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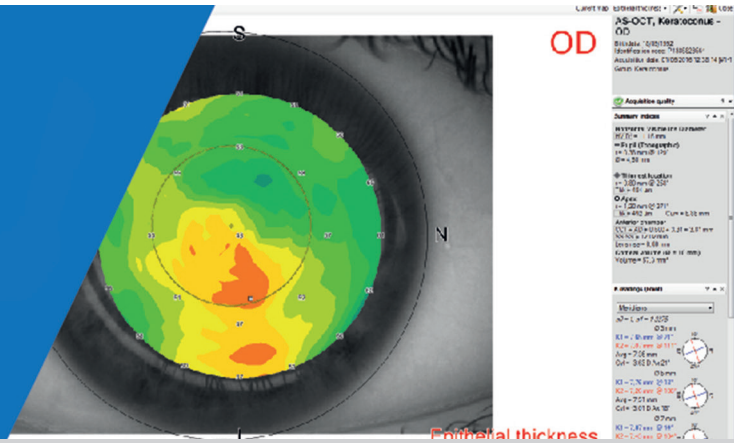
MS-39 AS-OCT

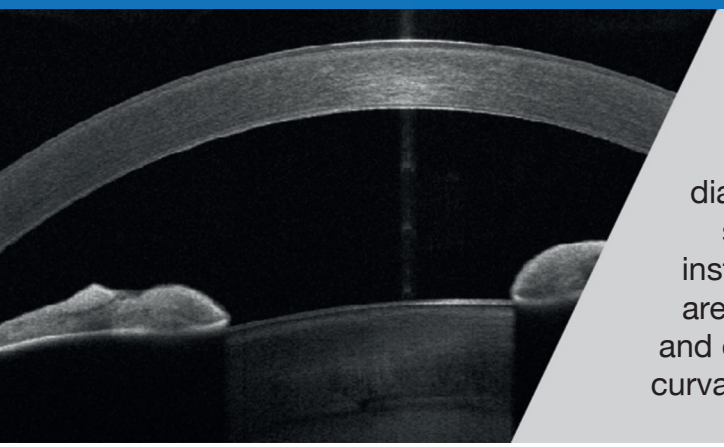
The MS-39 is the most advanced device for analysing the anterior segment of the eye. The MS-39 combines Placido disk corneal topography, with high resolution OCT based anterior segment tomography. Clear cross-sectional images, with a 16 mm diameter, as well as many corneal structure and layer analysis information, make the MS-39, an effective tool for anterior segment specialists.

The MS-39 provides information on pachymetry, elevation, curvature and refractive power of both corneal surfaces. In addition to clinical anterior segment diagnostics, the MS-39 can be used in corneal surgery for refractive surgery planning. An IOL calculation module is also available, based on Ray Tracing techniques. Additional tools allow the MS-39 to perform accurate pupil diameter measurements and advanced analysis of tear film.

EPITHELIAL AND STROMAL MAP

In addition to measuring curvature, elevation and the refractive power of the cornea, the MS-39 offers advanced measurement of the epithelial and stromal layer. With the epithelial masking effect known, knowledge of its morphology is also very useful to assess abnormalities of the corneal surface.





TOMOGRAPHIC SECTION OF THE ANTERIOR SEGMENT OCT BASED

The clarity of the high resolution section images, on a diameter of 16mm, together with the many details of the structure and the cornea layers brought to light by the instrument, are the MS-39's most important features and are useful for specialists of the anterior segment (corneal and epithelial). The device provides pachymetry, elevation, curvature and power information for both corneal surfaces.

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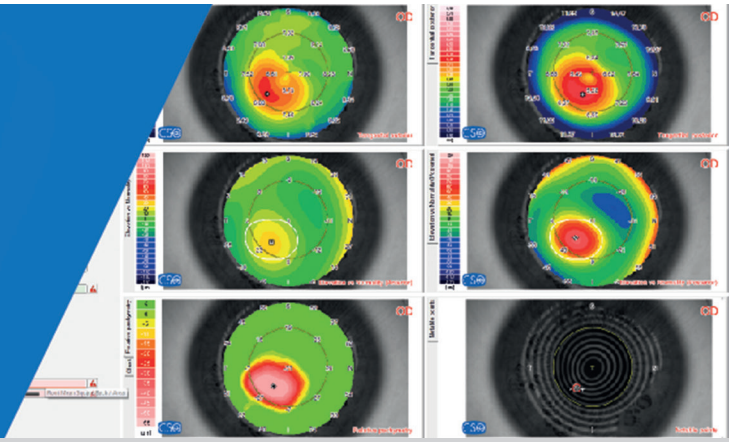
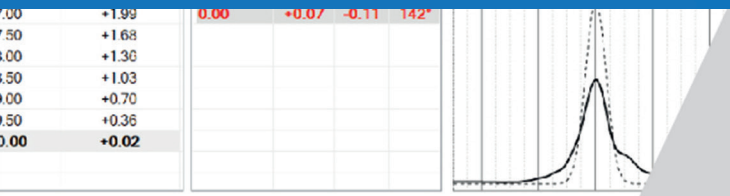
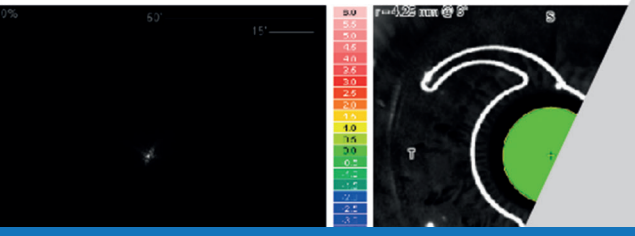
KERATOCONUS SCREENING

Keratoconus screening provides the clinician with important information about the patients cornea. Understanding this can help prevent complications associated with ectasia, before corneal surgery is undertaken.





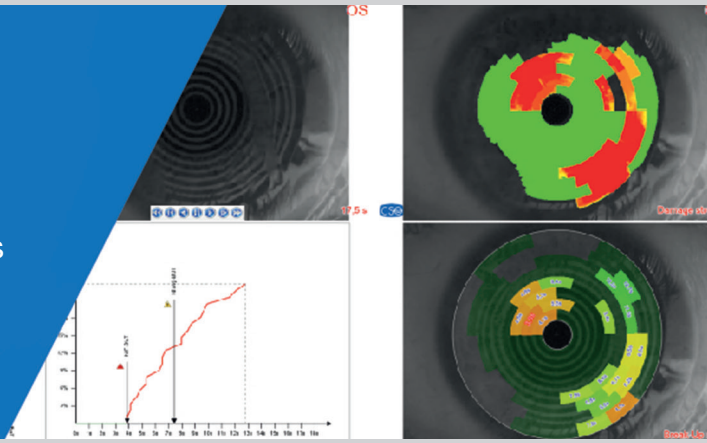


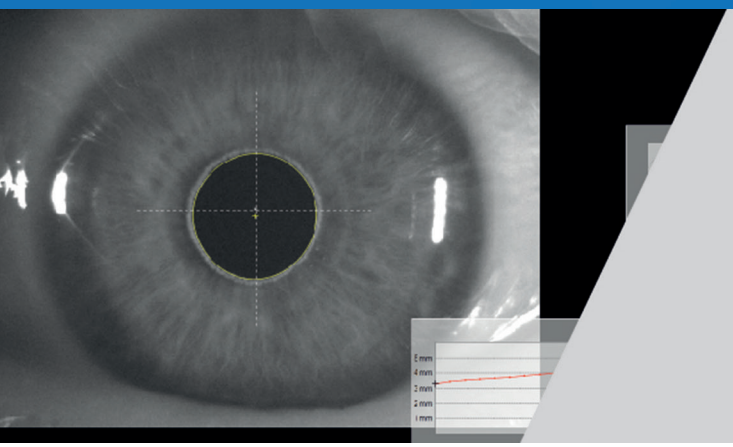
IOL CALCULATION MODULE

This module is based on Ray Tracing techniques, regardless of the state of the cornea (untreated or previously treated for refractive purposes), and provides the calculation of the spherical and toric power of the intra-ocular lens.

ADVANCED ANALYSIS OF THE TEAR FILM

Placido disk technology allows for advanced analysis of the tear film, such as NI-BUT (Non Invasive Break-up Time). Based on the Ocular Surface Disease Index questionnaire (OSDI), limbal and conjunctival hyperaemia, Meibomian glands analysis, tear meniscus analysis and tear osmolarity are calculated, merging together all partial scores, and providing an overall evaluation of the clinical condition of the patient for a comprehensive diagnosis of their dry eye condition.





PUPILLOGRAPHY

The MS-39 has built in pupillography measurement software. The measurement of the pupil is available in scotopic (0.04 lux), mesopic (4 lux) and photopic (50 lux) conditions as well as dynamic mode. Knowing the centre and the diameter of the pupil is essential for many clinical procedures which seek to optimise vision quality.

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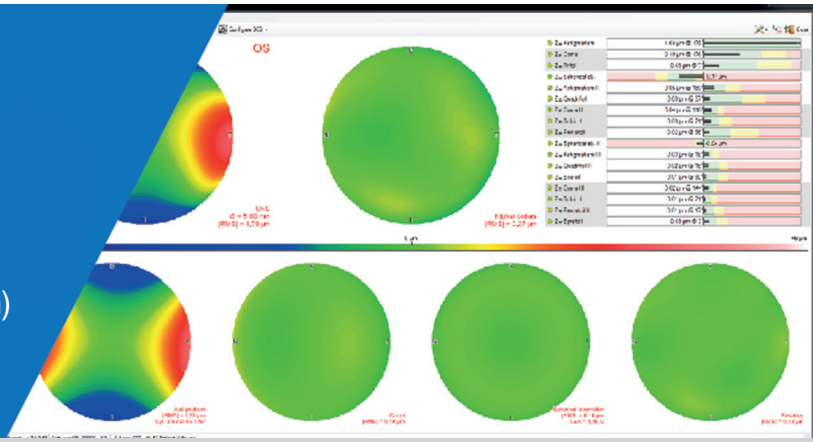
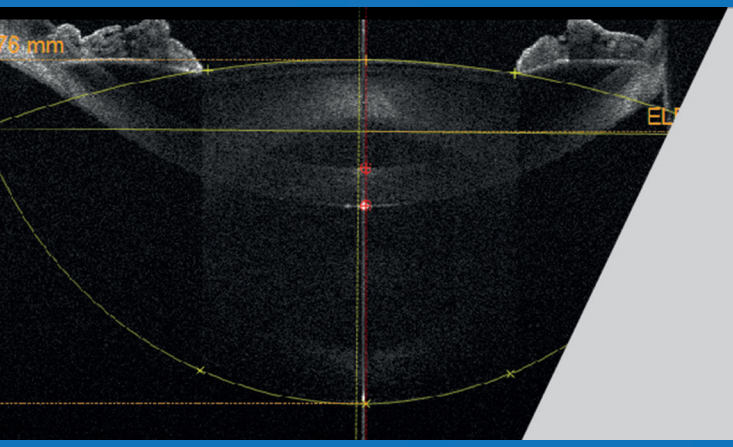
CORNEAL ABERROMETRY

Aberrometric analysis offers a complete overview of the patients corneal aberrations. It is possible to select the contribution of the anterior, posterior or total cornea for different pupil diameters. The OPD/WFE maps and the visual simulations (PSF, MTF, image convolution) can help clinicians in understanding or explaining the patient's visual problems.



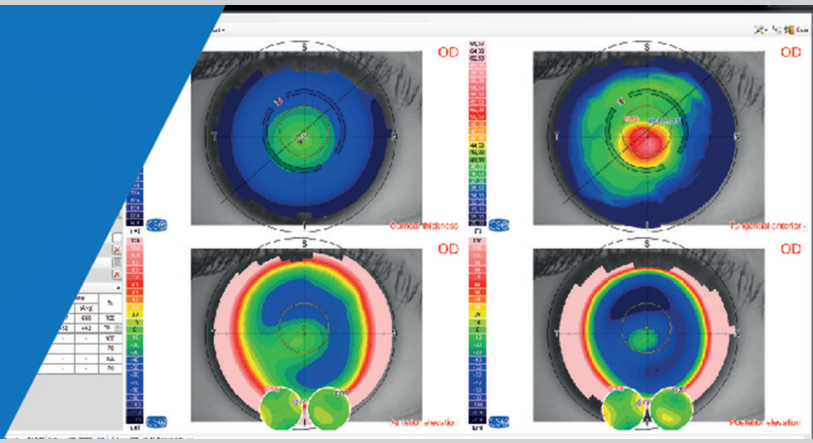


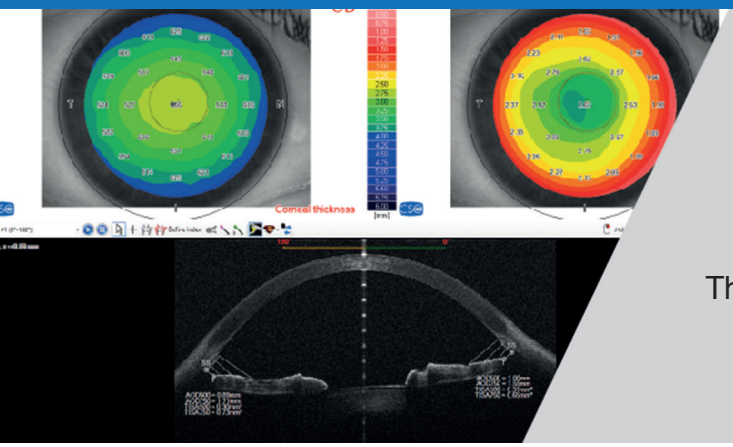
CRYSTALLINE BIOMETRY

In order to more accurately determine the ELED, and consequently to refine the intra ocular lens calculation, the MS-39 provides an acquisition mode to measure the crystalline lens thickness, its distance from the cornea and its equator.

INTRASTROMAL RINGS

In regards to the pachymetry map and corneal altimetric data, the MS-39 allows for intrastromal rings system planning, which may be an option for the correction of refractive defects and some forms of keratoconus.





GLAUCOMA SCREENING

For glaucoma specialists, the MS-39 enables the measurement of AOD, TISA and corneal pachymetry. These values are useful in the diagnosis of the disease.