On behalf of Vision Expo, we sincerely thank you for being with us this year.

Vision Expo Has Gone Green!

1

We have eliminated all paper session evaluation forms. Please be sure to complete your electronic session evaluations online when you login to request your CE Letter for each course you attended! Your feedback is important to us as our Education Planning Committee considers content and speakers for future meetings to provide you with the best education possible.



Experience EXPO With Us!

- Main Stage Exhibit Hall Booth F11084
 Our Main Stage sessions feature free, promotional content for all attendees.
- Vision Series Thursday 9/18, Friday 9/19 and Saturday 9/20
 Grab a bite to eat and continue learning over Breakfast 8:30-9:30am or Lunch 12:00-1:00pm!*
 Listen to industry leaders as they address the latest clinical innovations in a relaxed and collaborative environment.

*Open to Optometrists only. Not for Credit. Meals offered on first-come, first-serve basis to pre-registered

• Exhibit Hall Hours Thursday, Sept 18 b 9:30am - 6:00pm

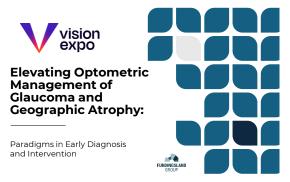
Conferee Cafe – Exhibit Hall – Booth P19087

Friday, Sept 19 9:30am - 6:00pm Education Lounge - Level 1 - Conference Area Saturday, Sept 20 9:30am - 3:00pm Conferee Happy Hour Thur, Sept 18 4:30 - 5:30pm



2

4



Faculty

Justin Schweitzer, OD, FAAO
Program Chair
Surgery Specialist Vance
Thompson Vision
Sioux Falls, South Dakota

Jessica Steen, OD, FAAO
Nova Southeastern
University
Fort Lauderdale, Florida

Mary Beth Yackey, OD
Cincinnati Eye
Institute/EyeCare Partners
Cincinnati, Ohio

3

Financial Relationship Disclosures Justin Schweitzer, OD, FAAO, has the following relevant financial relationships: Consultant: Alcon, Addeyra, Abbivie Balance Ophthalmics, Bausch and Lomb, Bruder, Carl Zelss Mediffee, Dompé, Glaukos, Harrow, Herru Lenz, Medifferint, Beichert, Science Based Health, Santen, Sight Sciences, Sun, Tarsus, Thèe, Viatris, and Visus, Speaker, Abbvie, Alcon, Bausch and Lomb, Carl Zeiss Meditec, Dompé, Glaukos, Lenz, Sight Sciences, and Sunder Debrech, Carlos Medicales, Consultant Alcon, Alleran Avellus Bausch and Lomb Balowe. Quintalmics, Carl Zeiss Mediter, Epierovin Glaukos, Care, Opus Genetics, Oriess, Redius XR, Viatris, and Tarsus, Shareholder, Cleanide Bonnedical (COD)78 concernity), Speaker, Alcon, Allergan, Astellas, Bausch and Lomb, Carl Zeiss Meditec, Dompé, Théa Pharma, and Vistris. Mary Beth Yackey, OD, has the following relevant financial relationships: Advisory Board, Apellis, Astellas/Ivenic Bio, Carl Zeiss Meditec, Glaukos, Hang Streit, Notal Vision/FSH, Oct Ferra, Orasis, Radial-Venic Bio, Carl Zeiss Meditec, District, Apellis, Astellas/Ivenic Bio, and Relain Carlos, and Notal Vision/FSH. Speaker, Apellis, Astellas/Ivenic Bio, and Relain Carlos, and Notal Vision/FSH. Speaker, Apellis, Astellas/Ivenic Bio, and Relaince Medical Equipment.

Financial Relationship Disclosures

It is the policy of The Fundingsland Group (TFC) that faculty and other individuals who are in the position to control the content of this activity disclose any real or apparent financial relationships relating to the topics of this educational activity. All identified relevant financial relationships have been mitigated and the educational content thoroughly evaluated for fair, balanced, and safe, effective patient care.

Laura Straub, TFG Staff, has the following relevant financial relationships: Consultant:
Launchiab Partners, Powers and Company, MM and Holiday Communications. The following financial relationships as consultant have ended: Avisi Technologies, Nova Eye, Rayner, Roight, STAMR Surgical, and Zeiss.

All other TFG staff, planners, reviewers, and writers have no financial relationships with ineligible companies.



Learning Objectives

Credit Designation Statement

Synchronous Live Course # 99158-GO 1.0 hour Activity # 130823

This activity, COPE Activity Number 130823, is accredited by COPE for continuing education for optometrists.

COPE advises optometrists to contact the State or Provincial Board where they are licensed for verification of what is acceptable for license renewal.



- You must have remained at the in-person event until the end of the program.
- · Please contact Vision Expo for further information on obtaining credit.
- Event will be recorded and published as an enduring CE activity at TFGLearningCenter.com

Thank you for joining us!

9 10



Polling Question

Which best describes your practice setting?

- a) Private solo practice
- b) Private integrated practice
- c) Corporate optometry
- d) Hospital or clinical setting
- e) Academic

f) Other

12

8



Polling Question

Which represents your largest patient volume?

- 1. Primary eye care / routine exams
- 2. Dry Eye
- 3. Glaucoma
- 4. Retinal disease 5. Other



Question

What is your typical first-line therapy for newly diagnosed glaucoma?

- a) Medications
- b) Selective Laser Trabeculoplasty (SLT)
- c) Bimatoprost intracameral implant
- d) Co-management for Surgery/minimally invasive glaucoma surgery (MIGS)

13

14



Pre-Program Polling Question

Rate your level of confidence in understanding MICS procedures?

- a) Very Confident
- b) Confident c) Neutral
- d) Not very confident
- e) Not confident at all



Pre-Program Polling Question

On average, how long do you believe it takes a patient to progress from first non-central geographic atrophy (GA) to central GA?

- a) Less than a year
- b) 1-2 years
- c) 3-4 years d) 5 or more years

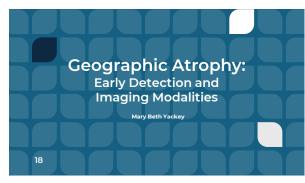
15 16



Pre-Program Polling Question

Rate your level of confidence discussing with patients the FDA-approved treatments for GA?

- a) Very Confident
- b) Confident
- c) Neutral
- d) Not very confident
- e) Not confident at all

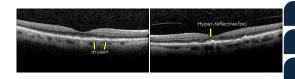


CASE STUDY:

- 72-year-old man
- C2: The 72-year-old White male presents for an evaluation of age-related macular
 degeneration (AMD) in the right and left eyes. The patient was referred from his
 local Optometrist. Patient states that he is having difficulties reading small print.
 The patient thinks he is seeing distortion in the left eye and describes it as wavy
 lines. The patient denies flashes, floaters, pain or redness in either eye.
- Systemic health is positive for Systemic HTN, Arthritis, Thyroid Disease
- Family Medical History: +Macular Degeneration (mother and father), Stroke (father), Thyroid disease (mother)
- POHx: S/P Phaco/PCIOL OU x 2 years ago; +PVD OD

March 22, 2022

OD: 20/20 J1
 OS: 20/20 J2

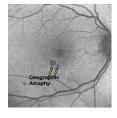


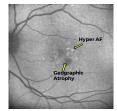
20

19

March 22, 2022

OD: 20/20 J1OS: 20/20 J2





Case Study Details

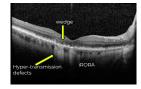
- Patient is instructed to continue to take AREDS2, monitor vision with Amsler Grid, and call with any new distortion or changes.
- Patient goes back to Primary Care Optometrist for dilated fundus exam and routine care.
- I year and 4 months later the patient presents with worsening distortion and vision changes in both eyes (OS>OD)

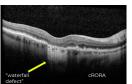
 The patient states that his Primary Care Optometrist believes there may be new treatments for his AMD and the patient wants to hear more about these options.

22 21

July 26, 2023

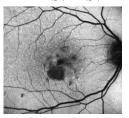
OD: 20/20 J3
 OS: 20/300(@D) 20/400(@N)





July 26, 2023

OD: 20/20 J3 OS: 20/300(@D) 20/400(@N)





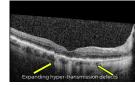
23 24

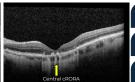
Treatment Options Discussed

- Unfortunately, the patient's insurance was not covering GA treatment at this time.
- The doctors were not able to give out sample drug at this time.
- Patient was instructed to follow up in 6 months with hopes that his insurance. would be able to cover treatment.

January 26, 2024

- OD: 20/30 J7 OS: CF7'(@D) 20/400 (@N)

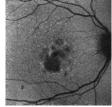


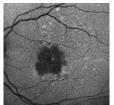


25 26

January 26, 2024

- OD: 20/30 37
 OS: CF7'(@D) 20/400 (@N)





Treatment Options Re-Discussed

- Now there are more options and the patient's insurance will cover both GA drugs
- Discussion of risks and benefits reviewed with patient.
- Patient received first treatment for GA in the right eye on February 5, 2024, with one of our retina specialists.
- Patient will continue with AREDS2 and Amsler grid monitoring.

27 28

Early Detection of Geographic Atrophy

- GA secondary to AMD is a degenerative disease responsible for severe and irreversible loss of vision in the elderly population.
 GA is relentless. Timely intervention is imperative in slowing disease progression of GA



Year 1 BCVA 20/30



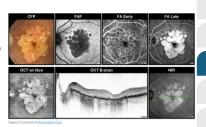
Year 2 VA 20/50



Year 5 VA 20/400

Multimodal Imaging for Early Detection and Monitoring of AMD

Multimodal imaging enables earlier detection of changes and better management of dry AMD progression.



30

5

When to Refer to a Retina Specialist

- High risk for progression to GA or wet AMD.
- Symptoms such as significant visual disturbances, scotomas, or rapid vision decline.
- Uncertainty in diagnosis or the disease is progressing despite treatment.

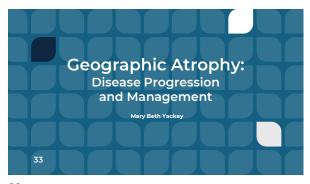


The Role of a Retina Specialist

- Provide advanced diagnostic tools and treatment options.
- Potential clinical trial enrollment for patients with progressing GA.



31 32



AMD Stages

AND AND Stages

Coxists
And VECP
(NYT)

Non-accelerations (CVY)

N

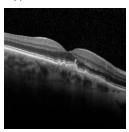
33 34

Biomarkers for GA Progression in AMD

- In addition to drusen and pigment changes in the fundus, we have learned of many other risk factors for developing GA in AMD.
- Defined biomarkers and nomenclature in GA.
- SD-OCT helps to identify and differentiate the atrophy as it progresses.

Lad EM, Finger RP, Guymer R. Biomarkers for the Progression of Intermediate Age-Related Macular Degeneration. Ophthalmol Ther. 202312(6):2917-29-Clasky K., et al. Connecting the dots: investigating the correlation between anatomic and visual outcomes in neouscular age-related macular dependence and referral vascudiseases. Expert Review of Ophthalmology. 2023-1-1

Hyperreflective Foci



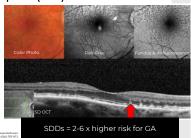
- Punctate intraretinal lesions
- Often at drusen apex
- Likely represent pigment granules
- Originate in the outer retina and migrate inward with time
- + 5x more likely to form GA within 2 years

Christechury X., et al. Progression of intermediate age-related macudegeneration with positiestion and inner related indiguation of hyperrellecti foci. Ophthalmology. 2011;10(5):1038-101. Ouysing Y, et al. Optical cohemence temography-based observation of the natuhistory of drusenoid lesion in eyes with day age-related macudegeneration. Ophthalmology. 2011;12(21):2365-246

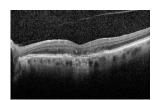
35 36

Subretinal Drusen Deposits (SDD)

- AKA reticular pseudodrusen.
- Difficult to distinguish from true drusen on color photography.
- SD-OCT allows us to see the location as deposits in the subretinal space above RPE.
- Early stage: granular hyperreflective deposit below EZ.
- Progression is noted when material accumulates into small mounds that break the EZ.
- Fundus Autofluorescence (FAF): target shape with hypo- or isoautofluorescent surround. Collectively forms reticular pattern.



Hypertransmission Defects



- Increased hyperreflectivity in the choroid as a result of retinal pigment epithelium (RPE) disruption.
- The overlying RPE may
 "appear" intact and unaltered,
 however, hypertransmission
 defects indicate loss of
 integrity of the RPE.
- Hypertransmission defects signify a high risk of nascent GA.

Ski V et al. Penistetet Hypertransmission Defection En Face OCT Imaging as a Stand Aljane Precurator for the Future Formation of Geographic Attaphy, Cybribalmol Resia. 2021;5(12): Liaignhair R, et al. Presistent Hypertransmission Defects Describt on En Face Swept Source Optical Computed Tomography Images Redict the Formation of Geographic Attaphy. Among the Procuration of Computed Tomography Images Redict the Formation of Geographic Attaphy. The Computed Tomography Images Rediction of Computed Tomography Images Rediction

37

38

Using FAF to Monitor GA Progression

- Analyze the progression patterns of GA, focusing on the key stages at which optometric intervention can alter patient outcomes.

 Fundus Autofluorescence:

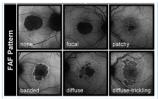
 Multifocal lesions grow quicker than monofocal lesions





Disease Progression and Management for GA

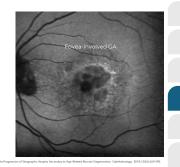
Banded or diffuse patterns show greater progression of GA than those with focal patterns or no pattern.



39 40

GA Lesions

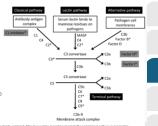
- The larger the geographic lesion, the quicker the growth.
- Lesion growth may affect the vision, even before the fovea is affected by GA.



What is the Complement System?

- The complement system normally plays a pivotal role in the immune system's defense against pathogens and abnormal cells.
- However, in patients with GA secondary to AMD, increased levels of complement activity have been found in the lesion and the area just outside of it.
- This overactivation of the complement system accelerates cell damage outside of the lesion, increasing the risk of GA lesion growth.

42



Pegcetacoplan Injection

- FDA approved in February 2023
- · Inhibits the C3 cleavage
- · Stops downstream progression of complement cascade
- · Goal: GA reduction through C3 inhibition
- · FILLY, OAKS, DERBY, and GALE studies



Apellis. Sylove Prescribing Information. https://ipi.apellis.com/fileu/PLSYFCNRE.pdf. Updated Julya 2025. Accessed September 4, 202

Niewhars 2025-48-month-results from-oaks destry-and-gale-open-label extension. Updated August 9, 2025. Accessed September 4, 202

Avacincaptad Pegal Injection

- FDA approved August 2023
- Goal: slow the growth of GA through C5 Inhibitor
- Preserves proinflammatory and anti-inflammatory effects of C3a and opsonization by C3b
- Prevents the proinflammatory effects of C5a and cell lysis/death and damage on RPE cells by MAC (C5b-9)
- Studies include GATHER I, GATHER II
 - CATHER II: met the primary objective to significantly slow GA growth compared to sham at 24 months
 Results suggest that avacincaptad pegol might slow disease progression and potentially change the trajectory of disease for patients with GA

43 44

Functional Outcomes and Maximizing Visual Improvement

- · Stabilization or improvement in visual acuity.
- Slow decline in low-luminance visual function.
- · Functional preservation over time.



45

47

Strategies for Individualized Care Plans

- Medical Management
 Regular Monitoring

 - Schedule routine eye exams with optometrist (and retina specialist if needed) to track disease progression

 - FDA-Approved Therapies
 Discuss complement inhibitors
 Nutritional Supplements: ** AREDS2 ***
 - Comorbidity Management
 Address other health conditions that may exacerbate vision loss (diabetes, systemic hypertension, cholesterol)
- Lifestyle Modifications
 - · Smoking Cessation
 - Dietary Changes: Rich in leafy greens, antioxidants and fish
 UV Protection

46

Vision Aids and Rehabilitation

- **Low Vision Aids**: Introduce magnifiers, screen readers, or electronic devices to assist with daily tasks.
- Occupational Therapy: Work with specialists to adapt home and work environments for safety and independence.
- **Orientation and Mobility Training:** Teach navigation techniques for patients with significant central vision loss.



Enhancing Patient Education and Adherence

Emotional and Psychological Support

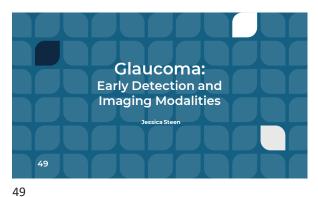
- Counseling: Provide access to mental health professionals to address anxiety, depression, or frustration related to vision loss.
- **Support Groups**: Connect patients with local or online communities for shared experiences and
- coping strategies.

 American Macular Degeneration Foundation
 Hadley Macular Degeneration Association
 Foundation Fighting Blindness
 American Foundation for the Blind

- . Family and loved ones must support the patient treatment plan.

This holistic approach ensures that patients with GA receive compassionate, comprehensive care tailored to their unique needs, helping them maintain quality of life and independence.





CASE STUDY: 70-Year-Old Black Woman

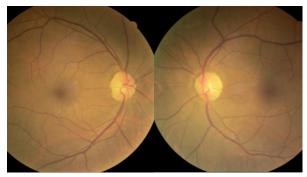
- Presented for a comprehensive eye examination
- No systemic medications; vitamin D and calcium supplements
- Family history of glaucoma (mother was diagnosed in her 70s, no known vision loss)
- BCVA 20/20 OD and OS
- IOP: 32 mm Hg OD; 34 mm Hg OS
- CCT 514 µm OD, 518 µm OS (2024)
- CCT 540 µm OD, 537 µm OS with ultrasonography

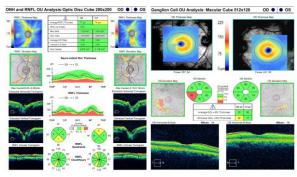
50



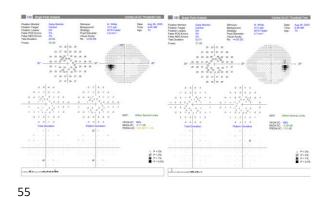
Gonio Examination: Superior: OD SUP: open to CBB Temporal: OD Temp: open to CBB OD NAS: open to CBB Inferior: OD INF: open to CBB Superior: OS SUP: open to CBB Nasal: OS NAS: open to CBB Temporal: OS TEMP: open to CBB OS INF: open to CBB Comment: Sampaolesi line inferior OD and OS posterior TM 2-3+ pigment OD and OS Flat iris approach OD and OS (14) respective to the original of the original of the angle OD and OS (2) PAS, angle recession, neovascularization of the angle OD and OS

51 52





53 54



Target IOP

- Represents an understanding of a patient's past disease course and takes into account your goal for their future clinical course
- Can be challenging to determine and not something that can or should be set on day1
 - o Target pressure (or target pressure range) changes over time
- Selective laser trabeculoplasty (SLT) alone compared to single medication

ALC Settor Manifold Pursum Gods for Palant With Glaurons Inter Gases an enfancether/defection-manifold pressure and 1 Hodge I house 1 2019 Around September 2 2025

56

Treatment Goals and Expectations

- Efficacy
- Safety
- Usability
- Tolerability of adverse effects
- Affordability
- Accessibility
- IOP-lowering effect: Expectations for any medication, procedure, or surgery

AACL Setting Missingful Pressure Goals for Prisons With Glaucoma. https://www.aac.org/sysrethricks/setting-massingful-pressure-goals. Updated January 1, 2019. Accessed September 4, 2015.

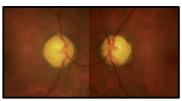
Opted for Medication

- · Latanoprost 0.005% QHS OU
- Expected effects
- 4-week follow up: IOP 21 mm Hg OD; 20 mm Hg OS

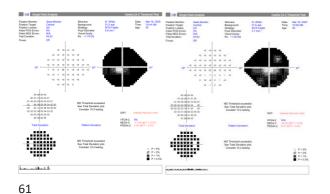
57 58

Is 20 mm Hg to 23 mm Hg "Good"?! | See of progresses | See of charge | C.1 | C.1 | C.1 | C.2 | C.2 | C.3 |

Why Manage Such Early Disease?



55-year-old Black man; lost to follow up for 5 years
• Peak untreated IOP 42 mm Hg OS; CCT <500 µm OD and OS



Set Expectations

- Be reasonable in managing therapeutic expectations.
 All glaucoma progresses ... eventually, is the rate of progression acceptable?
 People with overdiagnosed disease do well, because by definition, their disease was nonprogressive. This creates a cycle that reinforces more overdiagnosis, a phenomenon known as the popularity paradox.
- Sight Outcomes Research Collaborative (SOURCE) data presented at the American Glaucoma Society 2024 Annual Meeting

 Approximately one-quarter of patients whose data identified them as being in the lowest risk group for glaucoma were being treated with glaucoma

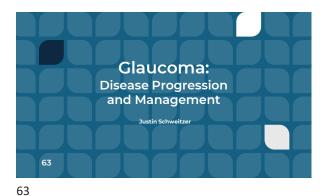
 - medications

 In contrast, many of the highest-risk patients were not receiving treatment.

 Ophthalmologists may be focusing too much attention on managing low-risk or early-stage patients

Margola TP, Galor A, Noucić GD, Implications of Diagnostic Error in Ocular Surface Disease: The Role of Anchoring and Ambiguous Diagnostic Terminology. JAMA Option Brandt J. Presented at: AGG Annual Meeting: Teb. 29-March 3, 2024; Huntington Brandt J. Presented at: AGG Annual Meeting: Teb. 29-March 3, 2024; Huntington Brandt J. Presented at: AGG

62



CASE STUDY:

Glaucoma Follow-up – patient had previous CEX

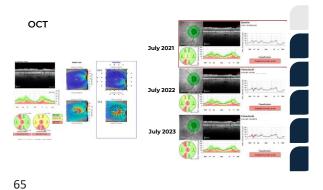
 Meds: Artificial tears, PGA qd OU fixed combo bid OU

• PACH < 550 560

. c/D < 0.75v

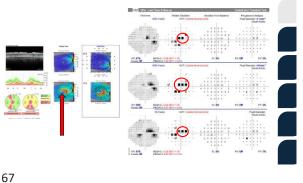
Important Medical History:
• Rheumatoid Arthritis
• Tremors

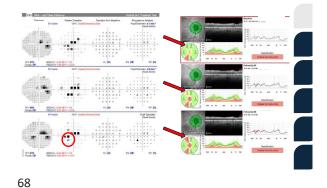
64



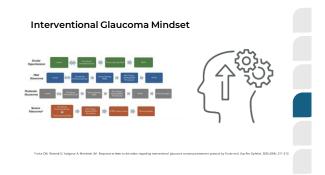
VFT PSD 4.96 July 2021 July 2022 PSD 5.51 PSD 6.82 July 2023

66

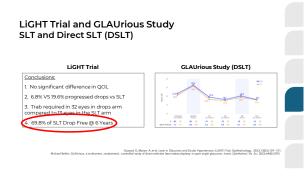








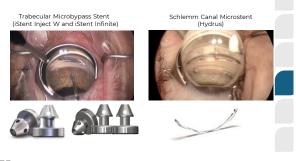


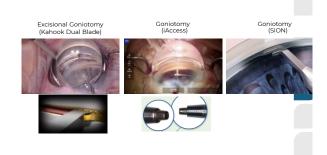




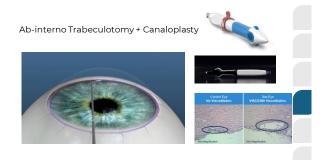


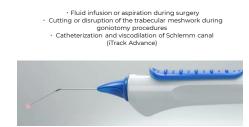
73 74





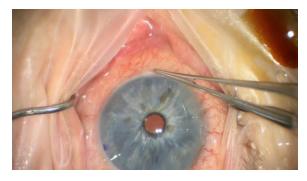
75 76





77 78





79 80

In Conclusion...

- Glaucoma is both a <u>medical</u> and <u>surgical</u> disease
 Key to success is collaboration
- Trends in treatment aim to $\underline{\textbf{balance}}$ effectiveness and safety
- MIGS procedures allow for <u>interventional glaucoma</u>



81



Post-Program Polling Question After participating in this activity, what is your typical first-line therapy for newly diagnosed glaucoma?

- a) Medications
- b) Selective Laser Trabeculoplasty (SLT)
- c) Bimatoprost intracameral implant
- d) Co-management for Surgery/MIGS



Post-Program Polling Question After participating in this activity, rate your level of confidence in understanding minimally invasive glaucoma surgery (MIGS) procedures?

- a) Very Confident
- b) Confident
- c) Neutral
- d) Not very confident
- e) Not confident at all



Post-Program Polling Question

After participating in this activity, on average, how long do you believe it takes a patient to progress from first non-central geographic atrophy (GA) to central GA?

- a) Less than a year
- b) 1-2 years
- c) 3-4 years
- d) 5 or more years



Post-Program Polling Question

After participating in this activity, rate your level of confidence discussing with patients the FDA-approved treatments for GA?

- a) Very Confident
- b) Confident
- c) Neutral
- d) Not very confident e) Not confident at all

85 86



