This guide is intended for healthcare professionals

# RECOGNISING GEOGRAPHIC ATROPHY

A guide to identifying and monitoring patients with Geographic Atrophy

Apellis

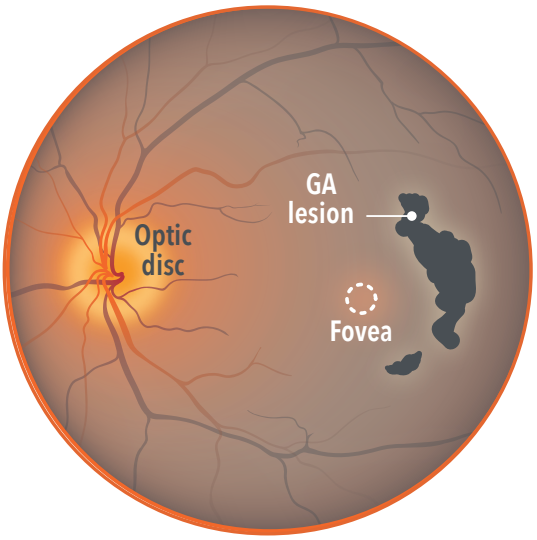
This booklet was created and funded by Apellis

# GEOGRAPHIC ATROPHY

## An advanced form of age-related macular degeneration

Geographic Atrophy (GA) is an advanced form of age-related macular degeneration (AMD), a leading cause of significant vision loss worldwide.[1-3]

GA is characterised by progressive loss of the photoreceptors, retinal pigment epithelium (RPE), and underlying choriocapillaris. Regions of atrophy typically start outside the fovea and expand to involve the fovea.[2,4]




**It is important to diagnose and refer patients with GA early to ensure that support can be provided, as the condition is progressive and associated with irreversible vision loss[2-4]**

**Optometrists play a key role in diagnosing and referring GA[5]**

# 4 STEPS TO DETECTING GEOGRAPHIC ATROPHY

1. Consider risk factors & symptoms
2. Use multimodal imaging
3. Assess lesion presentation
4. Monitor for progression

GA=geographic atrophy.

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# CONSIDER RISK FACTORS & SYMPTOMS

The pathogenesis of AMD is multifactorial, with many different genetic and environmental risk factors associated with its development and progression to more advanced forms like GA.[6]

## Risk factors associated with development of AMD and/or progression to GA

### Genetics

- **Family history*** of AMD[6-8]
- **Genetic predisposition*** (eg, complement gene variants associated with increased risk)[4,6,7]

### Physiology

- **Age*** (greatest risk factor for AMD)[8]
- Obesity[6]
- Certain dyslipidemias[6]
- Cardiovascular disease/ hypertension[6]

### Lifestyle/ environment

- History of **smoking**[6,8]*
- Diet[6]
- High alcohol intake[9,10]

### Clinical factors & imaging findings

- Presence of GA in fellow eye[2]
- Drusen volume[11]

*Most significant risk factors.

## Patient symptoms that may indicate GA

In the early stages of GA, visual symptoms may be minimal, as central vision is largely preserved until atrophy involves the fovea. Patients may experience some loss of low-light vision, but it may only be noticeable under certain conditions or with designed tests. As the disease progresses, more severe deterioration in central visual acuity occurs.[4,12]

### Visual symptoms[12]

- Delayed dark adaptation
- Reduced contrast sensitivity
- Distorted vision (eg, straight lines that appear wavy or crooked)
- Dull/washed-out colours
- Scotomas (characterised by blurry and/or blind spots)

### Functional symptoms[12]

- Difficulty reading, driving, working, and with daily activities outside the home
- Particular difficulty in low light
- Difficulty recognising familiar faces

AMD=age-related macular degeneration; GA=geographic atrophy.

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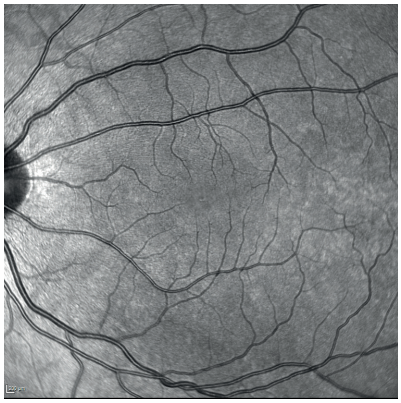
# GA CAN BE DIAGNOSED AND MONITORED THROUGH MULTIMODAL IMAGING

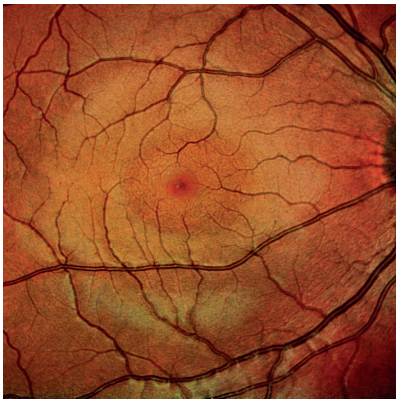
GA can be distinguished from other forms of AMD via imaging. It is characterised as cell layer loss with sharply defined borders.[2,13]

## Imaging modality

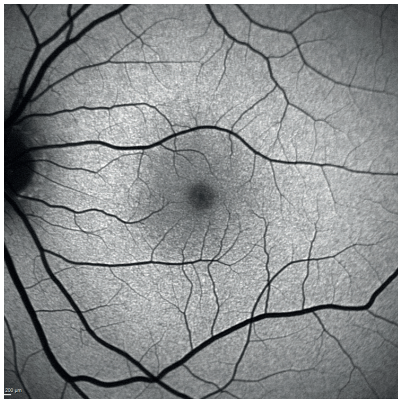
### NORMAL EYE



Infrared reflectance (IR)

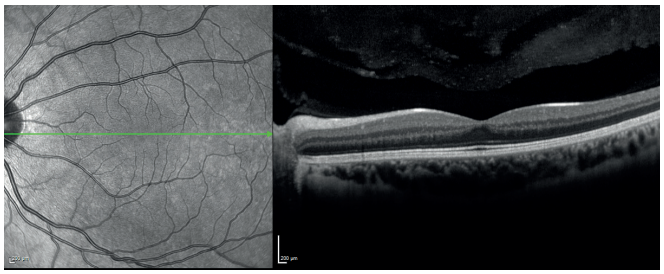


Multicolour

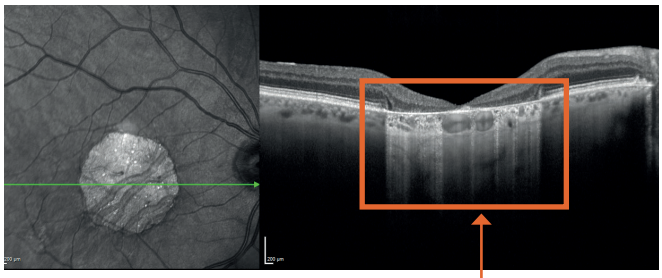


Fundus autofluorescence (FAF)

### NORMAL OCT



### GA OCT



Note the hyper-transmission

**It is important to diagnose and refer patients with GA early to ensure that support can be provided, as the condition is progressive and associated with irreversible vision loss[2-4]**

Images courtesy of Heidelberg Engineering Ltd and are intended for use in UK, Ireland and Nordics.
AMD=age-related macular degeneration; FAF=fundus autofluorescence; GA=geographic atrophy; RPE=retinal pigment epithelium.

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# ASSESS LESION PRESENTATION

GA lesions can present in several different patterns. While the rate and nature of GA progression vary considerably among individual patients, some factors have been shown to be associated with rate of progression. Awareness of specific lesion features that could predict faster GA progression is important.[2]

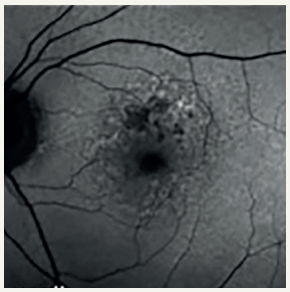
GA lesions grow at a rate of **~2 mm² per year** on average (~0.53 to 2.6 mm² per year)[2,15-17]

## Lesion features associated with rate of GA progression[18,19]

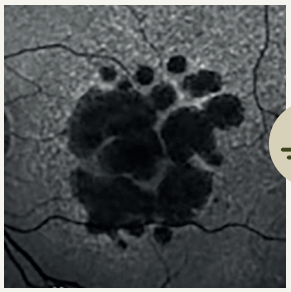
### Predictors of faster GA progression

**SIZE***

Small

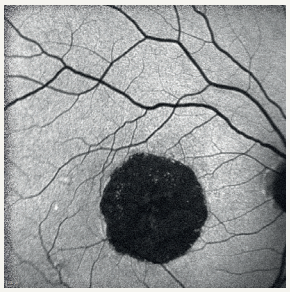


Medium/large

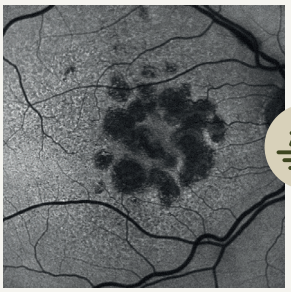


**CONFIGURATION****

Unifocal

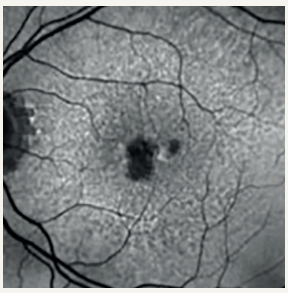


Multifocal

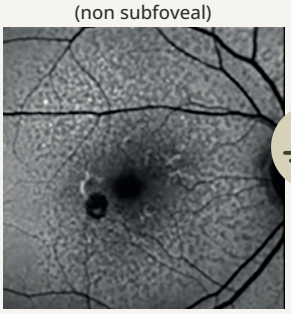


**LOCATION*****

With subfoveal involvement



Without subfoveal involvement (non subfoveal)



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# MONITOR FOR PROGRESSION

Recommended monitoring schedule for patients with GA[7]:

- **Regular monitoring at least every 6 to 12 months** by an optometrist (OD) or ophthalmologist
- **Consider referral to a specialist** for patients at high risk of progression

*Images reprinted from Fleckenstein M, et al. Ophthalmology. 2018;125(3):369-390. © 2018, with permission from the American Academy of Ophthalmology (FAF pattern).
**Images courtesy of Heidelberg Engineering Ltd and are intended for use in UK, Ireland and Nordics.
***Images courtesy of Mohammad Rafieetary, OD, FAAO, FORS, Dipl ABO & ABCMO mrafieetary@charlesretina.com (Lesion location)
FAF=fundus autofluorescence; GA=geographic atrophy.

You play a key role in early detection and ongoing monitoring of patients with GA

# DISCOVER GEOGRAPHIC ATROPHY

**Visit www.geographicatrophy.uk**

WHAT IS GA?

GA PROGRESSION

UNMET NEED IN GA

Apellis is a global biopharmaceutical company that leverages courageous science and compassion.
We are committed to addressing the unmet needs of patients and eye care professionals worldwide.

Developed in collaboration with Netan Choudhry, MD, FRCS(C), DABO
Co-founder and medical director of the Vitreous Retina Macula Specialists of Toronto
GA=geographic atrophy.

**References:**


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