# Eyelid Tumors

Charles Rice MD

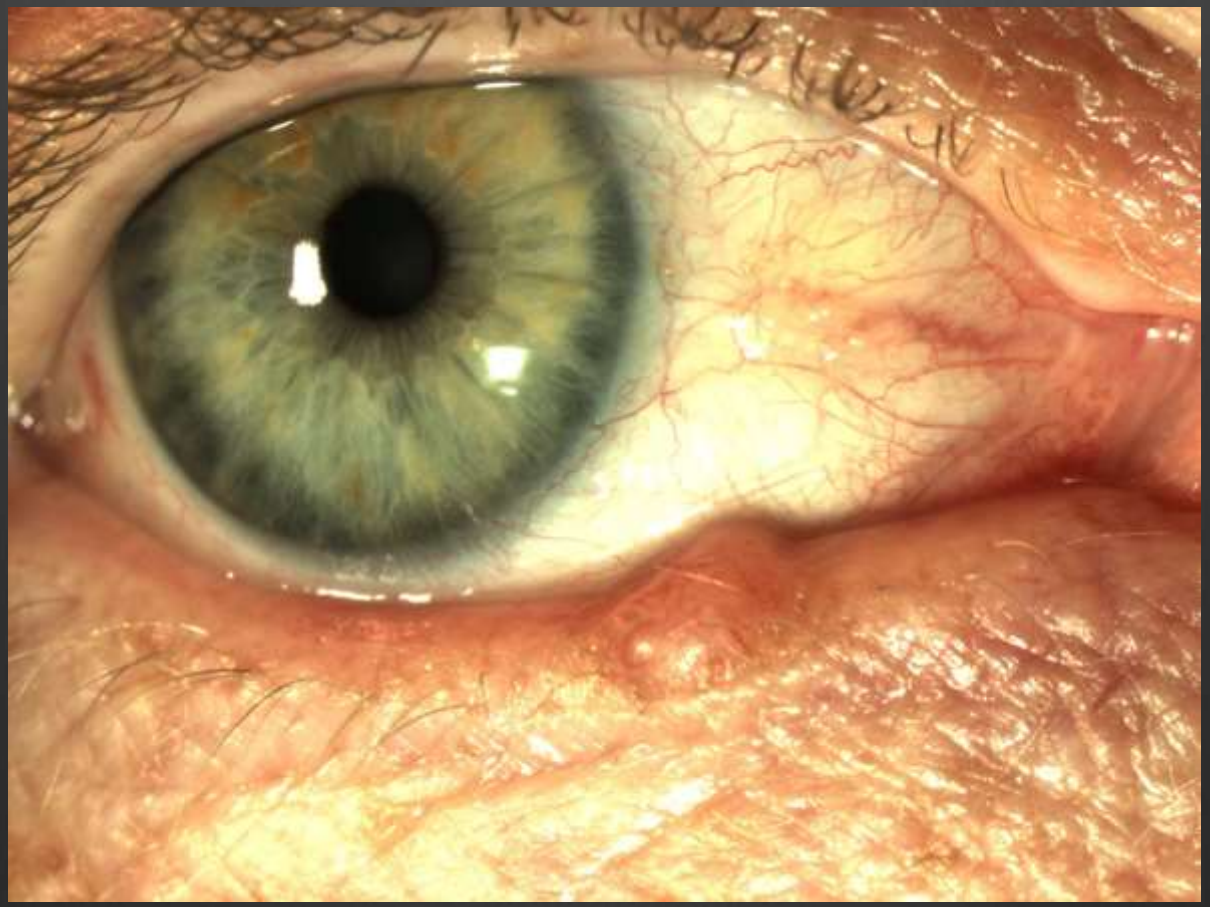
# Disclosure Statement

- Speaker, Charles Rice, M.D. has a financial interest/agreement or affiliation with Lansing Ophthalmology where he is a shareholder and employed as an oculoplastic specialist.

# Goals

- Improve ability to accurately diagnosis lesions
- Determine when to refer for biopsy
- Review treatment options for benign growths
- Treatment options for malignant growths

# Benign or Malignant

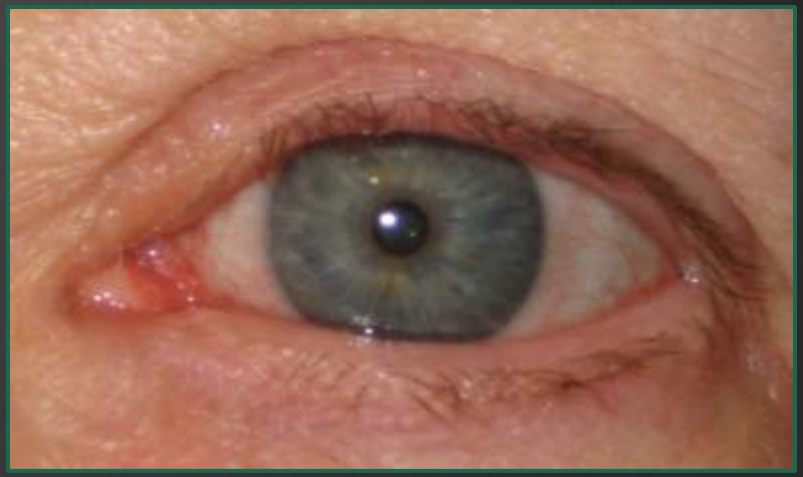


# Benign or Malignant

# Benign or Malignant

# Scope of the problem

- Eyelid bumps are very common
  - Many incidentally found on exam
  - Vast majority are benign
- 5-10% of skin cancers occur on eyelids



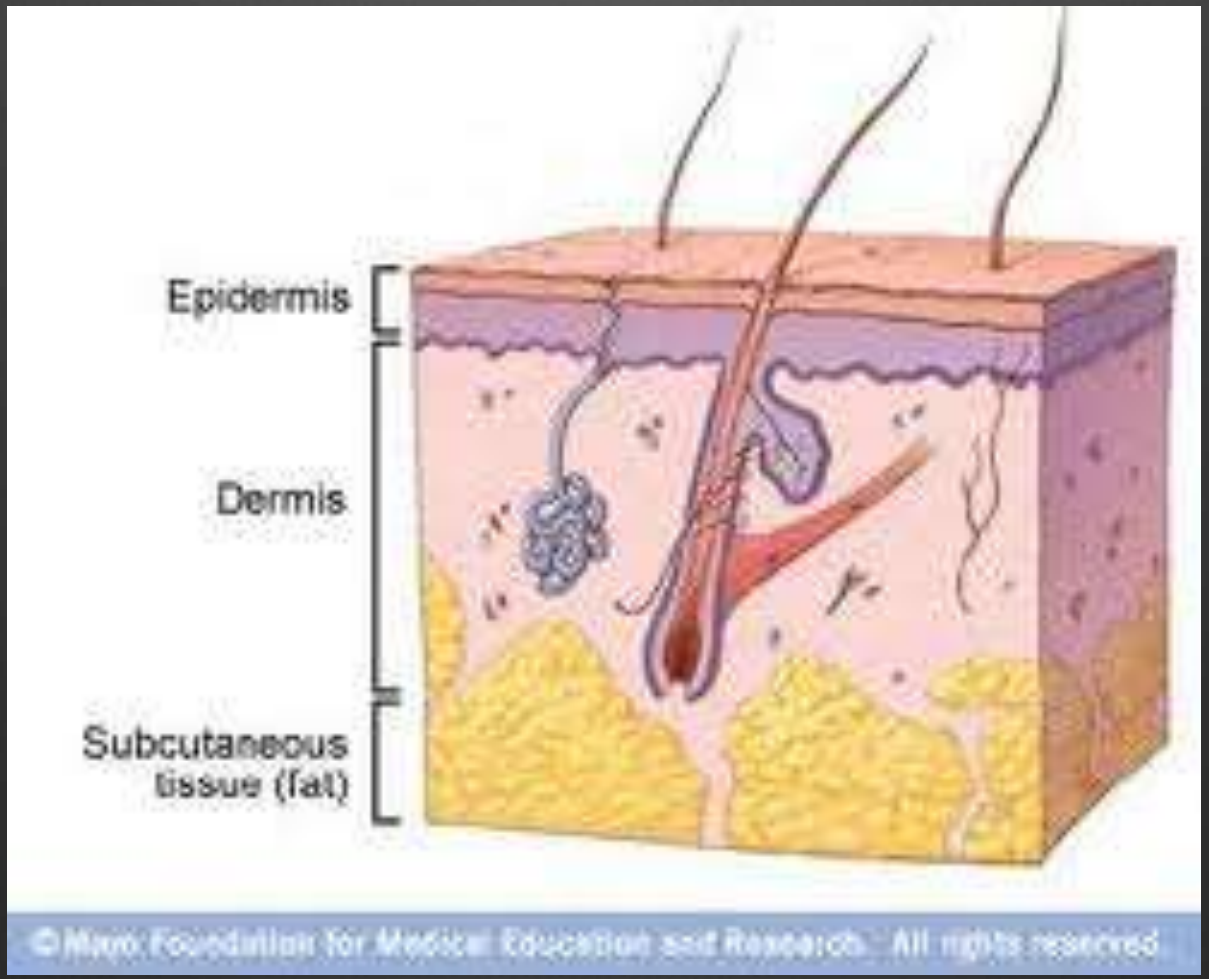
# History

- Duration of lesion
- Bleeding or crusting
- History of skin cancers

# Exam

- Morphology—Smooth, Ulceration, Erosion
- Color ----Flesh Color, Pigmentation, Vascular
- Lid margin---Intact, Notching, Lash Loss

# Skin


Epidermis
Dermis
Subcutaneous tissue (fat)
© Mayo Foundation for Medical Education and Research. All rights reserved.

# Eyelid Tumors
## Benign

- Wide variety
- Epidermal or Dermal
- Often not treated due to location
- Safely removed with variety of techniques

# Eyelid Tumors
## Malignant

- Slit-lamp exam allows magnified view and early detection
- Smaller lesions are easier to treat
- Prognosis depends on size and tumor type
- Basal cell carcinoma is most common type

# Accuracy of Clinical Diagnosis

- Depends on experience and magnification
- Sensitivity—Clinical Diagnosis of Malignant Lesion
- Specificity--- Clinical Diagnosis of Benign Lesion

# Clinically Malignant Lesion Found to be Histologically Malignant

| Study Author | Percentage | Participant |
|---|---|---|
| Kersten | 96% | Oculoplastic Surgeon |
| Margo | 75% | General Ophthalmologists |

# Accuracy of Diagnosing Benign Eyelid Lesions

| Study Author | Success | Participant |
| --- | --- | --- |
| Kersten | 98% (679 / 692)<br>7 year period | Oculoplastic Surgeon |
| Margo | 92% ( 44 / 48 )<br>1 year period | General Ophthalmologists |

# Clinically Benign Lesions Found to be Histologically Malignant

- 2 – 8% of cases
- Clinical diagnosis of papillomas, cysts, nevi
- Small (1 to 2 mm)
- Non-ulcerated
- Sometimes multi-focal

# Benign Lid Growths

- Slow growth
- Non-ulcerated
- No lash loss
- Wide variety of morphology

# Location

- Non-marginal
- Lid Margin
- Lash line
- Punctal area

# Reluctance to Treat Benign Eyelid Growths

- Scarring
- Lid notching
- Lash loss
- Pigment changes
- Damage to eye

# Benign Eyelid Lesions

- Epidermal
- Dermal
- Inflammatory

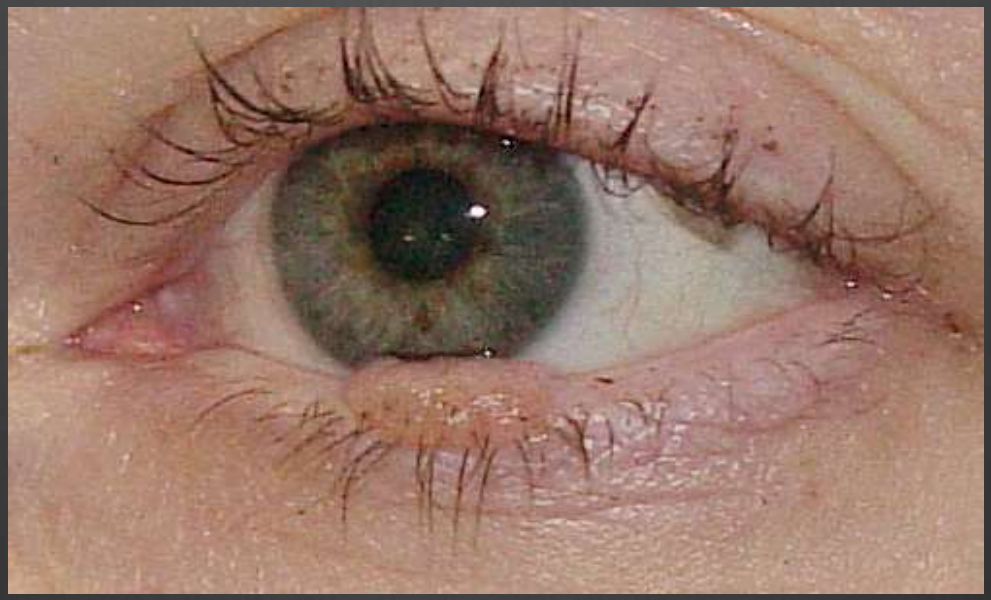
# Epidermal Lesions

- Papillomas
- Seborrheic keratoses
- Fibroepithelial polyps
- Actinic keratoses

# Papillomas

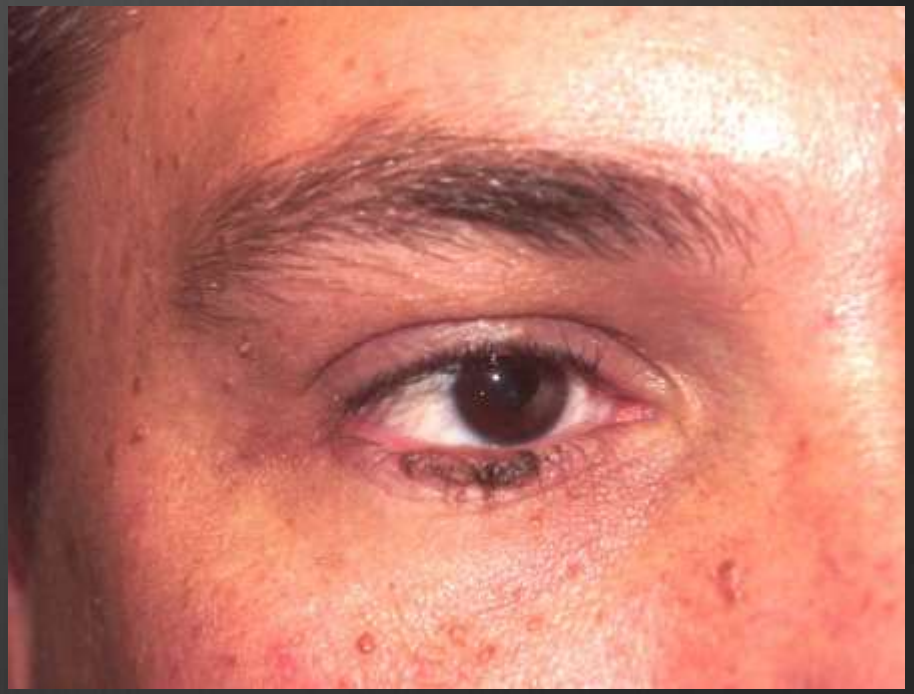
- Descriptive term for elevated skin lesion with irregular surface
- Includes
  - verruca vulgaris
  - seborrheic keratosis
  - actinic keratosis

# Papillomas



# Seborrheic Keratoses

- Common in adults
- Round or oval, smooth surface, elevated, brownish color
- Slow growth



# Fibroepithelial polyps

- Smooth surface

  with pedicle

# Actinic Keratoses

- Flat, erythematous, whitish scaling
-

# Dermal Lesions

- Nevi
- Hidrocystomas
- Sebaceous cysts
- Xanthelasma
- Syringomas

# Nevus

- Present in childhood

  or early adulthood
- Slow growing,

  frequently at lid margin
- Pigmented or

  non-pigmented

# Nevus

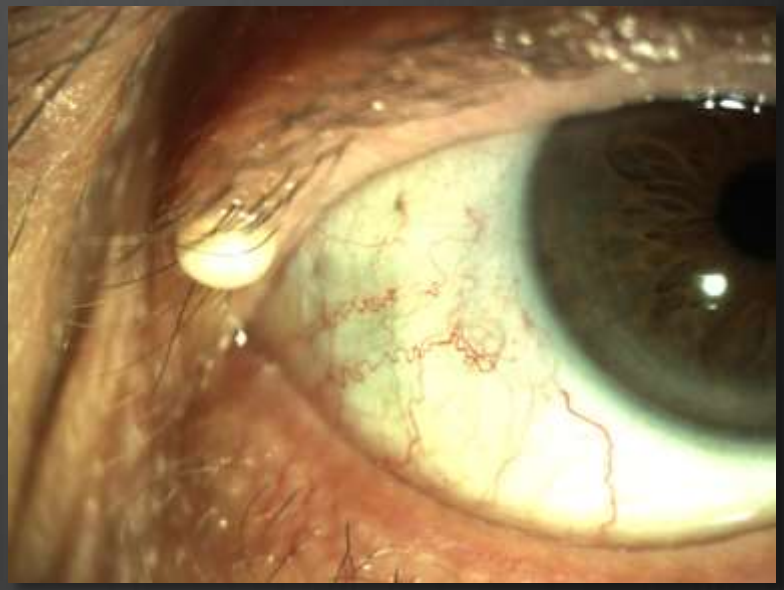
# Hidrocystomas

- Fluid filled cysts
- Apocrine or Eccrine
- Along lid margin or canthal areas
- Treatment is surgical excision or laser

# Sebaceous cysts

- Yellowish-white lesions

  along lid margin
- Usually small (1-3mm)
- Treatment is excision or laser



# Xanthelasma

- Plaque-like, yellowish lesions frequently in medial eyelid
- Evaluate for elevated triglycerides or cholesterol
- Lipid laden histiocytes
- Treatment is excision or laser ablation

# Syringoma

- Common eyelid lesions
- Small 1-3 mm elevated, yellowish lesion
- Derived from sweat gland
- More visible in warmer weather

# Inflammatory Lesions

- Chalazia
- Herpes simplex
- Herpes zoster
- Molluscum contagiosum

# Chalazion

- Lipogranulomatous inflammation of sebaceous glands
- Erythematous, nodular lesion located subcutaneously

# Chalazion

Treatment

- Hot soaks
- Antibiotic drops and ointment
- Oral Antibiotics
- Incision and drainage
- Steroid injection
- Biopsy ?

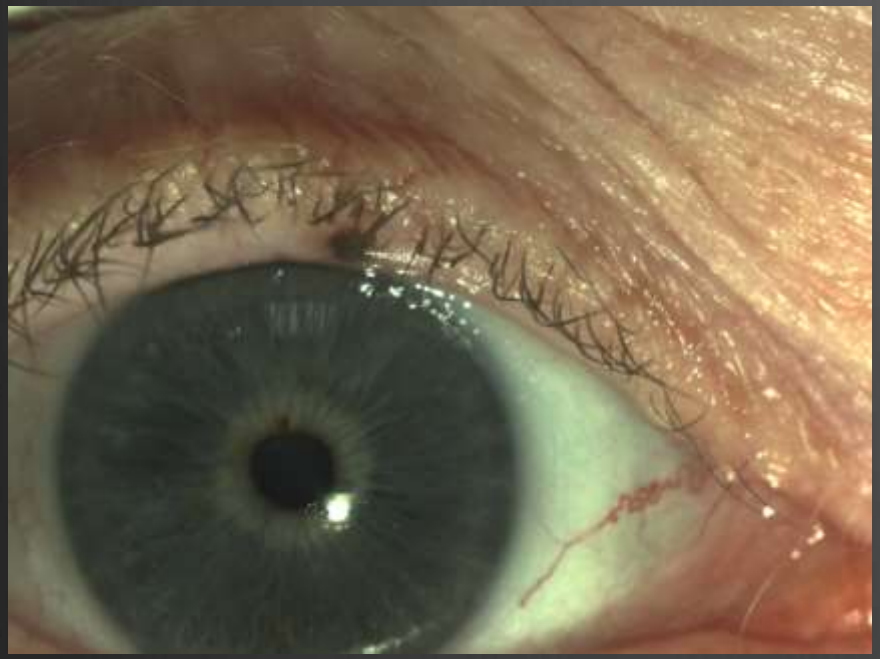
# Benign Lid Growths

Treatment Options

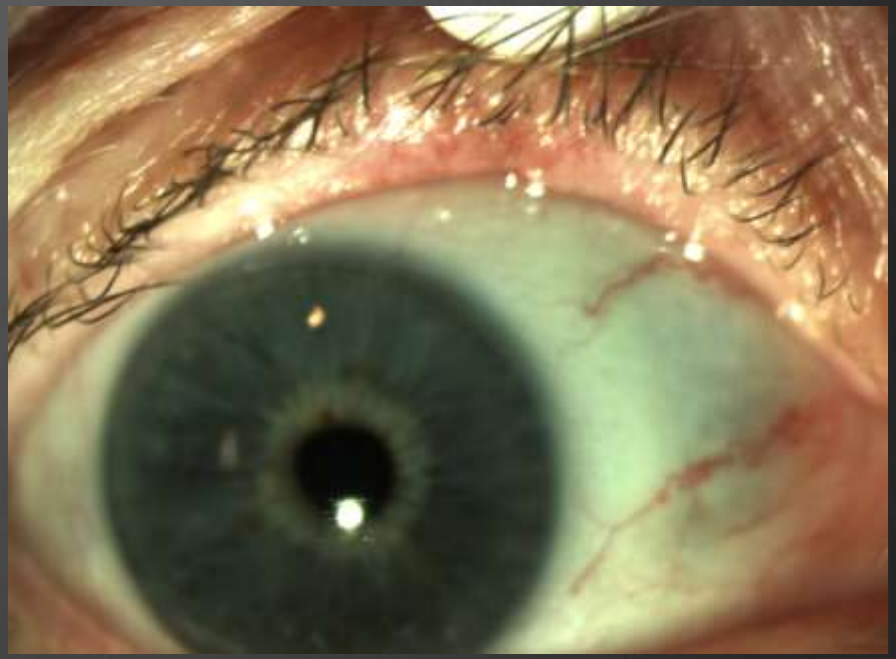
- Observation
- Surgical excision
- Electrocautery
- Radiofrequency
- Cryotherapy
- Laser

# Biopsy ?

- Biopsy suspicious lesions
  - Evidence of destruction
  - Pigmentation
- Adequate follow-up or counsel for removal without biopsy
- Risk of misdiagnosing a malignant lesion clinically diagnosed as a benign lesion is low but possible

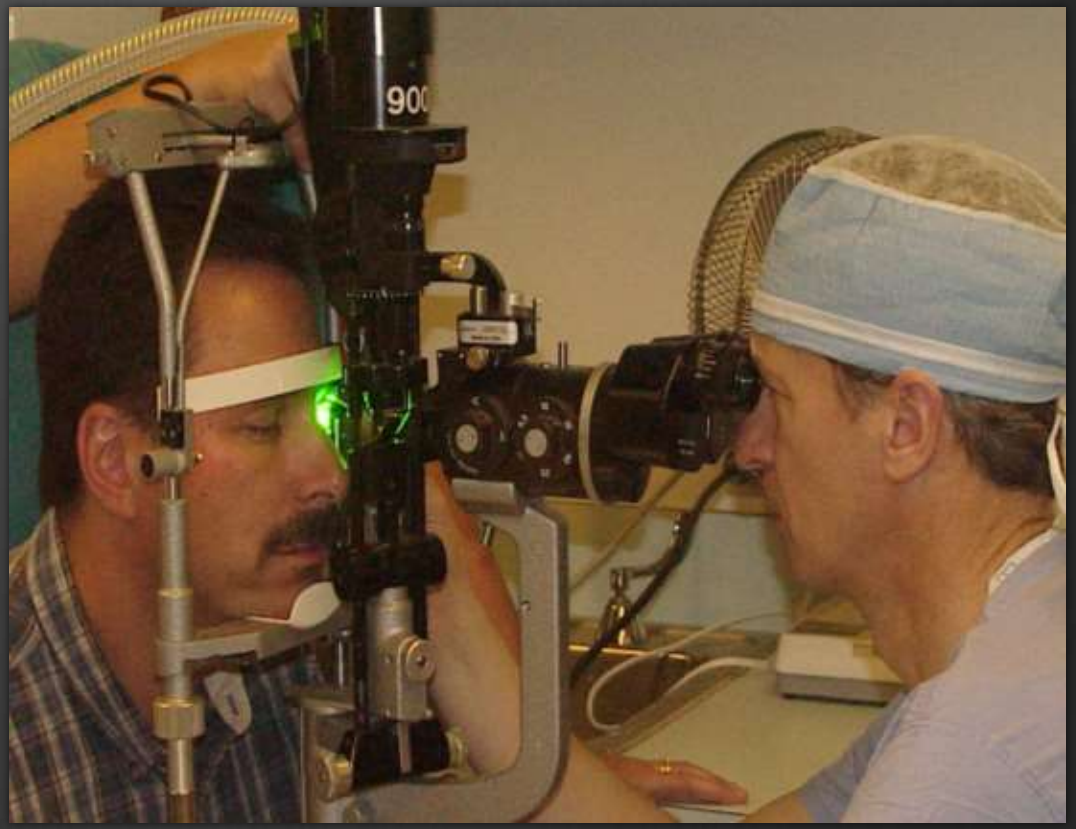


Pigmented Lesion



After Biopsy
Diagnosis Blue Nevus

# Treatment of Benign Eyelid Lesions
# Iridex™ 532nm Slit Lamp



# Slit Lamp Lasers

- Ophthalmic Usage for Retinal Diseases
- Previous Studies for Lid Lesions
- Argon and Diode Lasers

# Benign Lid Growths

Slit Lamp Laser Advantages

- Precision of removal
- Magnification
- Removal of lid margin lesions
- Flat superficial lesions
- No disposables
- Controlled penetration depth
- Ablate and coagulate

# Type of Skin Growths

- Solid marginal lesions
- Sebaceous cysts
- Fluid filled cysts
- Raised epidermal lesions
- Flat epidermal lesions
- Dermal lesions

# Selective Photothermolysis

Laser wavelength absorbed by tissue chromophore

Laser energy and pulse duration determine degree of tissue effect

# Slit Lamp 532 nm Laser

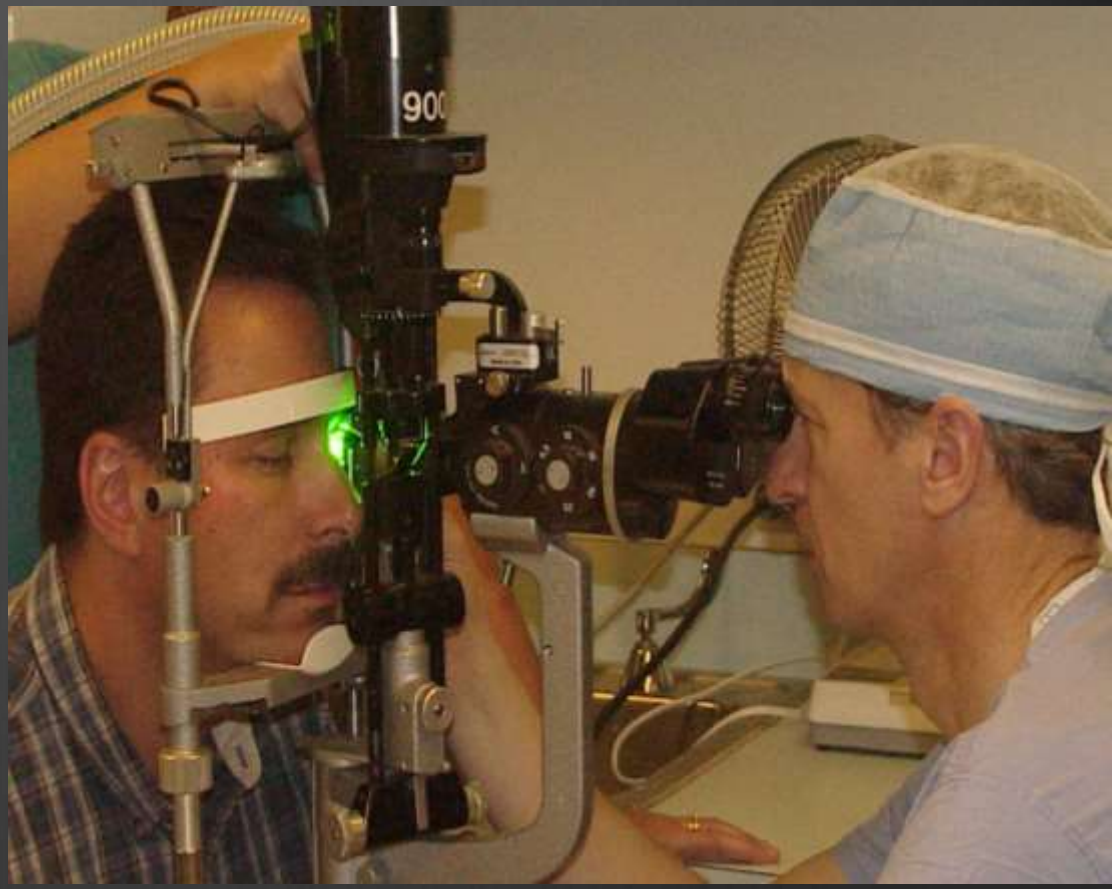
Tissue Chromophores

Melanin

Hemoglobin

Artificial Chromophore

Gentian Violet



# Benign Lid Growth Treatment

Procedure

- Gentian Violet marking
- Local anesthetic
- Protective metal corneal shield
- Smoke evacuator

# Technique of Laser Usage
## 532nm Diode Laser

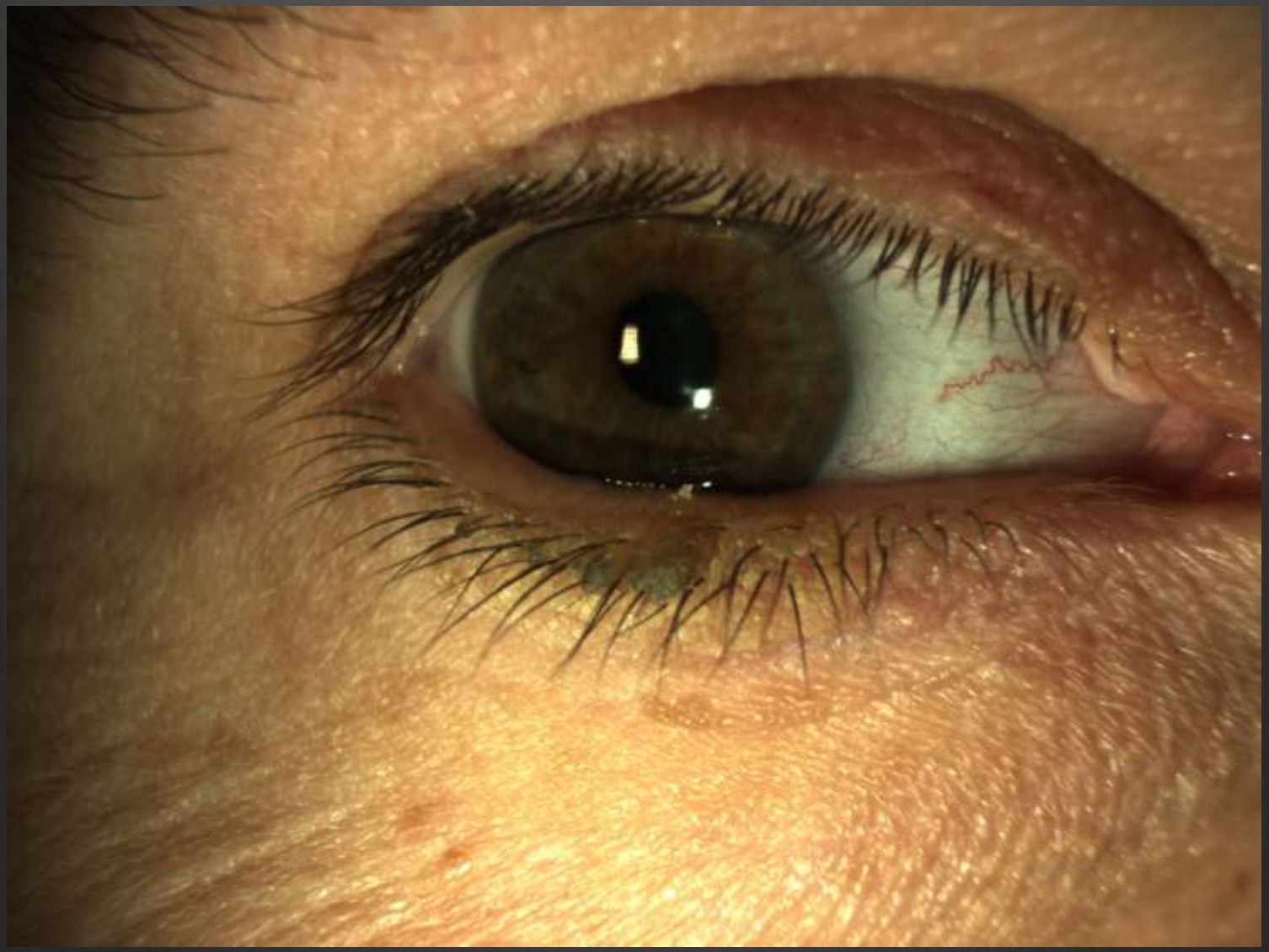


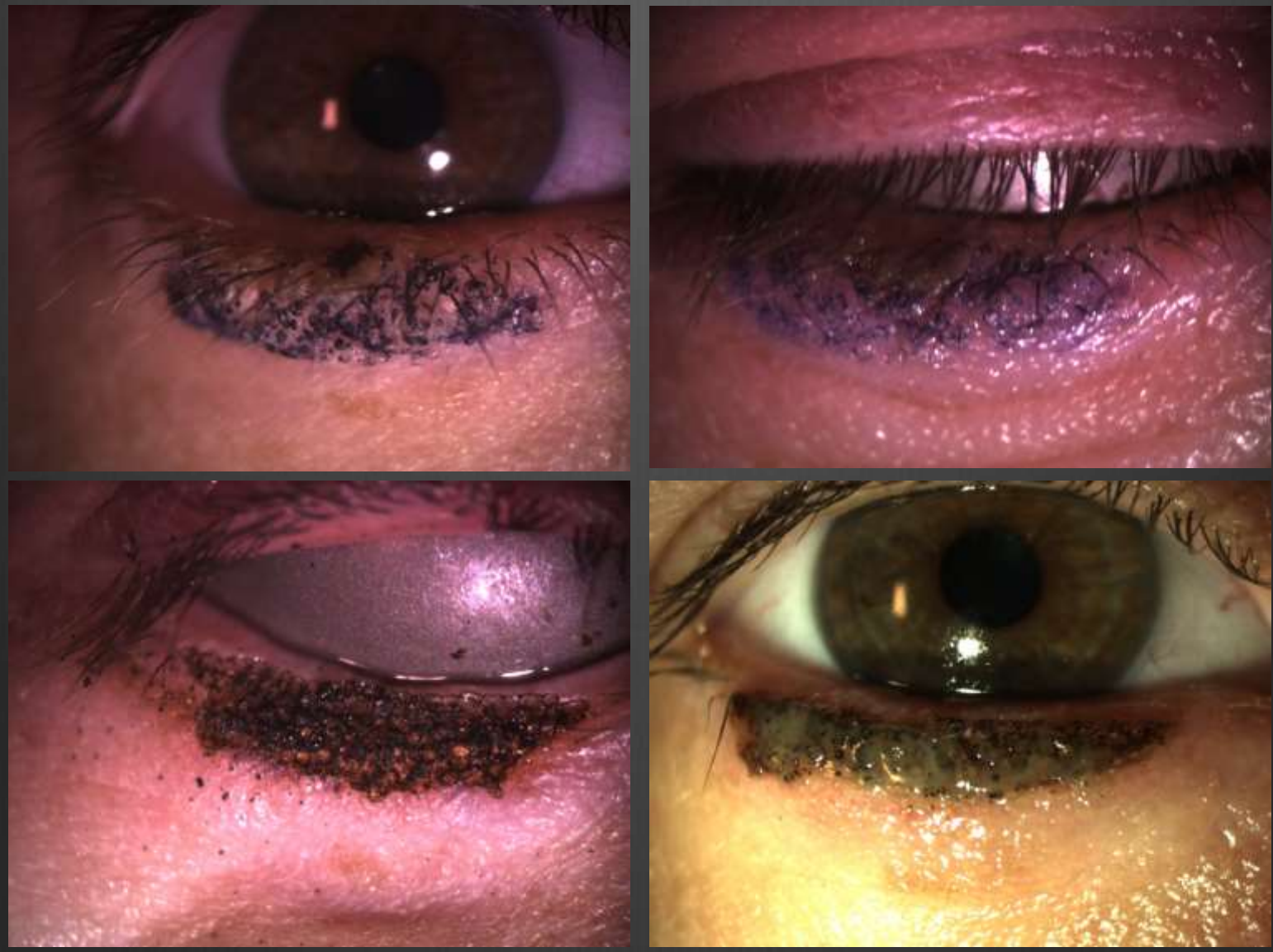

# Papillomas

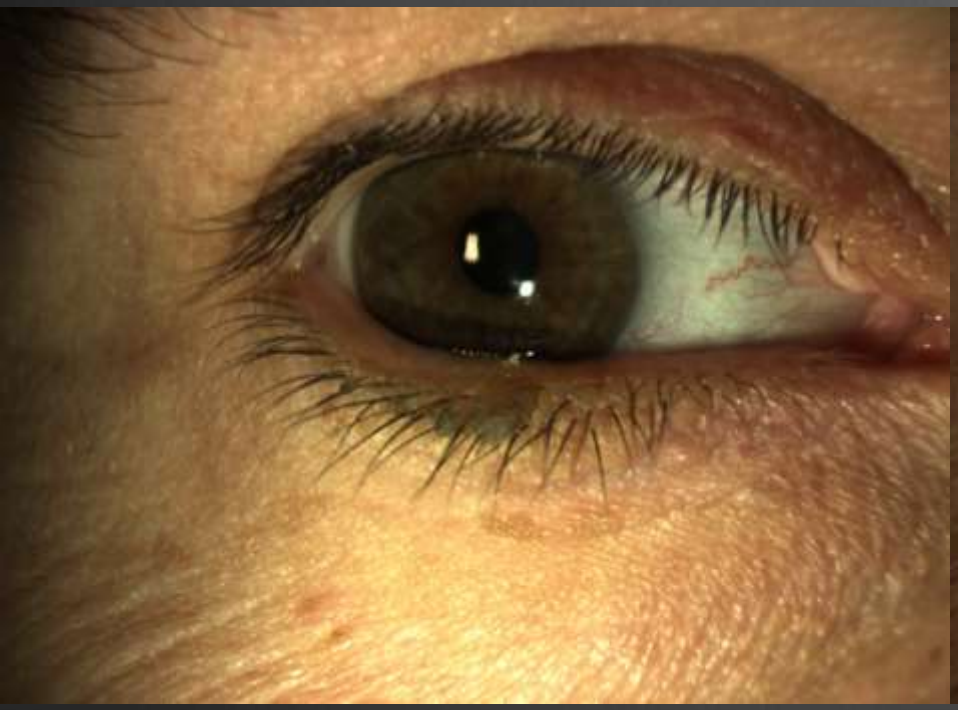
Before Slit Lamp Laser

After Slit Lamp Laser








# Seborrheic Keratoses

Before

After

# Nevus

Before

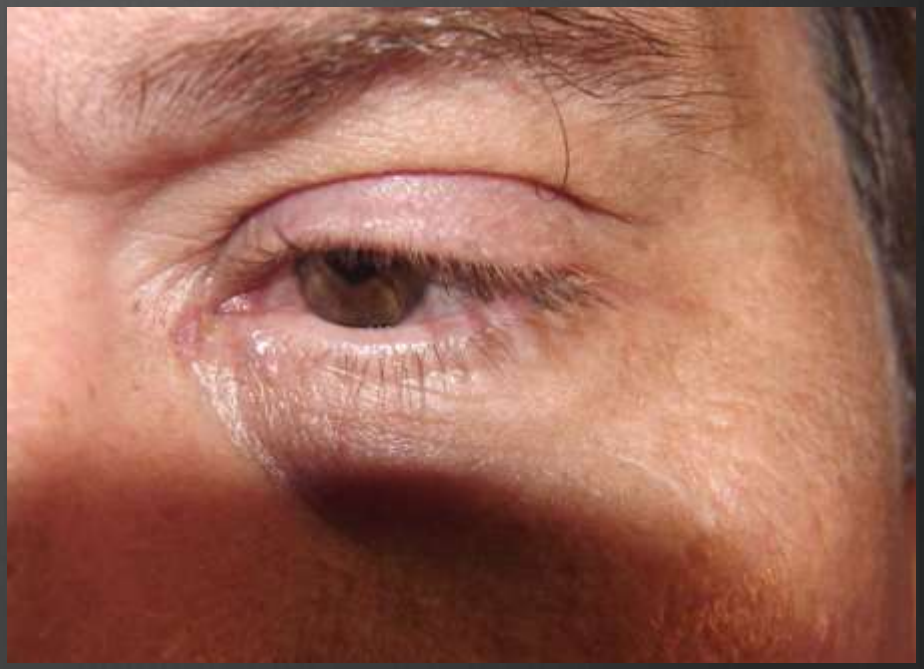
Laser Treatment

# Nevus

2 months post laser

# Hidrocystomas

Before



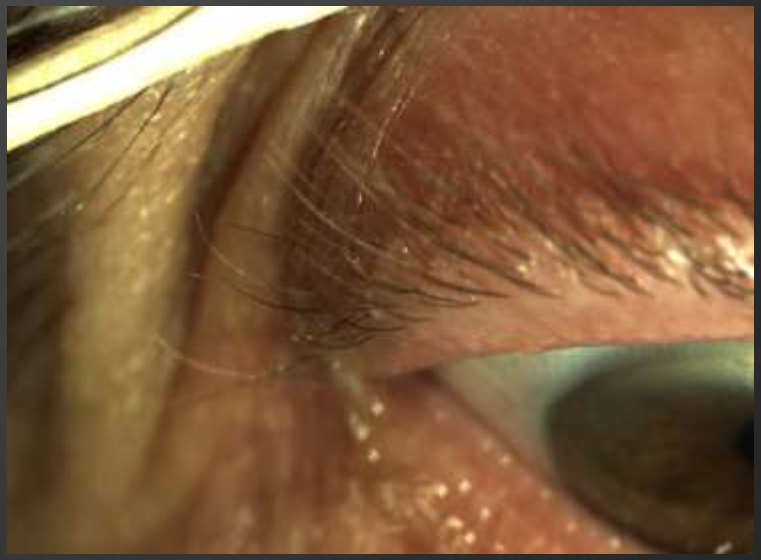
After

# Sebaceous cyst

Before

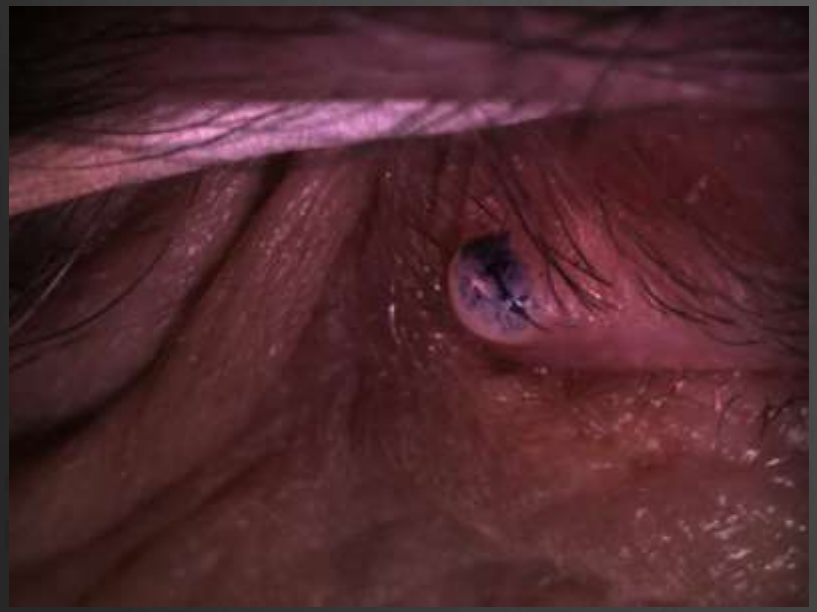
Before

After



After

# Sebaceous cyst



# Erbium Laser

- Controlled ablation
- Larger area with scanner handpiece

# Xanthelasma

Before

After

# Syringoma

Before

After

# Syringoma

Before

After

# Hidrocystoma

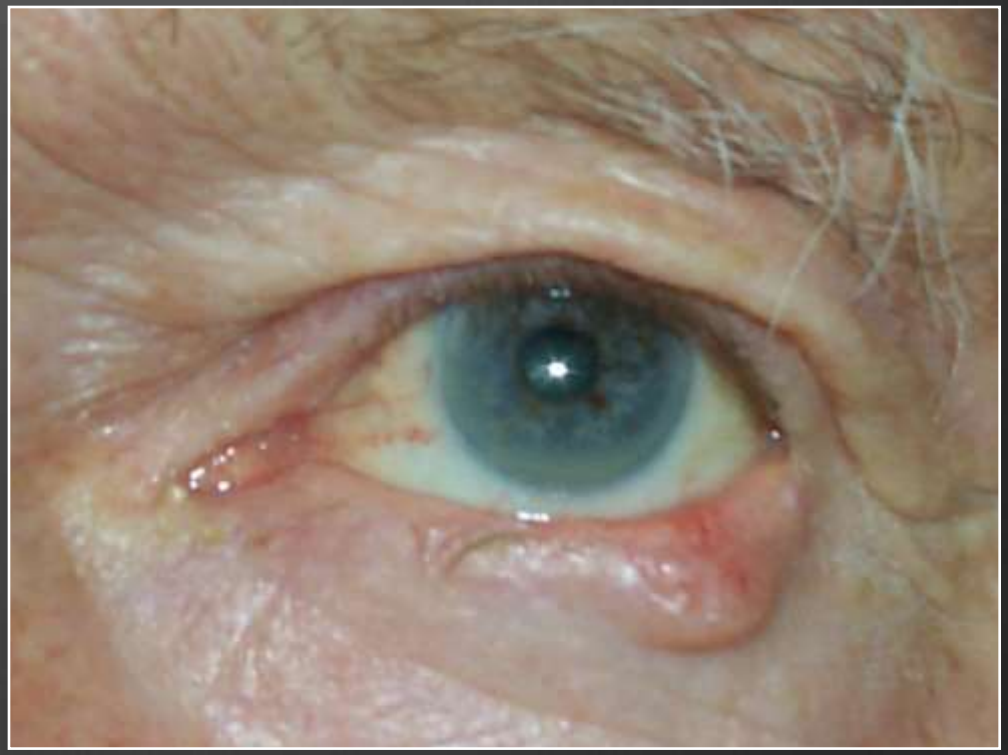
Sciton Erbium Laser

# Hidrocystoma

Sciton Erbium Laser

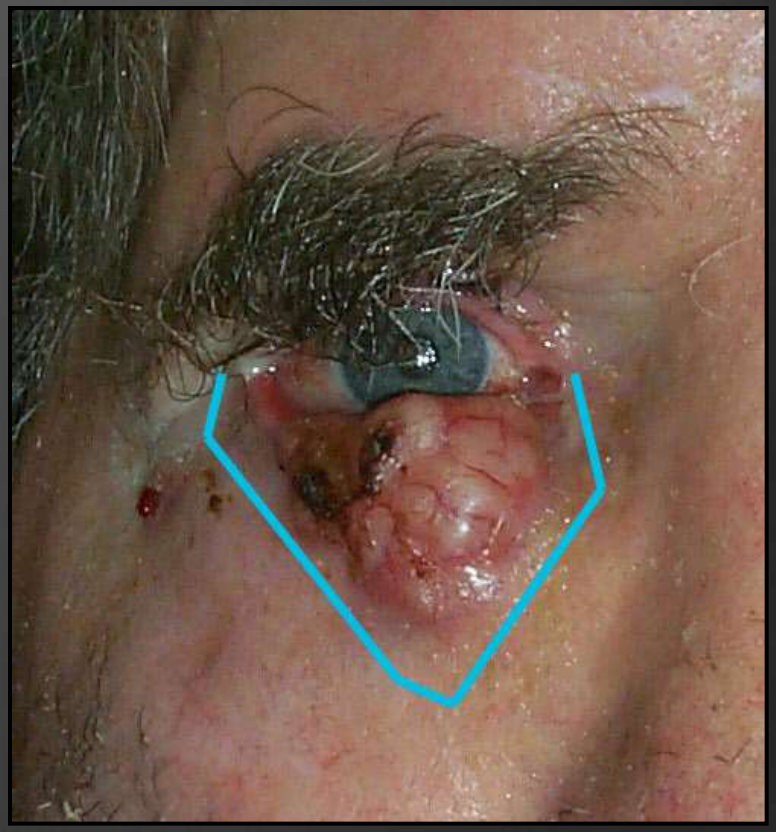
# Malignant Lid Growths

- Gradual onset
- Ulcerated
- Lash loss
- Flat or elevated



# Scope of the problem

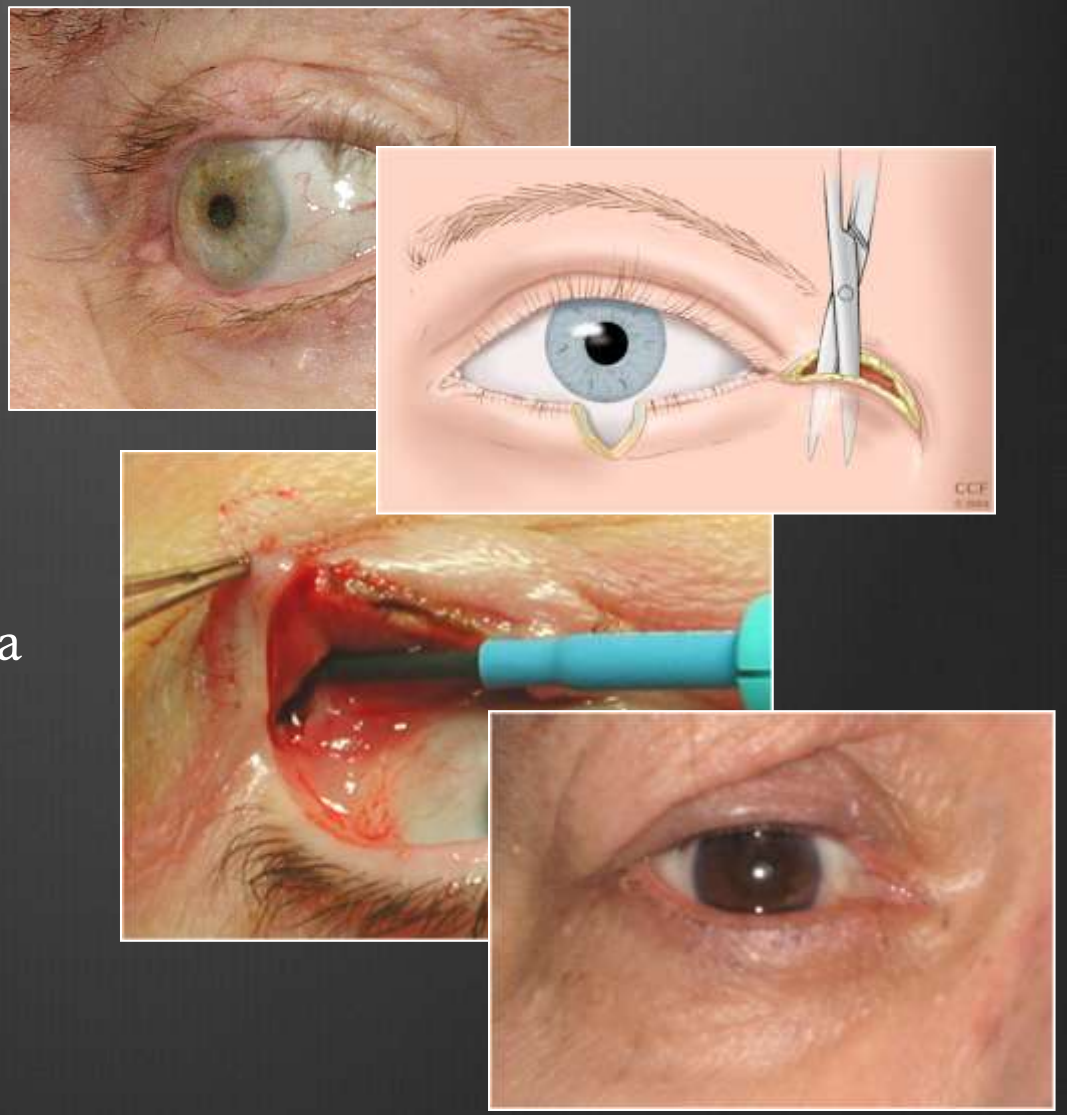
- Most malignancies present for several months/years at diagnosis
  - 10% >5 yr history*
- Earlier diagnosis is important:
  - Less extensive surgery
  - Less chance of recurrence
  - Less chance of metastasis



*Margo CE, Waltz K. Basal cell carcinoma of the eyelid and periocular skin. Surv Ophthalmol. 1993 Sep-Oct;38(2):169-92. Review.

# Outline

- Presentation of eyelid malignancies
- Diagnosis
- Specific types
  - Basal cell carcinoma
  - Squamous cell carcinoma
  - Sebaceous cell carcinoma
  - Malignant melanoma
  - Others
- Management



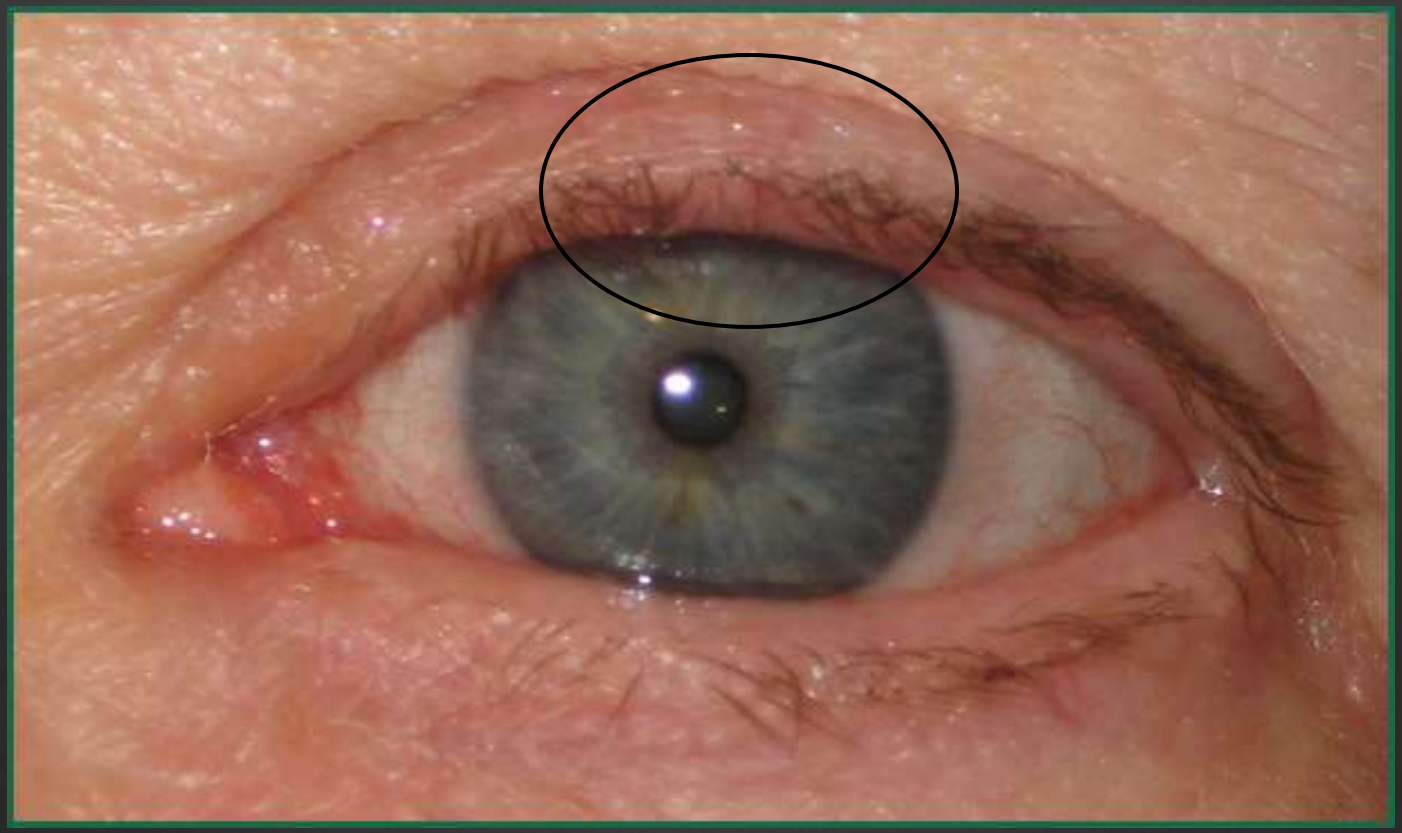
# Patient presentation

Notching of eyelid margin

Lash Loss

# Patient presentation

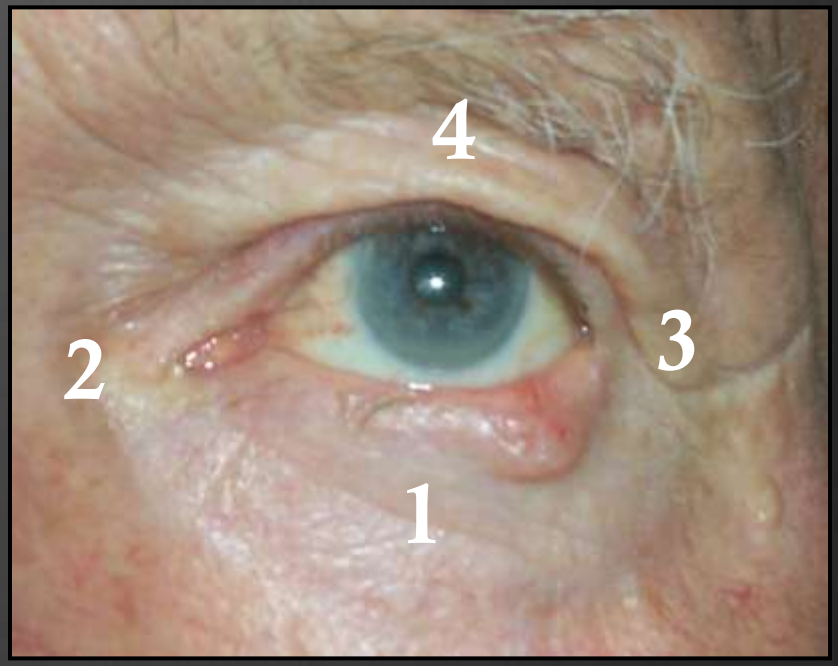
Lash Loss



- Basal cell carcinoma
- Squamous cell carcinoma
- Sebaceous cell carcinoma
- Malignant melanoma
- Others

# Basal Cell Carcinoma

- Most common malignant tumor of eyelid
  - 80%-90% of all eyelid cancers are BCC
- By Location:
  - lower eyelid > medial canthus > lateral canthus > upper lid
- Metastases very rare



# Basal Cell Carcinoma

- Subtypes:
  - Nodular: Firm, raised, pearly, telangiectasia
  - Morpheaform: More aggressive and extensive


# Basal Cell Carcinoma

- Basal cell carcinoma
- Squamous cell carcinoma
- Sebaceous cell carcinoma
- Malignant melanoma
- Others

# Squamous Cell Carcinoma

- Compared with BCC:
  - Flatter, erythematous
  - More difficult to detect margins
  - Higher risk of metastasis
  - Recurrence rate higher
- Perineural invasion is possible
- Treat aggressively

Image from: http://www.drmeronk.com/eyelid/malignancy.html

# Squamous Cell Carcinoma

- Perineural spread

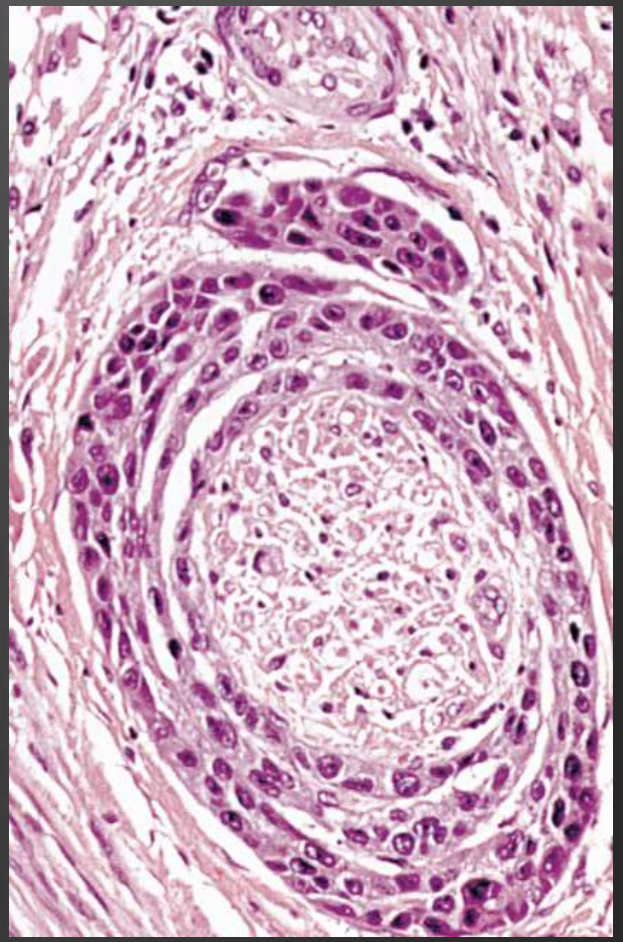
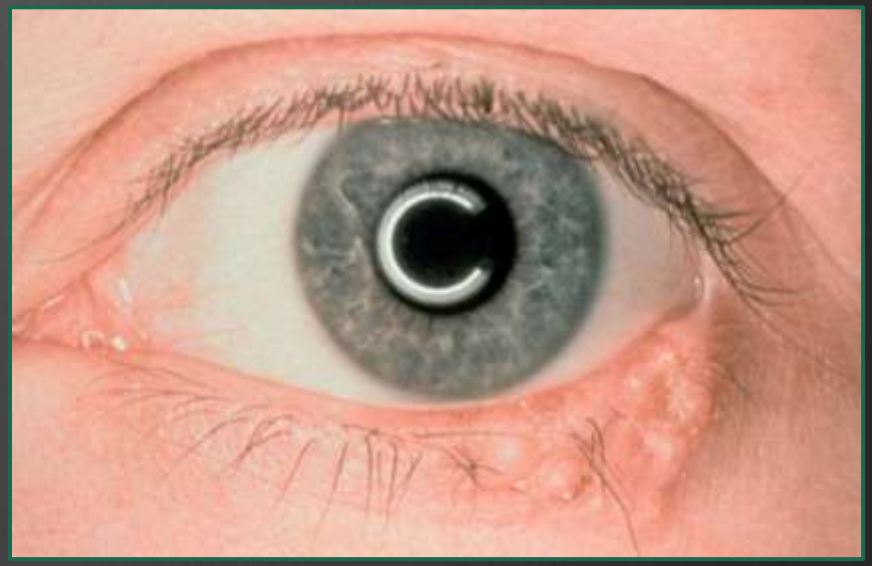


Image from: Fagan JJ, Collins B, Barnes L, D'Amico F, Myers EN, Johnson JT. Perineural invasion in squamous cell carcinoma of the head and neck. Arch Otolaryngol Head Neck Surg. 1998 Jun;124(6):637-40.

# Squamous Cell Carcinoma

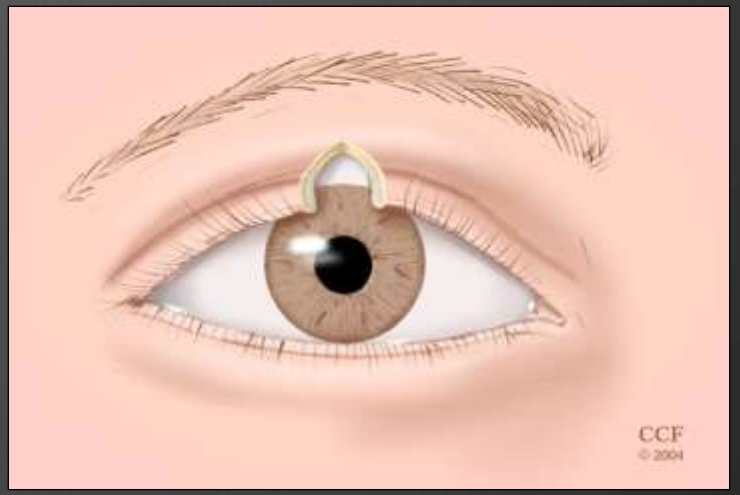
# Eyelid malignancy treatment

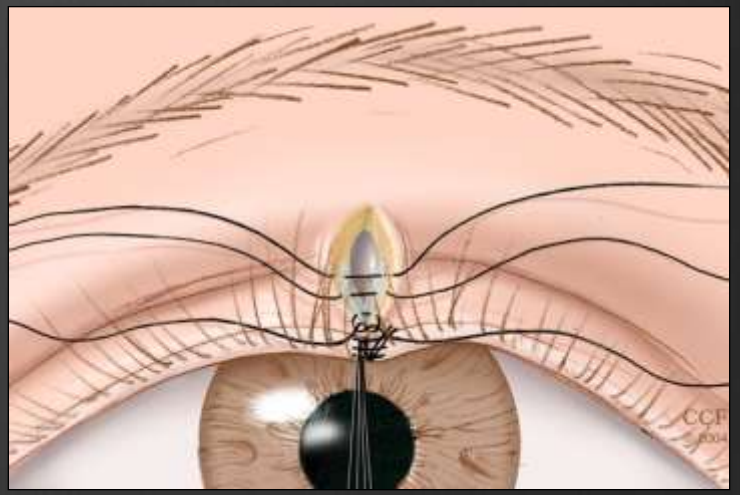
- Options:
  - Surgical excision
  - Cryotherapy
  - Radiotherapy
  - Thermocauterization
  - Laser Therapy
  - Topical chemotherapy



# Eyelid Reconstruction

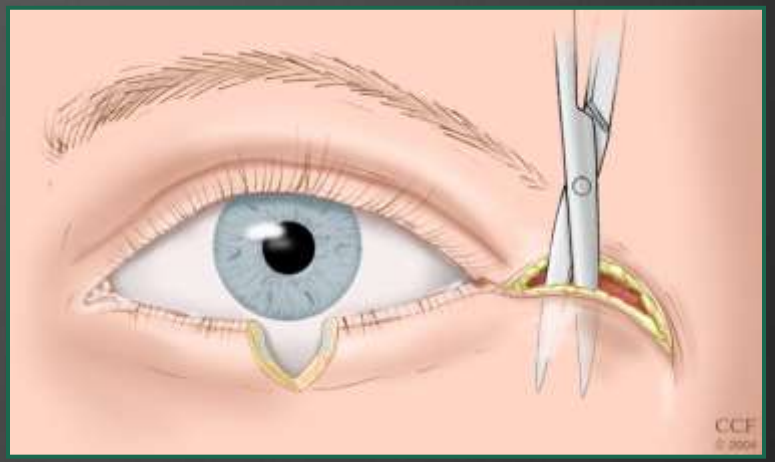
- Direct closure
  - Best repair for small to moderate defects
  - Maximum defect size depends on horizontal eyelid laxity

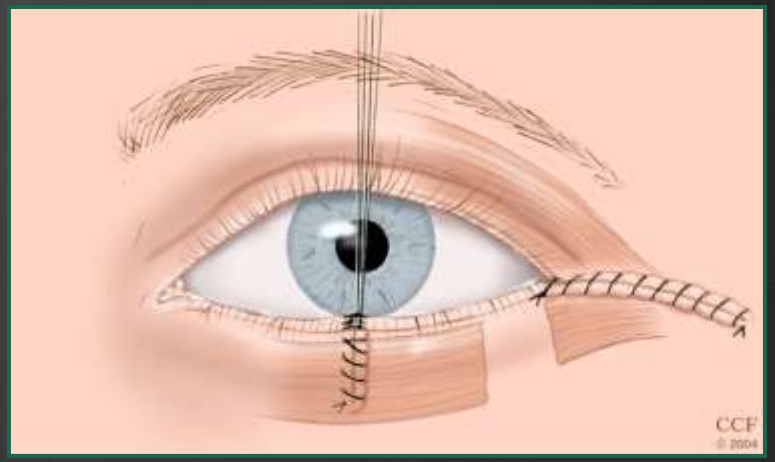


# Eyelid Reconstruction

- < 25%
  - Direct
  - Canthotomy/cantholysis
- 25-50%
  - Direct
  - Tenzel semicircular rotational flap
  - Full thickness composite
- >50%
  - Tarso-conjunctival flap



# Thank You