

# Procedures and Technology at CCRS

We are not just limited to LASIK here at CCRS. Please see below for all that we have to offer!

	<u>LASIK</u>	<u>PRK/LASEK/Epi-Lasik</u>	<u>ICL</u>
<u>Type of Surgery</u>	Laser vision correction	Laser vision correction	Implantable Collamer Lens
<u>Method of Correction</u>	* Ablation/Subtraction * Creation of corneal flap then reshaping of cornea through tissue removal	* Ablation/Subtraction * Removal of epithelial cells then reshaping of cornea through tissue removal	* Non-subtraction * Biocompatible lens is placed between the iris and the natural lens.
<u>Correction Range</u>	* Nearsightedness and farsightedness with or without astigmatism  +4.0 to -10.0	* Similar to LASIK but most effective for lower range of correction	* Nearsightedness of -3.0 or higher.  * Recommended for those who are not candidates for LASIK (thin corneas, dryness).
<u>Vision Outcome/Quality</u>	* Excellent for low/ med/ mod high degree of correction. * Good to excellent for high degree of correction.	* Very good for low degree of correction (+2.0 to -3.0)  * Less predictable for higher correction	* Excellent at all ranges  * More surgeon dependent than laser vision correction.
<u>Incision/Cut</u>	* Creates flap with either a femtosecond laser (bladeless) or mechanical microkeratome.	* No flap (cut) is created.  * Remove the surface cells either by hand or with microkeratome.	* 2.5 mm incision for lens insertion
<u>Surgery Time</u>	Approx. 5 min/eye	Approx. 5 min/eye	Approx. 15 min/eye
<u>Recovery Period</u>	1 day	Functional vision in 1 to 2 weeks	1 day
<u>Dryness</u>	* Observed especially in the first 2-4 weeks following surgery, more so for those prone to dry eyes.	Same as LASIK	Not induced
<u>Glare and Halos</u>	* Possible at all ranges but risk increases with higher correction	Same as LASIK	None or mild at all ranges
<u>Regression</u>	* Probability increases with higher correction	Same as LASIK	Not observed

	<u>LASIK</u>	<u>PRK/LASEK/Epi-Lasik</u>	<u>ICL</u>
<u>Rare but Potential Risks</u>	*Very rare but flap related issues (i.e. wrinkles and displacement)	* Intended outcome may not be obtained for several months.	*Extremely rare but catarat and/or glaucoma, ICL can be removed.
<u>Satisfaction Rate</u>	High to very high		Very high
<u>History</u>	First laser vision correction surgery performed in US in 1985.		* US FDA approval in 2005 but much longer follow up internationally.
<u>Other Factors</u>	Greater familiarity with technology and surgery.		*Intraocular procedure * Public is less familiar with the technology but is gaining increasing acceptance and is preformed in the military.
<u>Cost</u>	Depends on Laser system: See below	\$1600 per eye	\$3000 per eye
<u>Follow Up</u>	See below	1 year	3 years

10% off LASIK when surgery is scheduled at the time of consultation

<u>Laser Systems and Costs at CCRS</u>		
	<i>Wavefront LASIK</i>	<i>Bladeless Wavefront LASIK</i>
<u>Laser System</u>	Mel 80/Wavelight Allegretto	VisuMax
	*Highest precision in Wavefront technology *Eye-tracker to compensate for eye movement. *Small-flying spot laser beam	* Gold Standard in bladeless LASIK surgery *Highest precision and safety profile * Curved applanation for minimal pressure during flap creation.
<u>Follow Up</u>	1 year follow up	
<u>Dry Eye Treatment</u>	\$100 for LASIK patients	
<u>Enhancement</u>	\$150 Per Eye, Within the 1 Year follow up	
<u>Costs</u>	Wavefront LASIK with Microkeratome: \$1500 per eye	VisuMax Bladeless Wavefront LASIK: \$2000 per eye

★ No additional costs with any of the procedures.

## Comparison of Corneal Flap Creation in LASIK

	<b>Microkeratome (Blade)</b>	<b>Femtosecond Laser (Visumax)</b>
<b>Flap Creation Technology</b>	Mechanical blade	All-laser (bladeless)
<b>Corneal Contact</b>	Pressure applied to eye Cornea unnaturally flattened	Unique curved contact interface Cornea minimally flattened
<b>Flap Thickness</b>	Meniscus" flap – thinner center and thicker periphery Standard flap thickness	"Planar" flap – uniform thickness throughout middle and outer edges Customizable flap thickness (previously not good candidates due to thin corneas may benefit)
<b>Flap Edge Contour</b>	Standard edge angle and hinge location	Customizable edge angles for secure flap placement Customizable hinge location
<b>Intraocular Pressure (IOP)</b>	Significant rise in IOP (risk in glaucoma patients)	Curved interface enables flap creation with minimal pressure
<b>Comfort</b>	Pressure sensation on the eye Possible conjunctival hemorrhage (fully resolves on its own)	Maximum comfort without a pressure sensation on the eye Minimum stress and trauma to eye
<b>Sight</b>	Vision "blacks out" for several seconds	Visual sight maintained during entire procedure
<b>Potential Flap Complications</b> <i>(ie. unattached/partial flap, buttonhole)</i>	Greater variability due to corneal flattening and non-uniform flap thickness, especially with steeper corneal curvature	Less variability due to uniform flap thickness regardless of corneal curvature
<b>Potential Higher-Order Aberrations</b> <i>(ie. vision distortion)</i>	Greater variability due to non-uniform flap contour	Less variability due to uniform flap contour