

## **Thomas Update: Lab Test Results and Kidney Disease**

A week ago, [my ninth-lifer, Thomas](#), went into the vet for a tech appointment to have his blood drawn. We do this pretty regularly because of Thomas's kidney disease and hyperthyroidism, so he's pretty much used to it by now.

I just got the results back this morning. His hyperthyroidism is well-controlled at his current dose of Felimazole, so we're not going to change anything there. However, unsurprisingly, his kidney disease has progressed. Because I've got kidney disease on the brain today, I think I'll share some information about what it is, what is done to diagnose it, staging of disease, and what treatments are recommended.

### **How do you know if your cat has kidney disease?**

The [symptoms of kidney disease](#) can be pretty subtle—lethargy, a decrease in appetite, weight loss—or they can be more obvious, like drinking a lot more water and peeing a lot more. Kidney kitties can also start looking unkempt, but so can cats with hyperthyroidism and other illnesses like diabetes. Bottom line: If you notice your cat drinking and peeing more, it's time for a trip to the vet.

### **How is kidney disease diagnosed?**

If your vet suspects kidney disease, she'll run blood work and most likely get a urinalysis (urine analysis) as well. Because lab work is pretty comprehensive and contains a lot of abbreviations that can make it more confusing for lay people, I'll break it down into a few things that your vet will look for in your cat's blood test results.

First, she'll be looking at your cat's creatinine level. Creatinine is a chemical waste molecule that is generated from muscle metabolism. It is transported through the blood vessels to the kidneys, where it is released in the urine. When the kidneys aren't functioning well, the levels of creatinine in the blood rise. In Thomas's case, his creatinine level went from 3.4 milligrams per deciliter (mg/dl) to 3.7 mg/dl, which means his kidneys aren't filtering waste as well as they were a few months ago. The [normal range for creatinine in cats](#) is less than 1.6 mg/dl.

Another blood level used to diagnose kidney disease is blood urea nitrogen, or BUN. Urea is another waste product that passes through the kidneys and is excreted in the urine. When this value rises, it can indicate that the kidneys are not processing waste well. But BUN can also rise if a cat is dehydrated. Because kidney kitties pee a lot and have to drink a lot of water to make up for the fluids lost in the urine, dehydration could certainly play a role in an elevated BUN in a cat with kidney disease. Thomas's BUN rose somewhat, too, but I forgot to write down the exact numbers.

Your vet will look at the levels of various electrolytes, including phosphorus. Phosphorus levels rise when the kidneys stop functioning well, too, but my vet said that Thomas's phosphorus levels are still okay.

A urinalysis will help your vet to determine if your cat's urine is too dilute (it usually is in kidney kitties), or if protein is being excreted in the urine. Both of these things are factors in staging kidney disease.

Your vet may also take your cat's blood pressure because kidney disease causes high blood pressure later in the disease process, and take X-rays or an ultrasound to get images of your cat's kidneys. Diseased kidneys are smaller than healthy kidneys.

## Is chronic kidney disease curable?

Unfortunately, no it isn't. Kidney disease is a chronic, progressive illness that happens because the kidneys stop being able to effectively filter waste. That ability can't be restored with current technology. It can, however, be treated, and the progression slowed, by things like subcutaneous fluids, phosphorous binders, and dietary changes. High blood pressure can be treated with medications. Nausea and vomiting can be treated with cat-sized dosages of over-the-counter anti-nausea meds (ask your veterinarian how much to give your cat).

Now, about the diet thing: a lot of vets will recommend a low-protein, low-phosphorous diet for kidney kitties. I'm going to go out on a limb here, as a lay person, and say that the best diet for a cat with kidney disease is whatever he'll eat. I personally feed my cats a commercially prepared raw food diet—one that meets nutritional standards set by the AAFCO, the organization that creates nutritional guidelines for pet food. What I use is a freeze-dried raw made by [Primal](#), [Stella & Chewy's](#), or [Northwest Naturals](#). I rehydrate it with warm water and feed it to my cats just like I'd feed canned food. I add a little extra water to Thomas's food to help him get the fluids he needs. All of these companies also offer a frozen raw formula.

My vet knows I feed a raw diet, and she's fine with it, even though Thomas has kidney disease—in fact, she's happy that I feed raw because she believes it's closer to the food a cat naturally eats. That said, a lot of vets don't like raw feeding for a variety of reasons, so if you feed raw, you may get some pushback from your vet. I've been pretty fortunate because even vets I've had who don't know a lot about raw feeding have said, "You can't argue with good health!" For more information about feeding a nutritionally correct raw food diet, head over to [CatCentric](#) or [CatInfo.org](#).

## What are the stages of kidney disease?

Like most illnesses, chronic kidney disease has a staging system to determine where a cat is at in the progression of his disease. IRIS, the International Renal Information Society, has developed a guideline for staging kidney disease based on blood and urine test results. You can find a PDF describing all the factors in staging [here](#), but I'll give you a simplified version.

Basically, Stage 1 is very early in the disease process, and the only thing required during stage 1 is monitoring to determine if and when creatinine and BUN levels start to rise and the urine starts becoming more dilute. In Stage 2, the creatinine level begins to rise, hovering between 1.6 and 2.8 mg/dl. The urine becomes even more dilute. In Stages 3 and 4, creatinine levels will rise above 2.8 mg/dl.

With a creatinine level of 3.7, Thomas is firmly in Stage 3 kidney disease. Stage 4 is determined by even higher creatinine levels, raised blood pressure, and increasing azotemia. Azotemia is just the veterinarian-ese term for describing the condition of excessive waste products in the blood.

A cat in Stage 4 kidney disease might develop uremia, or a toxin buildup severe enough to cause nausea and vomiting, lethargy, and other symptoms. In other words, a Stage 4 kidney kitty really doesn't feel well at all and will almost certainly require subcutaneous fluids to maintain some level of health. The blood pressure also rises as a cat moves through the stages of kidney disease.

## **What should you do if your cat is diagnosed with kidney disease?**

First of all, don't panic. There's a lot of help and a lot of resources to support you through your cat's journey with the disease. You're going to need to work very closely with your vet and have blood work done every few months or so to check on how your cat is doing.

For support resources, I highly recommend [Tanya's Comprehensive Guide to Feline Chronic Kidney Disease](#). That site has really detailed information on the symptoms, diagnosis, and treatment of kidney disease. On Facebook, you can check out and join the [Feline Chronic Kidney Disease](#) group for information and emotional support as you deal with your cat's illness. And, of course, you can always follow along in this blog as I document my journey with Thomas's kidney disease.

Do you have any questions about feline chronic kidney disease? Do you have questions about what I've written? Please ask them in the comments!