All ophthalmologic roads led to Malaysia, as the Asia-Pacific Vitreo-retina Society (APVRS) opens today in Kuala Lumpur for the first time. With support from local organizer, the Malaysian Society of Ophthalmology (MSO), the 11th APVRS Congress (APVRS 2017) is hosted at the world-renowned Kuala Lumpur Convention Center (KLCC) from December 8 to 10.

As the burden of myopia and diabetes is increasing worldwide, retina is becoming one of the more popular subspecialties in ophthalmology. In the Asia-Pacific region, both retina specialists and trainees look forward to the APVRS meeting each year for the latest updates in clinical procedures, tools and technologies related to the eye’s posterior segment.

"APVRS is a leading society representing retina specialists in Asia-Pacific region, and our annual congress is a meeting of great quality," said Prof. Dennis Lam, Secretary General of the APVRS.

Some of the highlights to look forward to at APVRS 2017 are the four keynote speakers and their notable presentations on crucial topics in retina.
REFERENCES
6. EYLEA 40mg/L solution for injection

ABBREVIATED PRESCRIBING INFORMATION
Brand name of product: EYLEA 40mg/L solution for injection. Approved name of the active ingredient: Aflibercept. Indication: Treatment of neovascular (wet) age-related macular degeneration (wet AMD), visual impairment due to retinal vein occlusion (RVO), visual impairment due to diabetic macular edema (DME) and visual impairment due to myopic choroidal neovascularization (myopic CNV).
Dosage and method of administration: The recommended dose for Eylea is 2 mg aflibercept, equivalent to 0.05 mL (50 μL). Neovascular (wet) age-related macular degeneration (wet AMD): Eylea treatment is initiated with one injection per month for three consecutive doses, followed by one injection every other month. After the first 12 months of treatment with Eylea, based on visual and/or anatomic outcomes, the treatment interval may be extended, such as with a treat-and-extend dosing regimen. Visual impairment due to macular edema secondary to retinal vein occlusion (branch RVO or central RVO): After the initial injection, treatment is given monthly. Monthly treatment continues until maximal visual acuity is achieved and/or there are no signs of disease activity. Three or more consecutive, monthly injections may be needed. Treatment may then be continued with a treat and extend regimen with gradually increased treatment intervals to maintain stable visual and/or anatomic outcomes, however there are insufficient data to conclude on the length of these intervals. Diabetic macular edema (DME): Eylea treatment is initiated with one injection per month for five consecutive doses, followed by one injection every two months. After the first 12 months of treatment with Eylea, based on visual and/or anatomic outcomes, the treatment interval may be extended, such as with a treat-and-extend dosing regimen. Myopic choroidal neovascularization (myopic CNV): Single intravitreal injection is recommended. Additional doses may be administered if visual and/or anatomic outcome indicate that the disease persists. Recurrences are treated like a new manifestation of the disease. The interval between two doses should not be shorter than one month. Contraindications: Eylea is contraindicated in patients with ocular or pericocular infection, with Active severe intraocular inflammation, with Known hypersensitivity to aflibercept or to any of the excipients. Special warnings and special precautions: for use Endophthalmitis: Proper aseptic injection technique must always be used when administering EYLEA. Patients should be instructed to report any symptoms suggestive of endophthalmitis without delay and should be managed appropriately. Increases in intraocular pressure: Increases in intraocular pressure have been seen within 60 minutes of an intravitreal injection. Eylea should not be used during pregnancy unless the potential benefit outweighs the potential risk to the fetus. EYLEA is not recommended during breast feeding. Undesirable effects: The most frequently observed adverse reactions (in at least 5% of patients treated with EYLEA) were conjunctival hemorrhage, eye pain, cataract, intraocular pressure increased, vitreous detachment and vitreous floaters. For further prescribing information, please contact Bayer Co. (Malaysia) Sdn. Bhd.

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Abbreviation: wAMD | DME | RVO | mCNV
MSO Welcomes APVRS 2017 Delegates in the Heart of Asia

to Kuala Lumpur. “A top-notch scientific conference in a world-class venue, that’s what we made happen,” said Dr. Kenneth Fong, President of the 11th APVRS Congress, and President of MSO.

“Malaysia, the “Heart of Asia” is where cultures meet and diversities flourish,” added Dr. Taraprasad Das, APVRS President. “Kuala Lumpur is a vibrant city and the financial center of Malaysia. The venue, KLCC, next to the iconic Petronas Twin Towers, is the perfect combination for leisure and pleasure outside of Congress hours.”

Indeed APVRS delegates won’t run out of things to do, there are international food to try and new adventures to discover right in the middle of the city. Kuala Lumpur may be notorious for its bad traffic reputation, but KLCC is surrounded by establishments providing tourists with everything they need, hence there is no need to venture farther away.

“APVRS Congress is now regarded as a must-attend retina meeting not only in the Asia-Pacific region but worldwide,” added Dr. Fong. He believes that even in this day and age of social media and online CME (Continuing Medical Education), conferences such as the APVRS remain relevant.

In fact, the overwhelming number of abstract submissions for this congress has broken the record of APVRS history, shared Dr. Fong. “Conferences like this [APVRS] still play an important role in not only sharing knowledge but also in maintaining the personal ties that we share,” he explained. “Many updates and ideas are often discussed outside lecture halls, during coffee breaks, or in the hotel lobby.”

Recognizing that innovation and developments related to the posterior segment remains unstoppable, the APVRS Council’s mission of improving retinal care in patients continues to be a key priority, not only in Malaysia, but in Asia-Pacific as well.

At APVRS 2017, the organizers have included 8 masterclasses aimed at trainees and fellows to obtain clinical pearls from straight from international experts.

More importantly, the continued support of industry partners contributes substantially to the success of APVRS Congress each year. “We also have many important concurrent satellite meetings run by our industry partners that help improve and develop our field,” said Dr. Fong.
**Excerpts from Selected APVRS 2017 Posters**

**Poster No.: EX1-044**  
A Rare Presentation of Delayed Hypersensitivity to Retrobulbar Lignocaine 2%: A Case Report  
First Author: Jia Hui Leon  
Co-Author(s): Nor Ismarudi Ismail, Selvaraja P. Vengadasalam  

While lignocaine is widely used as a local anesthetic agent in ophthalmology, and hypersensitivity reactions are rare, a patient was found to have delayed hypersensitivity to retrobulbar lignocaine 2% following vitreoretinal surgery. The 54-year-old man, previously exposed to lignocaine during ophthalmic surgery for a right eye retinal detachment 6 months prior, had a second operative procedure for removal of silicone oil along with cataract surgery. Both surgeries were uneventful. Five days postoperatively, he presented with right eye pain, swelling, and redness. Computed tomography (CT) of the orbit showed proptosis of the right globe with preseptal thickening, intracanal fat streakiness, and enlarged thickened optic nerve. He was initially treated as right orbital cellulitis and empirically started on intravenous rocephin with Viganox (Alcon, Fort worth, Texas). Subsequently, when there was no improvement, he was started on antihistamines and intravenous methylprednisolone, and later on changed to oral prednisolone with tapering dose for 2 weeks. After treatment, he recovered with no proptosis, erythema, or chemosis. Vision improved to 6/60. Skin prick test later showed allergy to lignocaine.

**Poster No.: EX1-049**  
Comparative Analysis of Large Macular Hole Surgeries Using Internal Limiting Membrane Sheet: Insertion Technique Versus Inversion Technique  
First Author: Jongho Park  

In a retrospective, non-randomized, comparative clinical study, Dr. Park compared the insertion of ILM sheets inside the hole, to the inverted ILM flap technique, in the treatment of eyes with idiopathic large macular hole (MH) and found that it is just as effective. Reviewing 37 eyes with idiopathic MH, the patients were divided into vitrectomy and insertion of ILM sheet inside the hole (insertion group), and covering the hole with inverted ILM sheet (inversion group). Eleven eyes were in the insertion group and 26 eyes in the inverted flap group. Hole closure was achieved in all eyes of both groups. Mean BCVA (logarithm of the minimum angle of resolution, logMAR) improved significantly in both group (P = 0.010 and 0.000, respectively), which was better in the inversion group (0.526 vs 0.772, P = 0.019). Foveal depigmentation was more common in the insertion group than in the inversion group (81.8% vs 7.7%, P = 0.000). In the fovea, complete recovery of the EZ and ELM was found in 18 eyes of the inversion group but not in those belonging to the insertion group (P = 0.000). However, postoperative BCVA was better in eyes receiving inverted ILM flap, which was in accordance with the greater recovery of photoreceptor layers.

**Poster No.: EX1-061**  
Primary Vitrectomy with 360-Degree Laser as Surgery for Rhegmatogenous Retinal Detachment  
First Author: Shamik Mokadam  
Co-Author(s): Ian Constable, Mandar Joglekar, Vignesh Raja, Smita Upadhye  

This case study showed that 360-degree laser treatment as part of primary vitrectomy surgery for rhegmatogenous retinal detachment (RRD) reduces the redetachment rates and thus obviates the need for a second procedure. A retrospective case study of 166 cases of patients who underwent primary vitrectomy surgery as part of treatment for RRD from November 20, 2014 to December 31, 2016 was done. All the surgeries were uneventful; 152 out of the 166 eyes (91.6%) had a completely attached retina with 360-degree laser treatment at 6 months’ follow-up and a mean best corrected visual acuity (BCVA) of 6/12. Of the remaining 14 eyes, 3 had a peripheral re-detachment and 5 had complete re-detachments and needed a second procedure in the form of scleral buckling, vitrectomy, removal of membranes/proliferative vitreoretinopathy, endolaser, and silicone oil injection. The remaining 6 had dense epiretinal membranes (ERM) at the macula needing re-surgery in the form of vitrectomy and ERM peeling.

**Poster No.: EX1-120**  
Birds, Sex, and Ocular Injuries in Queensland  
First Author: Deveraj Supramanian  
Co-Author(s): Timothy Beckman, Richard Sarafian  

This study demonstrates the extent to which the Australian magpie can cause injury and the importance of establishing preventative measures to reduce such cases. Magpies are well known to become aggressive during its mating season between late August and early October. In Central Queensland, Australia, there were 19 presentations to the emergency department in the past 3 years involving injuries to the eye caused by magpies. Many of these involved children and occurred during the notorious mating season. Three of these presentations were serious penetrating eye injuries requiring surgical intervention. Often, this leaves the child with serious long-term visual issues. Timely intervention is key in reducing the risk of complications and maximizing visual outcomes. One recent case involved a 13-year-old boy who required extensive repair to his left eye, with a large corneal laceration, traumatic cataract, and significant iris tissue loss. The patient underwent emergency repair of the corneal wound. After 6 months, a secondary intraocular lens (HMK ANI 2, Ophtec) designed for the correction of traumatic aniridia was used. Vision improved from counting fingers to 6/60, resulting in both a functional and aesthetically pleasing outcome. This is particularly important in such cases, especially when the injury involves children. It is also important to understand the potential risks and complications associated with infection, with previous reports of keratitis after injury attributed either directly or indirectly to the magpie.
We Caught the Early-Birds at the Show

by Hazlin Hassan

The 11th Asia-Pacific Vitreo-retina Society Congress (APVRS 2017) in Kuala Lumpur, kicks off today, and looks set to be an important opportunity for knowledge exchange and advancement about cutting edge technologies in the vitreoretinal subspecialty in the Asia-Pacific region.

Hosting the APVRS for the first time, the Malaysian Society of Ophthalmology (MSO) has lined up a first rate scientific programme for the largest meeting of this kind in the region, with retinal specialists from all over the world sharing their skills.

There will also be instruction courses and symposium targeted at general ophthalmologists and trainees. Over 445 abstracts were received for the free paper and poster sessions this year, the most ever in the history of this congress.

With the disease burden from myopia and diabetes increasing worldwide, retina is one of the most exciting subspecialties in ophthalmology, and delegates are certainly looking forward to the programme here in Kuala Lumpur.

Here is what they had to say:

I was introduced to the APVRS last year in Bangkok by my tutor, and I look forward to finding out the latest information about fundus and retinal diseases. This year I am presenting a paper titled 'Rupture of Choriocapillario-Bruch Membrane-Retinal Pigment Epithelium Complex Originating in Lacquer Crack Leads to Simple Subretinal Bleeding in High Myopia.'

Dr. Lan Mi
China

I went for the APVRS last year in Bangkok, it was good. This year it is held in Malaysia so I decided to take advantage of that. The scientific programme is very comprehensive. There are so many symposiums to choose from, I am not sure if I can attend all of them. The gala dinner will be interesting, as it will showcase the multicultural diversity of Malaysia.

Dr. Teh Wee Min
Malaysia

I attended the APVRS four or five years ago in Hyderabad. I have a paper to present this time, titled ‘The Efficacy of 0.75% Levobupivacaine Versus 0.75% Ropivacaine With Fentanyl For Peribulbar Anesthesia in Vitreoretinal Surgery’. We also have a poster titled ‘Is Antithymocyte Globulin Therapy Responsible for Central Serous Retinopathy in Aplastic Anemia?’

Dr. Sherine Marina Dsouza
India

This is my first year attending the APVRS. We hope to learn more from this programme, such as new technologies in vitreoretinal diseases that can help to diagnose and treat patients.

Dr. Premala Devi
Sivagurunathan
Malaysia
Creativity and Technology without Boundaries

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The 33rd Asia-Pacific Academy of Ophthalmology Congress in conjunction with
The 29th Hong Kong Ophthalmological Symposium

http://2018.apaophth.org
The prestigious Tano Lecture will be delivered by Dr. Taraprasad Das, M.D., FRCS, DSc, the President of APVRS. Dr. Das is currently the Vice Chairman of the L V Prasad Eye Institute (LVPEI), a comprehensive eye health facility network in India, whose main campus is located in Hyderabad. Aside from his affiliation with LVPEI, Dr. Das is a Professor of Ophthalmology at the Sun Yat-Sen University in Guangzhou, China; an Adjunct Professor of Ophthalmology at University of Rochester Medical School, Rochester, New York, USA; and Fellow of the National Academy of Medical Sciences (NAMS), India. During the Tano Lecture at APVRS 2017, Dr. Das will talk about decoding evidence-based best practices in the prevention and treatment of post-cataract surgery endophthalmitis.

A prominent lecturer at every APVRS meeting, Prof. Andrew Chang, MBBS(Hons), Ph.D.(Syd), FRANZCO, FRACS, will give the Keshmahinder Singh Lecture this year. A vitreoretinal ophthalmologist of the Sydney Retina Clinic & Day Surgery in Sydney, Australia, Prof. Chang is strongly committed to international ophthalmology through his leadership – not only to the APVRS, but also to the Asia-Pacific Academy of Ophthalmology (APAO) and The Royal Australia and New Zealand College of Ophthalmologists (RANZCO). For the Keshmahinder Singh Lecture at APVRS 2017, Prof. Chang’s presentation is entitled “Vitreoretinal Surgery – An Unexpected Adventure.”

APVRS 2017’s International Award Lecture will be delivered by Prof. Neil Bressler, M.D., Chief of the Retina Division and Professor of Ophthalmology at the Johns Hopkins Wilmer Eye Institute, Baltimore, Maryland, USA. He will discuss the revolution in diabetic retinopathy management and why it is considered “a race against time.” Prof. Bressler has been a member of the Wilmer Eye Institute’s faculty since 1988. His research interests include diabetic retinopathy and macular degeneration. Dr. Bressler has previously chaired the National Eye Institutes (NEI) Data and Safety Monitoring Committee for intramural clinical trials and the Food and Drug Administration (FDA) Ophthalmic Devices Panel. Currently, he is the editor-in-chief of JAMA Ophthalmology.

The fourth keynote speaker at APVRS 2017 will be Dr. Timothy Lai, M.D., MBBS, FRCSEd, FRCOphth, Associate Professor in the Department of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Hong Kong SAR, The People’s Republic of China. With clinical and research interests in the management of macular diseases, particularly choroidal neovascularization (CNV), polypoidal choroidal vasculopathy (PCV), central serous choriotretnopathy, visual electrophysiology and genetics of retinal diseases, Dr. Lai has published more than 140 papers in international peer-reviewed journals, co-authored and edited seven textbooks and has delivered more than 50 invited lectures worldwide. At the APVRS 2017, he will give the Constable Lecture and will present on “Management of Choroidal Neovascularization Due to Uncommon Causes: What We Know and What We Don’t Know.”

With four strong keynote presentations and 176 international speakers, the APVRS Secretariat and Organizing Committee headed by the MSO, is assuring attendees of a robust scientific program this year. But lest we forget, retina experts from east and west alike converge at APVRS each year to share their knowledge, especially with young ophthalmologists. The intent to impart practical clinical pearls of wisdom to young ophthalmologists is emphasized even more strongly for APVRS 2017.

“This year, there are special sessions tailored specifically for general ophthalmologists and non-retina specialists to update themselves on important issues such as pathological myopia, polypoidal choroidal vasculopathy (PCV) and posterior segment issues in cataract surgery,” said Dr. Ken Fong, Congress President of the 11th APVRS Congress and Secretary General of MSO.

The Masterclasses at APVRS 2017, according to Dr. Fong, are especially aimed at retinal trainees. “They will be educated on tips and tricks in managing trauma, retinal detachment, diabetic retinopathy, PCV, as well as learning about retinal imaging and electrophysiology,” he explained.

Furthermore, world leaders in the field of gene and stem cell therapy will be present in various sessions at APVRS 2017 to discuss the latest findings in this exciting field.
The symposium on *Retinal Imaging in the 21st Century* will cover the latest imaging devices available today, while the symposium on *When Front and Back Collide: Managing Anterior Segment Surgery Complications*, will cover posterior segment issues that occur during anterior segment surgeries.

APVRS 2017 is hosted at the KLCC, Kuala Lumpur’s most popular convention center, located right beside the iconic Petronas Twin Towers. Outside of the scientific program at APVRS 2017, the social program is promising delegates an enjoyable experience as well.

The *Presidential Dinner* on December 8 (Day 1) will be held at the Grand Salon of the Grand Hyatt Kuala Lumpur, just a 3-minute walk from the congress venue. The *Congress Party* on December 9 (Day 2) at the KLCC Grand Ballroom will allow delegates to experience Malaysian food and culture under one roof. For this event, the KLCC Grand Ballroom will be transformed into a magical venue under the lights of the Petronas Twin Towers, where delegates will be treated to dinner and entertainment, in authentic Malaysian style.

Malaysia, a melting pot of culture and a top tourist destination in the heart of Asia-Pacific has a lot to offer every visitor, not just in Kuala Lumpur, but in other cities too including Melaka, Penang and Sabah, among others.

“On behalf of the Malaysian Society of Ophthalmology, we are honored to host this prestigious meeting for the first time in Malaysia. We hope you enjoy this beautiful country and we hope you find APVRS 2017 Congress most valuable to your practice,” concluded Dr. Fong.

### Keynote Speakers

**Dr. Taraprasad Das**

APVRS 2017 Tano Lecture
*Decoding Evidence-Based Best Practice in Post-Cataract Surgery Endophthalmitis Prevention and Treatment*
10.20 - 10.40 am
December 8, 2017 (Day 1)
Banquet Hall, KLCC

**Prof. Andrew Chang**

APVRS 2017 Keshmahinder Singh Lecture
*Vitreoretinal Surgery – An Unexpected Adventure*
10.00 - 10.20 am
December 9, 2017 (Day 2)
Banquet Hall, KLCC

**Prof. Neil Bressler**

APVRS 2017 International Award Lecture
*Revolution in Diabetic Retinopathy Management – A Race Against Time*
10.20 - 10.40 am
December 9, 2017 (Day 2)
Banquet Hall, KLCC

**Dr. Timothy Lai**

APVRS 2017 Constable Lecture
*Management of Choroidal Neovascularization Due to Uncommon Causes: What We Know and What We Don’t Know*
10.00 - 10.20 am
December 10, 2017 (Day 3)
Banquet Hall, KLCC

A version of this article first appeared in the 3rd issue of PIE Magazine, Asia-Pacific’s first magazine on the posterior segment, published by Media MICE Pte Ltd: https://issuu.com/mediamice/docs/pie_issue3-40pp-issuu/6
Discover
KUALA LUMPUR and MALAYSIA

by Brooke Herron

Congress doesn’t have to be all work and no play. Take some time to explore the local sights during APVRS – whether you can spare a few hours or a few days, this is your go-to tourism guide for Kuala Lumpur and Malaysia.

With a culturally diverse capital, idyllic beaches, first-class shopping and delectable cuisine, there is something for everyone in Malaysia. Below we explore the top sights in Kuala Lumpur, as well as additional Malaysian destinations.

See the sights in Kuala Lumpur

As the capital and largest city in Malaysia, Kuala Lumpur – also known as “KL” – is a culturally diverse and modern city. The distinct Malay, Chinese and Indian communities give the city a truly international feel by adding their own flavour and traditions to the bustling urban atmosphere.

If you’ve ever seen a photo of Kuala Lumpur’s skyline, you’ve probably noticed the Petronas Twin Towers. Standing at 451 meters and designed with influences from Islam (including five tiers to represent the five pillars of Islam), these iconic twin towers remain the tallest of its kind in the world. Visitors keen to go inside the towers for a bird’s eye view of KL are encouraged to purchase tickets in advance online, where half of the daily ticket sales are allocated. Tickets for the 45-minute tours are also sold on-site, but turn up early to guarantee your spot. If you don’t get a ticket, don’t despair – you can join the throngs of people outside trying to capture the perfect selfie with the towers. For more information, please visit www.petronastwintowers.com.my.

Another popular spot on the KL tourist trail is the Islamic Arts Museum. Housed in an impressive building with intricate domes and tile work, this museum showcases Islamic art from around the world, including scale models of Islamic buildings, textiles, carpets, jewelry, pottery and more. For more information, visit www.iamm.org.my.

Just 13 kilometers north of KL is one of Malaysia’s national treasures and holiest Hindu caves: the Batu Caves. For more than 120 years, pilgrims have been visiting this complex of giant limestone caves – and it’s well worth the trip out of town. One of the main attractions is the giant Hindu god statue at the entrance. There are three different caves featuring impressive Hindu shrines and temples, as well as gangs of cheeky monkeys scampering about.

Shopping and Eating in Kuala Lumpur

In addition to cityscapes, sights and museums, visitors to KL will find world-class shopping. Seeking designer labels and bargains? Head to Pavilion Kuala Lumpur. Looking for locally made souvenirs and handicrafts? Find what you’re looking for at Central Market. And don’t forget to check out the bustling streets and markets in Chinatown!

Cont. on Page 4 >>
Cont. from Page 9 >>

One of the biggest – and most delicious – tourist attractions in KL is Jalan Alor. Visiting this street, littered with roadside restaurants, is a must-do for anyone visiting the city. Beginning at 5 p.m. every evening, this street (just north of Jln Bukit Bintang), turns into a huge open-air restaurant, serving cuisines from different Asian countries. It’s always busy, and quite the sight to see – we recommend walking the street first to see all its offerings before settling down to dine.

Beyond Kuala Lumpur

There’s much more to Malaysia than its capital city. If you have extra time to explore, head out of KL and check out the funky and artistic city of George Town, or spend your days in the idyllic beach paradise of Pulau Langkawi.

George Town

Located 350 kilometers away from KL (about a three hour car ride) is George Town, a UNESCO World Heritage site, boasting colonial architecture and impressive arts scene. Cultures collide in this eclectic and photogenic city, with a mishmash of Indian, Chinese, Malay and western influences. Architecture aficionados will enjoy the Blue Mansion – which is the most photographed building in George Town. And a trip to George Town wouldn’t be complete without a stop at Hin Bus Depot Art Centre, the city’s hub for contemporary art (and street art)!

Pulau Langkawi

Take a respite from the bustling cities and head to Pulau Langkawi to recharge your batteries. With gorgeous sandy beaches, jungles, waterfalls, hot springs and more, the island’s official name is “The Jewel of Kedah,” and they’ve kept it well-preserved with sustainable development. After a long congress, it’s the ideal locale to reinvigorate your body and mind – and of course do a little shopping (the island has been duty-free since 1987!). Check out train schedules or book a short flight to get there from KL.

We hope these tips will help you to make the most of your time in Malaysia, before, after – or even during – APVRS.
Featuring next-generation visualization technologies and an intelligent ocular-free design, the NGENUITY® 3D Visualization System establishes a powerful platform for Digitally Assisted Vitreoretinal Surgery (DAVS).
Color. Clarity. Comfort.

These are the traits that set the CLARUS 500 apart from the current marketplace of widefield fundus imaging.

“I am very excited to showcase it for the first time in Southeast Asia,” said Terrance Siew, regional product manager for the Southeast Asia ophthalmic diagnostics at ZEISS (Jena, Germany). “Everybody has been asking if we will have a unit to showcase. They have been hearing good things about it.”

That’s because the virtues of color, clarity and comfort will truly make a difference for the practicing clinician. What’s more, these unique selling points will be of importance especially for clinicians in the Asia-Pacific region. Here’s why:

• Color. “The color of CLARUS will be the true color, as if doctors are looking at the fundus directly from the slit lamp,” Mr. Siew said. “It will be the natural true colors of the retinas. ZEISS employs Broad Line Fundus Imaging (BLFI) technology here, which is proprietary. And true color will aid in different types of diagnosis. Sometimes with a false color, surgeons might hesitate and have doubts about whether colorization of the fundus is due to disease or is simply a natural component of the eye. The color accuracy is important for diagnosis and documentation of the ocular disease. The existing technology in the market does not have true color, while CLARUS is the new generation of technology.”

• Clarity. Mr. Siew emphasized: “Clarity involves ultra-high resolution. At this moment, CLARUS is the only such device that has resolution down to 7 microns. That’s roughly twice as good as other devices. The existing market has resolution at typically 14-15 microns. Microns determine clarity, and you see more details with clarity. This will give the doctor more confidence in managing their patients. So regarding certain subtle changes, if you don’t have a very high resolution camera you might miss it. Typically, when you zoom into pictures at 14-15 microns, they would be hazy, blurred, and there would be a lot of noise. With 7 microns, when you zoom in, you have still very clear images. Even though CLARUS captures widefield fundus imaging with 7 microns when observing optic disc, the resolution is good enough that you don’t need a separate “optic disc” mode.

• Comfort. With existing technology, you essentially have to bring patients toward the devices. “You have to move the head, neck, and move the patient toward the machine,” Mr. Siew said. “The CLARUS has a chin rest and head rest. Patients stay still on the chin rest and you move the optics toward the patient.” Especially in Asia, this provides a more comfortable, satisfying patient experience. CLARUS also has the live infrared (IR) preview. The ophthalmologist can look at the entire fundus image before it is captured to make sure it is fine, free of eyelids and lashes, for example. This will help to minimize the frequency of recapturing images. “Typically doctors do non-mydriatic fundus imaging,” he said. “Therefore, the average for Asian eyes is roughly two camera shots. Otherwise, after two shots the pupil would be constricted, and the doctor will not be able to recapture again efficiently. If you have to recapture many times, patients will not feel comfortable. The live IR preview gives the technicians and operator a confirmation that the image quality is acceptable before pressing the capture button.

Finally, CLARUS is the first in the market to have fundus autofluorescence (FAF) for Blue and Green. Typically, the traditional fundus camera only has FAF-Green. Traditional cameras don’t have FAF-Blue. CLARUS has both because different wavelengths will highlight different diseases better. For example, dry AMD will be visualized better in FAF-Green while Geography Atrophy will be revealed better in FAF-Blue.

CLARUS will take a Southeast Asia tour after APVRS.

“I believe we will have great success with CLARUS,” Mr. Siew said.