



Detect more than 100 pathological signs of eye diseases in 45 seconds



Retinalyze® is a screening software, compatible with the majority of Fundus and OCT cameras, which assists optometrists to perform screenings for eye diseases like DR, AMD and Glaucoma in a safe and efficient manner using artificial intelligence and fundus images.

In 2022 we will launch our new product, Retinalyze OCT, which offers groundbreaking retinal 3D scans and AI-techniques that assist the optometrist to detect more than 100 signs of different eye conditions.

Time saving and homogeneous eye screenings with AI

With Retinalyze you will be able to check your customers with state-of-the-art technology. The Retinalyze software can detect the very early states before visual impairment and in many cases even earlier than the human eye identifies the condition. The automated algorithm (AI) detects possible signs of eye conditions by analysing OCT and fundus images, which are on par with manual gradings, but in just 30-45 seconds.

The web app provides instant results in an easy-to-read method with Red, Yellow, and Green recommendations. In the meantime, you can continue to focus on the customer and provide a full and thorough vision test. When merging your professionalism and customer approach with the analyses of the algorithm, the two of you become a state-of-the-art device for safe and thorough eye screenings.

The Retinalyze software saves valuable time without compromising your professionalism - and enables you to offer a better customer service and potentially more eye tests each day.

Retinalyze OCT – groundbreaking 3D eye scans

We are excited to introduce our groundbreaking new product, Retinalyze OCT, that supports the optometrist to detect more than 100 pathological signs of retinal conditions (follow this link to see the conditions).

Retinalyze OCT, powered by Altris.ai, is a new module, which is available in the Retinalyze Web App from Q1 2022.

OCT, Optical Coherence Tomography, is an advanced technology that provides highly detailed images of the retina. This groundbreaking method uses light waves to take cross-section pictures of the retina, allowing for topographical mapping of the eye including macular thickness.

Compared to fundus photographs, which capture a 2D image of the top layer of the retina, OCT captures a 3D depth-scan of the retina (similarly to an ultrasound). The 3D scan makes it possible to distinguish each of the retina's distinctive layers - and map and measure each layer's thickness. Anomalies in the thickness of each layer can be used to detect a number of possible diseases. OCT is also extremely helpful to measure the changes in a patient's eyes over time.

Who to screen with OCT?

We generally recommend screening all customers (above 4 years of age) with Retinalyze OCT yearly and especially those who:

- Report symptoms of eye diseases
- Receive an Yellow/Red result from the Retinalyze fundus/retinal image analysis algorithms.
- Have a family history of hereditary eye diseases

When screening the general public, there will be no detected changes in 85-90 % of the cases. The optometrist can store the image and ask the patient to return next year for a new test.

How the screening process works

A Retinalyze screening works in three easy steps: Capture a retinal photo/scan, upload it to our service and receive results within 30 seconds for fundus images and 45 seconds for OCT images.

The entire process can be initiated using a web-browser, internet connected software, or an internet connected OCT-device and is compatible with all major fundus cameras and OCT devices. The algorithm marks pathological signs, which should be examined in detail by an ophthalmologist.



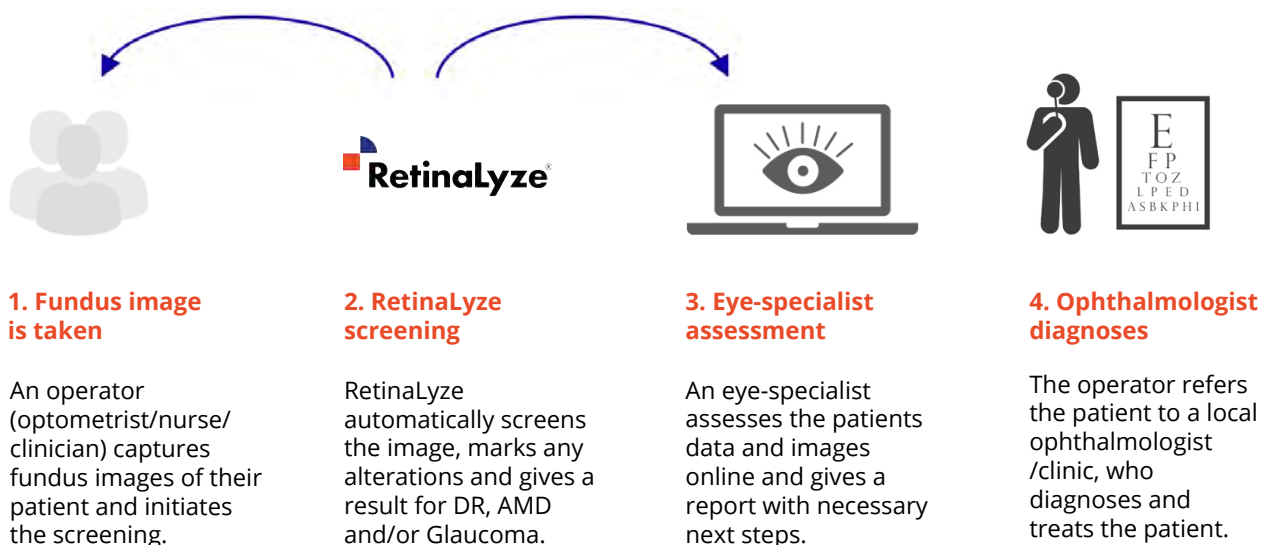
Green or yellow results

Patient is invited to attend a screening in 3-12 months time.



Red results

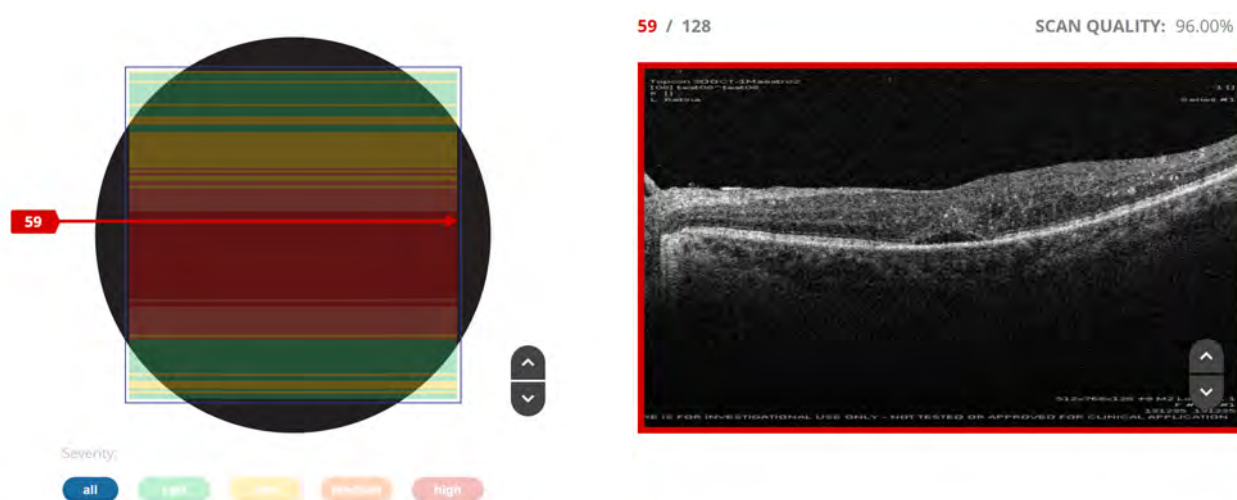
Red results can be results from the algorithm or patients requiring manual assessments based on symptoms.



In the event of software identifying a retinal pathology returned through a Red result, the image can optionally be sent to an associated specialist, who will provide the operator with a manual assessment. In some cases the patient will be advised to contact a local ophthalmologist for further examination. This ophthalmologist then performs the diagnosis and recommends treatment.

Example of an OCT scan

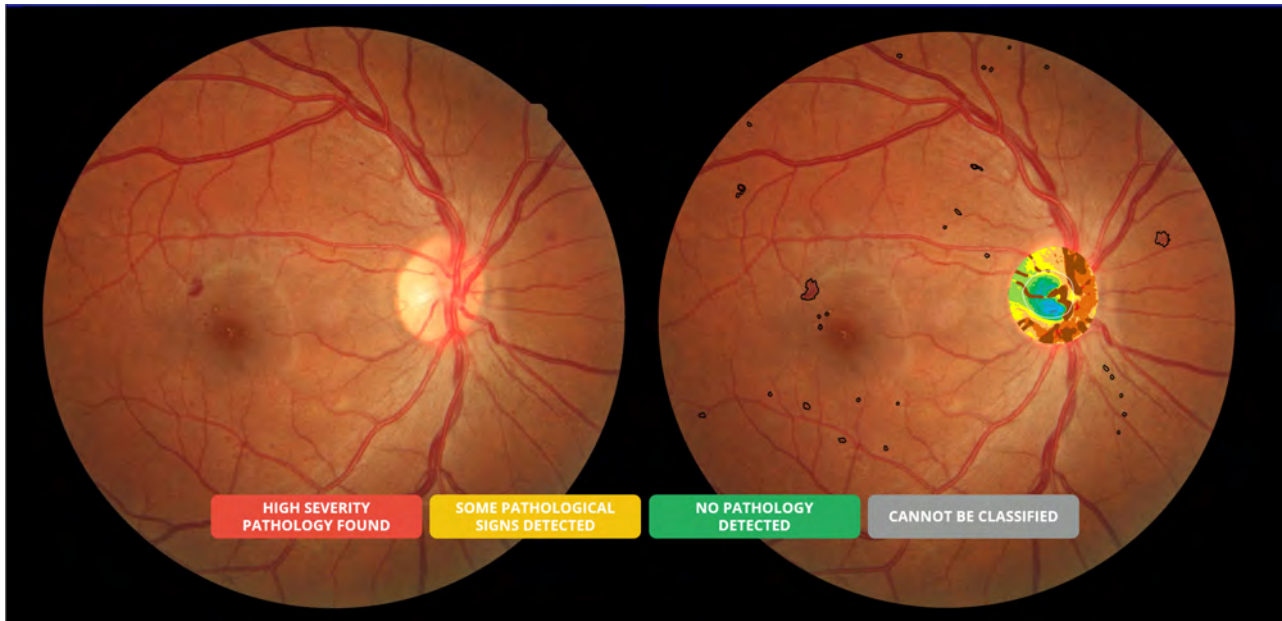
When uploading the OCT-scans in the Retinalyze Web app, the algorithm analyses the macula area of the retina. In the figure below, 128 individual b-scans were analysed. Within 45 seconds the software detects exactly where the anomalies are placed. This reduces the time spent examining eye scans by 30 %, making the eye test process more efficient and enabling the optometry retailer to potentially increase the number of eye tests each day.



The Retinalyze software highlights the individual b-scans which need your attention (marked in Yellow and Red), saving you valuable time

Example of a fundus photo analysis

With a fundus image you can screen for signs of Diabetic Retinopathy (DR), Age-related Macular Degeneration (AMD), and Glaucoma. The result is given in four easy-to-understand colour codes: Red, Yellow or Green and Grey. Red, Yellow, and Green indicate the severity of the found signs and Grey indicates that the image was not of acceptable image quality to perform the analysis.



The left fundus photo is of a patient with diabetic retinopathy. On the right photo, the pathological signs are highlighted with a black overlay.

As an optometrist you do not make the diagnosis but inform the customer about the result and, if necessary, refer the customer to an ophthalmologist.

The optometrist is backed by ophthalmologists

The Retinalyze algorithm and the result should be considered a tool for a screening or diagnostic process, and not a diagnosis in itself. When something does not look normal, ophthalmologists are associated via telemedicine to perform additional checks. The Retinalyze telemedicine web app enables you to retrieve an ophthalmologist's manual assessments of both OCT and fundus images. Thus, the Retinalyze system combines the speed and efficiency of artificial intelligence with the guidance and supervision of telemedicine offering the customer the best possible service.



Increase professionalism and customer loyalty

The algorithm makes it possible to provide consistent retinal screenings and recommendations irrespective of employees' education and experience. By using artificial intelligence, the quality of the eye screening and the customer's experience are homogeneous at all times. Retinalyze will strengthen your professionalism and be your most valuable partner when you enter the market of healthcare related services.

One more eye test a day...

By automating the identification of early signs of pathology, the joint venture between the optometrist and the Retinalyze software release extra time for more customers. Whether you plan to offer the screenings as an independent product or as an add-on to your standard eye exams, the availability of Retinalyze screenings will improve your customer experience and safety, while the automated algorithm will reduce the time spent examining eye scans.

Get started

To get started with the encrypted online access to the Retinalyze software, you need to have a subscription. The subscription price varies based on the number of screenings you perform each month.

Our customers have an average cost of less than £1 per fundus analysis and £1,5 per OCT analysis.

What's included in the subscription:

- Access to the software platform all educational material
- Access to support by ophthalmologists
- Encrypted/safe storage at all images
- Access to hotline (phone and email)
- Free installation (online)
- Free introduction to the software (online)
- Free updates of the Retinalyze Software
- Integration to camera and camera software (where possible)
- GDPR compatible software

Who we are

Retinalyze System A/S (Ltd.) is a Denmark-based software company providing artificial intelligence and telemedicine solutions to the Optometry and Healthcare industry. Retinalyze has performed over 3.5 million screenings in Europe and referred over 70.000 of those screenings with potential eye diseases. The software is used in hospitals, eye clinics, optical chains, and optometrists' stores.

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Have more questions?

If you would like to know more about the Retinalyze Web App, our new OCT module or have more questions, please contact us.

Since we have solid experience in roll-outs of new concepts in optometry retail, we can be a partner in implementation, education, technology, marketing and benchmarking. Find more information about our services on www.retinalyze.com

