

Ultrasound: Part 1

B-scan (brightness-mode)

The particular section of ocular tissue displayed on the screen is dependent on where the probe is positioned and how the mark is directed.

There are three basic probe orientations:

Transverse: (Quadrant)

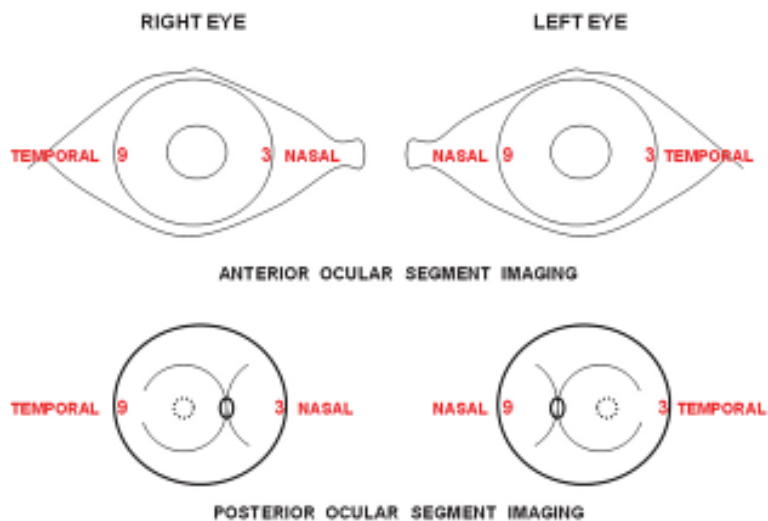
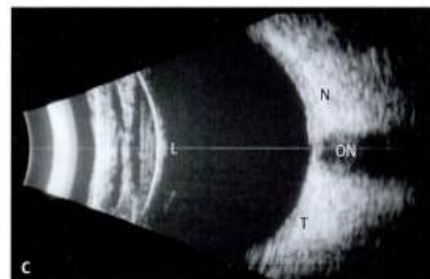
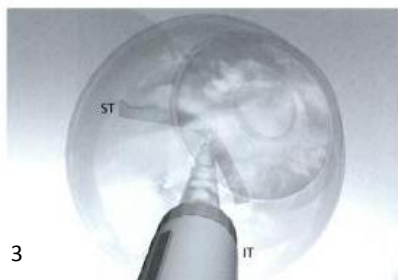
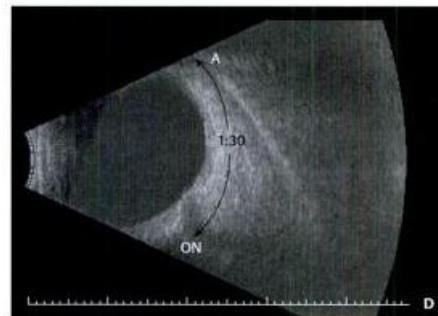
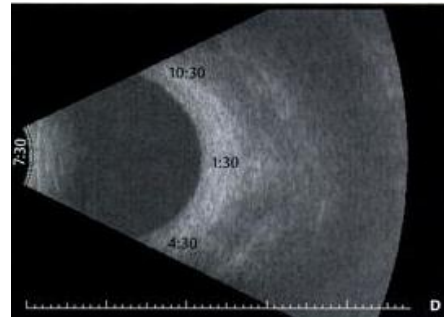
- longest diameter of the oval shaped oriented parallel to the limbus
- Sweeps *across* the meridian
- Lateral Extent of a lesion
- Marker toward Pt nose

Longitudinal: (Radial)

- longest diameter of the oval shaped oriented perpendicular to the limbus
- sweeps *along* the meridian
- Anterior-posterior extent
- Marker toward center of the cornea and of the meridian
- Optic disc displayed on the lower portion

Axial:

- Pt fixating in primary gaze
- Probe face centered on the cornea
- Sweeping along two opposing meridians intersected by the optic nerve
- Optic disc is at the middle of the screen



Interpretation of screen view:

- 1- Marker position displayed at the top of the screen
- 2- Increasing in brightness means increasing of reflectivity

Indication:

- 1- Differential diagnosis of intraocular abnormalities by knowing the following:

Topographic

- Location
- Extension
- Shape

Qualitative

- Reflectivity
- Sound attenuation

Kinetic

- Mobility
- Adhesion

- 2- Regular pre and post operation exam
- 3- Baseline and regular exam in some cases.

Ultrasound: Part 2

Abnormalities:

1- Lens condition

- Dislocation – subluxation – absent
- Elicit different forms of lens opacities

2- Condition related with axial length

- Staphyloma
- Scleral buckling
- Disc cup or coloboma

3- Vitreous abnormalities

- PVD
- Asteroid hyalosis
- IOFB
- PHPV
- Vitreal hemorrhage

4- Retinal abnormalities

- Retinal tears
- RD
- Retinal edema
- TRD

5- Choroid

- Dome shaped
- Suprachoroidal hemorrhage
- Choroidal calcification
- Choroidal detachment

6- Intraocular tumors

- Retinoblastoma
- AMD
- Melanoma

