o.s.a. idra

DEDICATED DRY EYE PLATFORM

Integrated system for the analysis of the ocular surface

SBM Sistemi

TECHNICAL DATA

	o.s.a.	idra
IMAGE RESOLUTION	5 MP	5 MP
ACQUISITION MODE	Multi shot, video	Multi shot, video
FOCUS	Autofocus, manual focus	Autofocus, manual focus
ISO MANAGEMENT	Variable	Variable
CONES	Main cone and Placido cone	Main cone and Placido cone
GRIDS	Placid disc, NIBUT grid	N/A
CAMERA	Colored, sensitive to infrared (NIR)	Colored, sensitive to infrared NIR) yellow-filtered
LIGHT SOURCE	Infrared LED – Blue and white LED	Infrared LED – Blue, red and white LED

MINIMUM HARDWARE REQUIREMENTS

o.s.a.	idra
Intel® Pentium® Dual Core 2.00 GHz	Intel® Core™ i7
SSD Drive	**SSD Drive**
4 GB RAM	8 GB RAM
Screen resolution: 1600 x 900	Screen resolution: 1600 x 900
1 available USB 3.0 port	1 available USB 3.0 port
1 other available USB port	1 other available USB port
Microsoft® Windows® 8, 10 Professional (Pro) x64 (64 bit) (Considering the high quality of the videos, for optimal video recording and playback we suggest: Intel® Core™ i7)	Microsoft® Windows® 8, 10 Professional (Pro) x64 (64 bit)

DIAGNOSTIC TIME

Invented and developed 100% in Italy

Medical instrument in CLASS I registered to the Ministry of Health

Medical electrical equipment CLASS I complies with the norm En. 60601-1.

The technical features of the instrument and its accessories can be improved at any time and without notice.

To obtain an updated description, we suggest visiting the website www.sbmsistemi.com

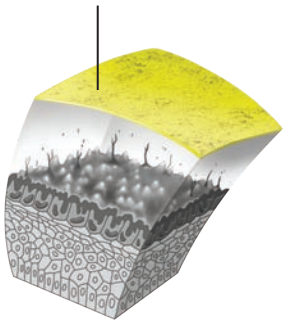
DIAGNOSTIC

FUNCTIONS

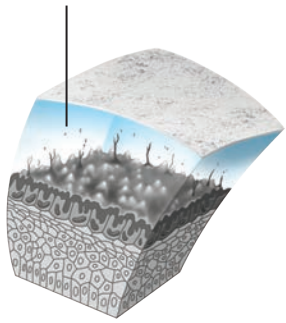
The OSA and IDRA are new instruments for the individual analysis of tear film that allow eye doctors to carry out a quick detailed structural analysis of the tear composition.

The systems allow analysis of all the layers (Lipid, Aqueous, Mucin) and Meibomian Glands, allowing for identification of the type of Dry Eye Disease (DED) which helps to identify which treatment is best suited for your patients.

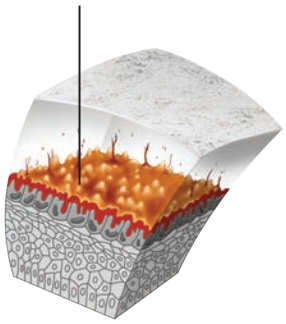
LIPID LAYER

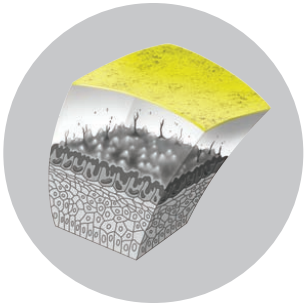


AQUEOUS LAYER



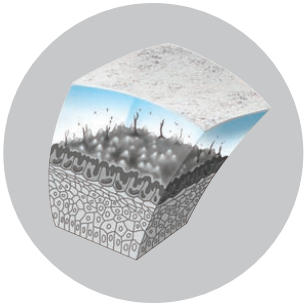
MUCOUS LAYER





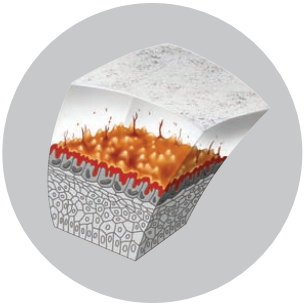
INTERFEROMETRY

Evaluation of the quantity and quality of the lipid component of the tear film. The device highlights the lipid layer and the software automatically analyses the Lipid Layer Thickness (LLT).



TEAR MENISCUS

The thickness of the tear meniscus that is observed on the eyelid margins provides useful information on the tear volume. The tear meniscus can be examined considering its height, regularity and shape.



NIBUT

The stability of the mucin layer and the whole tear film is assessed through the study of the break up time (BUT) or non-invasive break up time (NIBUT) by using the Placido cone projected on the cornea.

MEIBOGRAPHY

Meibography is the visualization of the glands through trans-illumination of the eyelid with infrared light. It images the morphology of the glands in order to diagnose any meibomian gland drop out.

BLEPHARITIS

This test helps to detect blepharitis and the presence of Demodex. It can be performed on the outer surface of the eye and eyelids.

OCULAR REDNESS CLASSIFICATION

Once the image of the conjunctiva with its blood vessels is captured, it is possible to compare it with the classification sheets of bulbar and limbal redness degrees.

PUPILLOMETRY

Measurement of the pupil reaction to light with and without glare. Measurement mode: SCOTOPIC, MESOPIC, PHOTOPIC.

WHITE TO WHITE MEASUREMENT

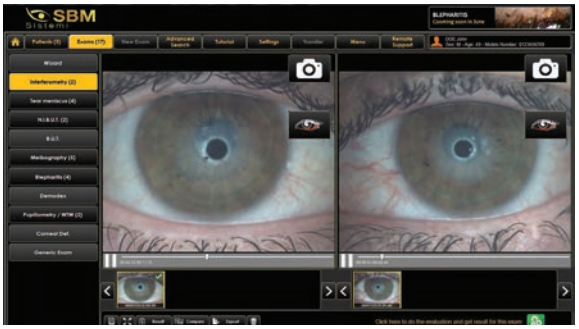
Evaluation of corneal diameter from limbus to limbus (white-to-white distance, WTW).

ANTERIOR SEGMENT IMAGING

INTERFEROMETRY

The evaluation of the lipid layer should be part of your overall Dry Eye Assessment. Knowing what is causing dry eye will help determine the best treatment option.

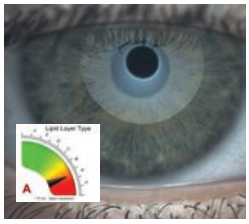
The OSA and IDRA make it possible to do an interferometric analysis of the lipid layer in the tear film.



VALUES ARE DISPLAYED ON A USER-FRIENDLY GRADING SCALE THAT CAN BE USED TO EXPLAIN THE PATHOLOGY TO PATIENTS

LIPID LAYER THICKNESS

The OSA and IDRA present lipid layer thickness measurements in an easy to understand color-coded map. The identification is made through the international grading scale of Dr. Guillon.



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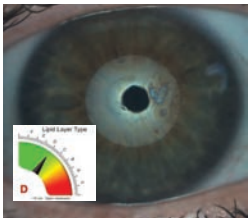
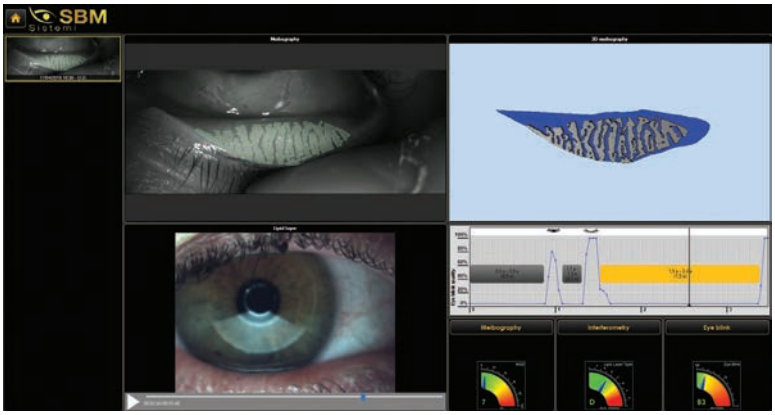


OD

AUTO-INTERFEROMETRY

Exam available only with IDRA

COMPLETE MEIBO ANALYSIS: STRUCTURE AND SECRETION VIEW



AUTO DETECTION OF:

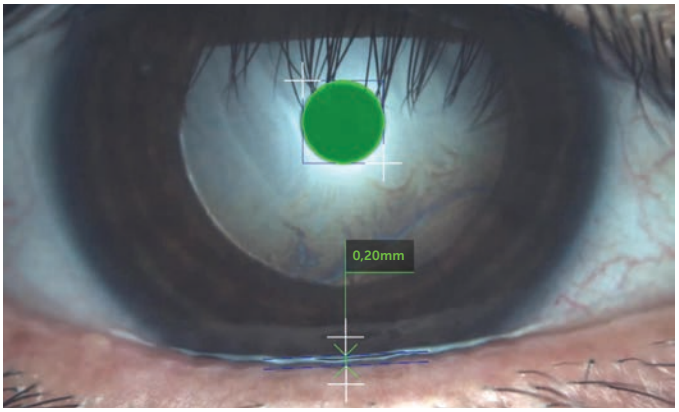
- Maximum thickness of the Lipid layer
- Average Thickness
- Blinking rate
- Max LLT
- Avg LLT
- Min LLT
- Lipid Dynamic graph

TEAR MENISCUS HEIGHT MEASUREMENT

Low tear production may result in aqueous tear deficiency (ATD) and cause dry eye symptoms. However, measuring tear volume is difficult since the methods available are invasive and irritating.

Reflex tear production can be induced, giving an overestimation of basal tear flow and volume.

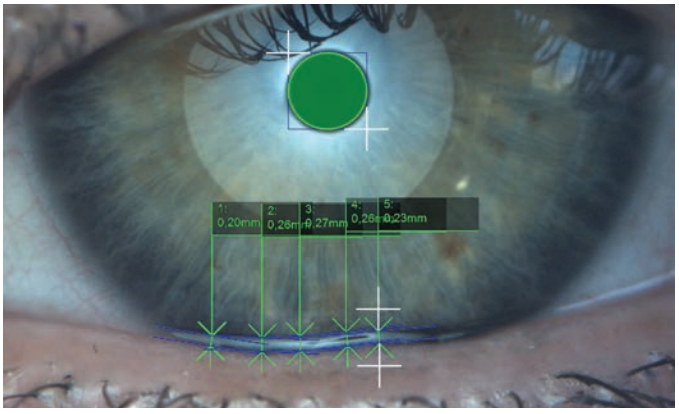
The tear meniscus height is related to the tear secretion rate and tear stability and is a good indicator of the overall tear volume. The aqueous layer is evaluated through the non-invasive "Tear Meniscus" test and is then classified into different categories.



The OSA and IDRA are excellent for measuring upper and lower tear meniscus height in patients with aqueous tear deficiency (ATD) dry eye. The result of this exam is comparable to the Schirmer's Tear Test 1 (STT1), with the difference that it is non-invasive and lasts 3 seconds instead of several minutes.

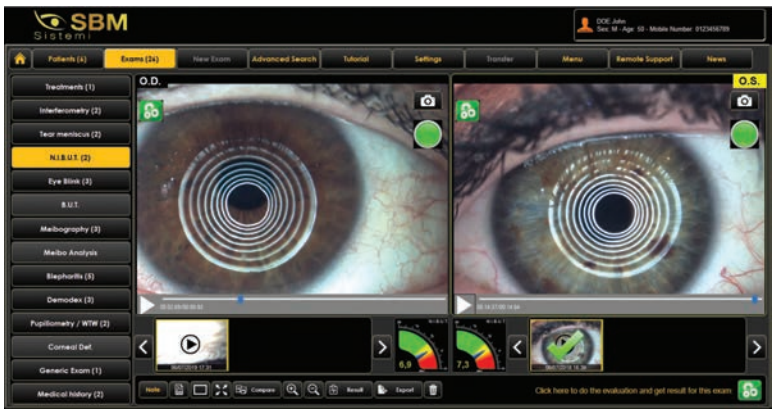
Exam available only with IDRA and OSA PLUS

POSSIBILITY TO ACQUIRE UP TO 5 MEASURING POINTS



NIBUT

TEAR STABILITY EVALUATION



Through Placido disk projection on the cornea, the OSA and IDRA allow for evaluation of the tear film stability and regularity, using non-invasive break-up time measurement (NIBUT). This measures the number of seconds between one complete blink and the appearance of the first discontinuity in the tear film.

The software checks periodically the corneas shape with the Placid rings and detects any deviation, providing break-up time values in an easy and understandable way.

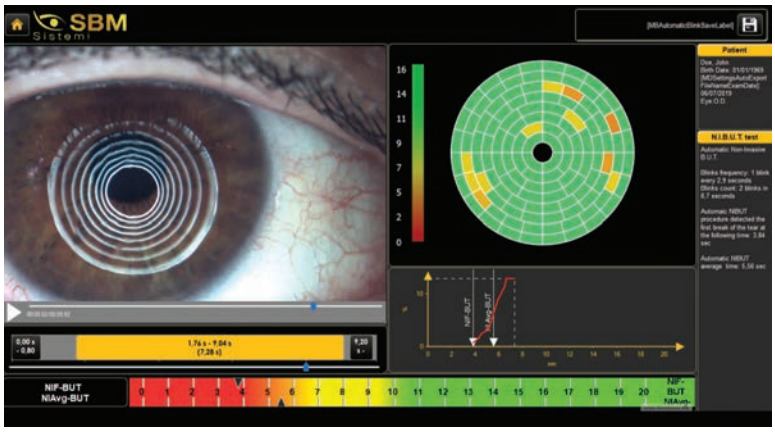
AVG BUT is provided with nomograms and, after different analysis, shows the trend line for a useful follow up after treatment.

Through the Placido rings, OSA and IDRA automatically provides:

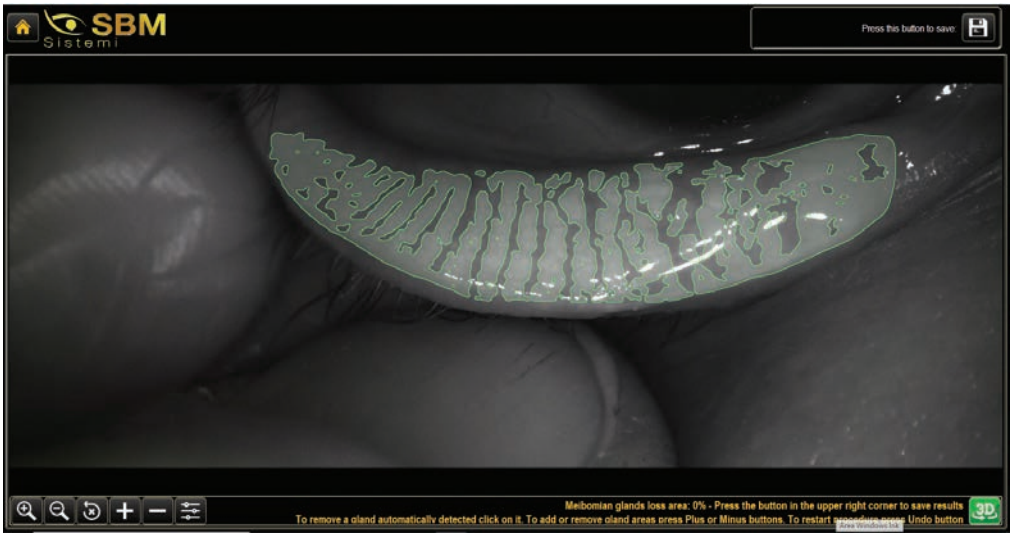
- First BUT
- Avg BUT
- Stability graph
- Tear topography

Exam available only with IDRA and OSA PLUS

AUTO-NIBUT



MEIBOGRAPHY



MEIBOMIAN GLAND AUTO DETECTION ON UPPER AND LOWER EYELIDS

The SBM device can detect the length and width of Meibomian Glands shown through Infrared Meibography without requiring any input from the user. The images are then automatically classified.

AUTOMATIC LID DETECTION

To decrease evaluation time, the software automatically detects the lid margin for MG analysis.

HOW IT WORKS

The Ocular Surface Analysers automatically analyse the images taken through a sensitive infrared camera (NIR) to locate the meibomian glands and automatically calculate

- The percentage of the extension of meibomian glands in the chosen area
- The percentage of the meibomian gland loss area

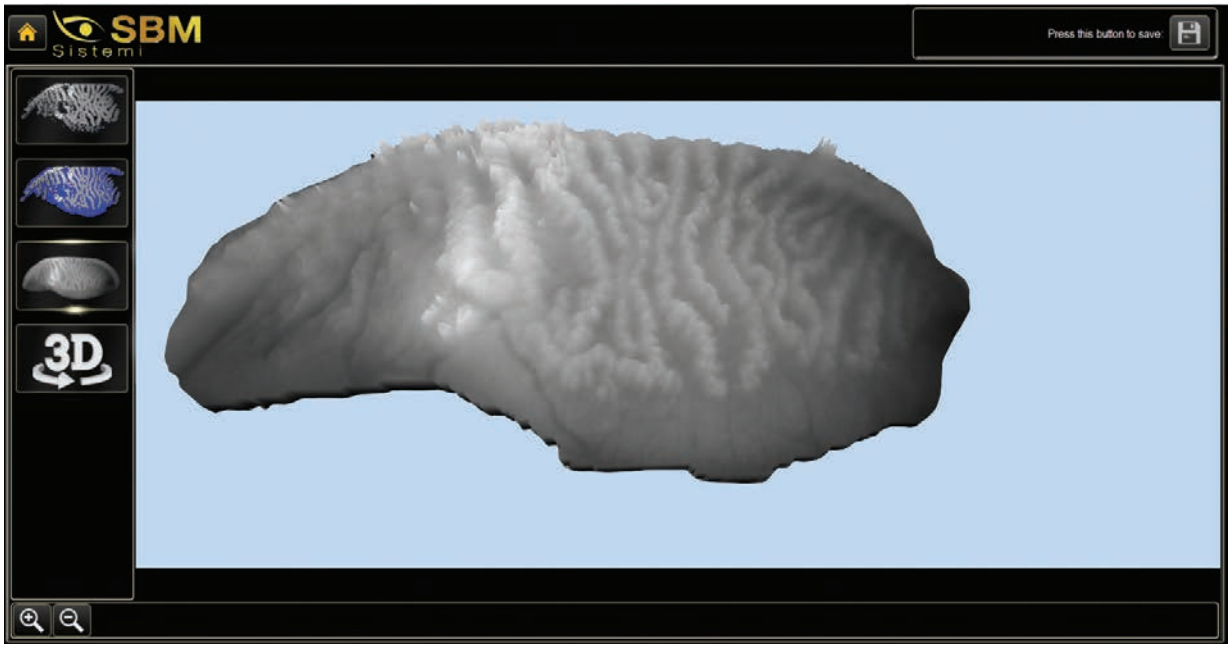
If the operator prefers, it is also possible to manually compare the images taken with three different related grading scales.

Exam available only with OSA PLUS and IDRA

MEIBOGRAPHY 3D

The revolutionary introduction of the 3D meibomian gland imaging gives two significant advantages. Firstly, it enables you to confirm the presence of abnormal glands compared to a healthy subject in a 3D view; secondly, it provides a clear image to share with patients, to help explain the potential reason for their discomfort.

Moreover, this new imaging system provides strong evidence to support the choice of a specific therapy and helps the patient to understand why a particular therapy is being recommended.



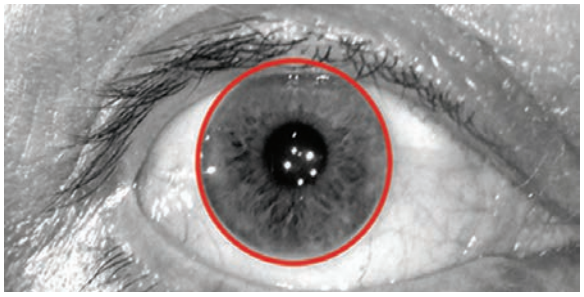
BENEFITS FOR PATIENTS:

- Help patients to understand the structure of the eyelids
- Show diseases of the meibomian glands and compare them with healthy meibomian glands
- Show why a specific treatment is suggested

ADVANTAGES FOR THE PHYSICIAN:

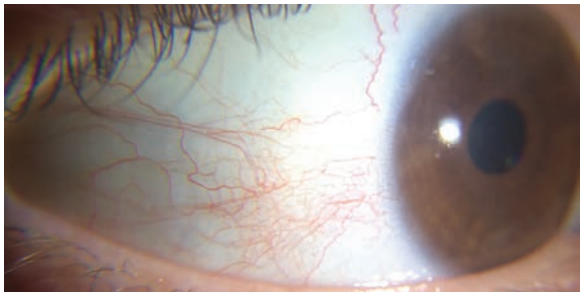
- View the presence of abnormal gland structures in a high-resolution 3D image
- Compare a normal patient gland profile with that of an MGD patient
- Evidence to support their diagnosis and treatment choice
- Compelling evidence to help the patient visualize what is happening to the meibomian glands

OTHER POSSIBLE EXAMINATIONS

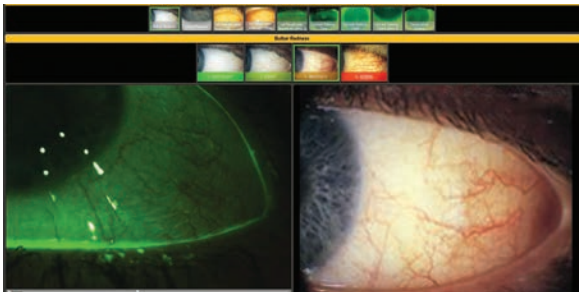


WHITE TO WHITE MEASUREMENT

PUPILLOMETRY

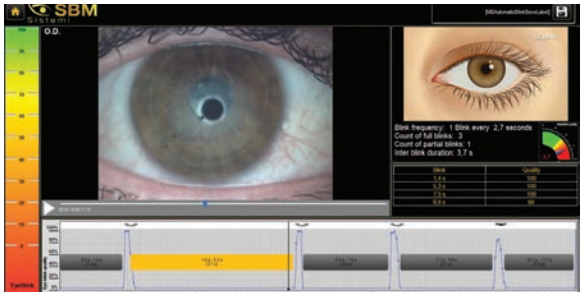


BULBAR REDNESS CLASSIFICATION

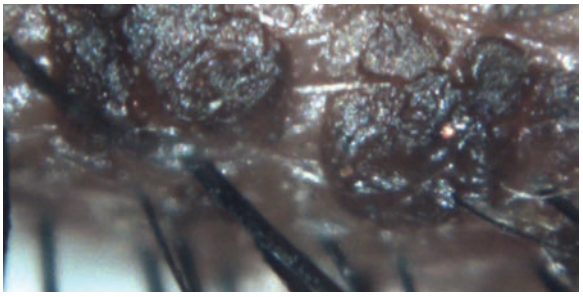


COMPARISON WITH THE MAIN INTERNATIONAL GRADING SCALES

EFRON - CCLRU - JENVIS - GLAUCOMA - FERNING TEST - MEIBOGRAPHY



BLINKING QUALITY



CYLINDRICAL DANDRUFF AND BLEPHARITIS

MD. VIGO TREATMENT SUGGESTION

SUGGESTIONS FOR DIAGNOSIS AND TREATMENT BASED ON CLINICAL PROCEDURE OF DR. LUCA VIGO AND STUDIO CARONES (MILAN, ITALY)

DATA RESULTS VIEW

A complete database allows you to understand and accurately diagnose your dry eye patients. With the useful data result tab, you can check the complete tear film assessment, determine all deficiencies causing the pathology and, in the meantime, understand which treatment is needed to approach each case.

DIAGNOSIS SUGGESTION

Ocular surface data and pathology classification
The OSA and IDRA include a suggestion algorithm for a possible treatment approach for each patient.

TREATMENT MANAGING

The TREATMENT MANAGING tab allows the physician to fill in the database with all drugs, integrators and treatments available in their practice and prescribe them to the patients. A report with the diagnosis and treatment suggested by the physician will be available to print.

It is also possible to review the patient's treatment in order to understand and track the patients progress.

COMPARISON OF THE SBM PRODUCTS FOR THE ASSESSMENT OF DRY EYE

idra

o.s.a.

PLUS VERSION
(software update)

o.s.a.

BASE VERSION

AUTO-INTERFEROMETRY TEST Automatic evaluation of the lipid layer	**INTERFEROMETRY TEST** Manual evaluation of the lipid layer	**INTERFEROMETRY TEST** Manual evaluation of the lipid layer
TEAR MENISCUS-HEIGHT Estimation of the tear lm quantity up to 5 values	**TEAR MENISCUS-HEIGHT** Estimation of the tear lm quantity up to 5 values	**TEAR MENISCUS-HEIGHT** Evaluation of the tear lm quantity
AUTO-NIBUT Evaluation of tear lm break-up time. Non-invasive and fully automatic with tear topography and graphic of tear stability	**AUTO-NIBUT** Evaluation of tear lm break-up time. Non-invasive and fully automatic with tear topography and graphic of tear stability	**AUTO-NIBUT** Evaluation of tear lm non-invasive break-up time: non-invasive and fully automatic
MEIBOGRAPHY Auto-detection of MGs thanks to infrared LEDs and percentage of loss area	**MEIBOGRAPHY** Auto-detection of MGs thanks to infrared LEDs and percentage of loss area	**MEIBOGRAPHY** Auto-detection of MGs thanks to infrared LEDs and percentage of loss area
3D MEIBOGRAPHY The revolutionary introduction of 3D Meibomian Gland imaging. This new imaging system provides strong evidence to support your choice of therapy for your patient.	**3D MEIBOGRAPHY** The revolutionary introduction of 3D Meibomian Gland imaging. This new imaging system provides strong evidence to support your choice of therapy for your patient.	
EYE BLINKING DETECTION	**EYE BLINKING DETECTION**	
BUT TEST - STAINING TEST With the use of a yellow lter and a blue LED		
BLEPHARITIS AND CYLINDRICAL DANDRUFF With automatic magnication	**BLEPHARITIS AND CYLINDRICAL DANDRUFF** With an appropriate additional lens	**BLEPHARITIS AND CYLINDRICAL DANDRUFF** With an appropriate additional lens
PUPILLOMETRY AND WHITE TO WHITE MEASUREMENT In scotopic, mesopic and photopic light	**PUPILLOMETRY AND WHITE TO WHITE MEASUREMENT** In scotopic, mesopic and photopic light	**PUPILLOMETRY AND WHITE TO WHITE MEASUREMENT** In scotopic, mesopic and photopic light
MD. VIGO TREATMENT SUGGESTION Possibility to print a report with suggested diagnosis and treatment	**MD. VIGO TREATMENT SUGGESTION** Possibility to print a report with suggested diagnosis and treatment	**MD. VIGO TREATMENT SUGGESTION** Possibility to print a report with suggested diagnosis and treatment
REPORT Different typologies of reports to be printed	**REPORT** Different typologies of reports to be printed	**REPORT** Different typologies of reports to be printed
TREATMENT MANAGING	**TREATMENT MANAGING**	**TREATMENT MANAGING**
LIFESTYLE QUESTIONNAIRE	**LIFESTYLE QUESTIONNAIRE**	**LIFESTYLE QUESTIONNAIRE**
COMPARISON WITH ALL INTERNATIONAL GRADING SCALES (Efron, CCLRU, Jenvis)	**COMPARISON WITH ALL INTERNATIONAL GRADING SCALES** (Efron, CCLRU, Jenvis)	**COMPARISON WITH ALL INTERNATIONAL GRADING SCALES** (Efron, CCLRU, Jenvis)