Summer 2021

the LIGHTPIPE

Editor-in-chief: Paul Walia, MD

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THE NEWSLETTER OF

GEORGIA RETINA

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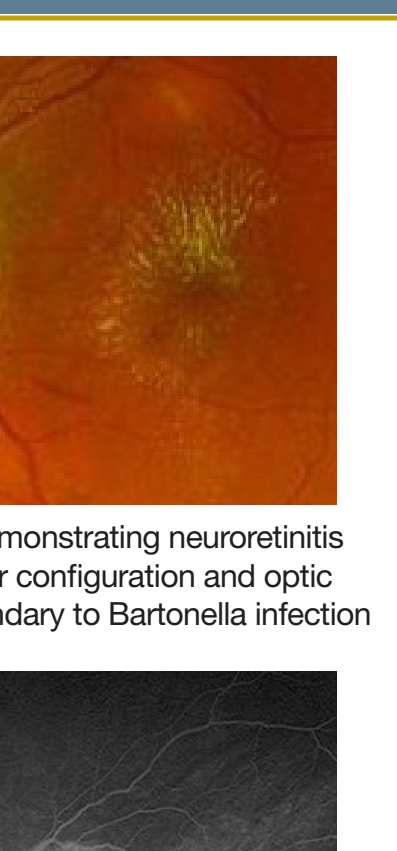
Letter from the Editor

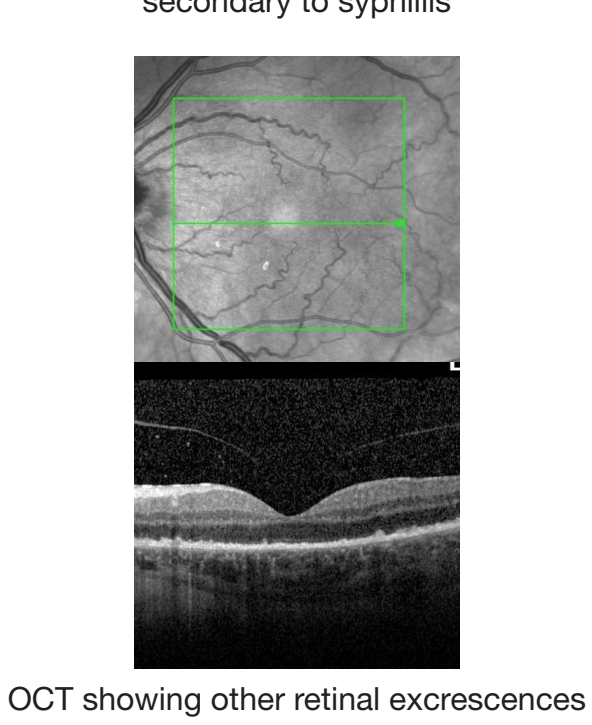
We hope this issue of the LightPipe finds you well. In 2021 we have seen a very pleasant return to some elements of our daily lives and practice patterns we have dearly missed. While safety remains paramount at Georgia Retina, we are excited to hopefully see more of each other via in person interactions soon.

As we get ready to head towards another Georgia Summer, we are proud to share this latest edition of the Georgia Retina LightPipe with our dear colleagues and friends. Thank you as always for entrusting Georgia Retina with the retinal care of your patients. It is our privilege and honor to assist in the care for your patients. We always strive to provide outstanding retinal care to your patients.

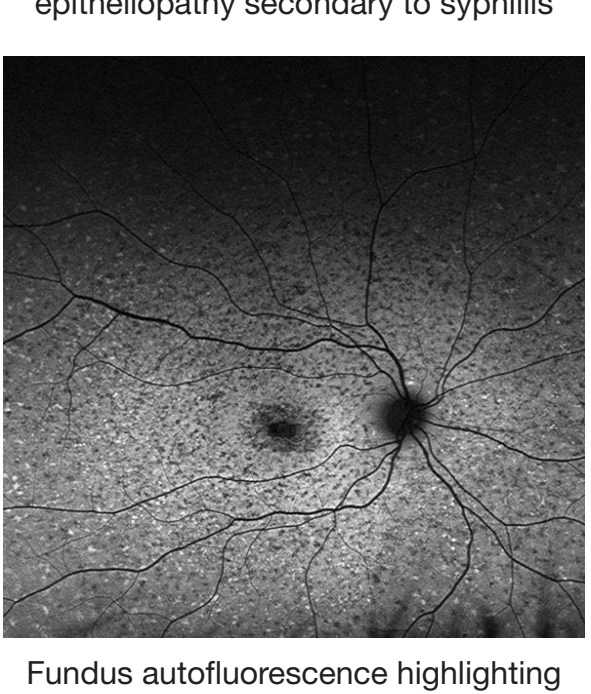


Dr. Paul S. Walia

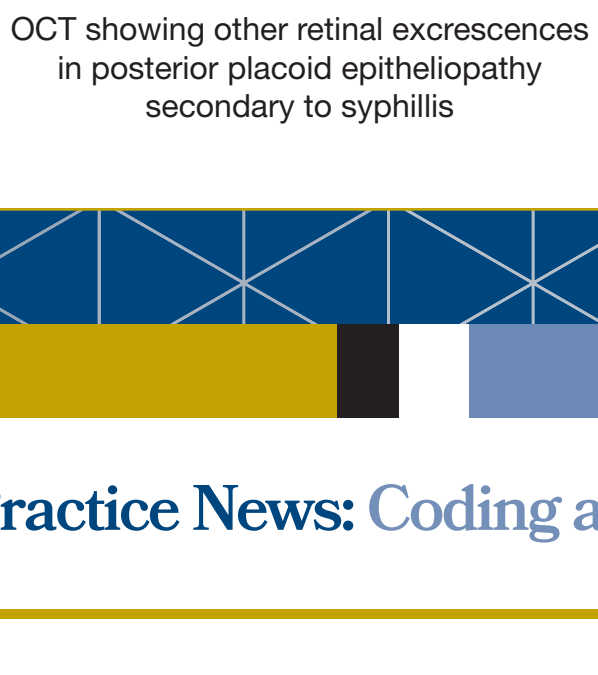
Imaging Corner



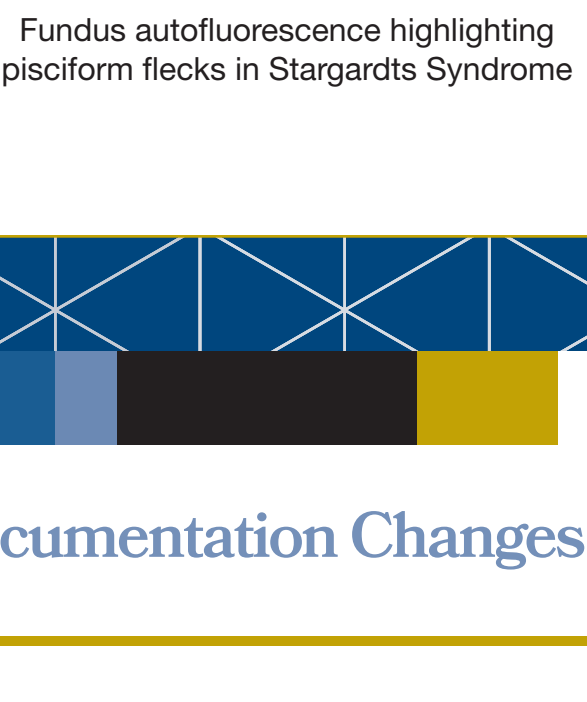
Fluorescein Angiogram demonstrating extensive nonperfusion of the retinal vasculature



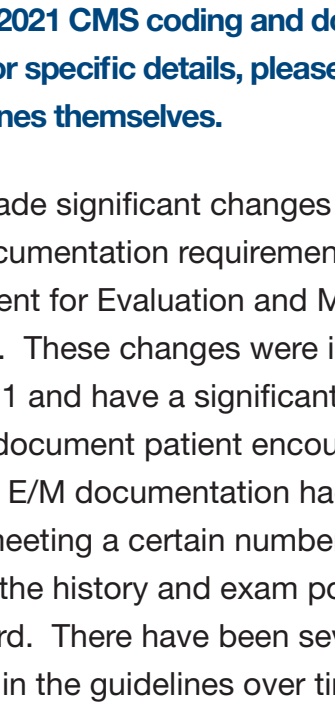
Fundus photo demonstrating neuroretinitis with macular star configuration and optic nerve edema secondary to Bartonella infection



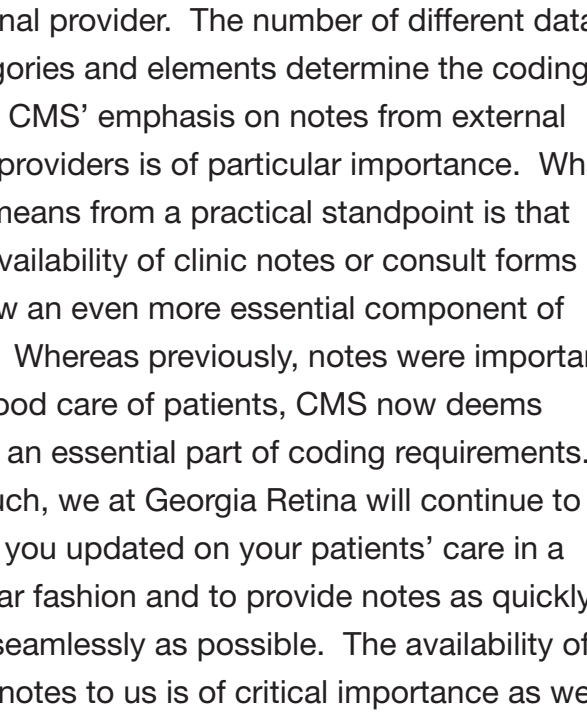
Fundus photograph of creamy placoid lesion in posterior placoid epitheliopathy secondary to syphillis



Fluorescein angiogram revealing diffuse late staining of posterior placoid epitheliopathy secondary to syphillis



OCT showing other retinal excrescences in posterior placoid epitheliopathy secondary to syphillis



Fundus autofluorescence highlighting pisciform flecks in Stargardts Syndrome

Practice News: Coding and Documentation Changes

The purpose of this article is to provide a brief overview of 2021 CMS coding and documentation changes. For specific details, please see the CMS guidelines themselves.

CMS has made significant changes in both the documentation requirements and reimbursement for Evaluation and Management (E/M) codes. These changes were initiated in January 2021 and have a significant impact on how we document patient encounters. For many years, E/M documentation had focused heavily on meeting a certain number of charted elements in the history and exam portions of the patient record. There have been several small refinements in the guidelines over time, but the new 2021 rules change the documentation landscape entirely. If you are fond of corporate-speak, the new requirements are a paradigm shift. Whereas the old focus was on bullet-point elements of history, physical exam, and care plan, emphasis now rests on medical decision making. CMS has eliminated history and exam elements for code selection, and codes are chosen based on how treatment decisions are made or on total time involved in patient care.

Although the coding pathway that focuses on the total time spent in patient care may be periodically utilized in eyecare, my impression is that it will be rarely used. For the sake of brevity, I will not cover time-based coding here.

The requirements for E/M documentation hinge on three elements—problems addressed, data reviewed, and risk level. The problems component is fairly straightforward, as CMS deems that a provider has addressed a problem if a particular condition is being evaluated and treated at an encounter or if the problem requires scheduling, further testing, or treatment in the future. However, CMS does not deem a problem relevant if another provider is managing the disease (e.g., POAG not being managed by retina specialist) or if it is a problem that is noted but not addressed in any way (e.g., dermatochalasis that is not mentioned by patient and not addressed by provider). Furthermore, E/M coding level is partially determined by whether the problems are chronic but stable, chronic with progression, or acute. The number of different problems and their nature help determine the coding level.

The data reviewed component is arguably the most complicated and difficult element to meet. The data reviewed is deemed to exist in three categories: category 1, category 2, and category 3. Category 1 data can be notes from an external provider, test results from an external provider, information from the patient's family or caregiver, or information from your own testing. Category 2 data is composed of independent interpretations of tests that another provider ordered. Category 3 data is discussing the patient management directly with an external provider. The number of different data categories and elements determine the coding level. CMS' emphasis on notes from external care providers is of particular importance. What this means from a practical standpoint is that the availability of clinic notes or consult forms is now an even more essential component of care. Whereas previously, notes were important for good care of patients, CMS now deems them an essential part of coding requirements. As such, we at Georgia Retina will continue to keep you updated on your patients' care in a regular fashion and to provide notes as quickly and seamlessly as possible. The availability of your notes to us is of critical importance as well. Ideally, records should be received prior to or on the day of evaluation in order to meet CMS guidelines. Now, more than ever, sharing of clinic information among practices is paramount.

The final element of medical decision making is Risk. CMS defines the risk levels as minimal, low, moderate, and high. The risk that ocular diseases carry plus the risk of comorbidities both contribute to overall risk level. Problems that involve low risk of morbidity, for which rudimentary treatment is needed, are considered minimal to low risk. Moderate risk problems are those requiring prescription medication, minor surgery, or elective major surgery. High risk level problems are those that require emergent major surgery or elective major surgery with significant co-existent risk factors. The combination of this risk level, along with the problems addressed and the amount of data reviewed, all combine to determine the final E/M code level. Keep in mind that the new documentation requirements apply only to Evaluation and Management (E/M) codes, not to Eye Codes.

Proper documentation to meet the new coding requirements is essential from both an audit and reimbursement standpoint. Following the new guidelines will help ensure compliance in the event of an audit but will also ensure the maximization of the allowable reimbursement. CMS determines the reimbursement for a specific code based on two factors: the conversion factor (CF) and relative value units (RVUs). The conversion factor affects all codes in medicine equally, but the RVUs change code by code. As they do frequently, CMS has changed the conversion factor and RVUs for 2021. The overall trend is a slight reduction in reimbursement for all Eye Codes and for new E/M codes, and established E/M codes are not negatively affected. Knowing the rule changes and payment changes places you in a position to safely and appropriately maximize your reimbursement.

Clinical Trial Update

Georgia Retina has a long tradition of commitment to and participation in clinical trials in order to provide our patients access to new, state-of-the-art preventative, or therapeutic treatments. We partner with the National Eye Institute, some of the nation's top pharmaceutical companies, and other clinical practices to explore the causes and cures for many retinal conditions.

We take special care to ensure that our study patients experience the best medical care possible.

This past year we have been active in twenty-six clinical trials for wet age-related macular degeneration, geographic atrophy, secondary to dry age-related macular degeneration, retinal vein occlusion, diabetic macular edema, and non-proliferative diabetic retinopathy.

We hope that as you consider where to refer your patients for retinal care, you will keep in mind that Georgia Retina not only provides exceptional care but can also offer your patients the opportunity to enroll in clinical trials, thereby offering them new vision saving treatments. If you have any questions about whether your patient might be eligible to participate in one of our ongoing clinical trials, please call any one of our doctors or contact our Clinical Research Director, Leslie Marcus (lmarcus@garetina.com).

Current Recruiting Clinical Trials:

Wet AMD: Amgen Inc. 20170542, Sam Chun Dang Pharm SCD411-CP101, RIBOMIC USA Inc. RBM-007-002 TOFU

Geographic Atrophy: Genentech GR40973 GAllego, Gyroscope Therapeutics GTSCOPE, Iveric Bio. ISEE2008 GATHER2, NGM Biopharmaceuticals NGM621-GA-201 CATALINA

Diabetic Macular Edema: Alimera 01-20-005 The New Day, Roche GR40550 PAGODA

Diabetic Retinopathy: Novo Nordisk NN9535-4352 FOCUS, Roche GR41675 PAVILION

Branch Retinal Vein Occlusion: Roche GR41984 BALATON

Central Retinal Vein Occlusion: Roche GR41986 COMINO

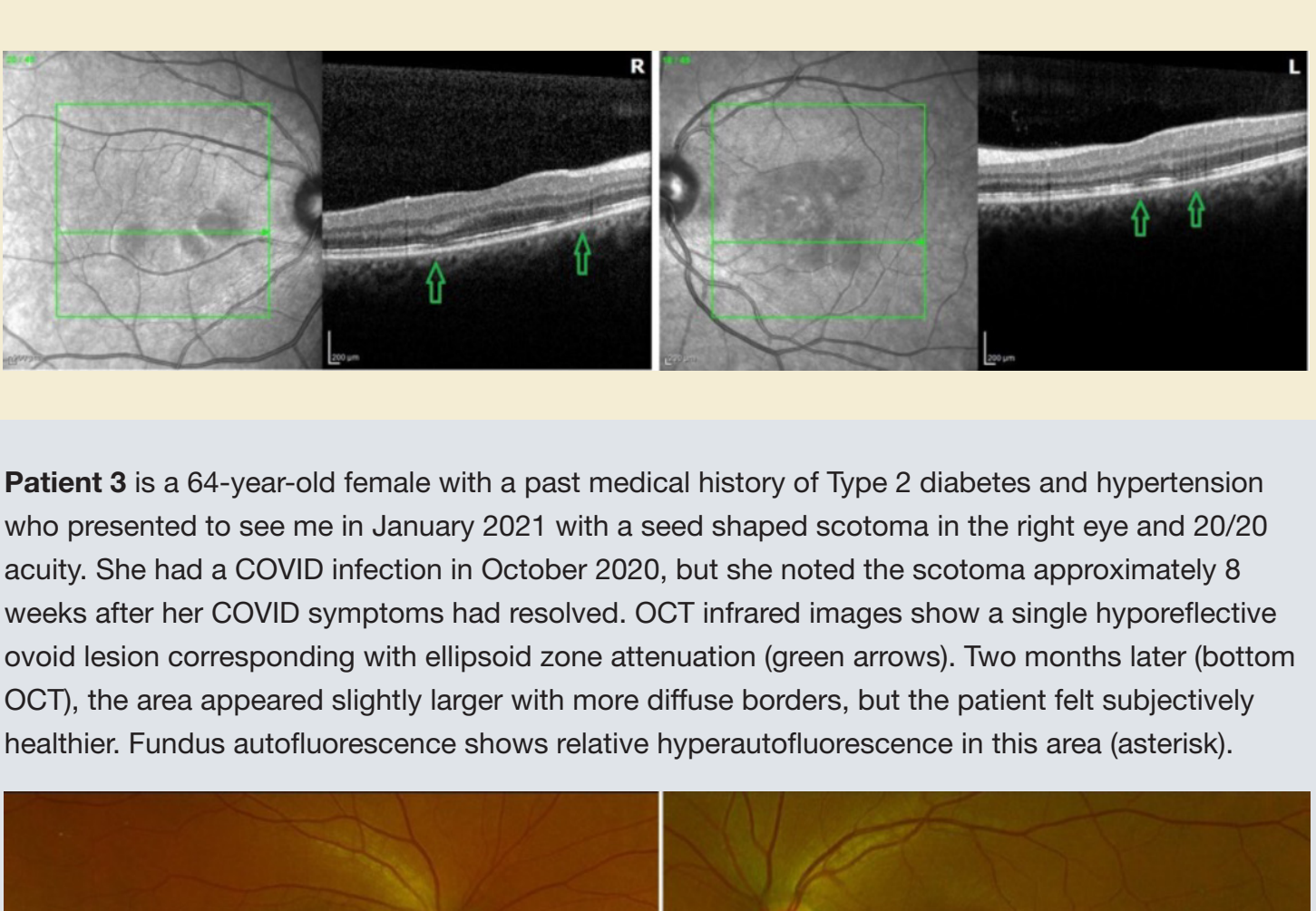
Clinical Care Discussion: COVID-19 Retinal Manifestations: Acute Macular Neuroretinopathy by Dr Rahul Komati

The COVID-19 global pandemic has had a dramatic impact on our lives over the past year, both personally and professionally. Many questions have arisen since the severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) was first identified in December 2019. One at the forefront of our minds has been how this disease can present in our patients. Early in the pandemic, the primary concern involved ocular surface manifestations and the spread of viral particles through ocular secretions. This led to the widespread adoption of eye protection, slit-lamp shields, and additional sterilization procedures employed in our practices. Indeed, a meta-analysis of 38 studies, including 8,219 COVID patients, showed a prevalence of ocular symptoms to be 11%, with the most common disease being conjunctivitis (88%).1 The most common symptoms were foreign body sensation, redness, and tearing, with examination often revealing follicular conjunctivitis, conjunctival hyperemia, and chemosis. These symptoms more commonly affected patients with severe systemic symptoms of COVID-19, but they could present as the initial or sole manifestation of the disease.

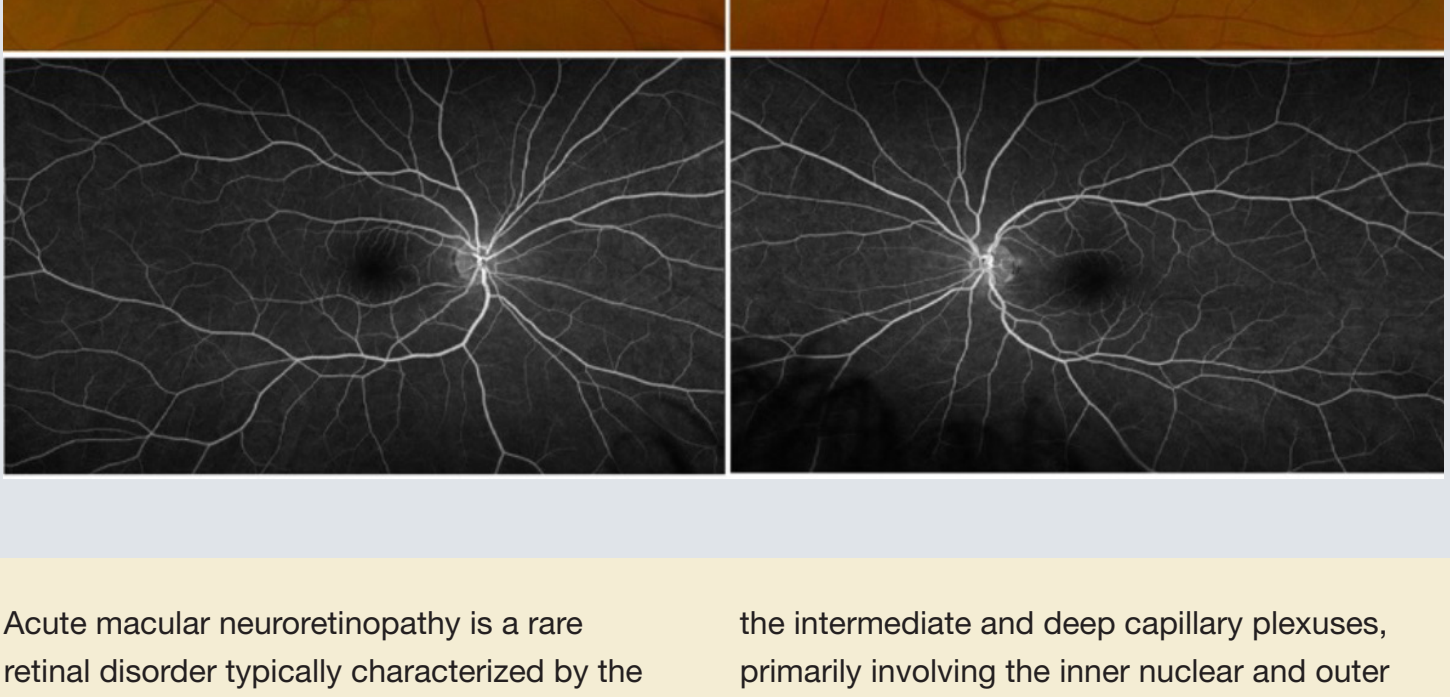
Over time, there have been many additional reports of COVID-19 ocular complications due to the vascular, inflammatory, and neuronal changes triggered by the viral infection. Neuro-ophthalmic manifestations include optic neuritis, Adie's tonic pupil, papilledema, cranial neuropathies, and an increased incidence of stroke. Children can present with a Kawasaki-like picture with conjunctival injection and iritis due to multisystem inflammatory syndrome (MIS-C). In regard to the posterior segment, COVID-19 has been associated with retinal microvascular alterations, including retinal hemorrhages, cotton wool spots, dilated veins, and tortuous vessels.2 There has even been a direct correlation between retinal vein diameter and disease severity.3 Central retinal vein occlusions (CRVO) have been frequently reported in patients without typical risk factors of hypertension, diabetes, obesity, and dyslipidemia. Some cases of CRAO have been reported as well.4 These findings are theorized to be a result of the procoagulant state of COVID-19, as evidenced by elevated D-dimer, prothrombin time, activate partial thromboplastin time, and fibrinogen. Additionally, intermittent hypoxia can induce endothelial cells to release tissue factor and cytokines that trigger the coagulation cascade.

Additional case reports have identified acute macular neuroretinopathy (AMN) and paracentral acute middle maculopathy (PAMM) following or concurrent with COVID-19 diagnosis. We have seen several patients in our practice with similar findings, and the remainder of this discussion will highlight these cases.

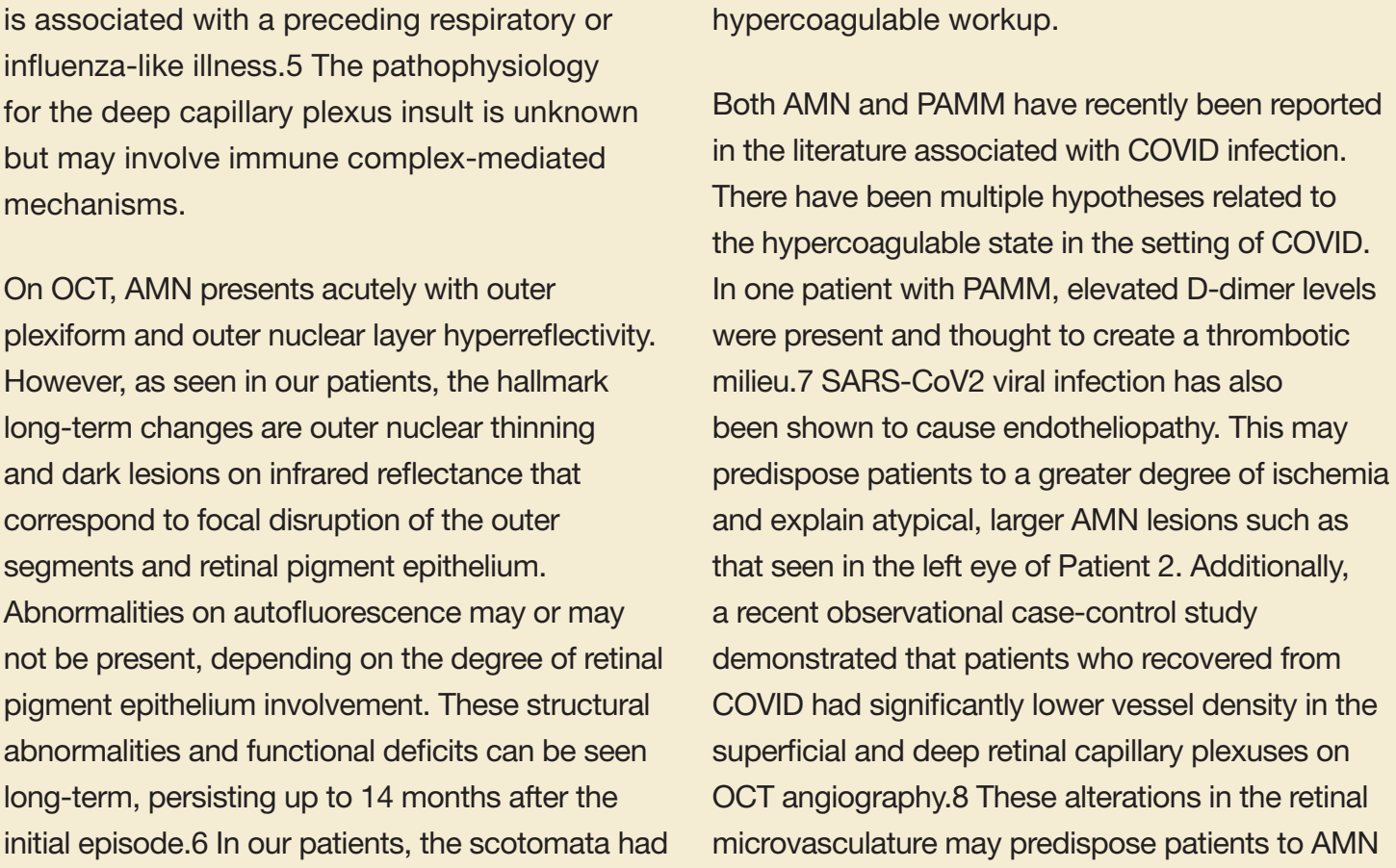
Patient 1 is a 22-year-old female with a history of Type 1 diabetes and depression who noted sudden visual symptoms one day before COVID related symptoms in December 2020. She described upside-down triangular shape scotomas and photopsias in both eyes that had been stationery and constant since her illness. When she presented to our clinic to see Dr. Sean Koh in January 2021, her visual acuity was 20/20 OD, 20/25 OS with the OCT findings below. Infrared reflectance images show prominent dark petaloid lesions surrounding the fovea in both eyes, corresponding with areas of inner and outer segment photoreceptor (ellipsoid zone) disruption and outer nuclear layer thinning on the OCT (green arrows). Repeat OCT scans 2 months later (images on the right) show only a slight reduction in these findings. Her visual acuity and symptoms have remained stable.



Patient 2 is a 32-year-old female with no significant medical history who presented to see Dr. Hyung Cho in January 2021 with a dark spot in her left eye that had been present for 2 months. Further questioning revealed she had been diagnosed with COVID at approximately the same time as her symptom onset. Visual acuity was 20/20 OU. OCT infrared images show similar small petaloid hyporeflective lesions in the right eye and a more diffuse, confluent affected area in the left eye, correlating with inner and outer segment photoreceptor disruption (green arrows). Optos color fundus photos show a reddish-brown hyperpigmented appearance in these areas, while this remains completely silent on fluorescein angiography.



Patient 3 is a 64-year-old female with a past medical history of Type 2 diabetes and hypertension who presented to see me in January 2021 with a seed shaped scotoma in the right eye and 20/20 acuity. She had a COVID infection in October 2020, but she noted the scotoma approximately 8 weeks after her COVID symptoms had resolved. OCT infrared images show a single hyporeflective ovoid lesion corresponding with ellipsoid zone attenuation (green arrows). Two months later (bottom OCT), the area appeared slightly larger with more diffuse borders, but the patient felt subjectively healthier. Fundus autofluorescence shows relative hyperautofluorescence in this area (asterisk).

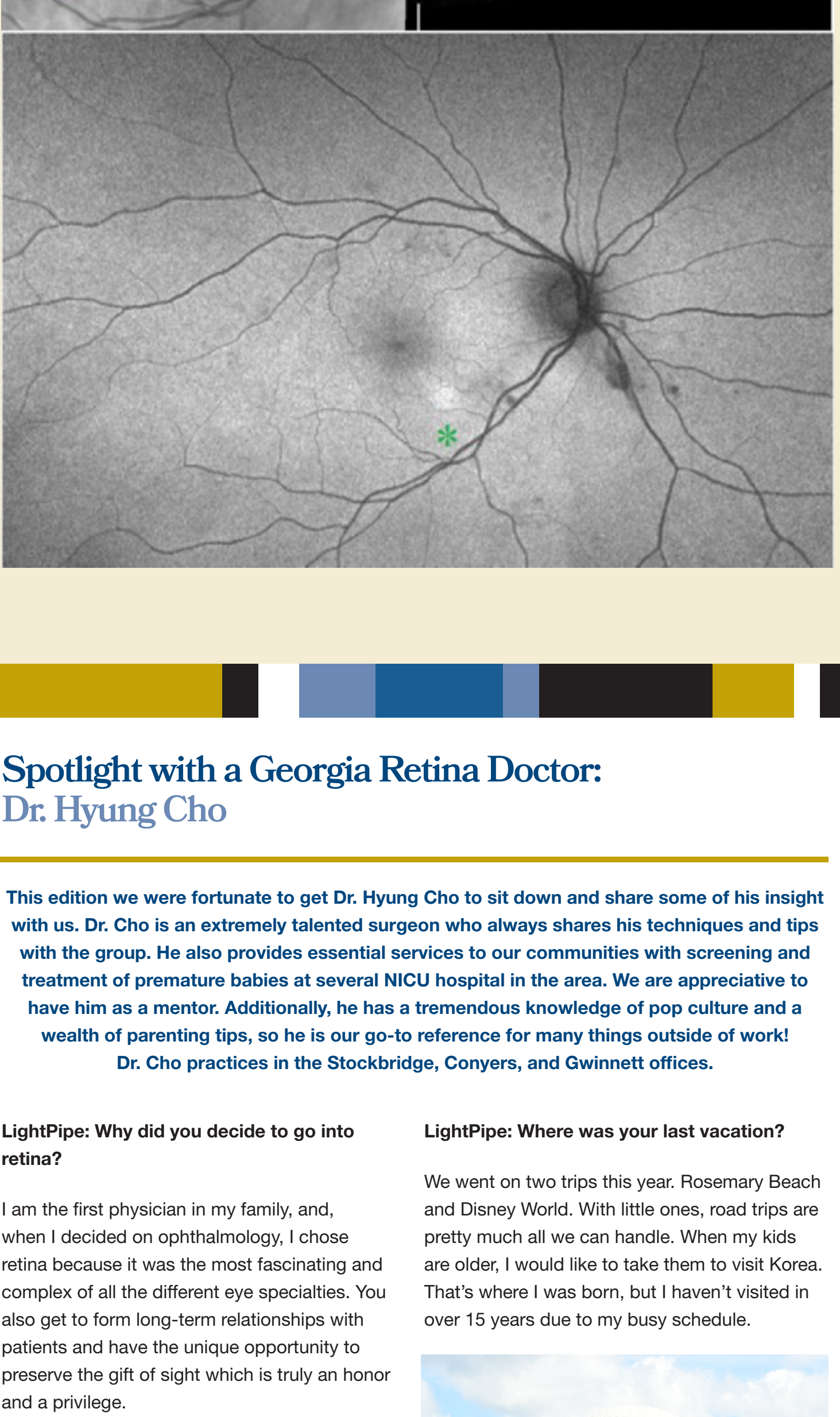


Acute macular neuroretinopathy is a rare retinal disorder typically characterized by the sudden onset of paracentral scotomas and corresponding wedge-shaped reddish-brown lesions that point towards the fovea. Typically, the disease occurs in young healthy females and can be unilateral or bilateral. Ischemia of the deep capillary plexus is thought to be responsible, but, nearly half the time, AMN is associated with a preceding respiratory or influenza-like illness.5 The pathophysiology for the deep capillary plexus insult is unknown but may involve immune complex-mediated mechanisms.

On OCT, AMN presents acutely with outer plexiform and outer nuclear layer hyperreflectivity. However, as seen in our patients, the hallmark long-term changes are outer nuclear thinning and dark lesions on infrared reflectance that correspond to focal disruption of the outer segments and retinal pigment epithelium. Abnormalities on autofluorescence may or may not be present, depending on the degree of retinal pigment epithelium involvement. These structural abnormalities and functional deficits can be seen long-term, persisting up to 14 months after the initial episode.6 In our patients, the scotomata had been relatively persistent at 2 months of follow-up.

A similar entity to AMN that is worth discussing is PAMM. It is characterized by ischemia of the intermediate and deep capillary plexuses, primarily involving the inner nuclear and outer plexiform layers on OCT. Thus, it affects the middle layers of the macula as opposed to the outer retinal layers in AMN. OCT angiography has been helpful in highlighting these distinct capillary plexus abnormalities in both conditions. PAMM can be an indicator of underlying retinal vascular disorders and can warrant a hypercoagulable workup.

Both AMN and PAMM have recently been reported in the literature associated with COVID infection. There have been multiple hypotheses related to the hypercoagulable state in the setting of COVID. In one patient with PAMM, elevated D-dimer levels were present and thought to create a thrombotic milieu.7 SARS-CoV2 viral infection has also been shown to cause endotheliopathy. This may predispose patients to a greater degree of ischemia and explain atypical, larger AMN lesions such as that seen in the left eye of Patient 2. Additionally, a recent observational case-control study demonstrated that patients who recovered from COVID had significantly lower vessel density in the superficial and deep retinal capillary plexuses on OCT angiography.8 These alterations in the retinal microvasculature may predispose patients to AMN and other conditions with long-term sequelae. Reviewing these cases and their associations with COVID-19 can help us gain insight as we see more patients in this pandemic era.



Spotlight with a Georgia Retina Doctor: Dr. Hyung Cho

This edition we were fortunate to get Dr. Hyung Cho to sit down and share some of his insight with us. Dr. Cho is an extremely talented surgeon who always shares his techniques and tips with the group. He also provides essential services to our communities with screening and treatment of premature babies at several NICU hospital in the area. We are appreciative to have him as a mentor. Additionally, he has a tremendous knowledge of pop culture and a wealth of parenting tips, so he is our go-to reference for many things outside of work! Dr. Cho practices in the Stockbridge, Conyers, and Gwinnett offices.

LightPipe: Why did you decide to go into retina?

I am the first physician in my family, and, when I decided on ophthalmology, I chose retina because it was the most fascinating and complex of all the different eye specialties. You also get to form long-term relationships with patients and have the unique opportunity to preserve the gift of sight which is truly an honor and a privilege.

LightPipe: How did you end up at Georgia Retina?

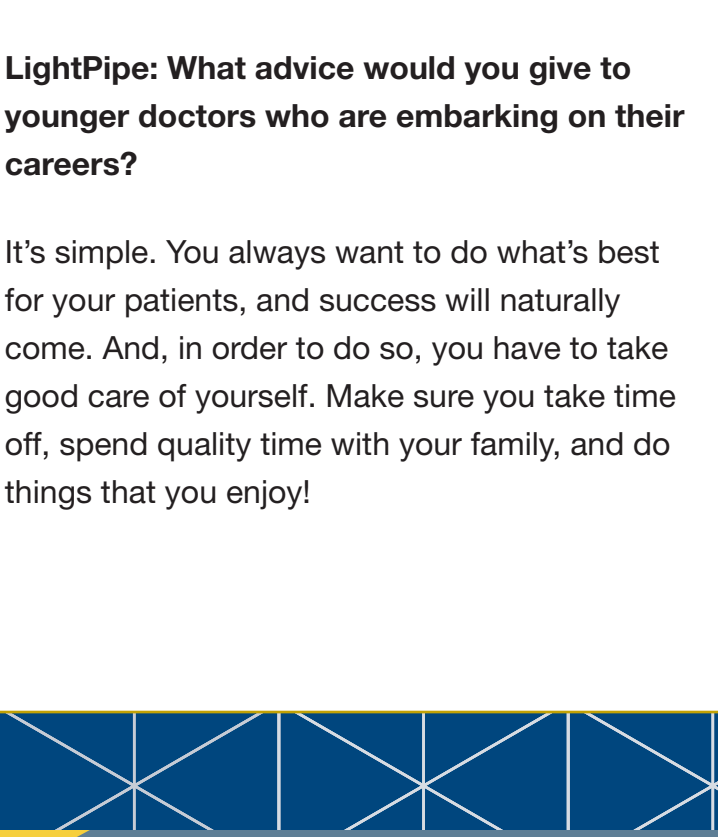
I'm from the Northeast and did all my education/training there and had no desire to live anywhere else. But, when I interviewed here almost ten years ago, I immediately knew this is where I belonged. The doctors here are an eclectic bunch, but I fit right in. You will be hard-pressed to find another practice that works as well as we do. I am so glad I took the leap of faith by moving to Georgia.

LightPipe: What do you do in your spare time?

What spare time?! I have three young kids that take up most of my time. Before kids, I liked to play all sports, especially tennis, golf, and snowboarding. I also play the viola and enjoy dancing. Now, most of my extracurricular activities incorporate my kids such as bike riding, swimming, and playing hide and go seek.

LightPipe: Where was your last vacation?

We went on two trips this year. Rosemary Beach and Disney World. With little ones, road trips are pretty much all we can handle. When my kids are older, I would like to take them to visit Korea. That's where I was born, but I haven't visited in over 15 years due to my busy schedule.



LightPipe: What are some changes you have seen during practice?

The evolution of treatments in both macular degeneration and diabetic retinopathy has been amazing. In the past, we hoped to prevent or retard blindness. Now, we can potentially reverse severity and improve vision in a lot of our patients with anti-VEGF agents. Our field is unique in the ever-advancing technologies and treatments, and it's really an exciting time to be a retina specialist!

LightPipe: What advice would you give to younger doctors who are embarking on their careers?

It's simple. You always want to do what's best for your patients, and success will naturally come. And, in order to do so, you have to take good care of yourself. Make sure you take time off, spend quality time with your family, and do things that you enjoy!

Thank you for reading our Summer 2021 Light Pipe Newsletter!

If you have time, please take a moment to answer a few questions about this year's publication. By doing so, you're helping Georgia Retina become an even better practice.

Click here to begin: https://bit.ly/3xnbNwX

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Robert A. Stoltz, M.D., Ph. D. | John J. Miller, M.D. | Stephanie L. Vandervelt, M.D. | Hyung Cho, M.D. | S. Krishna Mukkamala, M.D.
David S. Chin Yee, M.D. | Harpreet "Paul" S. Walia, M.D. | Yogin Patel M.D. | Gregory D. Lee, M.D. | Ella H. Leung, M.D. | Rahul Komati M.D.

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Cigna
Coventry Healthcare
Evolutions Healthcare System
First Health
Great-West
Humana
Medicaid
- -Peach State Medicaid
- -Wellcare Medicaid
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Novanet
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State Health
United Healthcare
USA Managed Care Organization
WellCare Medicare HMO

Other plans are pending; please call to check specific participation.

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