



Visante OCT Anterior Segment Imaging: the latest advance in ocular diagnostics

Scott Lee, OD, Director of Clinical Care, Pacific Vision Institute

Until now we have used the slit lamp, gonioscopy lenses, and the ultrasound pachymeter to evaluate the anterior segment. Even with these great diagnostic tools we were still left with certain questions that were difficult to answer. How much residual stroma does a post-LASIK patient have? How deep is the anterior chamber? How narrow is the angle? How much thinner is the inferior cornea compared to the superior? We can now answer these questions accurately by using the advanced Visante OCT scan.

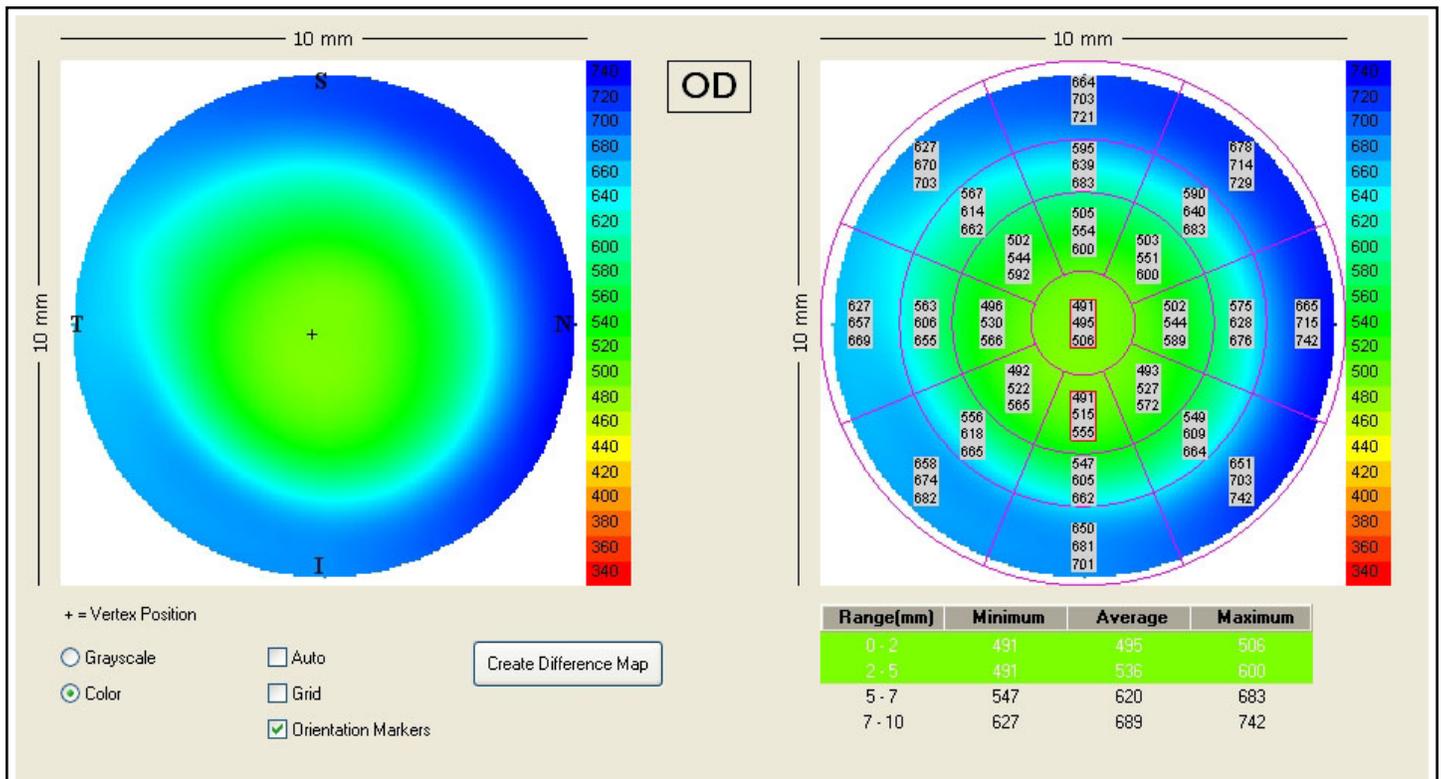
OCT scan utilizes computerized tomography to image the anterior segment in great detail. The scan is high resolution which allows flap-bed interface visualization and residual stromal thickness calculation in a post-LASIK patient. This helps in planning a safe enhancement procedure to minimize the risk of ectasia.

For patients considering a phakic IOL, the anterior chamber depth can be measured to show how much space is available for the lens.

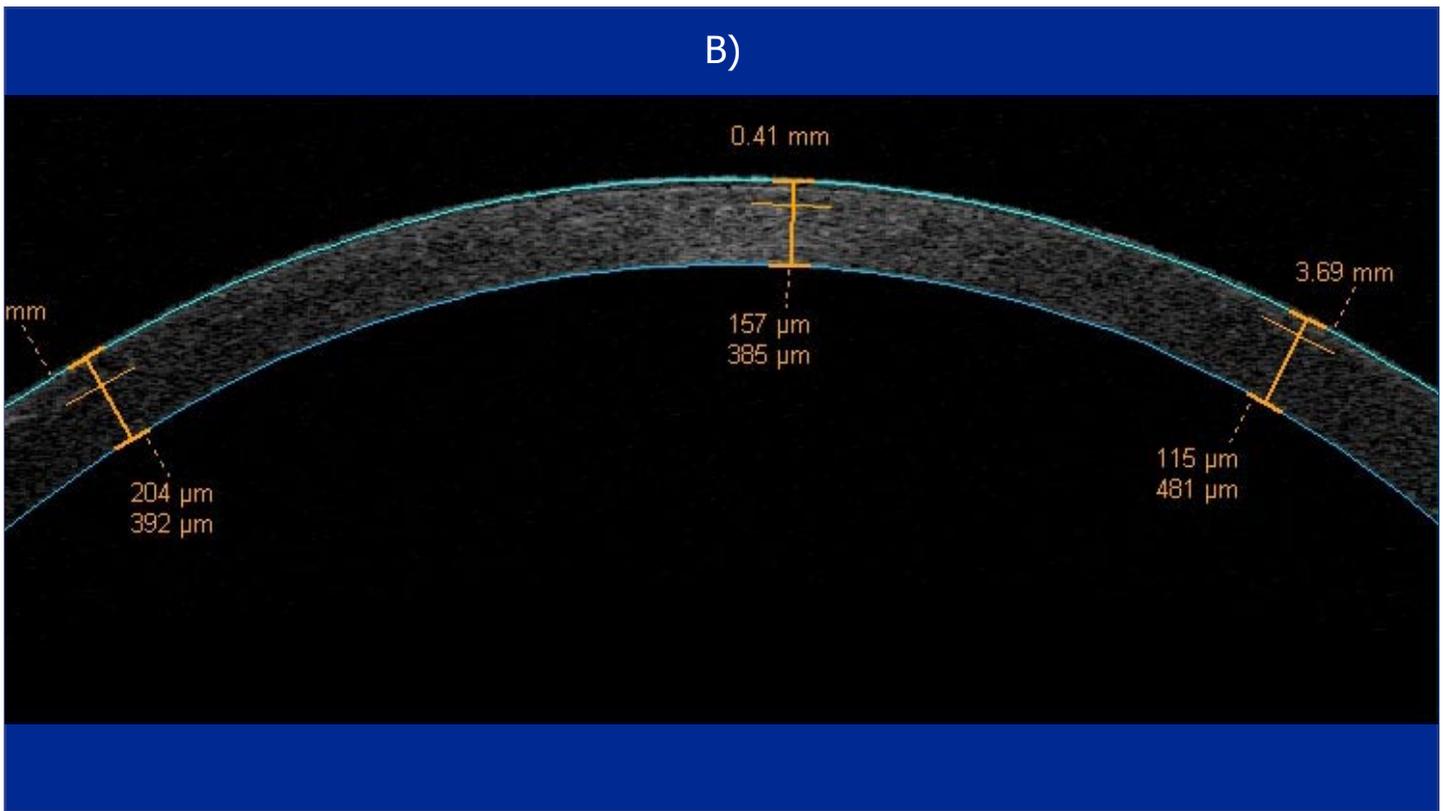
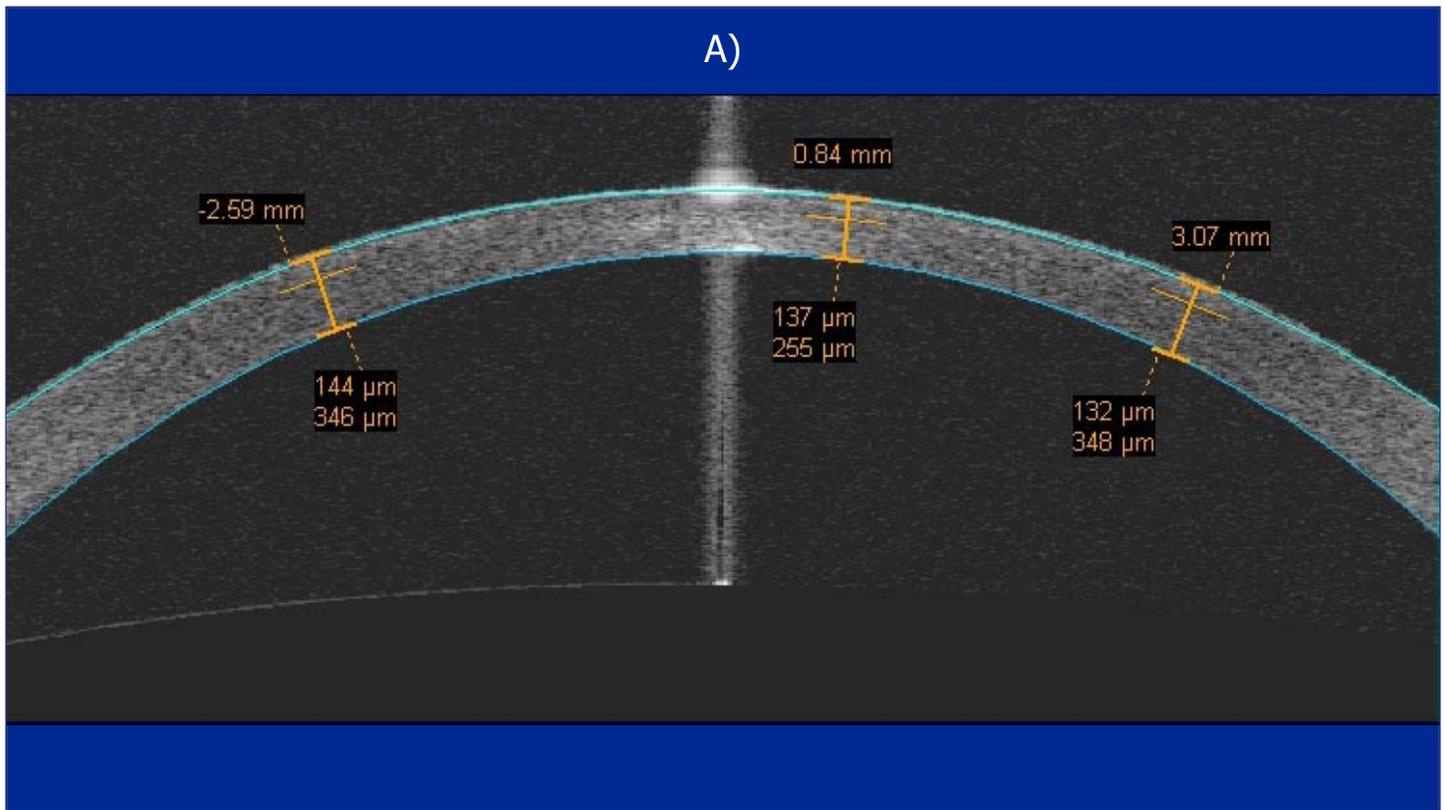
With OCT scan, we can measure the exact angle depth and visualize the patency of Schlemm's canals to determine the patient's risk for angle occlusion. Because the scan is non-contact, the angle depth calculation is precise and free of possible artifact induced by the gonioscopy lenses.

The diagnostic possibilities of the OCT Anterior Segment Imaging are invaluable for great patient care.

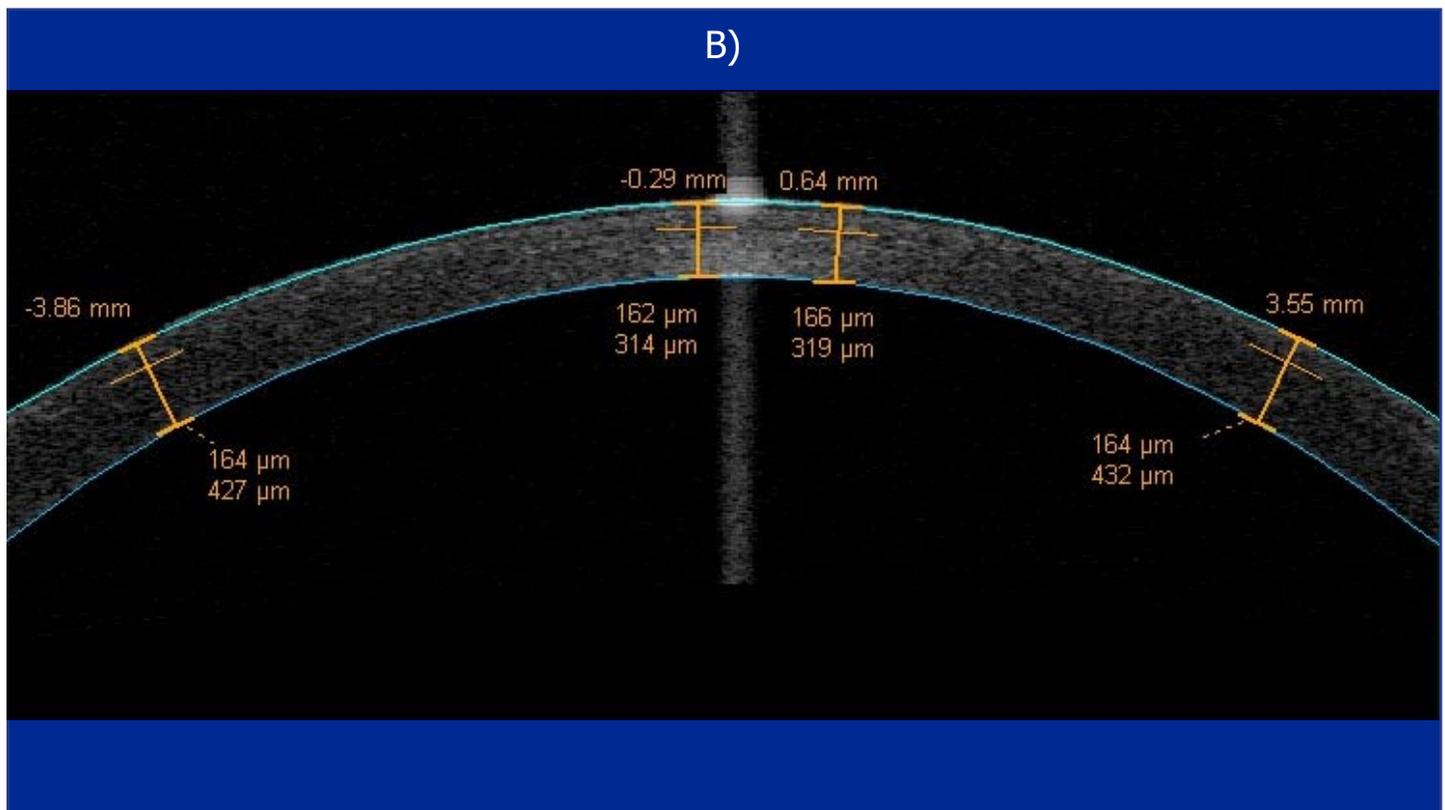
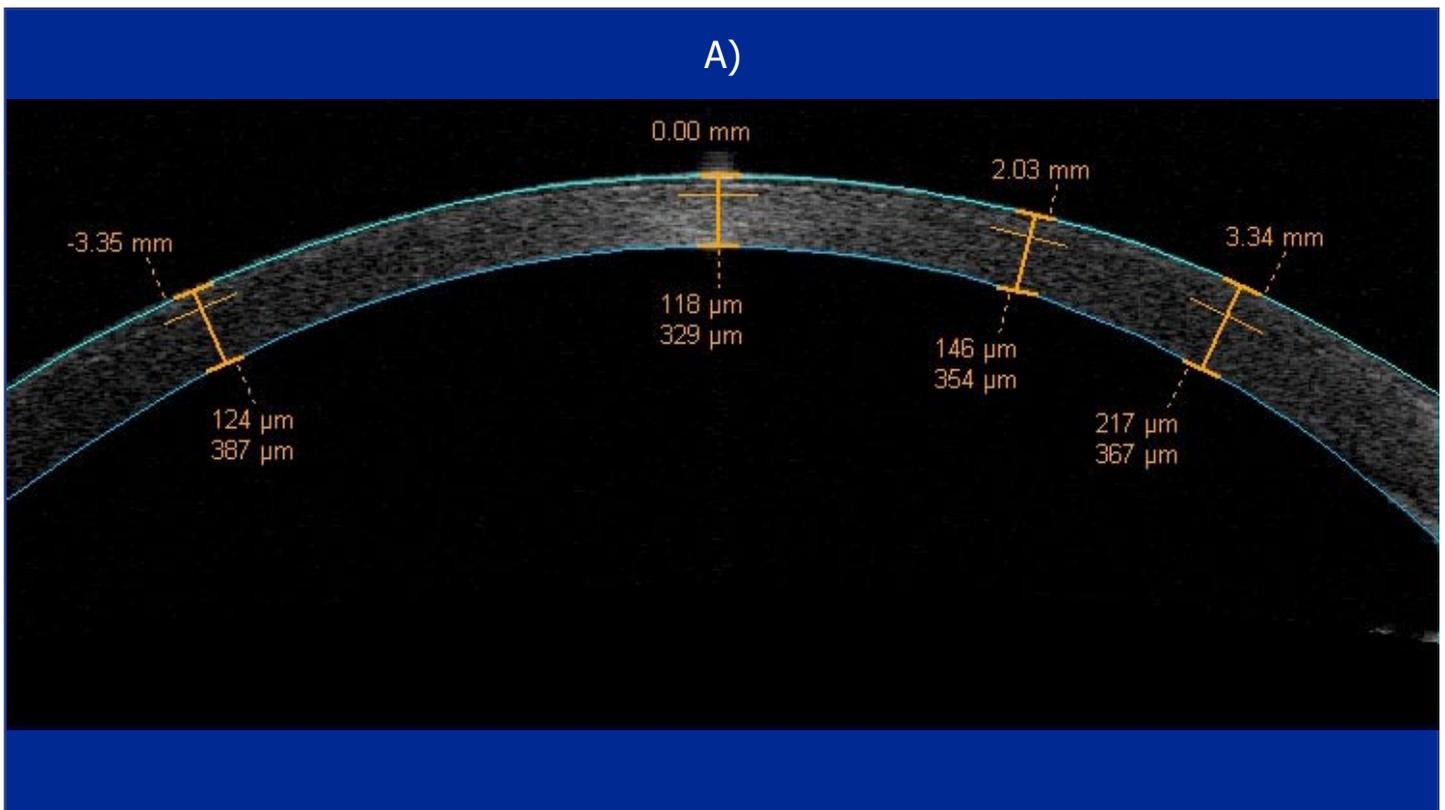
At Pacific Vision Institute, we are starting "hands on" training workshops for the PVI affiliated doctors. The first workshop will be held on Wednesday, June 14th. The workshops are limited to 5 doctors each to give the participants an opportunity to perform the scans and learn their significance in detail. If you are interested in participating, please contact Alyson Jackson at (415)922-9500 or alyson@pacificvision.org.



The Pachymetry Map Report measures corneal thickness in 25 areas across the cornea giving a detailed diagnostic view of thinning conditions such as Pellucid Marginal Degeneration, for example. Subtle thinning can be detected. Progression can be monitored with enhanced accuracy.



For patients considering enhancement following LASIK, we can measure how much residual stroma is available. OCT scan in Figure A) shows inadequate stromal bed to treat the residual -4.00D in this patient who underwent LASIK in Shanghai previously. PRK may be considered instead. On the other hand, OCT scan in Figure B) shows adequate residual stroma to treat the residual -2.00D in the patient who underwent LASIK in Peru.

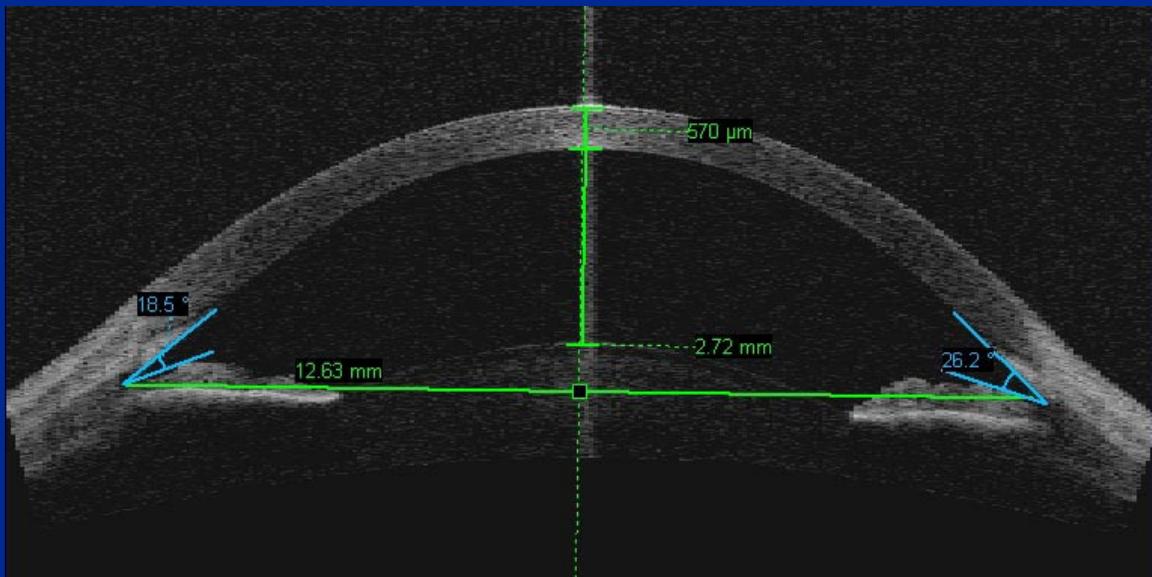


Detailed scans of the corneal flap show the difference between the Microkeratome (A) and the IntraLase (B) flaps. Notice the more uniform thickness of the IntraLase flap.

A)



B)



C)



Precise angle depth calculation can be used to determine the relative risk for angle-closure glaucoma. The Van Herrick angle is measured at a 1+ in Figure A) and at a 4+ in Figure C)



My Lasik Story

Lynn Valdez, O.D., EyeCaramba Optometry, 4 Embarcadero Ctr, San Francisco, 415.772.8282, lynn@eyecaramba.com.

How many times have you been asked by patients, friends, and family, "what do you think about that LASIK surgery?" My response was usually something like, "well it depends on your prescription and whether you're a good candidate". If presbyopia is a potential concern, I make it a point to discuss monovision and the need for reading glasses post-surgery.

However, if you asked me today, I'd say, "It's great! Amazing! If you're interested, go have a consultation". The reason for my change of heart is that today I'm 7 days post-Wavefront IntraLASIK.

At the initial consultation I filled out information forms and sipped on coffee. Dr. Faktorovich did pachymetry and topography. They can now even perform a CT scan of the anterior segment at the consultation. It was determined that I was a good candidate, so then I had a detailed discussion with Dr. Lee about what to expect of my post-op vision. I then meet with Chelsea, who went over all pre-op instructions and day of procedure instructions. I was told to discontinue contact lens wear one week prior. On the day of the procedure I was to wear warm comfy clothes and have someone escort me home.

The big day arrived and I have to admit I was more nervous than I expected. When I checked in, I was given Vicodin (which helped my nerves), filled out more forms, and was given a post-op kit with the necessary drops, instructions, and eye shields. I was dilated and given an antibiotic, anti-inflammatory and vasoconstrictor. The area around my eyes was cleaned with Betadine and my limbus was marked for the wavefront. Once dilated, Dr. Lee did the wavefront mapping. While all this was being done the staff did an excellent job of informing me of what was being done and why. Most importantly they helped put me at ease.

For the first step I was taken into the Intralase Suite. As the lid retainer and suction ring were placed on my right eye, I wondered if this was the right decision. As the procedure started and Dr. Faktorovich talked me through it and kept me focused on the target, I got more relaxed. Within seconds I had a custom flap! I was escorted to a waiting area and asked to keep my eyes closed and wait about 15 minutes. At this point, my vision was extremely blurry, but I had no discomfort.

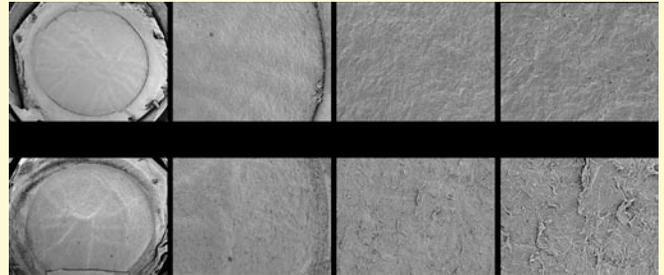
The second step began as I was taken into the LASIK suite. Once again, Dr. Faktorovich was there to coach me through the procedure. It was a bit difficult keeping the very fuzzy red target focused. When it was over, I couldn't feel the flap being put into place, but once in place that fuzzy red target was a sharp brilliant red.

By noon I was at home and ready to sleep. After a 4 hour

Newsflash:

60 kHz IntraLase upgrade delivers ultra-fast procedure time with ultra-low energy

At Pacific Vision Institute, we are now one of the few centers in the US to utilize the latest, 4th generation, IntraLase for LASIK procedures. This upgrade is at least two generations ahead of most IntraLase sites in the country. Ultra-fast energy delivery of the 60 kHz femtosecond laser allows ultra-close laser spot placement which results in extremely fast procedure time, minimal energy per pulse, and ultra-smooth corneal bed which is significantly smoother than the latest generation mechanical microkeratomes.



Corneal bed is significantly smoother with the 60kHz IntraLase (above) than with the Hansatome XP mechanical microkeratome (below).

nap I took off the shields, started the 1% Econopred, Vigamox and artificial tears. I was amazed that I had nearly normal vision. It could best be described as looking through dirty contacts. The next day at the post-op, I was 20/20. During the rest of the week, my vision fluctuated a bit, mostly just halos and glare around lights at night. My eyes felt dry in the evenings, so I used a lot of artificial tears. At one week out, I'm 20/15 and it seems to only get better.

I wake up every morning and I am amazed with my vision. I'm extremely excited to discuss my experience with my patients, family and friends. I have full confidence in Dr. Faktorovich and her staff, and will be forever grateful for this newfound freedom. ■

2006 calendar of the Upcoming Events for PVI Affiliated Doctors:

- 07/19/06: PVI Grand Rounds - Cataract and Refractive Surgery
- 08/02/06: Staff Training
- 09/20/06: PVI Grand Rounds - Glaucoma
- 10/18/06: Staff Training
- 11/15/06: PVI Grand Rounds - Retina

Note from the Editor-in-Chief: Thanks for reading and your continued interest in the latest in high technology eye care. We always appreciate your comments and feedback! drlee@pacificvision.org