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Apical HCM

A form of HCM where the heart muscle thickens at its tip. Most people with it do well, and the right imaging finds the few who need more.

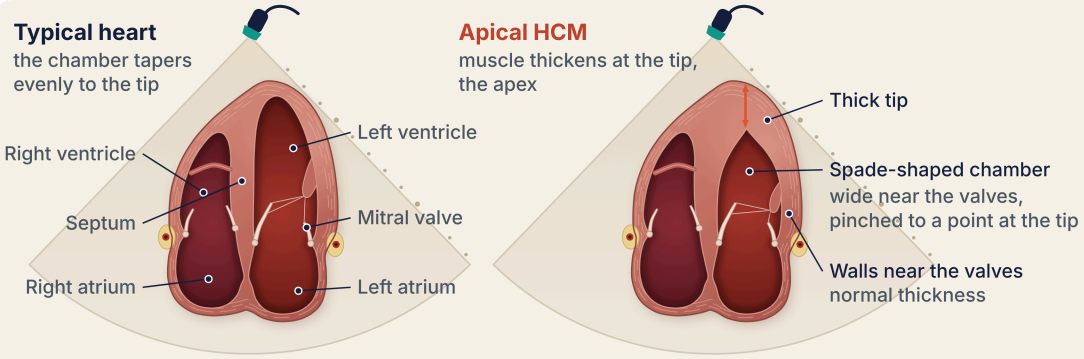
~3–4%
of HCM in the US and Europe, and 15 to 25% in Japan and East Asia

~13–15%
develop an apical aneurysm, the risk that changes the plan

~Half
the rate of major events and death in other forms of HCM, on average

WHAT IT IS

A thick tip and an ace of spades



Ace of spades

The thick tip crowds the bottom of the chamber into the shape of the ace of spades on imaging.

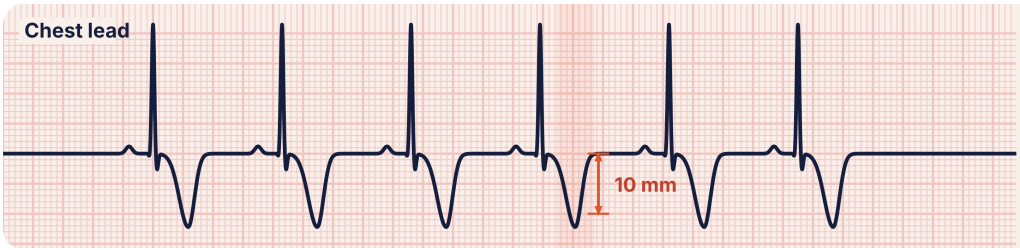
↕ Thickness at the tip, 15 millimeters or more

Shown as on the echo screen, with the tip of the heart at the top

Apical HCM is the same inherited disease as classic HCM, with the thickening at the apex, the pointed bottom tip of the left ventricle. On echo the diagnosis needs an apical wall of 15 millimeters or more, or an apex at least 1.3 times thicker than the wall near the base.

WHY IT GETS MISSED

Hidden on echo, mistaken on the ECG



Giant T waves

Deep, sharp T-wave inversions in the chest leads, often 10 millimeters or more. They can look like a heart starved of blood.

Each small square is 1 mm

The apex sits farthest from the echo probe, so a standard echo can look normal while thickening hides at the tip, and the deep T waves on the ECG can look like a heart attack. Cardiac MRI sees the apex clearly and finds scar and apical aneurysms that echo misses.

Most do well

Make sure you have had a quality cardiac MRI, that someone tracks your rhythm and your scar over time, and that your relatives have been screened.

THE APICAL ANEURYSM, TREATMENT AND FAMILY SCREENING ARE ON THE BACK

WHAT CHANGES THE PLAN

The aneurysm, scar, treatment and your family

WHEN TO GET HELP

for 911, don't drive yourself

Call 911	Fainting (especially during exercise), chest pain that doesn't settle with rest, or palpitations with lightheadedness or near-fainting.
Same-day call	Shortness of breath or tiredness that's getting worse, or a brief, mild flutter that settles.

THE APICAL ANEURYSM

about 13 to 15 percent of patients

What it is	A thin-walled pouch of scarred muscle at the very tip of the ventricle that no longer contracts. Cardiac MRI is usually what reveals it.
Rhythm risk	The scar rim can host dangerous fast rhythms. The 2024 guidelines name an aneurysm as a sudden death risk marker, enough on its own to discuss an implantable defibrillator (ICD).
Clot risk	Blood pools in the pouch and can clot and travel to the brain, a stroke risk around 1 percent a year without a blood thinner. For a sizable aneurysm one is strongly considered, even without AFib.
Size	At 2 centimeters or larger, the 5-year sudden death event rate is near 10 percent. With an appropriate ICD and a blood thinner, deaths in this group fall to roughly 0.8 percent per year.

SCAR AND THE ICD DECISION

The calculator	The standard HCM risk calculator scores most apical patients as lower risk, but it leaves out the aneurysm and the scar on MRI. A low score shouldn't end the conversation.
Scar on MRI	The 2024 guidelines flag scar in 15 percent or more of the muscle as able to tip an uncertain ICD decision toward yes. A 2026 registry study found a jump in risk at 9 percent. Scar grows, so repeat MRIs are now favored.

TREATMENT

Symptoms	Beta-blockers, or the calcium channel blockers verapamil or diltiazem, give the stiff ventricle more time to relax and fill. A low-dose water pill can help if breathlessness lingers.
Surgery	Apical HCM is almost always nonobstructive, so the myectomy and alcohol ablation of classic HCM don't apply. A rare patient with a tiny cavity and severe symptoms may be considered for transapical myectomy at an expert center.
Atrial fibrillation	With HCM, AFib calls for a blood thinner regardless of the usual risk score.

SCREENING YOUR FAMILY

parents, siblings and children

Tests and genes	Each first-degree relative has a 50 percent chance of carrying the gene and should have an echocardiogram and an ECG. If a family gene variant is known, relatives who test negative can step out of repeated imaging.

DO I NEED A DEFIBRILLATOR?

Not automatically. Many apical HCM patients never need one. The decision rests on your own risk features, above all an apical aneurysm or extensive scar on MRI, plus your rhythm monitoring and family history.

READ THE FULL ARTICLE

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apical-hypertrophic-cardiomyopathy

For education only, and not a substitute for advice from your own physician. Sources include the 2024 AHA/ACC HCM guideline, Braunwald (NEJM 2025), Hughes (JACC Imaging 2024), Rowin (JACC 2017), Klarich (AJC 2013), a 2025 meta-analysis of apical versus other HCM and the HCMR study (JAMA 2026).

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