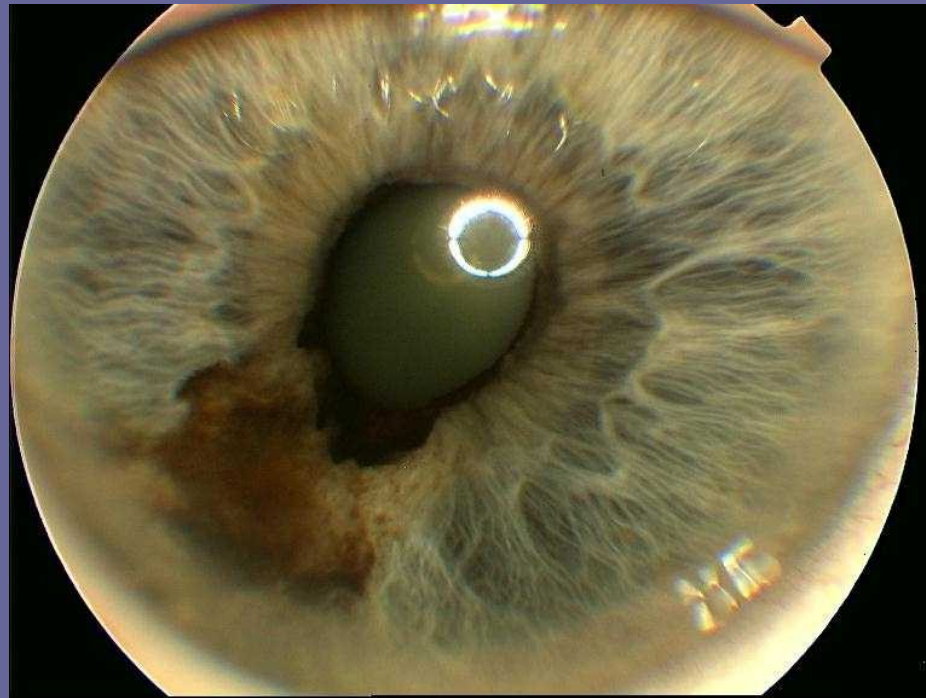


# Neoplastic diseases of the eye and adnexa



**Tumor tissue change, which is a result of the locally noncontrolable growth of autonomous nature.**

The biological nature of the tumor:

benign

malignant

Classification of eye tumors according to anatomic localization:

eyelid tumors

tumors of the eye

orbital tumors

# Eyelids tumors

## Location:

mainly a cosmetic problem

malposition and dysfunction of the eyelids with symptoms of dry eye syndrome (burning, cutting, more frequent sec. infections, xerosis of the conjunctiva, exposure keratopathy a reduction or even loss of the eye ZO)

## Treatment:

(Depending on size, location and nature of the changes)

Early excision with a sufficiently large safety rim  
histological verification

# Benign eyelids tumors

## Location:

anywhere on the lid, without age limitation  
mostly a cosmetic problem

Papilloma - cutaneous horns

Verruca, verruca senile

Hemangioma

Nevus



## Treatment:

Observation (nevi)

Surgery - cautery, simple excision

Histological examination

# Benign eyelids tumors



*Eyelids papiloma*

*Retention cyst*



# Malignant eyelid tumors

## Location:

predilectively lower lid, 6.-7. decade of life

basal cell carcinoma (invasion only local)

squamous cell carcinoma (metastasizes)

malignant melanoma

Meibom glands carcinoma

## Treatment:

surgical excision - simple

- with transplant (free or sliding)

radiotherapy

surgery followed by radiotherapy

Oncologic dispensary!

# Malignant eyelid tumors

*Basal cell carcinoma*



# Tumors of the conjunctiva and cornea

## Location:

all ages, a shift to a higher age

## Treatment:

dispensary congenital change without progression -  
photographs (cosmetic point of view)

surgical - block excision, lamellar keratectomy,  
in malignancies completed with cryotherapy  
- radical excision (up orbit exenteration)

additional local radiotherapy

local application of antimetabolites

Histological examination!

Oncological dispensary in melanoma and cancer!



# Benign tumors of the conjunctiva and cornea

## Congenital:

Choristoma - dermoid, lipodermoid

Hemangioma

## Epithelial:

Hyperplasia

Epithelioma (carcinoma in situ, Bowen's disease)

## Melanotic:

Melanosis

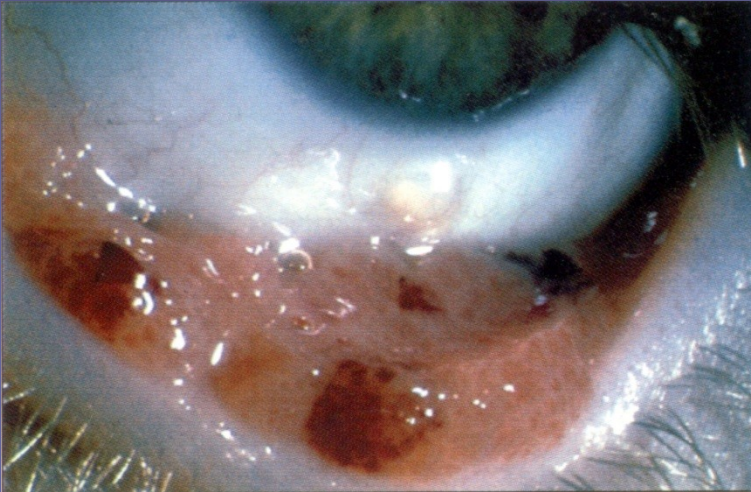
- congenital

- acquired (with or without atypia atypical)

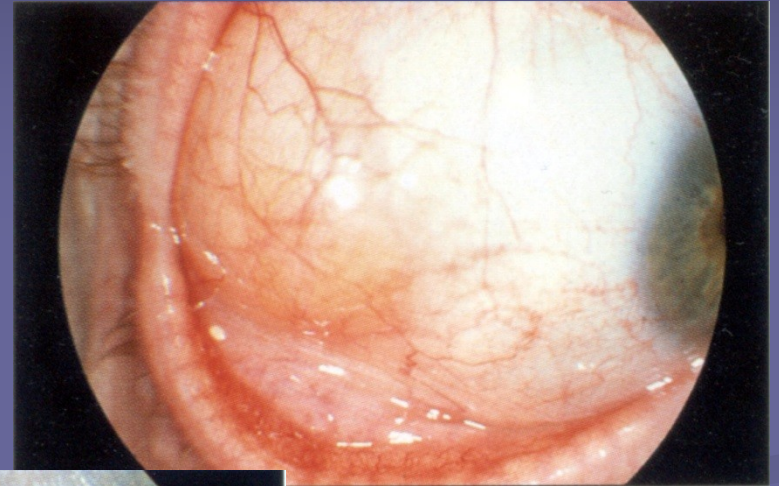
Nevus, Melanocytoma (kong. based)

# Benign tumors of the conjunctiva and cornea

*conjunctival papiloma*



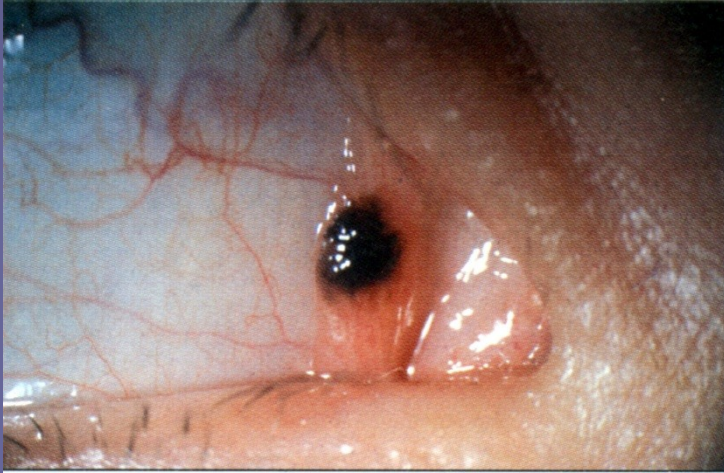
*conjunctival lipodermoid*



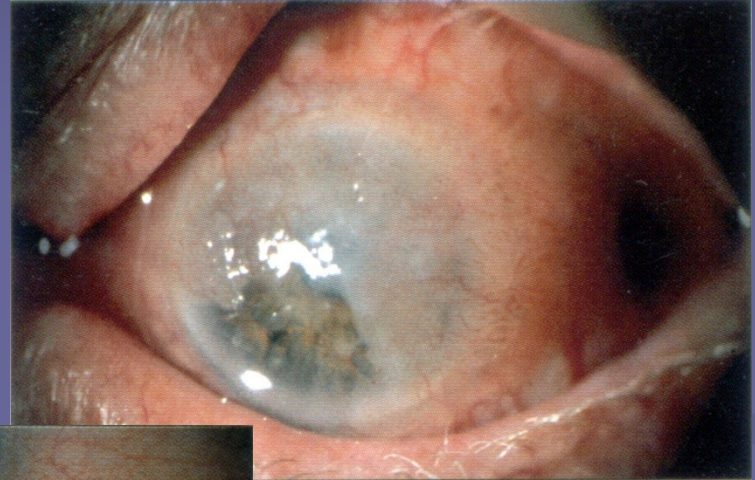
*conjunctival  
lymfangioma*

# Benign tumors of the conjunctiva and cornea

*conjunctival nevus*



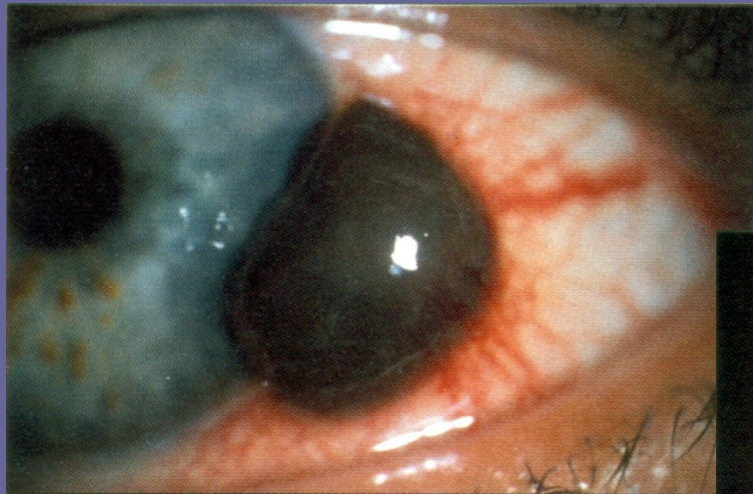
*carcinoma in situ*



*conjunctival  
melanosis*

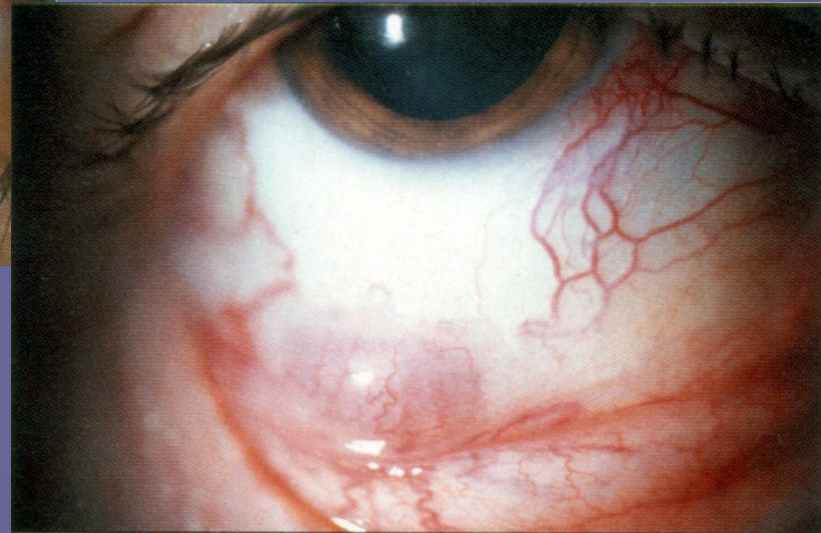
# Malignant tumors of the conjunctiva and cornea

- Malignant melanoma of the conjunctiva
- Carcinoma of the conjunctiva ( rare disease))
- Lymfoma of the conjunctiva (Non – Hodgkin type)



*conjunctival malignant melanoma*

*conjunctival lymfoma*



# Intraocular tumors

## Primary:

the origin of the uvea (iris, ciliary body, choroid)  
originate in the retina

## Secondary:

infiltrative growth of surrounding tissue

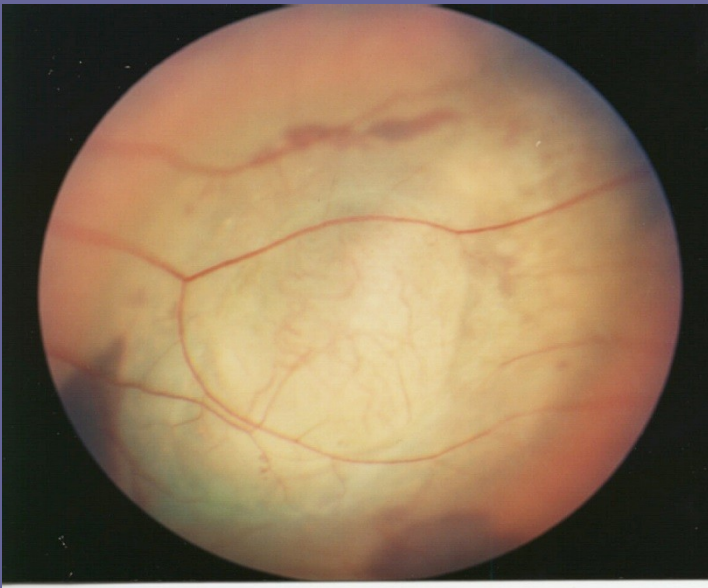
## Metastatic:

following generalization of the malignancy  
most common in the choroid (often the first symptom of malignancy)

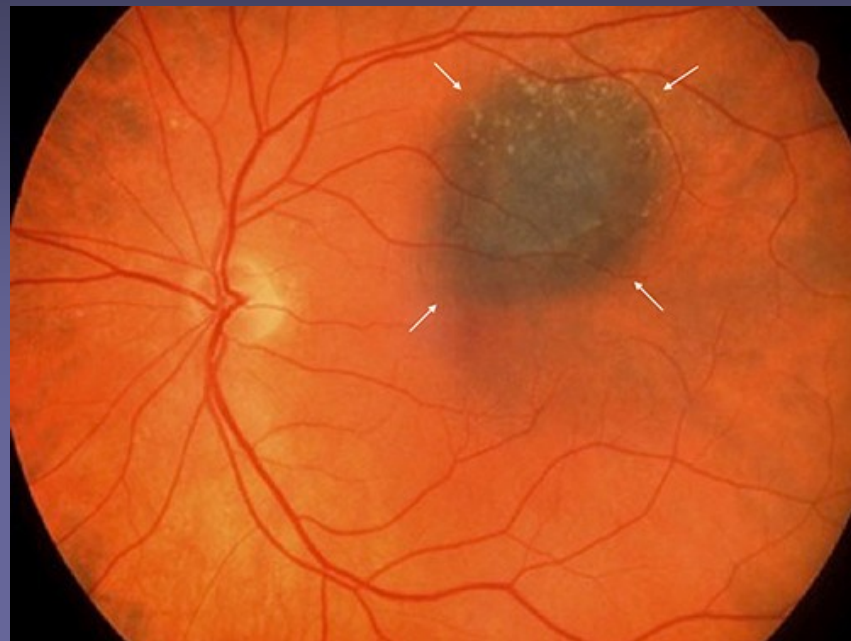
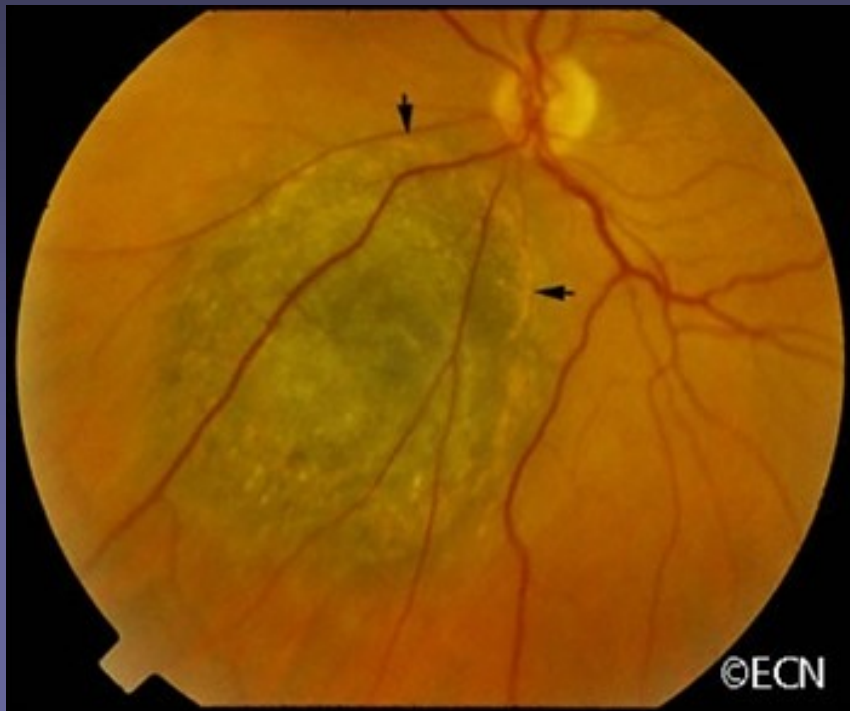
*Metastases* - women breast carcinoma 85%, bronchi 8%  
- male lung carcinoma 38%, GIT 20%

# Malignant melanoma of the uvea( MMU )

- Iris 8%
- Ciliary body 12%
- Chorioid 80%



- the most common primary intraocular tumor of adults
- incidence between 50-70 years
- featured mortality 30 -70% most often
- unilateral

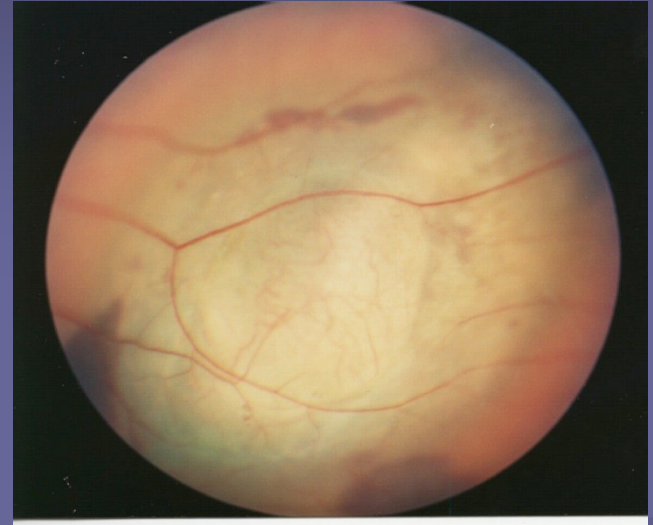


# MMU Diagnostics

## Examination on the slit lamp

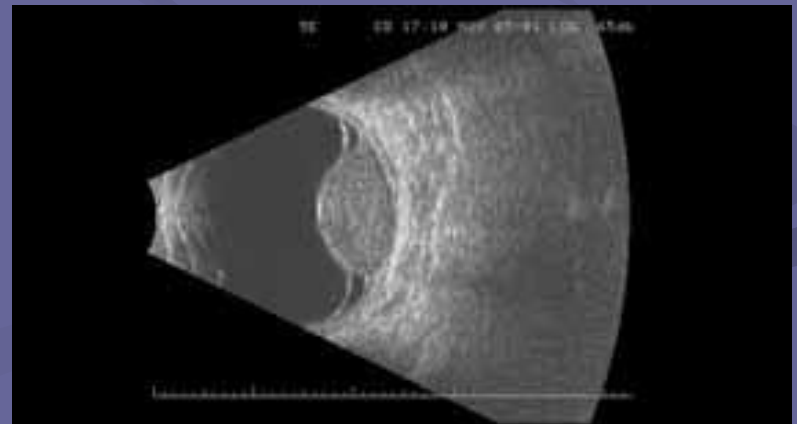
### Ophthalmoscopy

- direct
- indirect
- biomicroskopie
- gonioscopy



### Sonography

- B scan
- standard. echography
- UBM



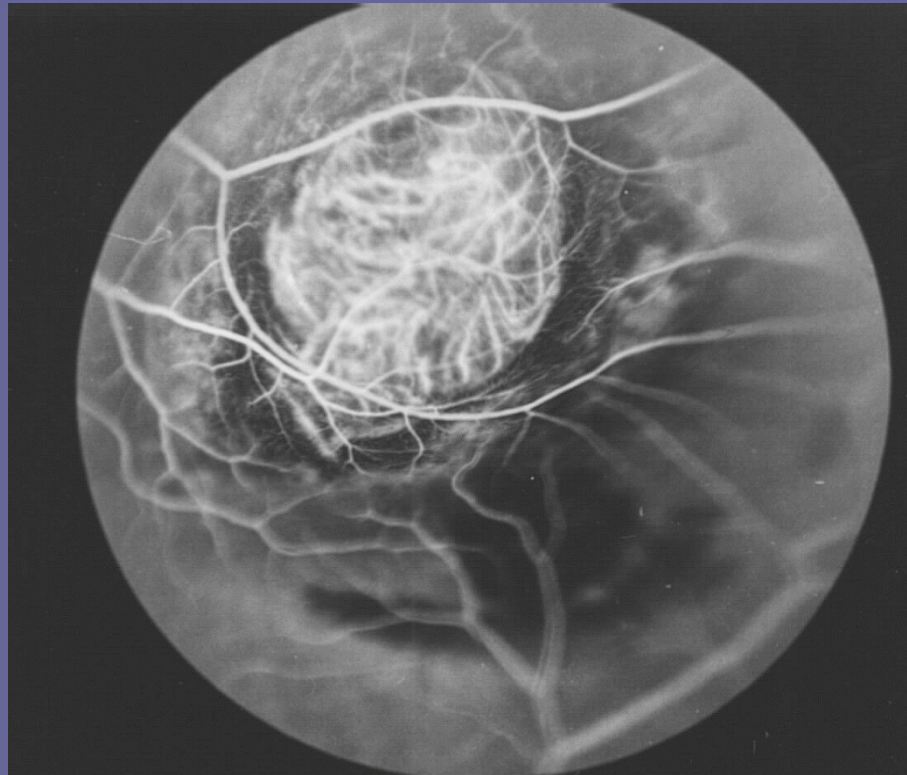


# MMU diagnostics

FAG ( fluorescein angiography )

ICG ( indocyanin angiography )

NMR, PET



# Examinations performed in determining the MMU diagnosis

- Compleat laboratory examinations including oncomarkers
- Lungs X ray scans
- Echography of parenchymatous organs of the abdomen
- Brain NMR
  
- Oncological examination
- ( PET )

# Therapy of choroidal MM

- Brachytherapy
- Enucleation of the bulb
- Exenteration of the orbit

# Brachytherapy

## Indication

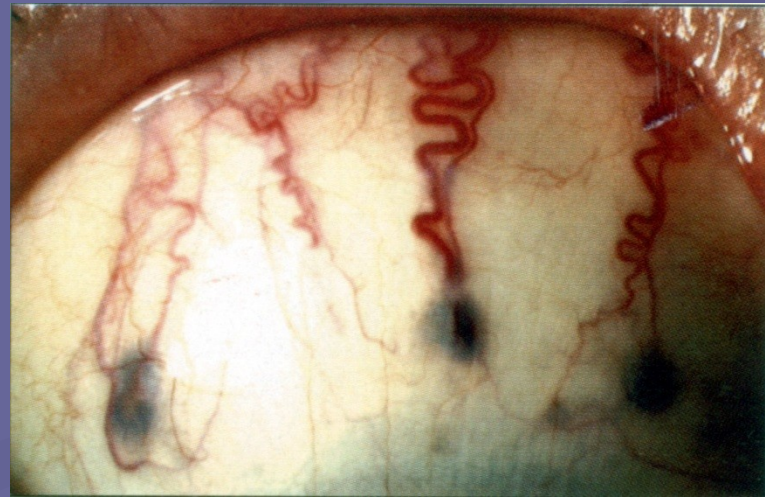
- Height to 10 mm
- Bases to 15 mm

*radioactive source  $^{106}\text{Ru}$*



# Enucleation of the bulb

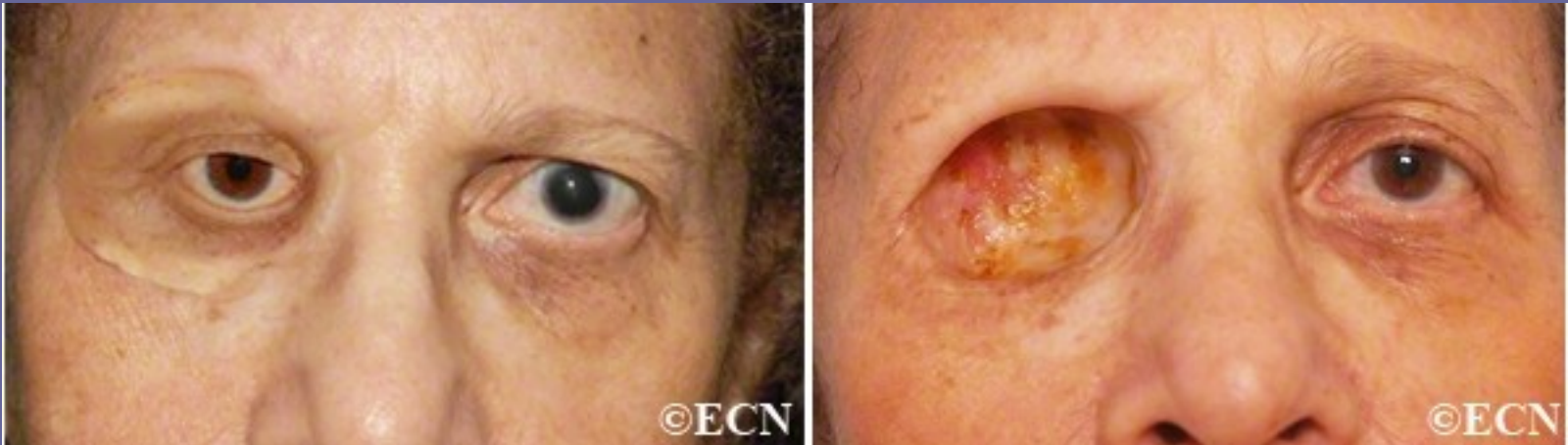
- height above 8-10 mm
- bases above 15 mm
- small range extrabulbar extension
- blind and painful bulbs with secondary glaucoma



# Exenteration of the orbit

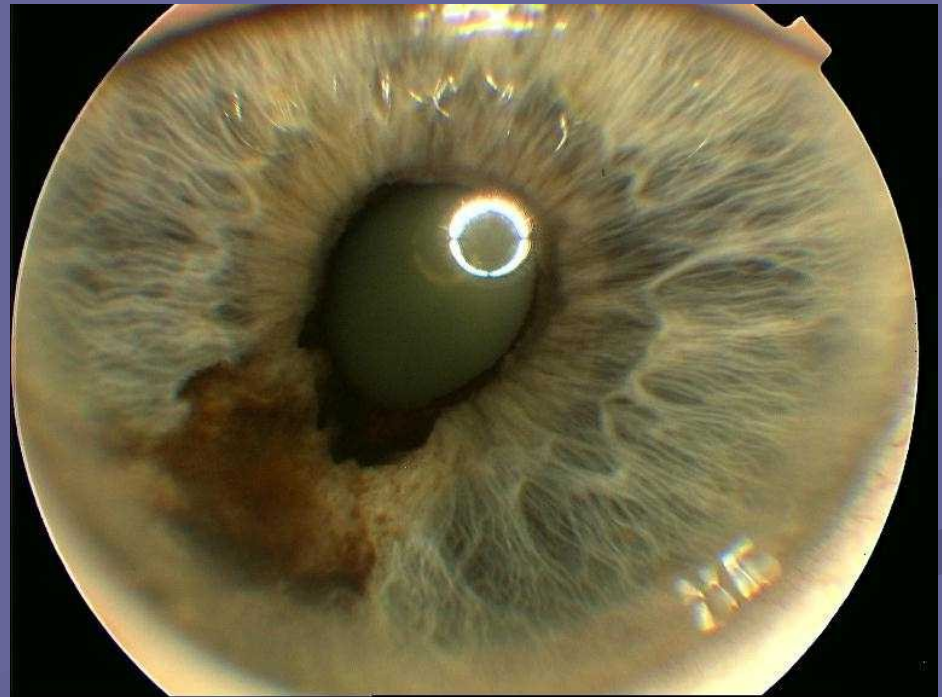
## Indications:

- retrobulbar extension of the tumor
- significant peribulbar extension of the tumor



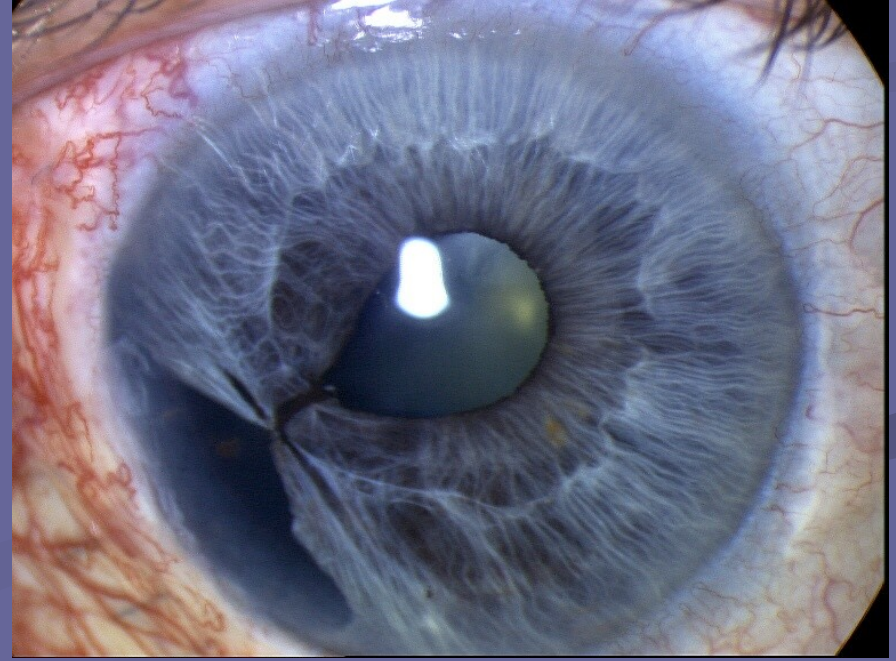
# Iris malignant melanoma

- most common occurrence in the lower half of the iris
- various pigment
- distortion of the pupil
- ectopia of pigmented sheet
- partial cataract



# Treatment of benign and malignant lesions of the iris

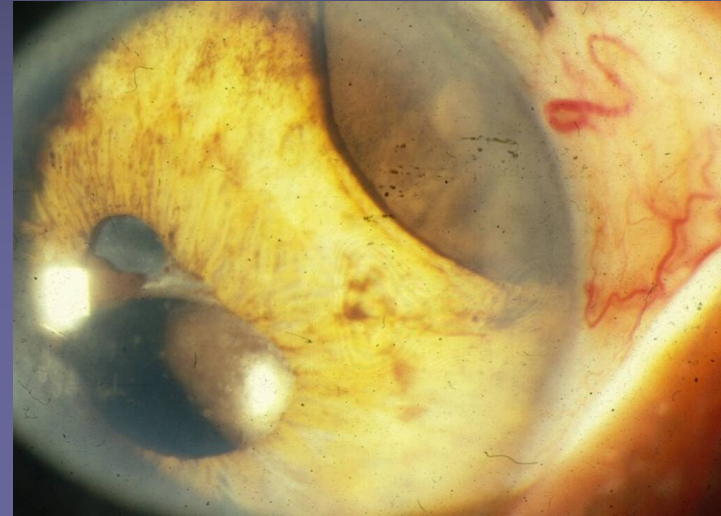
- monitoring borderline findings (photographs)
- excision - in suspected lesions not overlapping 4 hours
- enucleation of the globe - susp. malignant lesions over 1/2 of the iris, blind bulb, noncorrected secondary glaucoma





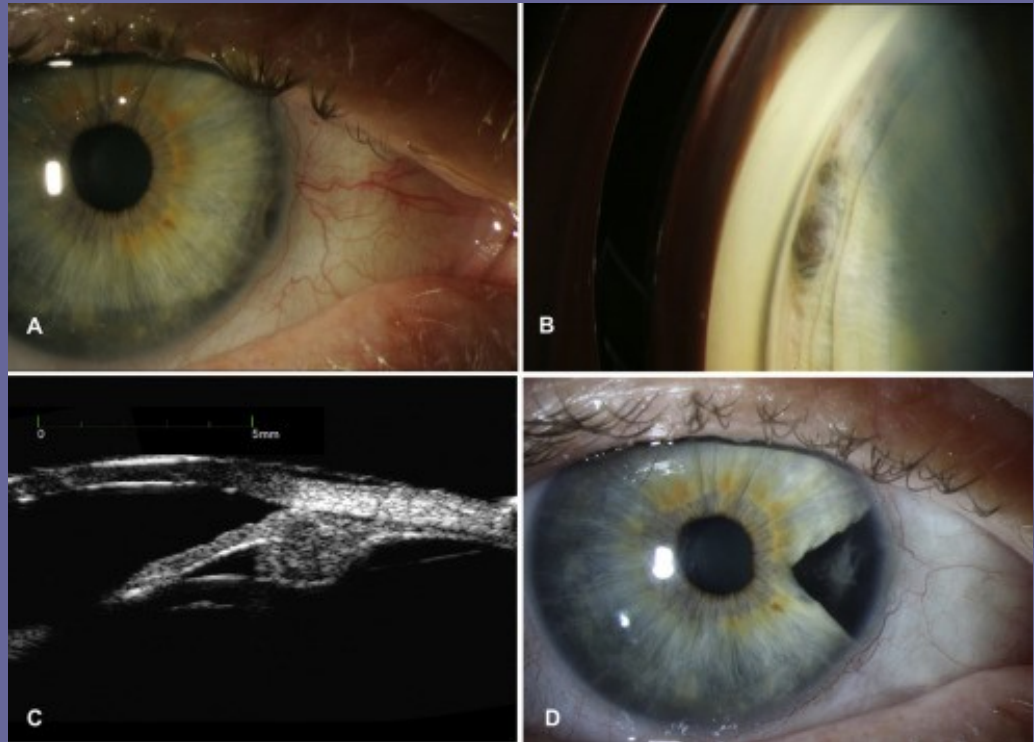
# Ciliary body malignant melanoma

- long asymptomatic
- extension episcleral vessels
- pressure on the lens  
(astigmatism, partial cataract, subluxation)
- secondary retinal detachment
- iris root erosion
- secondary glaucoma after initial hypotension
- epibulbar meat in place of extrabulbar extension

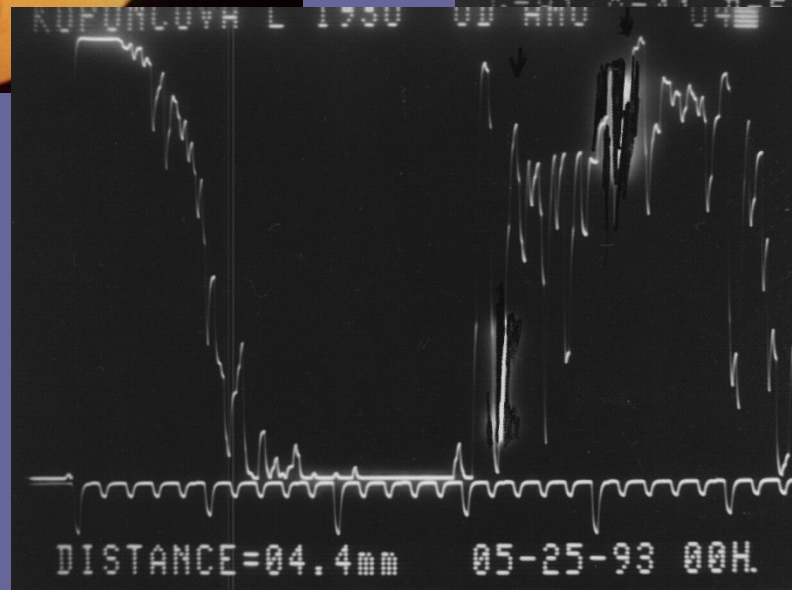
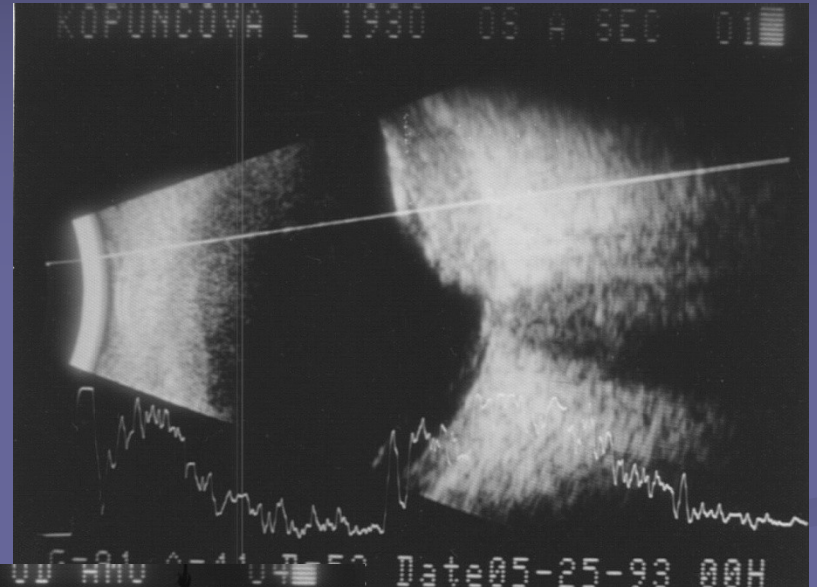
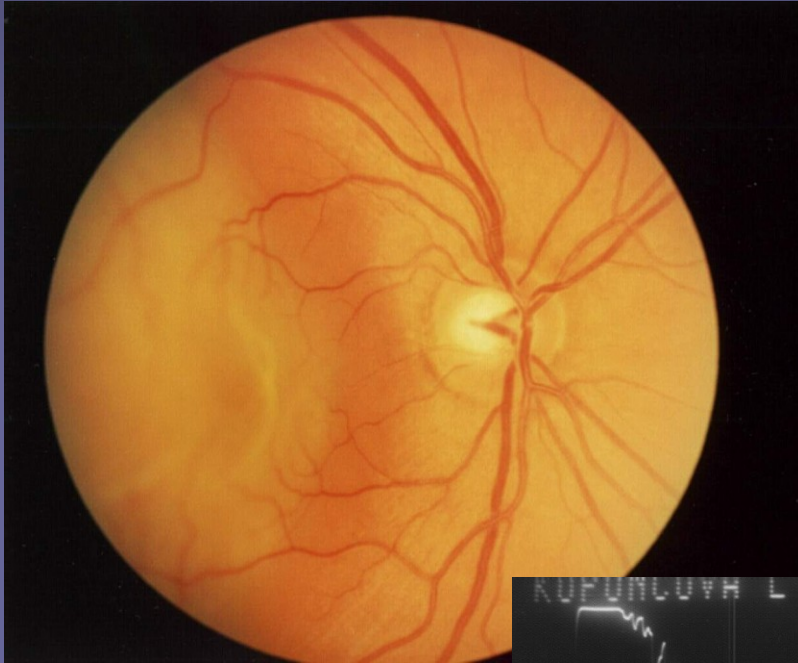


# Therapy of ciliary body melanomas

- cyclectomy
- iridocyclectomy
- radiotherapy - brachytherapy
- enucleation

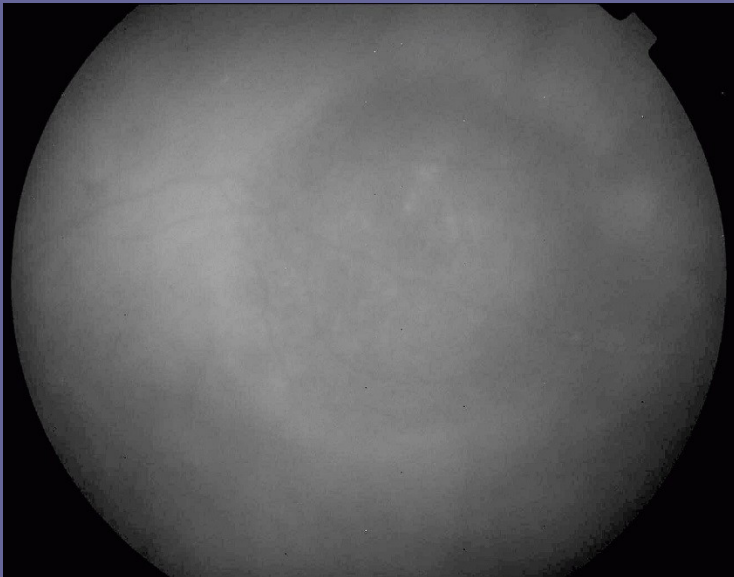
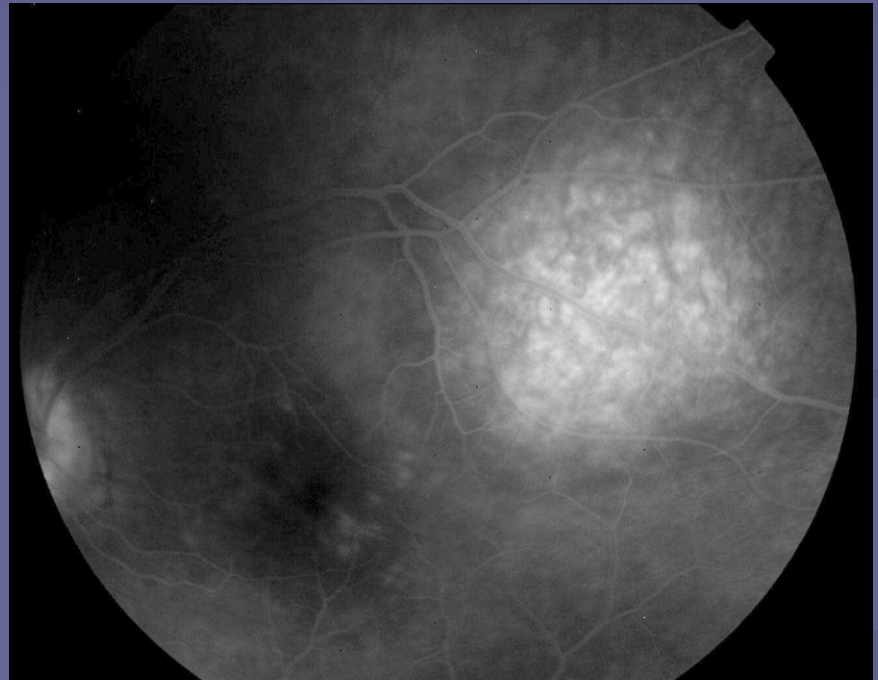
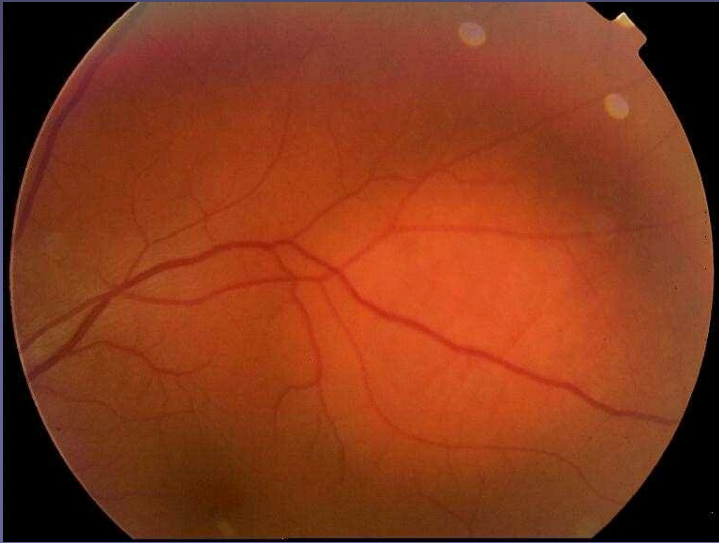


# Choroidal metastasis

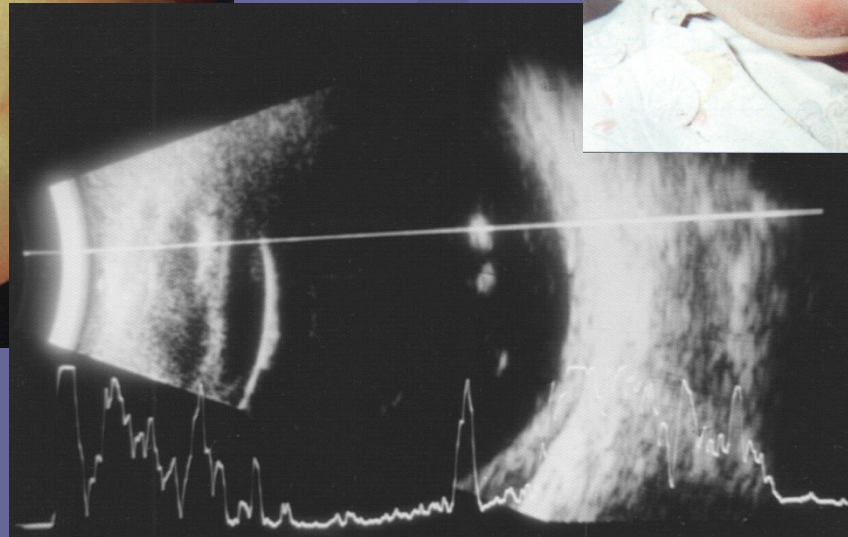
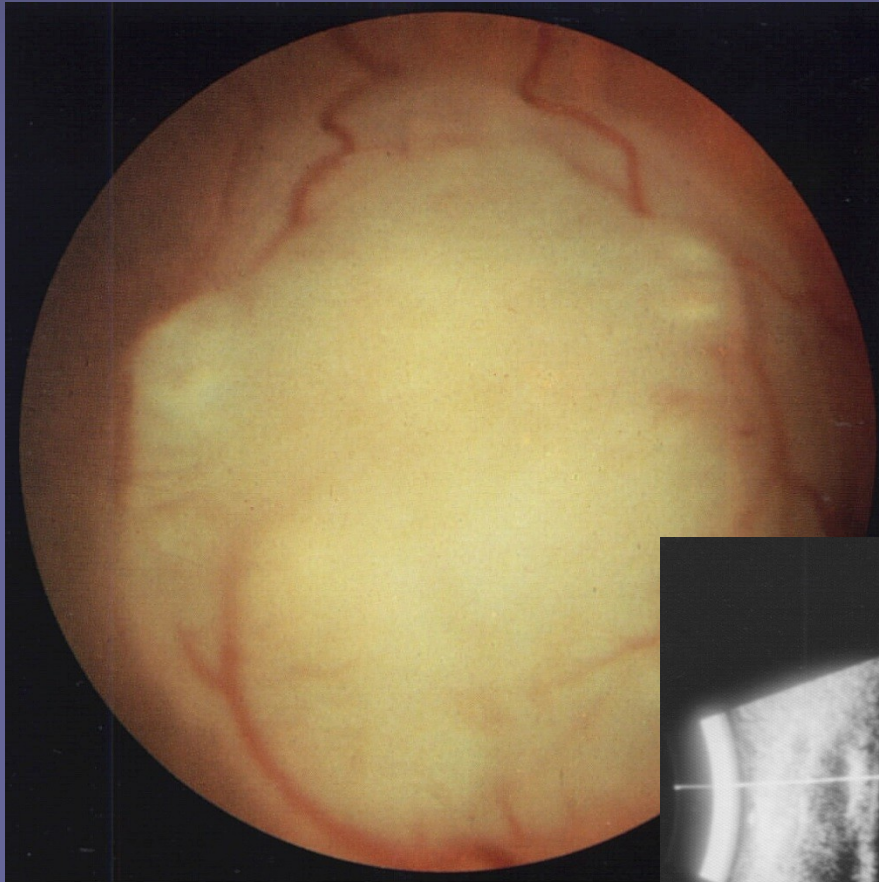




# Choroidal hemangioma



# Retinoblastoma – most common intraocular tumor in childhood



# Tumors of the orbit

## Symptoms:

- changes in the position of the eye - the eye protrusion or deviations
- double vision (binocular diplopia)
- eyelid symptoms - edema of the eyelids, drooping of the eyelid
- swelling and redness of the conjunctiva
- pain - a frequent symptom! ( from oppression, sec. glaucoma)
- decrease in visual acuity from the oppression of the optic nerve
- visual field changes

# Tumors of the orbit - distribution

## Primary – primary formation in orbit tissues

- **Benign** - inflammation pseudotumor, vascular – **hemangioma**, lacrimal gland adenoma
- **Malignant** - **primary lymphoma, rhabdomyosarcoma**, meningioma of the optic nerve, lacrimal gland and sac adenocarcinoma

## Secondary – ingrowth from sinuses and CNS

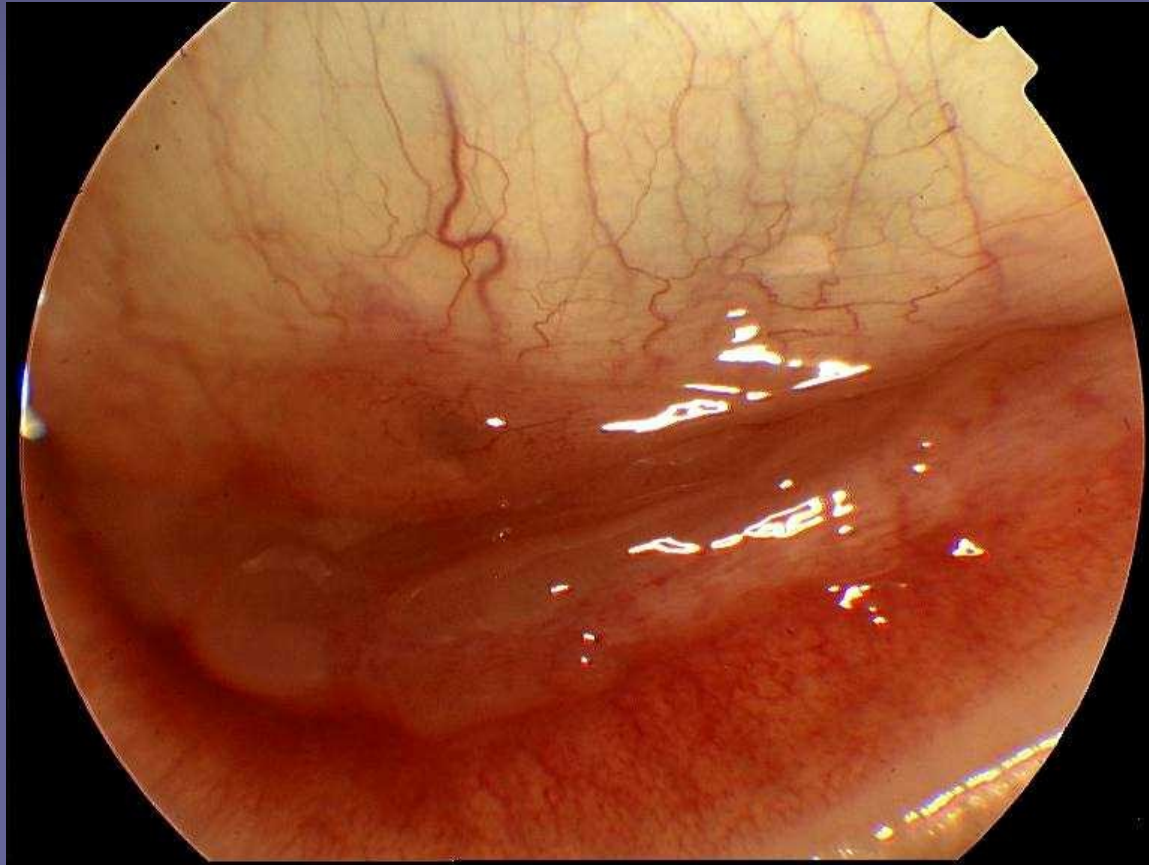
- **Benign** - dermoid cysta, mucocele and pyocele
- **Malignant** – sinuses carcinoma , wedge bone meningioma, conjunctival and uveal malignant melanoma, eyelids carcinoma

## Metastatic – blood or lymphatic vessels

- **always malignant** – bronchogenic carcinoma, breast carcinoma, GIS carcinoma, haemoblastoma

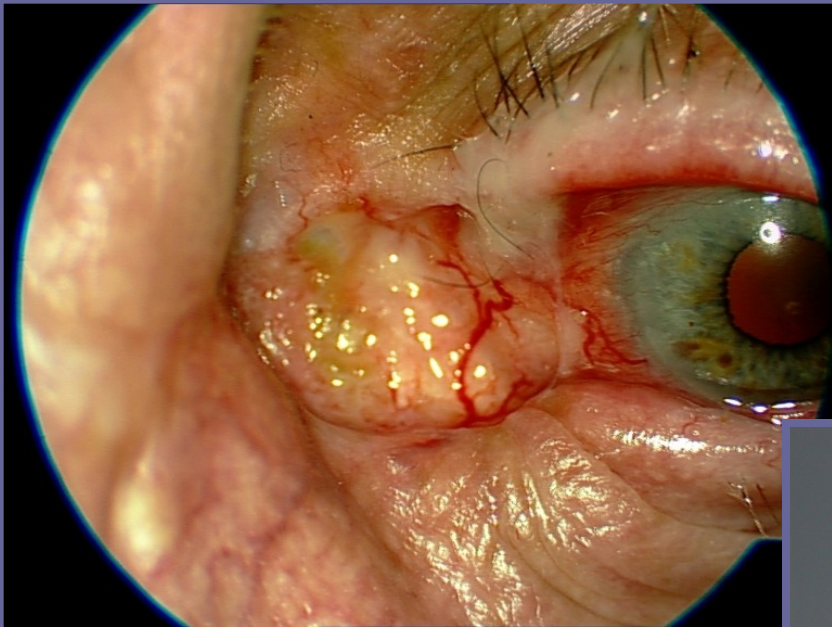


# Primary tumors of the orbit



*lymfoma of the orbit*

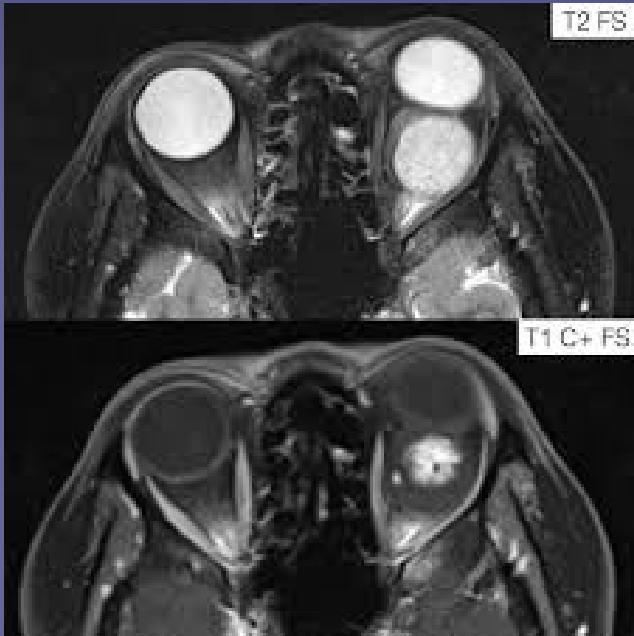
# secondary tumors of the orbit



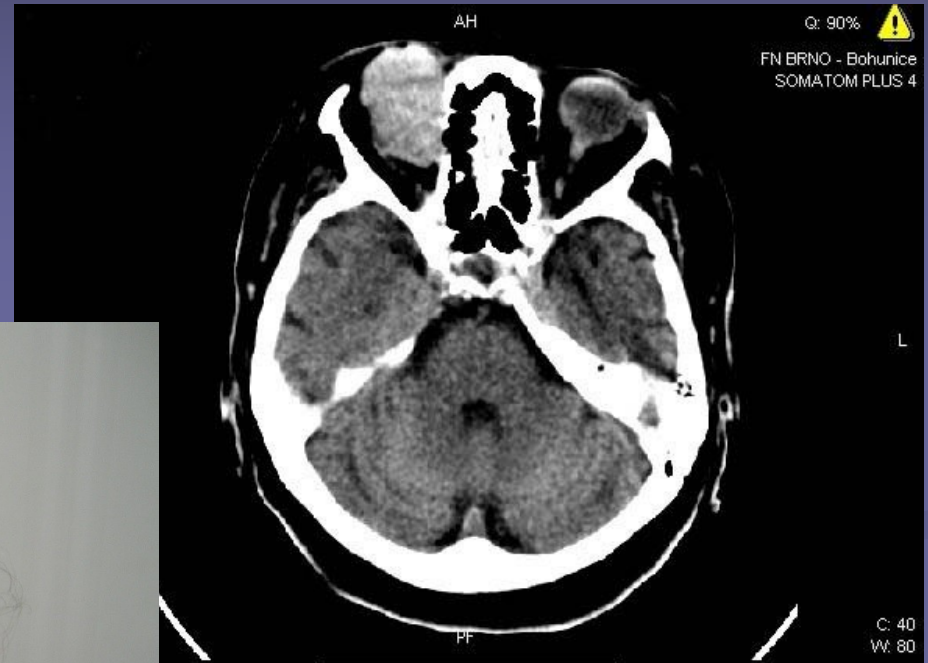
*adenocarcinoma of the orbit*

*bazalioma of the orbit*





# Metastatic tumors of the orbit



# Rhabdomyosarcoma



# Diagnostics of orbit tumors

- **Complet ophtalmological examinatin**
- **Radiodiagnostic methods** - RTG, CT, NMR,  
Digit. substr. angiografie  
(morphology of the lesion in PNS or CNS)
- Biopsy**
- **Interdisciplinary cooperation**

# Treatment of oncological diseases of the orbit

## **Surgery ( interdisciplinary cooperation)**

- extirpation (boundad lesions)
- extirpation with resection of surrounding structur
- exenteration of the orbit without or with resection of PND

## **Radiotherapy**

- primary ( lymfoma of the orbit, pseudotumors )

## **Combined**

- surgery with radiotherapy or chemotherapy

