must be measured before even considering intervention.

I am utilizing FGF-23 testing in the patient with normal phosphorus that I want to see if additional phosphorus restriction is needed.

Urinary cystatin B may give us an idea of when there is an acute injury process in the kidney, potentially on top of CKD, which is valuable information. However, I think, especially for cats, we still need a little more information about how best to leverage that test.

CHAIR/MODERATOR

Andrew Sparkes, BVetMed, PhD, Dipl. ECVIM, MANZCVS, MRCVS is an independent consultant. Previously, he served as Veterinary Director of International Cat Care and of the International Society of Feline Medicine (ISFM; now known as the International Cat Care [iCatCare] Veterinary Society). Dr. Sparkes has published widely and is the founding and current co-editor of the *Journal of Feline Medicine and Surgery*.

PANELISTS

Lindsey Bullen, DVM, DACVIM (Nutrition) created and co-created, respectively, the Clinical Nutrition Service at the Veterinary Specialty Hospital of the Carolinas and Friendship Hospital for Animals, and currently works at Peak Veterinary Specialists, which she co-founded in 2024. She is particularly interested in clinical nutrition application, specifically critical care, multi-disease state, and assisted feeding.

Jessica Quimby, DVM, PhD, DACVIM is currently Professor and Vice Chair of Research at The Ohio State University College of Veterinary Medicine and serves on the International Renal Interest Society Board. Her research focuses on CKD in cats. Current interests include the study of renal aging, telomere length and cellular senescence, novel treatment strategies, and evidence-based supportive care strategies.

FOOTNOTES

¹ Adapted from the live broadcast of Comprehensive Management of Feline CKD: Part 2, a *Purina Institute Creating Collaborative Care Through Nutrition Conversations* webinar, available on demand at [Purina Institute Webinar Series 2025](#). Watch Part 1 at [Comprehensive Management of Feline CKD](#) and read its adaptation at [Comprehensive Management of Feline CKD Panel Discussion English.pdf](#).

² Various energy calculators are available online. See [MER Calculator for Cats | Purina Institute](#).

³ See [screening-evaluation.pdf](#) from the Purina Institute.

⁴ See [Purina Body Condition System | Purina Institute](#).

⁵ Learn about muscle condition scoring at [Detecting muscle loss in cats & dogs | Purina Institute](#).

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