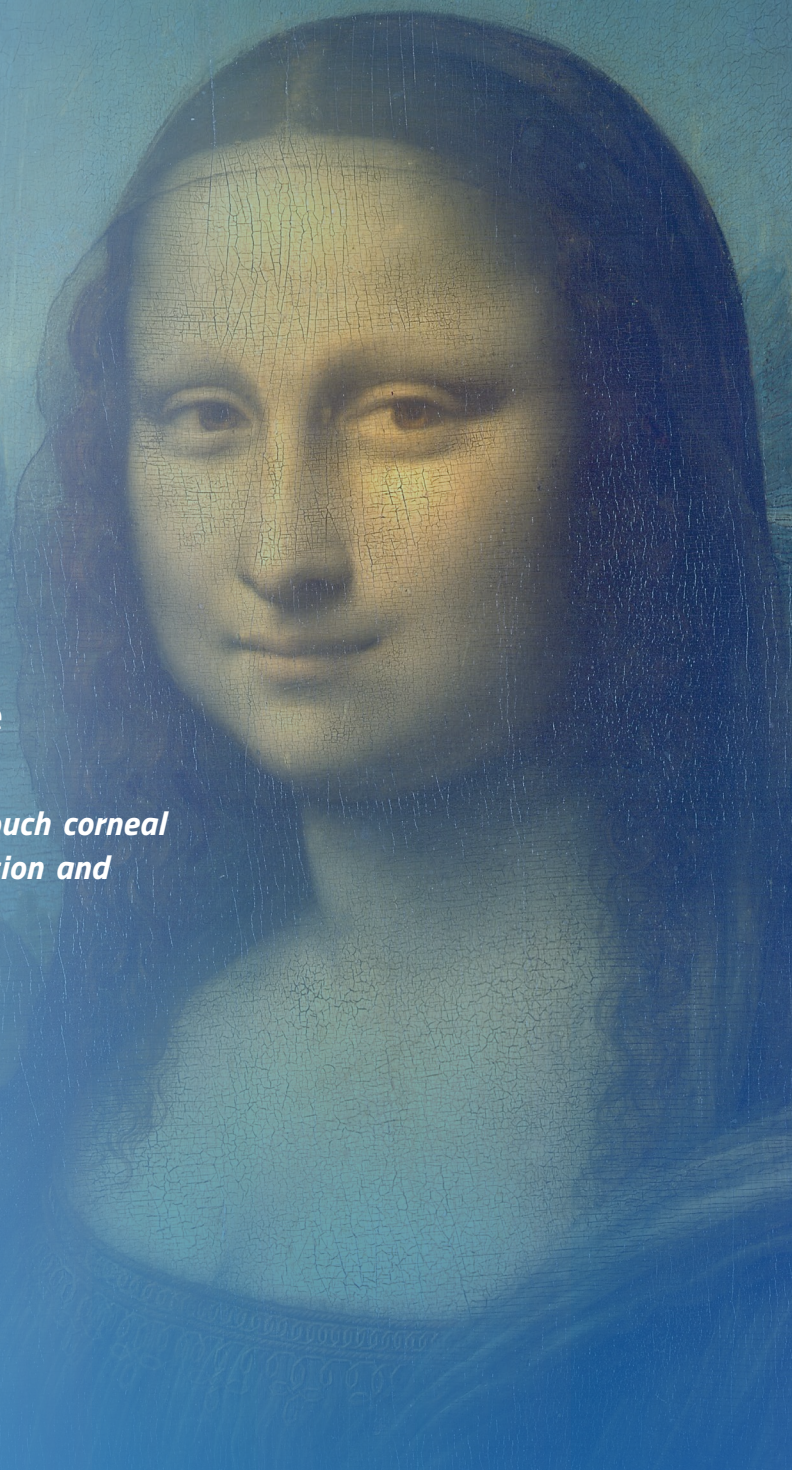
iVis Suite

Refractive Line



Eyes are masterpieces.
Give them the surgery they deserve

iVis has been the leader in customized no-touch corneal surgery since 1993, optimizing quality of vision and minimizing surgical invasiveness.

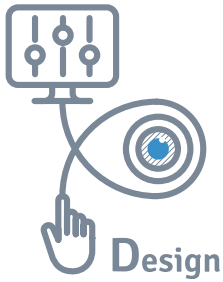
iVIS
LIVE YOUR VISION

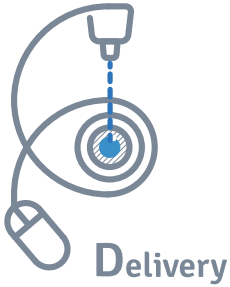
iVis Suite® - Refractive Line

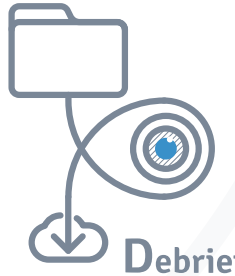
The iVis Suite® is web interconnected platform, designed for the treatment of invalidating corneal pathologies and refractive disorders, delivering ray-tracing customized ablation plans, at the unique speed of 1200Hz and exploiting the CF/A patent, to minimize thermal effects.

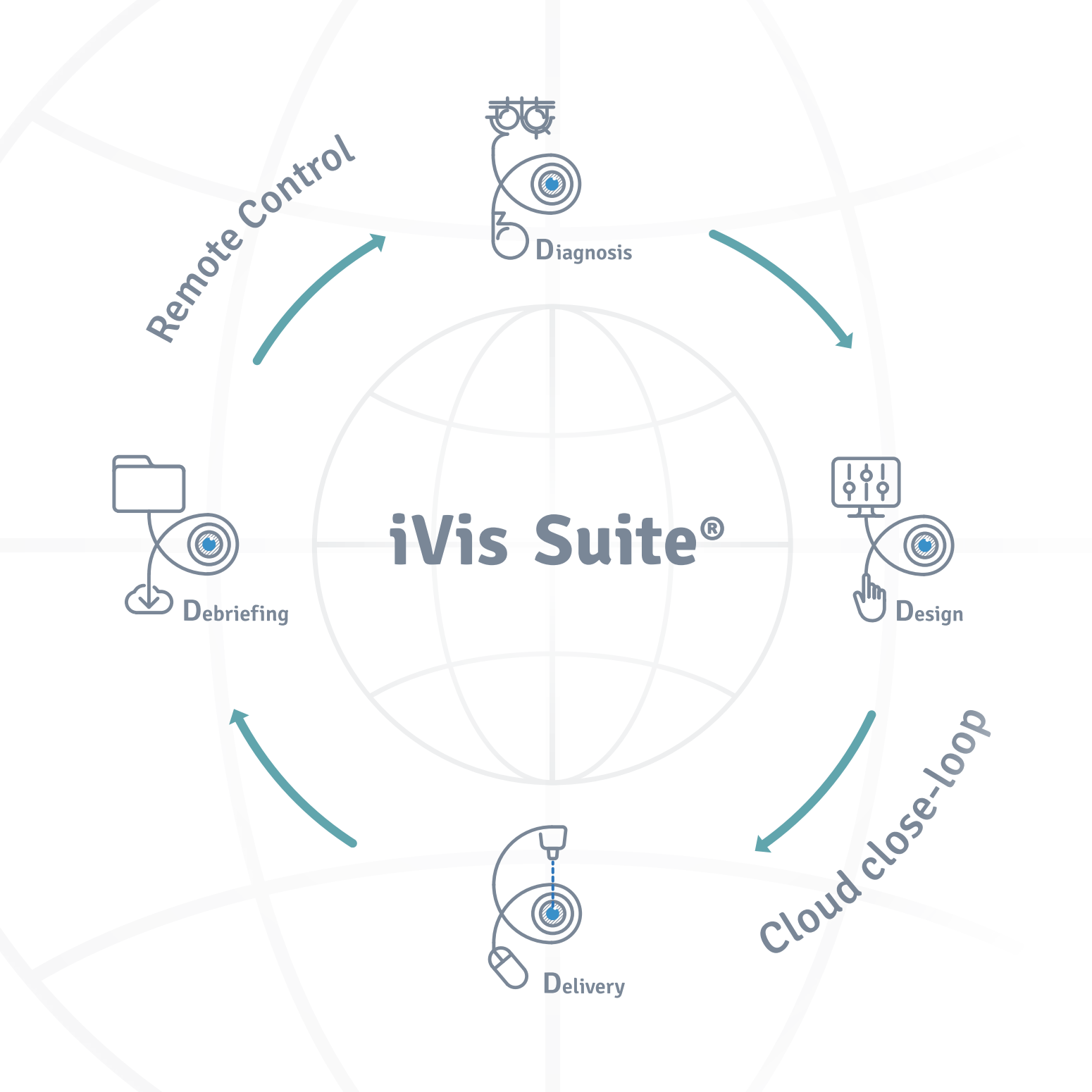
Key Features

Low-invasive surgery
Cloud interconnectivity
Ray-Tracing customized ablation
Combined Laser Remodelling & Crosslinking
Diagnosis, Design, Delivery and Debriefing closed loop








Remote Control
Diagnosis
Design
Cloud close-loop
Delivery
Debriefing
iVis Suite®

iVis Mission

We, at iVis, see the eye as a complex and wonderful masterpiece to be protected and preserved, as much and as long as possible. Therefore, we deliver a comprehensive approach, providing a customized solution for every eye.

Customizing is caring, to improve quality of vision and minimize surgical invasiveness. This is why we design and manufacture the iVis Suite®, the unique platform of fully integrated medical devices, delivering Screening, Diagnosis, Treatment, and Follow-up of corneal pathologies and refractive disorders. Our medical devices are designed to provide the precision which is required to support the most accurate diagnosis and advanced customized surgery.

Being innovative pioneers, we have been promoting cTen®, no-touch customized trans-epithelial surgery, since 1997, to optimize quality of vision, minimize intra-operative risks and preserve the strength of the eye, avoiding intrastromal cuts.

We grant the ability to treat invalidating corneal diseases and to repair previously unsuccessful refractive surgery, by means of our unique web-based ray-tracing ablation plan.

We wish to improve quality of life to more and more people worldwide, maintaining our leadership as innovative thinkers in advanced corneal diagnosis and customized refractive surgery.

Precisio

Precisio® is a laser scanning tomographer, conceived to deliver the most accurate measure of corneal morphology and ray-tracing power, supporting advanced diagnosis of corneal pathologies, customized refractive surgery and IOL planning.

Key Features

Over 1.000.000 independent points per exam
Accuracy below 3 microns
Exam auto-acquisition, voice driven supported
Exam validation for customized surgery
6D eye tracking and registration
Lacrimal film independent epithelial maps
Ray-tracing refractive power maps
Patient medical record

Clinical Applications

Customized corneal surgery
Customized IOL planning
Diagnosis and follow up of corneal pathologies
Refractive outcomes of corneal and cataract surgery

Technology

Ultrathin blue laser slit
Stop-passing light filtration
Synchronous, stereo, CMOS tandem cameras
3D motorized chinrest
Touch screen monitor
Realtime exams backup

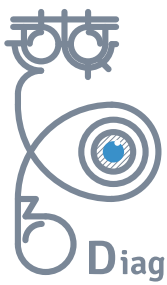
Diagnosis

Technical Specifications

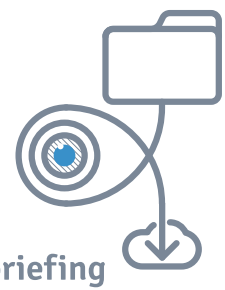
Weight: 117kg
Power supply:
110 ÷ 240Vac,
50-60Hz, 0.9A
Dimensions:
590mm x 485mm x
1590mm (LxWxH)

Exam Outputs

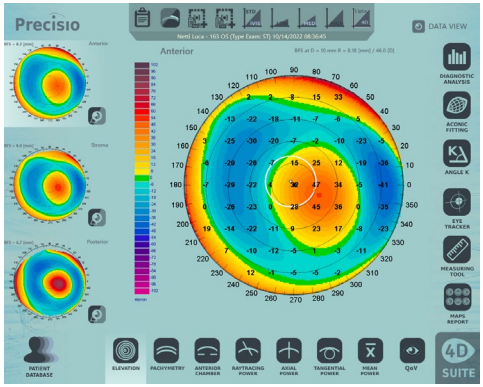
Elevation and related gradient maps
Pachymetry and related gradient maps
Anterior chamber and iris maps
Ray-tracing and related gradient maps
Axial and related gradient maps
Tangential and related gradient maps
Mean and related gradient maps
Wavefront maps
Point Spread Function diagram
Image convolution maps
Main refractive data determination
Corneal Morphological Irregularities evaluation
Horizontal and vertical K angle
Irido-corneal angle
Patient compliance analysis
Diagnostic analysis of corneal pathologies
Clinical and Surgical follow-up



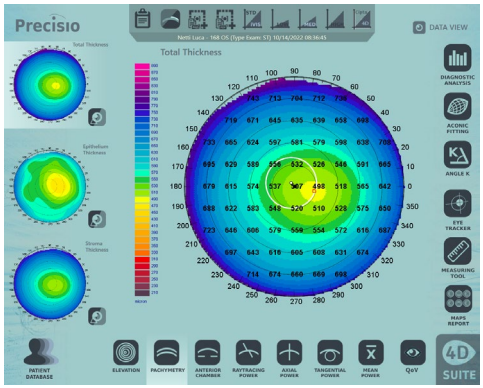
Diagnosis



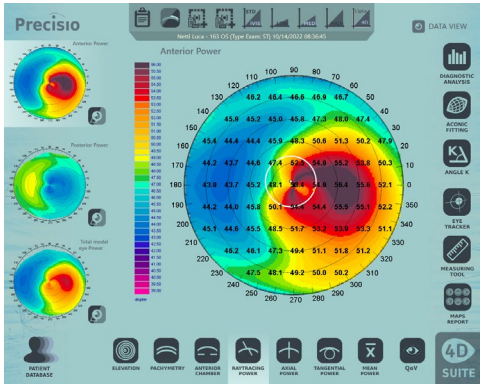
Debriefing



Elevation



Pachymetry



Ray Tracing

pMetrics

pMetrics® is a dynamic pupillometer, performing pupillary analysis under controlled lighting conditions, with a closed-loop retro-feedback, to statistically determine the Ideal Pupil for customized refractive surgery and IOL planning, to minimize surgical invasiveness and optimize quality of vision.

Key Features

Pupillary dynamics analysis
Accuracy below 30um
Ideal Pupil based on pupil dynamics and patient's lifestyle
Automated control of diffuse and direct light intensity
Six environmental light conditions
Binocular or monocular examination

Clinical Applications

Ideal Pupil determination for refractive surgery
Ideal Pupil determination for IOL planning
Pupillary anisocoria evaluation
Hippus and nystagmus analysis

Technology

Telecentric optical system
Closed loop control of light environments
Synchronous pupil tracking
Motorized interpupillary distance

Exam Outputs

Pupil dynamics graph of pupil size vs. light intensity
Pupil dynamics graph of daily pupillary events per pupil size
Ideal pupil determination for refractive surgery and IOL planning
Minimum, maximum, and mean pupil size per light environment

Technical Specifications

Weight: 16kg
Power supply: 100 ÷ 240Vac, 47-63Hz, 1.35A
Dimensions: 235mm x 450mm x 405mm (LxWxH)

Diagnosis

Cipta

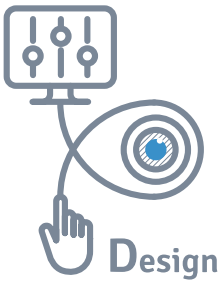
Cipta® is an online web application designed to plan customized corneal surgery to optimize quality of vision and minimize surgical invasiveness, based on Precisio® and pMetrics® exam data.

Cipta® uniquely delivers Raytracing based customized ablation plans to optimize quality of vision and minimize surgical invasiveness.

Cipta® promotes cTen® one step transepithelial no touch surgery, to consider the refractive contribute of the epithelium in irregular corneas and to eliminate intraoperative risks.

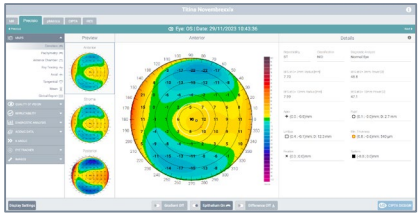
Cipta® supports Screening, Diagnosis, Treatment, and Follow-up of corneal pathologies and refractive disorders, interconnecting online the iVis Suite® Diagnostic Platform with the iVis Suite® Surgical Platform, to standardize performance.

Cipta® is composed of four modules for process management, customized treatment of refractive disorders, customized treatment of corneal pathologies and IOL planning.



Cipta®CS

Cipta®CS supports process management, remote supervision and performance analysis of the iVis Suite® medical devices.



Precisio

pMetrics

iRes

Key Features

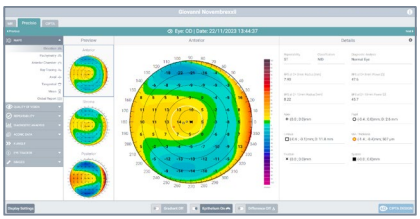
Remote supervision of the iVis Suite® medical devices
Data base synchronization among the iVis Suite® medical devices
Performance analysis of the iVis Suite® Diagnostic and Surgical Platforms

Cipta

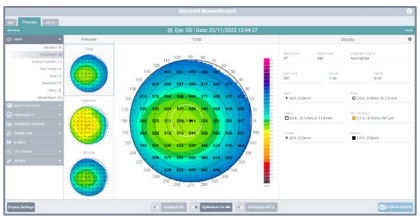
Cipta®R

Cipta®R delivers online customized ablation plans, raytracing based, for the treatment of regular refractive disorders, including the refractive contribute of the posterior shape of the cornea, the biometric measures of the eye and the IOL data for pseudo-phakic patients.

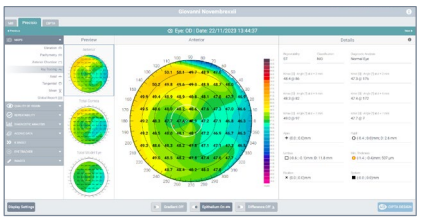
Cipta®R provides online support and real time data sharing.



Elevation Pre-op



Pachymetry Pre-op



Ray Tracing Pre-op

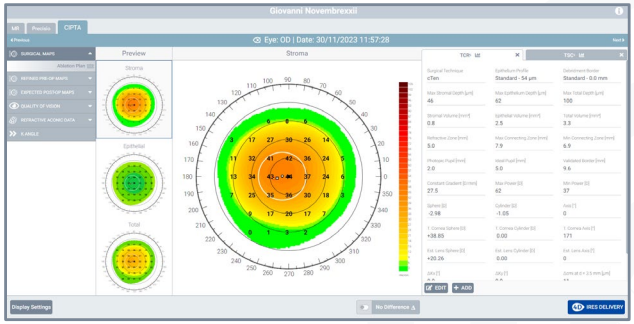
Key Features

Determination of the Ideal Shape of the cornea
Automatic plan of the customized ablation profile
Customization of the refractive zone by raytracing
Definition of the refractive zone diameter by the Ideal Pupil
Customization of the connecting zone by constant refractive gradient
Customization of the epithelium ablation profile
Evaluation of the surgical ectatic risk

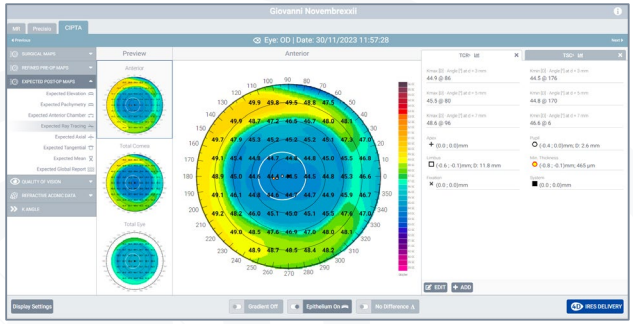
Cipta

Clinical Applications

Customized monofocal plan of regular refractive disorders
Customized EDOF plan of regular refractive disorders



Ablation Plan



Expected Ray Tracing

Output data

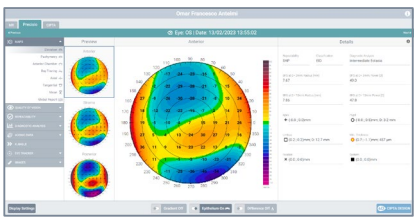
Stromal ablation map
Epithelial ablation map
Total ablation map
Expected Elevation maps
Expected Pachymetry maps
Expected Ray Tracing refractive maps
Expected Axial, Tangential, Mean refractive maps
Expected Wavefront, Point Spread Function, Quality of Vision

Cipta®T

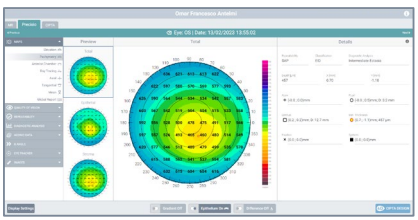
Cipta®T delivers online customized ablation plans, raytracing based, for the treatment of irregular refractive disorders, taking into account the refractive contribute of the epithelium and of the posterior shape of the cornea, considering the biometric measures of the eye and the IOL data for pseudo-phakic patients.

Cipta®T delivers online crosslinking plan, customized according to the stromal thickness gradient, to be combined with the customized corneal remodelling for the treatment of ectatic pathologies.

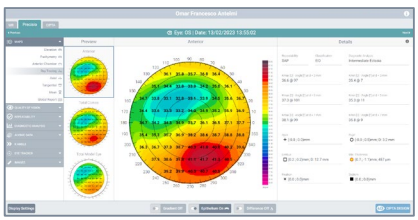
Cipta®T provides online support and real time data sharing.



Elevation Pre-op



Pachymetry Pre-op



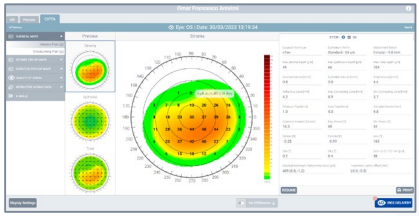
Ray Tracing Pre-op

Key Features

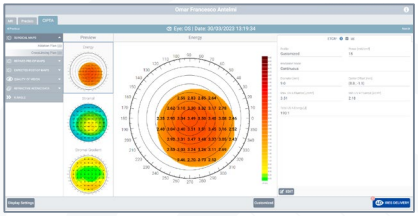
Determination of the Ideal Shape of the cornea
Automatic plan of the customized ablation profile
Customization of the refractive zone by raytracing
Definition of the refractive zone diameter by the Ideal Pupil
Customization of the connecting zone by constant refractive gradient
Customization of the epithelium ablation profile
Customization of the crosslinking plan
Evaluation of the surgical ectatic risk

Clinical Applications

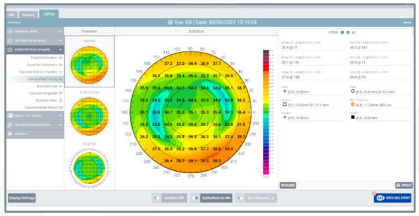
Customized plan of irregular refractive disorders
Customized crosslinking plan for ectasia
Customized plan for K angle correction
Customized plan for retinal focusing redirection
Customized plan for lamellar transplantation



Ablation Plan



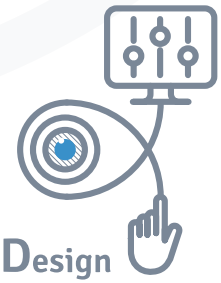
CrossLinking Plan



Expected Ray Tracing

Output data

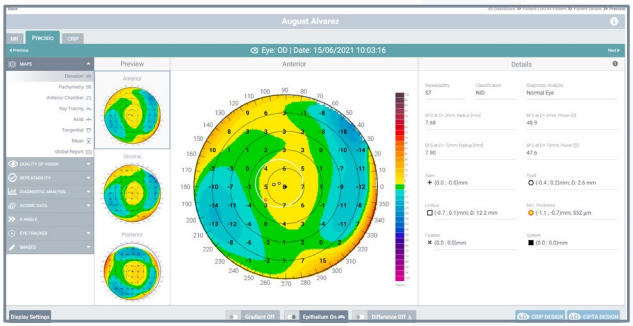
Stromal ablation map
Epithelial ablation map
Total ablation map
Crosslinking Plan Map
Expected Elevation maps
Expected Pachymetry maps
Expected Ray Tracing refractive maps
Expected Axial, Tangential, Mean refractive maps
Expected Wavefront, Point Spread Function, Quality of Vision



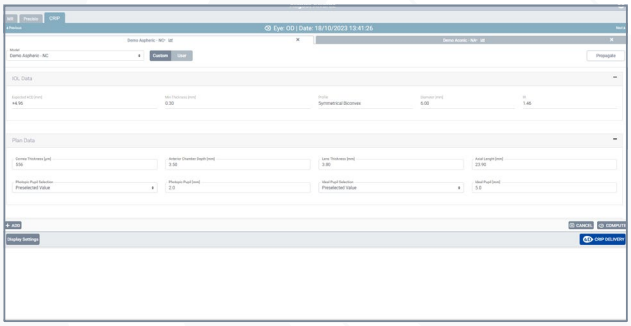
T-CRIP

T-Crip® is a module of the Cipta® web application designed for online, raytracing based, IOL planning for cataract and refractive surgery, considering the refractive contribute of the cornea and the biometric measures.

T-Crip® provides online support and real time data sharing.



Pre-op Elevation



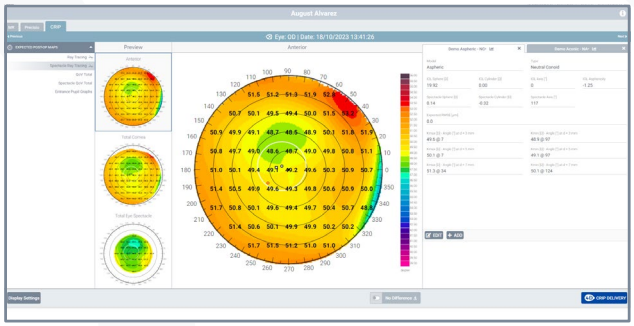
IOL Edit Data

Key Features

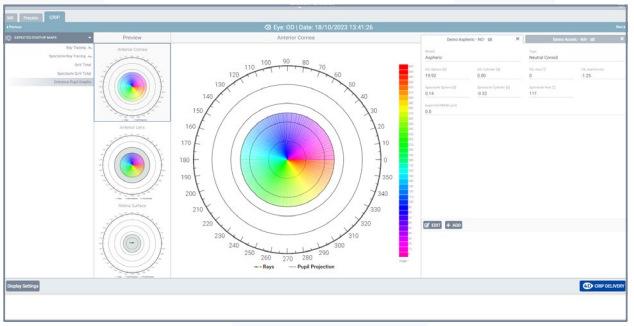
Customized sphere, cylinder, axis and asphericity IOL plan
RMSE evaluation of the Point Spread Function
Glare risk analysis related to the Ideal Pupil

Clinical Applications

IOL planning for cataract and refractive surgery



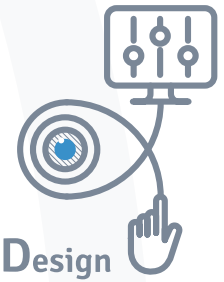
IOL Output Data



Entrance Pupil Graph

Output data

IOL sphere, cylinder, axis and asphericity data
Entrance pupil Graph
Expected spectacle refraction
Expected Ray Tracing refractive maps
Expected Axial, Tangential, Mean refractive maps
Expected Wavefront, Point Spread Function, Quality of Vision

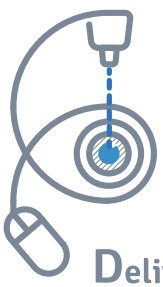


iRes 1.2

iRes® 1.2 is an excimer laser conceived for customized corneal surgery, to treat complex corneal pathologies and refractive disorders, optimizing quality of vision and minimizing surgical invasiveness.

iRes® 1.2 supports cTen®, the most advanced transepithelial no-touch surgical procedure, removing in one-step epithelium and stroma, taking care of the irregular refractive contribute of the epithelium in complex corneas and eliminating the intra-operative risks.

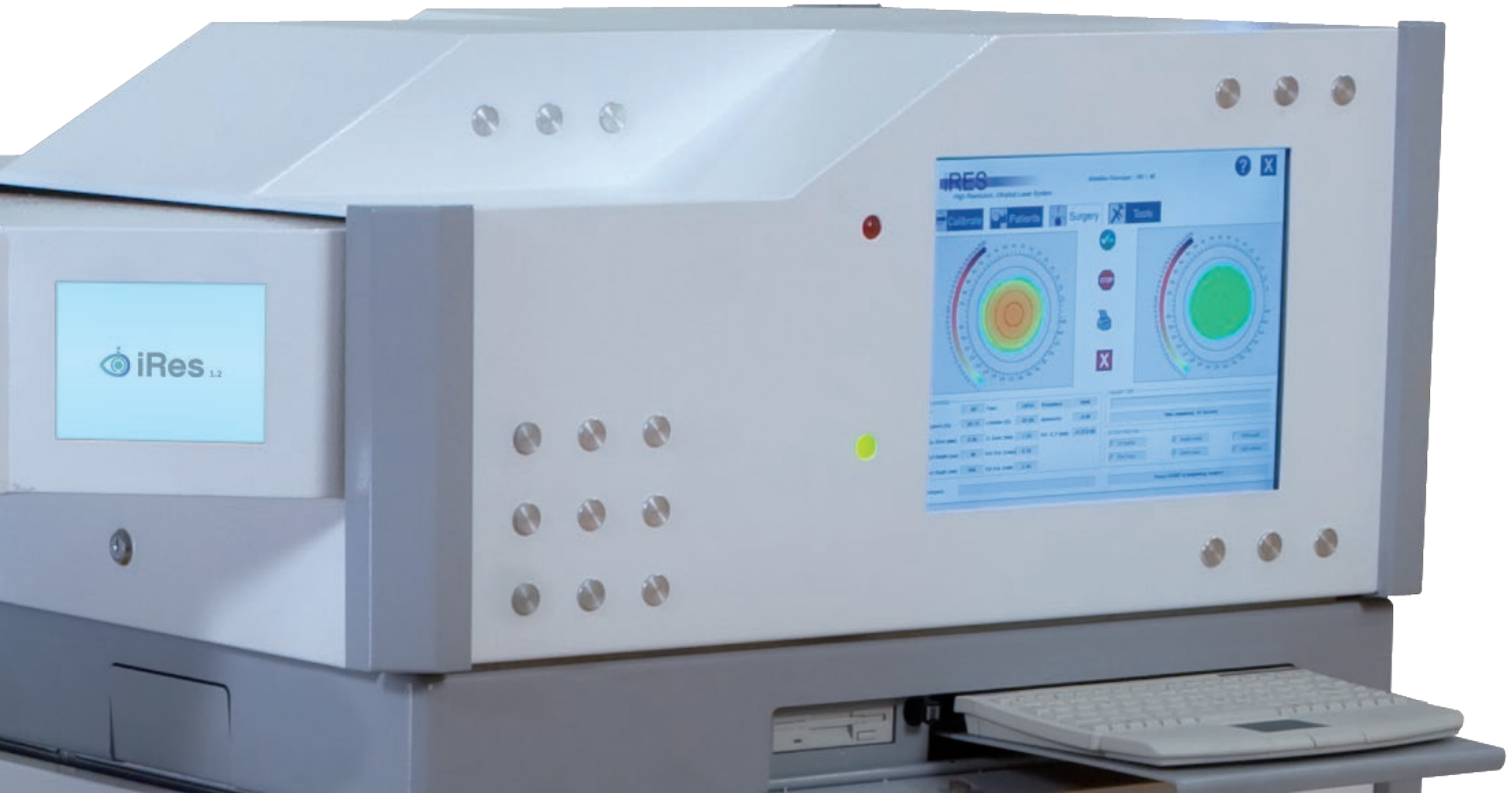
iRes® 1.2 uniquely releases a constant fluence per unit of time, delivering extremely precise ablation profiles and drastically reducing thermal effects.



Delivery

Key Features

High speed working frequency at 1.2kHz
Small laser spot of 650um
Pulses delivered with constant fluence per unit of time
cTen® customized transepithelial no touch surgery
Patient eye registration
Synchronous eye-tracking
Automated calibration system



Surgical Treatments

Customized monofocal treatment of regular refractive disorders
Customized EDOF treatment of regular refractive disorders
Customized treatment of irregular refractive disorders
Customized corneal remodelling and crosslinking for ectasia
Customized treatment for K angle correction
Customized treatment for retinal focusing redirection
Customized treatment for lamellar transplantation

Technology

Independent double beam laser pulses
Sealed optical path
Synchronous eye tracking system
Incorporated crosslinking device

Output Data

Ablation profile
Ablation treatment time
Attempted refractive correction
Refractive zone
Connecting zone
Treatment center offset
Energy factor
Eye tracker status
Crosslinking plan
Crosslinking treatment time

Technical Specifications

Weight: 400kg
Bed weight: 250 kg
Power supply: 230V, 50-60Hz, 6.5A
Bed power supply: 230Vac, max 250VA, 50-60 Hz
Laser dimensions: 1657mm x 680mm x 1153mm (LxWxH)
Bed dimensions: 2040mm x 690mm x 700mm (LxWxH)

iRes 1.2

SafeCross

SafeCross® is an innovative ophthalmic solution for the treatment of ectasia, with high riboflavin content, specifically conceived for corneal crosslinking in thin corneas.

Key Features

Production of 1.50 µmol/ml of anion superoxide at E = 5,4 J/cmq
Increase in crosslinking efficiency by 35%
Optimized osmolarity solution
Higher patient compliance and lower side effects

Indications
Low-invasive crosslinking for ectasia

Composition
Riboflavin: 0.25%
HPMC: 1,00%
Osmolarity: 260 – 280 mOsm/Kg

Packaging
Luer Lock connection syringe containing 2,0 ml of riboflavin solution.

SafeCross+

SafeCross® is an unique ophthalmic solution for the treatment of ectasia, with high riboflavin content and EDDS, specifically conceived for corneal crosslinking in poor oxygen environment.

Key Features

Production of 1.90 µmol/ml of anion superoxide at E = 5,4 J/cmq
Increase in crosslinking efficiency by 50%
Optimized osmolarity solution
Higher patient compliance and lower side effects

Indications

Low-invasive crosslinking treatment for ectasia in poor oxygen environment

Composition

Riboflavin: 0.25%
HPMC: 1,00%
EDDS: 0,05%
Osmolarity: 260 – 280 mOsm/Kg

Packaging

Luer Lock connection syringe containing 2,0 ml of riboflavin solution.

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