

How to create a perfect LASIK flap with Intralase

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iFS 150 kHz IntraLase Technology

HIGHLIGHTS:

- Inverted “Bevel-In” Side Cut Angle Option
- Elliptical Flap Option
- Higher Repetition Rate
- Tighter Spot Separation, Lower Energy
- Easier Flap Lift
- Lower Incidence of OBL in Initial Clinical Experience (Chayet)
 - Less OBL observed (less than 10% overall)
 - OBL was soft and typically dissipated immediately upon flap lift
- Hi-Res Digital Video Microscope with Touch Screen
- New Contemporary User Interface, Keyboard, and Touch Screen
- Ergonomically Designed for Maximum Surgeon Comfort
- New Capabilities for Arcuate Incisions and Corneal Pocket Inlay

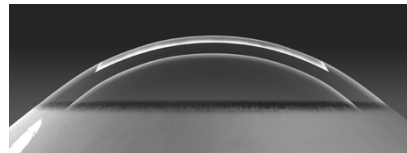


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Inverted Bevel-In Side Cut Angle:

- Provides better wound healing for enhanced biomechanical stability of the post LASIK cornea^{1,2}
- Increased flap adhesion post-operatively for optimal wound healing
 - 3x more flap stability for iFS laser (150° side cut) vs MK during flap lift²
- Easier flap lift, replacement, and positioning for optimal flap stability³
- Reduced flap gutter³

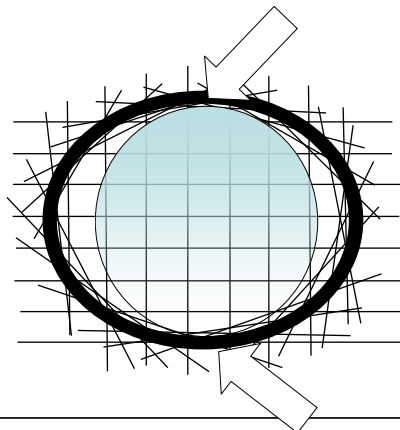


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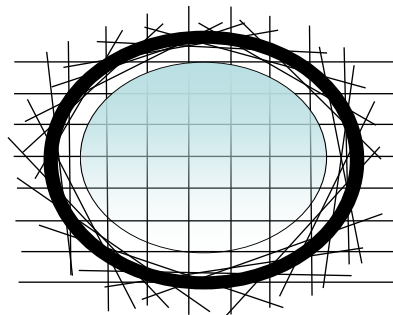


Circular vs Elliptical Flaps

Circular invades peripheral vital lamellar fibers



Elliptical preserves peripheral vital lamellar fibers



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Flaps in 10-15 secs

- Higher Repetition Rate
 - Reduced chance of suction break
 - Improved patient throughput
 - Patient comfort
- Lower Energy Per Pulse
 - 2.5x faster than current 4th generation IntraLase™ FS laser
 - May contribute to less tissue response/inflammation
 - Smoother stromal bed
- Tighter Spot Separation
 - Easier flap lift with new 2.0 to 8.0 μm line/spot separation range



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Video Microscope:

- Digital High Resolution Video Microscope with Touch Screen
- Ergonomically Designed for Maximum Surgeon Comfort
 - Display and controls are in front of the surgeon allowing him/her to perform the task comfortably
 - Easily adjustable to personal working distance
- Dashboard Style
 - Key surgical information (centration rings, procedure time) are conveniently visible in front of the surgeon



First femtosecond laser to feature digital hi-res video microscope



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New GUI features

Light / Dark eye toggle button:

- Gamma correction for better visibility of iris



Docking indicators:

- **Red Light:** End of gantry downward travel
- **Yellow Light:** Stop downward Z travel and adjust meniscus by pinching suction ring
- **Green Light:** Contact of applanation lens and suction ring

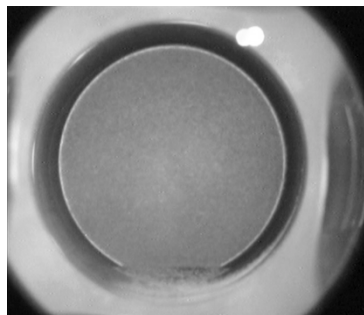


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Standard Laser Settings

Suggested Laser Settings FS

- Flap Thickness 100-120 microns
- Flap Diameter 8.5 - 9.0 mm
- Side Cut Angle 70 degrees
- Hinge Position Superior, Nasal and Temporal
- Hinge Angle 55 degrees



The small hinge angle of the IntraLase FS flap allows for full reflection and a larger bed area for excimer treatment.



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Personalised Laser Settings



Inserting the Patient Interface

Applanation Cone

The base of the applanation cone slides into the loading deck guides located at the bottom of the lens aperture and is secured into place by the locking arm. Also check to see that the z movement of the cone is sufficient for the height of the bed



Ensure proper positioning of PI



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Positioning of patient's nose

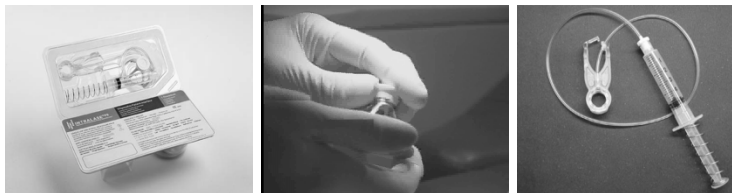


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IntraLase Disposable Patient Interface (PI)

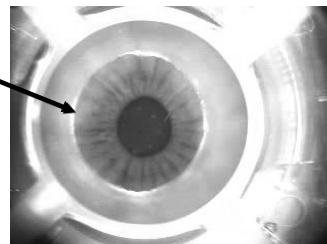
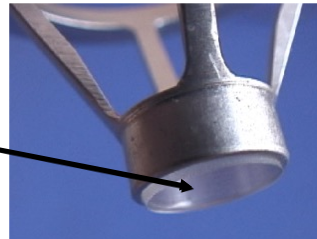
• Suction Ring Assembly

- The Luer-Lock fitting of the syringe connects to the suction ring tubing. The molded clip on the end of the gripper levers is available for different docking techniques.



Docking and Applanation

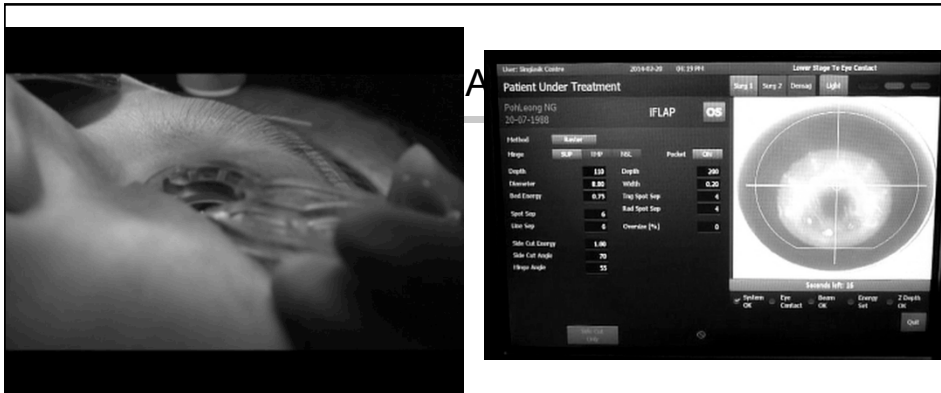
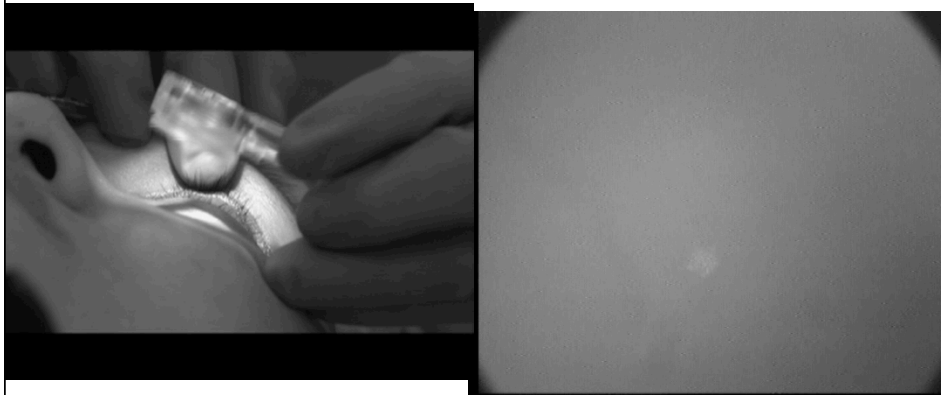
- The laser is set up to start its depth calculation at the bottom of the glass applanation lens.
- Once the cornea is applanated, 120 μm below the glass is 120 μm in the cornea.
- During the docking process, it must be ensured that the applanated area (what is seen as the meniscus) is outside of where the laser will treat. Otherwise the depth of the treatment will not be correct.



Suction Ring Application

Centration to the pupil is crucial in assuring an accurate treatment.

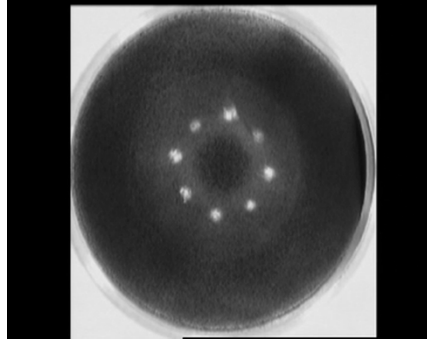
Slowly release the plunger allowing the suction ring to affix to the eye.



- The Suction Ring (SR) is in the un-clipped position.
- Drive the gantry downward (z-direction) with the joy stick until the cone comes in contact with the SR, attaining the green light.
- Align the surgical cone illumination lights centrally over the pupil using the joy stick. Z downward an additional 3-4 seconds.
- Pinch Suction ring (SR) to allow Meniscus to full (avoid X-Y movement with joystick when applanating)
- Slowly release pinch to lock SR

Normal Intralase Pattern (iFS)

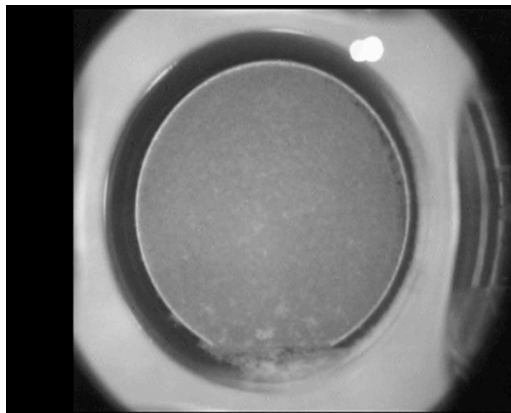
iFS flap creation – 15 seconds



- Gas that is created during photodisruption can travel towards the hinge and into the pocket and then into the surrounding, less compressed tissue.
- If optimal gas flow is changed for any reason, the gas can follow different pathways.

Normal Gas Escape

- It is normal for the built up gas to escape through the side cut in a quick burst before the treatment is complete.

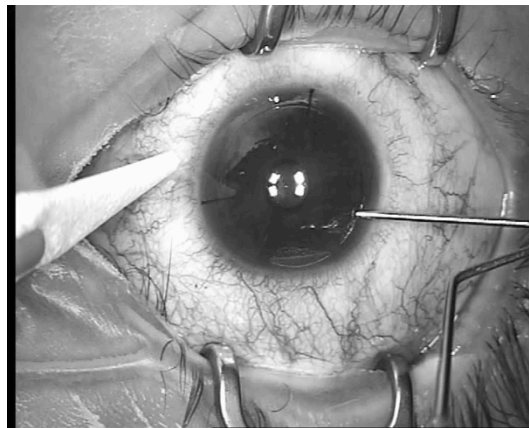


Examples of a gas escape or "burp".

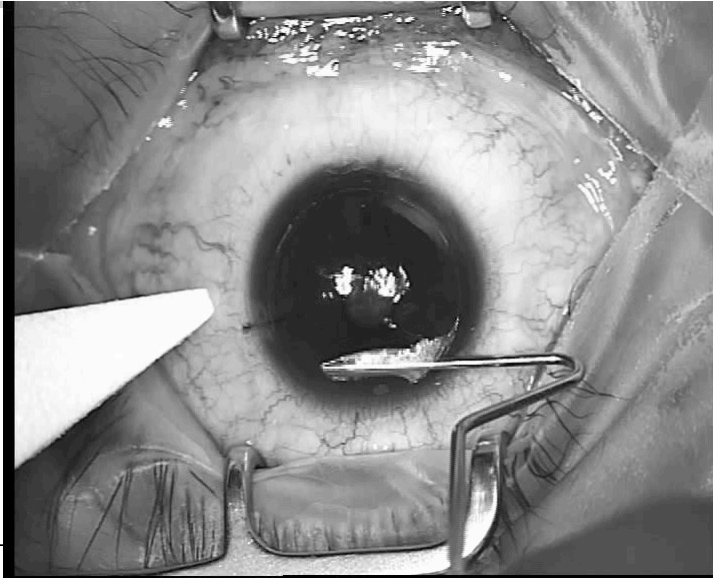
Flap Lift, Excimer Laser Treatment, Flap Placement



Intralase flap lifting techniques Single swipe technique



Modified 3 swipe flap lift technique



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THANK YOU



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