Hypertrophic Cardiomyopathy in Cats

A comprehensive course on understanding, diagnosing, and treating the most common heart disease in cats

Understanding HCM: The Silent Threat

Hypertrophic Cardiomyopathy (HCM) affects approximately 16% of cats—one out of every six. This disease can strike ANY cat, though Maine Coons, Ragdolls, and Sphynx cats face higher risk due to genetic mutations in the MYBPC3 gene.

The challenge? HCM often hides. Cats may appear completely normal until the disease has progressed significantly. Early testing and intervention can protect your cat's heart health and potentially add years of quality life.

Hypertrophic

Heart muscle becomes abnormally thick—unlike beneficial muscle growth from exercise, this thickening is harmful

Cardiomyopathy

A disease of the heart muscle that progressively impacts cardiac function

The Cascade of Problems in HCM

When the heart muscle thickens abnormally, it triggers a cascade of serious complications that affect your cat's entire cardiovascular system and beyond.

Reduced Flexibility

Thickened heart walls lose elasticity, preventing effective blood pumping

Reduced Pumping Ability

As walls thicken, heart chambers shrink, limiting blood volume capacity

Mechanical Problems

Back pressure causes mitral valve murmurs, left atrial enlargement, and dangerous clot formation

Organ Damage

Kidneys and other organs suffer from reduced oxygenated blood flow

How the Cat Heart Works

The Four-Chamber System

The heart contains four chambers: right and left atria (top) that receive blood at low pressure, and right and left ventricles (bottom) that pump blood at high pressure.

01

Blood from the body enters the **right atrium**

02

Pumped through the tricuspid valve into the **right ventricle**

03

Sent to the **lungs** to load oxygen

04

Oxygenated blood enters the **left atrium**

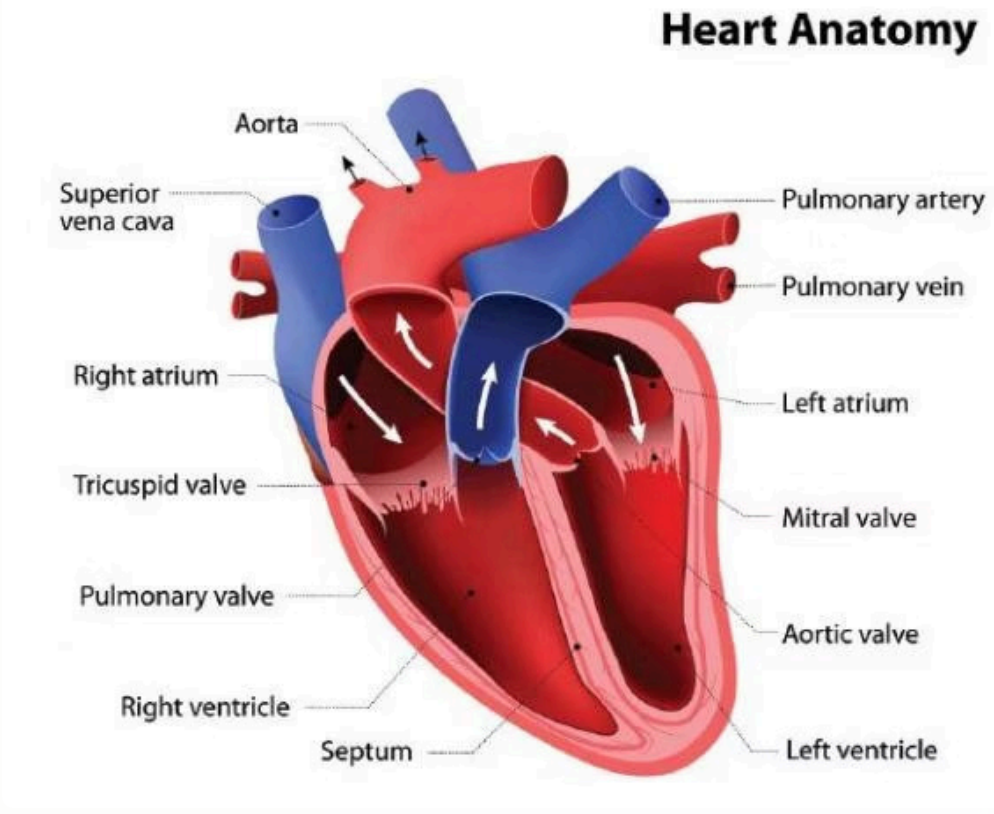
05

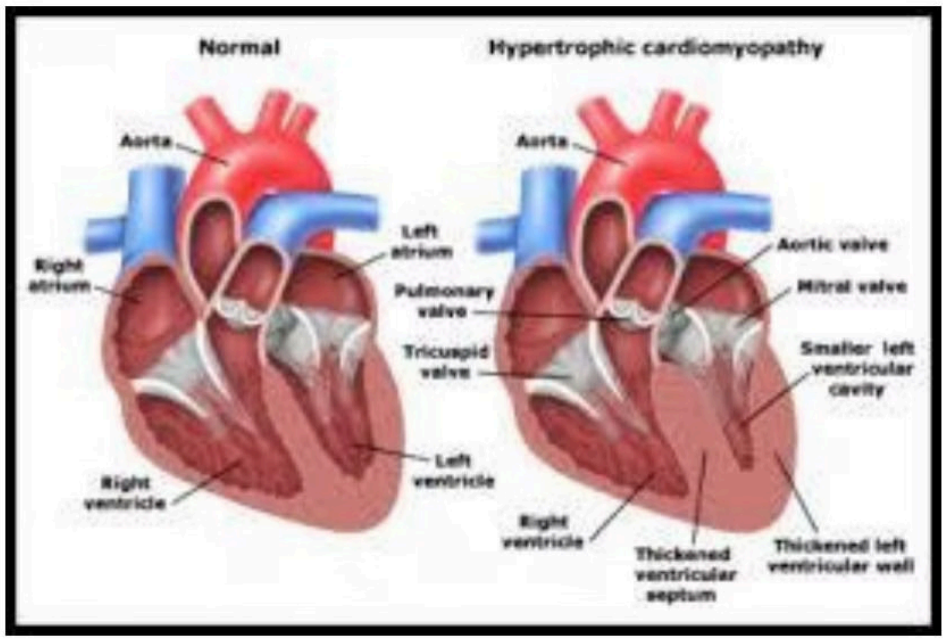
Pumped through the mitral valve into the **left ventricle**

06

Pumped into the **aorta** and throughout the body

What Happens in HCM





The thickened chamber becomes smaller and stiffer, unable to fill properly with blood.

In HCM, the left ventricle thickens. Sometimes all walls are affected; in luckier cases, only one wall thickens, making disease less severe.

LVOTO

Left Ventricular Outflow Tract Obstruction occurs when thickening squeezes the outflow valve like pinching a balloon neck

Pressure Buildup

Blood can't exit normally, causing dangerous pressure increases within the ventricle

Mitral Valve Problems

Increased pressure prevents normal mitral valve function, causing murmurs and abnormal leaflet motion

Atrial Enlargement

The left atrium stretches and enlarges, leading to murmurs, arrhythmias, and blood clots

This disease progresses gradually, day after day, causing heart failure—until rapamycin.

Diagnosing HCM: The Tools We Use

Physical Exam

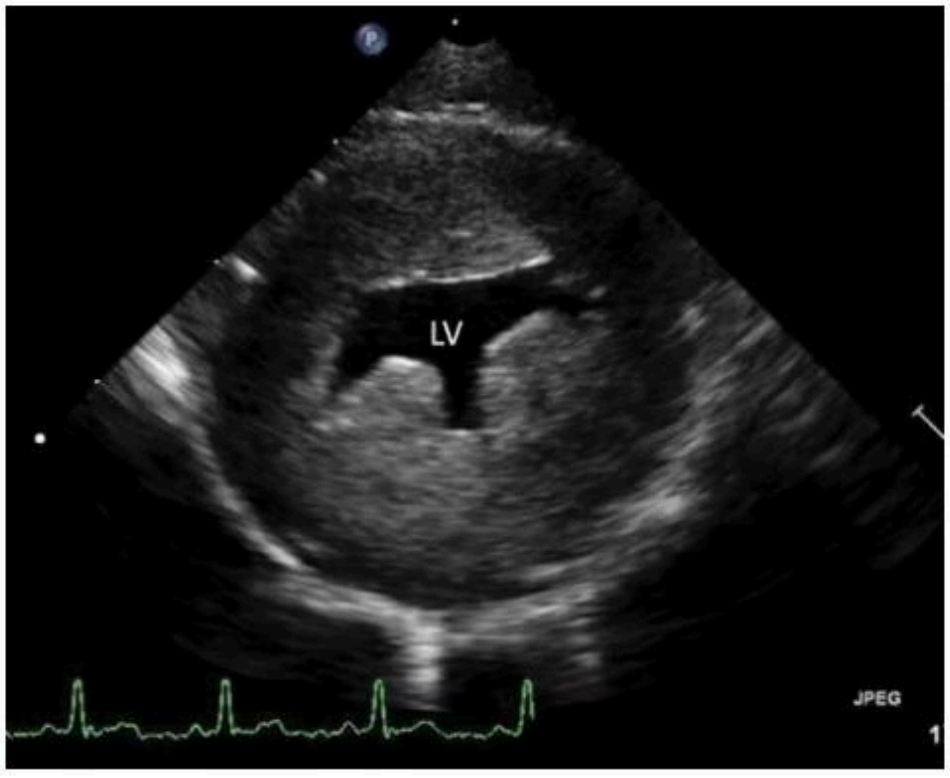
Your vet may hear a murmur or gallop rhythm—the most common way HCM is detected, usually as an incidental finding during routine care.

BNP Blood Test

Measures stress on heart muscle through a simple blood draw. Not always reliable—some severely affected cats show low BNP while less severe cases show high scores. Always use as ONE tool, not alone.

Echocardiogram

The gold standard—an ultrasound by a veterinary cardiologist measuring wall thickness, chamber size, valve function, blood velocity, and detecting clots in the left atrium.



Chest X-rays

Can reveal heart enlargement and lung fluid from congestive heart failure. These SUGGEST HCM but cannot DIAGNOSE it definitively.

> By combining these diagnostic tools, your veterinarian can confirm HCM and determine disease severity to guide treatment decisions.

The Four Stages of HCM

Veterinarians classify HCM into stages to guide treatment and predict outcomes. Understanding your cat's stage helps you make informed care decisions.

Stage B1: Early Disease

Murmur or BNP elevation present, but **no heart enlargement**. Rapamycin can significantly slow or stop progression here.

- Monitor with echo and labs every 6 months
- Control blood pressure and thyroid
- Start rapamycin, maintain healthy weight
- Low-sodium diet and dental care

Stage B2: Heart Enlargement

Heart enlargement visible on echo, but no symptoms. **Left atrial enlargement** is the hallmark. Treatment for secondary issues begins.

- Continue B1 strategies
- Minimize clotting risk with clopidogrel or rivaroxaban
- Consider nattokinase/rutin supplementation

Stage C: Congestive Heart Failure

CHF has occurred—fluid in lungs or chest causes breathing difficulty. Rapamycin plus cardiac drugs and diuretics needed.

- Continue B1 and B2 strategies
- Add diuretics (furosemide/torsemide)
- Monitor kidney function and potassium closely

Stage D: End-Stage Disease

Multiple medications no longer control symptoms effectively. Focus shifts to comfort and quality of life.

Medication Arsenal for HCM

Not every cat needs medication immediately, but as 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 and overall health.

Atenolol

Beta-blocker that slows heart rate and reduces blood pressure. Indicated for LV outflow tract obstruction. Dose: 6.25 mg per cat every 12 hours.

Amlodipine

Lowers blood pressure in hypertensive cats. Dose: 0.625–1.25 mg per cat daily, can double if needed (max 2.5 mg).

Benazepril

ACE inhibitor reducing heart strain, treating high blood pressure and kidney disease. Dose: 2.5 mg for average 10-12 lb cat daily.

Pimobendan

Increases heart contractility in advanced HCM. Dose: 1.25 mg twice daily for average 10-12 lb cat.

Furosemide

Diuretic removing lung/chest fluid in CHF. Monitor potassium and kidney function. Dose: 5-10 mg 2-3x daily for average cat, may increase.

Torsemide

10x more potent diuretic than furosemide. Reserved for cases where furosemide insufficient. Monitor kidneys and potassium.

Blood Thinners

Reduce chances of blood clot development in the left atrium or minimize existing clot growth.

Clopidogrel (Plavix)

The standard option, though bitter when given orally. Dose: 18.75 mg per cat daily.

Rivaroxaban (Xarelto)

Newer option, can be used alone or with clopidogrel. Dose: 2.5 mg per cat once daily.

Apixaban (Eliquis)

More expensive, used when cardiologist very concerned about clotting. Dose: 1-2 mg once daily for average cat.

Rapamycin: The Game-Changer

Breaking New Ground in Cat Longevity

Rapamycin is the most publicized prescription longevity drug in the world—and for good reason. This breakthrough medication works by calming the mTOR pathway involved in cell growth and scarring, helping reduce thickening and stiffening of heart muscle.

Slows/Stops HCM

Documented to halt progression in majority of cat patients

Anti-Cancer Properties

Broad protective effects against cancer development

Reduces Inflammation

Improves arthritis and periodontal health

Kidney Benefits

Currently studied for chronic kidney disease treatment

Extends Lifespan

Shown to increase lifespan up to 14% in every mammal species studied

When started early (Stages B1–B2), rapamycin can delay or even prevent congestive heart failure. While most responding cats show stable disease, a minority actually see ventricular measurements IMPROVE.

80%

Success Rate

Rapamycin helps approximately 80% of HCM cats—far better than doing nothing

0.3

Optimal Dose

mg/kg given once weekly with food (1 mg per 7 lbs for average cat)

IMPORTANT: Rapamycin is a prescription drug. You need either a prescription from your local veterinarian or a longevity consult with Dr. Kevin before ordering. Consider this a lifetime medication for HCM cats.

Living Your Best Life Together

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

Monitor Breathing

Normal resting rate is under 30 breaths per minute. If it rises or you notice open-mouth breathing, call your vet immediately.

Consistent Medications

Use pill pockets, flavored liquids, or compounding pharmacies if needed. Consistency is key to treatment success.

Maintain Ideal Weight

Obesity makes the heart work harder. Keep your cat at a healthy weight through proper diet and activity.

Enjoy Life Together

Don't limit play—this is what makes their life fun! Keep stress low, ensure hydration, and provide a calm environment.

Remember: You Are Not Alone

- Rapamycin/Felycin can slow or stop HCM progression in 80% of cases
- The tests and treatments in this course can give your cat years of quality life
- I can help you navigate this journey

Thank you for helping your HCM kitty live their best life!

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