
OCT + OCTA

Avanti™
WIDEFIELD OCT

with

AngioVue™
OCTA IMAGING
Avanti Widefield OCT with AngioVue OCTA Imaging

Comprehensive Structural and Functional Imaging — in a Single Imaging Platform
Comprehensive OCT Imaging

The Avanti™ Widefield OCT is a powerful clinical tool that will transform the way you diagnose ocular disease — from the anterior segment to the choroid — to let you tailor your approach to treatment for truly personalized care.

- Visualize the vitreous and deep choroid and gain new information beyond the traditional 6x6mm cube
- Track and estimate rate of change in RNFL and GCC thickness
- Quantitatively assess the anterior segment to expand the clinical utility of your OCT system

The Future of Retinal Imaging

AngioVue™ OCTA Angiography (OCTA) brings valuable new information to clinical practice through non-invasive visualization of retinal and choroidal vascular structures.

- Visualize vascular structures non-invasively in a matter of seconds
- Analyze individual layers of vasculature to isolate areas of interest
- Personalize patient care with novel, real-time information that aids in treatment decisions
Retina Applications

See Retinal and Choroidal Vascular Structures in Exquisite Detail

Assess Individual Layers of Vasculature

Images courtesy of Pravin Dugel, MD.

Optic Nerve Applications

Visualize Optic Disc Vasculature

Measure Ganglion Cell Thickness with Normative Comparison

Images courtesy of Pravin Dugel, MD.
View Retinal Structure in High Definition

Evaluate Individual Layers of the Retina

Anterior Segment Applications

Measure Corneal Thickness

View and Quantify Anterior Chamber Structures
AngioVue OCT Angiography
Crystal Clear Imaging in Seconds

See retinal vascular structures in a whole new way with three-dimensional images that are shown as individual layers of vasculature to provide an unprecedented level of detail.
Leading OCTA Innovation and Clinical Applications

Since 2014, Optovue has been the leading provider of OCTA technology, having introduced the world’s first commercially available OCTA platform with more installations worldwide than any other OCTA system.

We remain focused on furthering the science, efficacy and clinical application of OCTA for enhanced eye health and are working in partnership with ophthalmic specialists around the globe to accomplish this mission. As a result, the AngioVue system has been featured in more peer-reviewed publications and scientific presentations than any other OCTA system.
Visualize widefield views of retinal anatomy and en face views of structural layers.

Analyze retinal structures with comprehensive reports.

Personalize patient care by imaging as often as needed.

Images courtesy of Bruno Lumbroso, MD, Rome, Italy
Visualize individual layers of vasculature.

![Images of retinal vasculature layers](image)

Images courtesy of Pravin Dugel, MD, Phoenix, Arizona

Analyze retinal structures with comprehensive reports.

![OCT OverVue Report](image)

![Change and Trend Analysis Report](image)

Personalize patient care with new information on retinal vasculature.

“I have had patients in whom I suspected choroidal neovascularization, but where traditional OCT was not very diagnostic. The AngioVue Imaging System allowed me to visualize choroidal neovascularization definitively, which gave me the information I needed to treat those patients earlier.”

-David Boyer, MD. Retina-Vitreous Associates Medical Group
Optic Nerve Applications

Visualize optic nerve vascular changes in known glaucoma patients.

Analyze anatomical structure and vascular structure with comprehensive reporting.

Personalize treatment with trend analysis reports displaying estimated rates of change.

Images courtesy of Michel Puech, MD, Paris, France

Images courtesy of Linda Zangwill, San Diego, California
Anterior Segment Applications: Cornea Advance

**Visualize** anterior segment structures to gain new information that aids in pre-surgical planning and post-operative assessment.

- **Cornea Line Scan with Caliper Tool**
- **9mm Pachymetry Map**
- **Total Cornea Power for Post-LVC IOL Power Calculation**

**Analyze** corneal angles and thickness quantitatively to increase diagnostic confidence.

- **Cornea Angles with Measurement Tools**
- **Pachymetry Change Analysis**

**Personalize** IOL power calculation for post-refractive surgery patients.

**Total Cornea Power® (TCP)**

Provides direct quantification of the corneal power by measuring both the front and back surfaces of the cornea.

Scan acquisition takes less than two seconds and reduces reliance on historical data.
Case Studies

Choroidal Neovascularization

CNV as visualized with FA and OCTA. Abnormal vasculature is seen in the Outer Retinal Zone of the OCT angiogram.

Images courtesy of Pravin Dugel, MD, Phoenix, Arizona

Proliferative Diabetic Retinopathy

Proliferative diabetic retinopathy with retinal neovascularization visualized in the vitreous-retina.

Images courtesy of Bruno Lumbroso, MD, Rome, Italy.
**Optic Nerve Disease Progression**

Trend analysis software estimates the annual rate of change based on all prior visits and may be used to predict the future rate of change. Correlation of the estimated rate of change with the patient’s age and other unique characteristics aids in clinical decision making.

![Progression Examples]

*Case studies courtesy of Linda Zangwill, PhD, San Diego, California*

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**Post-Refractive Surgery IOL Power Calculation**

Total Cornea Power measurements may be entered into the ASCRS IOL calculator to generate a recommended lens power for post-refractive surgery patients.

![IOL Calculation Examples]

*Case study courtesy of Erik Mertens, MD, Antwerp, Belgium*
AngioVue Technology

SSADA: Split-Spectrum Amplitude Decorrelation Angiography

OCTA relies on the acquisition of sequential OCT B-scans at a single cross-section of the retina and a comparison of the scans against one another. The differences between scans indicate the presence of blood flow.

SSADA is a proprietary algorithm that shortens the scan time needed to acquire the sequential B-scans while producing unparalleled OCTA image quality by optimizing the signal to noise ratio (SNR).

This unique technology elevates image quality by optimizing signal-to-noise ratio while minimizing scan acquisition time.

SSADA images display less noise and a more detailed microvascular network.

SSADA was developed by David Huang, MD, PhD at Oregon Health Sciences.

En Face Visualization

En face technology separates the retina into distinct structural layers for assessment of microvascular changes.

En face colorization uses a standard color scheme for rapid identification of the different retinal layers. The en face layer indicator icon provides a reference to the retinal layers displayed.

Red: Choriocapillaris
Yellow: Outer Retina
White: Superficial Capillary Plexus
Purple: Deep Capillary Plexus
DualTrac™ Motion Correction Technology

DualTrac provides enhanced flow visualization and ultra-precise motion correction by combining real-time tracking, which corrects for patient motion and blinks, and post-processing Motion Correction Technology (MCT) to further reduce residual motion and enhance image quality.

DualTrac Technology:

- Improves patient comfort by allowing blinks and fixation drifts during acquisition
- Increases the number of patients that can be successfully scanned compared to independent use of live tracking
- Enhances visualization of vascular structures

AngioMontage

See a wider field of view with AngioMontage™, which allows for automatic stitching of two 6x6 mm images centered on the macula and optic disc for a widefield view of retinal vasculature.

Images courtesy of Adil El Maftouhi, Lyon, France
MCT was developed by MIT and the University of Erlangen.
Networking Solutions

- **NetVue Pro** allows viewing and modification of images from a single Optovue OCT system on up to eight review stations. In addition, with NetVue Pro, new patient scans may be captured while existing scans are reviewed.

- **NetVue Enterprise** enables viewing and modification of images from multiple Optovue OCT systems on up to 20 review stations.

- **NetVue Web** is a browser-based solution that brings Optovue OCT images to a smartphone, tablet or PC.

- **DICOM**. All Optovue products are DICOM compatible.

Networking Specifications

**Operating System:** Windows 7, 8 and 10; 64-bit OS compatible

**Processor Speed:** 3.0 GHz; Intel Quad Core (desktop); Core 2 (laptop)

**Network Bandwidth:** 1 Gbps or higher

**Computer RAM:** 4 GB or higher

**Monitor Resolution:** 1920 x 1080 at 32-bit color
Product Configurations

- **Avanti Widefield OCT** is a structural OCT system featuring extensive retina, glaucoma and anterior segment applications.

- **AngioVue OCTA Imaging** is an addition to the Avanti system to enable OCTA capabilities.

- **AngioVue Retina** is a configuration designed specifically for retina practices that combines functional OCTA with structural OCT retina scans.

- **AngioVue Retina** may be upgraded to the comprehensive system that includes glaucoma and anterior segment applications at any time.

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<th>Avanti</th>
<th>AngioVue</th>
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<td>AngioRetina</td>
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<td>AngioDisc</td>
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<td>Structural OCT: Retina</td>
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<td>Structural OCT: Anterior Segment</td>
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Technical Specifications

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<tr>
<th>Specification</th>
<th>Value</th>
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<tr>
<td>OCT scanning speed</td>
<td>70,000 A-scans per second</td>
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<tr>
<td>Optical axial resolution</td>
<td>~5 microns (digital pixel sampling = 3 µm)</td>
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<tr>
<td>Optical transverse resolution</td>
<td>~15 microns</td>
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<tr>
<td>OCT axial imaging depth</td>
<td>2 to 3 mm (dependent on scan protocol)</td>
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<tr>
<td>AngioVue imaging volume</td>
<td>304 x 304 B-scans (2 repeat B-scans with 304 lines per B-scan)</td>
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<tr>
<td>Acquisition time per imaging volume</td>
<td>(209K / 70K) ~3 seconds</td>
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<tr>
<td>AngioVue imaging size (retina)</td>
<td>3x3, 6x6, 8x8 mm</td>
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<tr>
<td>AngioVue imaging size (optic disc)</td>
<td>3x3, 4.5x4.5, 6x6 mm</td>
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