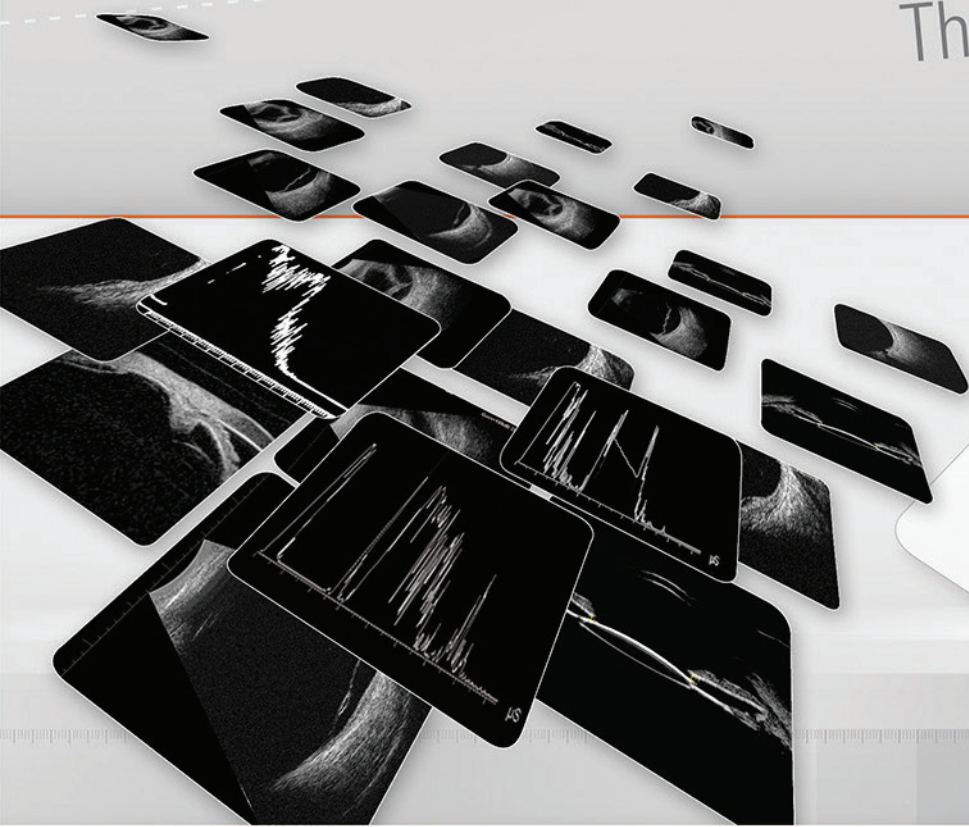


# Aviso<sup>®</sup> S™

The Ultrasound Platform



**A/B Scan, UBM & Standardized A Mode**



# Aviso S™

Quantel Medical's cutting edge technology in ultrasonography has brought constant and multiple innovations to ultrasound specialists worldwide since 1993.

Aviso S is a modular ultrasound platform that adapts to the varying demand of multispecialty practices. With its unique mode of standardized echography software Aviso S offers a diagnostic tool ideal for ultrasonographers specialized in oncology and posterior pole diseases.

## A Comprehensive, Superior Quality Ultrasound Platform

- Standardized A scan fully compliant with requirements set by Prof K. Ossoinig
- Biometry module (A mode, IOL calculation, B mode biometry)
- B-scan with different frequency probes: 10 MHz, 20MHz
- UBM scan with 25MHz and 50MHz linear probes

<ul style="list-style-type: none"> <li>• Unique tissue differentiation</li> <li>• Unparalleled tumors and mass lesions diagnosis in eye and orbit</li> </ul>	<b>Std A-scan</b>
<ul style="list-style-type: none"> <li>• Routine use prior to cataract surgery</li> <li>• Axial length measurement (easy with Auto+Save Mode) and IOL calculation with all formulas</li> </ul>	<b>A-scan</b>
<ul style="list-style-type: none"> <li>• Management of patients with trauma, uveitis, vitreoretinal disorders and differentiation of intraocular tumors</li> </ul>	<b>B-scan</b>
<ul style="list-style-type: none"> <li>• Management of anterior chamber disorders</li> <li>• Analysis and Diagnosis of glaucoma</li> </ul>	<b>UBM</b>

## Image Quality

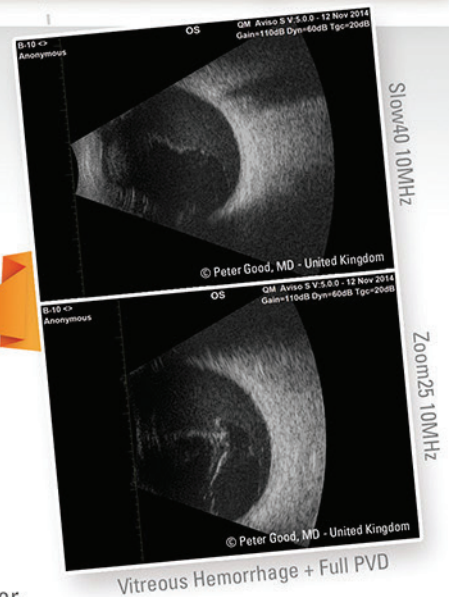
High resolution digital imaging, with the latest probe technology. Range of probes for specific applications:

- 10MHz => Easy visualization of the entire globe
- 20MHz => Increased resolution in the posterior pole for retina diagnosis
- 25MHz => Linear scanning probe for anterior segment visualization
- 50MHz => Linear UBM probe for glaucoma diagnosis

### New Zoom Feature included on the 10 and 20MHz Probes

The Quantel Medical's acoustic zoom technology allows for high image resolution when zooming in.

Using pre-set magnified areas at 10-35mm at 10 MHz and 15-35mm at 20 MHz helps to enhance visualization of vitreous and retina.



## User-Friendly Interface

Examination is fast and easy using the Aviso S software via touchscreen remote or the computer terminal:

- Simple, intuitive workflow through easy software navigation with full screen imaging and miniature reference images available during examination
- Quick and easy labelling of probe positioning and pathology localization with two eye diagrams
- Unlimited number of scans per session, saved and exported in image or video (Cineloop) format
- Automatic video recording of the last 40 seconds of examination to review and select the best image frame
- High performance post-processing image tools, including complete semi-automated tools for glaucoma diagnosis: AOD 500 & 750, TIA, IT 750 & 2000, ARA 500 & 750, TISA 500 & 750, LV



## Interconnectivity: DICOM & EMR Compatible

- Easy export of images and videos in EMR in jpeg and mpeg format
- DICOM option allows for easy access to patient files and storage and retrieval of exams

# Exclusive Standardized Echography

## ■ Unique Technique for Tissue Characterization

Standardized echography with Aviso S provides detailed and crucial information in the eye, orbit and ocular annexes including:

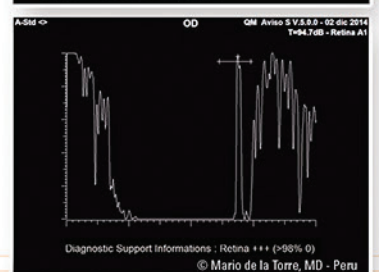
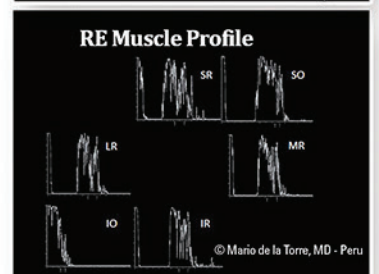
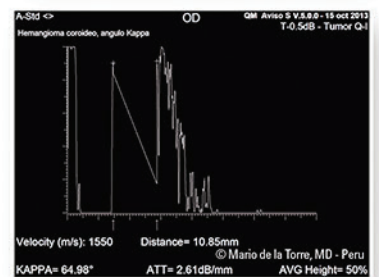
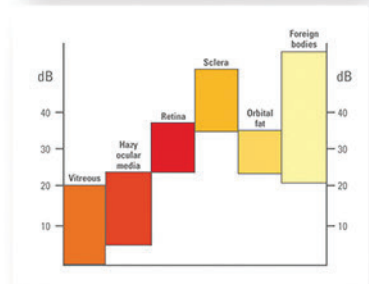
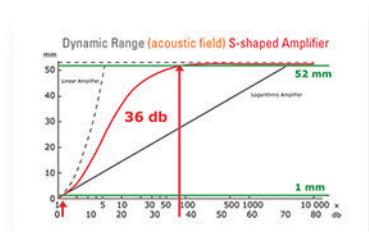
- Internal reflectivity of the structures
- Location and dimension of the structures
- Tissue differentiation

## ■ Unique Technology for Standardized Echography

- A specific parallel beam probe with the same sound intensity along length of scan
- An 8 MHz narrow band receiver
- An S curve amplifier that combines adequate acoustic acuity and perfect acoustic field allowing for precise visualization of reflectivity levels
- A unique tissue model is used to calibrate the probe, which standardizes tissue sensitivity measurements for consistent and accurate diagnosis

## ■ Unique and Extensive Diagnosis Capabilities

- Detect intraocular and orbital lesions quickly and reliably  
**Tumor Q1:** measure mass lesions, automatic calculation of tissue internal reflectivity, calculation and visualization of angle Kappa
- Calculate muscle thickness  
**Muscle Profile:** calculate the thickness of the six muscles to obtain muscle indexes
- Differentiate retinal or other membrane detachment  
**Retina A1:** automatic diagnosis support that recognizes specific levels of reflectivity for retina and other membranes.  
**Retina Q2:** for quantitative differential calculation



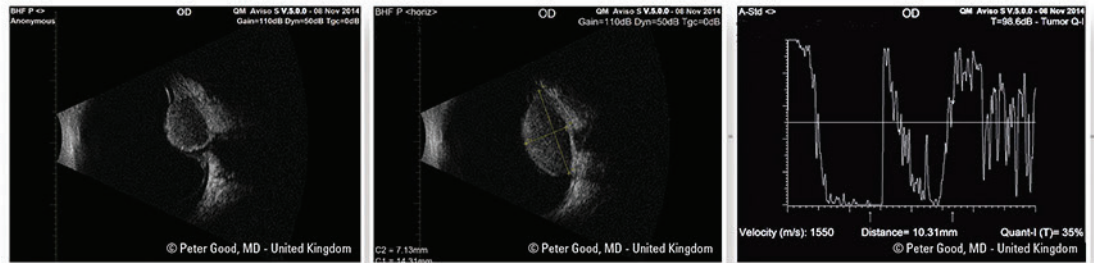
## Clinical Indications for Standardized Echography

Standardized echography is the most accurate method for:

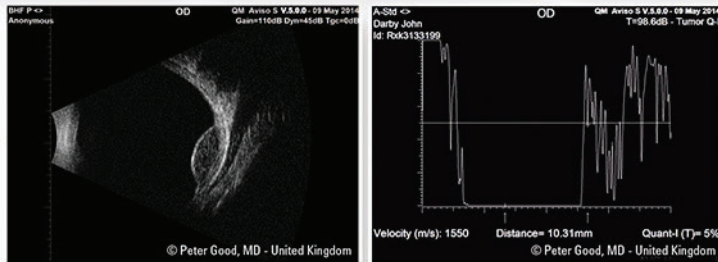
- Intra-ocular masses
- Orbital tumors
- Graves' disease

- Optic nerve pathologies
- Retinal or other membranes' detachment

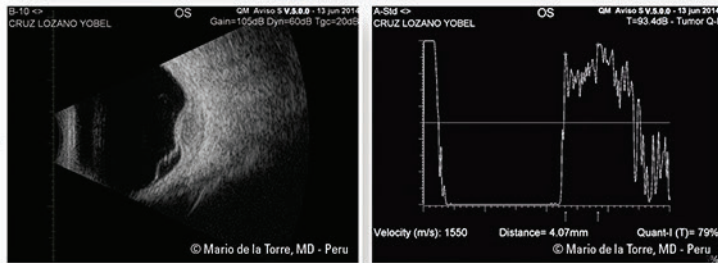
### Malignant Melanoma



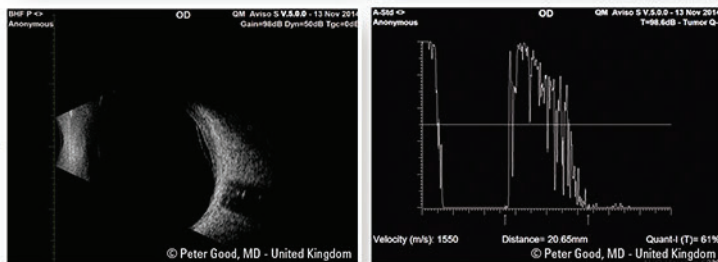
### Naevus



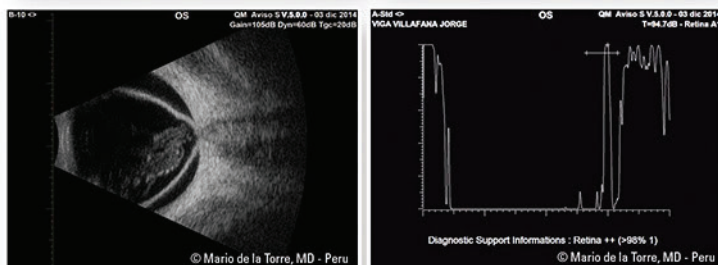
### Hemangioma



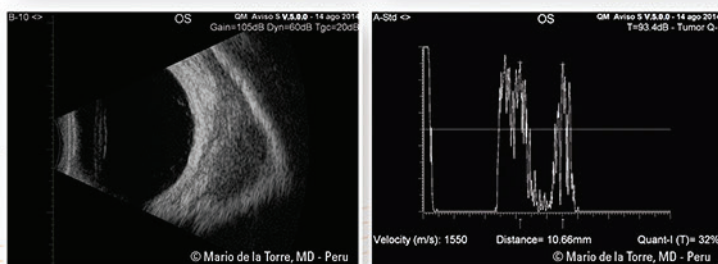
### Choroidal Metastasis



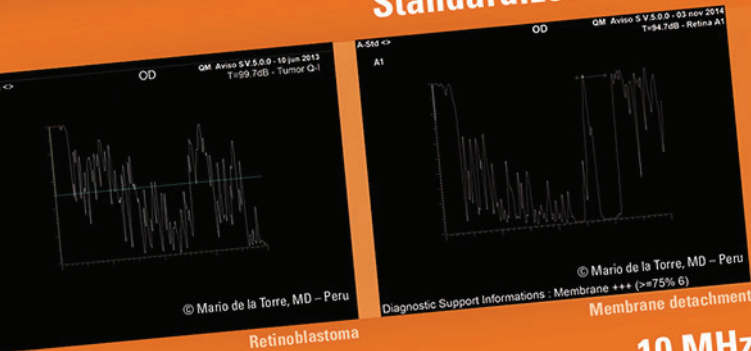
### Retinal Detachment



### Lymphoma

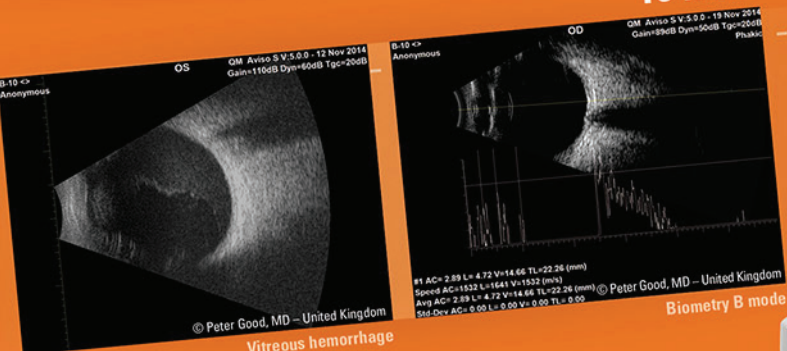


# Standardized A Probe



Retinoblastoma

# 10 MHz



Vitreous hemorrhage

Biometry B mode



# 20 MHz



Optic disc drusen

Extraocular muscle

# 50 MHz



Phakic IOL

Cataract and refractive surgery

# 25 MHz



Plateau iris



Non-contractual picture

### B SCAN MODES

Grey levels: 256  
 Adjustable gain: 20 to 110 dB  
 Time Gain Control (TGC): 0 to 30 dB  
 Manual and synchronized dynamic range adjustment from 25 to 90 dB  
 Unlimited storage capacity for still images and video sequences (up to 40 second duration)  
 Image post-processing tools: Algorithmic & color image filters, calipers, areas, angles, markers, comments  
 Glaucoma quantifying semi-automated tools with AOD 500 & 750, IT 750 & 2000, TIA, ARA 500 & 750, TISA 500 & 750, LV

### POSTERIOR POLE EXAMINATION

#### Magnetic 10 MHz probe

Transducer frequency: 10 MHz  
 Angle of exploration: 50°  
 Depth of exploration: 20 to 60 mm (0.79" to 2.37")  
 Focus: 21 to 25 mm (0.83" to 0.98")  
 Axial resolution: 150 µm  
 Lateral resolution: 300 µm  
 Frame rate acquisition: up to 16 Hz

#### Magnetic 20 MHz probe for posterior pole\*

Transducer frequency: 20 MHz  
 Angle of exploration: 50°  
 Focus: 24 to 26 mm (0.94" to 1.02")  
 Axial resolution: 100 µm  
 Lateral resolution: 250 µm  
 Frame rate acquisition: up to 16 Hz

### UBM & ANTERIOR SEGMENT EXAMINATION\*

#### Magnetic 50 MHz UBM probe with linear scanning

Transducer frequency: 50 MHz  
 Linear transducer movement: exploration width 16 mm (0.63")  
 Focus: 9 to 11 mm (0.35" to 0.43")  
 Axial resolution: 35 µm  
 Lateral resolution: 60 µm

#### Linear 25 MHz UBM probe

Transducer frequency: 25 MHz  
 Linear transducer movement: exploration width 16 mm (0.63")  
 Focus: 11 to 13 mm (0.43" to 0.51")  
 Axial resolution: 70 µm  
 Lateral resolution: 120 µm

### STANDARDIZED A MODE

Digitally programmed S-shaped amplifier characteristics and comprehensive design criteria for standardized echography and tissue differentiation according to Karl C. Ossoinig MD  
 Automatic tissue sensitivity determination with specific gain value recorded  
 Diagnosis functions featuring: Tumor Q1 ; Retina A1/Retina A2; Musc Profile  
 Probe Frequency: 8 MHz / parallel beam  
 Cineloop in A mode: Sequence up to 400 images recorded  
 Depth: Orbit 80 µs, Eye: 40µs, Zoom 20 µs  
 Distance measurement between 2 gates with adjustable velocity  
 Axial length measurement with cornea, A.C. depth, lens and vitreous differentiation.

### DATA MANAGEMENT

Built-in physician and patient database  
 Exportation of still images and video sequences  
 Customizable digital and printed reports  
 DICOM\* and/or EMR compatible  
 Compatible with PC, USB video and DICOM printers

### BIOMETRY

Adjustable gain: 20 to 110 dB  
 Time Gain Control (TGC): 0 to 30 dB

#### 11 MHz Probe

Transducer frequency: 11 MHz  
 Tip diameter: 6 mm (0.23")  
 Electronic resolution: 0.04 mm (0.002")  
 Depth: 40/80 mm on 2048 points  
 Contact and immersion techniques compatible  
 Aiming beam: LED or laser pointer\*

#### Axial length measurements

Ultrasound propagation velocity adjustable per segment (anterior chamber, lens, vitreous) and IOL and vitreous material  
 Built-in pattern recognition: phakic, aphakic, PMMA, acrylic and silicone material for pseudo-phakic eye types  
 Automatic calculation of standard deviation and average total length (series of 10 measurements)  
 Acquisition modes: automatic, auto + save, manual  
 Automatic detection of scleral spike

#### IOL calculation

SRK-T, SRK 2, HOLLADAY, BINKHORST-II, HOFFER-Q, HAIGIS  
 Post-op refractive calculation:  
 - Pre-op and Post-op refraction, Pre-op and Post-op keratometry  
 - 6 different methods for keratometric correction and implant calculation:  
 History derived, refraction derived, contact lens method, Rosa regression, Shammass regression, Double K/SRK-T (Dr. Aramberri's formula)  
 7 values bracketed for desired ametropia for each IOL (IOL increment steps: 0.25D or 0.50D)  
 Simultaneous display of 4 different IOL calculations

### GENERAL INFORMATION

#### Connection

Connectable to PC systems via USB-2 port operating under Windows 8 / Windows 7  
 Dedicated software for communication driving between the acquisition module and computer  
 Images displayed on the computer monitor

#### Electrical requirements

Power supply: 100-120 / 200-240 Vac ± 10% single phase + grounding  
 Frequency: 50 / 60 Hz  
 Power: 25 VA max

#### Features

Overall dimensions: 19 cm (L) x 17 cm (W) x 19 cm (H); 7.5" (L) x 6.7" (W) x 7.5" (H)  
 Touch screen dimensions: 8.6 cm (W) x 11.5 cm (H); 3.4" (W) x 4.5" (H)  
 Weight: 1.5 kg (3.3 lb.)

#### \* Option

Specifications are subject to change without notice.

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