

GEOGRAPHIC ATROPHY

Geographic atrophy is the advanced form of dry age-related macular degeneration that impairs central vision, causing irreversible vision loss.

Some patients with age-related macular degeneration

(AMD) will develop geographic atrophy (GA), which refers to regions of the retina where cells become damaged and die (atrophy). The regions of atrophy result in a blind spot in the visual field. Geographic atrophy can affect one or both eyes, and a patient with geographic atrophy in one eye is more likely to develop it in the other.

Symptoms

GA can start to develop with subtle symptoms, or even no symptoms at all. By the time vision loss becomes noticeable, GA may have already caused significant, irreparable vision loss. The initial symptom may be found during reading, when one or more letters in a word are missing. Or, when looking at faces, a small part of the face cannot be seen.

Once GA starts and retina cells begin to die, the region of atrophy expands slowly over several years until the central vision is lost. GA does not normally affect peripheral vision.

The most common signs and symptoms of GA are:



Washed-out colors



Difficulty seeing in **low light** or at night



Blurriness or blank spots in the field of vision



Straight lines that look **wavy or crooked**

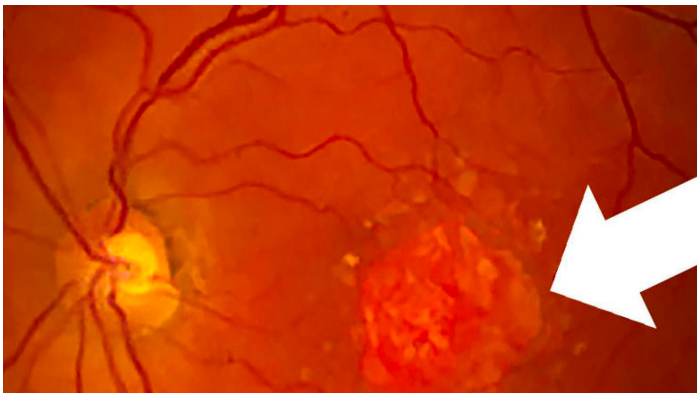


A loss of **central vision**, the straight-ahead vision used to complete everyday tasks

Diagnosis

1.5 million people across the US are living with GA, but only 1 out of 4 individuals have been diagnosed.

To diagnose GA, our team will perform a dilated exam and retinal imaging. In a dilated exam, GA appears as a patch of retina that is missing its dark melanin pigment. Imaging techniques including optical coherence tomography and fundus autofluorescence photography are used to detect and monitor progression of GA.



Geographic atrophy causes retinal cells to become damaged and die, creating patchy areas in the retina like the one shown by the arrow.

Image courtesy of the National Eye Institute.

Cause & Risk Factors

Researchers do not know the actual cause of the eye changes that lead to GA, but they suspect your immune system, i.e. the complement cascade, plays a role. Genetic and environmental factors also play a part.

There is no way to prevent GA, but you may be able to lower your risk by addressing modifiable risk factors such as avoid smoking, managing chronic conditions: diabetes, high blood pressure, obesity, or cholesterol, wearing UV protective eye wear, eating a heart-healthy diet, and regular exercise.



1.5 million people in the US have GA



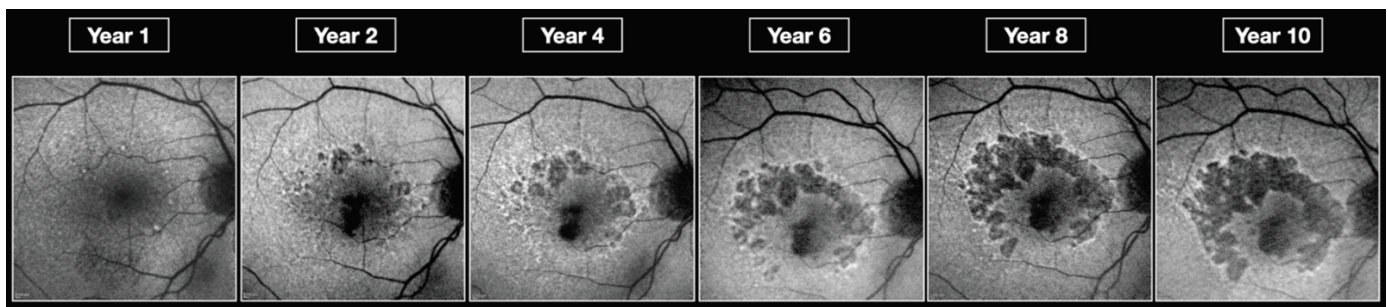
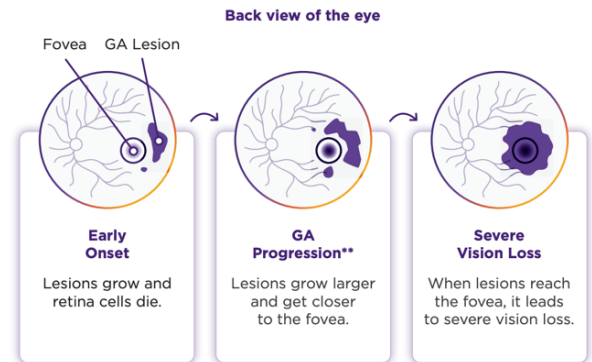
1 out of 5 cases of legal blindness in North America are due to GA

Progression

GA affects everyone differently and can be unpredictable, especially when it comes to speed of progression. From time of diagnosis, it can take on average about 2.5 years for GA to spread to the center of the retina, the fovea. When GA reaches the fovea, it can lead to a significant loss of central vision and, eventually, legal blindness.

As GA progresses, some challenges can interfere with lifestyle and independence. These include difficulty driving, struggling to read, or having a hard time recognizing faces.

Examples of how GA progresses over time:



Treatment

Slowing vision loss is top priority in managing geographic atrophy! Because once your vision is gone, it's gone.

The first intravitreal injection treatments for GA were approved by the U.S. Food and Drug Administration in 2023. New treatment options do not cure, reverse, or stop GA, they only slow the progression of the disease. Even with treatment, GA patients will lose vision, just at a slower rate than if no action was taken.

Treatment works by targeting inflammation in the complement pathway system in the eye, the key source of retinal cell death and loss of photoreceptors, preserving the cells in the retina that are responsible for vision. Treatment is most effective when initiated earlier in the disease process before the fovea is affected. It is also important for patients to follow their physicians recommended injection intervals, typically every 4-8 weeks.

Other ways to manage GA may include vision rehabilitation to learn how to manage activities of daily living with visual aids, and AREDS, antioxidant-containing supplements.

Despite vision loss, GA doesn't affect life expectancy. Many people live full lives even with decreased vision.

Treatment Complications and Side Effects

GA patients experiencing any of the following symptoms of visual distortion: straight lines seeming bent, deterioration in vision, dark spots, or loss of central vision should call our office at **(303) 261-1600** to set up a follow-up appointment. If declining treatment, annual exams are advised to monitor progression.

If receiving injection treatment, call our office if experiencing any of the following symptoms post-injection: increased discomfort or eye pain, worsening eye redness, blurred or decreased vision, increased number of small specks floating in your vision, flashes of light, or increased sensitivity to light.

Wet AMD and Geographic Atrophy

There is a risk of developing wet-AMD, the other advanced form of AMD. The risk of conversion from dry AMD to wet AMD is slightly increased when receiving GA injection treatment. Patients can have geographic atrophy before, during, or after they have the wet form of AMD. The two forms of AMD are not mutually exclusive.