optohellas
Worldwide Representation Platform

ALTRIS AI PLATFORM

SETTING HIGHER DIAGNOSTIC STANDARDS
AND IMPROVING PATIENT OUTCOME

WHAT IS ALTRIS AI ?

Altris AI is an AI-powered, standalone, browser-based software for OCT scans interpretation created for the support of eye care specialists in diagnostic decision - making.

BUSINESS VALUE OF ALTRIS AI

Follow up examinations for patients who need them most

With Altris AI eye care specialists **won't miss minor, early, rare pathologies** which will lead to accurate diagnosis for more patients and adequate treatment.

Every patient gets OCT examination

Even less experienced eye care professionals can offer OCT.

Time saved, more patients served

Eye care specialists spend time only on pathological scans and overall examination will take less than 10 minutes.

No time wasted on controversial scans

With Altris AI eye care specialists have a second opinion when dealing with controversial scans immediately which will save 3-5 hours a week.

optohellas
Worldwide Representation Platform

altris

PAIN POINTS OF EYE CARE SPECIALISTS

Not noticing minor / early / rare pathologies

25% of eye care specialists miss minor / early / rare pathologies 3 times a week on average.
31% of eye care specialists don't know if they miss them.
No follow up examinations are assigned which leads to worse patient outcome.

Not offering OCT examination to every patient

16% of eye care specialists are not sure about their OCT skills and **don't offer OCT examination.**
With Altris AI even less experienced eye care specialists will feel confident enough.

Spending too much time on non-pathological scans and on OCT examination in general.

Struggling with controversial OCT scans

65% of eye care specialists come across controversial scans 3 times a week on average.
They spend hours on consulting colleagues but sometimes don't find the right answer immediately.

optohellas
Worldwide Representation Platform

optohellas
Worldwide Representation Platform

altris

WHAT ALTRIS PROVIDES

- AI OCT screening and quick triage
- More than 100 retina conditions segmentation and classification with AI
- Vendor-neutral AI retina layers segmentation and thickness calculation
- Pathologies visualization and linear measurements done by AI
- Data management and data security
- High performance and accuracy

5 mins for interpretation and reports preparation

91% cumulative accuracy of AI models

100 + of detected retinal conditions

optohellas
Worldwide Representation Platform

altris

optohellas
Worldwide Representation Platform

All data in one place

Any authorized eye care specialist from any medical institution can access patient's history of examinations to make better diagnostic decisions.

Full information about every patient

Eye care specialists can describe each patient's case using important details
(gender, past traumas, concomitant diseases, such as diabetes).

All formats are supported

Eye care specialists can upload DICOM and non-DICOM files of any OCT scan length (6mm - 12mm)

Efficient team management

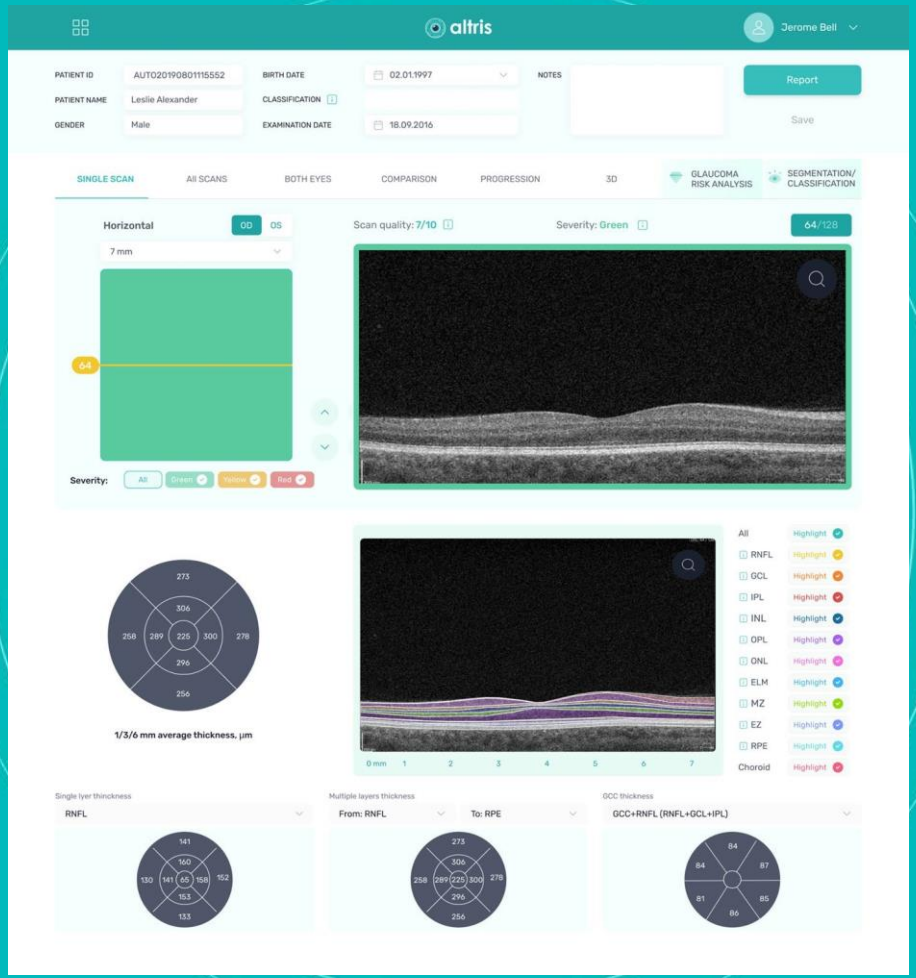
Assign team members with different roles so they could access patients' data easily.

optohellas
Worldwide Representation Platform

optohellas
Worldwide Representation Platform

ALTRIS AI PLATFORM

* all the following scans are used for visualization purpose



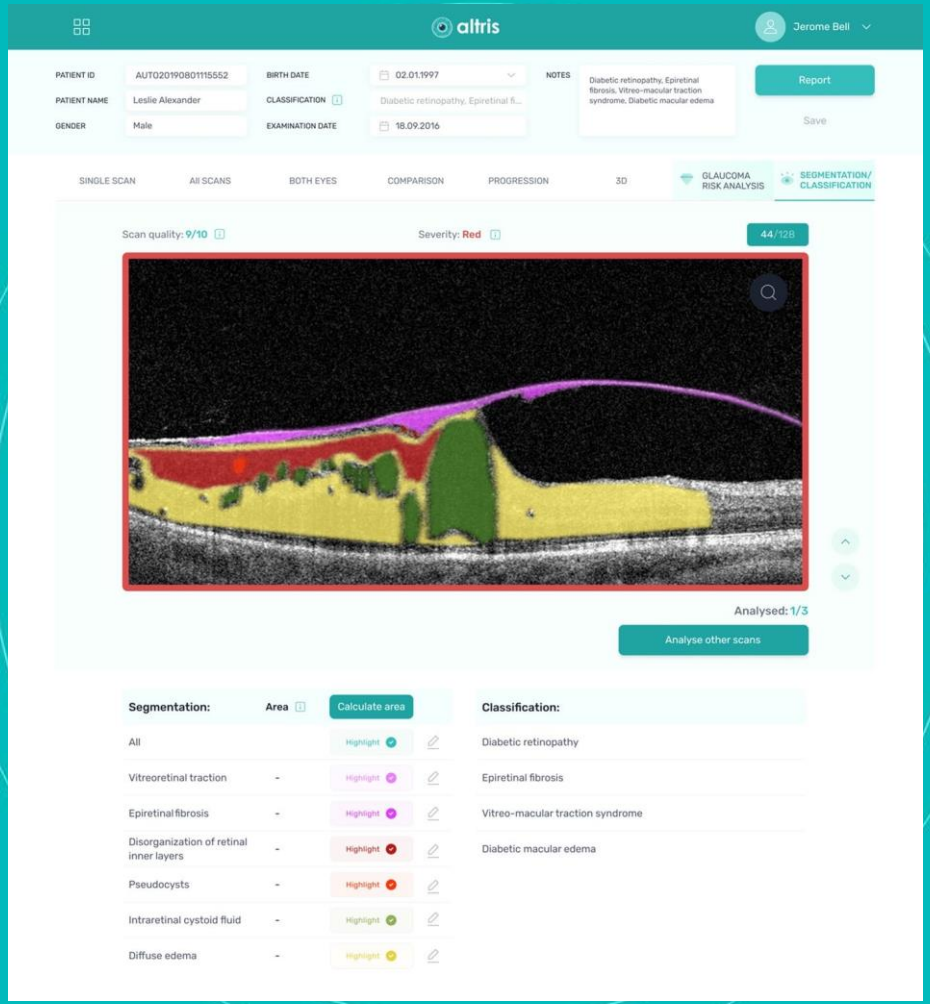
optohellas
Worldwide Representation Platform

altris

AI OCT SCREENING

- **Pathology severity visualization**
  When you upload N scans into the system, it will instantly differentiate between normal retina scans, moderate severity scans, and severe scans
- **Detection of low- quality scans**
  Altris AI detects low-quality scans automatically and warns eye care specialists about the possibility of corrupt data
- **Vendor neutral retina layers segmentation with AI**
  Altris AI can segment 10 retina layers and provide the possibility to explore each one of them
- **Retina thickness, layers thickness, multiple layers thickness**
  Altris AI analyzes the thickness of retina, separates layers or multiple layers.

optohellas
Worldwide Representation Platform



optohellas
Worldwide Representation Platform

altris

AI SEGMENTATION / CLASSIFICATION

- **Pathology detection and visualization with AI**
  Classification of pathologies by AI algorithm with the possibility to edit or delete them
- **Utilization of AI for the segmentation of pathological areas**
  Highlight pathological areas on the scan
- **Pathology area calculation is done automatically by AI**
  Pathological area is also automatically updated when the highlighted area is changed by the user.

optohellas
Worldwide Representation Platform

optohellas
Worldwide Representation Platform

altris

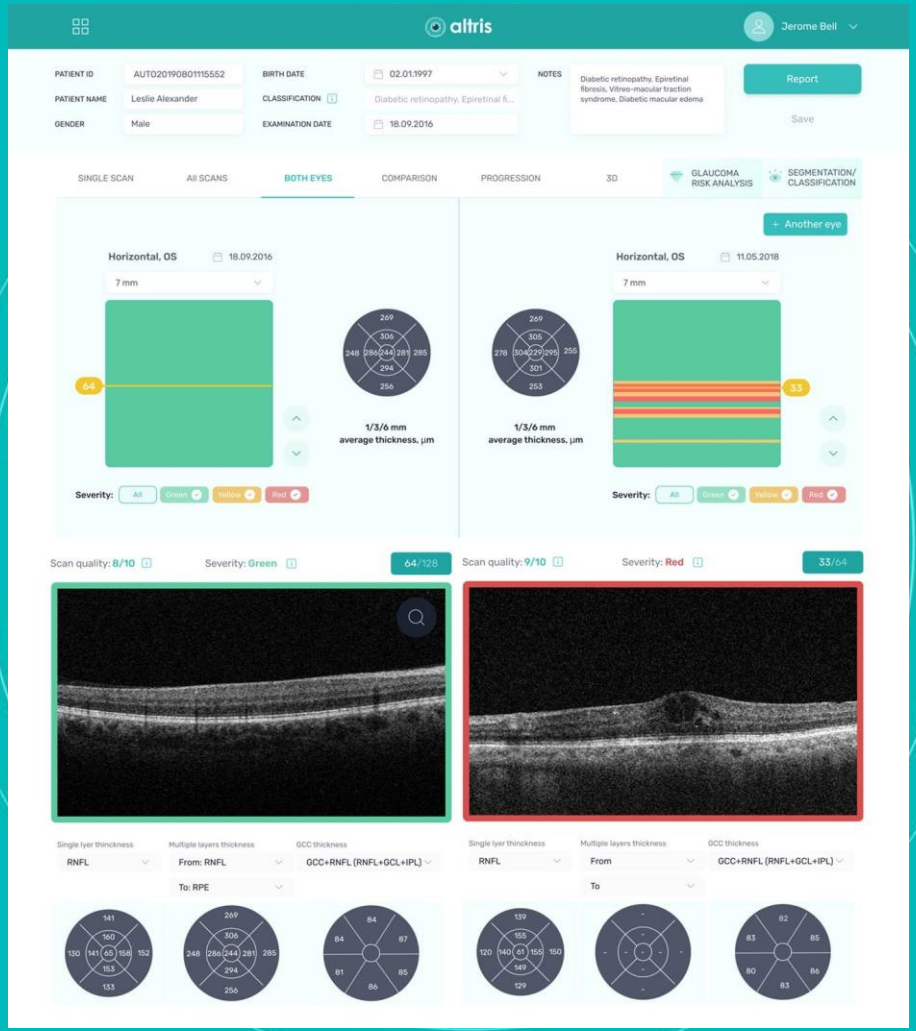
ALL SCANS

- **Looking through ALL the scans with no additional effort**
  Eye care specialists can zoom the scan they need when looking through all the scans.

  Convenient filtration according to the historical order or/and severity principles.

  Eye care specialists can choose the most problematic scans among all the scans fast.

optohellas
Worldwide Representation Platform



optohellas
Worldwide Representation Platform

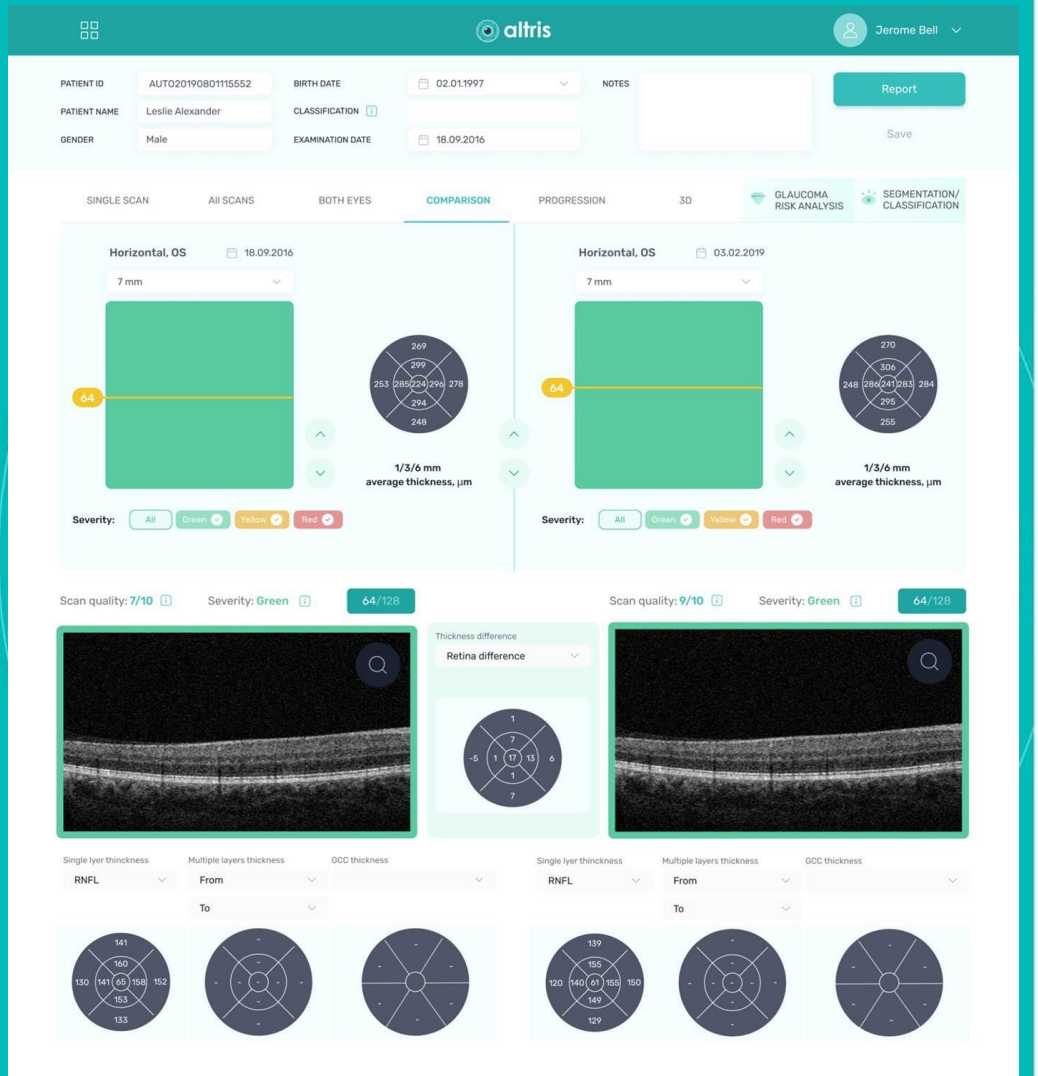
altris

BOTH EYES

- **Adding patients' examination of the fellow eye in 1click**
  Eye care specialists can upload the scan of the fellow eye fast to compare results.

- **Reviewing patient's both eyes to compare pathology signs or thickness difference**
  Eye care specialists can examine 2 eyes at the same time. If a specialist notices the pathology on one eye, a doctor can use a healthy eye for comparison.

optohellas
Worldwide Representation Platform



optohellas
Worldwide Representation Platform

altris

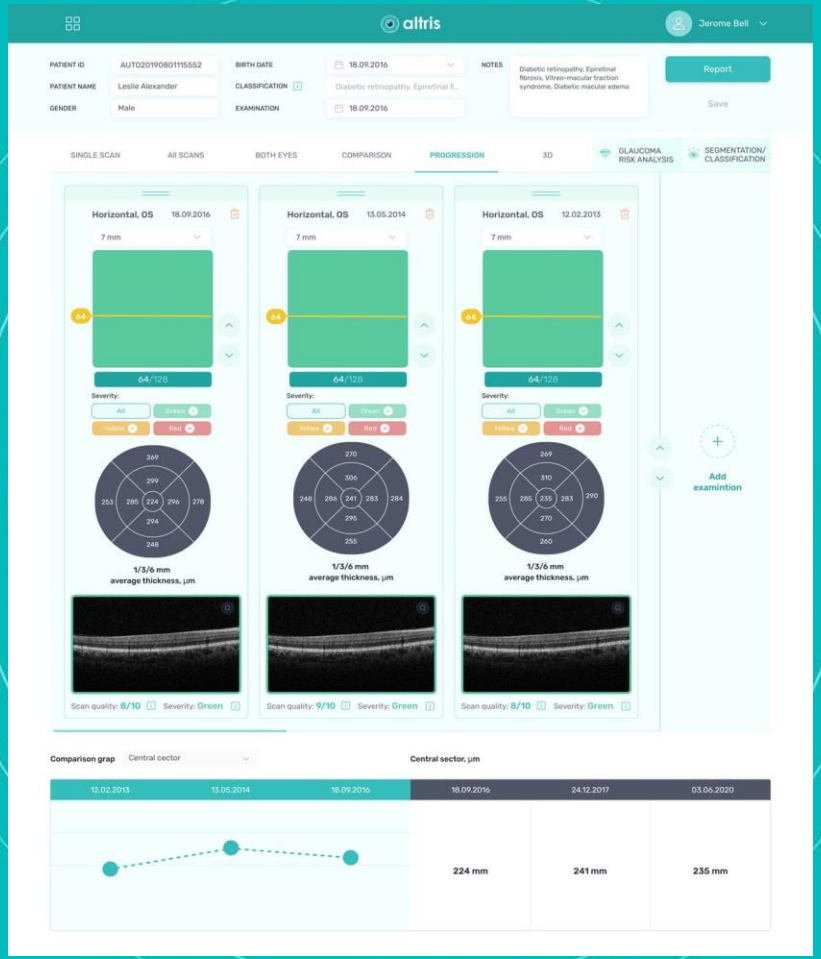
COMPARISON

- **Comparing the same eye in historical perspective**
  Many patients with progressive diseases require regular follow up examinations. The comparison function of Altris AI makes this follow up control more convenient.

- **Exploring several scans simultaneously**
  Eye care specialists can examine several scans simultaneously and analyze the examination on the right and on the left in parallel. This function allows tracing changes on the pathological scans in real time. This function is available even if there is a different number of scans in 2 examinations.

- **Retina thickness difference**
  A separate thickness map for the review of the thickness difference of [illegible] macular area.

optohellas
Worldwide Representation Platform



optohellas
Worldwide Representation Platform

altris

PROGRESSION

- **Tracing pathology progression by adding several examinations at the screen**

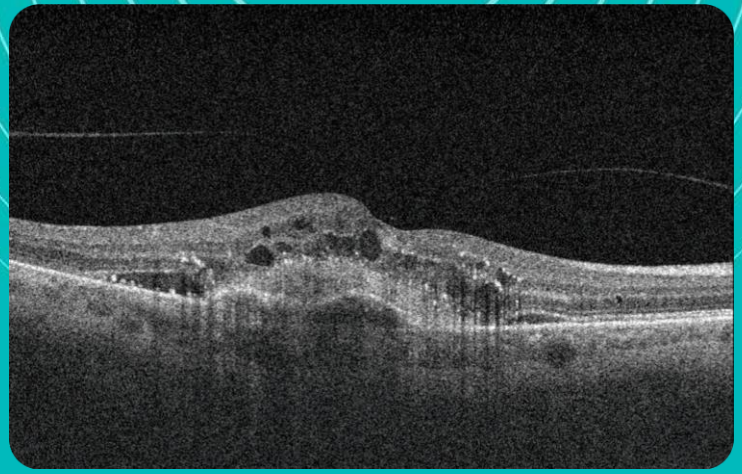
  Progression section allows tracing the state of pathology and its transformation with the time.

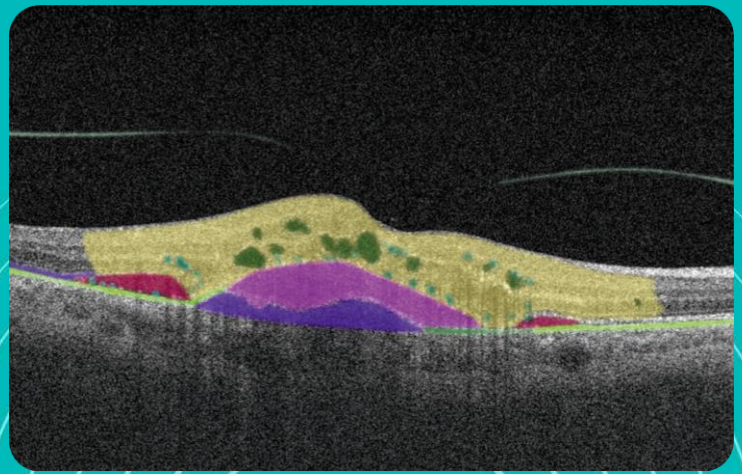
  Examinations can be placed in a convenient order with the possibility to swap, delete them, and add new ones.

  A comprehensible graph indicating the change of the central layer thickness is available here as well.

  Tracing the change of the central sector thickness in real time.

optohellas
Worldwide Representation Platform





optohellas
Worldwide Representation Platform

altris

Classification example:

- Wet AMD
- Choroidal neovascularization

Segmentation example:

- Posterior hyaloid membrane detachment
- RPE disruption
- RPE atrophy
- Subretinal hyperreflective material
- Fibrovascular RPE detachment
- Ellipsoid zone disruption
- Intraretinal hyperreflective foci
- Subretinal fluid
- Intraretinal cystoid fluid
- Diffuse edema

optohellas
Worldwide Representation Platform

optohellas
Worldwide Representation Platform

ALTRIS AI RECOGNIZES

altris

Segmentation

Chorioretinal folds
Chorioretinal scar
Confluent drusen
Cotton wool spot
Cuticular drusen
Diffuse edema
Disorganization of retinal inner layers
Double layer sign
Drusenoid RPE detachment
Ellipsoid zone disruption
Ellipsoid zone focal defect
Epiretinal fibrosis
Fibrovascular RPE detachment
Floaters
Focal choroidal excavation
Focal hyperreflectivity
Full thickness macular hole
Hard drusen
Hard exudates
Hyperreflectivity of neurosensory retina
Hypertransmission
Internal limiting membrane thickening
Intraretinal cystoid fluid
Intraretinal hyperreflective foci
Lamellar macular hole
Macular excavation
Microaneurysm
Neurosensory retina atrophy
Neurosensory retina detachment
Operculum
Outer retina tubulations
Posterior hyaloid membrane adhesion
Posterior hyaloid membrane detachment
Posterior hyaloid membrane detachment with operculum
Pseudocysts
Pseudohole
Reticular pseudodrusen
Retinal neovascularization
Retinal wrinkling
Retinoschisis
RPE atrophy
RPE disruption
RPE elevation
RPE hyperreflectivity
RPE rupture
Serous RPE detachment
Shadowing
Soft drusen
Subretinal fluid
Subretinal hyperreflective material (SHRM)
Subretinal hyperreflectivity
Subretinal space
Vitelliform material
Vitreoretinal traction

Classification

Asteroid hyalosis
Central retinal artery occlusion
Central retinal vein occlusion
Central serous chorioretinopathy
Chorioretinal scar
Chorioretinitis
Choroidal melanoma
Choroidal neovascularization
Choroidal nevus
Choroidal rupture
Cone/rod dystrophy
Cystoid macular edema
Degenerative myopia
Diabetic macular edema
Diabetic retinopathy
Dry AMD
Dry AMD - Geographic atrophy
Epiretinal fibrosis
Epiretinal hemorrhage
Foveaschisis
Full thickness macular hole
Hypertensive retinopathy
Intraretinal hemorrhage
Lamellar macular hole
Laser-induced maculopathy
Macular degeneration
Macular telangiectasia type 2
Myelinated nerve fiber layer
Myopia
Pigment epithelium detachment
Polypoidal choroidal vasculopathy
Preretinal haemorrhage
Pseudohole
Retinal angiomatous proliferation
Retinal detachment
Retinitis pigmentosa
Retinoschisis
RPE rupture
Solar maculopathy
Sub-RPE hemmorage
Subhyaloid hemmorage
Subretinal fibrosis
Subretinal hemorrhage
Tapetoretinal dystrophy
Vitelliform dystrophy
Vitreo-macular traction syndrome
Wet AMD
X-linked juvenile retinoschisis

optohellas
Worldwide Representation Platform

AI PERFORMANCE INDICATORS

Accuracy 98.50%

Accuracy is the proportion of predictions the model got right.

Sensitivity 97.00%

Sensitivity is the proportion of pathological scans correctly classified.

Specificity 99.80%

Specificity is the proportion of non-pathological scans correctly classified.

Segmentation accuracy 95.00%

A pixel perfect match between the deep learning model output and ground truth annotation.

optohellas
Worldwide Representation Platform

Altris Inc

CONTACT US

2nd km Katerinis - Elassonas, Katerini, Greece
Branch: Evelpidon 61-63
11362 Athens, Greece

Tel: +30 23510 79750 / +30 210 5750572
e-mail: info@optohellas.com
www.optohellas.com

optohellas
Worldwide Representation Platform