Ultrasonic B-Scanner

UD-8000

Inspire by Digital

Tomey Corporation

Intuitive & High Resolution

① Intuitive

② Sharply

③ High Resolution

by Fully Digital technology

in ergonomic design.

① Anullar Array Probe

Adjustable focusing by long ultrasound beam

Extra High-resolution
6 Gradual Reception Dynamic Focus

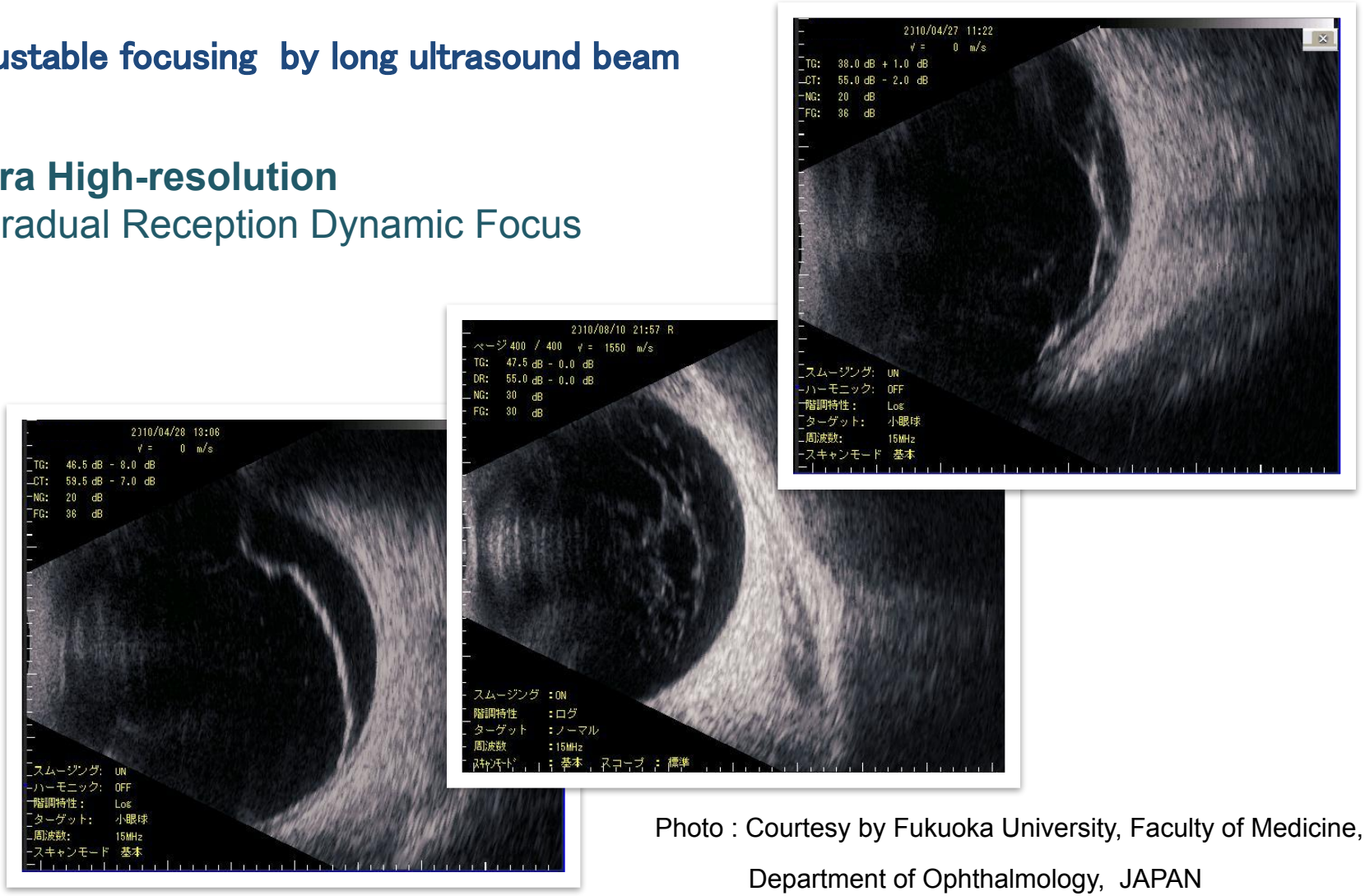
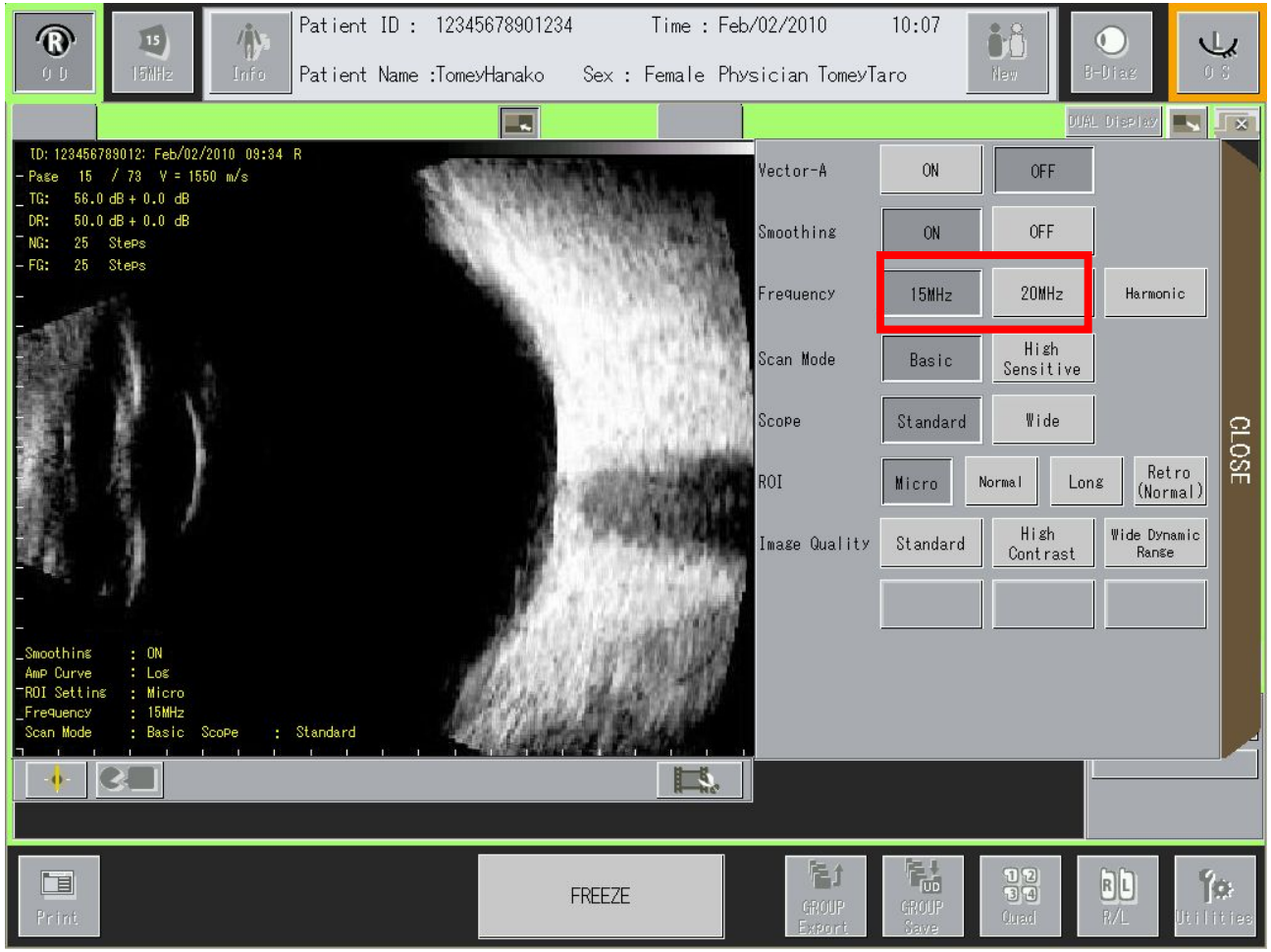


Photo : Courtesy by Fukuoka University, Faculty of Medicine,

Department of Ophthalmology, JAPAN

② 15MHz ⟷ 20MHz by one probe

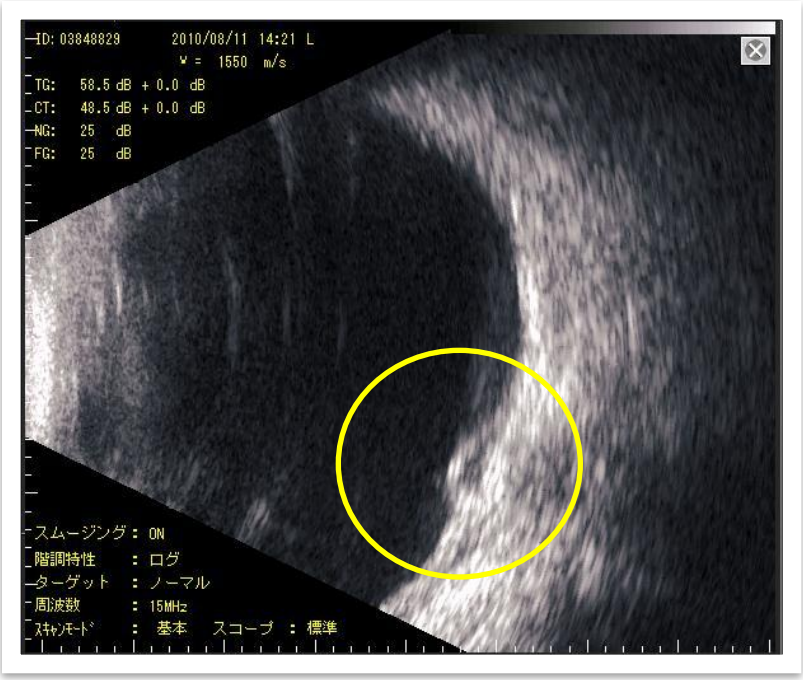


15MHz

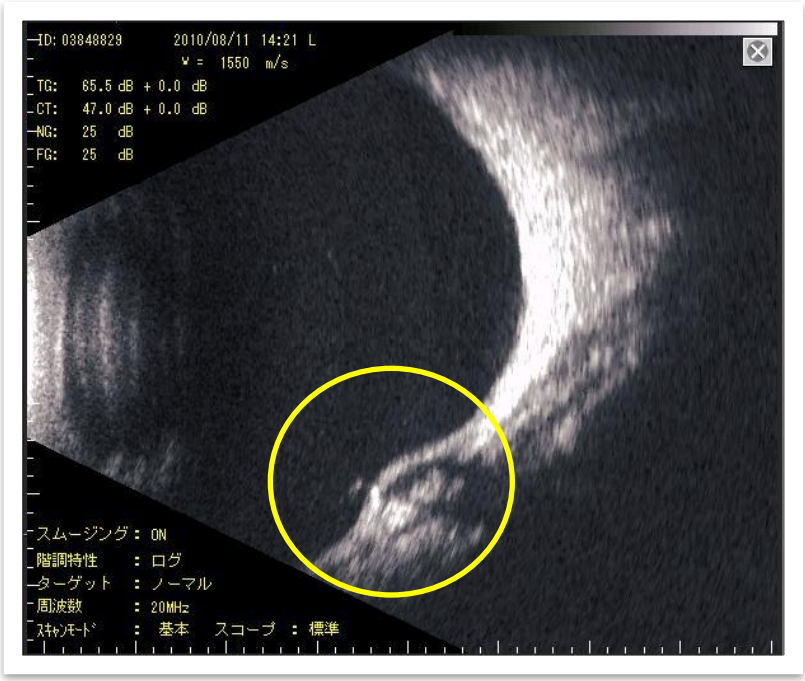
For entirety and Vitreoretinal area
Retrobulbar area observable

20MHz

For better Membranous tissue observation
Resolution enhance for Axial Direction
（In a transverse direction on the display）
※ High Frequency
(Both of Transducer and Receive)



15MHz

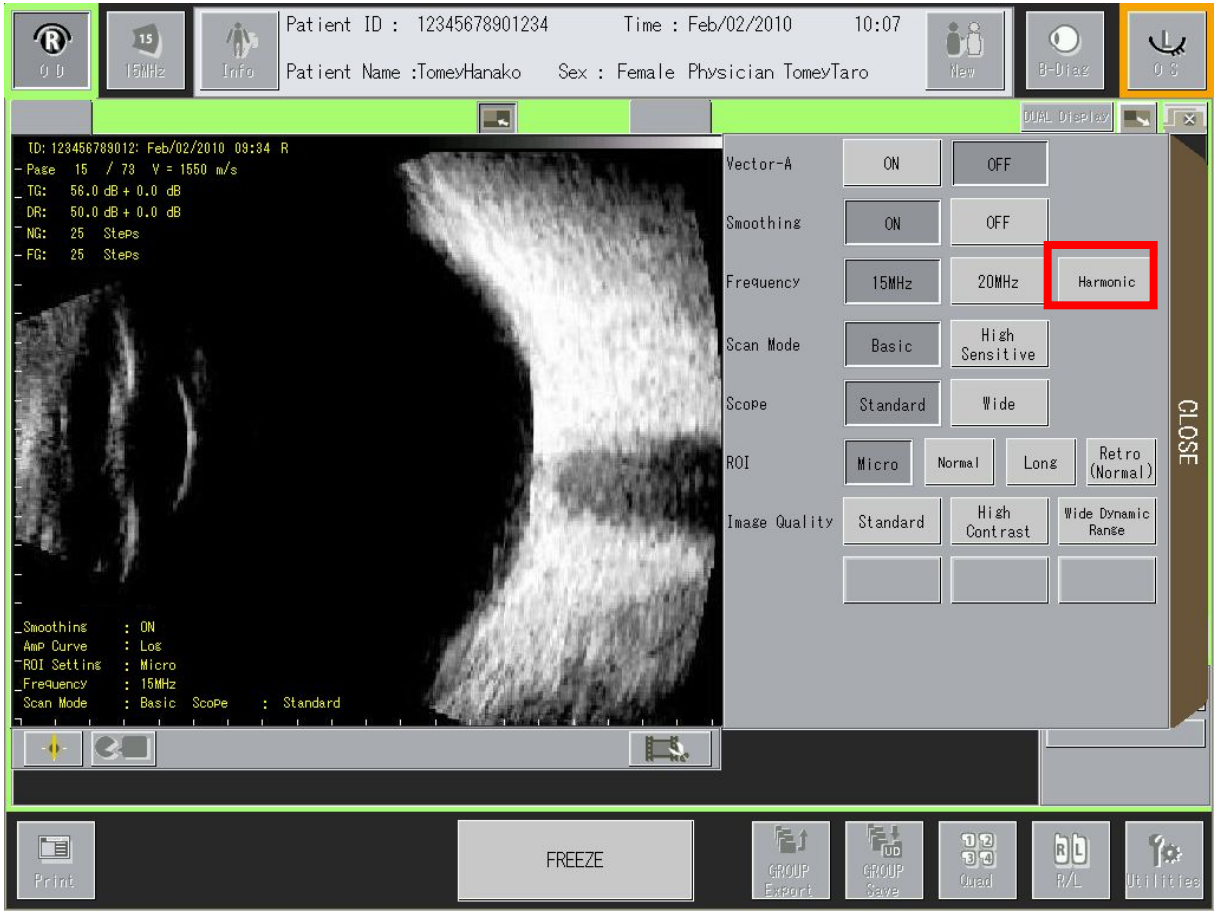


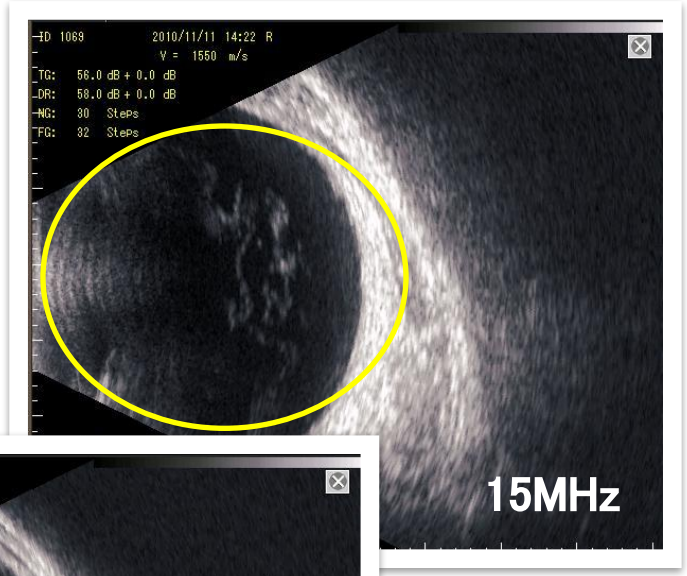
20MHz

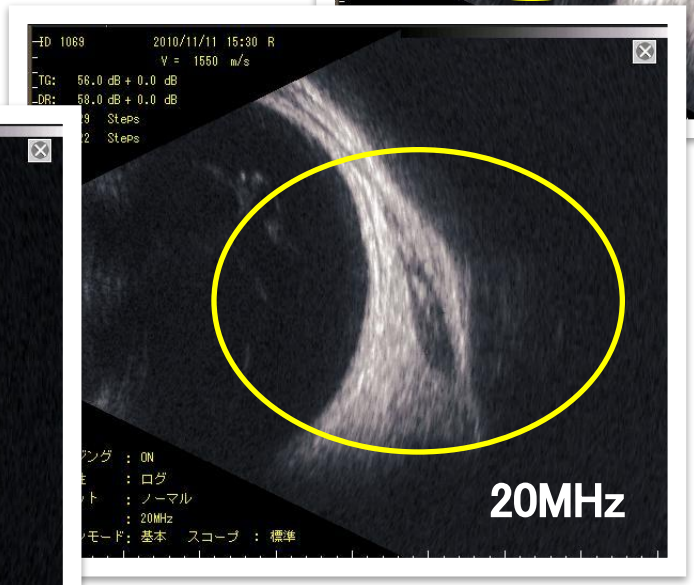
③ Harmonic

<u>For Optic disc, Macular area disease and ailments observable resolution enhance for Lateral Direction（In a longitudinal direction　on the display）</u>

※Harmonic imaging can be achieved using a wide bandwidth transducer, which can be respond to both the fundamental frequency.　15MHz and its second harmonic 15　MHz x 2







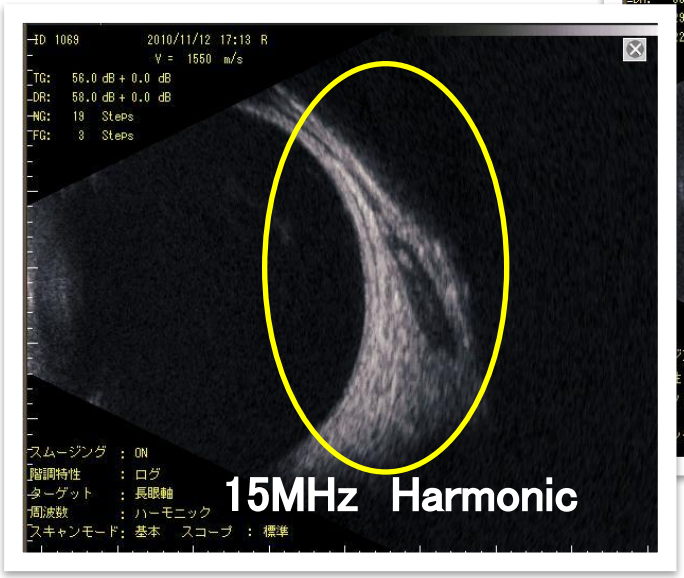
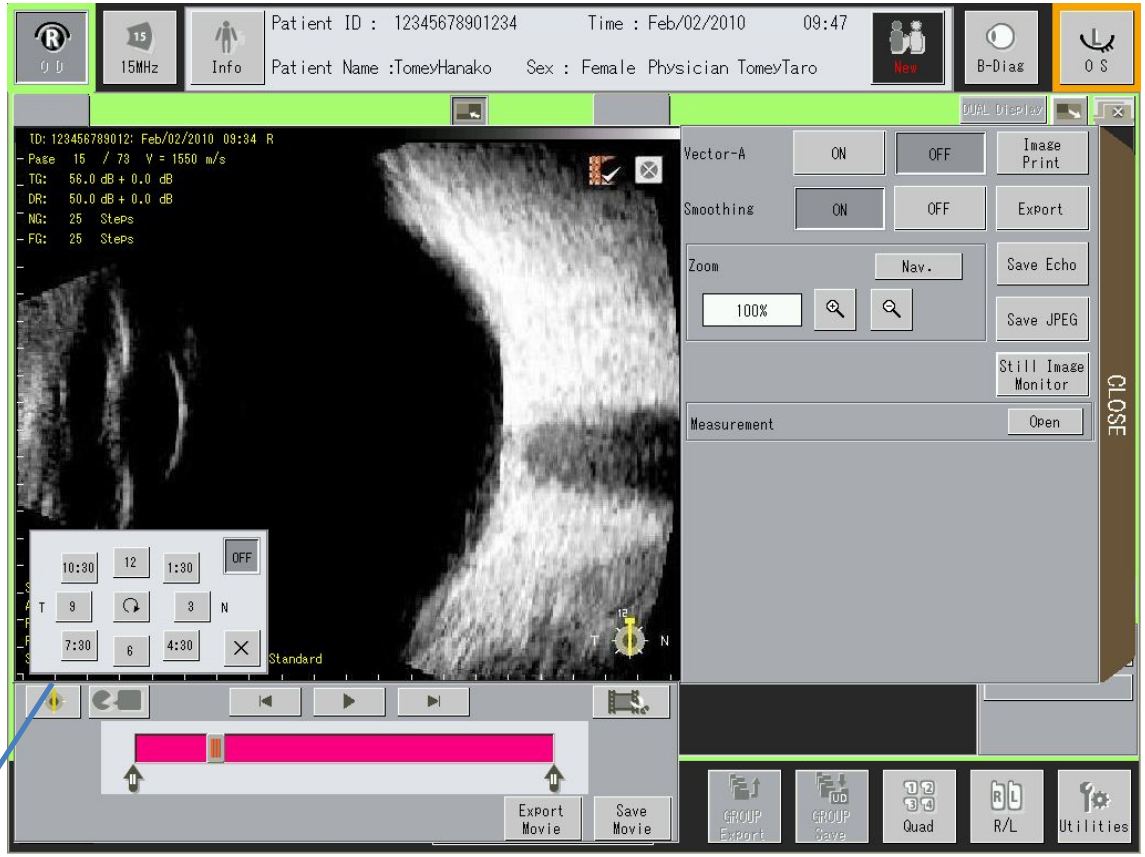
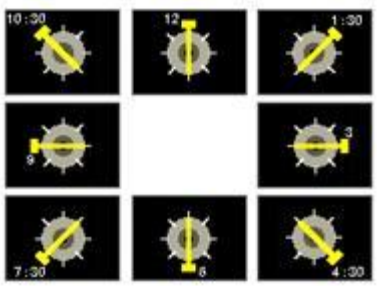


Photo : Courtesy by Fukuoka University, Faculty of Medicine,

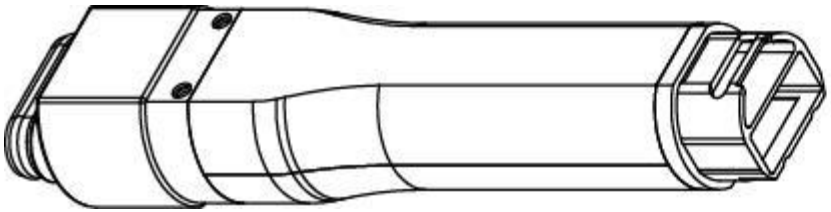
Department of Ophthalmology, JAPAN

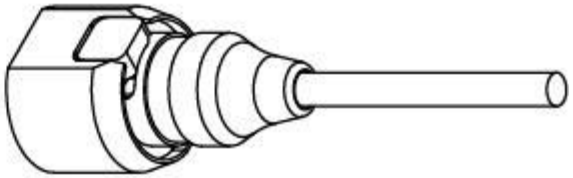
④ Indicate of probe direction





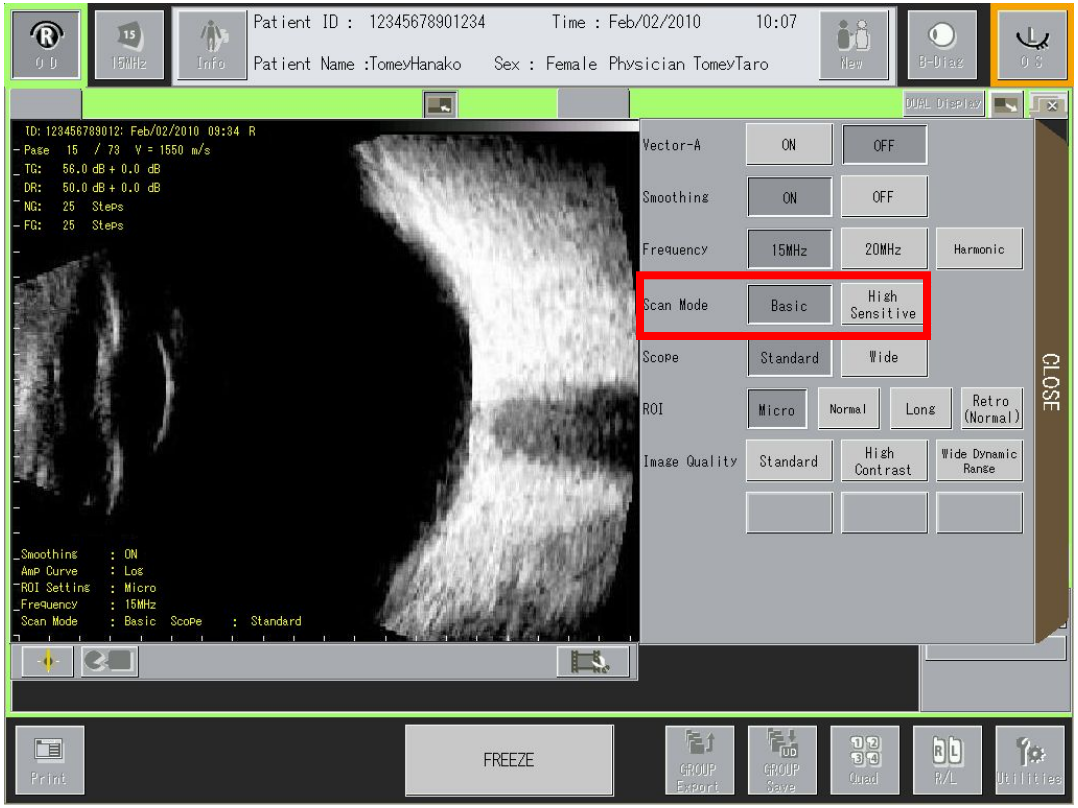
⑤ New designed probe





Function setting

① Scan mode



① **Standard mode**

② **High Sensitive Mode**

※ **Deduct noise, improve SNR**

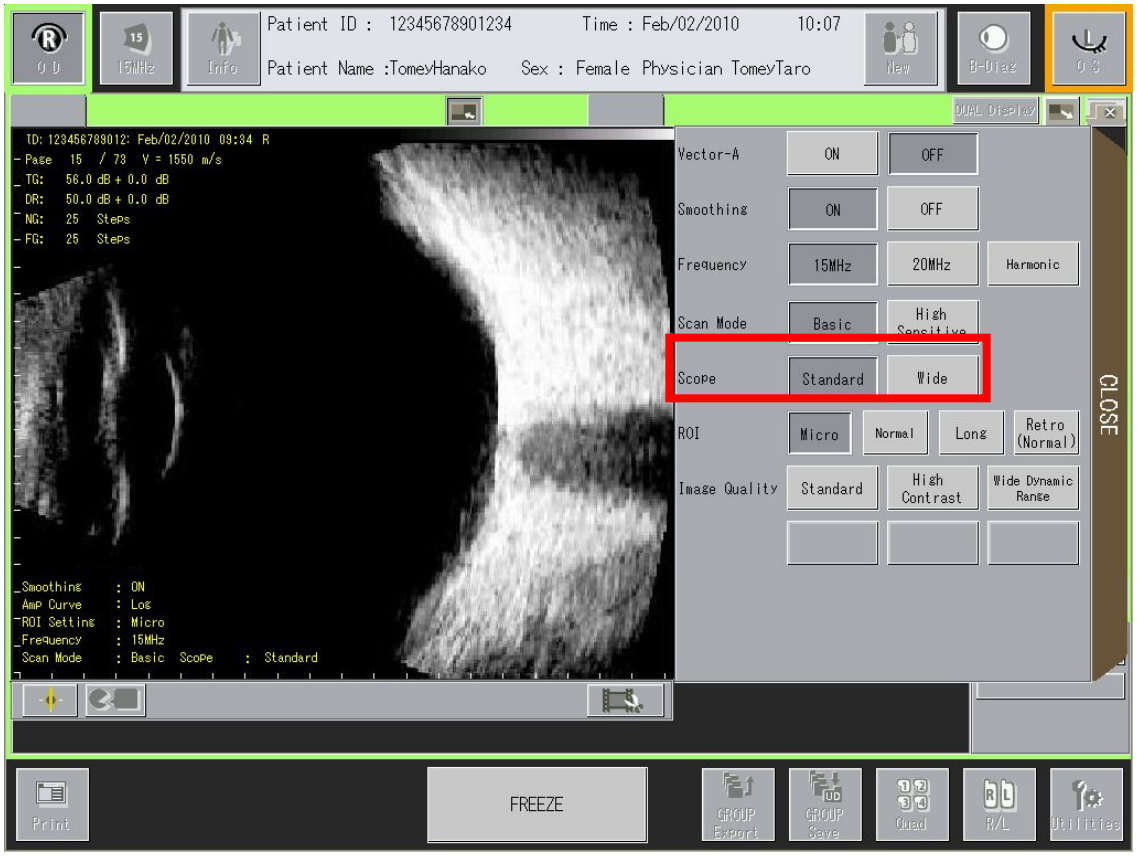
Frame rate 】

① **Standard mode ： 22 Frames/sec**

② **High sensitive mode ：**

11 Frames/sec

② Scope（Displayed depth ）



Standard → **Eye ball**

or

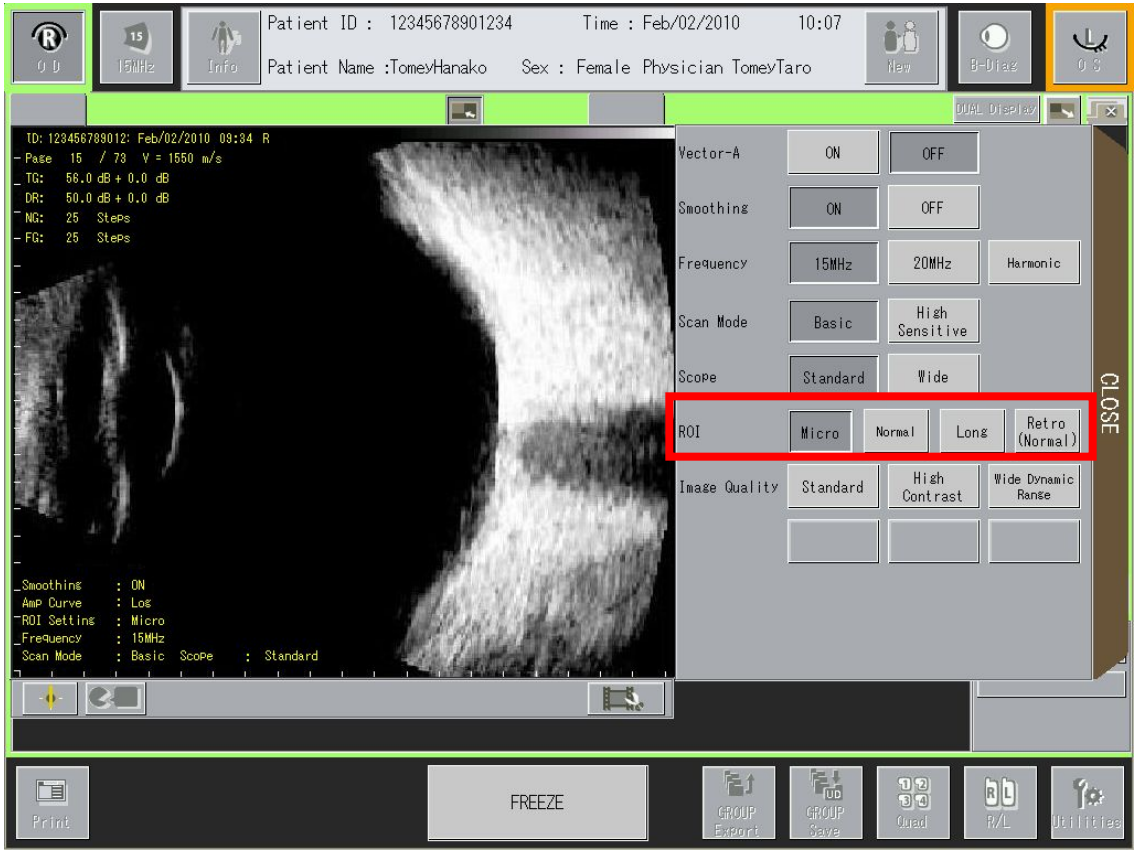
Wide → **Orbit**

Display Range】

Standard : 42 mm

Wide : 54 mm

③ ROI／Region Of Interest



You can select 4 eye types

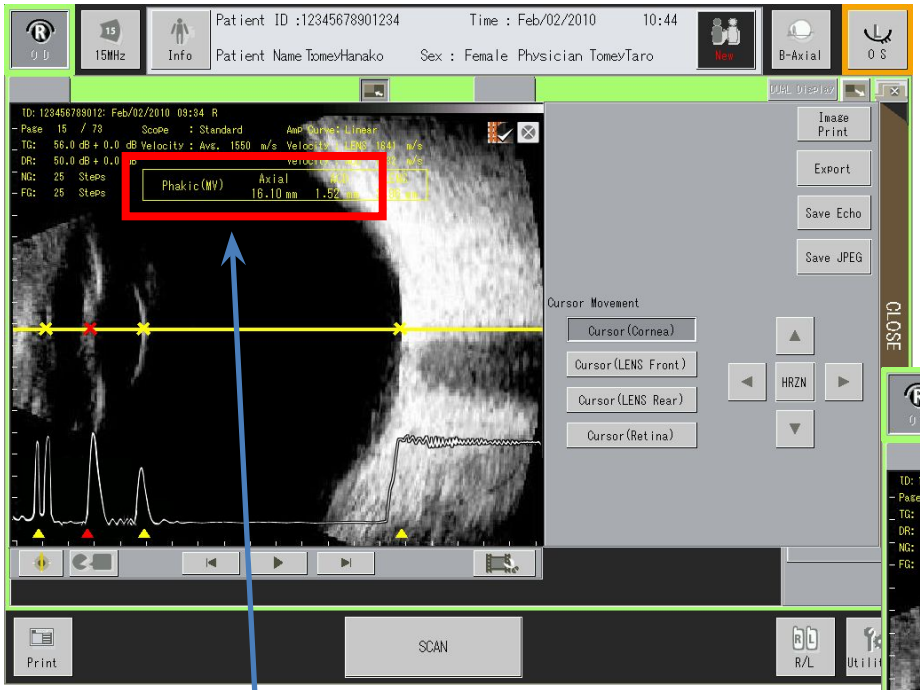
Micro（ Child ）

Normal

Long

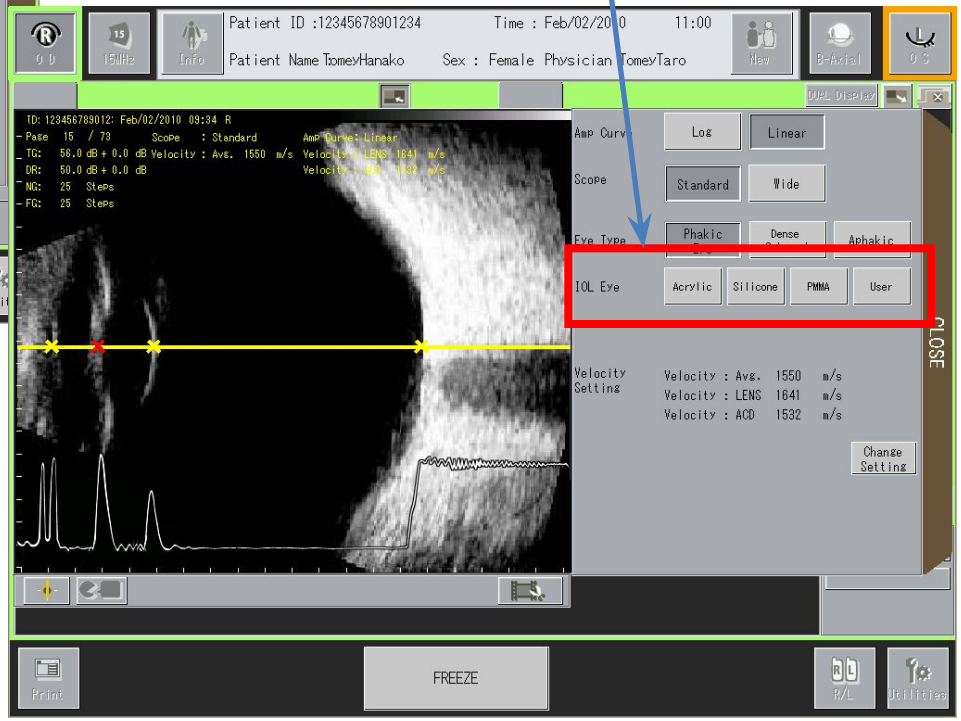
Retoro（ Normal ）

B-Axial（Assistance for A-Biometry）



On screen annotation

Select eye type



Versatile Function

① Play back movie

② Zoom

③ Area calculation

④ Dual display

⑤ R/L(OD／OS)

⑥ Smoothing

⑦ Vector A-Mode

⑧ Length measurement

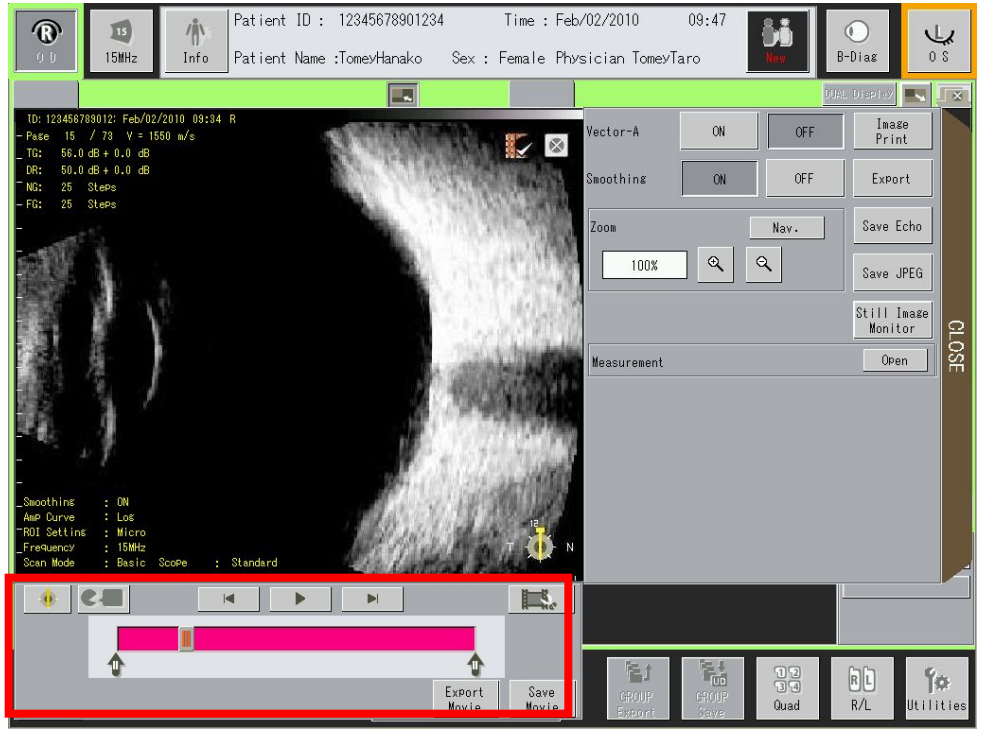
⑨ Angle measurement

⑩ Quad display

⑪ Gain adjustment after freeze

⑫ USB memory

① Movie (Play Back)



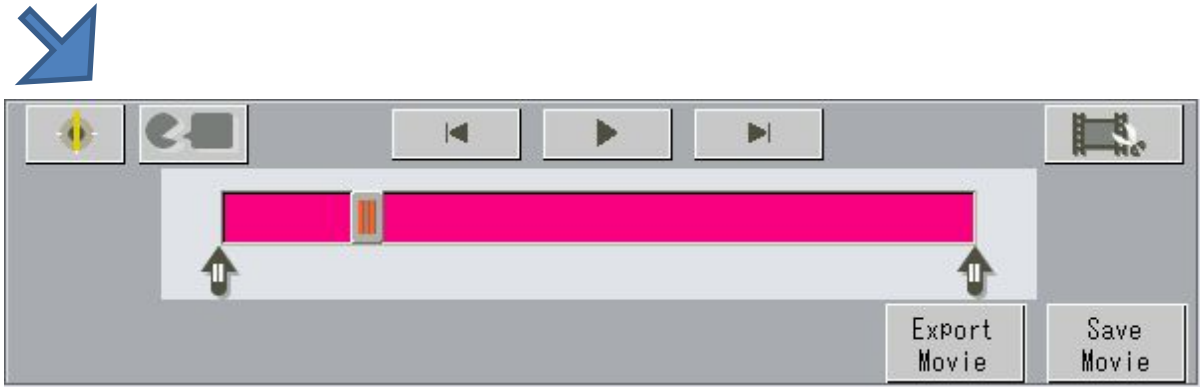
Play back movie by 20 seconds or

400 frames still images.

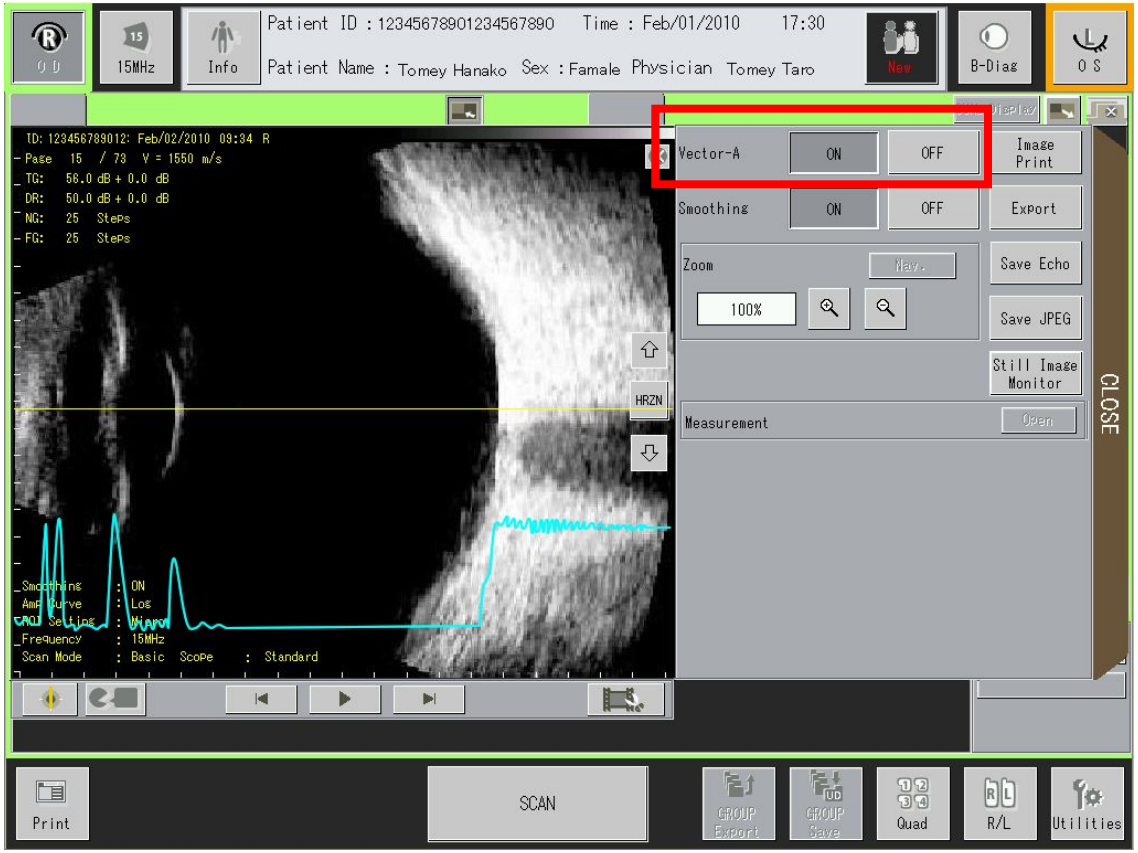
Cut out still image from movie.

You can customize

cut out image.

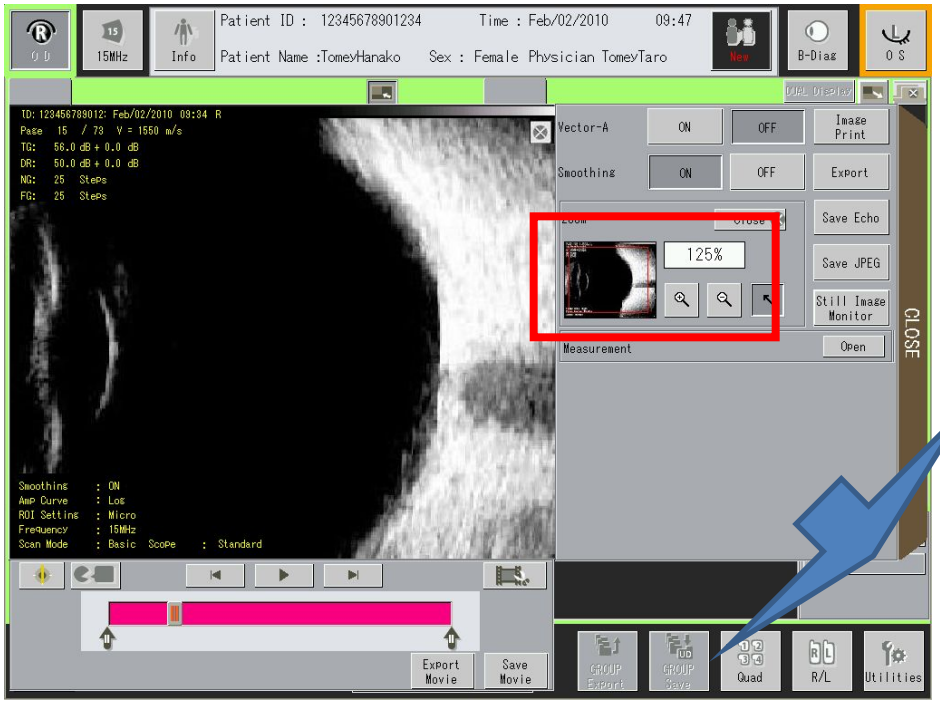


② Vector A-Mode



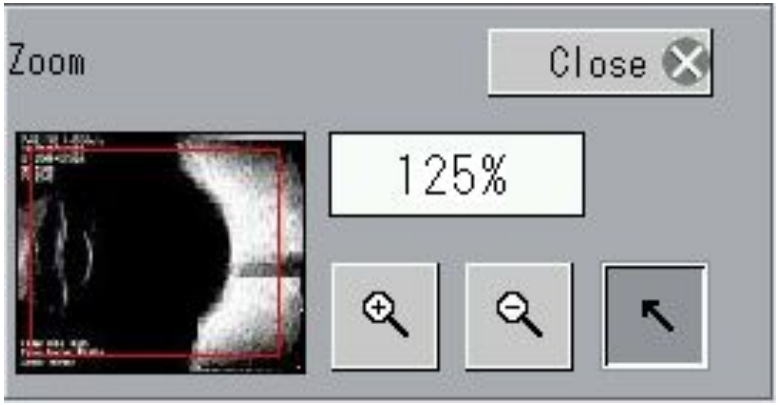
Temporary A-Biometry by Compare with pathology wave form and retina wave form.

③ Zoom



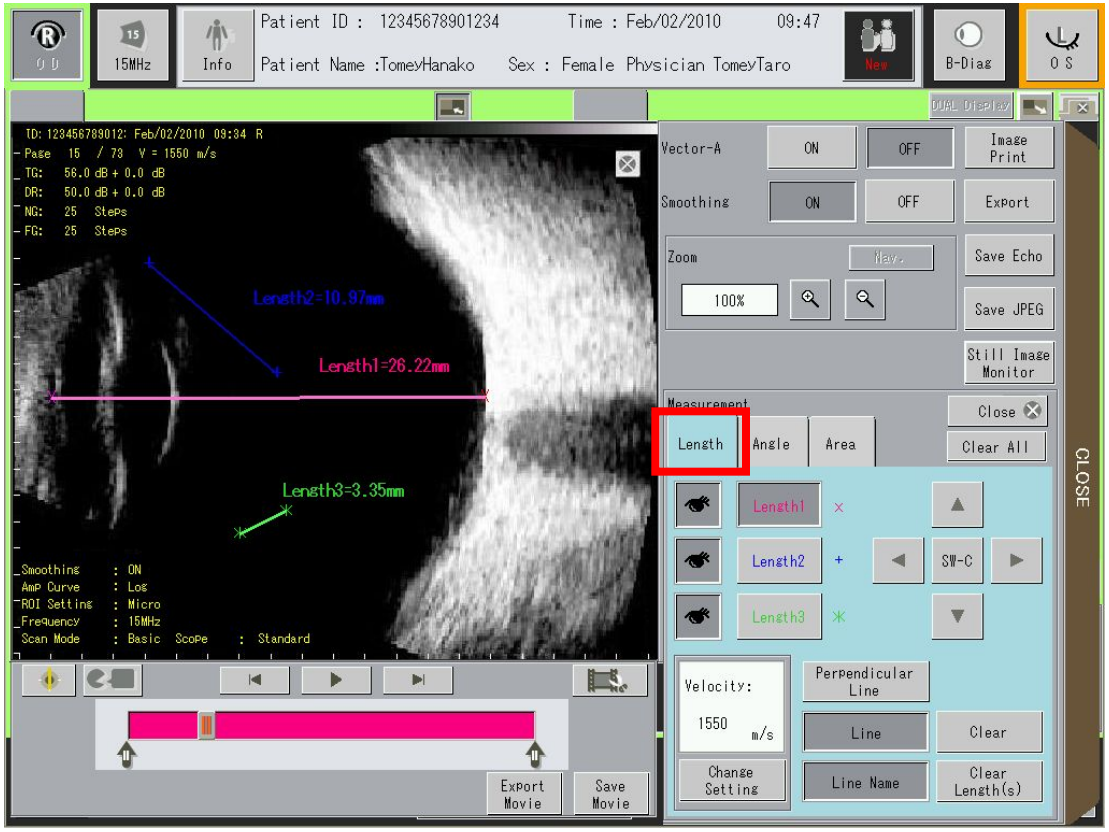
5 steps Zoom

100%, 125%, 150%, 200%, 300%



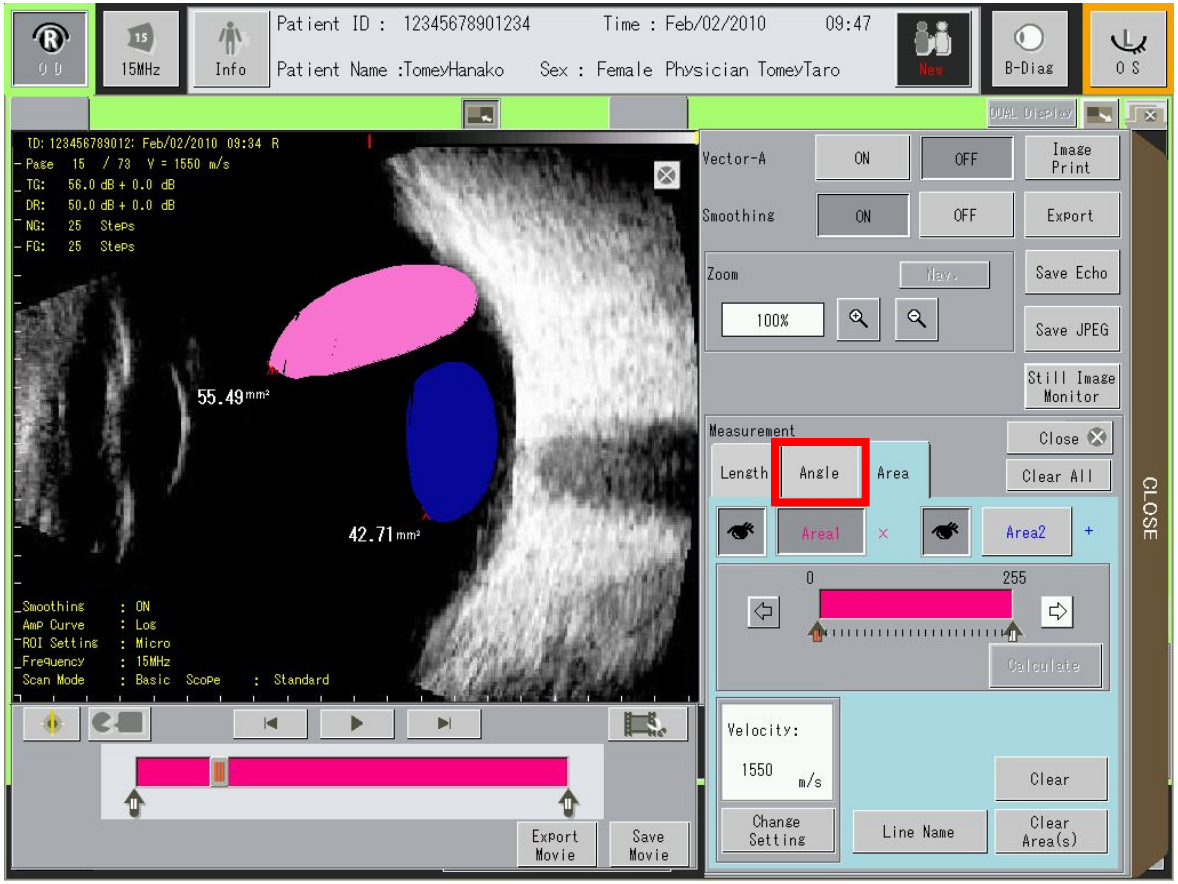
Intuitive navigation monitor

④ Length calculation



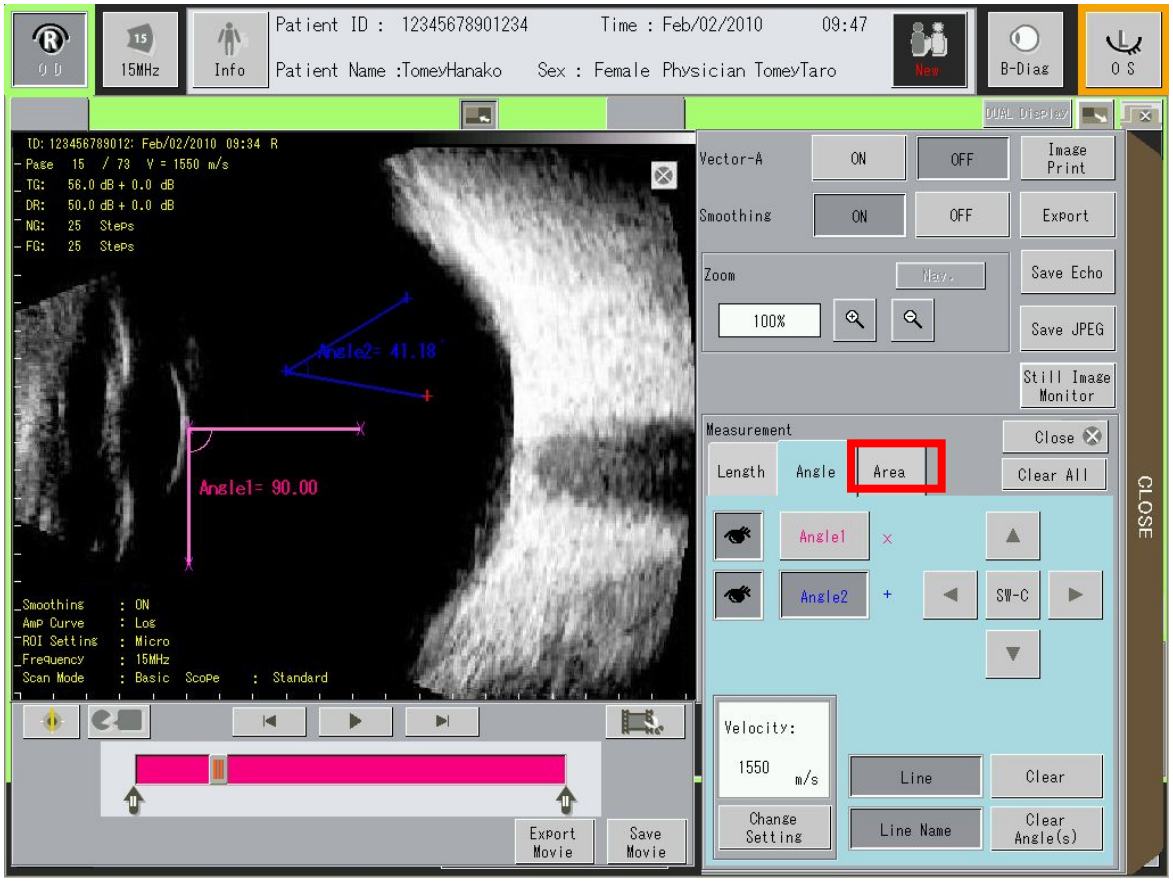
Up to 3 spots on same time calculation

⑤ Area calculation



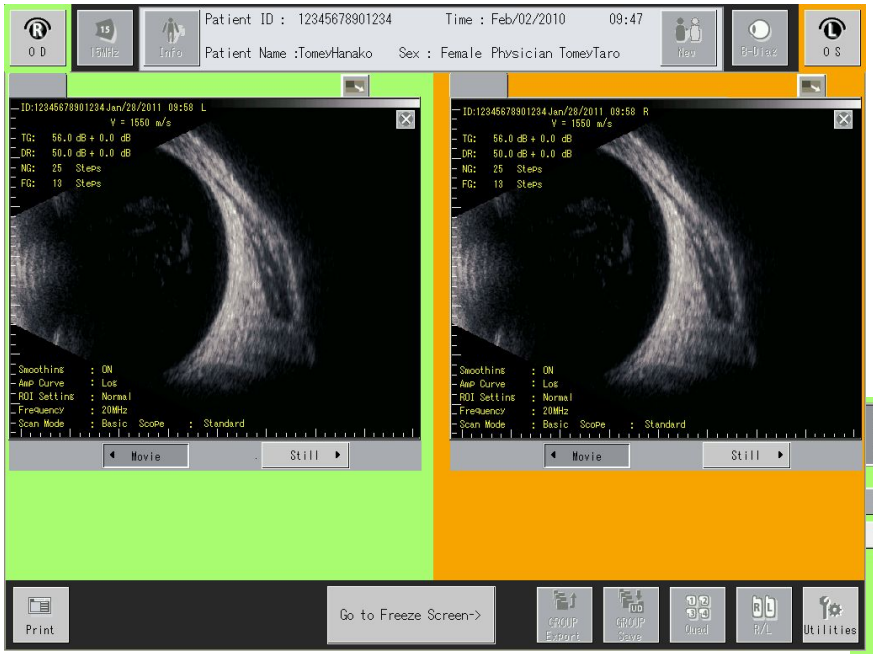
Up to 2 spots on same time calculation

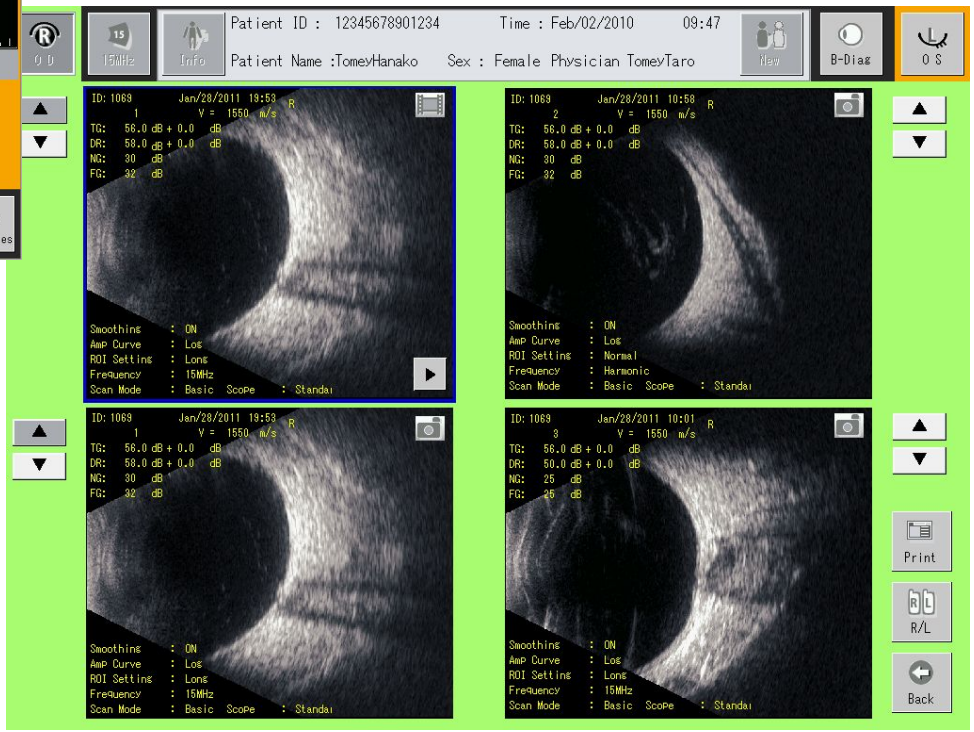
⑥ Angle calculation



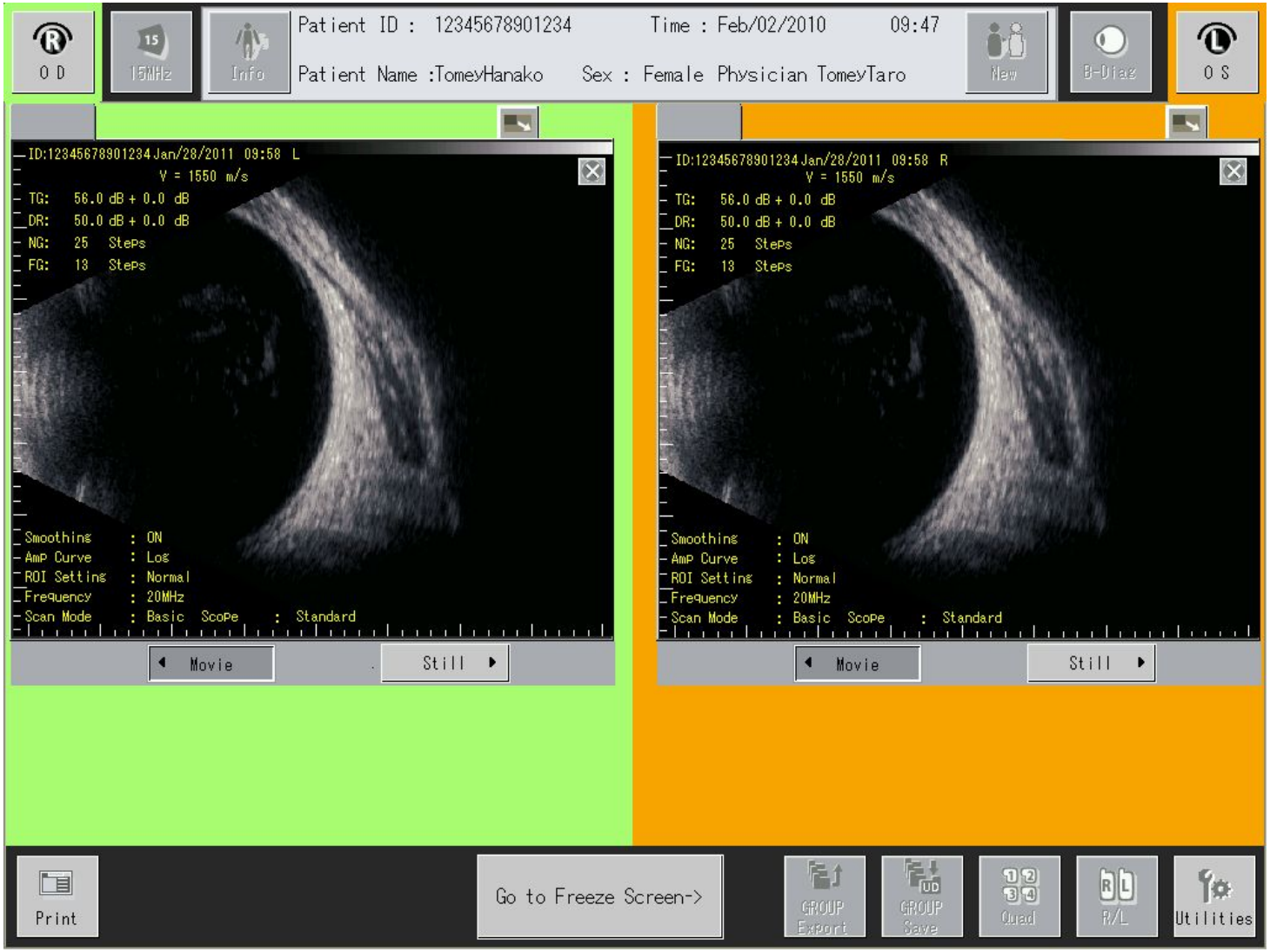
Up to 2 spots on same time calculation

⑦ Dual/Quad Display

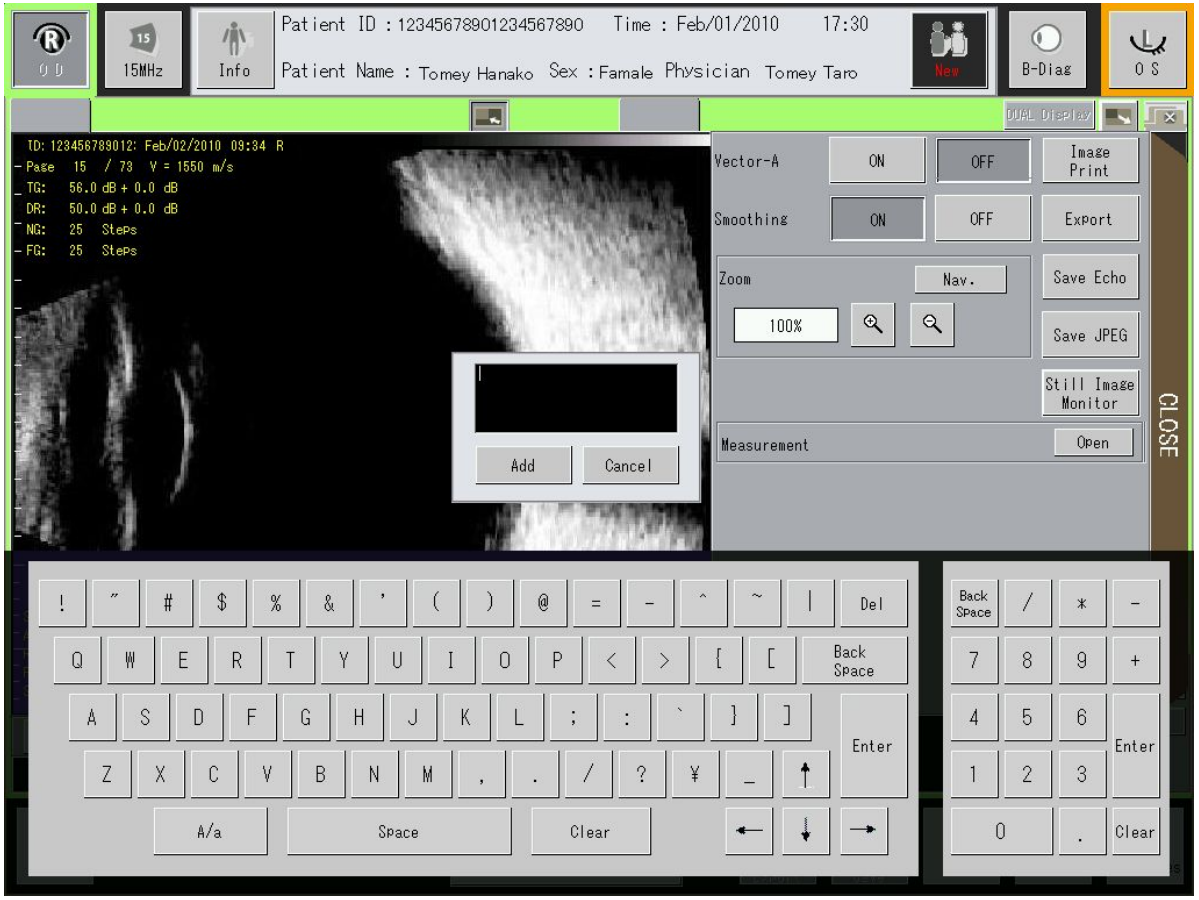




⑧ R(OD)／L(OS) Display

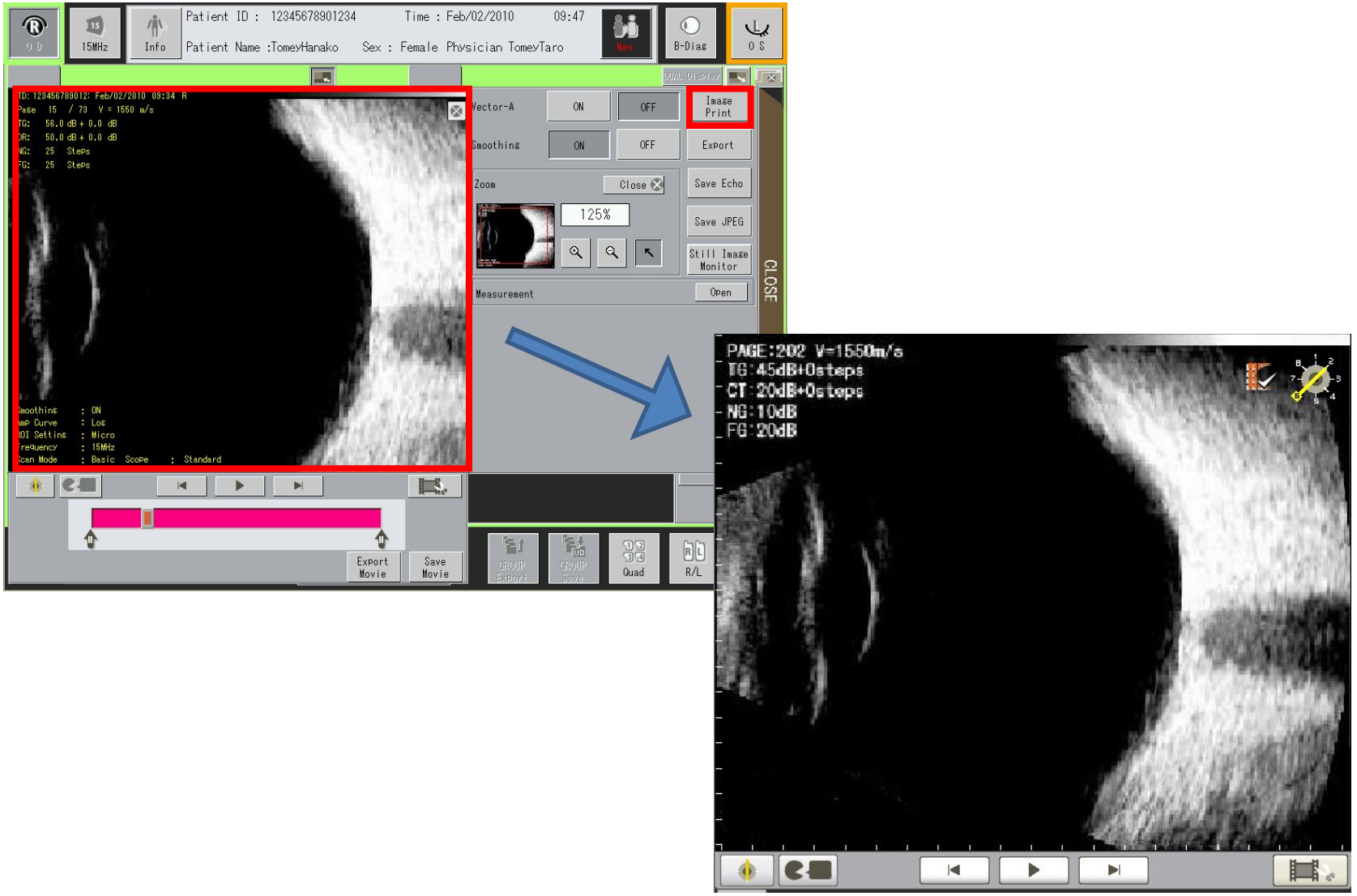


⑨ In put Comment

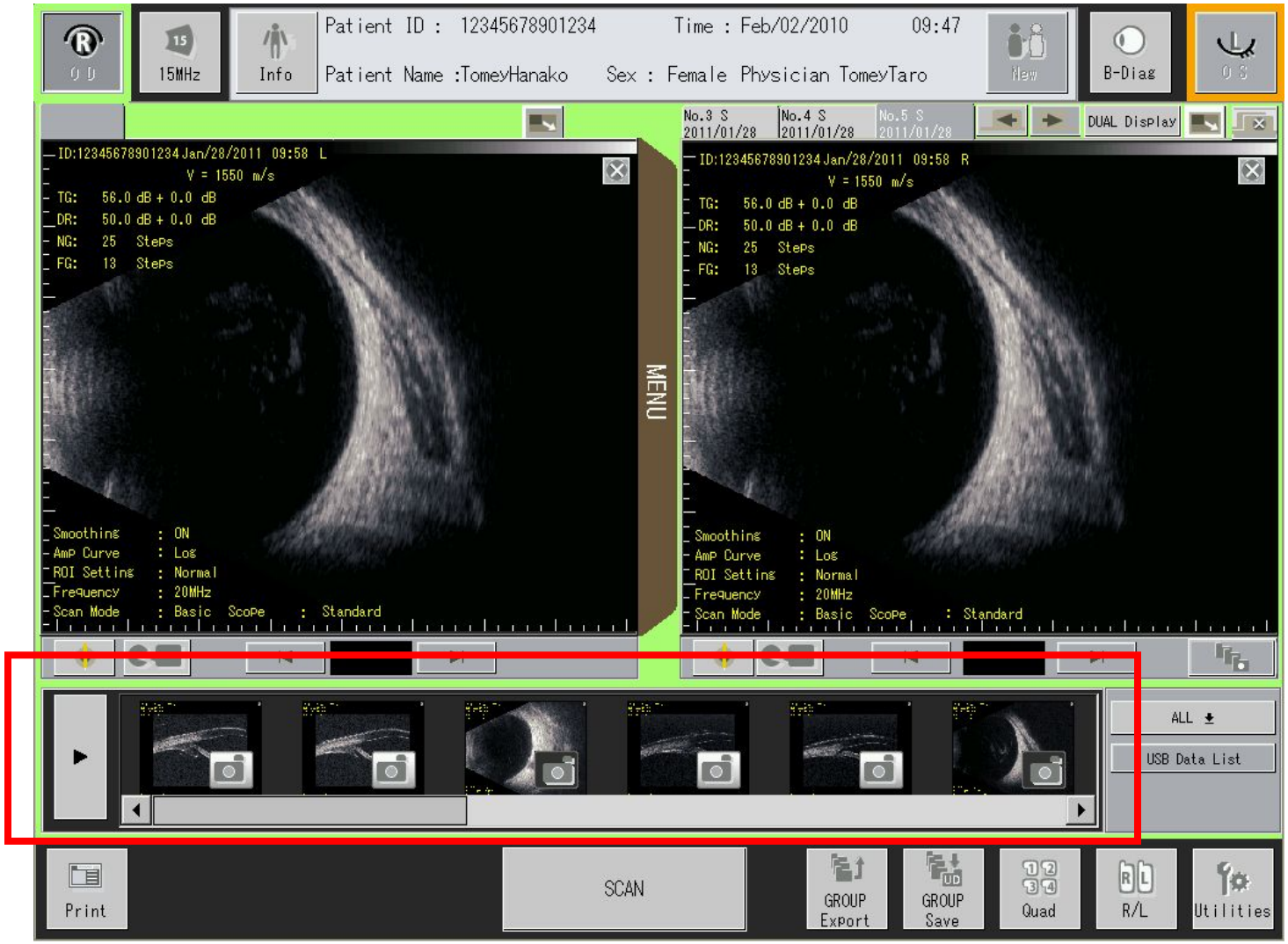


In put comment on still picture or movie

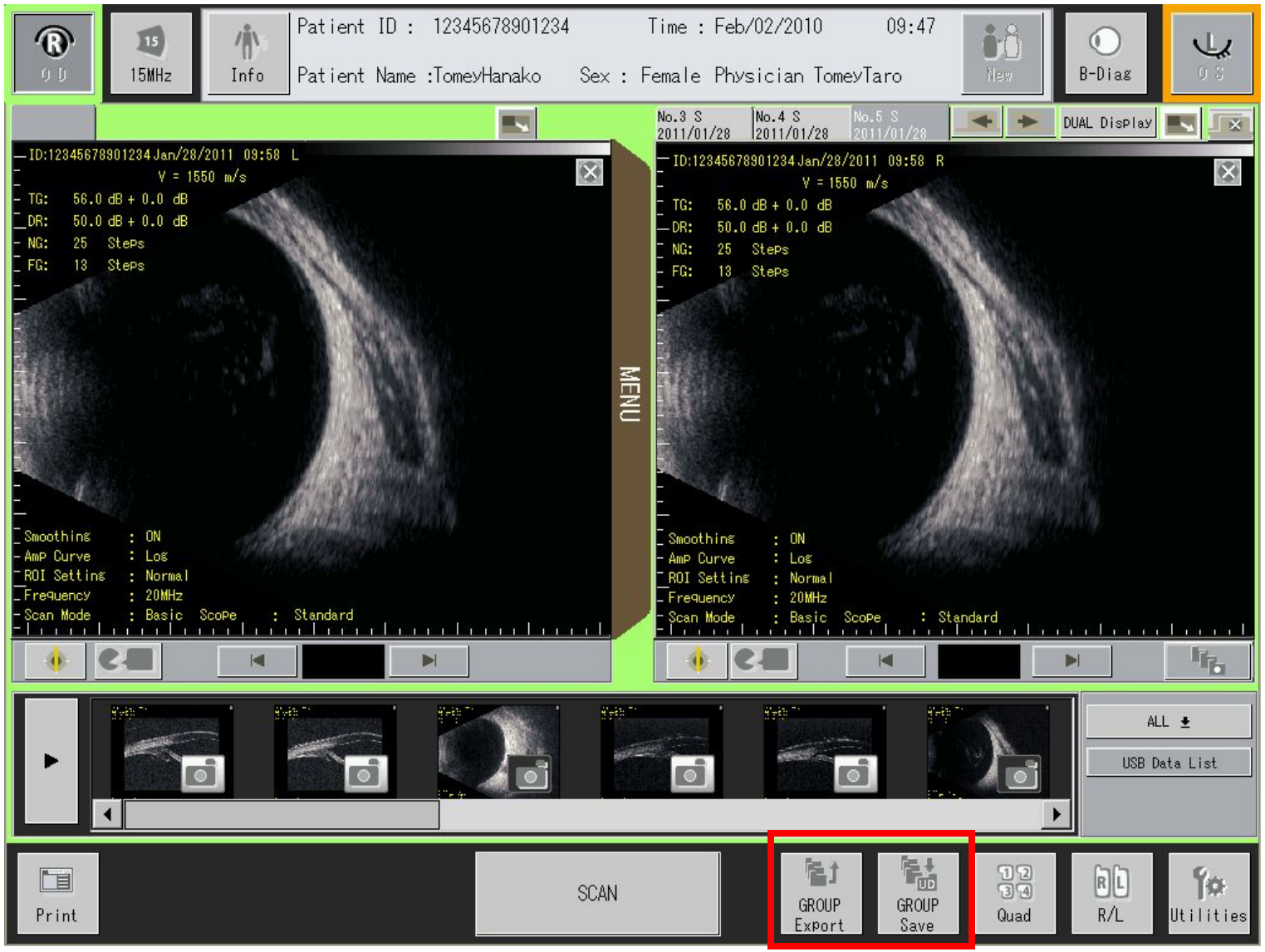
⑩ Print out by still image part only



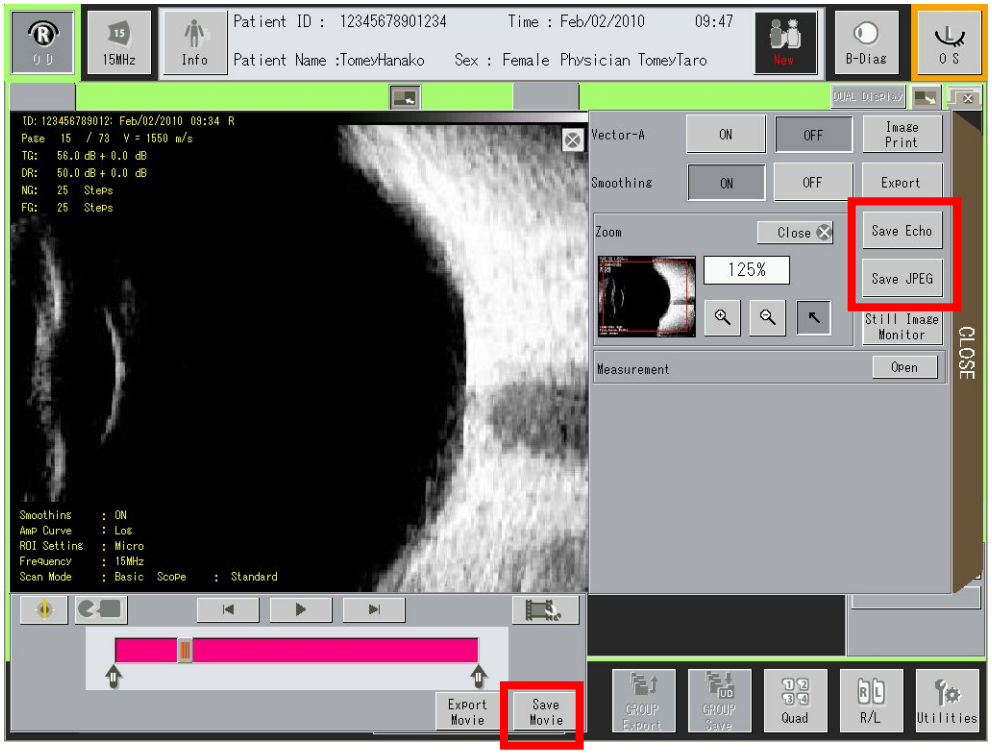
⑪ Thumbnail images



⑫ Group Export ／ Group Save



Save／Out put



①Still image

Save Echo or JPEG format

(Re-Display, Edit possible)

② Movie

Save in USB memory by Echo format and out put.

USB memory save capacity

ID : 32,750 Patients (Max)
Group Save : 64 Groups／Patient
20 still pictures／Group
USB size : 32GB (Max Acceptable)

15Mhz B-Scan (Estimate)

Still picture
32GB Approximately 123,000 picture
16GB Approximately 61,500 Pictures
8GB Approximately 30,700 Pictures

Movie (Max. 400frames for each file)
32GB Approximately 400frames = 307files
16GB Approximately 400 frames = 150files
8GB Approximately 400 frames = 70files

1 still picture = 260KB = 0.26MB

UBM 60Mhz B-Scan (Estimate)

Still picture

32GB Approximately 56,700 Pictures
16GB Approximately 28,300 Pictures
8GB Approximately 14,100 Pictures

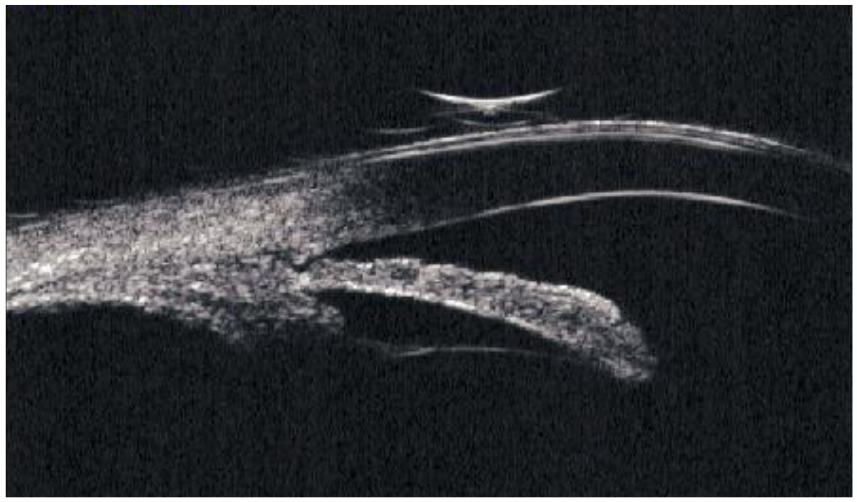
Movie (Max. 100frames for each file)

32GB Approximately 100frames = 567files
16GB Approximately 100 frames = 283files
8GB Approximately 100frames = 141files

1 still picture = 260KB = 0.26MB

UBM 60MHz／UD-8060

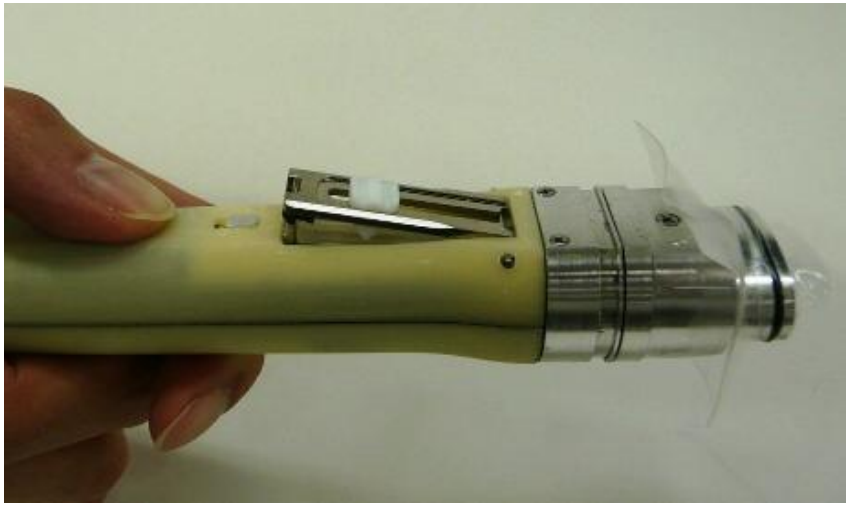
(Membrane waterproofing cap /No Eye Cup)

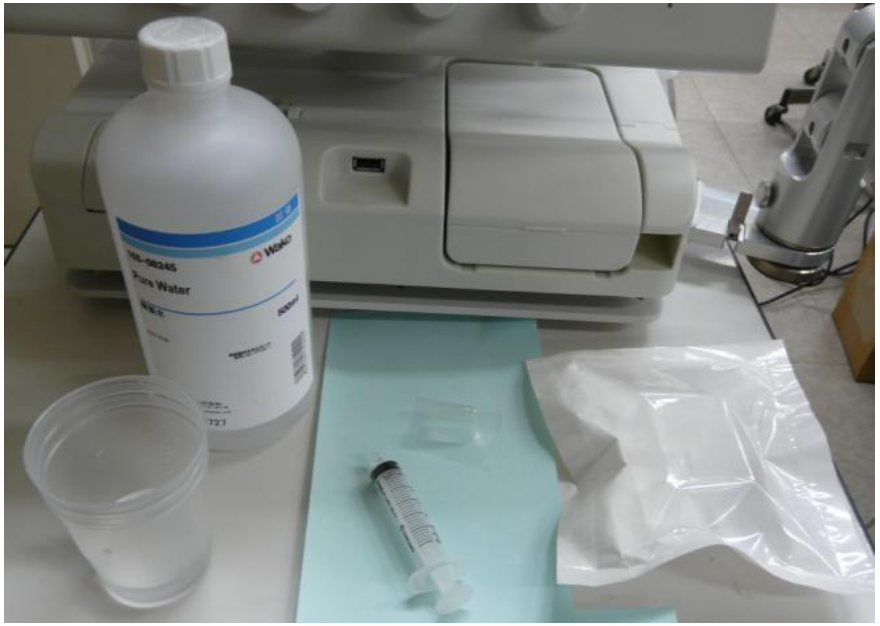


① Disposable

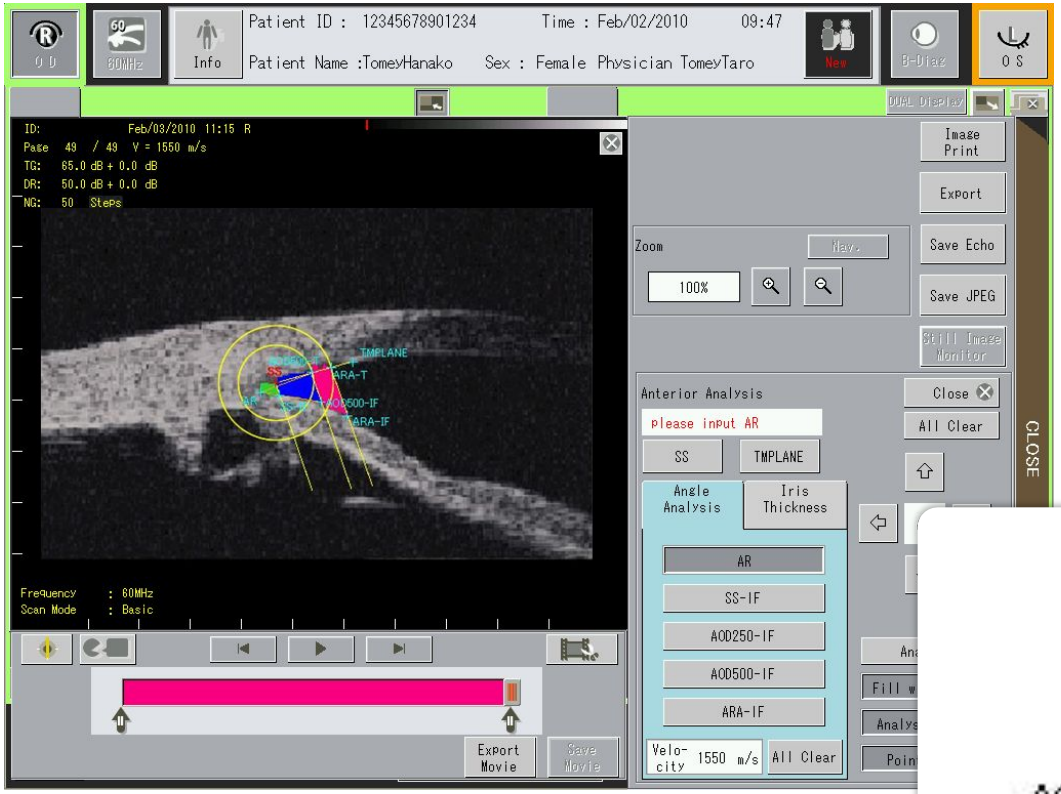
② No eye cup

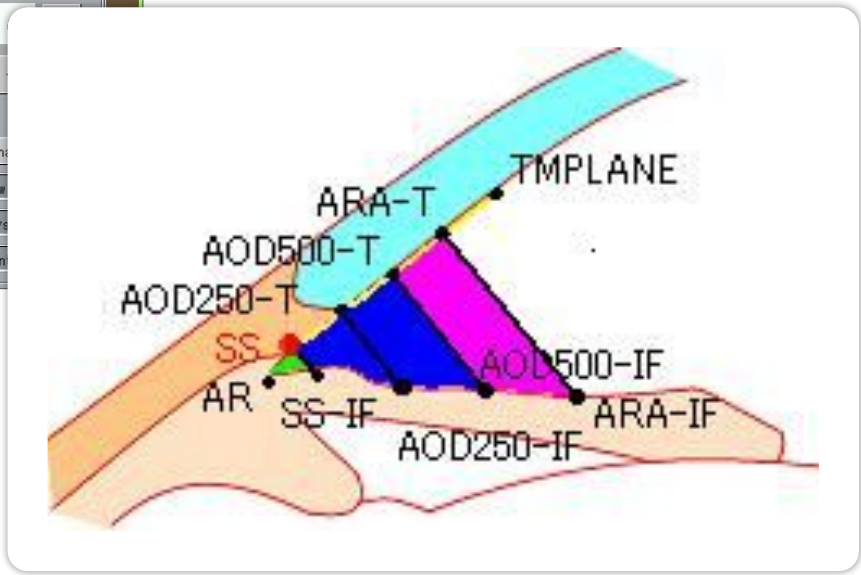
③ Sitting position




Pure Water

Angle Analysis

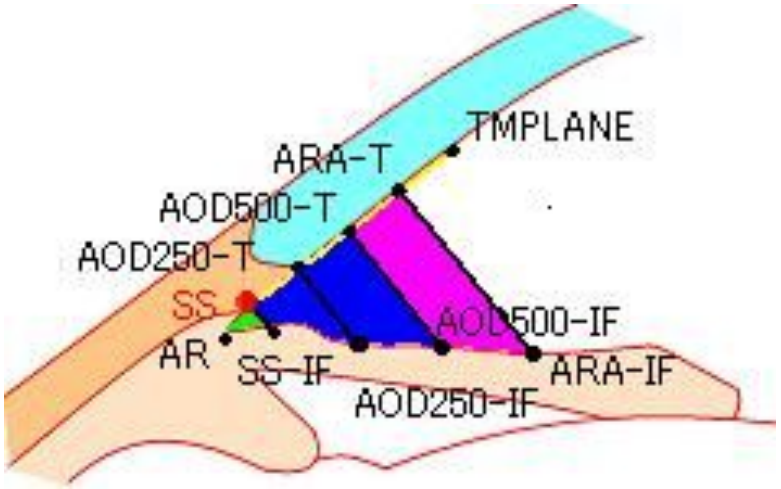




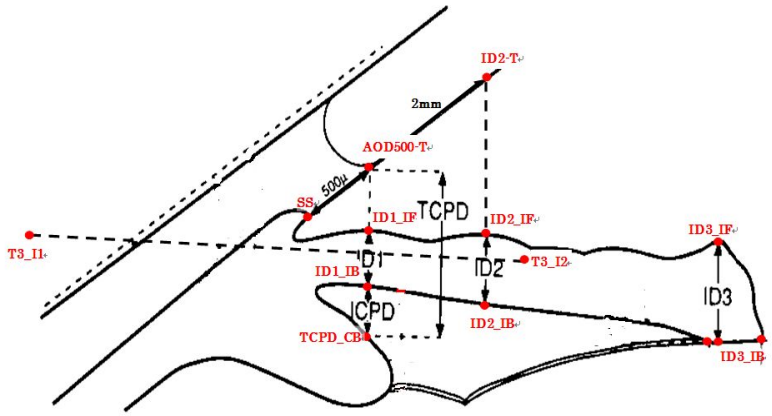
Angle Analysis Parameter 】

SS	:	Sclera: The angle corner side of the line segment that constitutes the trabeculum plain
TMPLANE	:	The cornea side of the line segment that constitutes the trabeculum plain
SS-IF	:	The intersection of the iris anterior surface and the line that crosses SS and is vertical to the line that crosses SS and TMPLANE
AOD250-T	:	The measurement point on the trabeculum side of AOD250
AOD250-IF	:	The measurement point on the iris side of AOD250
AOD500-T	:	The measurement point on the trabeculum side of AOD500
AOD500-IF	:	The measurement point on the iris side of AOD500
ARA-T	:	A point, on the trabeculum (on the corneal surface), that is 750 um away from the sclera.
ARA-IF	:	The intersection of the iris anterior surface and the line that crosses ARA-T and is vertical to the line that crosses SS and ARA-T
AR	:	Angle point

AOD250	:	Distance between AOD250-T and AOD250-IF
AOD500	:	Distance between AOD500-T and AOD500-IF
AOD700	:	Distance between AOD700-T and AOD700-IF
ARA500	:	The area of the angle area defined by the line that crosses AOD500-T and AOD500IF
ARA750	:	The area of the angle area defined by the line that crosses AOD700-T and AOD700-IF
TISA500	:	The area of the angle area defined by the line that crosses SS and SS-IF and the line that crosses AOD500-T and AOD500IF
TISA700	:	The area of the angle area defined by the line that crosses SS and SS-IF and the line that crosses AOD700-T and AOD700-IF
TIA500	:	The angle between the line AB to AOD500-T and the line AB to AOD500-IF.



Iris Analysis



Iris Analysis Parameter 】

T3-I1 : Terminal point 1 of line T3

T3-I2 : Terminal point 2 of line T3

ID1-IF : The intersection of the iris anterior surface and the line that crosses AOD500-T and is vertical to line T3

ID1-IB : The intersection of the iris posterior surface and the line that crosses AOD500-T and is vertical to line T3

TCPD-CB : The intersection of the ciliary process surface and the line that crosses AOD500-T and is vertical to line T3

ID2-T : The point, on the corneal surface, that is 2 mm away from SS

ID2-IF : The intersection of the iris anterior surface and the line that crosses ID2-T and is vertical to line T3

ID2-IB : The intersection of the iris posterior surface and the line that crosses ID2-T and is vertical to line T3

ID3-IF : The point, on the iris anterior surface, at which the distance between the intersections of the T3-vertical line and the iris anterior and posterior surfaces first marks a peak value when measured from the pupil side

ID3-IB : The point, on the iris posterior surface, at which the distance between the intersections of the T3-vertical line and the iris anterior and posterior surfaces first marks a peak value when measured from the pupil side

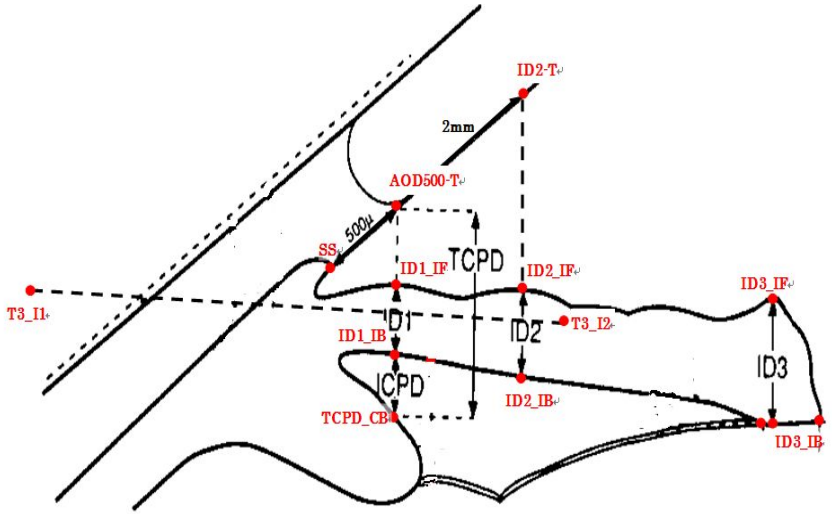
ID1 : Distance between ID1-IF and ID1-IB

ID2 : Distance between ID2-IF and ID2-IB

ID3 : Distance between ID3-IF and ID3-IB

TCPD : Distance between AOD500-T and TCPD-CB

ICPD : Distance between ID1-IB and TCPD-CB

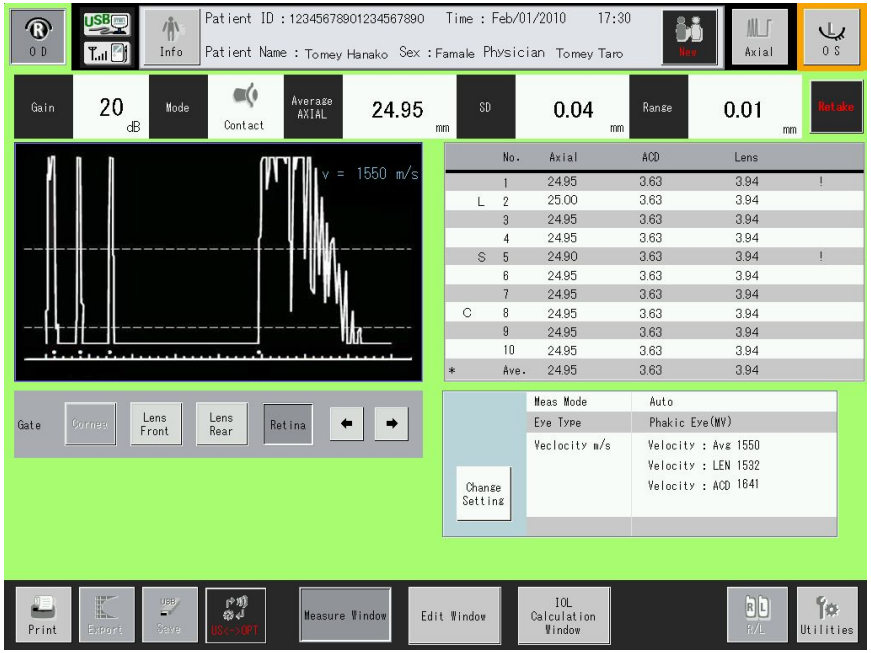


AL-4000 （Biometry／Pachymetry）

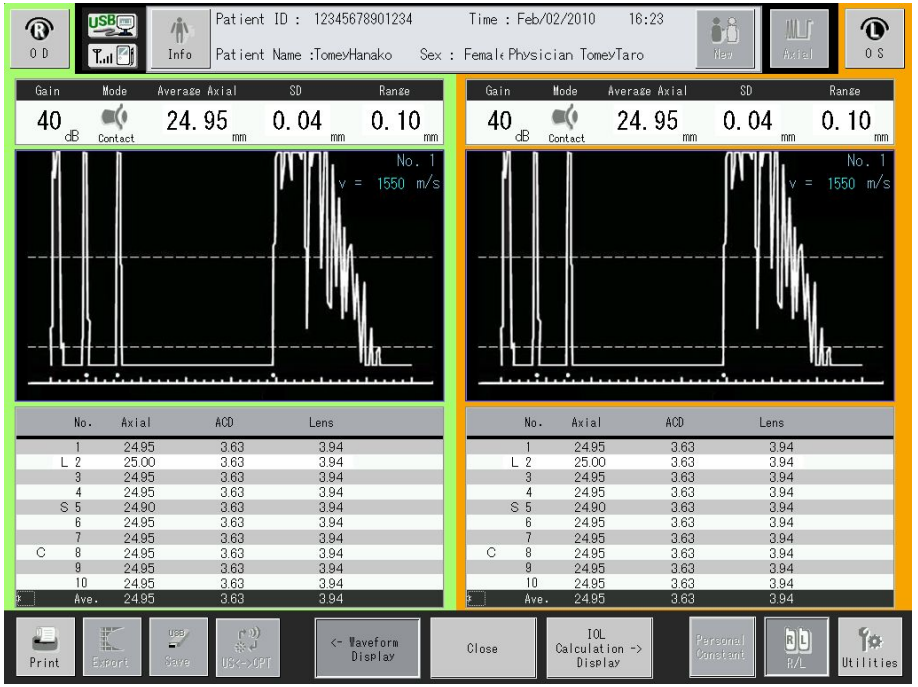
① A-Biometry
② IOL Power calculation
③ Pachymetry

USB or Bluetooth communication

① A-Biometery

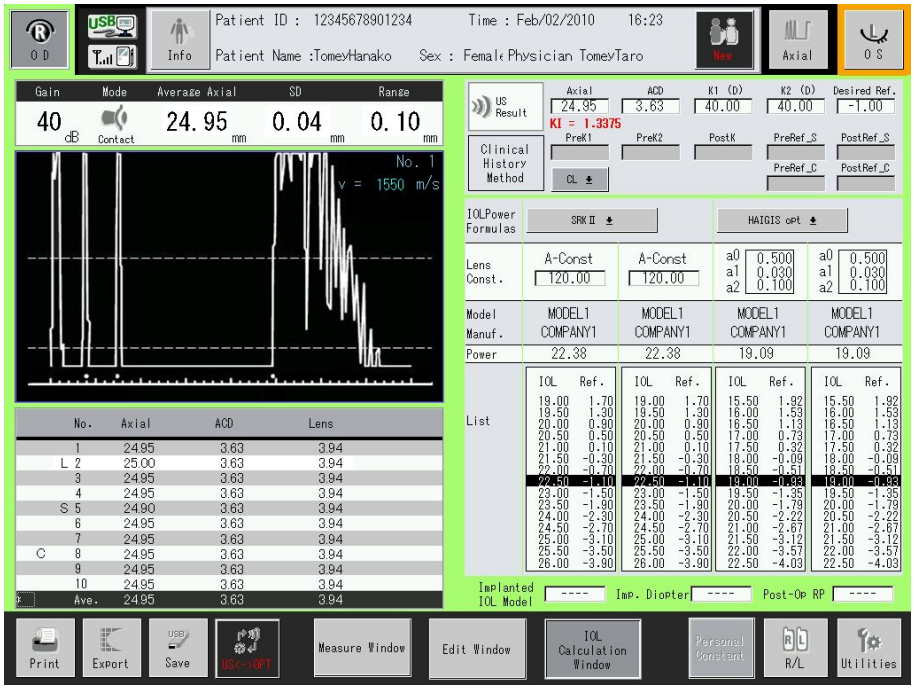


One eye

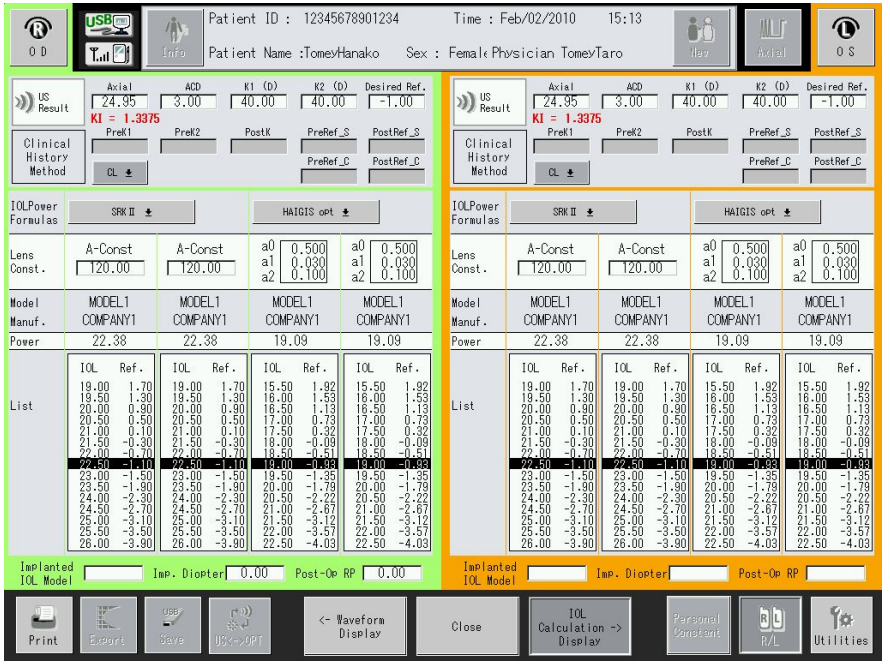


Both eye（R／L）

② IOL Power calculation

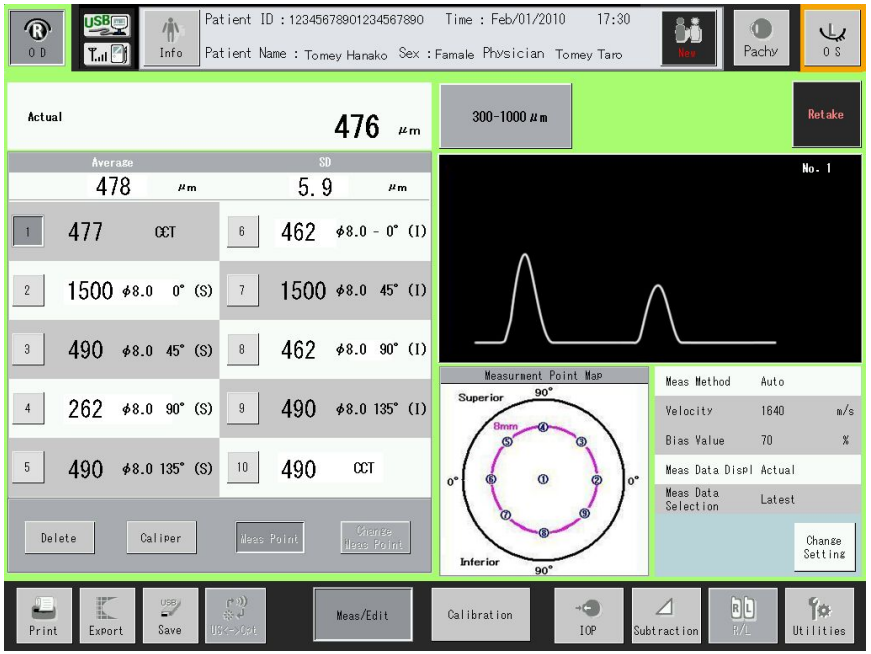


One eye

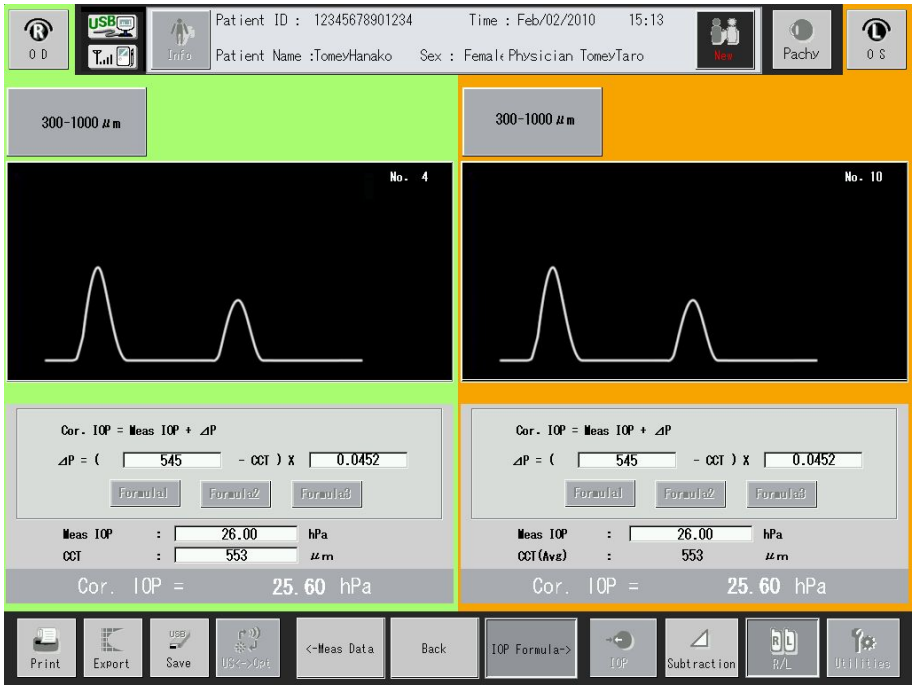


Both eye（R／L）

③ Pachymetry



One eye



Both eye（R／L）

UD-8000 Specification 】

<15MHz B Probe>

- Focus : Dynamic Focus
- Frame rate
  - Basic mode : 22 frame / sec
  - High Sensitive mode : 11 frame / sec
- Maximum number of pages in a movie : 400 pages x 2
- Image display range
  - Standard : 42mm / 52° (at ultrasound velocity=1550 m/sec)
  - Wide : 54mm / 52°(at ultrasound velocity=1550 m/sec)
- Color scale : 256 scale level
- Scan type : Sector scanning
- Transducer type : Annular array
- Transducer frequency : 15 MHz

<60MHz UBM Probe >

- Frame rate
  - Basic mode : 10 frame / sec
  - High Sensitive mode : 7 frame / sec
- Maximum number of pages in a movie : 100 pages x 2
- Image display range : 9 mm(W) x 7mm(D) (at ultrasound velocity=1550 m/sec)
- Color scale : 256 scale level
- Scan type : Linear scanning
- Transducer type : Single
- Transducer frequency : 60 MHz

Dimensions and weights

- Dimension : 398(W)×359(D)×456(H) mm
- Weight : 15.0kg

Display

TFT LCD : 15 inches, color touch screen

Power source

- Input Voltage : 100-120V / 220-240 VAC
- Frequency : 50/60Hz
- Power Consumption : 125/125 VA

		UD-8000	UD-6000
Standard Probe	Frequency	15MHz	10MHz
	Resolution	0.4mm	0.5mm
	Frequency Chang over function	Yes（15MHz / 20MHz / Harmonic）	No
	Capture pict (Max)	400pcs（Appro. 20sec）	202pcs（Appro.10sec）
	Angle （Max）	51mm × 51.0°	46mm × 46.4°
	Dimension ・Weight	27 × 21.6 × 134(mm) 97g	φ25.6 × 198 (mm) 400g
UBM Probe	Frequency	60MHz	40MHz
	Resolution	0.05mm(Actual 0.04)	0.05mm(Actual 0.06)
	Membrane cap	Yes（EOG antisepsis）	No
	Sitting,Prostrate position examine	Possible	Impossible
	Eye cup examine	Possible	Possible
	Angle （Max）	9 × 7 (mm)	9 × 6 (mm)
	Dimension ・Weight	27 × 26 × 144 (mm) 101g	φ30.9 × 200 (mm) 680g
Others Specifications	Display	15’ TFT color display	10.4’ TFT color display
	Save Media	USB memory	CF card memory
	Save／Still picture	JPEG / Raw data	JPEG / Raw data
	Save／Movie （EXPORT）	Raw data：Change to AVI file through data transfer.	No
	Group saving	Up to 20 frames	No
	Measurement function	Distance（3）Angle（2）Area（2）	Distance（1）、Area（1）
	Angle analyze function	AOD250,AOD500, AOD750, ARA500, ARA750, TIA500, TISA500, TISA750	AOD250, AOD500, ARA750, TIA500
	Iris analyze function	ID1, ID2, ID3, TCPD, ICPD	なし
	Comment in put	Yes（All Probe）	Yes（UBM Only）
	Printing (Picture only)	Yes	No
	Probe line up	15MHz Probe 60MHz Probe 30MHz Probe 40MHz Probe	10MHz Probe 40MHz Probe
	Probe shifting part	Basal part	Main unit part

Thank you !