Canon

CX-1

Digital Retinal Camera

Mydriatic/Non-Mydriatic

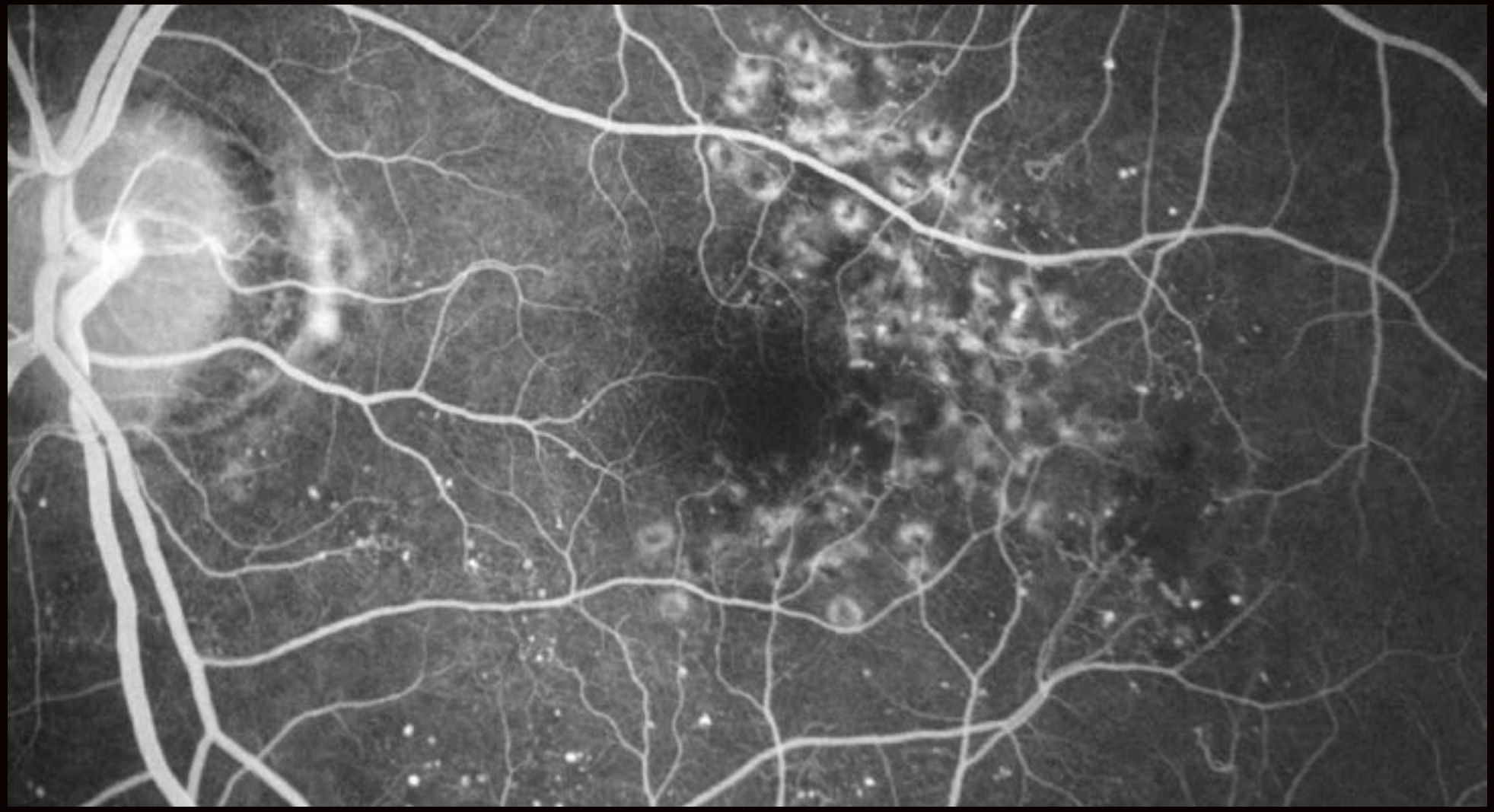
Multimodal Imaging

The CX-1 is a Mydriatic Retinal Camera with full Non-Mydriatic functionality. Besides color photography, the CX-1 is equipped with high quality optical filters for FLUO, Red Free, Cobalt and standard even with FAF imaging. The CX-1 can be changed into a Non-Mydriatic camera by a simple push of a button. The Non-Mydriatic mode is essential for non dilatable patients such as glaucoma suspects. Children and photosensitive patients will also benefit from the non- invasive IRED observation light. All photography modes can be performed in the Mydriatic and Non-Mydriatic mode. This provides exceptional versatility and enables diagnosis, screening and monitoring of all major eye diseases.

CX-1
Mydriatic Retinal Camera with
full Non-Mydriatic functionality

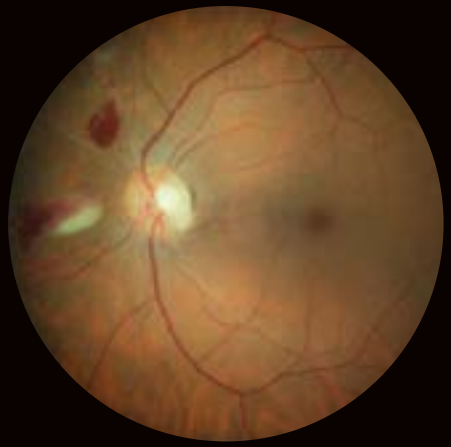
High Definition image quality

See more than ever before with the new Canon EOS 32.5 MP Digital camera and latest high quality optics.



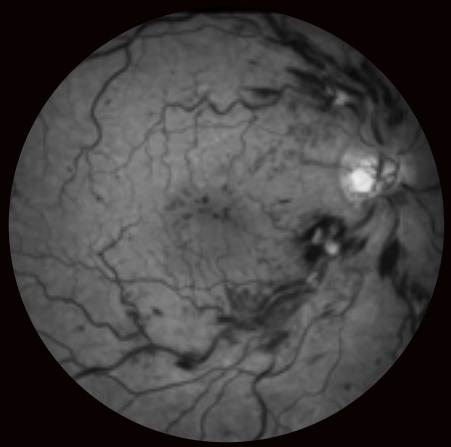
CX-1 Multimodal imaging modes

Can be performed in either mydriatic or Non-Mydriatic mode.



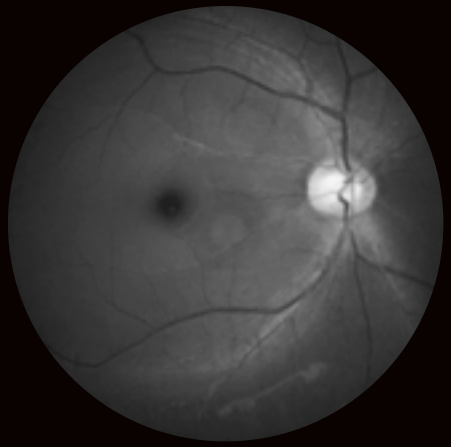
HD Color

Base Line.



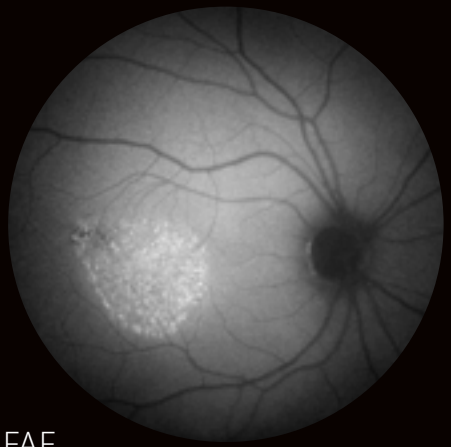
HD Red free

Useful for checking the condition of the blood vessels, important for detecting Diabetic Retinopathy.



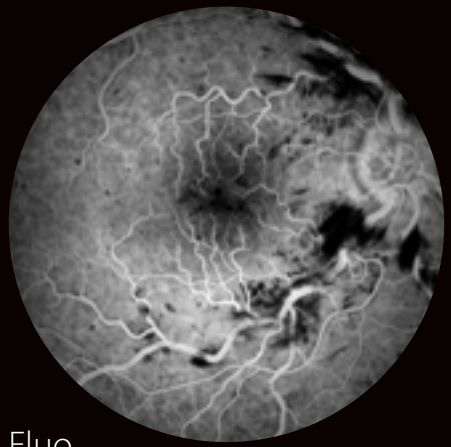
HD Cobalt

Visualizes Nerve Fibre Layer, important when checking for Glaucoma.



HD FAF

Fundus Autofluorescence Imaging provides more information on the health of the Retinal Pigment Epithelium.



HD Fluo

Checks retinal flow for occlusions and leakages.


Canon
CX-1

Easy operation and a small footprint

The CX-1 is a compact device that allows for maximal patient interaction. The short distance makes it easy to open a patien't eyelid and easy to observe the patient.

Non-Mydriatic Mode

Observation by EOS screen, using invisible infrared observation light.

Mydriatic Mode

Observation by optical viewfinder, using visible observation light.

Easy panning and tilting

For working around central obstructions and imaging the peripheral retina.

Centralized controls

Wide flash range

The required flash range is automatically changed with the photography mode.

Small Pupil Mode

ø 4.3 mm in Myd mode.
ø 3.8 mm in Non-Myd mode.

Filter Selection

The insertion of all optical filters is motorized and completely automated.

Split Lines control

Simple to deactivate this focusing aid when not required.

Chin Rest

The up and down chin rest movement is motorized for ease of use.

BA control button

Useful during observation in early phase of angiography, when image is still dark.

MYD / NM selection

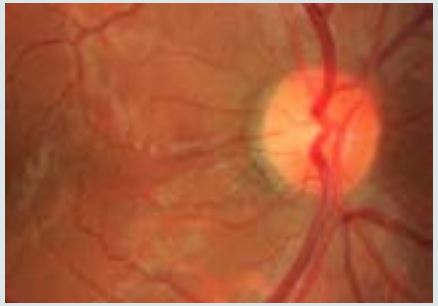
Just press a button to change between the two modes.

Fixation target

LED matrix display to be used for the NM mode. For the MYD mode the external fixation target can be used or the optional internal fixation target.

32.5 MP purpose-built digital EOS camera

Canon, as world-leading camera manufacturer, has created a unique digital camera: the EOS Retina - specifically for ophthalmic photography. Dedicated algorithms in the internal DIGIC image processor provide optimal image parameters for retinal imaging. It results in the best possible retinal image, with representation of true colors.

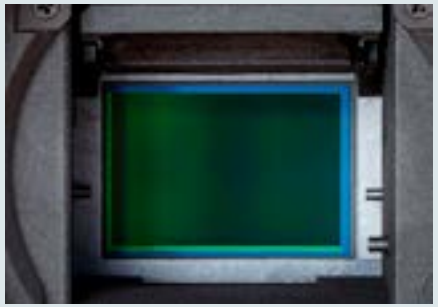


Optimal image parameters

Dedicated image processing reduces the gradation of overexposure: Low-intensity sections (macula) are clearly visible, while the high-intensity area of the optic disc is not too bright.

Fully integrated

Functionalities of the retinal camera are fully integrated with the EOS Retina. The camera body can be exchanged easily when upgrading to newer model or defects.
A great advantage over built-in digital cameras.



External monitor

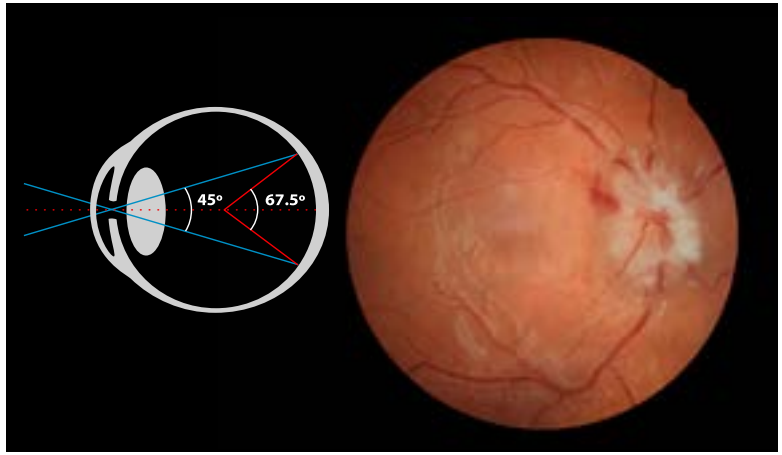
The image on the EOS screen can also be viewed on an external larger monitor in full HD. Simply connect a HDMI cable to the EOS.

32.5 MegaPixel

This extraordinary high sensor resolution maximizes the information provided by the sophisticated optics of the retinal camera, to visualize even the smallest details.

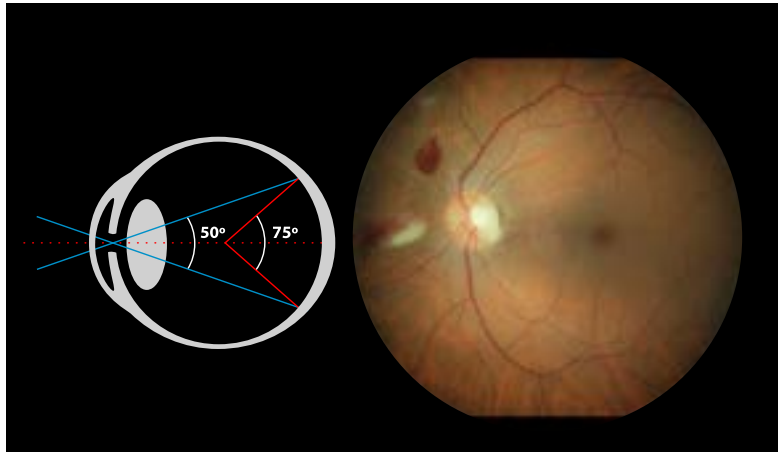
Non-Mydriatic Mode | 45 degrees

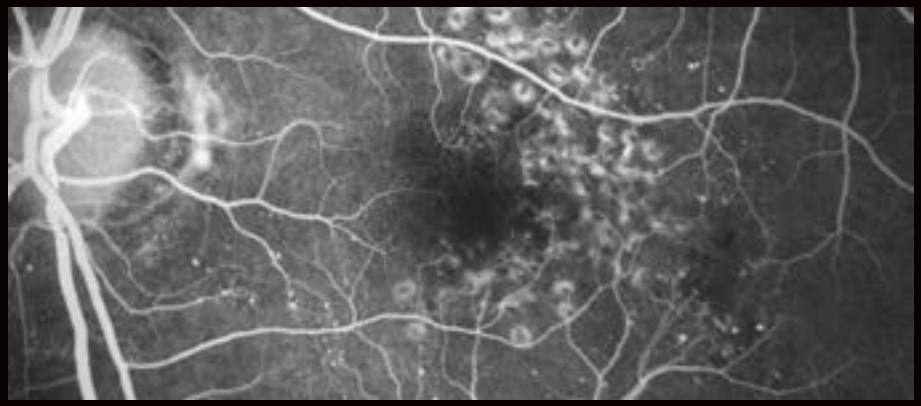
The imaging standard for retinal screening.
(67.5 degrees when using center of eye as reference)



Mydriatic Mode | 50 degrees

(75 degrees when using center of eye as reference)





x2 magnification

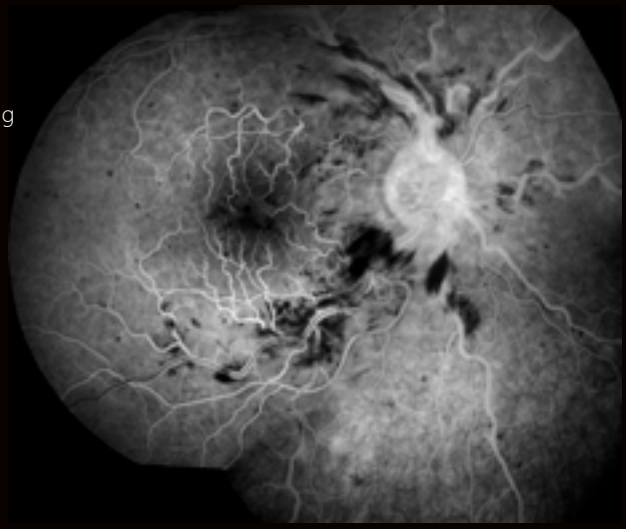
Digital zoom (30 degrees image) without any loss of image quality.

Reading centres

The 30 degrees image allows for participation in studies and co-operation with most leading reading centres: i.e Digital Angiography Reading Center (DARC), Wisconsin and Vienna Reading Center (VRC).

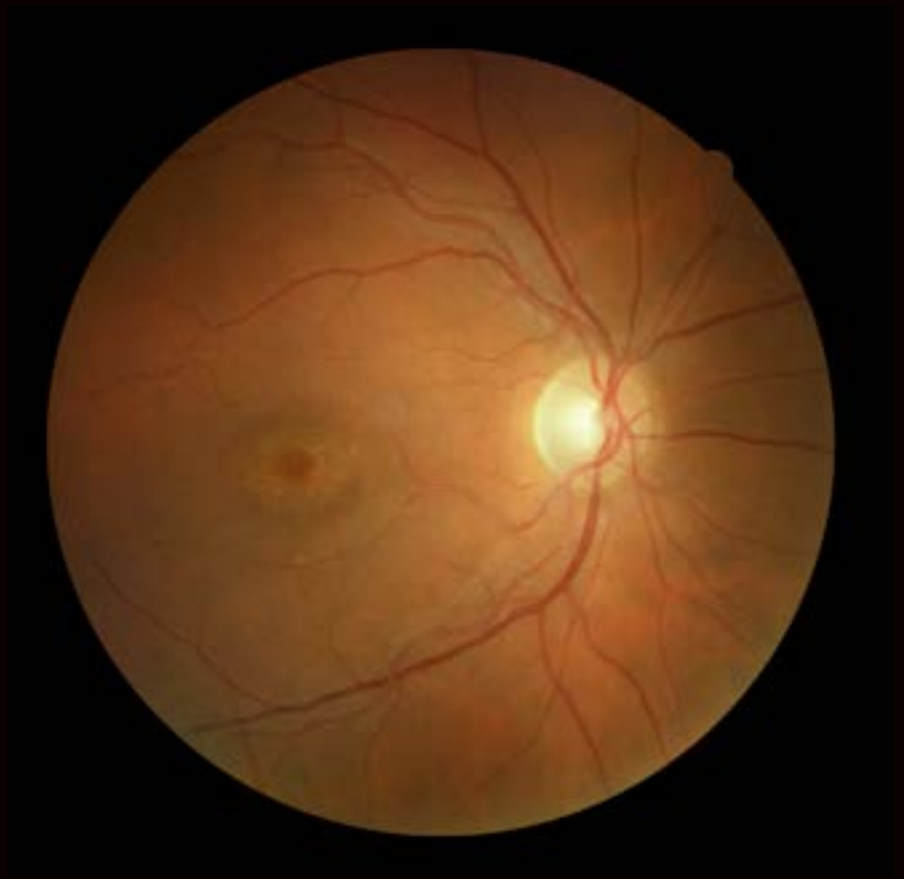
Wide Field Imaging

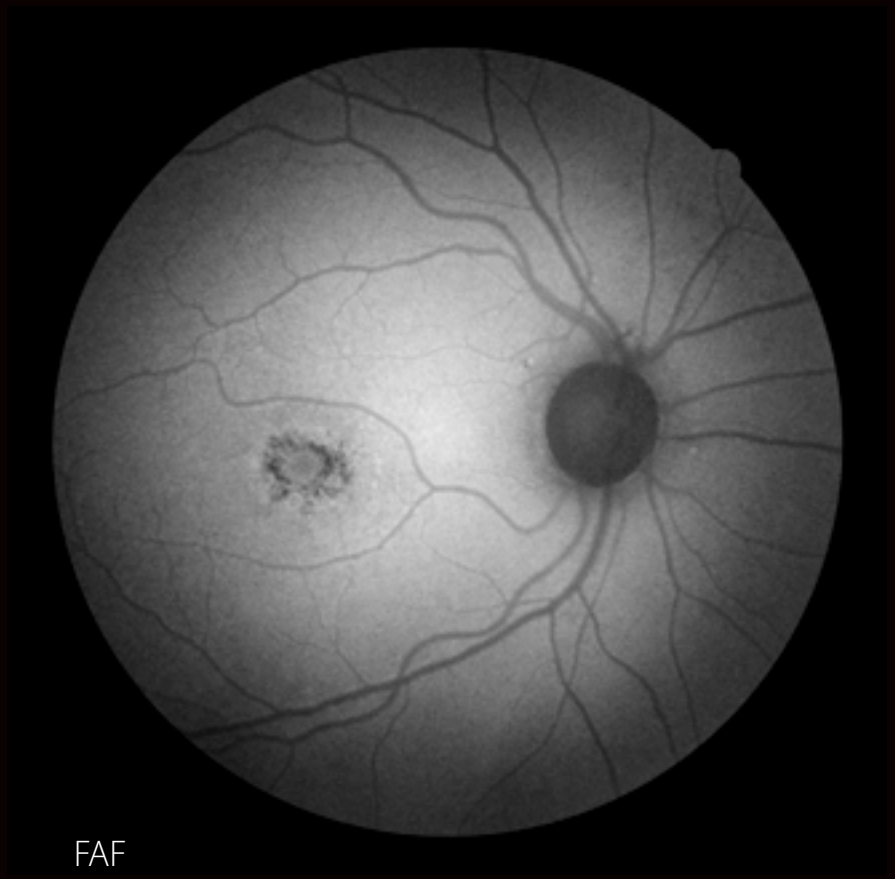
Combine up to 20 images into a wide field mosaic image covering an area of up to 100 degrees.



Fundus Auto Fluorescence (FAF)

FAF Imaging is a diagnostic technique for visualizing the deposition of lipofuscin in the retinal pigment epithelium (RPE). It is easy and non invasive since FAF does not require an injection with a fluorescein dye. FAF has proven to be very useful for the early detection of age related Macula Degeneration (AMD), one of the leading causes of visual impairment. Recent studies indicate that FAF Imaging can also aid in the diagnosis of a variety of other diseases and even in the detection of intraocular tumors.





FAF

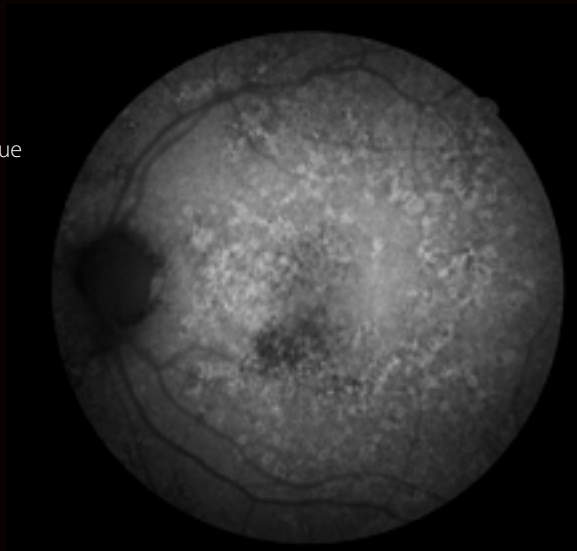
Clinical gallery

Multiple drusen and AMD

Multiple drusen scattered around the macular area.

FAF

The drusen are hyperfluorescent due to the content of lipofuscin, the macular area is hypofluorescent because of atrophy of the RPE.



Central serous chorio-retinopathy

Area above the fovea can be seen with disruption of the pigment epithelium.

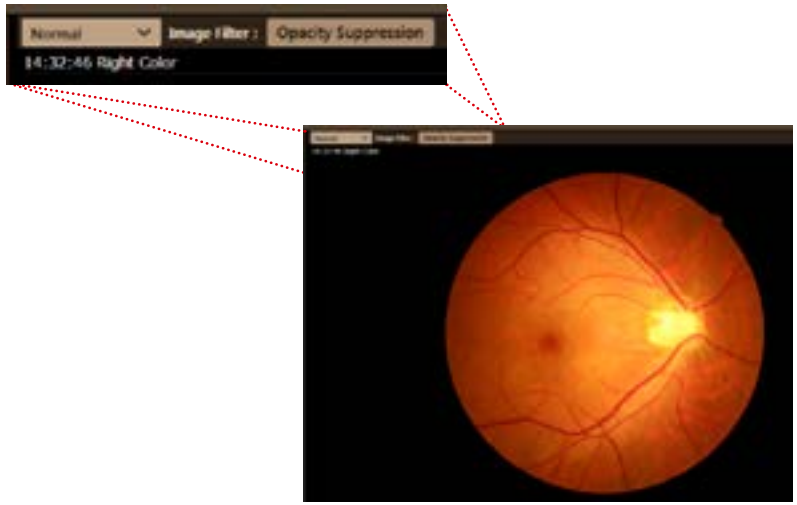
FAF

The affected area becomes clearer, showing mainly hypofluorescence (FAF).

Canon Opacity Suppression

When obtaining retinal images, ocular opacities can cause several problems. Canon's patented Opacity Suppression is a unique and sophisticated software tool, that based on all available information from the EOS Retina sensor will largely suppress the effect of ocular opacities on color images.

Canon's Opacity Suppression can be used while capturing the image, but also afterwards when making the report.



Original image

Canon Opacity Suppression

Original image

Canon Opacity Suppression

Ocular opacities will result in scattering of the light and will make the edges of the blood vessels appear blurred, and the difference in brightness of the retina will be reduced, making it very difficult to distinguish between structures. Additionally a cataract eye will cause images to appear more yellow.

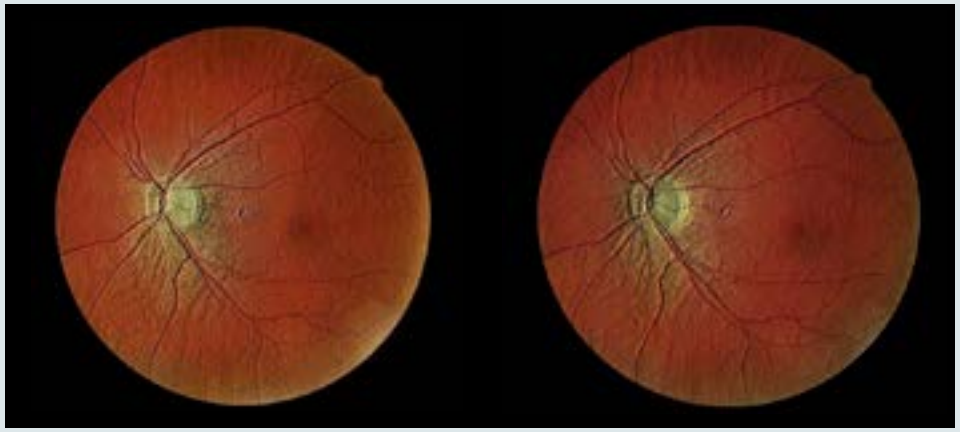
With Canon Opacity Suppression the original brightness and color of the retina will be restored and the blood vessels will appear much clearer.

Optimized workflow

Canon's Retinal Expert software (RX) has a very intuitive Graphic User Interface, making daily operation very pleasant. The software does not require the time consuming input of patient data manually but it can import lists from the practice management system or even a modality worklist in a DICOM environment. With the cache functionality - storing recent studies on the capture station - the access to previous examinations is considerably faster since there is no download waiting time due to limited network speed. It seamlessly integrates with other software such as the standard Command Line Interface and Launcher function (soft 1~3) of the Canon software. From your practice software, the RX software can automatically open on the patient for capturing or reviewing reports.

RX Software

RX Software offers an impressive arsenal of tools to assist your diagnosis and to create a clear and complete report. Use the emboss function on a retinal image, change its gamma value, adjust its brightness and contrast, change its color balance, add annotations to it, and analyze its C/D ratio. Images can also be rotated, flipped and mirrored.



Emboss Negative

The blood vessels stand out.

Emboss Positive

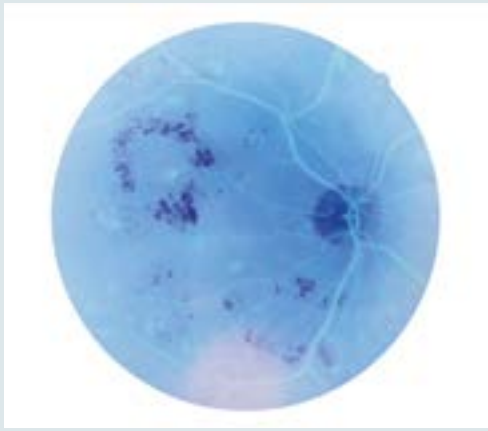
The optic disc stands out.

Annotations

Add a shape and texts to a captured image.

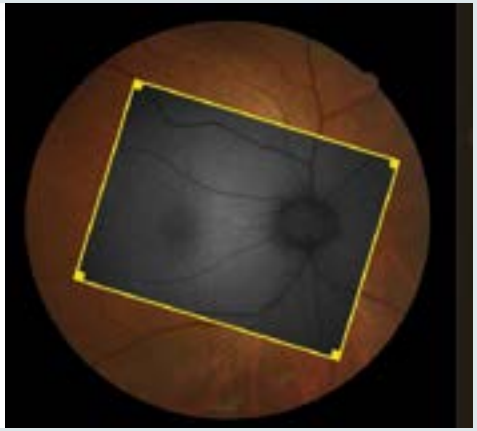
Cup/disc measurement

Measure the optic nerve papillary area.



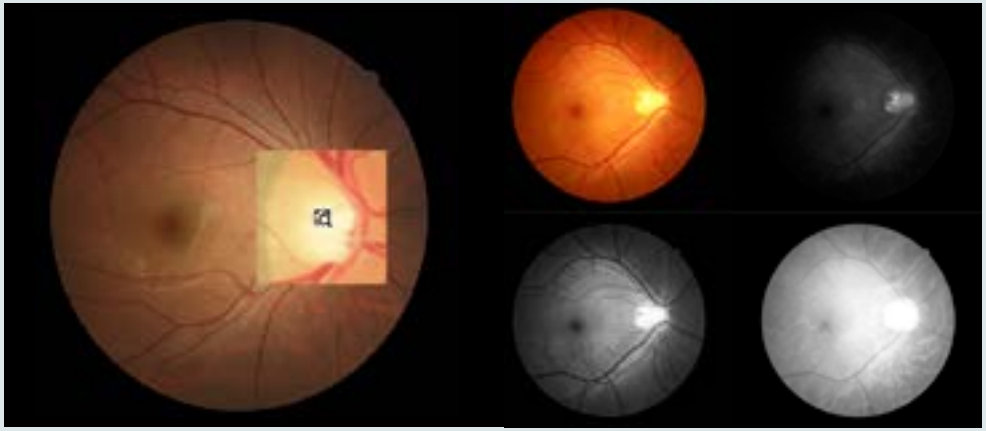
Color

Inverts the color of an image to assist diagnosis.



Overlay

Overlay two images to see differences and changes in pathology.

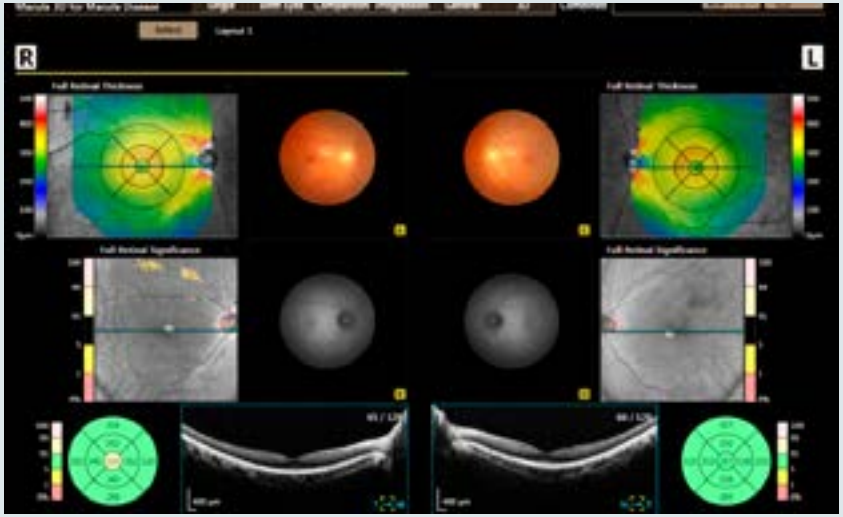


Loupe function

To assist diagnosis.

RGB Channel view

View separate RGB channels.



Combined report: OCT + Retinal image

Shows the analysis results of retinal images, accompanied with OCT Images, obtained with a Canon OCT. The fully automatic image exchange offers a great workflow advantage over combination units.

Single Eye Report

Compare result with a previous study.

Comparison Report

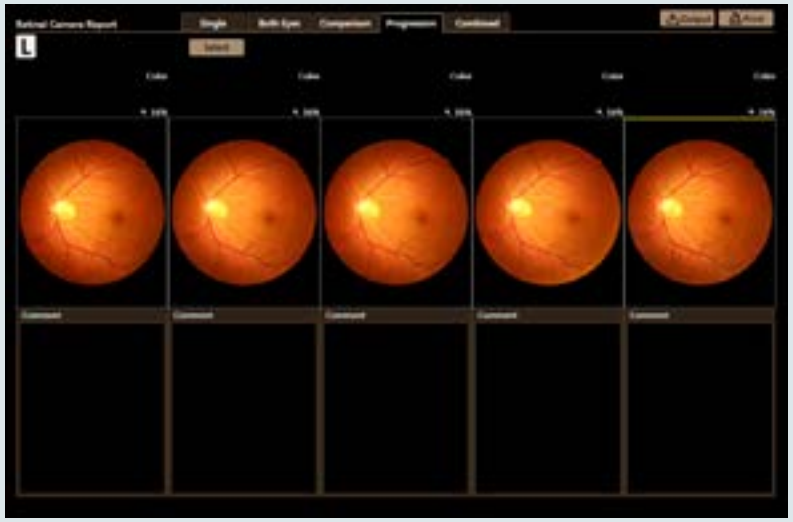
Compare result with a previous study.

Mosaic Report

Automatic stitching of up to 20 images for a very wide combined image.

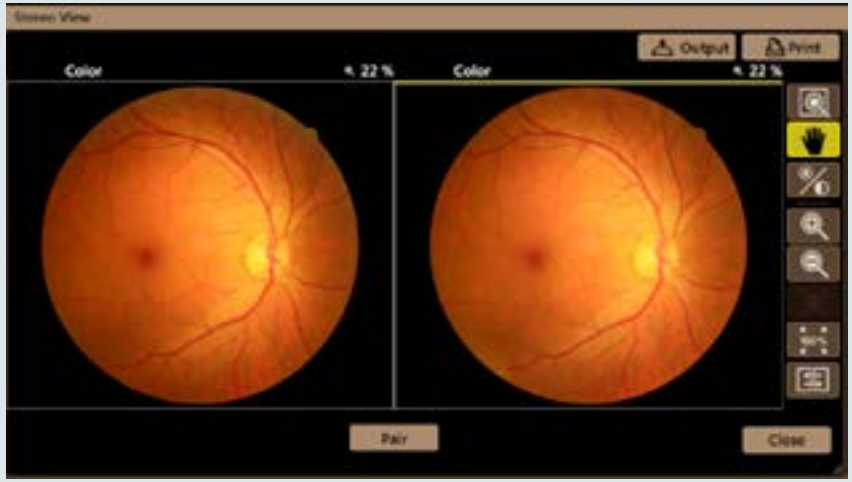
Both Eyes Report

Compare left and right eye together.



Progression Report

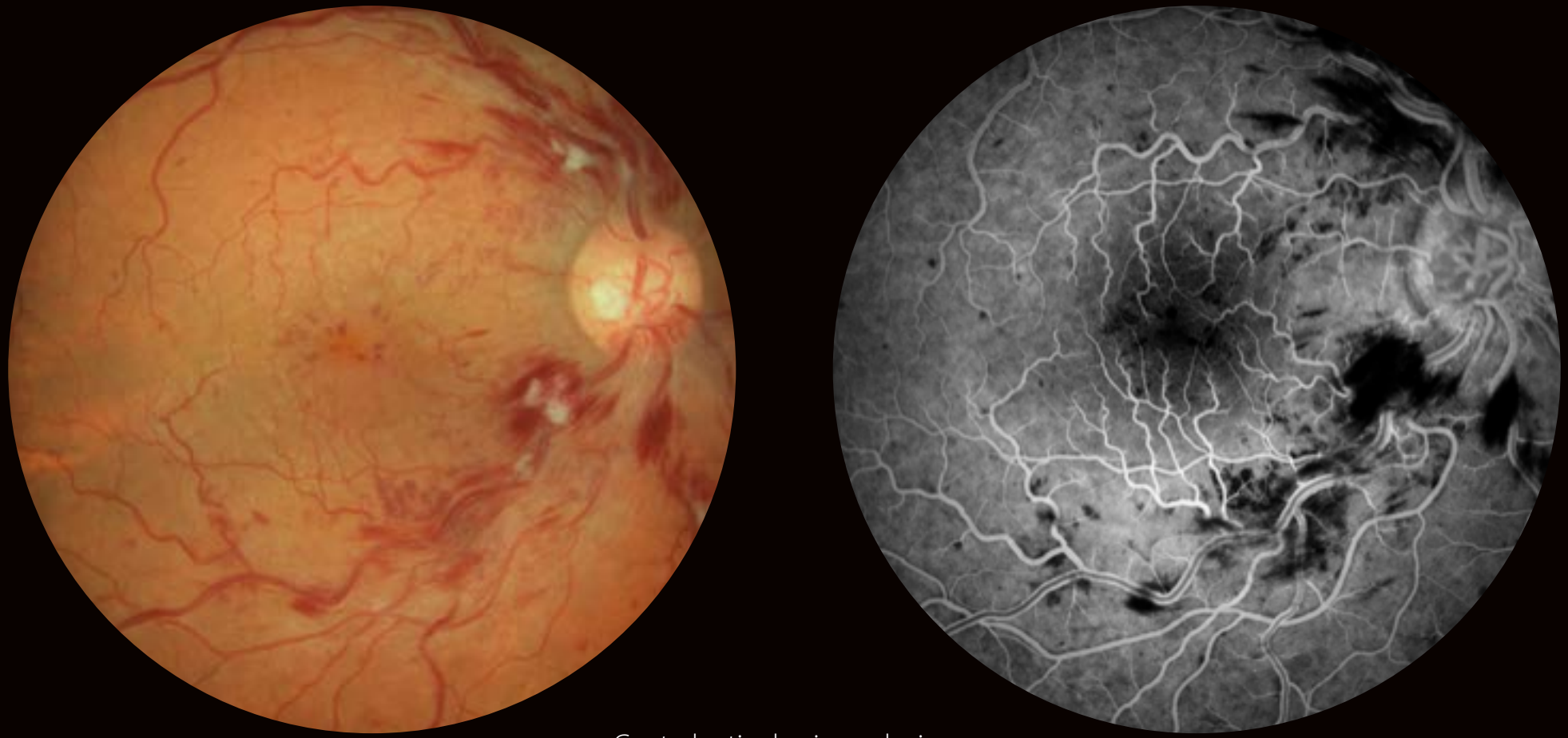
Select up to 5 previous studies to observe progression.



Stereo Photography View

Pair and view two images.

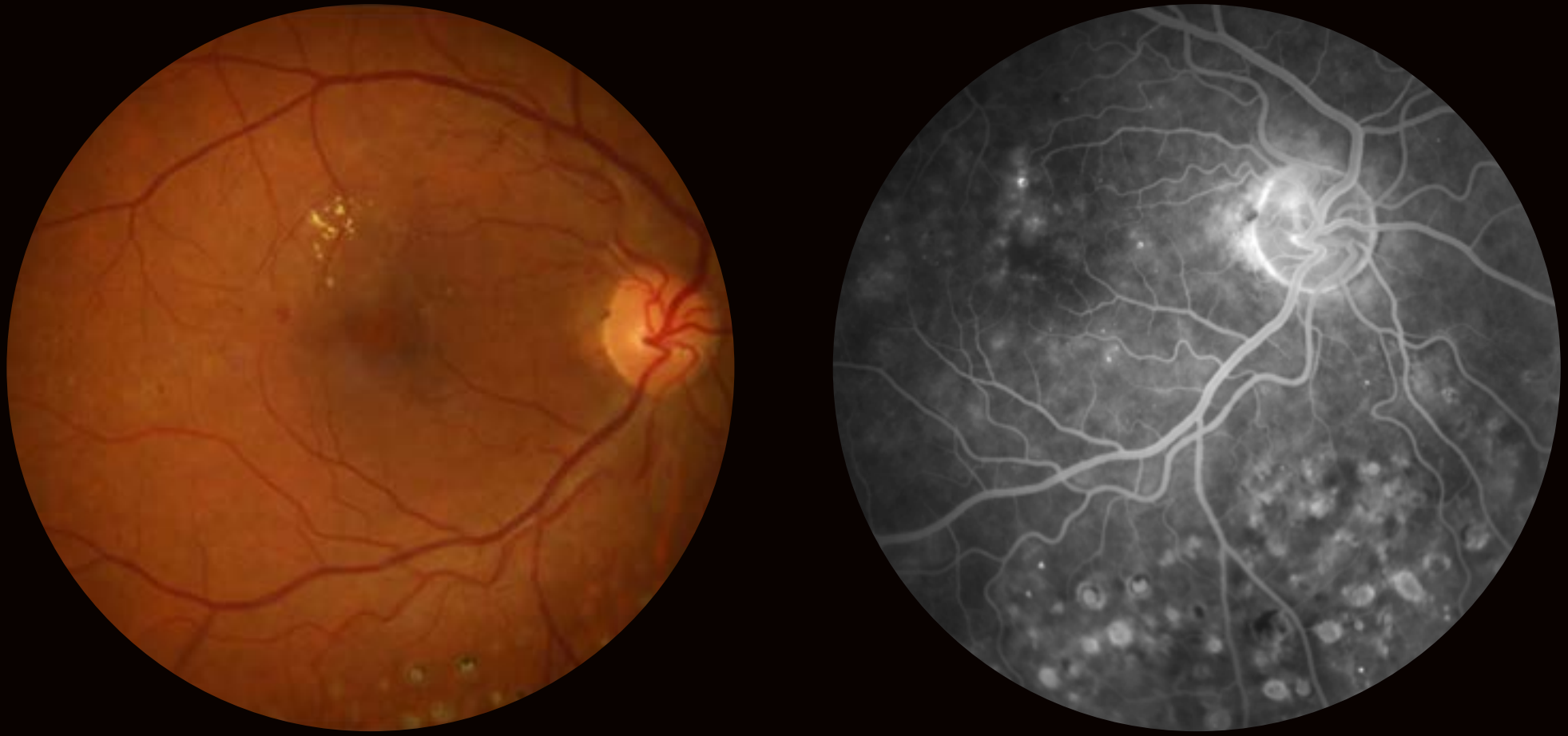
Clinical gallery



Central retinal vein occlusion

Diabetes

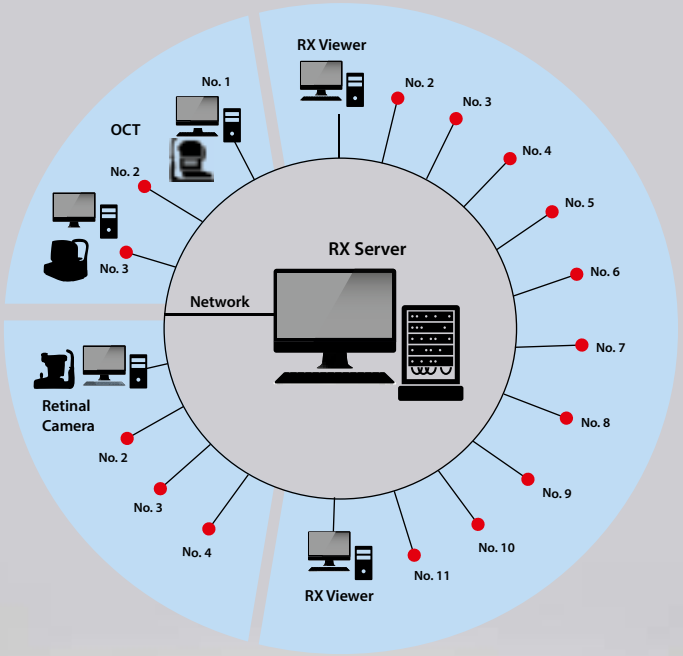
Clinical gallery



Localized arterial occlusion with vascular sheeting

Nevus

A scalable IT solution to match all your patient data and connectivity requirements



Canon Medical's Retinal Expert (RX) Ophthalmic Software Platform ranges from stand-alone installations to server-based multi-access solutions, combining Canon's retinal cameras and OCTs. The multi-modality platform is designed for seamless integration into your existing EMR system or practice management software and also offers cloud based storage solutions. RX Software is fully DICOM compliant - included as standard.

With comprehensive anonymization tools, central account and user management, as well as advanced logging capabilities, Canon's RX software is fully GDPR compliant. The software protects the privacy of your patients and allows you to properly document your studies.

Stand alone

The RX Capture software is fully integrated with Canon retinal cameras and enables capturing, reviewing and reporting in stand-alone mode. It also serves as a database including archiving.

Viewing station

RX Viewer software allows you to access all patient data for reviewing and reporting from remote locations while the database remains on the RX server.

Server solution

With the RX server software you can connect multiple modalities and viewers while storing all images and patient data on a centralized server.

RX

Specifications CX-1

Dimensions	320 W x 531 D x 577 H mm, 26 kg
Angle of view	MYD: 50 degrees, Non-Myd: 45 degrees 2 X magnification (digital)
Minimum pupil size	Myd: ø 5.1mm (SP mode ø 4.3 mm) Non-Myd: ø 4.3 mm (SP mode ø 3.8 mm)
Working Distance	35 mm
Photography modes	Color /FA /Red Free /Cobalt and FAF
Mounted camera	Dedicated digital EOS camera (32.5 MegaPixel for current model) HDMI Output for external monitor Full HD resolution
Flash levels	168 steps
Patient's diopter	–31D ~ –7D, –10D ~+15D (standard) compensation +11D ~+33D
Focus Adjustment	Split Lines
Working distance	Corneal Reflection dots adjustment
Panning and Tilting	30 degrees to the left and right tilting range 15 degrees up, 10 degrees down
Light sources	Xenon tube for photography Halogenlamp for observation (Myd mode) IRED LED for observation (Non-Myd mode)
Fixation targets	External Internal LED dot matrix for Non-Myd mode (70 points) Internal fixation target for Myd mode (optional)
Optional accessories	Internal fixation target (FIXTARGETCX1K)

Canon

https://eu.medical.canon

Model number: CX-1
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Canon Medical Systems Corporation meets internationally recognized standards for Quality Management System ISO 9001, ISO 13485. Canon Medical Systems Corporation meets the Environmental Management System standard ISO 14001.

Made For life