



F P 2 Chronic Visual Loss

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KAUH

CHRONIC VISUAL LOSS

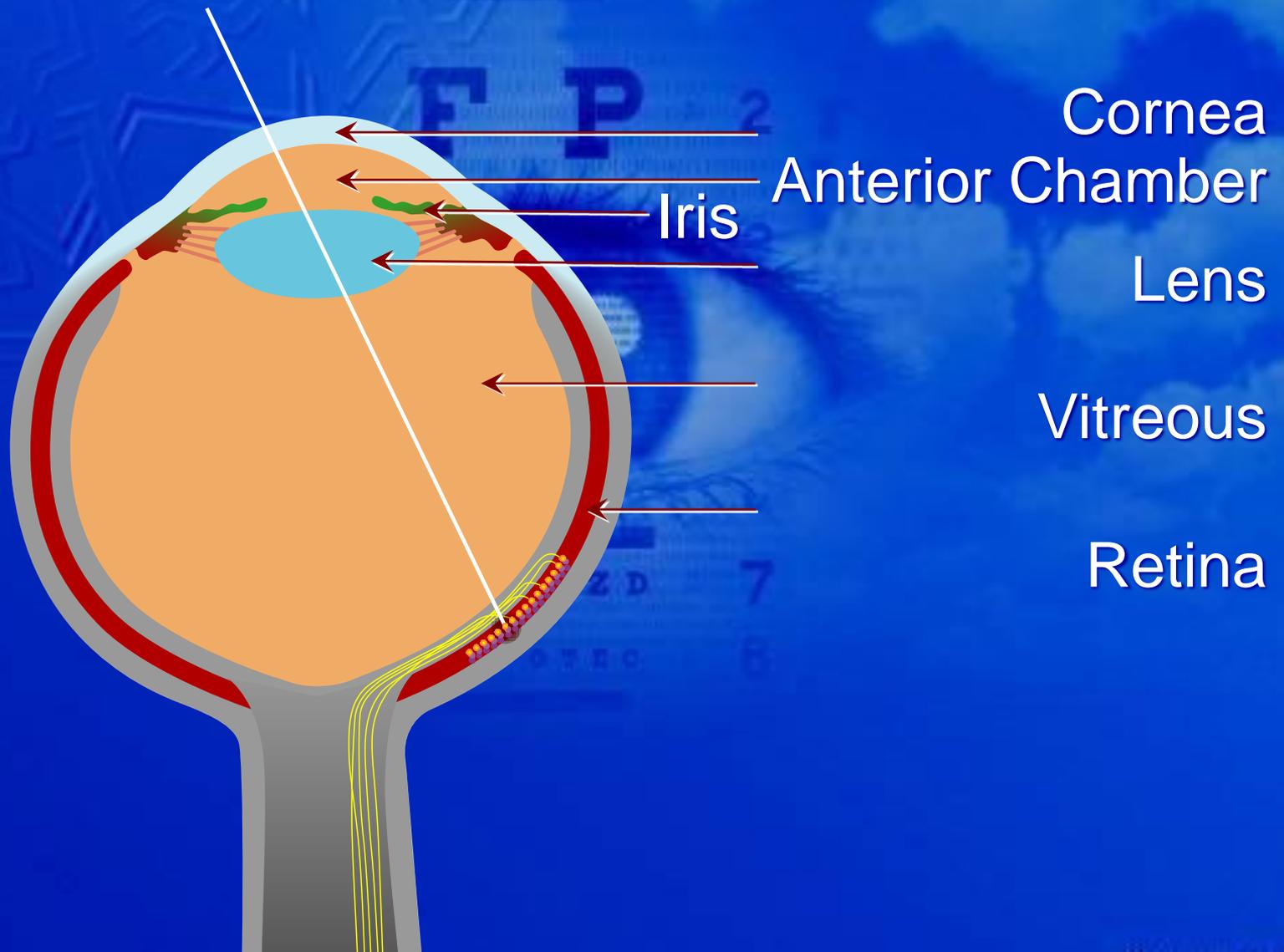
1. Measure intraocular pressure with a tonometer
2. Evaluate the nerve head, classifying it as normal, or abnormal
3. Evaluate the clarity of the lens
4. Evaluate the function and appearance of the macula.

CHRONIC VISUAL LOSS

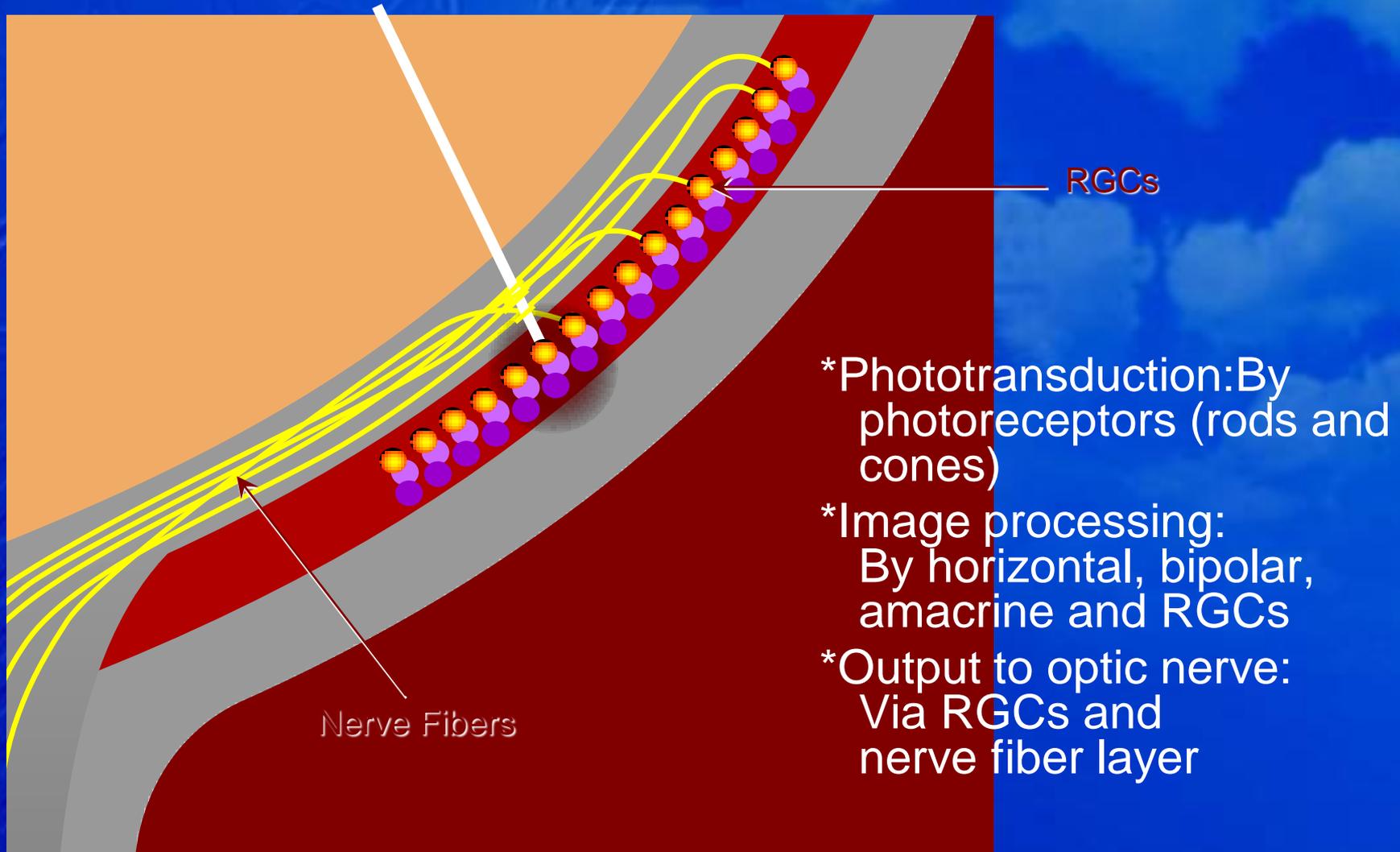
Causes of slowly progressive **visual loss** in an adult patient

1. Glaucoma.
2. Cataract.
3. Macular degeneration.
4. Diabetic retinopathy .

The Visual Pathway

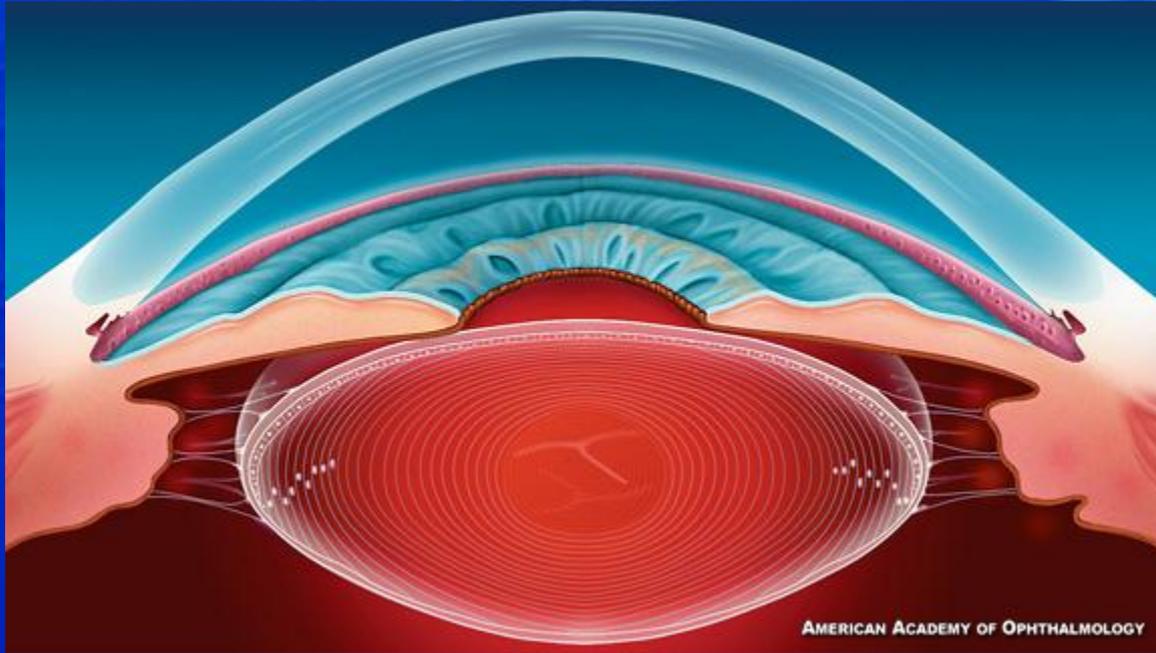


The Visual Pathway



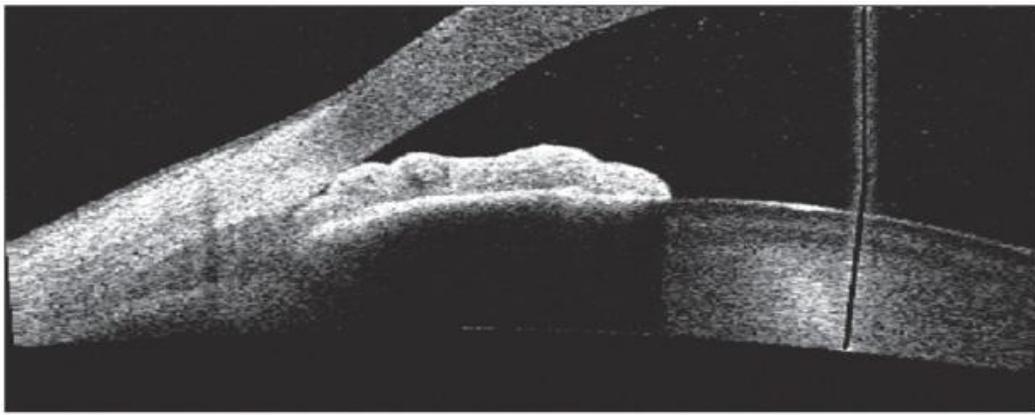
GLAUCOMA

- *A major cause of blindness.
- *Often A symptomatic; in early stage.
- *Damage is irreversible.
- *Effective treatment is available.

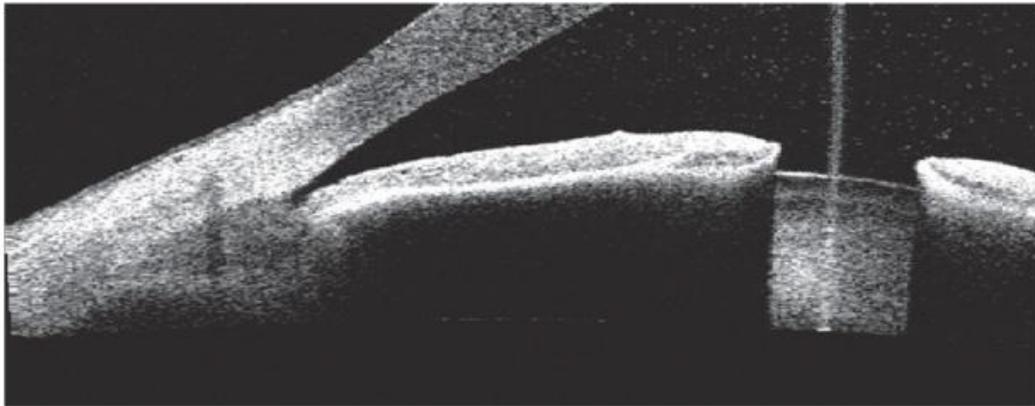


AMERICAN ACADEMY OF OPHTHALMOLOGY

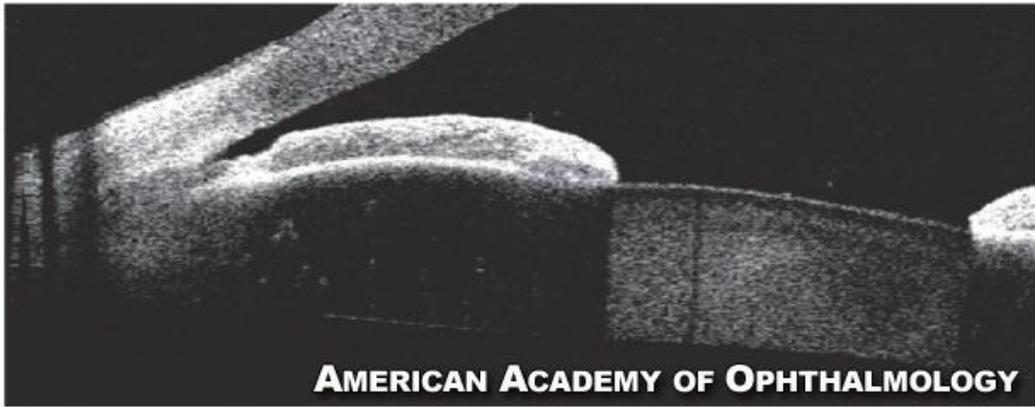
PELOPZO /
DEPTOPEC 8



A



B

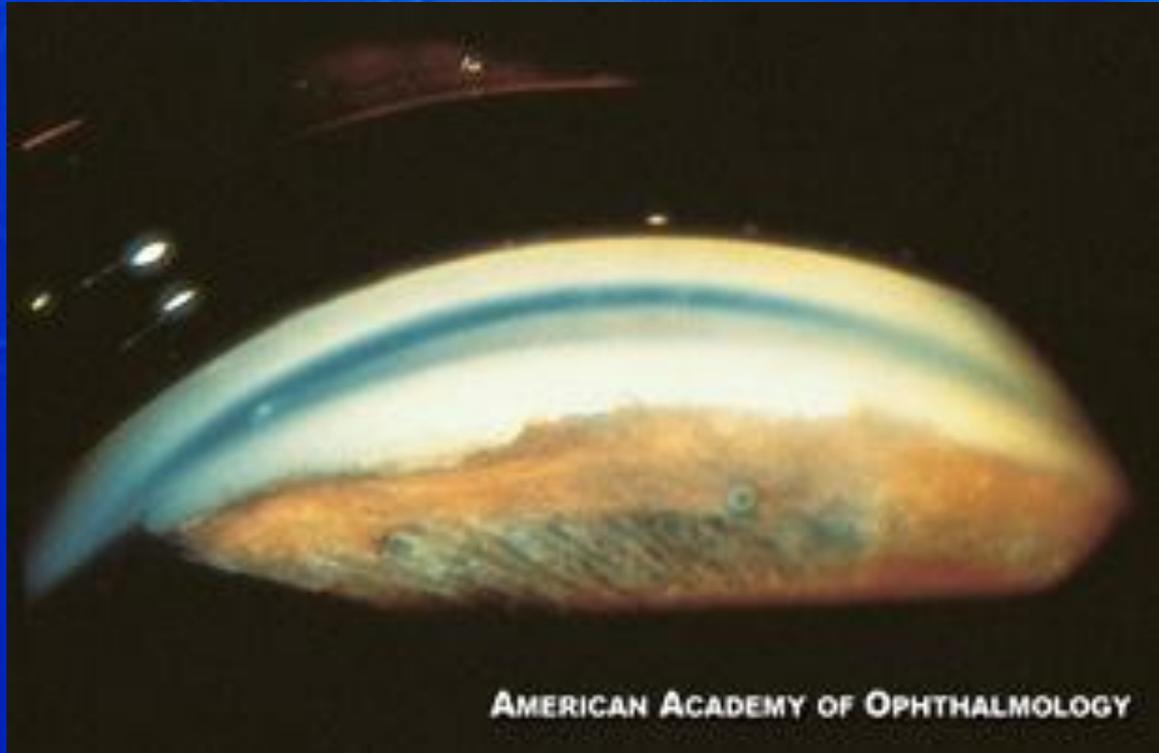


C

AMERICAN ACADEMY OF OPHTHALMOLOGY

AMERICAN ACADEMY OF OPHTHALMOLOGY





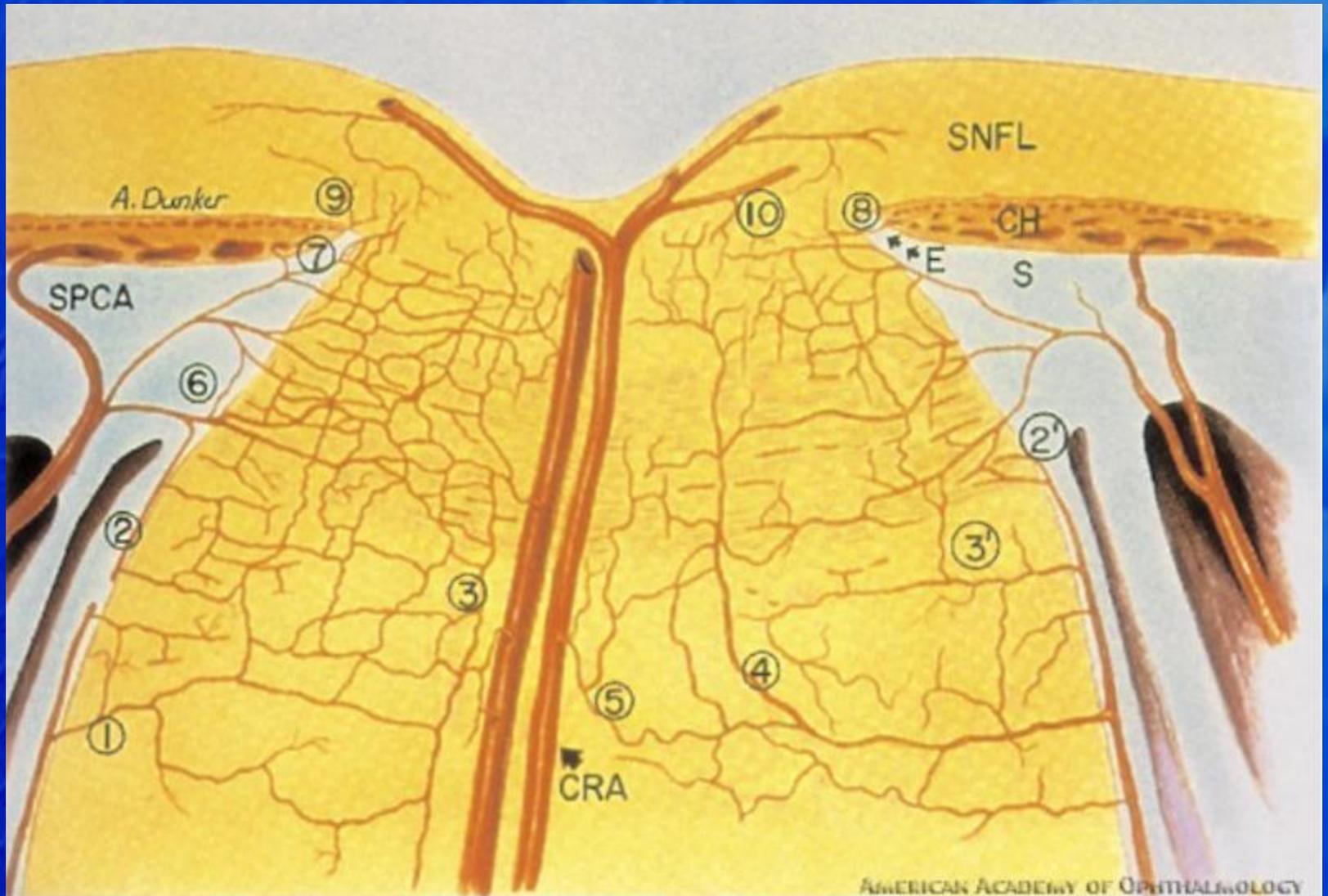
AMERICAN ACADEMY OF OPHTHALMOLOGY

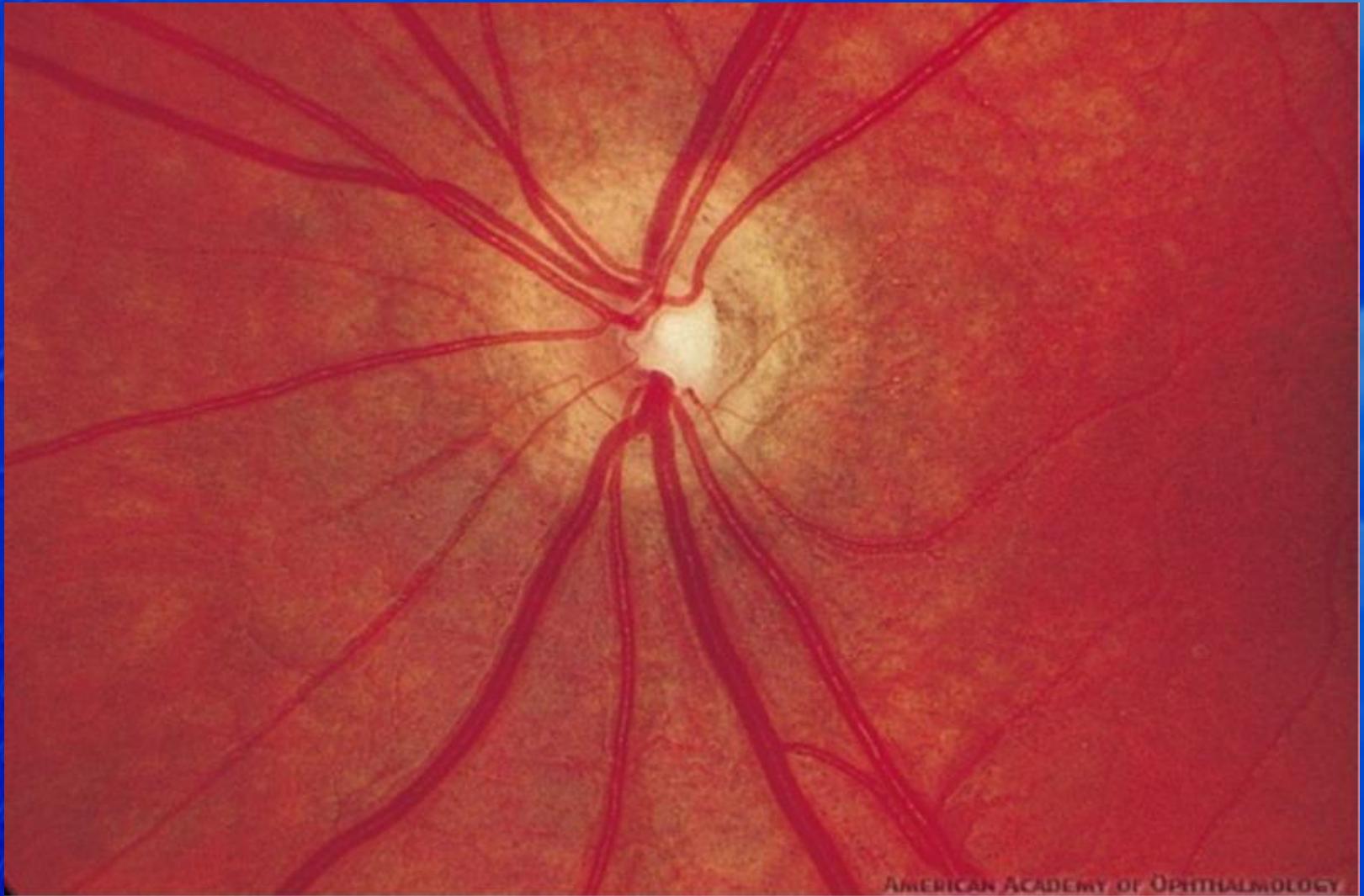
TYPES OF GLAUCOMA

Acute glaucoma

Chronic glaucoma

Congenital glaucoma

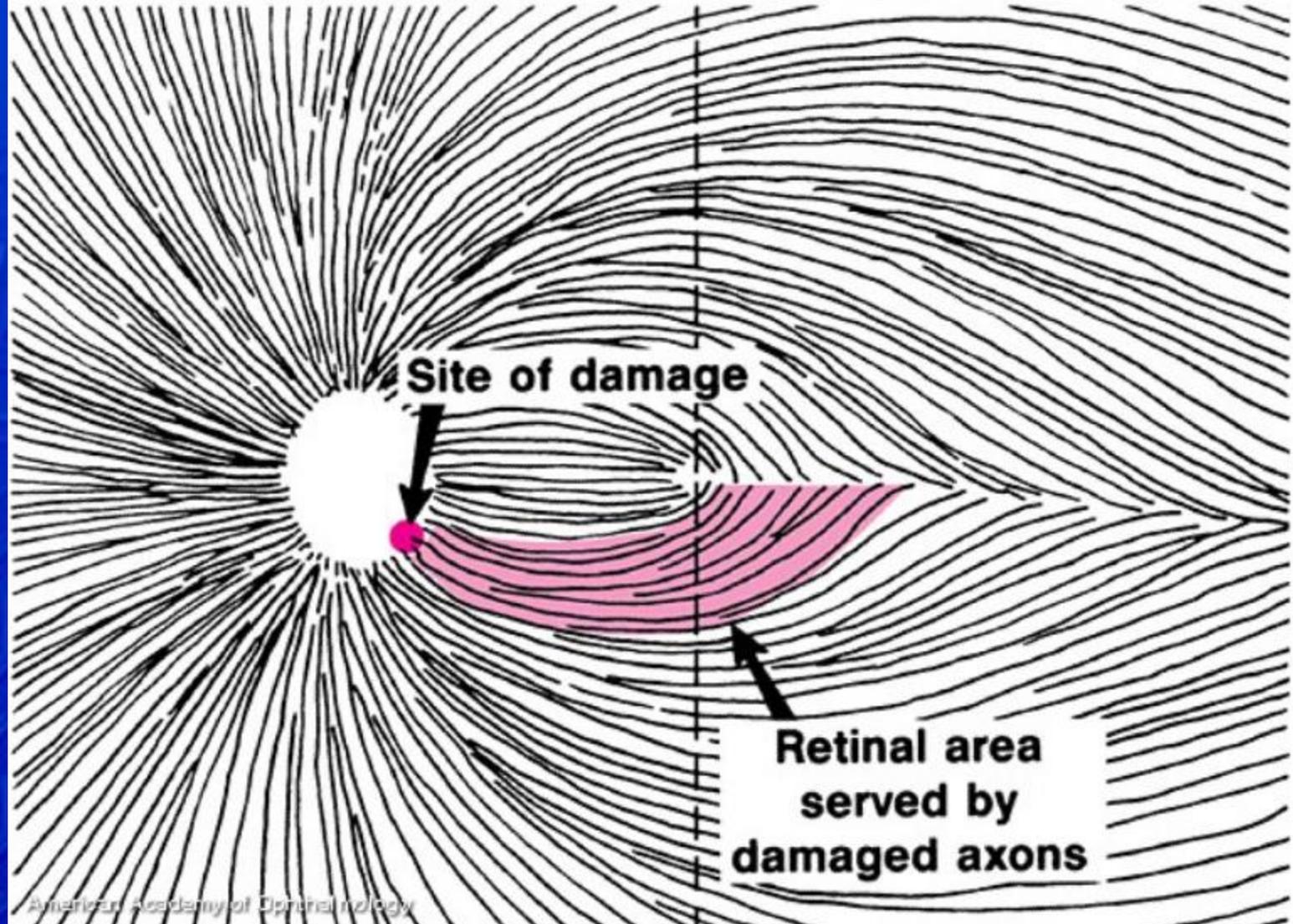


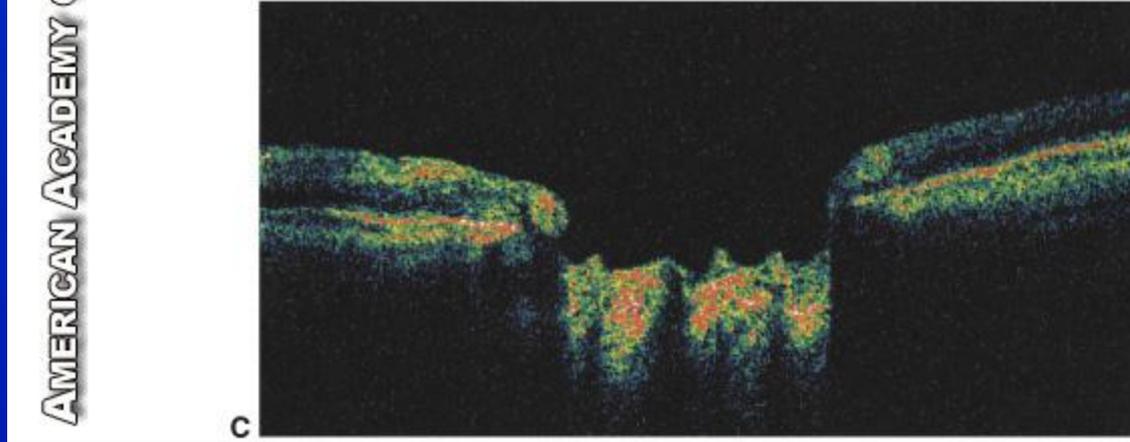
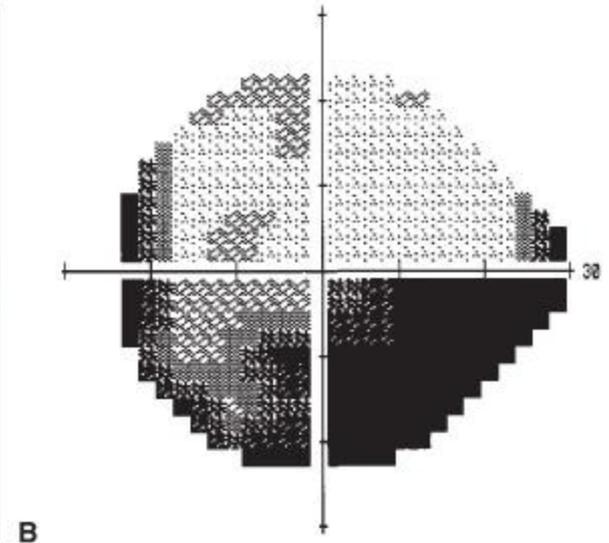


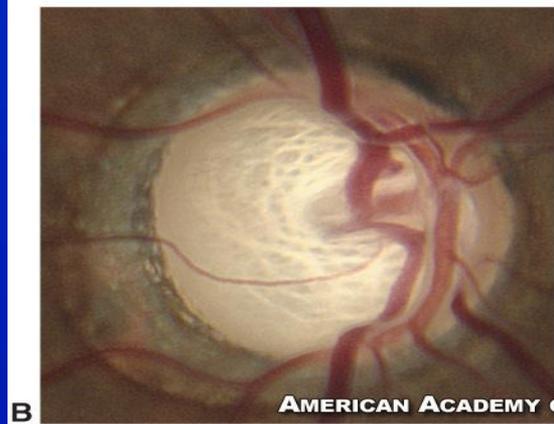
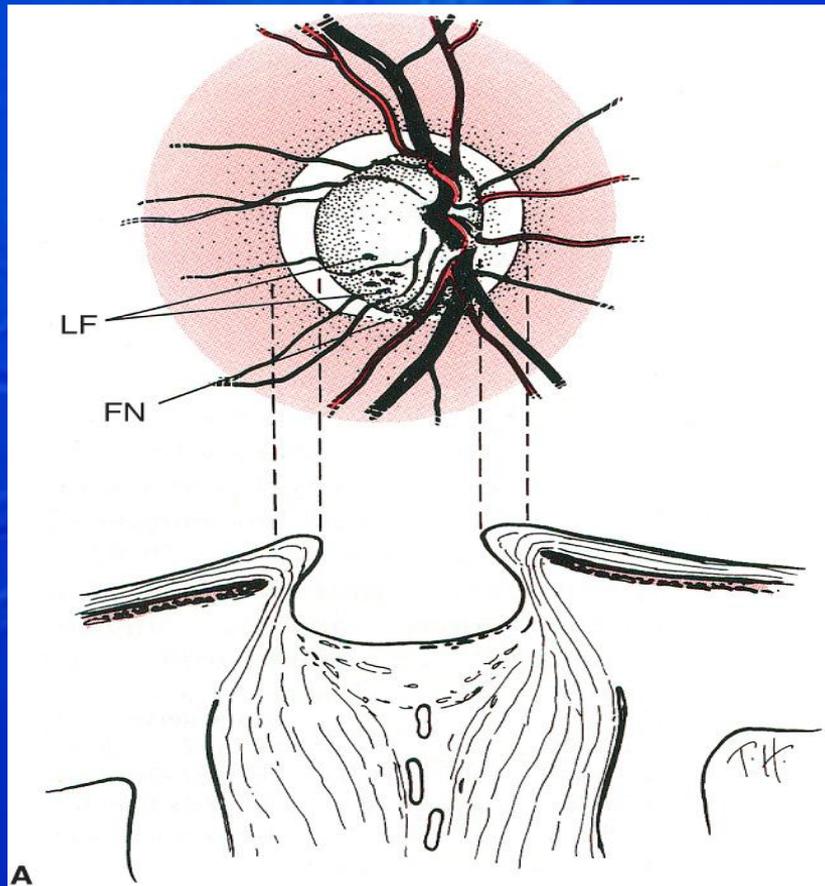
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Nasal retina

Temporal retina







F P 2



E 5

FELOPZD 7

DEPOTEC 8

GLAUCOMA

EGS definition:

F P - 2

progressive optic neuropathies, that have in common characteristic morphological changes at the optic nerve head and retinal fiber layer in the absence of other ocular disease or congenital anomalies. Progressive retinal ganglion cell death and visual field loss are associated with these changes.”

— *EGS, Terminology and Guidelines for Glaucoma, 2nd Edition, 2003*

GLAUCOMA

RELEVANCE

- Glaucoma is the second most important cause of blindness in the United States and the single most important cause of blindness in African Americans.
- If glaucoma is detected early and treated medically or surgically, blindness can be prevented. Most patients with early glaucoma are asymptomatic.

GLAUCOMA

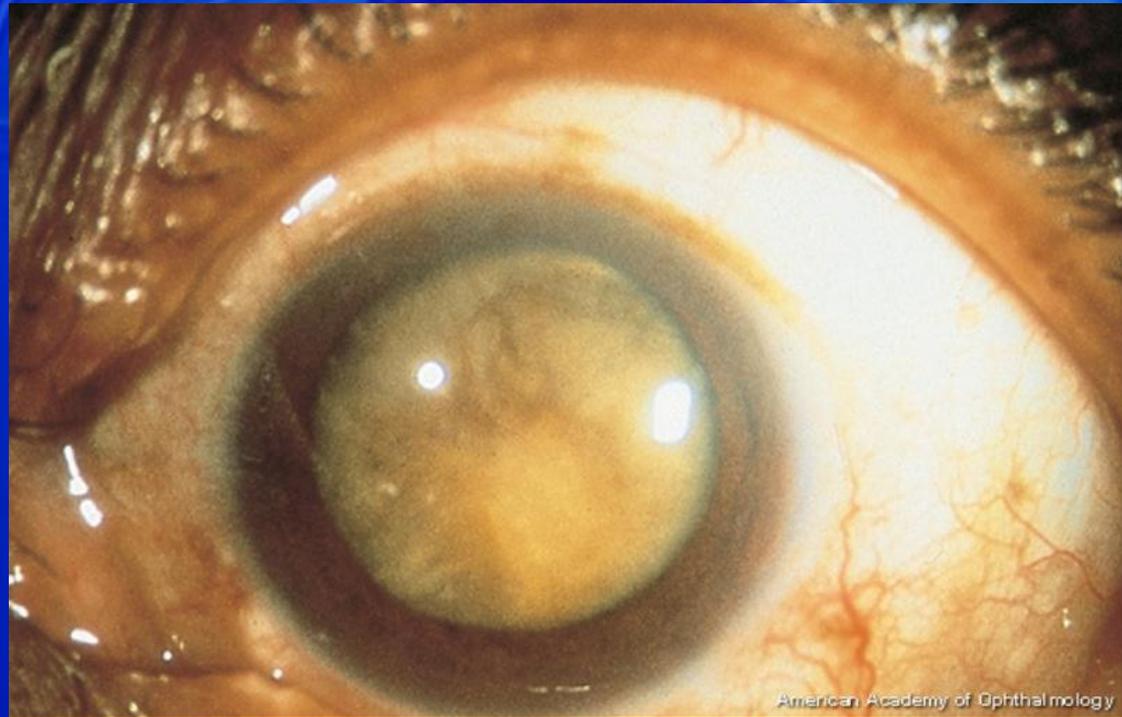
- The great majority of patients lack pain, ocular inflammation.
- Much peripheral vision can be lost before the patient notices **visual** impairment.

GLAUCOMA

- Because glaucoma involves elevated pressure in the eye, routine measurement of Intraocular pressure is a valuable means of screening for glaucoma.
- elevation of intraocular pressure can lead to optic nerve damage; therefore, examination of the optic nerve is another way to detect glaucoma.

CATARACT

Opacity of the lens - 2



CATARACT

Causes

Age related

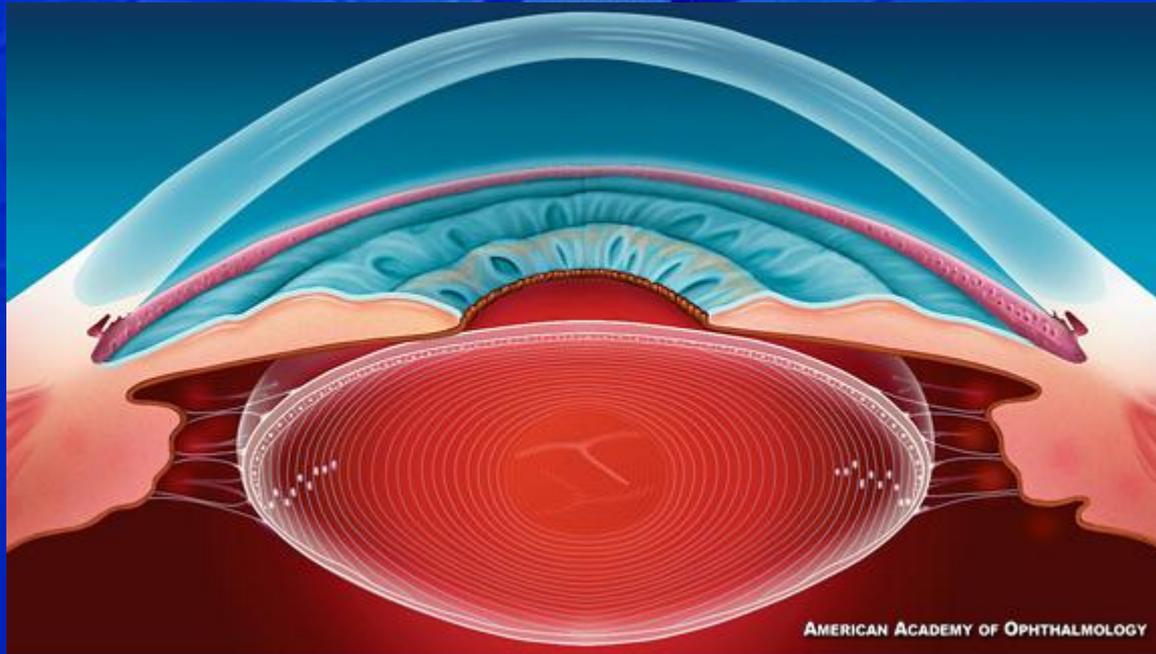
subcapsular

Nuclear

cortical

Traumatic





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CATARACT

Metabolic

Diabetic

Hypocalcemic syndrome



CATARACT

Cataratogenic drugs

Steroids

Chlorpromazine

Miotics

Amiodarone



CATARACT

Complicated cataract

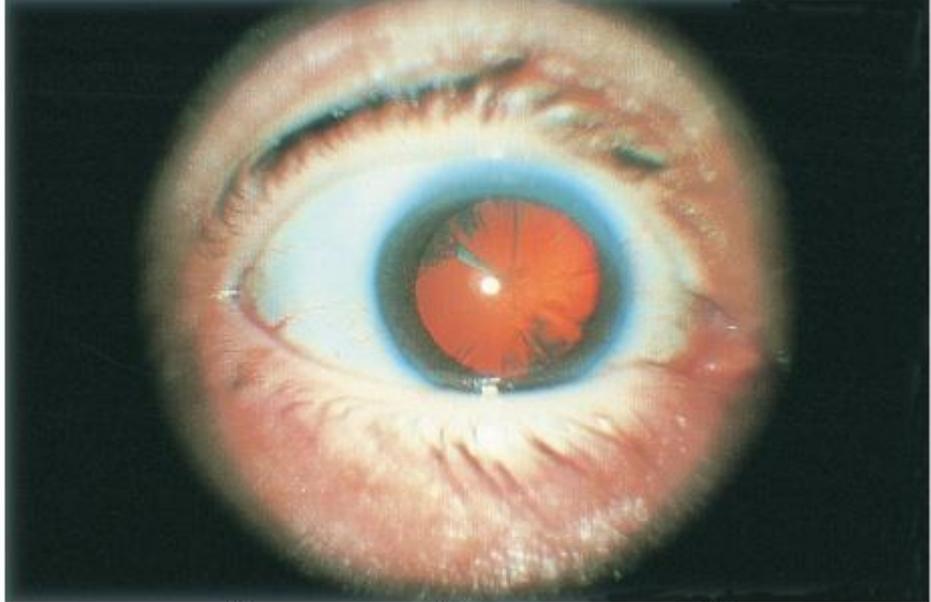
Uveitis

Retinal dystrophy, retinitis pigmentosa

High myopia

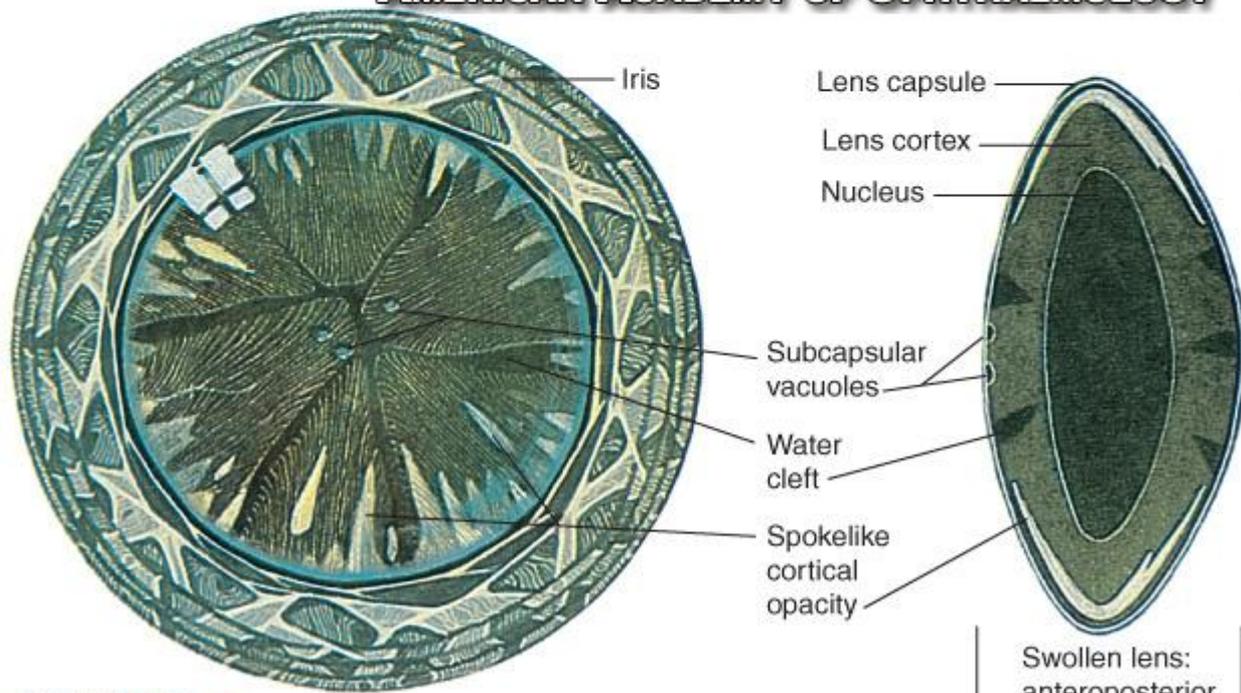
Acute glaucoma





A

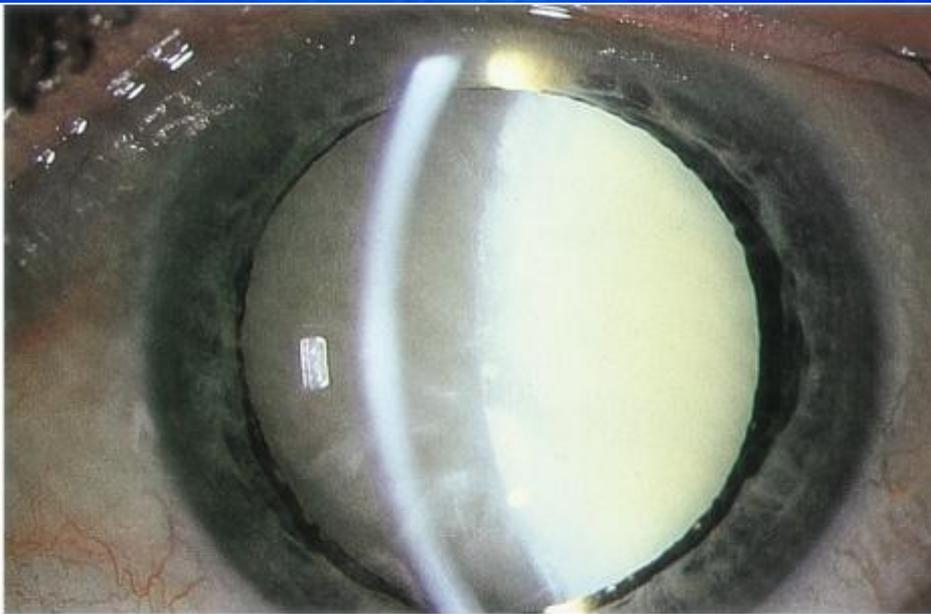
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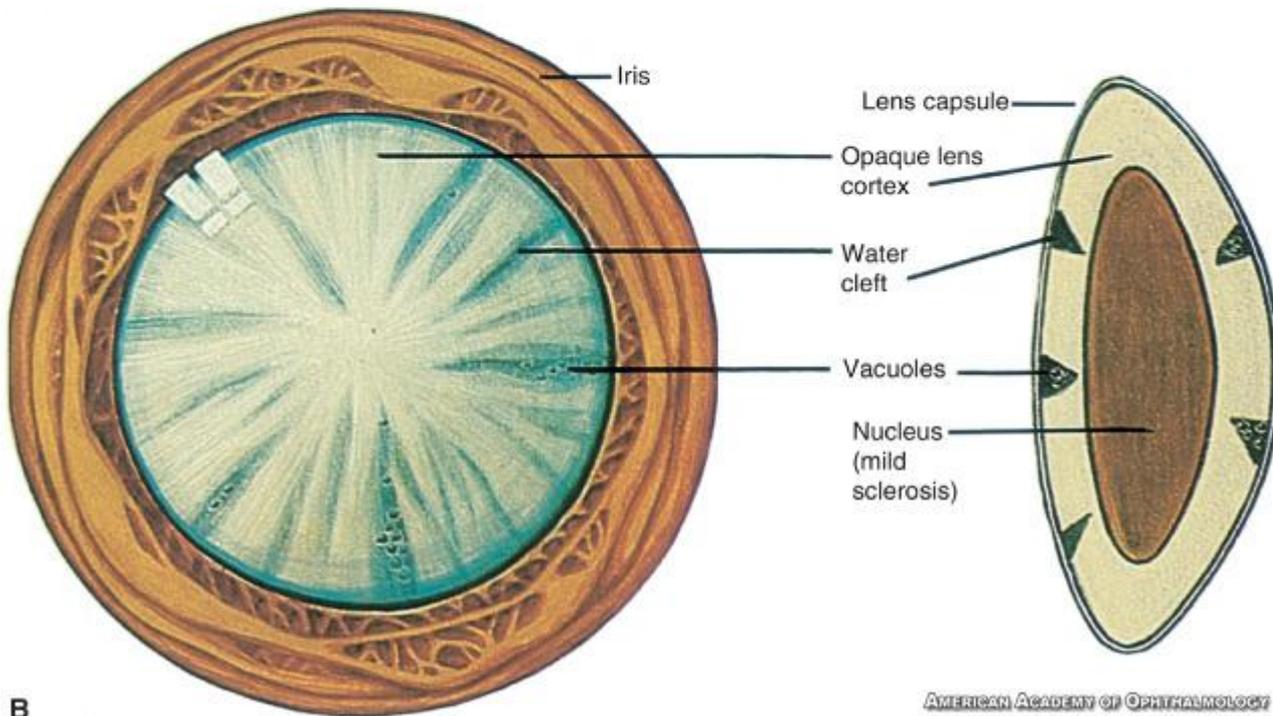
JOHN A. CRAIG, MD
© CIBA

B

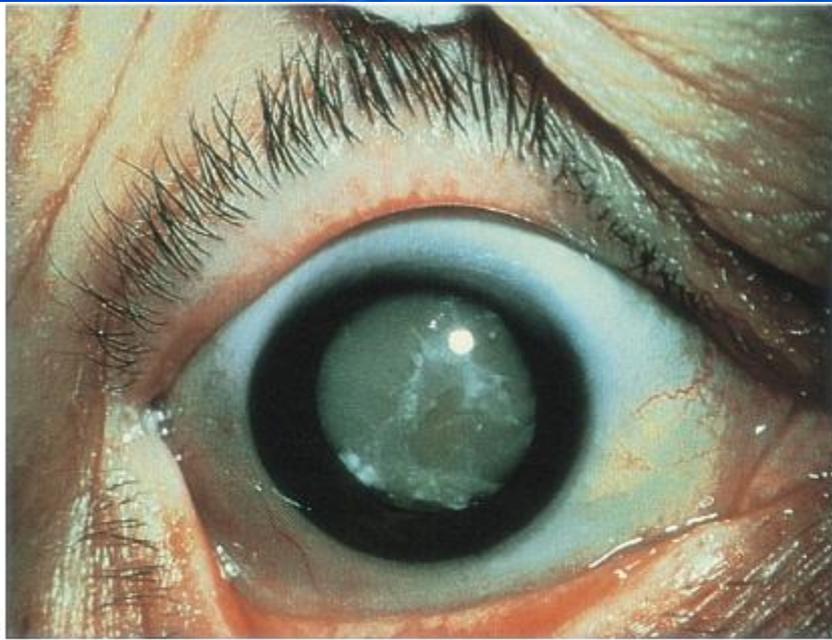
Swollen lens:
anteroposterior
diameter
increased



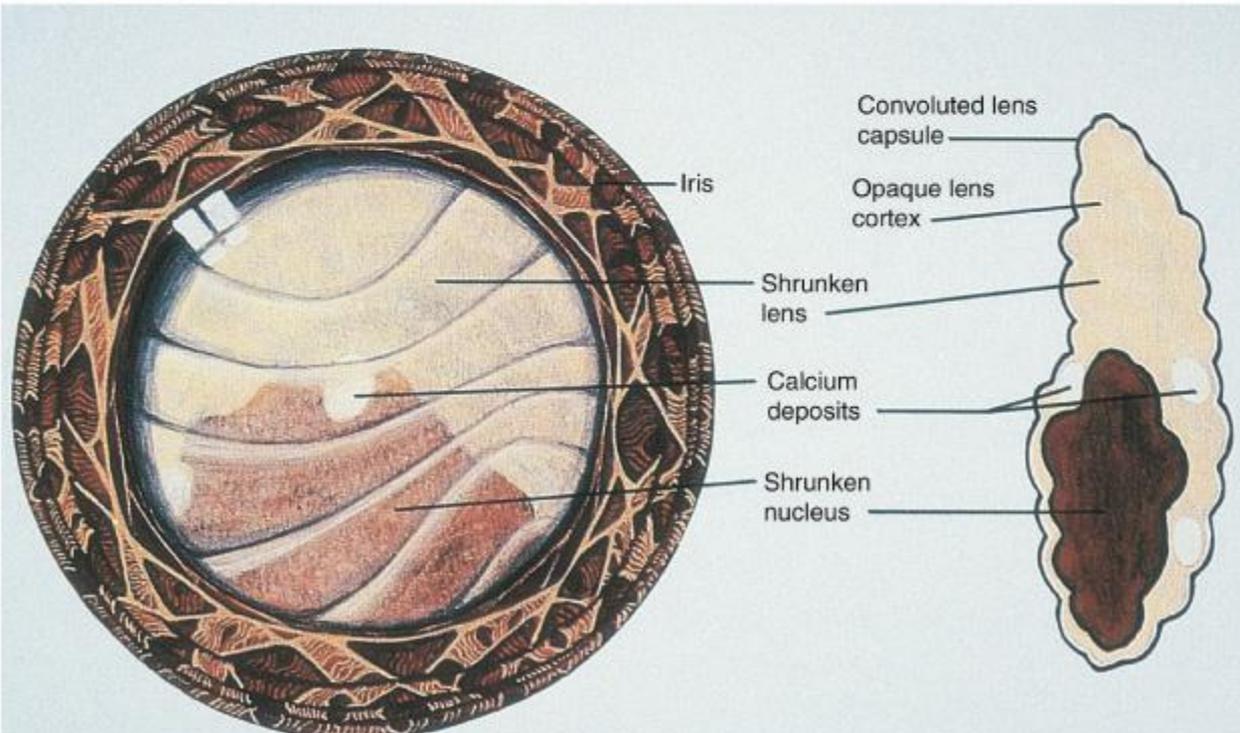
A



B



A



CATARACT

Classification

1-morphologic

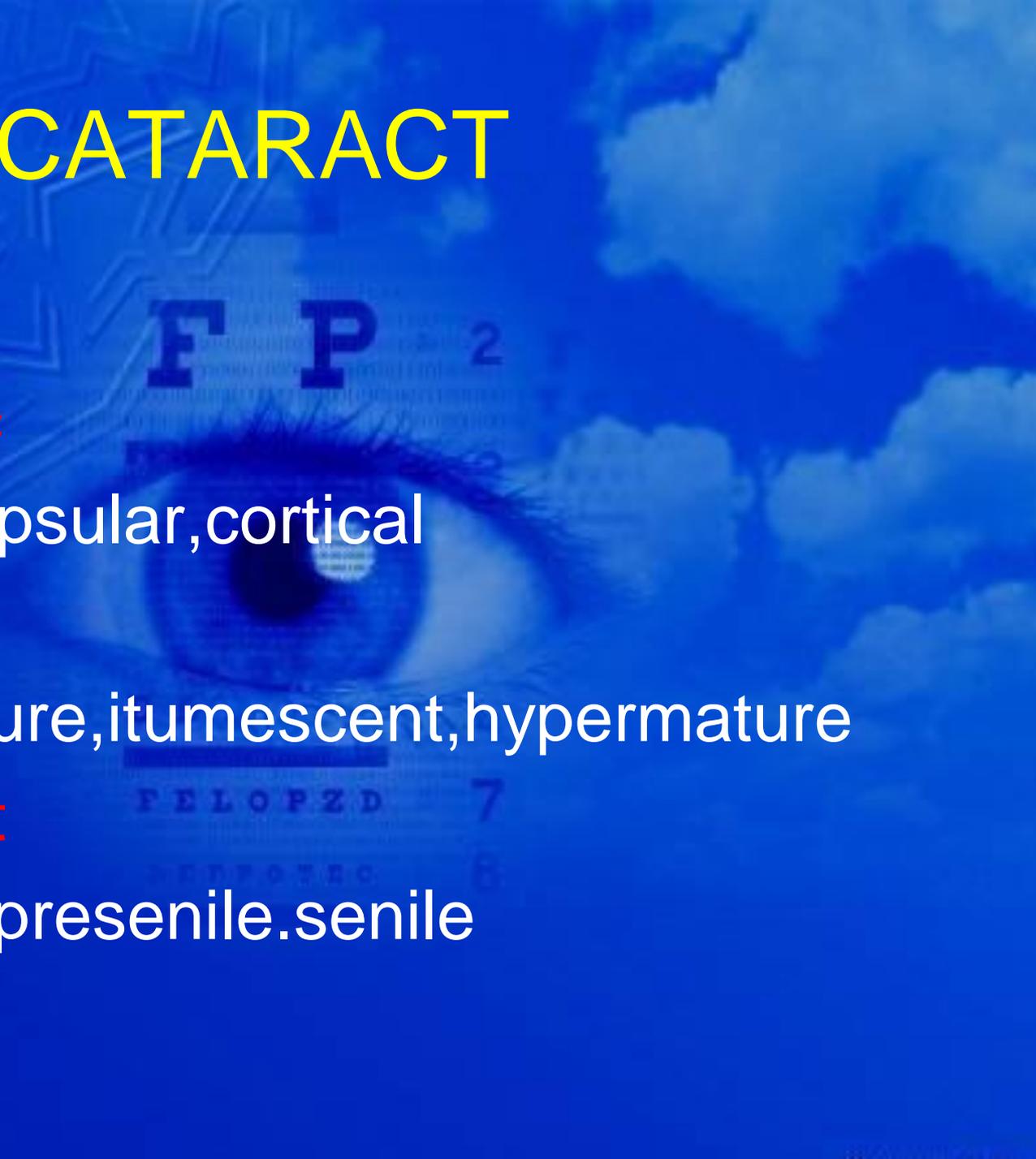
nuclear, subcapsular, cortical

2-maturity

immature, mature, intumescent, hypermature

3-age of onset

cong, infantile, presenile, senile



Congenital Cataract

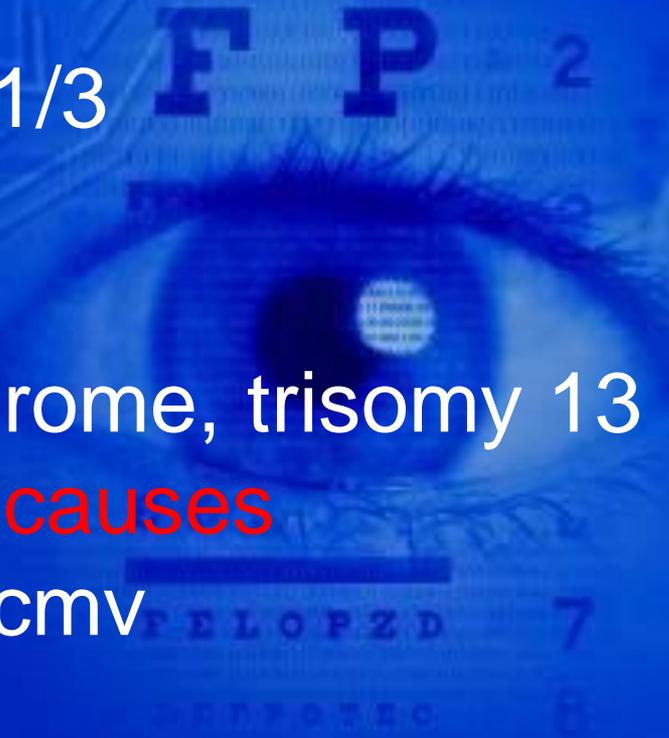
Hereditary 1/3

Metabolic
Syndroms

dowen syndrome, trisomy 13 & 18

Intrauterine causes

rubellatoxo,cmv



CATARACT

Management

Congenital lens aspiration \pm IOL

Acquired

ICCE

ECCE

ECCE IOL

PHACO IOL







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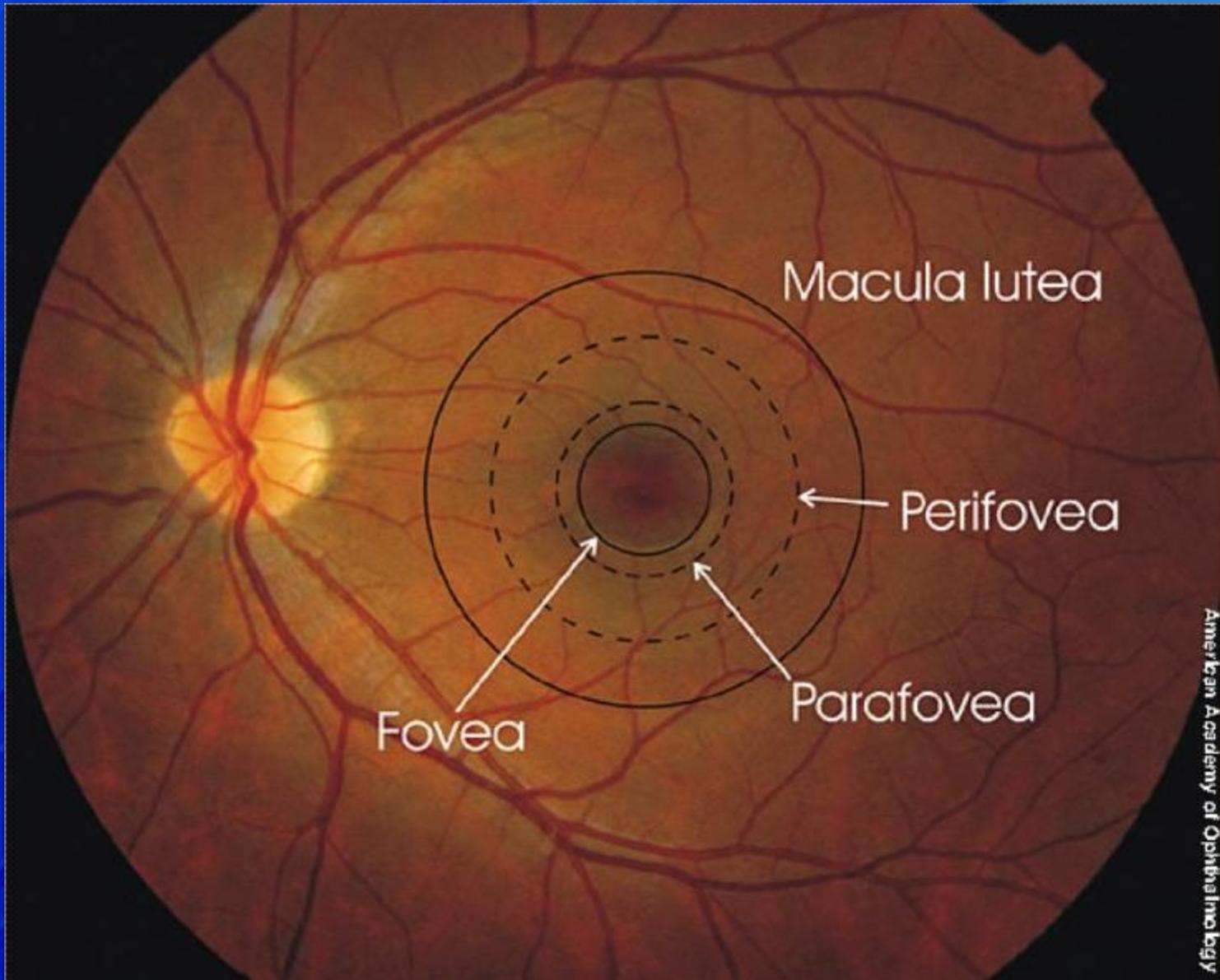


Macular Degeneration

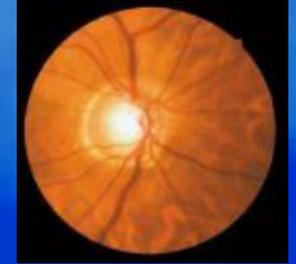


RELEVANCE

- In the United States, age-related macular degeneration is the leading cause of irreversible central **visual loss** (20/200 or worse) among people aged 50 or older.
- Because certain types of macular degeneration are treated effectively with laser, it is important to recognize this entity and to refer for appropriate care.
- It is important to distinguish between the possible causes of **visual loss**, whether cataract (surgically correctable), glaucoma (medically or surgically treatable), or macular
- degeneration (potentially laser treatable).



Macular degeneration



Macular Anatomy

The macula is an oval area situated about 2 disc diameters temporal to the optic disc. The macula is composed of both rods and cones and is the area responsible for detailed, fine central vision.

The central macula is a vascular and appears darker than the surrounding retina. The fovea is an oval depression in the center of the macula. There is a high density of cones but no rods are present.

The central depression of the fovea may act like a concave mirror during ophthalmoscopy, producing a light reflection (i.e., foveal reflex).

Macular degeneration

Test for macular function

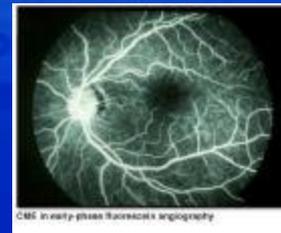
V/A

Ophthalmoscopy

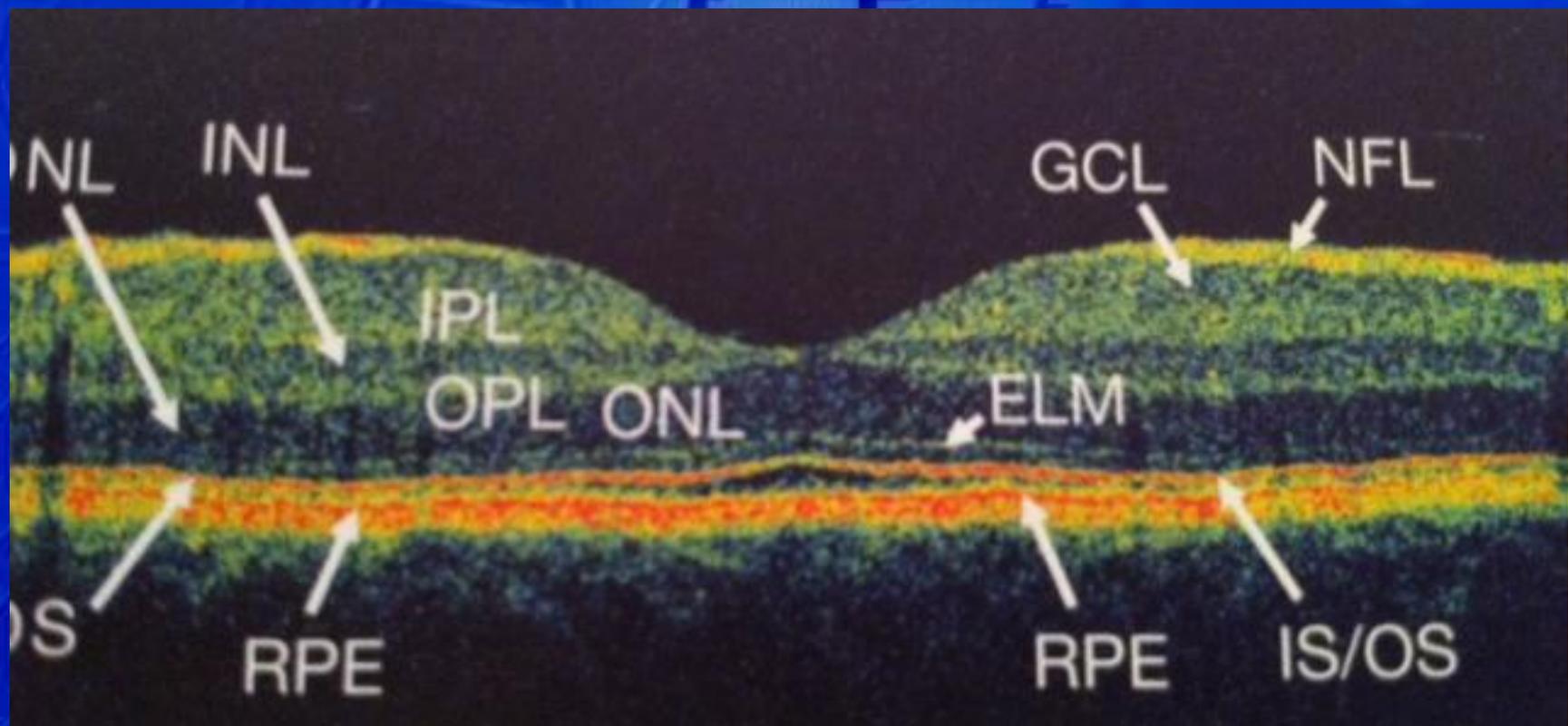
Amsilar grid

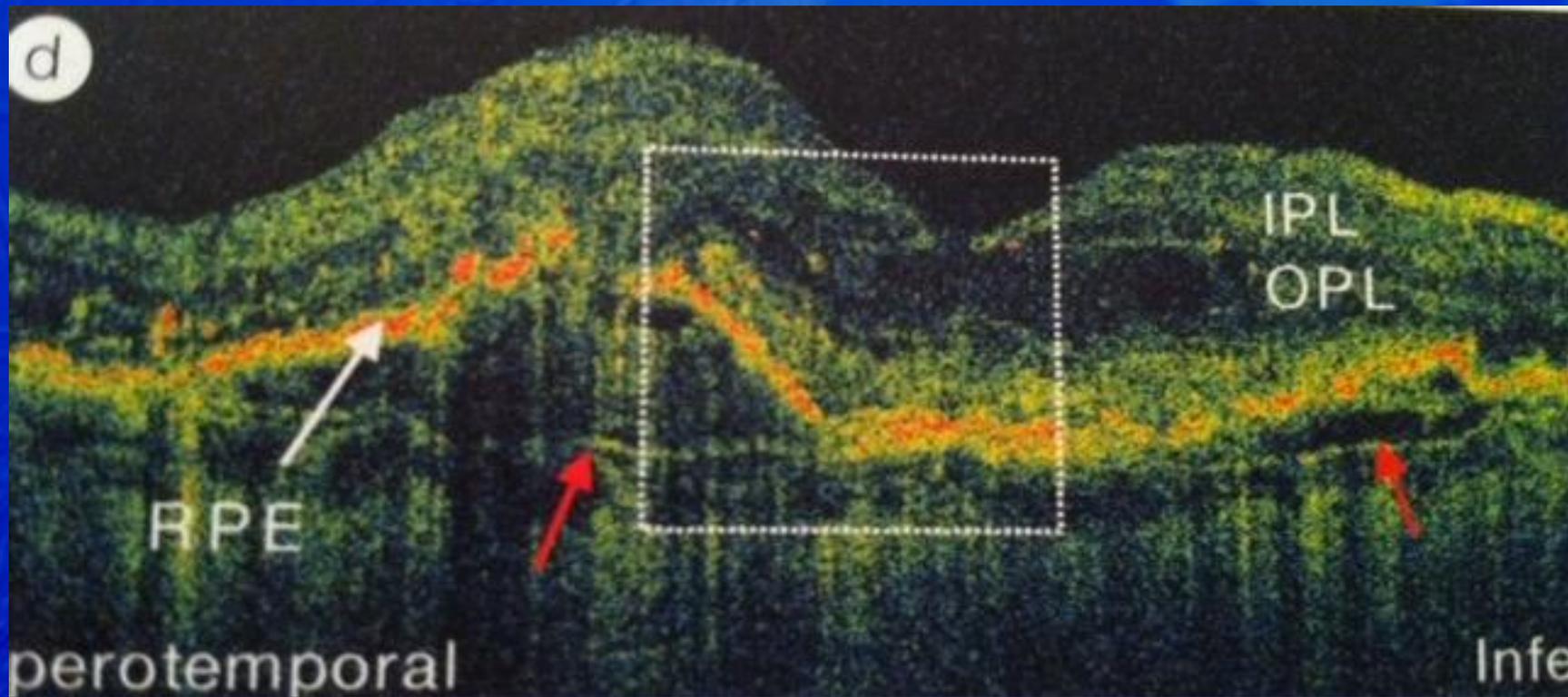
OCT

Flourescine angiography



F P 2





Macular degeneration

Age related

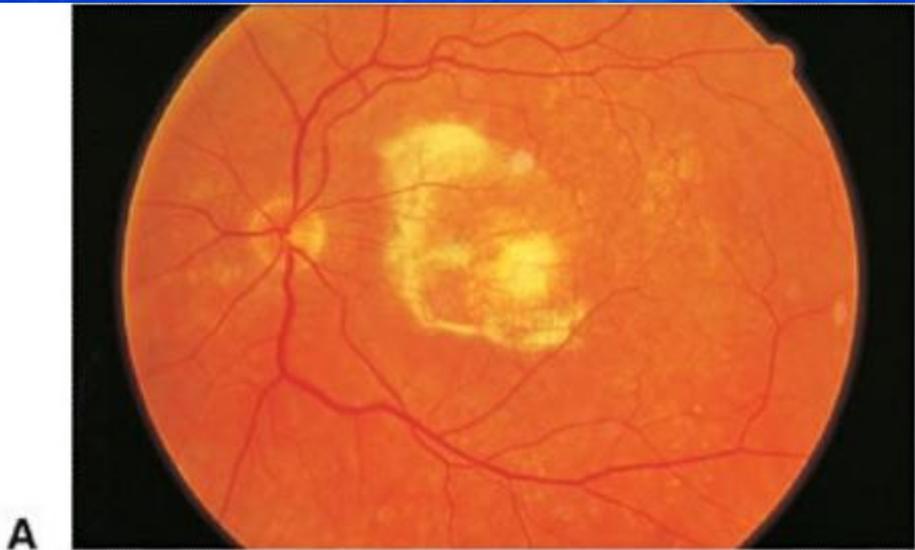
Some degree of visual loss
associated with drusen & atrophy of
RPE
subretinal neovascularization

Types

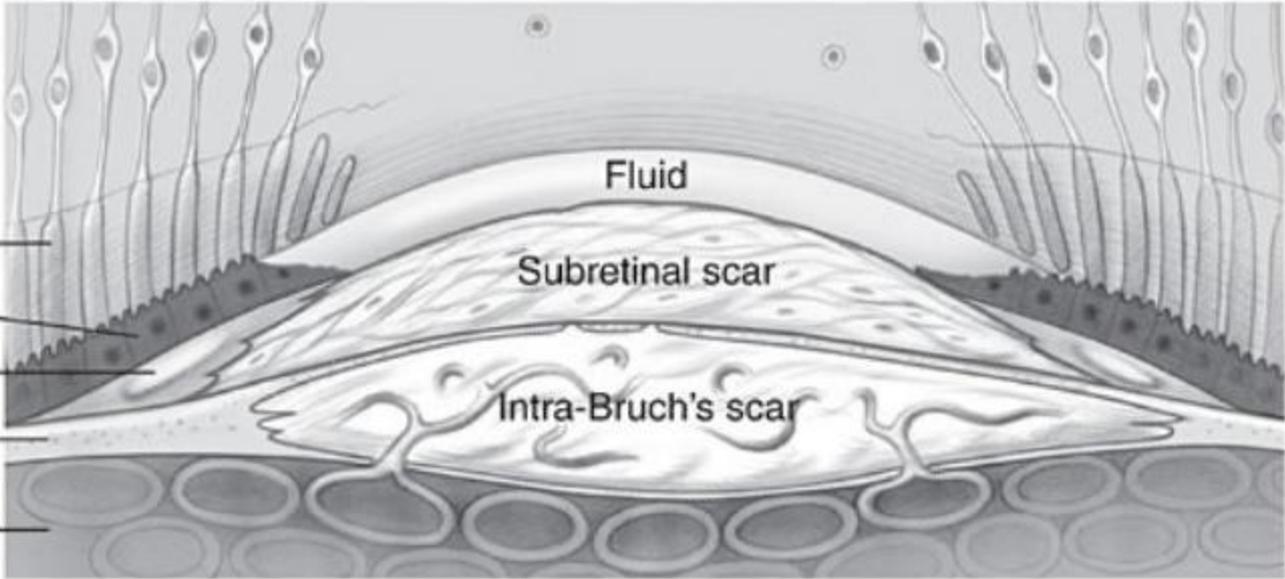
Dry type slow progressive atrophy of RPE
and photoreceptors

Wet type RPE detachment and choroidal
neovas.



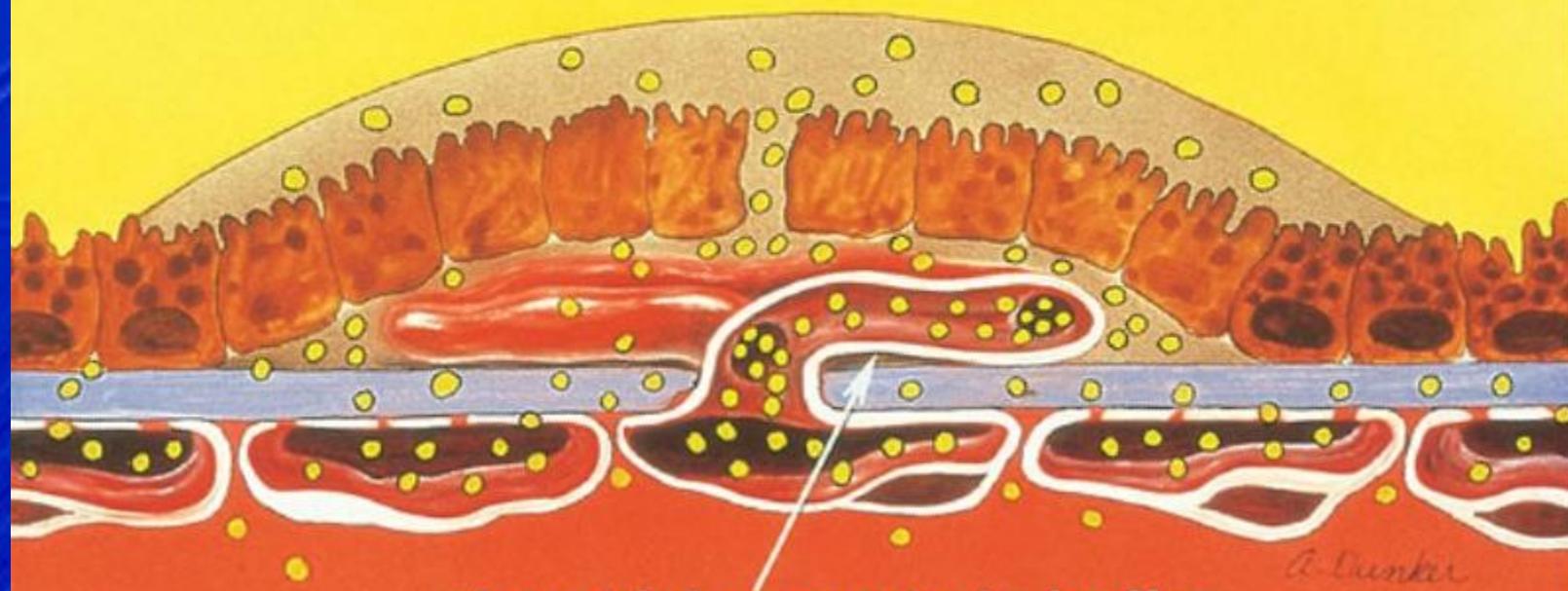


- Photoreceptor layer
- RPE
- Fluid
- Bruch's membrane
- Choroid



B

sensory retina



choroidal neovascularization

A. Dunker

F P 2



E 5

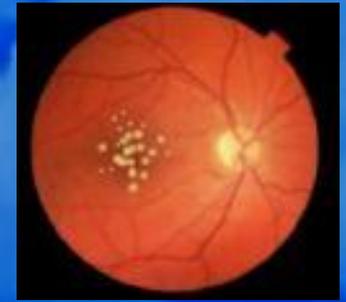
FELOPZD 7

DEFFOTEC 8



American Academy of Ophthalmology

Macular Degeneration



- Drusen are hyaline nodules (or colloid bodies) deposited in Bruch's membrane, which separates the inner choroidal vessels from the retinal pigment epithelium. Drusen may be small and discrete or larger, with irregular shapes and indistinct edges. Patients with drusen alone tend to have normal or near normal **visual acuity**, with minimal metamorphopsia

Macular degeneration

As the most common cause of vision loss among people over the age of 60, macular degeneration impacts millions of older adults every year. The disease affects central vision and can sometimes make it difficult to read, drive or perform other activities requiring fine, detailed vision.

Macular Degeneration

- **What Risk Factors You Can't Control**
- **Age**
- **Race**
- **Gender**
- **Genetics**

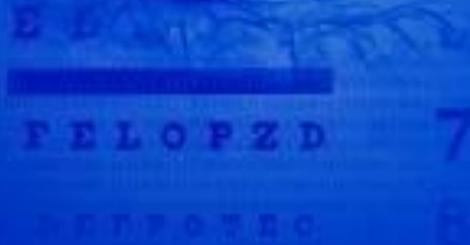


Macular Degeneration

- **Risk Factors You Can Control**
- **Smoking**
- **High Blood Pressure**
- **High Cholesterol**
- **Poor Nutrition**
- **Unprotected Exposure to Sunlight**
- **Ultraviolet (UV) light has been**
- **Excessive Sugar Intake**
- **Obesity**
- **Sedentary Lifestyle**

Diabeetic Retinopathy

Diabetic retinopathy is commoner in type 1 •
(40%) than in type 2 (20%), and is the
most prevalent cause of legal blindness
between the ages of 20 & 65 years.



Diabetic retinopathy

- Risk factors

Duration of the disease

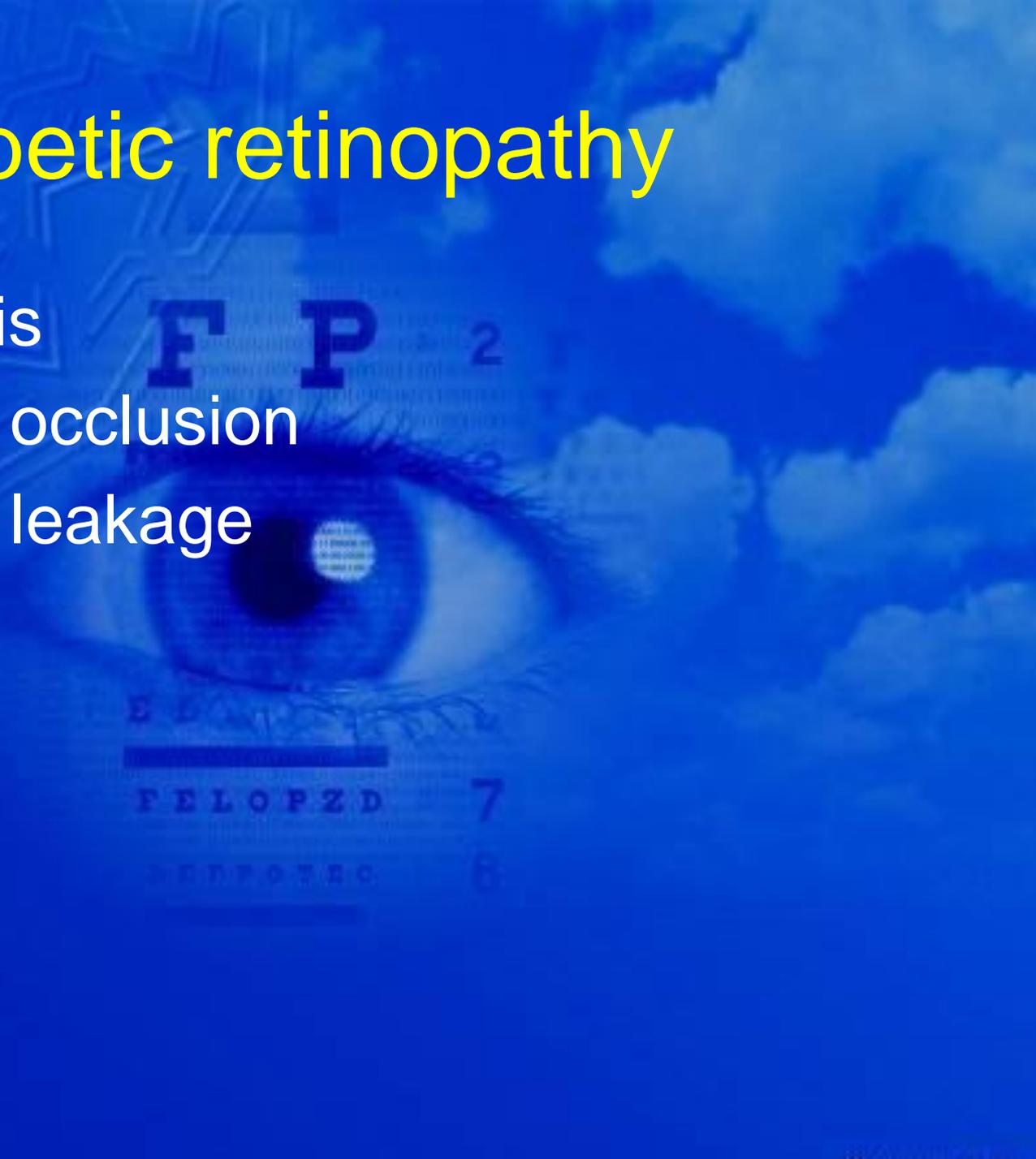
Good metabolic control

Pregnancy, hypertension, renal disease, anaemia



Diabetic retinopathy

- Pathogenesis
 - Microvascular occlusion
 - Microvascular leakage



Diabetic retinopathy

Microvascular occlusion

Thickened capillary basement membrane

Capillary endothelial cell damage

Changes in RBC

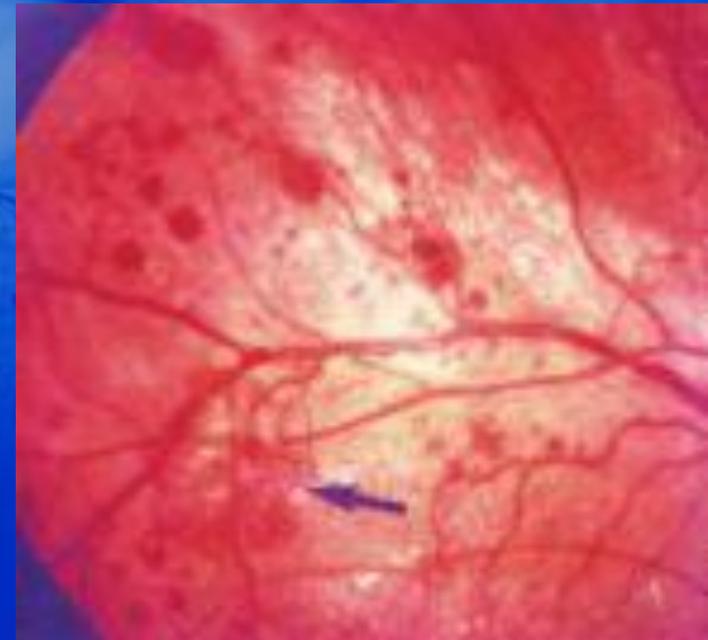


Retinal ischemia



AV SHUNT

NEOVASCULARIZATION



Diabetic retinopathy

Microvascular leakage

Loss of pericyte cells between endothelial cells

Leakage of plasma constitute in the retina(exudate)



Diabetic retinopathy

- **Types**

Non proliferative

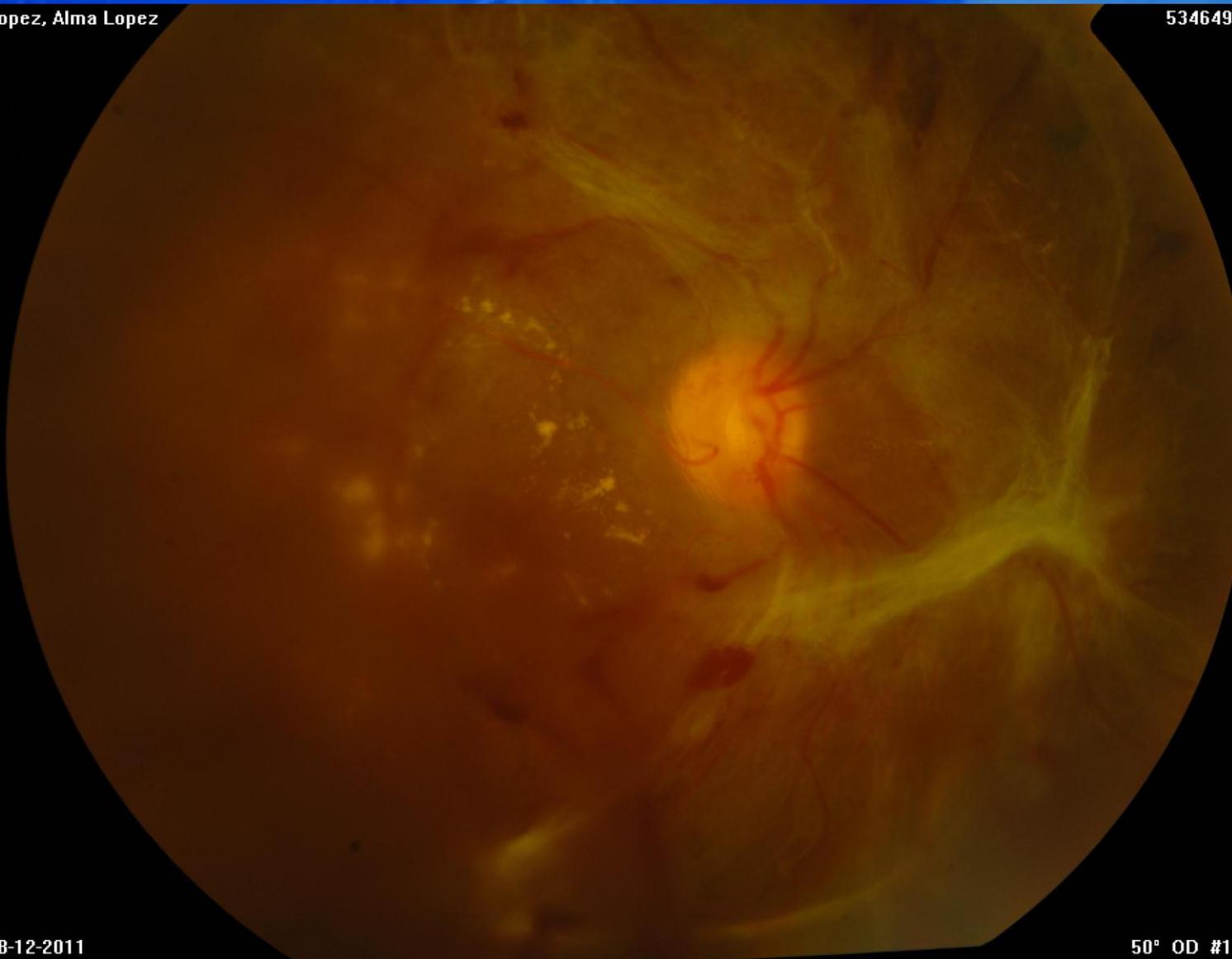
Proliferative

Macular oedema



Lopez, Alma Lopez

534649



18-12-2011

50° OD #1

F P 2



DEPT. OF OPHTHALMOLOGY



Diabetic retinopathy

- Management

NPDR

OBSERVATION

PDR

PRP

MACULAR OEDEMA

FOCAL & GRID LASER





Thank You



E B C D E F G H I J K L M N O P Q R S T U V W X Y Z
F E L O P Z D 7
D E F F O T E C 8