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Looking deeper into the health of your RETINA

Your optometrist has recommended an advanced diagnostic scan to evaluate the health of your retina.

For this procedure, your optometrist will be using a highly innovative instrument called CirrusTM HD-OCT. This advanced-technology instrument never touches your eye, so there's no discomfort. It's safe and requires only a few minutes of your time. Most importantly, Cirrus HD-OCT helps your optometrist to clearly see the internal structures of your eye, so problems can be treated before they progress. The unique view that your optometrist sees with Cirrus HD-OCT is called a direct cross-sectional image of your retina.

What is direct cross-sectional retinal imaging?

The retina is the innermost lining of the inside of your eye. It is composed of several layers, and functions like the film in a camera. The lens of the eye focuses images on your retina, much like the lens of a camera focuses images on film. These images are transmitted to your brain by the optic nerve, enabling you to see.

Direct cross-sectional imaging is so named because it enables your optometrist to look directly at a "cutaway" view of the layers of the retina and optic nerve, and accurately assess their characteristics. Other machines show the surface of these structures, but Cirrus HD-OCT shows your optometrist what is below the surface.

Does this type of image help your optometrist?

The best answer is, examining your retina without the Cirrus HD-OCT would be like trying to diagnose a broken arm without an x-ray, or a ruptured disc without an MRI.

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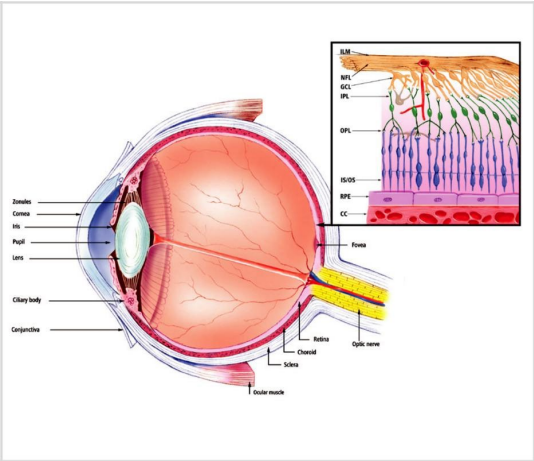
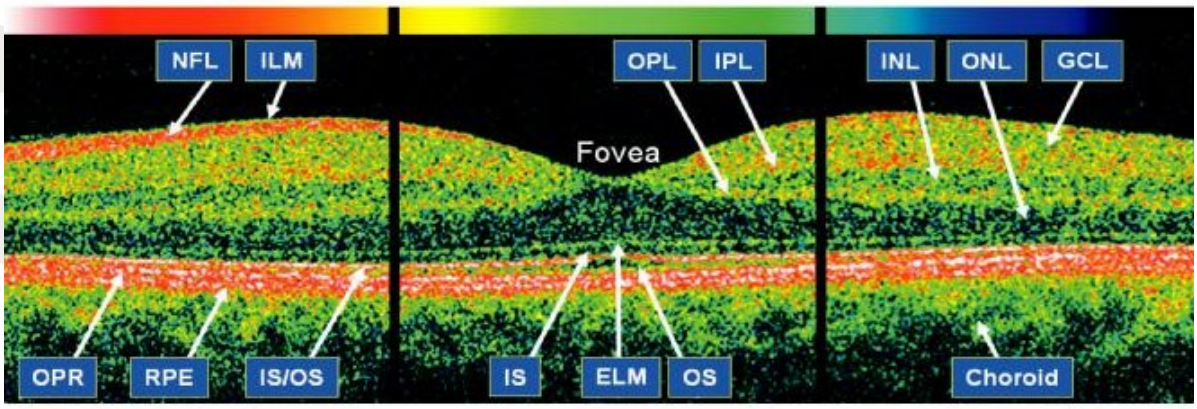
The Layers of the Retina



Cirrus HD-OCT Image

Strong Reflection Medium Reflection Weak Reflection



Nerve fi
NFL: bre layer
IS: Photo receptor inner segment
ILM: Inner limiting membrane
OS: Photo receptor outer segment
GCL: Ganglion cell layer
IS/OS: Interface between PR inner & outer segment
IPL: Inner plexiform layer
INL: Inner nuclear layer
OPR: Outer PR/RPE complex
OPL: Outer plexiform layer
RPE: Retinal pigment epithelium + Bruch's membrane
ONL: Outer nuclear layer
ELM: External limiting membrane

This is a Cirrus HD-OCT image of the layers of a normal retina.

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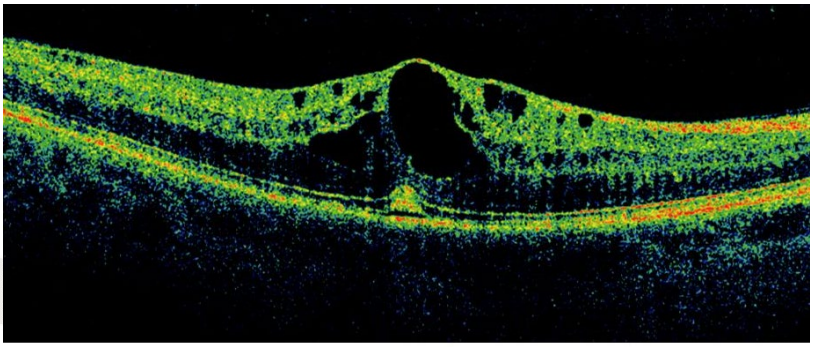
What does direct cross-sectional retinal imaging offer that's unique?

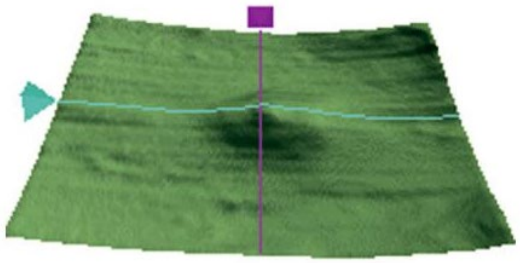
With Cirrus HD-OCT's ability to image the individual layers of the retina, your optometrist can see and measure delicate structures and monitor any changes. OCT imaging is the only technology that provides these cross-sectional images, so it's the ultimate tool for precise diagnosis and treatment.

What can direct cross-sectional imaging tell my optometrist about my retina?

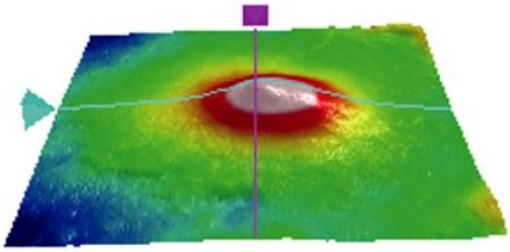
Cirrus HD-OCT enables your optometrist to detect many retinal disorders. The following are some important examples:



Post-Cataract Surgery Cystoid Macular Oedema consists of fluid-filled cysts that form within the retina causing the retina to be swollen. This is usually noticed as blurry or distorted vision.



This is the same eye but shown as a 3D surface map. This image covers a 6mm x 6mm region and shows the swelling clearly.



The same eye but shown as a 3D thickness map. The hotter colours represent thicker regions of the retina. This analysis is useful for showing changes over time.

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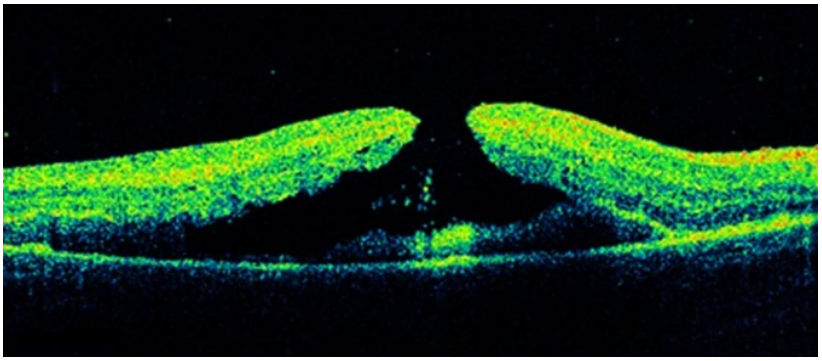
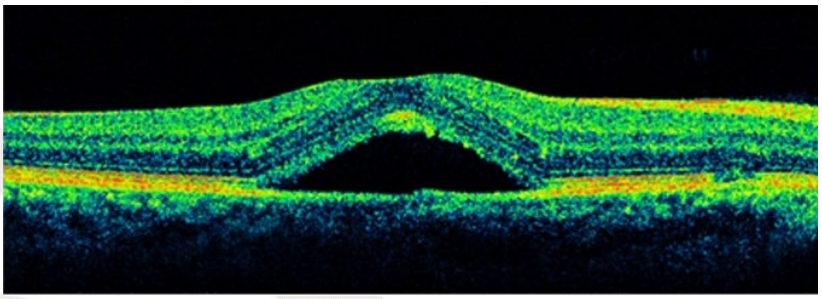
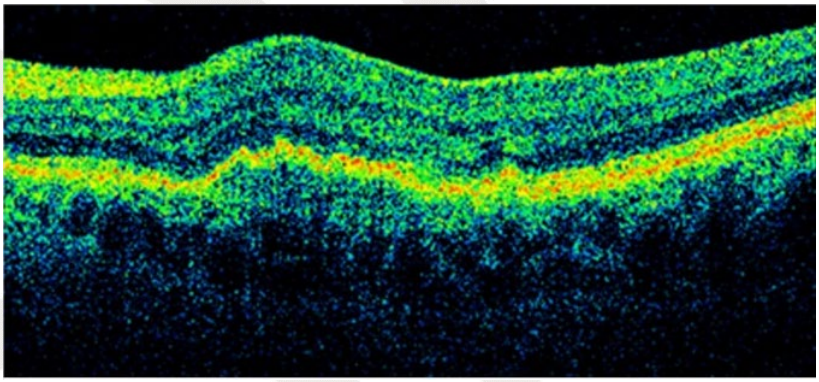


Macular Hole is a hole in the retina. Prior to treatment, the loss of vision can be very slight to very noticeable, depending on the size of the hole.



Central Serous Chorioretinopathy is a blister of fluid that collects underneath the retina. Prior to treatment, symptoms can include a dark or grey area in the field of vision.



Age-Related Macular Degeneration (AMD) is a deterioration of the macular, which is the part of the retina responsible for sharp, direct vision. AMD may include abnormalities below the retinal surface. Prior to treatment, this can interfere with central vision.

Cirrus HD-OCT: Revealing the complete picture.

Cirrus HD-OCT offers the ultimate benefit for people with retinal abnormalities - the best possible care. Early detection helps your optometrist to diagnose and control retinal problems before avoidable, permanent damage is done.

Cirrus HD-OCT enables your optometrist to watch closely for the slightest retinal changes and respond as needed.

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Cirrus HD-OCT gives your optometrist high quality, highly accurate knowledge of your eyes that is simply unavailable with any other technology. This extremely detailed understanding of your eyes can be instrumental and essential to safeguarding your vision for many years to come.

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