Course Workbook: Hypertrophic Cardiomyopathy in Cats

Module 1: Background of HCM

Hypertrophic Cardiomyopathy (HCM) is the most common heart disease in cats, affecting about 16%, or one out of every six, cats. HCM can happen to ANY cat, but some breeds are more likely to be affected. Maine Coons, Ragdolls, and Sphynx cats have well-studied genetic mutations (the MYBPC3 gene) that increase risk.

Which of these cats will get HCM? Statistically, one of them will.

Why does this matter? Because HCM often hides. Cats may seem completely normal until the disease has already progressed. By learning about HCM and testing early, you can take action to protect your cat's heart health — and potentially add years of quality life.

Let's break down the name.

"Hypertrophic" means the heart muscle becomes abnormally thick. You can think of weight lifting as creating muscular hypertrophy, but in that setting hypertrophy is a good thing. For our cats, hypertrophy of the heart muscle is definitely NOT a good thing.

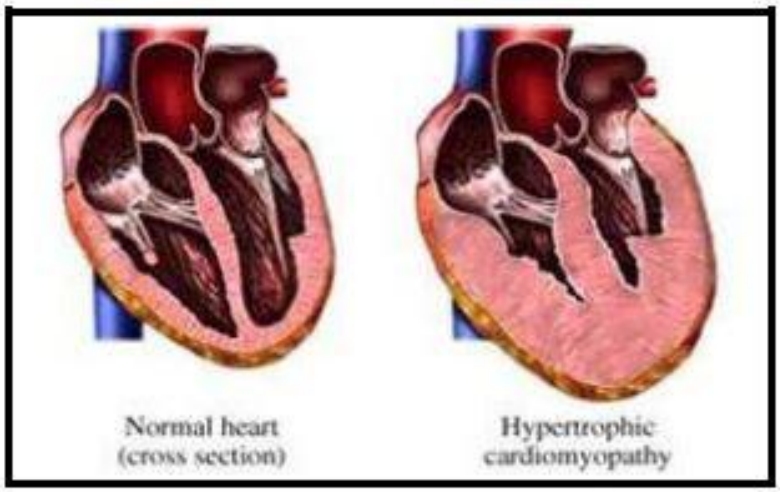
"Cardiomyopathy" just means a disease of the heart muscle. Easy enough to understand.

So What's The Problem with HCM?

Hypertrophic Cardiomyopathy means that a disease is causing the heart muscle to thicken. This is a really big deal for your cat, because this causes…

- **reduced flexibility,** so that the heart cannot pump blood as effectively
- **reduced pumping ability**, because as the walls of the heart thicken the chambers of the heart become smaller.

- **secondary mechanical problems in the heart due to back pressure** – mitral valve murmurs, left atrial enlargement, and clot formation
- **downstream damage to organs like the kidneys** which are not receiving normal amounts of oxygenated blood.



End-of-Module Reflection

1. What does "hypertrophic" mean in hypertrophic cardiomyopathy?
   A) Thinned muscle
   B) Thickened muscle
   C) Enlarged chambers
   D) Weakened contractions

2. Which cat breeds have a known genetic mutation for HCM?
   A) Siamese & Burmese
   B) Maine Coon & Ragdoll
   C) Persian & Bengal

3. True or False: Most cats with HCM show obvious symptoms early in the disease.

Answer Key

1-B, 2-B, 3-False

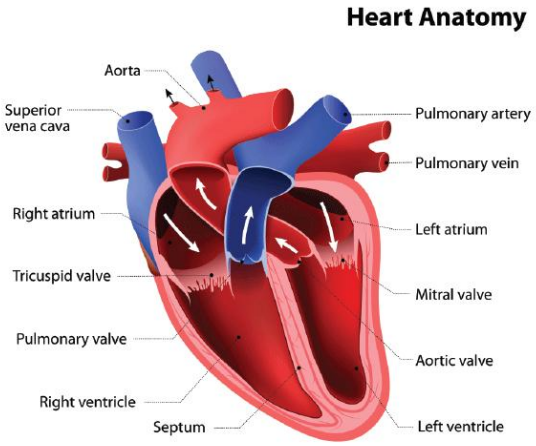
Module 2: Anatomy of the Cat Heart

Let's look at how a normal cat heart works, and what changes in HCM.

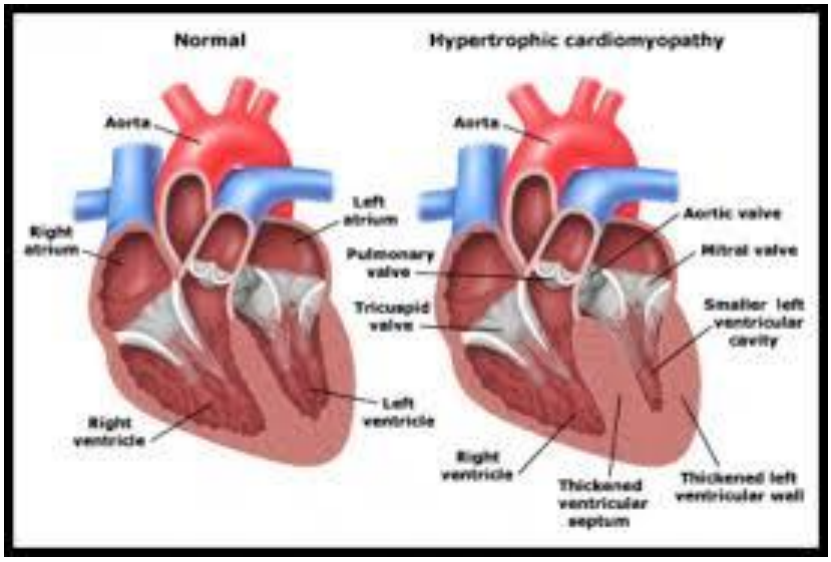
The heart has four chambers: the right and left atria top, and the right and left ventricles on the bottom. The atria RECEIVE the blood, so have very low pressure. The ventricles PUMP the blood, so they have high pressure.

Normal blood circulation through the heart goes like this:

- blood from our cat's foot (or whatever) enters the right atrium
- it is pumped through the tricuspid valve into the right ventricle
- it is then pumped from the right ventricle into the lungs…… where it loads up on oxygen.
- The oxygenated blood from the lungs then enters the left atrium
- It is pumped through the mitral valve into the left ventricle
- And is pumped from the left ventricle into the aorta and the rest of the body.



In HCM, the left ventricle thickens. Sometimes all walls of the ventricle are affected, but in some "lucky" cats only one wall is affected, making their disease less severe. This thickening makes the chamber smaller and stiffer, so it can't fill properly with blood.



This can cause…

- LVOTO, or Left Ventricular Outflow Tract Obstruction if the thickening of the ventricle wall squeezes the outflow valve of the ventricle, like you or me squeezing off the neck of a balloon,
- Because blood can't exit the left ventricle normally, pressure builds up within the the ventricle.
- This increased pressure prevents normal function of the mitral valve, which controls blood coming INTO the left ventricle from the left atrium. This can cause a murmur, which is often the first sign of a heart problem, and abnormal motion eg Systolic Anterior Motion) of the little leaflets of the mitral valve.
- The left atrium, the chamber before the left ventricle, gets stretched and enlarged. Over time, this can cause murmurs, arrhythmias, and even blood clots.

And the biggest problem for our cats is that this disease just progresses a little at a time, day after day, gradually causing heart failure in our cats.

That is, until rapamycin.

End-of-Module Reflection

1. How many chambers are in the cat heart?
   A) 2
   B) 3
   C) 4
   D) 5

2. In HCM, which chamber wall thickens abnormally?
   A) Right Atrium
   B) Left Ventricle
   C) Right Ventricle
   D) Left Atrium

3. What happens to the left atrium as the left ventricle becomes stiff?
   A) It shrinks
   B) It stretches and enlarges
   C) It disappears
   D) It stays the same size

Answer Key

1-C, 2-B, 3-B

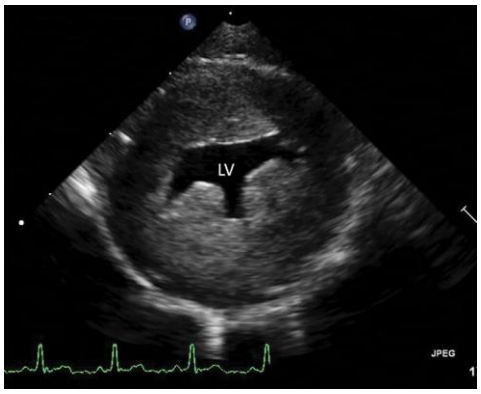
Module 3: Diagnosis

How do we know if a cat has HCM?

1. Physical Exam: Your vet may hear a murmur or an extra heart sound (gallop rhythm). This is the most common way HCM is detected, and it is usually an incidental finding, meaning a vet is not looking for this.

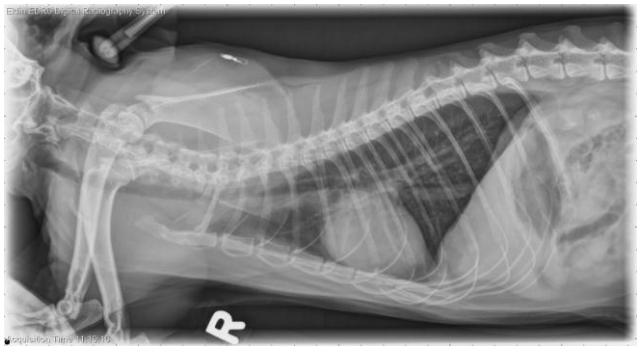
2. BNP Blood Test: Measures stress on the heart muscle. This is a simple blood draw that is often included in general cat blood panels. Unfortunately, it is not always reliable – some severely affected cats have a relatively low BNP, whereas some cats with less severe disease can have abnormally high BNP scores. Hint: ALWAYS use BNP measurement as just ONE way to measure HCM… not by itself.

3. Echocardiogram: This is the gold standard in diagnosing HCM — an ultrasound of the heart by a veterinary cardiologist. This measures wall thickness, chamber size, valve function, and blood velocity. It can also see blood clots forming in the left atrium.



This echo exam shows severe thickening of the left ventricular walls.

4) Chest x-rays can see heart enlargement and fluid accumulation in the lungs due to congestive heart failure. These x-rays can SUGGEST that your cat has HCM, but are not adequate to DIAGNOSE it.



ADDITIONAL TESTS will give us the best understanding of your cat's overall health

- **Bloodwork** is a great way to check for overall health.
    - **A Complete Blood Count**, or CBC, will measure your cat's blood cells. This will tell you how well their bone marrow is working, whether they are anemic or dehydrated, and whether they have allergies or infections present.
    - **A Chemistry Panel** will look for problems with the liver, kidneys, pancreas, and will also measure the electolytes, or minerals, in the blood.
    - **A Thyroid Panel** will check to make sure that your cat's thyroid is working normally. While the most common problem in humans is HYPOthyroidism, where our thyroid function slows down, many cats develop HYPERthyroidism, where their thyroid is overactive. This will worsen stress on the heart and can cause significant weight loss.
- **Urinalysis** will evaluate your cat's kidney function and bladder health.
    - Kidney disease may be found earlier with urinalysis than with blood tests
    - In male cats, it is very important to check bladder health to avoid urinary stones or potentially fatal urethral blockage.

By combining these tools, your veterinarian can confirm HCM and decide how serious it is.

End-of-Module Reflection

1. What is the gold standard test for diagnosing HCM in cats?
   A) Chest X-ray
   B) Blood test
   C) Echocardiogram
   D) Physical exam

2. What does the BNP test measure?
   A) Kidney function
   B) Stress on the heart muscle
   C) Thyroid hormone
   D) Blood sugar

3. Why is a thyroid (T4) test important in cats suspected of having HCM?
   A) Because hyperthyroidism can mimic or worsen HCM
   B) To check for anemia
   C) To measure cholesterol
   D) To confirm dehydration

Answer Key

1-C, 2-B, 3-A

Module 4: Staging HCM

Veterinarians and cardiologists classify HCM into stages. This helps guide treatment and can help predict how well an HCM kitty will do longer term.

• **STAGE B1**: Early disease without actual symptoms. Thee cats often have a murmur or BNP elevation, but ***no heart enlargement***. This is where rapamycin can exert a great deal of influence in slowing or stopping HCM progression.

Typical Stage B1 management:

- Monitoring echo exam and labwork every 6 months
- Measure blood pressure and check thyroid to ensure no underlying disease
    - If BP high, treat with amlodipine
    - If thyroid high, treat with methimazole or radiation
- RAPAMYCIN to slow or stop progression
- Healthy body weight
- Diet < 0.27% sodium on a dry matter basis
- Anesthetic dental with radiographs of every tooth and appropriate treatment.

• **STAGE B2**: Heart enlargement is present on echocardiogram, but the cat still has no symptoms. ***The hallmark of Stage B2 is typically left atrial enlargement.*** Treatment to control the secondary issues (high heart rate, abnormal heart rhythm, etc) is usually begun here. Again, rapamycin is now becoming a cornerstone of treatment for Stage B2 cats.

Typical Stage B2 management:

- All of the above strategies for B1 disease
- MINIMIZE CLOTTING RISK with clopidogrel, rivaroxaban, or both.
- Consider nattokinase/rutin supplementation

• **STAGE C**: ***Means that your cat has had Congestive Heart Failure, or CHF***. Fluid builds up in the lungs or chest, causing trouble breathing. These cats should be on rapamycin and cardiac drugs. Most will also be on furosemide or torsemide as diuretics to help reduce fluid accumulation.

Typical Stage C management:

- All of the above strategies for B1 and B2 disease
- DIURETICS like furosemide or torsemide to control lung/chest fluid accumulation.
    - Must monitor kidney function, typically blood/urine tests at 1-3-10 d after starting diuretics.
    - Must monitor blood potassium, typically 7 and 21 days after starting med.

• **STAGE D**: End-stage disease. These kitties are usually on multiple meds, but those medications no longer control symptoms well.

End-of-Module Reflection

1. In Stage B1 HCM, what is typically present?
   A) Heart enlargement
   B) Congestive heart failure
   C) Murmur or BNP change but no enlargement
   D) Severe symptoms

2. What stage involves fluid build-up in the lungs or chest?
   A) B1
   B) B2
   C) C
   D) D

3. Which stage focuses mainly on comfort care?
   A) B1
   B) B2
   C) C
   D) D

Answer Key

1-C, 2-C, 3-D

Module 5: Drug Therapy

Not every cat with HCM needs medication right away. But as the disease progresses, different drugs may be added to improve heart function, control symptoms, and prevent complications.

Your veterinarian will tailor treatment to your cat's stage of disease and overall health. Many cats may be managed with just one drug at first, then more as needed.

HERE ARE THE MOST COMMON MEDICATIONS USED TO TREAT YOUR CAT'S HCM:

ATENOLOL: A beta-blocker that slows the heart rate and reduces blood pressure. Also indicated for LV outflow tract obstruction. *Atenolol dosage is 6.25 mg PER CAT PO every 12 hours. If no response, can titrate upward, eg 12.5 mg in AM and 6.25 mg in PM (Plumbs Vet Formulary)*

AMLODIPINE: Lowers blood pressure in cats with hypertension. *Amlodipine dosage is 0.625–1.25 mg PER CAT PO q24 hr. If no improvement, can double dose, not to exceed 2.5 mg PER CAT (Plumbs Vet Formulary)*

BENAZEPRIL (or, less commonly, ENALAPRIL): An ACE inhibitor that is used to reduce strain on the heart, to treat high blood pressure, and for kidney disease. Note that amlodipine, above, is a better pure blood pressure drug. *Benazepril dosage is 0.5 mg/kg PO q24h, Practically, this means the average 10-12 lb cat is on 2.5 mg Benazepril. (Plumbs Vet Formulary)*

PIMOBENDAN: May help the heart pump better by increasing heart "contractility", or how hard the heart contracts. Used most commonly in advanced cases of HCM. *.Pimobendan dosage is 0.25–0.3 mg/kg PO q12h. Practically, this means that the average 10-12 lb cat is on 1.25 mg pimobendan 2x daily. (Plumbs Vet Formulary)*

FUROSEMIDE: A diuretic that removes fluid from the lungs or chest in congestive heart failure, or CHF. Known to reduce blood potassium and can damage kidney function, so you should monitor both blood potassium levels and kidney function. *Furosemide dosage is 1–2 mg/kg PO/IV/IM q8–12h. Practically, this means that the average 10-12 lb cat is started on 5-10 mg of furosemide 2-3x daily. However, this dosage may need to be increased for severely sick kitties.*

TORSEMIDE: Torsemide is a diuretic that acts very similarly to furosemide, above, but is literally 10x more potent. Thus a 10 mg dose of furosemide would be replaced with a 1 mg dose of torsemide. This should be reserved for cases where furosemide is not as effective as we would like. Like furosemide, torsemide can create kidney issues and deplete blood potassium levels.

BLOOD THINNERS to reduce chances of a blood clot developing in the left atrium, or to minimize the growth of an existing blood clot.

- **CLOPIDOGREL**: Also known as Plavix, it's the old standby. Unfortunately, it's also very bitter when given orally to our cats. *Clopidogrel dosage is 18.75 mg PO PER CAT q24h. (Plumbs Vet Formulary)*
- **RIVEROXABAN**: Also known as Xarelto, it's the new kid on the block. Can be used alone, or in combination with Clopidogrel above. *Riveroxaban dosage is 2.5 mg PER CAT given once daily. (Plumbs Vet Formulary)*
- **APIXABAN**: Also known as Eliquis, it's more expensive and typically used only when your cardiologist is very concerned about clotting. *Apixaban dosage is 0.2-0.4 mg.kg given once to twice daily. Practically, this means the average 10-12 lb cat is started on 1-2 mg once daily.*

End-of-Module Reflection

1. Which drug is commonly used to prevent blood clots in cats with HCM?
   A) Atenolol
   B) Clopidogrel
   C) Pimobendan
   D) Amlodipine

2. What is furosemide's main purpose?
   A) Lower blood pressure
   B) Slow the heart rate
   C) Remove fluid from lungs or chest
   D) Improve pumping function

3. Which medication is often used if a cat has high blood pressure along with HCM?

A) Pimobendan
B) Amlodipine
C) Atenolol
D) Benazepril

Answer Key

1-B, 2-C, 3-B

Module 6: Natural Supplements for HCM

Evidence Overview

When it comes to natural supplements in feline hypertrophic cardiomyopathy (HCM), the reality is that ***controlled feline studies are almost entirely absent***. Most of the rationale comes from human cardiology or experimental models, and this may or may not be accurate for our cat pals.

Supplements should *ALWAYS* be positioned as *ADJUNCTS,* not replacements, for standard HCM drug treatments:

- **Rapamycin/Felycin to slow/stop the progression of HCM**
- **Clopidogrel for atrial enlargement and clotting concerns**
- **Atenolol for high heart rate, high blood pressure, or outflow obstruction**
- **Amlodipine for high blood pressure**
- **Benazepril for high blood pressure and kidney issues**
- **Furosemide and Torsemide for diuretics**

Nattokinase

Clinical rationale: Nattokinase is a fibrinolytic enzyme derived from fermented soy (natto) that enhances plasmin activity and theoretically promotes clot breakdown. In human studies, it shows antithrombotic and blood pressure–lowering effects. **The theoretical appeal in cats with HCM lies in its potential to reduce risk of aortic thromboembolism (ATE), a major complication of left atrial enlargement.**

Evidence: No controlled feline trials exist. Evidence comes exclusively from human cardiovascular research and preclinical models, and **we have those listed for you here.** While appealing mechanistically, there is no proof of efficacy in preventing or treating feline ATE, and there are safety concerns regarding concurrent use with antithrombotics like clopidogrel.

Dosing in cats: No evidence-based dose exists for nattokinase, but this appears to be very safe in cats. We currently recommend 750 FU (Functional Units) per cat per day.

Cautions: This will **NOT** replace drug therapy (Clopidogrel or Riveroxaban) for clot prevention. When used alongside these drugs, monitor your cat for bleeding tendencies—blood in the urine, poop, or water bowl.

Rutin

Clinical rationale: Rutin is a flavonoid with antioxidant and anti-inflammatory properties. In veterinary medicine, its primary use has been for feline chylothorax, where it may improve lymphatic drainage and reduce chyle viscosity. **In HCM, it is not a direct cardiac therapy, but can be considered if pleural or pulmonary effusion complicates management.**

Evidence: Data is limited to case reports and small case series in cats with idiopathic or secondary chylothorax, not HCM. No studies demonstrate a direct benefit for HCM progression, but empirical use is sometimes justified when effusions are present. **It also has been proven** to stabilize and strengthen blood vessel walls, which may be a help to our cats.

Dosing in cats: 50–100 mg/kg orally three times daily, or alternatively a flat dose of 250 mg/cat every 8 hours. Start at the lower end and reassess response after 10-14 days. Gastrointestinal upset is the most common side effect; discontinue if no benefit is seen.

Fish Oil (Omega-3 Fatty Acids: EPA + DHA)

Clinical rationale: Omega-3 fatty acids provide anti-inflammatory, antiarrhythmic, and antiplatelet effects. In human cardiology, they reduce triglycerides, stabilize cell membranes, and modulate eicosanoid balance. In feline HCM, they are considered as an adjunct to potentially reduce arrhythmia risk, support cardiovascular health, and influence platelet behavior.

Evidence: There are no interventional studies in cats with HCM showing outcome benefit. However, **nutrition studies document altered fatty acid profiles in HCM cats compared to controls, supporting a mechanistic role**. **Veterinary nutrition guidelines endorse EPA/DHA supplementation for cats with cardiovascular and inflammatory disease,** extrapolated from human and canine data.

Dosing in cats: Target ~60–70 mg/kg/day of combined EPA + DHA, ideally split with meals. For example, a 5 kg cat would receive ~300–350 mg/day total. Always calculate based on EPA + DHA content, not total fish oil volume. Vitamin E supplementation should be considered with chronic use. Monitor for GI upset, pancreatitis risk, and potential additive platelet inhibition when combined with clopidogrel.

End of Module Reflection: Supplements for Feline HCM

1. Which statement best reflects the current evidence on nattokinase use in cats with HCM?

A) Nattokinase has been shown in controlled feline trials to reduce aortic thromboembolism.

B) Nattokinase is FDA-approved for feline cardiomyopathy.

C) Nattokinase has no controlled feline data; its use is extrapolated from human cardiovascular studies.

D) Nattokinase is routinely recommended as first-line therapy for cats with HCM.

2. Rutin's primary documented use in cats is:

A) Reducing blood pressure in hypertensive cats.

B) Treating chylothorax by reducing chyle viscosity and improving lymphatic clearance.

C) Preventing aortic thromboembolism in cats with HCM.

D) Controlling arrhythmias associated with left ventricular outflow tract obstruction.

3. What is the recommended target dose range of combined EPA + DHA from fish oil for cats with HCM?

A) 10–20 mg/kg/day

B) 30–40 mg/kg/day

C) 60–70 mg/kg/day

D) 120–150 mg/kg/day

Correct answers: C, B, C

Module 7: Cutting Edge Medicine: Rapamycin (Felycin)

THIS IS WHERE CAT LONGEVITY SCIENCE IS BREAKING NEW GROUND.

Rapamycin is the most publicized prescription longevity drug in the world. With good reason:

- **Rapamycin has been documented to slow/stop the progression of HCM in a majority of cat patients**
- **Rapamycin has broad anti-cancer properties**
- **Rapamycin reduces inflammation**
- **Rapamycin is currently being studied for its benefits in Chronic Kidney Disease, or CKD**
- **Rapamycin improves periodontal health.**

Taken together, these benefits show why *RAPAMYCIN HAS BEEN SHOWN TO INCREASE LIFESPAN BY UP TO 14% IN EVERY MAMMAL SPECIES STUDIED TO DATE.*

And now, we can send either our generic RAPACAT or the new FELYCIN brand of rapamycin to you.

In cats with HCM, rapamycin works by calming the mTOR pathway, which is involved in cell growth and scarring. By lowering this overactive signal, rapamycin helps reduce thickening and stiffening of the heart muscle.

When started early (Stages B1–B2), rapamycin can delay or even prevent congestive heart failure. While most cats who respond show no progression of HCM (ie, stable disease) there are a minority of cats whose ventricular measurements actually IMPROVE.

Although the Trivium study just enrolled preclinical HCM kitties, my personal experience is that **RAPAMYCIN CAN IMPROVE QUALITY OF LIFE AND MAY HELP STABILIZE CATS IN STAGE C AND D HCM.**

To be clear, rapamycin/Felycin do NOT work for every cat with HCM. In my experience, though, they help about 80% of HCM kitties… and that sure as heck beats doing nothing as your cat gets sicker and sicker. Let's try!!

By reducing arthritic inflammation and periodontal disease progression, rapamycin may also improve overall health and vitality, giving your cat more good years of life.

At this time, we consider rapamycin a lifetime drug for HCM kitties. Sorry about that.

The Trivium study showed that the optimal dose of rapamycin appears to be 0.3 mg/kg given once weekly with food. This translates into 1 mg per 7 lbs for the average cat.

IMPORTANT STUFF: Here's what you need to know about rapamycin bioavailability:

- Rapamycin is degraded by stomach acidity, and so it needs to be protected until the drug reaches the small intestine. Both our generic Rapacat and the branded Felycin are acid-resistant, as is our oral oil suspension of rapamycin.
- You can increase absorption of rapamycin by giving with a little oil – either olive or fish is just fine.

RAPAMYCIN IS A PRESCRIPTION DRUG. YOU WILL NEED EITHER A PRESCRIPTION FROM YOUR LOCAL VETERINARIAN OR A LONGEVITY CONSULT WITH DR. KEVIN BEFORE YOU CAN ORDER IT FROM US.

End-of-Module Reflection

1. What pathway does rapamycin target in the body?
   A) RAAS
   B) Thyroid axis
   C) mTOR
   D) BNP

2. At which stages of HCM is rapamycin most beneficial?
   A) B1 and B2
   B) C only
   C) D only
   D) All of the above

3. True or False: Rapamycin can be purchased without a prescription or a consult with Dr. Kevin

Answer Key

1-C, 2-D, 3-False

Module 8: Treatment Algorithm

HERE'S HOW VETERINARIANS ARE TAUGHT TO APPROACH HCM TREATMENT, STEP BY STEP. *Please refer back to Page 8 for another way to look at this.*

1. Suspicion of HCM (murmur, BNP change) → Echocardiogram to confirm.

2. If HCM is confirmed:
- **Stage B1**: Monitor with echo exams and lab tests every 6 months.
  -Drugs: rapamycin, amlodipine for high BP, atenolol for high heart rate/LVOTO
  -Control body weight and diet
  -Solve dental disease
- **Stage B2**: Continue echo exams and lab tests every 6 mo.
  -Drugs: Rapamycin plus above.
  -Add medications:
    -AMLODIPINE for high BP
    -ATENOLOL for LVOTO, high heart rate, or high BP
    -CLOPIDOGREL or RIVEROXABAN if the left atrium is enlarged or if you see clots
- **Stage C**: Continue echo exams and lab tests every 6 months.
  -Drugs: Continue rapamycin and any meds from B2, above.
  -ADD MEDICATIONS:
    DIURETICS: furosemide or torsemide for CHF or fluid accumulation.
      - monitor kidney function at 1, 3, and 10 days after start
      -monitor blood potassium at 7 and 21 days after start
- **Stage D:** Adjust diuretics (furosemide/torsemide), consider palliative care.

3. At all stages:
- Schedule 6 mo rechecks (echo, BNP) , blood pressure, and lab tests (CBC, chem panel, UA, thyroid)
- Reduce dietary sodium
- Keep weight ideal and manage stress.
- Watch for early signs of breathing difficulty.
- AND SPOIL YOUR KITTY!!

This structured plan ensures cats get the right treatment at the right time, maximizing quality of life.

End-of-Module Reflection

1. What is the first diagnostic step if HCM is suspected?
   A) X-ray
   B) Echocardiogram
   C) Blood pressure check
   D) Urinalysis

2. Which drug is added in Stage B2 if the left atrium is enlarged?
   A) Pimobendan
   B) Clopidogrel
   C) Furosemide
   D) Benazepril

3. What is the main treatment goal in Stage D?
   A) Prevention of enlargement
   B) Monitoring only
   C) Aggressive diuretics and palliative care
   D) Surgery

Answer Key

1-B, 2-B, 3-C

Module 9: Living With a Cat With HCM

Living with a cat that has hypertrophic cardiomyopathy can feel overwhelming, but with the right tools and knowledge, you can help your cat live a long and happy life.

Here's what you can do at home:
• Monitor breathing: A normal resting breathing rate is under 30 breaths per minute. If it rises or you notice open-mouth breathing, call your vet.
• Give medications consistently: Use pill pockets, flavored liquids, or compounding pharmacies if needed.
• Keep weight ideal: Obesity makes the heart work harder.
• Manage lifestyle: Keep stress low, ensure your cat stays hydrated, and provide a calm environment.

ONE IMPORTANT AND OVERLOOKED PART OF LIFESTYLE IS TO HELP YOUR CAT ENJOY THEIR LIFE!! DON'T LIMIT THEIR PLAY – THIS IS WHAT MAKES THEIR LIFE FUN!!

Emotionally, many pet parents feel anxious or helpless after an HCM diagnosis. Remember…

- Rapamycin/Felycin can slow or stop progression of HCM in 80% of cases.
- The tests and treatments outlined in this course can give your cat years of good quality life.
- You are not alone—***I CAN HELP YOU.***

THANK YOU VERY MUCH FOR HELPING YOUR HCM KITTY LIVE THEIR BEST LIFE!!

Kevin

Kevin Toman, DVM

Email: DrKevin@TheLongevityVet.com

www.HelpingPetsLiveLonger.com

End-of-Module Reflection

1. What is a normal resting breathing rate for cats?
   A) Under 20 breaths/min
   B) Under 30 breaths/min
   C) Under 40 breaths/min
   D) Under 50 breaths/min

2. Which factor makes the heart work harder in cats with HCM?
   A) Low body weight
   B) Obesity
   C) Stress-free environment
   D) Regular hydration

3. True or False: Monitoring your cat's breathing and consistency with medication can extend both lifespan and quality of life.

Answer Key

1-B, 2-B, 3-True