rtx1-ε

Adaptive Optics Retinal Camera[1]

Imaging the retina at the microscopic scale
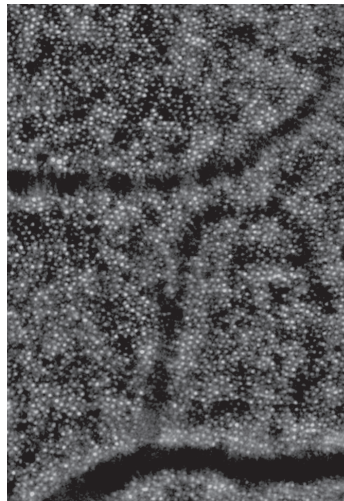
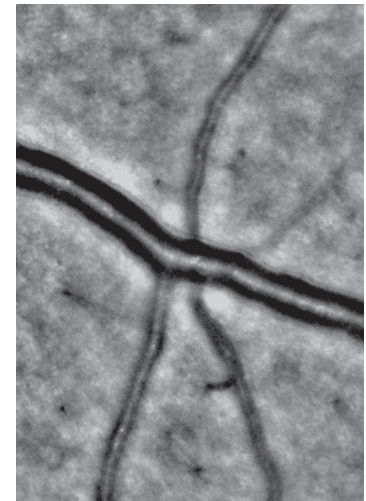**Previously unseen retinal structures, now visible with the rtx1:**

- Extrafoveolar cone photoreceptors
- Arteriolar structure: lumen and wall
- Thin borders of macular lesions
- Pores of the lamina cribrosa
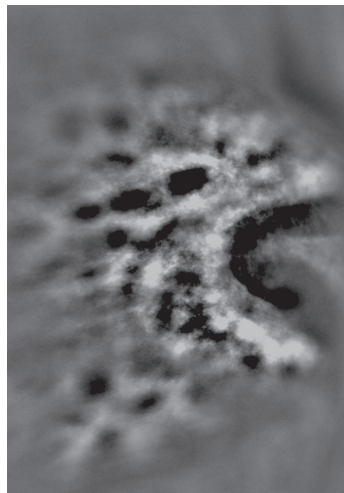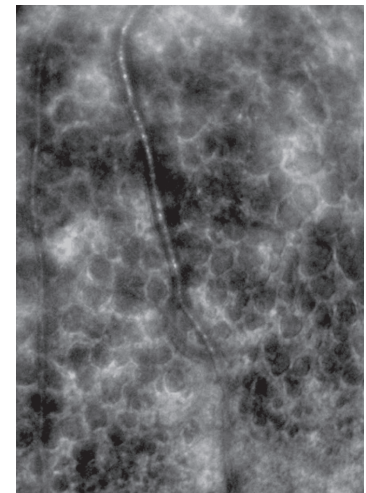- Microaneurisms and microscopic hemorrhages

Cone mosaic

Capillaries

Lamina cribrosa

Microcystic edema

rtx1

imagine eyes

Technical data

Imaging

Imaging type	En face near-infrared reflectance imaging
Detection type	Low-noise CCD camera
Imaging field of view[2]	4° x 4°
Camera pixel pitch on the fundus[2]	1.1 µm
Optical resolving power on the fundus[2,3]	250 line pairs per millimeter (lppmm)

System

Adaptive optics control	Fully automated, resistant to blinking & movement
Focusing range[2]	1600 µm
Minimal pupil diameter	≥ 4 mm
Fixation stimulation range	H ±14.5° / V ±10°
Refractive error compensation	-12 to +6 D

1. The rtx1 is an approved medical device in the European Union (CE mark from G-MED, class 2a device), in Japan (Shonin) and in Australia (ARTG approval). In the USA, the rtx1 has not received FDA clearance. It is an investigational device and requires Institutional Review Board (IRB) oversight for use in any research application. Further information should be read in the user documentation.
2. Some specifications are dependent on ocular biometry, pupil diameter, optical defects, ocular media transparency as well as other factors
3. System can image line pairs of 2 µm in line width

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