

What Is Ocular Melanoma? This Rare Eye Cancer Has Struck 36 Graduates of Auburn University

More than 50 people in two small towns have been diagnosed with this rare and aggressive cancer—and no one knows why.

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A real-life medical mystery has a college community—and dozens of families all over the country—reeling: At least 36 people who graduated from Auburn University have been diagnosed with a rare eye cancer known as ocular melanoma, according to a CBS News report.

Many of the diagnoses came decades after the former students attended the university, located in Auburn, Alabama. When three women who'd been friends in college all developed ocular melanoma (also called uveal melanoma) in recent years, one started a Facebook group to search for others who may have also been affected.

Researchers have also discovered that another 18 patients living in Huntersville, North Carolina—located outside of Charlotte, about 400 miles from Auburn University—have been diagnosed with the disease, as well.

Scientists don't know why the cancer has struck so many people in these two towns, but they're hoping to find out. Leading the charge are researchers from the Sidney Kimmel Cancer Center at Thomas Jefferson University in Philadelphia, who are studying patients from both geographic areas in hopes of learning more about what they have in common.



In the meantime, *Health* spoke with Hakan Demirci, MD, associate professor of ophthalmology at the University of Michigan Kellogg Eye Center. He has not been involved with any of the Auburn or Huntersville patients, but he has diagnosed and treated ocular melanoma, along with other types of eye cancer. Here's what he wants people to know.

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What is ocular melanoma?

Ocular or uveal melanoma is a type of cancer that's related to subcutaneous melanoma, the deadliest form of skin cancer. It occurs when cells called melanocytes—which provide pigment and color to the iris—mutate and form tumors.

These tumors can form in the iris (the colored area surrounding the pupil) or in other parts of the eye's middle layer, known as the uvea or the uveal tract.

Although ocular melanoma is the most common type of eye cancer, that doesn't mean it's widespread. Overall, the incidence rate is about 5 to 6 people per million; in other words, it affects fewer than 3,000 people in the United States every year.

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What causes ocular melanoma?

Unlike subcutaneous melanoma, which is sometimes linked to sun damage, exposure to solar rays has not been shown to raise the risk of uveal melanoma. In fact, doctors don't really know what causes the disease, and they think that most cases arise purely by chance.

There are a few things that are known to raise a person's risk, however. Uveal cancer mostly affects Caucasian individuals, and people with blond or red hair and light-colored eyes seem to have a higher risk than people with dark hair and eyes, says Dr. Demirci. "It's much rarer in people of African-American, Asian, or Hispanic descent," he adds.

In a very small proportion of patients with uveal melanoma, he says, genetics may play a role. "If you carry a certain gene that makes you predisposed to cancer development, you may be more likely to get this cancer and to get it at an earlier age," he says. These patients are also more likely to develop cancer in other parts of the body, as well.

While scientists haven't yet found any environmental risk factors for uveal melanoma in the general population, a few studies have suggested that people who work as welders, farmers, fisherman, or laundry-facility employees may have a higher-than-average risk.

"These cases in North Carolina and Auburn are very, very interesting, and it raises a big question as to whether there's something environmental there," says Dr. Demirci. "Maybe it's just pure luck that all of these people were living in the same area. But maybe they will give us some clues to understand this disease better and discover something new."

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Symptoms of ocular melanoma

Juleigh Green, the first of three college friends to be diagnosed with eye cancer, told CBS News that seeing “unusual flashes of light” was her first sign something was wrong. She was diagnosed at age 27.

A few years later, in 2001, another friend was diagnosed at age 31. “I was just seeing some mild flashes of light for, say, 7 to 10 days,” Allison Allred told CBS News. Ashley McCrary was the third friend to be diagnosed, after finding black spots in her iris.

Dr. Demirci says that most of the time, ocular melanoma causes blurry vision or obstructions—like flashes or dark spots—in the visual field. It can also cause a spot (or multiple spots) that look like a freckle on the iris, called a choroidal nevus. Sometimes, he adds, tumors are noticed during routine eye exams even before they cause any symptoms at all.

When ocular melanoma is caught and treated early, prognosis for the disease can be good, says Dr. Demirci. While there’s no cure, doctors can shrink tumors in the eye with radiation therapy or remove them surgically. That often involves removing the entire eye, but not always.

Unfortunately, says Dr Demirci, ocular melanoma can be very aggressive—especially if it’s not caught early. For about half of patients, the disease spreads to other organs in the body, like the liver or the brain. “If it spreads to another organ, the prognosis is usually very poor,” he says.

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How to protect yourself

Since doctors don’t know what causes most ocular melanomas, there are no concrete recommendations on how to prevent them. But it is important to see an eye doctor for any visual complaints, says Dr. Demirci—and to get an annual eye exam, even if

there's nothing noticeably wrong. "It's a great idea regardless," he says, "because an exam can detect not only cancer but also other defects and diseases that you wouldn't know about otherwise."

Symptoms like choroidal nevi or blurry vision can have many causes and usually aren't a sign of rare cancer, says Dr. Demirci—so you shouldn't panic if you're experiencing something unusual. It is smart, however, to get it checked out as soon as possible. The earlier a problem is caught, he adds, the greater a person's chance of successful treatment.

There's no evidence that wearing sunglasses will protect you from ocular melanoma, but some doctors still think they might reduce a person's risk. The American Cancer Society recommends wearing wrap-around sunglasses with 99% to 100% UVA and UVB absorption, which may also protect against skin cancer around the eyes.

There are also no dietary supplements or lifestyle changes that have been shown to lower the risk of eye cancer or prevent it from coming back. According to the American Cancer Society, "adopting healthy behaviors such as not smoking, eating well, and staying at a healthy weight might help, but no one knows for sure." These changes have been shown, however, to improve health overall.