

A Letter from the Medical Director

The goal of the doctors and staff at Retina Consultants of Hawaii is to make a positive impact and difference in the lives of each patient, who entrust their care to us. We also strive to make sure to do everything we can do to show our appreciation to the doctors that kindly send us their patients. One of the ways is to keep our medical community informed through education and research. This newsletter is a joint effort prepared by all of the doctors and much of the staff of Retina Consultants of Hawaii for our Hawaii community, and our international community of doctors who referred patients to us.

Macular degeneration not that long ago was felt to be untreatable. I remember when Genentech, the maker of the first drug for wet macular degeneration, Lucentis, first began the studies on this drug. The first introduction of Genentech to ophthalmology began in 2002 at the first combined meeting of the Retina Society and Vitreous Society in San Francisco. San Francisco is also the home of Genentech. Soon after, Retina Consultants of Hawaii became the first and only Hawaii site for the first treatment for wet macular degeneration with Lucentis in the FOCUS and the MARINA trials. The MARINA trial was one of the pivotal phase III trials leading to the approval of Lucentis as the first approved treatment for exudative or wet macular degeneration.

In this issue we will discuss and highlight one of the most promising treatments for dry macular degeneration. Lampalizumab, an intravitreal drug, that inhibits the alternative complement pathway, has had promising early phase trials. This drug, also being developed by Genentech, is now being entered in two pivotal phase III clinical trials. The CHROMA trial is the multi-centered trial predominantly in the USA. Retina Consultants of Hawaii through the Hawaii Macula and Retina Institute is the only clinical trial site in Hawaii. We are happy to provide access

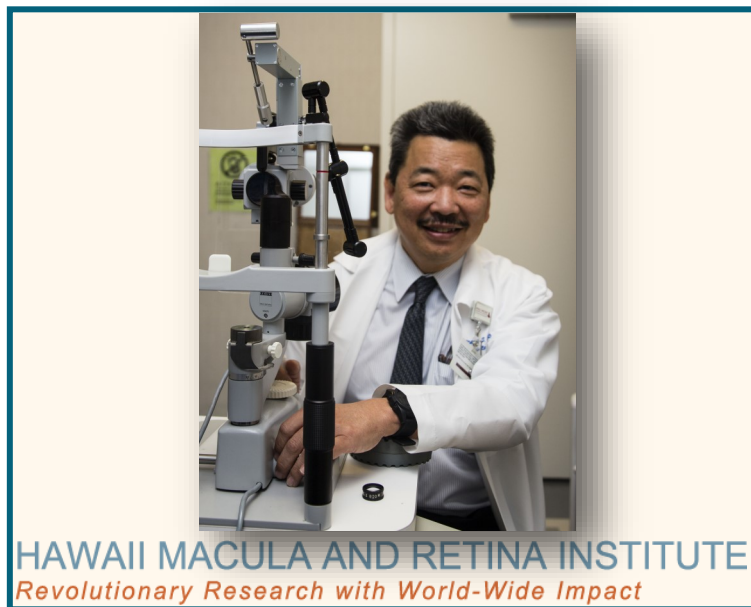
to this potential new treatment for dry age related macular degeneration to our patients here in Hawaii.

Our research division has grown and now has its own office space on the fourth floor of the Pali Momi physician building. The future in retinal therapeutics is extremely bright with many new frontiers being studied. We are excited about many other new research studies that are really addressing unmet needs in retina for our patients, many of which are working with us on future projects. We look forward to sharing these new studies with you.

Most importantly, thank you again for your support of RCH, its doctors, and its research. We value that tremendously and will do all that we can to make a positive impact on retina care in our community.

With Warm Regards,

Gregg T. Kokame MD MMM
Managing Partner
Retina Consultants of Hawaii, Inc.
Medical Director
Hawaii Macula and Retina Institute



HAWAII MACULA AND RETINA INSTITUTE
Revolutionary Research with World-Wide Impact

Recent and Upcoming Academic Presentations

4/3/14: *"Polypoidal Choroidal Vasculopathy (PCV)"* @ World Ophthalmology Congress in Tokyo, Japan. Presented by Dr. Gregg Kokame

4/4/14: *"My Best Buckle Complication Surgical Management Video"* @ World Ophthalmology Congress in Tokyo, Japan. Presented by Dr. Gregg Kokame

5/6/14: *"New Treatments for Vein Occlusions"* @ Hawaiian Ophthalmological Society in Honolulu, HI. Presented by Dr. James Lai

8/12/14: *"Comparison of Monthly Treatment of 2.0 mg Ranibizumab for PCV"* @ American Society of Retina Specialists in San Diego, CA. Presented by Dr. Raymond Wee

8/12/14: *"Location of PCV Vessels by ICG-Correlated OCT and Response to High Dose Ranibizumab"* @ American Society of Retina Specialists in San Diego, CA. Presented by Dr. Gregg Kokame

09/6/14: *"Novel Treatments for Diabetic Macular Edema"* @ Hawaiian Ophthalmological Society annual meeting in Honolulu, HI. Presented by Dr. James Lai

9/6/14: *"A Few Bizarre Things: Case Presentations"* @ Hawaiian Ophthalmological Society annual meeting in Honolulu, HI. Presented by Dr. Raymond Wee

9/12/14: *"The role of anti-VEGF in the treatment of PCV"* @ Euretina Annual Meeting in London, England. Presented by Dr. Gregg Kokame

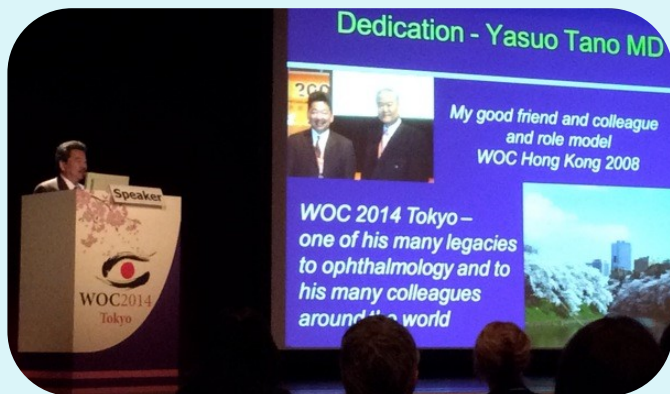
9/13/14: *"Antiangiogenic Therapy for PCV"* @ Euretina Annual Meeting in London, England. Presented by Dr. Gregg Kokame

10/21/14: *"PCV"* American Academy Course @ American Academy of Ophthalmology Annual Meeting in Chicago, Illinois. Co-presented by Dr. Gregg Kokame

11/6/14: *"Comparison of Anti-VEGF Agents in the Treatment of Macular Edema from Retinal Vein Occlusion"* @ Study Club for Ophthalmological Research Hawaii in Honolulu, HI. Presented by Dr. Raymond Wee

12/21/14 *"En Face OCT Imaging of PCV"* @ Second International Congress of "En Face OCT Imaging" in Rome, Italy. Presented by Dr. Gregg Kokame and University of Hawaii medical student Kelsi Hirai, MSII

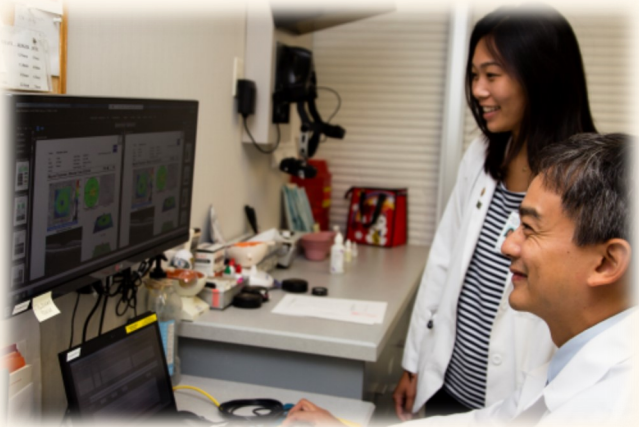
For additional information on any of these presentations, please contact Alison Zenel at alison@retinahi.com or (808) 380-8061



Dr. Gregg T. Kokame presenting at the annual **World Ophthalmology Congress** in Tokyo, Japan in April 2014 (left) and at the annual **EURETINA** meeting in London, England in September 2014 (right).



Dr. Lai was on the air!



Dr. Lai advising University of Hawaii medical school student Elyse Tom

Dr. James C. Lai was a featured guest on **Hawaii Public Radio's** *The Body Show* on September 15, 2014. He discussed diabetic retinopathy with Dr. Kathleen Kozak. Diabetic retinopathy is a leading cause of blindness in patients under 65 years old in the United States. You can listen to the podcast of the show on our website at:

<http://retinahi.com/lai-hpr-diabetic-retinopathy/>

RCH Adds an Additional Suite at Pali Momi

written by Raymond Wee, MD

Retina Consultants of Hawaii continues to thrive. With increasing demand for care from RCH physicians comes the increasing need for more space. In addition to suite 470, we have expanded to suite 410. The additional space allows the following improvements: 1) less crowded waiting area, 2) space to add state-of-the-art equipment, and 3) expansion of the research department.

One of our goals at RCH is to provide the people of Hawaii the best care available anywhere. A large part of that is the knowledge of our physicians who teach at the national and international level. Another part of providing the best care involves having the best equipment. This requires space. Obtaining suite 410 has already allowed us to purchase the top ultrasound machine. In addition, we are able to house a newly acquired microperimetry machine. There are other big projects under development that would not have been possible without the additional space.

We pride ourselves on advancing medical knowledge and educating other retinal physicians around the world. In addition, another goal is to

bring the newest treatments to Hawaii. Both of these actions require a healthy and vibrant research department. The addition of suite 410 allows for an expansion of our research department. We have been extremely fortunate to have dedicated and caring research coordinators. In addition, we have been able to attract extremely talented students to conduct research projects with us. In fact, five former RCH staff currently attend JABSOM (University of Hawaii medical school).



Dr. Raymond Wee



Exam room in Suite 410

We strive to provide the highest level of service to our patients. Expansion to suite 410 enables us to pursue our mission of providing caring clinical care and state of the art treatment and to advance knowledge about retinal diseases through education and state of the art research.

DRY MACULAR DEGENERATION

The new treatment frontier

Gregg T. Kokame, MD MMM, Research Director, Hawaii Macula and Retina Institute

Macular degeneration is the leading cause of vision loss in Hawaii and in this country. While there have been marked advances in treatment of the wet type of macular degeneration with leaking and bleeding abnormal blood vessels, there is no proven treatment yet for the dry type of macular degeneration, which leads to gradual progressive scarring in the central vision area of the retina.

One of the most promising potential treatments for dry macular degeneration is the use of lampalizumab, which is an antibody fragment directed against the complement component factor D. This fragment is being studied in the CHROMA trial, a phase III clinical trial, in which monthly injections are being given to patients with geographic atrophy and dry macular degeneration. Chronic inflammation is believed to be a significant factor in macular degeneration. Lampalizumab specifically targets the alternative complement pathway, which is felt to be especially important for the pathogenesis of dry macular degeneration. Retina Consultants of Hawaii, and its research division, the Hawaii Macula and Retina Institute, are the only clinical research site in Hawaii for this potential breakthrough treatment for dry macular degeneration.

This study is now open and recruiting patients with geographic atrophy – a previously untreatable form of macular degeneration. Treatment will be monitored for a decrease in the progression of geographic atrophy, and thus hopefully will allow preservation of better central vision than with sham treatment. If this trial does show positive results, it could lead to FDA approval of this medication for treatment in the USA, as this is a phase III clinical trial. This would then be the first drug that doctors would have available to them to treat some patients with the dry form of macular degeneration.

If you would like more information regarding the CHROMA trial, please contact Sheila Chamian at retinahawaii@aol.com, or (808) 380-8060.

Our Enrolling Clinical Trials:


PCV: EPIC Study– A study investigating the effectiveness of monthly or bimonthly injections of Eylea, for patients that have previously or not previously received treatment for Polypoidal Choroidal Vasculopathy.

DME: PALM Study– An evaluation of Abicipar Pegol injections in patients with decreased vision due to Diabetic Macular Edema.

Dry AMD: Chroma Study- A study investigating the effectiveness of Lampalizumab injections every 30 or 45 days in patients with Dry Age-Related Macular Degeneration.

Wet AMD: LPath Study– An adjunctive treatment, isoNEP, for cases of Wet Age-Related Macular Degeneration that are not responding well to current medications.

VMA: ORBIT Study- A study assessing patient outcomes after use of Jetrea to treat Vitreomacular Adhesion.



For more information regarding our clinical trials, please contact our study coordinator Alison Zenel at alison@retinahi.com or (808) 380-8061

Please visit our website: www.retinahi.com and our research website: www.hawaiimacula.com

AAO

18-21 October - Chicago

2014

The American Academy of Ophthalmology (AAO) is honoring **Dr. Gregg Kokame** with the **Senior Achievement Award!** He will receive this prestigious award in October 2014 at the annual AAO meeting in Chicago, Illinois. This is Dr. Kokame's third award from the AAO. He has previously received the Achievement Award in 1999, as well as the Secretariat Award in 2008 for his extensive work as a reviewer for Ophthalmology journal manuscripts. Dr. Kokame continues to be recognized for his many innovative and intelligent contributions to the AAO.



Above, Dr. Gregg Kokame examines former clinical trial participant Harriet Weissman. Ms. Weissman still remains a patient and close friend of Dr. Kokame's, and enjoys catching up with him at her appointments, below.



Congratulations!



**Dr. James Lai: Best Doctor in Hawaii
since 2007**

**Dr. Gregg Kokame: Best Doctor in Hawaii
since 1998**

**Dr. Raymond Wee: Best Doctor in Hawaii
since 2013**

The World Ophthalmology Congress in Tokyo, Japan *written by Gregg Kokame, MD MMM*



The World Ophthalmology Congress (WOC), a bi-annual international meeting bringing researchers and clinicians together from around the world, was held in Tokyo, Japan from April 2 – 6, 2014. Dr. Gregg Kokame and Dr. James Lai from Retina Consultants of Hawaii participated in the World Congress.

The American Academy of Ophthalmology invited Dr. Kokame to speak at its major symposium on age related macular degeneration. Specifically, Dr. Kokame spoke on the different appearance and frequency of polypoidal choroidal vasculopathy, a leaking blood vessel growth under the retina, in different ethnic groups around the world. The research into the response of polypoidal choroidal vasculopathy to the newest management options and doses of different intravitreal medications from research performed by Retina Consultants of Hawaii was presented. Dr.

Kokame dedicated this lecture to Dr. Yasuo Tano, the major leader of vitreoretinal surgery in Japan and the initial driving force to bringing the World Congress to Tokyo, who unfortunately passed away in January 2009.

The Retina Society invited Dr. Kokame to present a surgical video in its program on Retinal Surgical Dilemmas. Dr. Kokame presented on a difficult to manage problem with scleral buckle intrusion into the eye after previously successful repair of retinal detachment. The video led to much discussion, and interest from surgeons from many countries, who had not encountered this problem.

Drs. Lai and Kokame met with surgeons from around Asia and the world. The beauty of the sakura (cherry blossoms) happened just before the Congress started and was enjoyed by the Congress attendees.



Photo by research assistant Ryan Yanagihara

We're Published!

Dr. Kokame and co-authors Dr. Lai and Dr. Wee were published in the 2014 issue of *Ophthalmologica* for their article “Polypoidal Choroidal Vasculopathy Exudation and Hemorrhage: Results of Monthly Ranibizumab Therapy at One Year.” This article presents the results of their ground-breaking research from the PEARL study, which was conducted at Retina Consultants of Hawaii, Inc. PEARL evaluated the efficacy and safety of monthly intravitreal injections of ranibizumab in patients with polypoidal choroidal vasculopathy and active exudation or hemorrhage.

Ophthalmologica, published since 1899, is a world-renowned retina journal based in Europe that has become a frequently cited international guide to clinical and experimental ophthalmology. Congratulations to Doctors Kokame, Lai, and Wee!



EPIC Results Released at EURETINA

written by Gregg T. Kokame, MD MMM

In London at the EURETINA meeting on September 13, 2014 Dr. Gregg Kokame, medical director of the Hawaii Macular and Retina Institute, released the results of the EPIC study, the world's first prospective study of aflibercept use in polypoidal choroidal vasculopathy.

The paper by Drs. Kokame, James C. Lai, and Raymond Wee, and Ryan Yanagihara BS was extremely well received, as this was the first public release of the 6 month results of this study, which showed a remarkable decrease in retinal pigment epithelial detachment in over 90% of cases, and an ability to go to bi-monthly treatment in 65% of cases.

Dr. Kokame also presented the findings of his study on indocyanine green angiography guided OCT localization of polypoidal choroidal vasculopathy, showing that 99% of the time the PCV vessels are located between Bruch's membrane and the retinal

pigment epithelium. Thus polypoidal choroidal vasculopathy is not really in the choroid!

Dr. Gregg Kokame previously presented the PEARL study in London at EURETINA, and this work was published in 2014 in *Ophthalmologica*, the retina journal of European retina.

The EURETINA meeting is the largest retina meeting in the world with attendees from Europe, the Middle East, and Africa, as well as Asia and the United States. This EURETINA meeting in London in 2014 was the largest retina meeting ever in the world with 5,500 attendees, as announced by President Francesco Bandello from Milan, Italy.



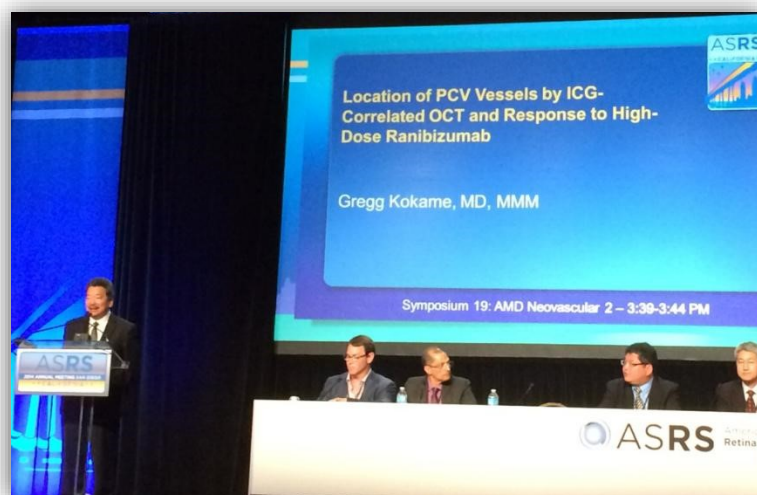
American Society of Retina Specialists meets in San Diego

written by Gregg Kokame, MD MMM

The American Society of Retina Specialists had their largest meeting ever with 1700 retina specialists from around the world meeting in San Diego. What was impressive was not only the large attendance by retina specialists in the USA, but also by many from around the world. Many leaders in retina from Japan, who have become close friends, were there and participated in the meeting. Many from Japan had previously attended our 20th Anniversary meeting for The Retina Center at Pali Momi held in 2013.

We presented our results of our research on polypoidal choroidal vasculopathy (PCV). One part of our presentation was on the localization of the PCV vessels. Our work using indocyanine green (ICG) angiograms to guide optical coherence tomography (OCT) to localize the vessels provided some surprising results. The vessels of PCV are not localized to the choroid, but are localized to the area above Bruch's membrane and below the retinal pigment epithelium. In other words, PCV is not in the choroid, but it is a variant of subretinal neovascularization. We also presented the results of high dose ranibizumab for PCV at 6 months. The high dose showed similar vision results as our prior studies with regular dose ranibizumab, but there was a trend towards more polyp closure in the higher dose study.

At this meeting I was also invited to be on Formula Retina – a television video presentation interviewing leading retina specialists. I was invited to be on a panel for exudative macular degeneration with two other leading retinal specialists in the United States – Jay Duker MD, Chairman of New England Eye Center, Tufts University School of Medicine. and David Saraff MD, Clinical Professor, Department of Ophthalmology, UCLA School of Medicine, Jules Stein Eye Institute. Our research on PCV was extremely important during the discussion of cases we provided to this presentation.



Dr. Gregg Kokame presents (far left) and Dr. Raymond Wee resides on panel (far right)



Retina Consultants of Hawaii • www.retinahi.com • www.hawaii macula.com

**Retina Consultants
of Hawaii**

Clinic Locations

Pali Momi Medical Center
98-1079 Moanalua Road,
Suite 470
(808) 487-8928

Kuakini Medical Plaza
321 North Kuakini Street,
Suite 307
(808) 523-6131

Queen's POB I
1380 Lusitana Street,
Suite 506
(808) 545-7036

Neighbor Island Clinics
Toll Free (877) VIT-RET1

Retina Consultants of Hawaii, Inc.
98-1079 Moanalua Road, Suite 470
Aiea, Hawaii 96701