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LASIK / PRK Technology Update 2013

With the most advanced technologies available today we can deliver outstanding vision results with superb safety to all our patients, regardless of their prescription, age, and vision goals. In this issue of eFocus, we review the latest generation of devices used in refractive surgery and discuss what these advances mean for the patients. Our patients should expect the very best for their vision.

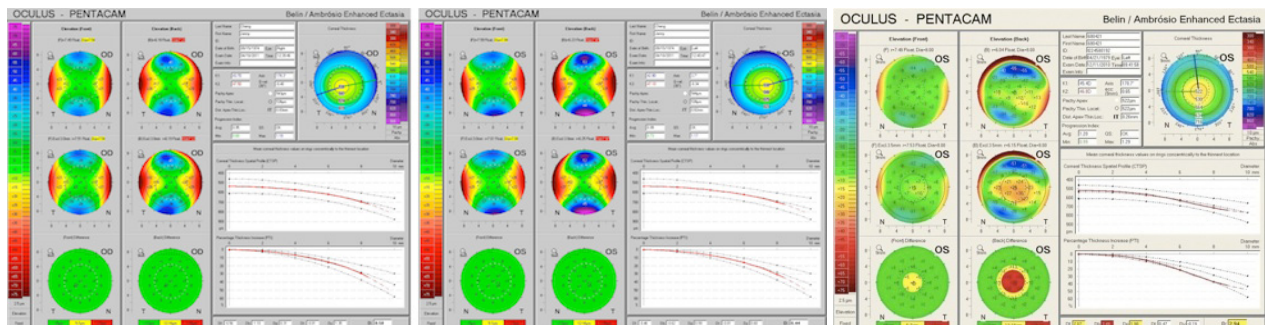
Diagnostics

Accurate screening and preoperative assessment insures the highest level of safety in vision correction surgery. In addition to 3-D corneal topography maps, comprehensive eye exam, and corneal pachymetry (thickness) measurement, the most accurate screening process should include the following advanced technologies:

Technology	Test	Benefit to patient
Belin/Ambrosio Enhanced Ectasia Detection software (Version II) for OCULUS Pentacam HR	Multiple indices of corneal symmetry are calculated and compared to thousands of normal and abnormal eyes tested in the general population	Corneal shape is accurately measured to determine suitability for LASIK or PRK
Anterior Segment OCT	CT scan of the cornea and other structures inside the eye to determine the clarity and health of the cornea	Corneal health is accurately evaluated to ensure excellent corneal clarity after surgery
Ocular Response Analyzer	The only eye test that measures corneal strength to determine if cornea is strong enough to undergo LASIK/PRK	Corneal strength is accurately tested to achieve the highest level of safety
Posterior Segment OCT	CT scan of the retina	Retinal health is accurately evaluated to ensure excellent vision result

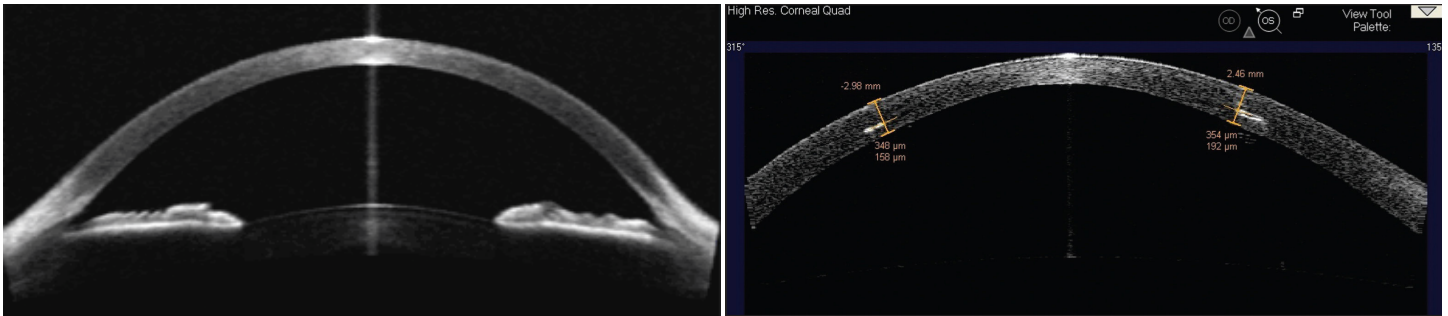
Belin/Ambrosio Enhanced Ectasia Detection software

OCULUS Pentacam HR (Version II). All the corneal shape indices are normal in a patient with symmetric and smooth cornea (left & center). In a patient with abnormally shaped cornea (right), the indices are highlighted either in yellow (somewhat abnormal) or red (significantly abnormal)



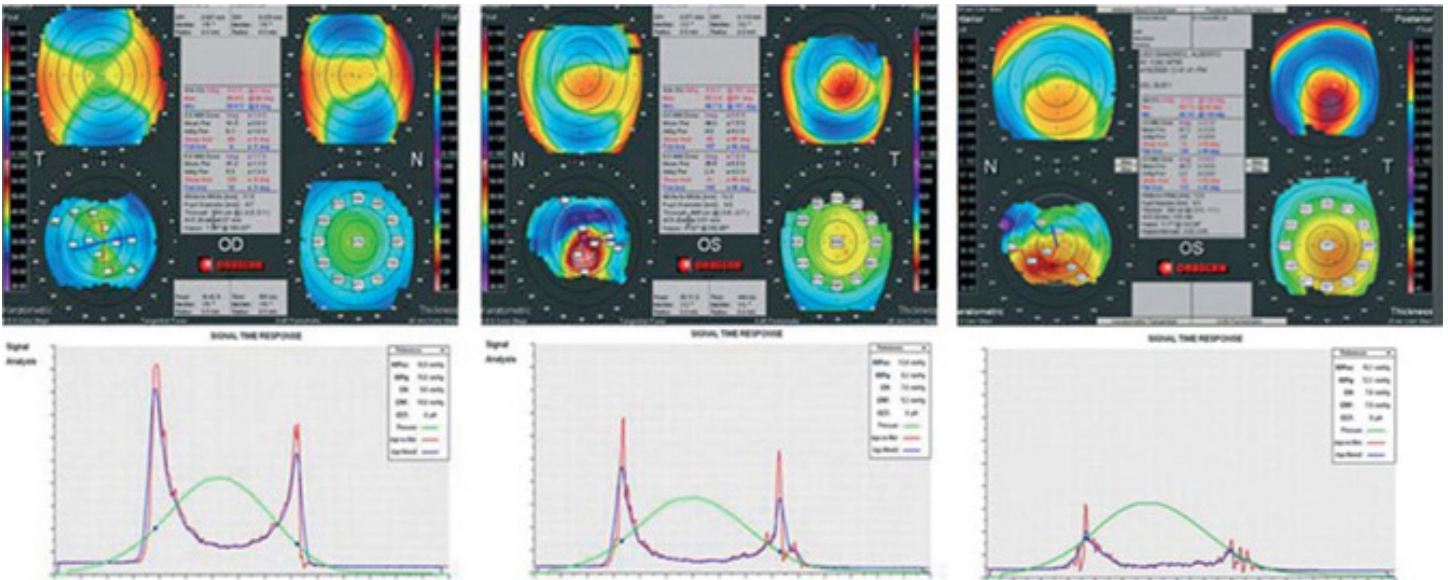
Anterior Segment OCT

Clear cornea (left) and cornea with scars (right). The location and thickness of the scars can be calculated with micron precision accuracy (*Kent C. Making the most of Anterior Segment OCT: the detailed images produced by this technology are proving to be of value in many clinical situations. Review of Ophthalmology 2011*)



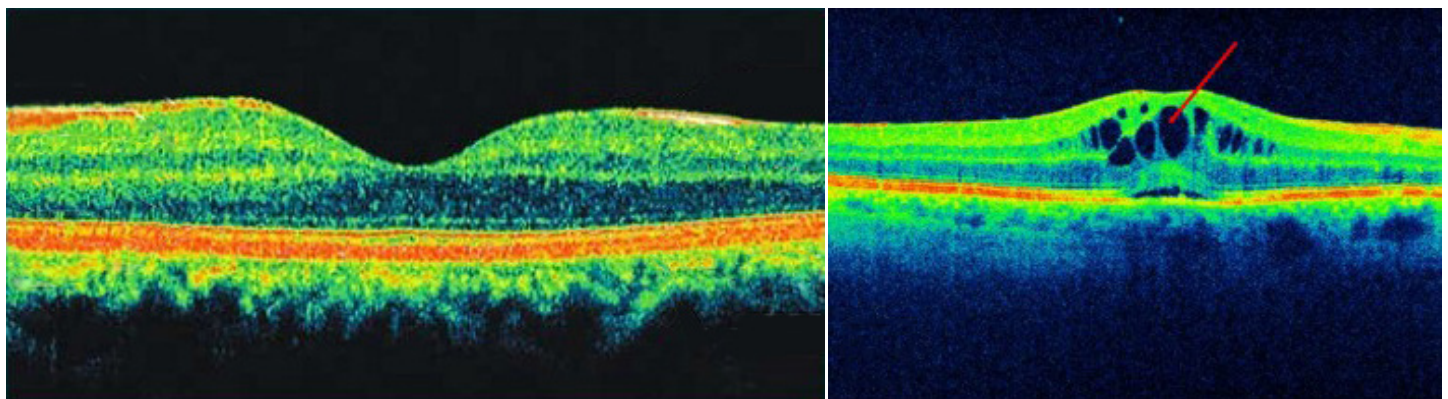
Ocular Response Analyzer

Tracing in an eye with a normal strong cornea (left), an eye with a moderately weak cornea (middle), and an eye with a very weak cornea (right). (*María A. del Buey, MD, et al. Corneal biomechanical properties in normal, regular astigmatic, and keratoconic eyes. J Emmetropia 2011; 2: 3-8 ©2011*)



Posterior Segment OCT

A patient with a normal retina (left) and a patient with an abnormal retina (right)



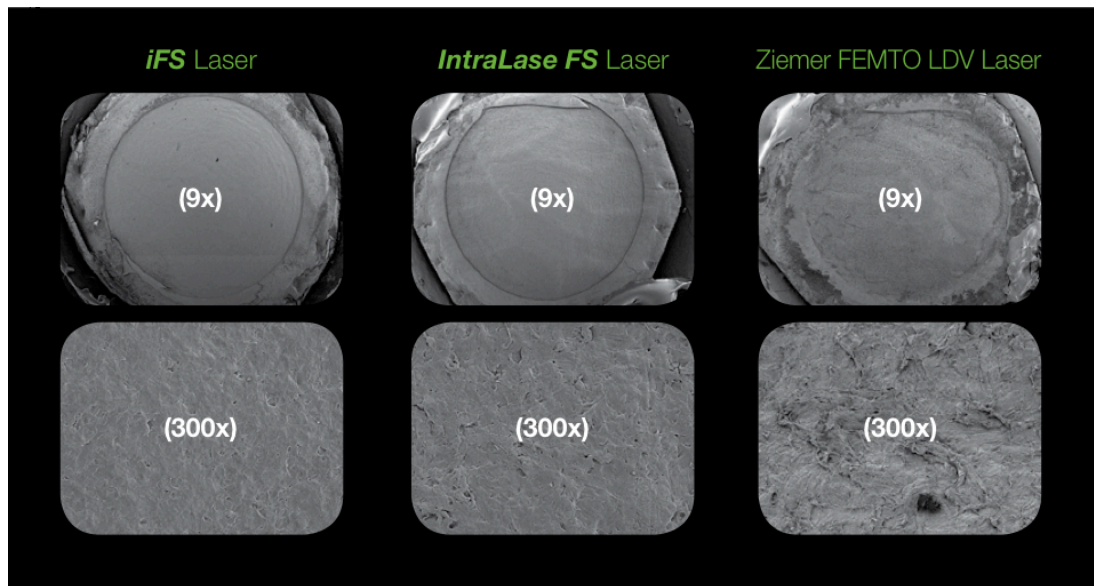
Lasers

Since its inception decades ago, laser technology has evolved tremendously and the most advanced lasers are now in their 5th generation. EX500, in particular, marks a major milestone in the evolution of vision correction technology because, unlike other lasers, it has a uniquely shaped beam that allows preservation of natural corneal shape. As a result, patients can see clearly both day and night with minimal exposure to glare and haloes.

Technology	Unique Features	Benefit to patient
iFS™ Advanced Femtosecond Laser for LASIK flap	Creates the smoothest LASIK corneal bed (where vision correction treatment is applied) compared to other lasers	Extremely precise vision results
	Has the most safety features compared to other lasers	Highest level of safety
EX500 Excimer Laser for LASIK and PRK	Cylindrical laser beam shape	Glare and haloes are virtually eliminated
	Fastest procedure time compared to other lasers	Extremely precise vision results
	Fastest eye tracker compared to other lasers	Highest level of safety

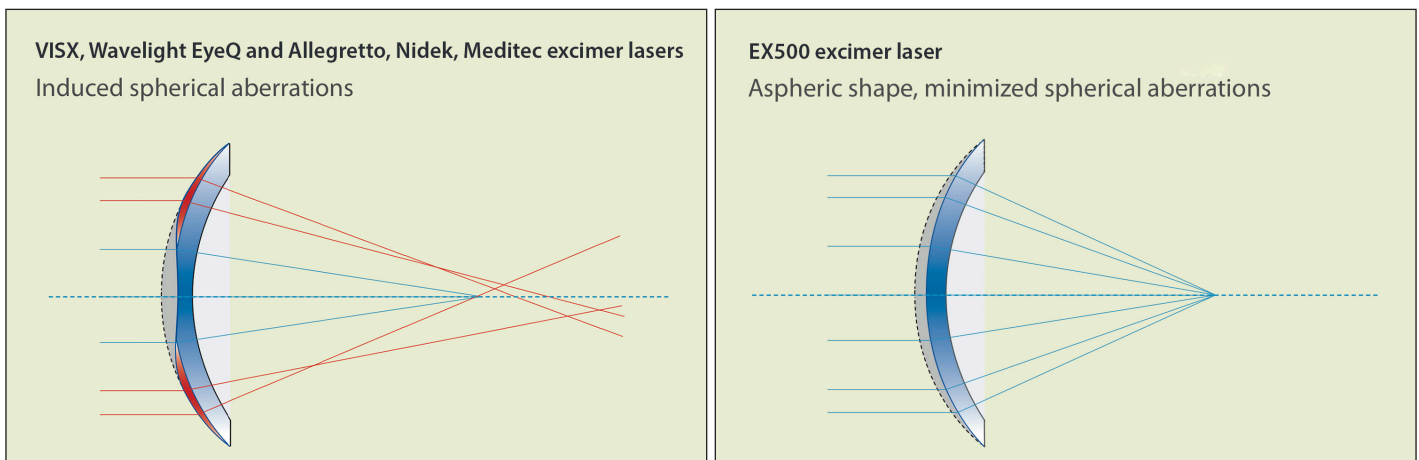
iFS™ Advanced Femtosecond Laser

The smoothest LASIK corneal bed is created with iFS™ Advanced Femtosecond Laser compared to previous generation technology (IntraLase FS) and Ziemer FEMTO LDV



EX500 Advanced Excimer Laser

With EX500, unlike with all other lasers, natural corneal shape is maintained after surgery. This results in fewer aberrations and better vision results.





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LASIK / PRK Technology Update Guide

	Technology	Features	Benefit to patient
Diagnostics	Belin/Ambrosio Enhanced Ectasia Detection software (Version II) for OCULUS Pentacam HR	Multiple indices of corneal symmetry are calculated and compared to thousands of normal and abnormal eyes tested in the general population	Corneal shape is accurately measured to determine suitability for LASIK or PRK
	Anterior Segment OCT	CT scan of the cornea and other structures inside the eye to determine the clarity and health of the cornea	Corneal health is accurately evaluated to ensure excellent corneal clarity after surgery
	Ocular Response Analyzer	The only eye test that measures corneal strength to determine if cornea is strong enough to undergo LASIK/PRK	Corneal strength is accurately tested to achieve the highest level of safety
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Treatment	iFS(tm) Advanced Femtosecond Laser for LASIK flap	Creates the smoothest LASIK corneal bed (where vision correction treatment is applied) compared to other lasers	Extremely precise vision results
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