

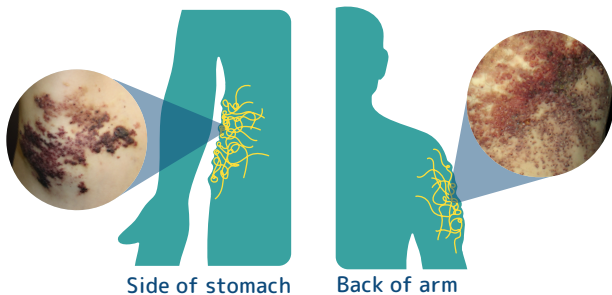
mLM: What you see and what you don't

You're not alone

It's estimated that there are **more than 30,000 people** living with mLM (microcystic lymphatic malformations) in the United States.¹

Visible effects of mLM

mLM is a rare, serious, noncancerous genetic disease. In many cases, mLM causes small fluid-filled clusters (called microcysts) to form under the skin. These clusters may appear as small fluid-filled bubbles that can show up anywhere on the skin's surface.²



Invisible causes of mLM

mLM is a disease in which tiny tubes in the body (called lymphatic vessels) don't grow correctly. mLM can be caused by changes in certain genes that control cell growth. These genetic changes often lead to the unnecessary growth (called malformations) of too many lymphatic vessels, which are part of the body's immune and drainage system.^{3,4}

There are **currently no treatments approved by the US Food and Drug Administration** for mLM.²

mLM begins below the skin's surface

More than a mark

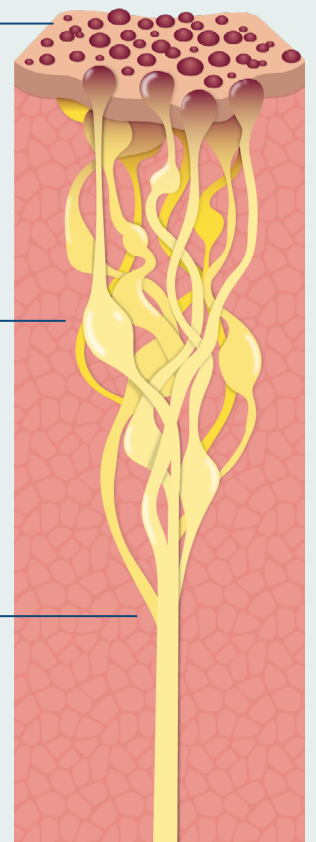
What appears on the skin is being caused by a tangled traffic jam of excess lymphatic vessels, which are part of the body's system for moving and draining fluids.

A growing problem

This overproduction of lymphatic vessels is a result of a communication issue, in which the body receives too many signals to build more vessels than it needs.

False starts

This miscommunication happens when a gene (most commonly PIK3CA) is mutated and causes the signaling system in the body (called the mTOR pathway) to act like a switch that's stuck in the "on" position.



mLM can be genetic but is not hereditary

The mutated PIK3CA gene is not inherited from a parent. It's the result of what's known as a somatic mutation, which means the gene change occurs during development.



Terms to help you understand mLM



mLM in the body

Vascular anomaly: A type of abnormal growth or development of blood or lymphatic vessels. Usually present at birth, they can occur in any part of the body and can involve arteries, veins, capillaries, or lymphatic vessels

Lymphatic system: A network of lymphatic vessels, lymph nodes, and organs (such as the spleen, thymus, and tonsils) that supports immune function, absorbs fats from the intestines, helps maintain fluid balance, and filters harmful substances

mLM (microcystic lymphatic malformations): A serious, genetic disease that can cause very small fluid-filled cysts or lesions to appear on certain areas of the body, including the skin

PIK3CA: A gene involved in cell growth. Mutations in this gene can cause cell and tissue overgrowth and are associated with lymphatic and vascular malformations

The mTOR pathway: This is like a control center inside your cells. It listens to signals from inside and outside the cell to help decide when the cell should grow, make energy, or make more cells

Lymph: A clear to straw-colored fluid that circulates through the lymphatic system, carrying white blood cells, proteins, fats, and waste products. It helps maintain fluid balance and supports immune function

Somatic mutation: An alteration to a gene that happens during pregnancy. It is not something that is inherited from parents



mLM on the skin

Cellulitis: A bacterial infection of the deeper layers of the skin that causes redness, warmth, swelling, and pain

Cyst: A fluid-filled sac or lump found anywhere in the body or under the skin

Lesion: Any abnormal area of tissue, such as a spot, wound, growth, or inflammation. Lesions can be benign or serious depending on the cause



mLM at the doctor's office

Biopsy: A test where a doctor removes a small sample of tissue or cells so it can be examined under a microscope

MRI: An imaging test that uses a strong magnet and radio waves to create detailed images of the body, helping doctors diagnose and monitor disease. It is noninvasive and does not use radiation

Ultrasound: An imaging test that uses high-frequency sound waves to create pictures of internal organs and tissues. It is noninvasive and does not use radiation

MRI=magnetic resonance imaging; mTOR=mammalian target of rapamycin.

References: 1. Treat J, et al. *J Vasc Anom.* 2024;5(4):1-7. 2. Teng J, et al. *Lymphat Res Biol.* 2023;21(2):101-110. 3. Lymphatic malformations. CincinnatiChildrens.org. Accessed February 13, 2026. <https://www.cincinnatichildrens.org/health/1/lymphatic-malformations> 4. Mäkinen T, et al. *Circ Res.* 2021;129(1):136-154.