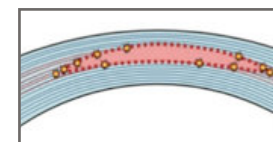
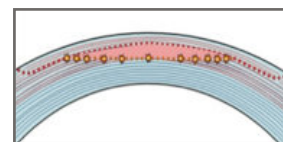
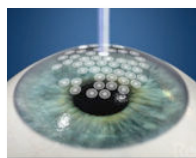


# Comparison Of Three Techniques Of Laser Vision Correction - PRK vs. LASIK vs. SMILE



CRITERIA	PRK	LASIK	SMILE
Year Of Health Canada Approval	1990	1994	2015
Generation Of Equipment	5 <sup>th</sup> Generation	5 <sup>th</sup> Generation	1 <sup>st</sup> Generation
Type Of Treatment	Laser Photoablation	Laser Photoablation	Laser Photodisruption
Precision	0.12 um/pulse	0.12 um/pulse	2-3 um/pulse
Smoothness Of Refractive Correction	Smooth excimer ablation	Smooth excimer ablation	Femtosecond - rougher than excimer
Blade-free Procedure	Yes	Yes	Yes
Type Of Laser	Excimer Laser	Femtosecond & Excimer Lasers	Femtosecond Laser
Myopic Correction: Low < 3 D	Yes	Yes	Difficult if thin lenticule
Myopic Correction: High >3 D	Yes	Yes	Yes
Myopic Astigmatic Correction	Yes	Yes	Difficult if spheroequivalent < 3 D
Hyperopic Correction	Yes	Yes	Future
Hyperopic Astigmatic Correction	Yes	Yes	Future
Topography-Guided Treatments	Yes	Yes	Future
Wavefront-Guided Treatments	Yes	Yes	Future
Optical Centration Adjustment	Yes	Yes	Future
Return of Best Uncorrected Acuity <sup>1-4</sup>	Slowest	Fastest	Slower than LASIK
Best Uncorrected Acuity <sup>1-4</sup>	Superior (Custom Ablation)	Superior (Custom Ablation)	Good (Non-Customized)
Higher-Order Aberrations <sup>1-4</sup>	Less (Custom Ablation)	Less (Custom Ablation)	Highest (Non-Customized)
Enhancements	Yes	Yes	More Difficult
Dry Eyes < 6 month <sup>5</sup>	Increase (typically mild)	Increase (typically mild)	Increase (less than PRK or LASIK)
Dry Eyes > 6 months <sup>5</sup>	Same	Same	Same
Risk of Ectasia - Low myopia <sup>6</sup>	Low (Less Tissue Removed)	Low (Less Tissue Removed)	Greater (More Tissue Removed)
Risk of Ectasia - High myopia <sup>6</sup>	Same	Same	Same

<sup>1</sup>Yildirim Y, Olucucu O, Alagöz C, Başcı A, Ağca A, Yasa D, Özgürhan EB, Demirok A. Visual and refractive outcomes of photorefractive keratectomy and small incision lenticule extraction (SMILE) for myopia. Journal of Refractive Surgery. 2016 Sep 8;32(9):604-10.

<sup>2</sup>Kanellopoulos AJ. Topography-Guided LASIK versus Small Incision Lenticule Extraction: Long-term Refractive and Quality of Vision Outcomes. Ophthalmology. 2018 May 10.

<sup>3</sup>Moshirfar M, Murri MS, Shah TJ, Linn SH, Ronquillo Y, Birdsong OC, Hoopes PC. Initial Single-Site Surgical Experience with SMILE: A Comparison of Results to FDA SMILE, and the Earliest and Latest Generation of LASIK. Ophthalmology and therapy. 2018 Jun 1:1-4.

<sup>4</sup>Shetty R, Matalia H, Nandini C, Shetty A, Khamar P, Grover T, Roy AS. Wavefront-Guided LASIK Has Comparable Ocular and Corneal Aberrometric Outcomes but Better Visual Acuity Outcomes Than SMILE in Myopic Eyes. Journal of Refractive Surgery. 2018 Aug 9;34(8):527-32.

<sup>5</sup>Shen Z, Zhu Y, Song X, Yan J, Yao K. Dry Eye after Small Incision Lenticule Extraction (SMILE) versus Femtosecond Laser-Assisted in Situ Keratomileusis (FS-LASIK) for Myopia: A Meta-Analysis. PLoS One. 2016;11(12):e0168081. Published 2016 Dec 16.

<sup>6</sup>Kanellopoulos AJ. Comparison of corneal biomechanics after myopic small-incision lenticule extraction compared to LASIK: an ex vivo study. Clinical ophthalmology (Auckland, NZ). 2018;12:237.