Lid Lesions: Relax or Refer

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Disclosures

Paid consultant for:

Maculogix: Honoraria-Advisory Board

Sun: Honoraria: Advisory Board/Speakers Bureau

Agenda

- Benign vs. Malignant lesions
- Benign Eyelid Lesions
  - Various types
  - Diagnostic criteria and differentials
  - Treatment and management options
- Malignant Eyelid Lesions
  - Various types
  - Diagnostic criteria and differentials
  - Treatment and management options

Pacific University Oregon

Aussie Patient Story

- Male 59 Anglo Celtic heritage
- Asymptomatic , accidental detection by daughter following island holiday Bali and further sun exposure August 2016
- Hx : surfer and excessive sun exposure - coconut oils etc for first 2 decades of life.

Pacific University Oregon

Aussie Patient Story

- Initial dermatologist opinion – BCC (basal cell carcinoma)
  - **BUT** biopsy confirmed aggressive malignant melanoma, 2.2 mm thick , 5 mm cell growth rate

Aussie Patient Story

- Initial excision September 14 2016 .
  - Found to have invaded sentinel axillary node –
- further surgery October 6 - complete axillary dissection right underarm - pathology clear.
- Final dx - stage 3 malignant melanoma.

Eyelid Lumps and Bumps

- 15-20% of periocular skin lesions are malignant
- Benign vs malignant:
  - Benign lesions are:
    - Well circumscribed and possibly multiple
    - Slow growing
    - Less inflamed
    - Look “stuck on” instead of invasive and deep

Is it Benign?

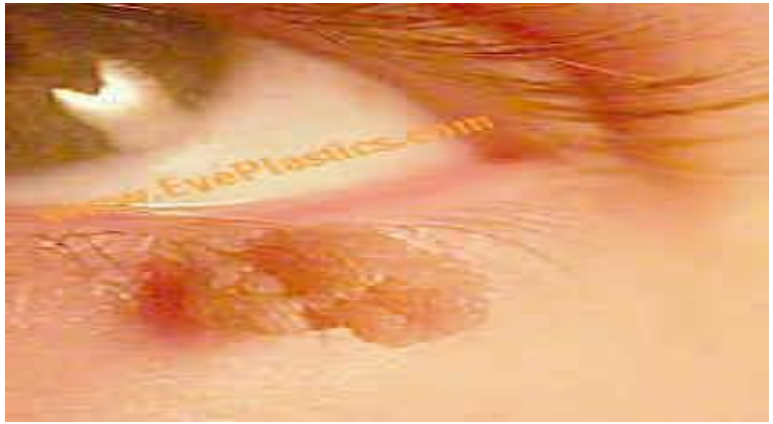
- H: loss of hair bearing structures?
- A: asymmetrical?
- A: abnormal blood vessels (telangectasia's)?
- B: borders irregular?
- B: bleeding reported?
- C: multicolored?
- C: change in the size or color of the lesion?
- D: overall diameter > 5 mm?

Benign Eyelid Lesions

- Most common types of benign eyelid lesions include:
  - Squamous papillomas (skin tags)-most common
  - Hordeola/chalazia
  - Epidermal inclusion cysts
  - Seborrheic keratosis
  - Apocrine hidrocystoma
  - Capillary hemangioma (common vascular lesion of childhood)

Benign Eyelid Lesions: Squamous Papilloma

- Most common benign lesion of the eyelid
  - Also known as fibroepithelial polyp or skin tag
- Single or multiple and commonly involve eyelid margin



Benign Eyelid Lesions: Squamous Papilloma

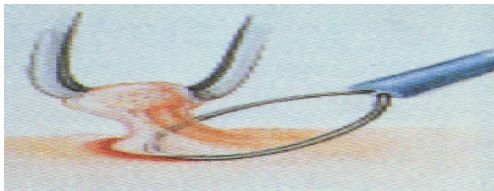
- Flesh colored and maybe:
  - sessile (no stalk) or pedunculated (with a stalk)
- Differentials:
  - seborrheic keratosis,
  - verruca vulgaris and
  - intradermal nevus
- Treatment is excision at the base of the lesion.
  - Radiosurgery: Ellman
  - Cryotherapy
  - Chemical removal e.g TCA

https://www.willseye.org/disease_condition/eyelid-papilloma/

http://morancore.utah.edu/basic-ophthalmology-review/eyelid-masses/

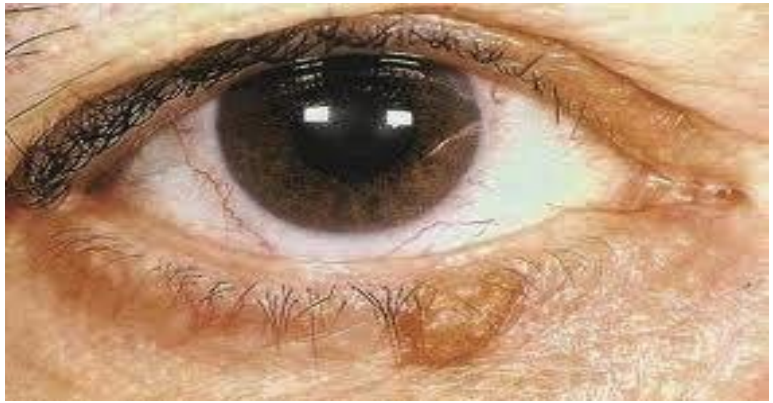
Radiofrequency (RF) Surgery

- Radiosurgery is the passage of high frequency radiowaves through soft tissue to cut, coagulate, and/or remove the target tissue
- Cuts and coagulates at the same time
- Nearly bloodless field
- Minimal biopsy artifact damage
- Quick and easy (to do and to learn)
  - Pressureless & bacteria-free incisions
- Minimal lateral heat
- Minimal Post-op pain
- Rapid healing
- Fine control with variety of tips



Benign Eyelid Lesions: Seborrheic Keratosis

- Also known as senile verruca
- Common and may occur on the face, trunk and extremities
- Usually affect middle-aged and older adults, occurring singly or multiple, greasy, stuck on plaques



Benign Eyelid Lesions: Seborrheic Keratosis

- Color varies from tan to brown and are not considered pre-malignant lesions
- Differentials include skin tags, nevus, verruca vulgaris, actinic keratosis and pigmented BCC
- Simple excision for biopsy or cosmesis or to prevent irritation.

https://www.grepmed.com/images/3892/seborrheic-table-keratoses-dermatology-photo

Benign Eyelid Lesions: Hordeola

- Acute purulent inflammation
  - Internal occurs due to obstruction of MG
  - External (stye) from infection of the follicle of a cilium and the adjacent glands of Zeiss or Moll
- Painful edema and erythema,

Benign Eyelid Lesions: Hordeola

- Typically caused by Staph and often associated with blepharitis
- Treatment includes:
  - hot compresses (e.g. Bruder)
  - topical antibiotics (?)
  - possibly systemic antibiotics
    - Augmentin 875 mg BID x 7days
    - Keflex 500 mg TID-QID x 7 days
- Treat concurrent blepharitis

Demodex

- Demodex is a natural part of human microbiome
- *Demodex folliculorum* live in hair follicles, primarily on the face, as well as in the meibomian glands of the eyelids;
- *Demodex brevis* live in the sebaceous glands of the skin.

Acne Rosacea and Demodex

- *Demodex folliculorum* frequently occur in greater numbers in those with rosacea and this overabundance is thought to trigger an immune response or possibly certain bacteria associated with the Demodex

Treatments for Demodex

Table 1 Summary of lid cleansers for *Demodex*

Cleanser	Manufacturer	Active ingredients
Cliradex® and Cliradex® Light (towelettes and foam)	Bio-Tissue, Inc.	4-Terpineol (T40)
OUST™ Demodex® Swabstix™ and OUST™ Demodex® Cleanser (premoistened pads)	OCuSOFT®	50% tea tree oil, 40% sea buckthorn oil, and 10% caprylic acid
OCuSOFT® Lid Scrub Plus (premoistened pads, Swabstix)	OCuSOFT®	1,2-Octanediol and detergents
Avenova®	NovaBay® Pharmaceuticals	Pure 0.01% hypochlorous acid

Fromstein, S. R., Harthan, J. S., Patel, J., & Opitz, D. L. (2018). Demodex blepharitis: clinical perspectives. Clinical optometry, 10, 57–63. doi:10.2147/OPTO.S142708

Benign Eyelid Lesions: Chalazia

- Focal inflammatory lesion resulting from obstruction of a meibomian or Zeis gland
- Results in a chronic lipogranulomatous inflammation

Benign Eyelid Lesions: Chalazia

- May drain spontaneously or persist as a chronic nodule
- Recurrent lesions need to exclude a sebaceous gland carcinoma
- Treatment varies from:
  - hot compresses/massage,
  - intralesional steroid injection (triamcinolone (Kenalog^{R}) or
  - surgical drainage
  - **Latest**: IPL (Intense Pulsed Light)

Benign Eyelid Lesions: Pyogenic Granuloma

- Most common acquired vascular lesion to involve the eyelids
- Usually occurs after trauma or surgery as a fast growing, fleshy, red-to-pink mass which readily bleeds with minor contact

Benign Eyelid Lesions: Pyogenic Granuloma

- Differential include Kaposi's sarcoma
- Treatment can include use of steroid to reduce the inflammation or surgical excision at the base of the lesion.

https://webeye.ophth.uiowa.edu/eyeforum/atlas/pages/pyogenic-granuloma/index.htm

Benign Eyelid Lesions: Epidermal Inclusion Cyst

- Appear as slow-growing, round, firm lesions of dermis or subcutaneous tissue
- Eyelid lesions are usually solitary, mobile and less than 1 cm
- Maybe congenital or may arise from trauma

Benign Eyelid Lesions: Epidermal Inclusion Cyst

- May become infected or may rupture
- Differentials include:
  - dermoid cyst,
  - pillar cyst or
  - neurofibroma
- Treatment is complete excision to prevent recurrence.

Benign Eyelid Lesions: Capillary Hemangioma

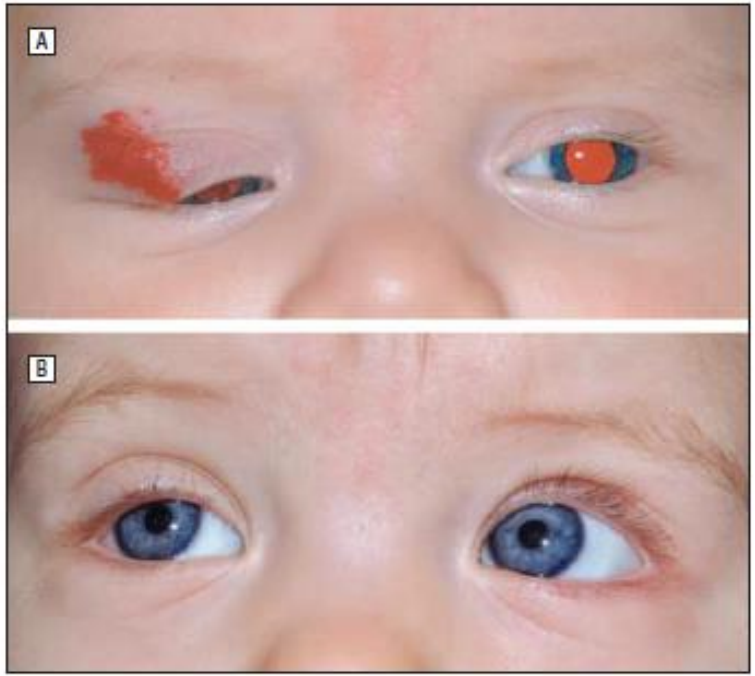
- Most common vascular lesion in childhood (5-10% of infants)
- Females 3:2
- Periorbital may appear as a superficial cutaneous lesion, subcutaneous, deep orbital or combination
- 1/3 visible at birth, remainder manifest by 6 months
- 75% regress to some extent by 7 years

Benign Eyelid Lesions: Capillary Hemangioma

- Classic superficial lesion
  - strawberry lesion, appears as a red, raised, nodular mass which blanches with pressure
- Most common ocular complication is amblyopia
- regression is common, treatment is reserved for patients who have specific ocular, dermatologic or systemic indications for intervention.

Benign Eyelid Lesions: Capillary Hemangioma

- Mainstay treatment includes the use of oral propanolol
- Recent protocols include use of topical timolol 0.25 or 0.50% Gel Forming Solution (GFS) BID for 3-4 months for superficial hemangiomas
- The exact mechanism of action of β-blockers for the treatment is not yet completely understood, however, it is postulated to inhibit growth by at least four distinct mechanisms: vasoconstriction, inhibition of angiogenesis or vasculogenesis, induction of apoptosis, and recruitment of endothelial progenitor cells (EPCs) to the site of the hemangioma



ARCH OPHTHALMOL/VOL 129 (NO. 3), MAR 2011

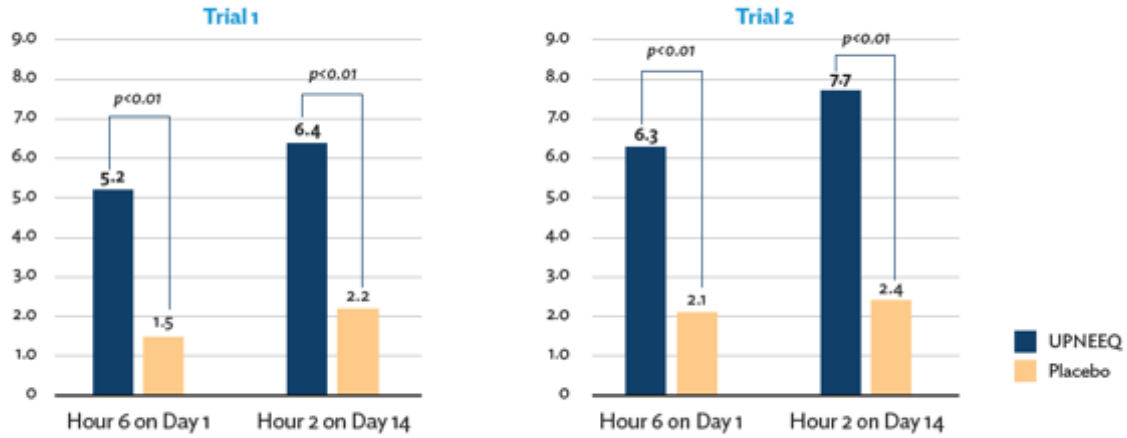
UPNEEQ™ (oxymetazoline hydrochloride ophthalmic solution 0.1%)

- an alpha adrenoceptor agonist targeting a subset of adrenoreceptors in Müller's muscle of the eyelid.
- UPNEEQ is a first-in-class pharmacologic treatment for acquired blepharoptosis.
- Osmotica Pharmaceuticals

Blepharoptosis
https://www.aao.org/headline/first-blepharoptosis-drug-gains-fda-approval

Mean Change in LPFT from Baseline

Figure 1. Mean change in LPFT from baseline[14]



LPFT: Leicester Peripheral Field Test
Number of points seen on the top 4 rows of the LPFT

Photos depicted are actual subjects. Individual results may vary.

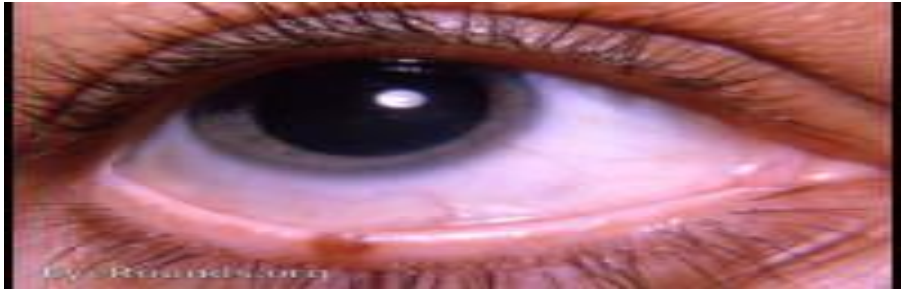
UNEEQ™ (oxymetazoline hydrochloride ophthalmic solution 0.1%)

- Dosing is 1 drop per day in affected eye

- Adverse reactions that occurred in 1-5% of subjects treated with UPNEEQ were punctate keratitis, conjunctival hyperemia, dry eye, blurred vision, instillation site pain, eye irritation and headache.
- Use with caution in patients with cerebral or coronary insufficiency or Sjögren's syndrome.
- may increase the risk of angle closure glaucoma in patients with untreated narrow-angle glaucoma

Which of the following lid nevi have the greatest chance to convert to a malignant melanoma?

1



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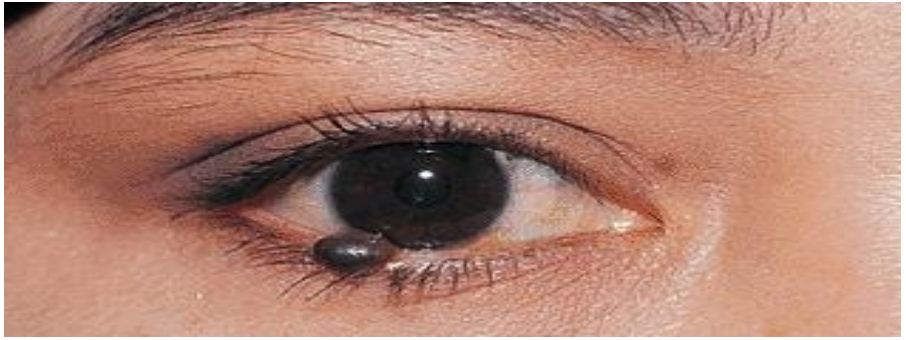


4

Lid Nevi

- Lid nevi:
  - congenital or acquired
  - occur in the anterior lamella of the eyelid and can be visualized at the eyelid margin.
- The **congenital eyelid nevus** is a special category with implications for malignant transformation.
- With time, slow increased pigmentation and slight enlargement can occur.
- An **acquired nevus** generally becomes apparent between the ages of 5 and 10 years as a small, flat, lightly pigmented lesion

Congenital Nevus

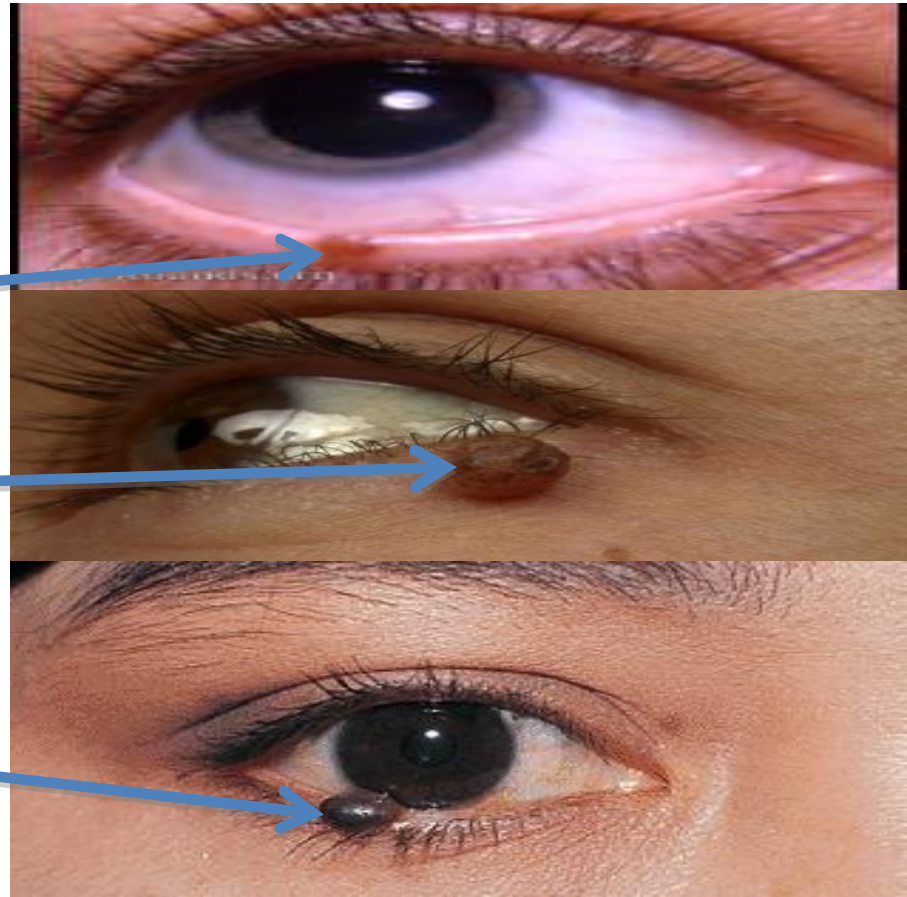
- The nevus is generally well circumscribed and not associated with ulceration.
- The congenital nevus of the eyelids may present as a "kissing nevus" in which the melanocytes are present symmetrically on the upper and lower eyelids.
  - Presumably this nevus was present prior to eyelid separation

Congenital Nevus

- Most nevi of the skin are not considered to be at increased risk of malignancy.
  - However, the large congenital melanocytic nevus appears to have an increased risk of malignant transformation of 4.6% during a 30 year period

Acquired Lid Nevi

- Acquired nevi are classified as:
  - **junctional** (involving the basal epidermis/dermis junction), typically flat in appearance
  - **intradermal** (involving only the dermis), tend to be dome shaped or pedunculated
  - **compound** (involving both dermis and epidermis) tend to be dome shaped

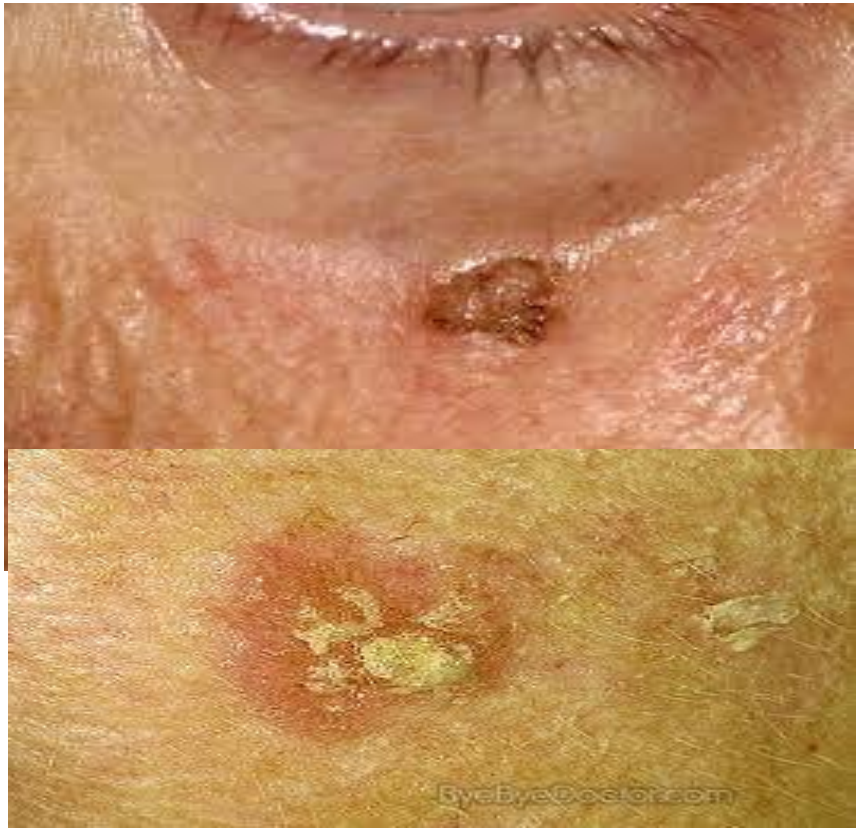


Pre-Malignant Eyelid Lesions: Keratoacanthoma

- Appears as a solitary, rapidly growing nodule on sun exposed areas of middle-aged and older individuals
- Nodule is usually umbilicated with a distinctive crater filled with keratin
- Lesion develops over weeks and undergoes spontaneous involution within 6 mo to leave an atrophic scar
- Complete excision is recommended as there are invasive variants

Pre-Malignant Eyelid Lesions: Actinic Keratosis

- Also known as solar or senile keratosis
- Most common pre-malignant skin lesion
- Develops on sun-exposed areas and commonly affect the face, hands and scalp (less commonly the eyelids)
  - Predominately white males



Pre-Malignant Eyelid Lesions: Actinic Keratosis

- Appear as multiple, flat-topped papules with an adherent white scale.
- Development of SCC in untreated lesions as high as 20%
- Management is surgical excision or cryotherapy (following biopsy)

Malignant Eyelid Lesions: Basal Cell Carcinoma (BCC)

- Most common malignant lesion of the lids (85-90% of all malignant epi eyelid tumors)
- 50-60% of BCC affect the lower lid followed by medial canthus 25-30% and upper lid 15%
- Metastases is rare but local invasion is common and can be very destructive

Malignant Eyelid Lesions: Basal Cell Carcinoma

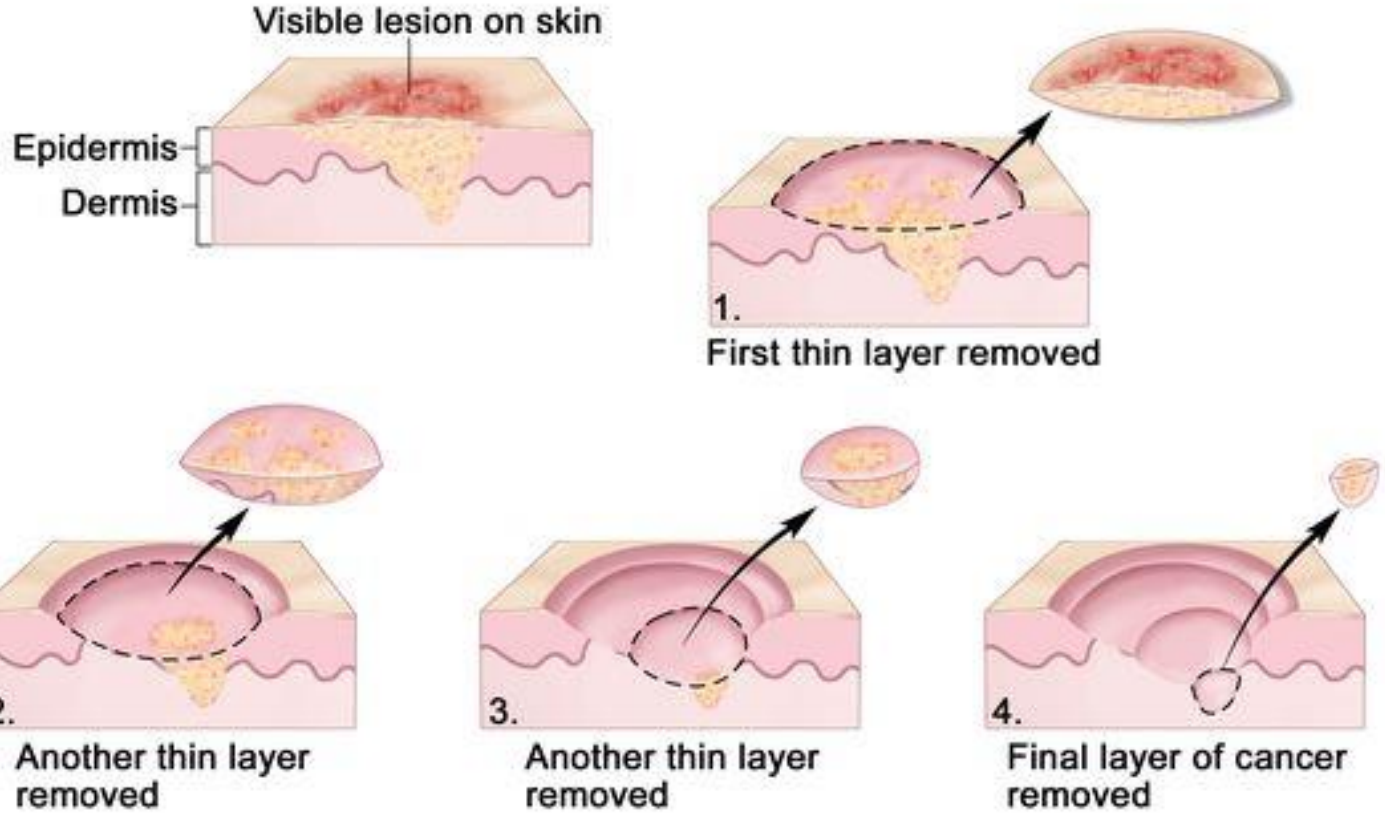
- Diagnosis is initially made from its clinical appearance, especially with the noduloulcerative type with its raised pearly borders and central ulcerated crater
  - categorized into two basic types: noduloulcerative and morpheaform
  - The morpheaform variant is typically diffuse, relatively flat with indistinct borders. This variant is more aggressive and can be invasive despite showing less obvious features.

Malignant Eyelid Lesions: Basal Cell Carcinoma

- Definitive diagnosis made on histopathological examination of biopsy specimens
  - loss of adjacent cilia is strongly suggestive of malignancy and occurs commonly with basal cell carcinoma of the eyelid
- Surgery is generally accepted as treatment of choice
  - Mohs' surgery technique

https://entokey.com/tumors-of-the-eyelids/

Mohs Surgery



Malignant Eyelid Lesions: Squamous Cell Carcinoma (SCC)

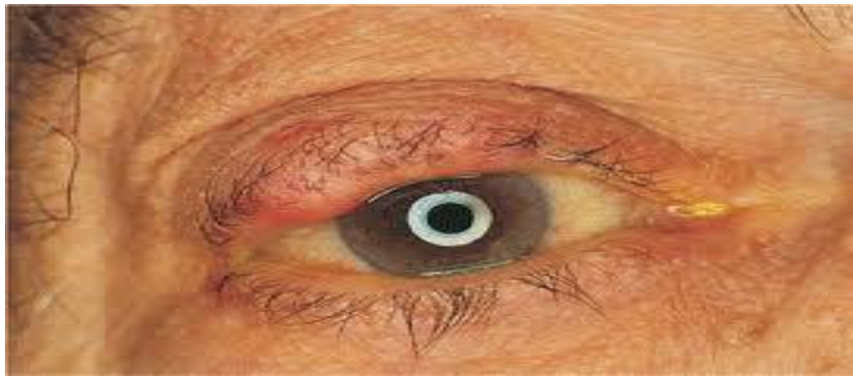
- Much less common than BCC on the eyelid but has much higher potential for metastatic spread
- Typically affects elderly, fair-skinned and usually found on the lower lid

Malignant Eyelid Lesions: Squamous Cell Carcinoma (SCC)

- Presents as an erythematous, indurated, hyperkeratotic plaque or nodule with irregular margins
- Lesions have a high tendency towards ulceration and tend to affect lid margin and medial canthus

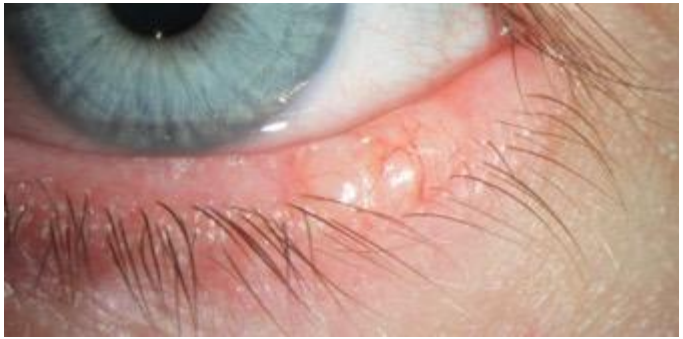
Malignant Eyelid Lesions: Sebaceous Gland Carcinoma

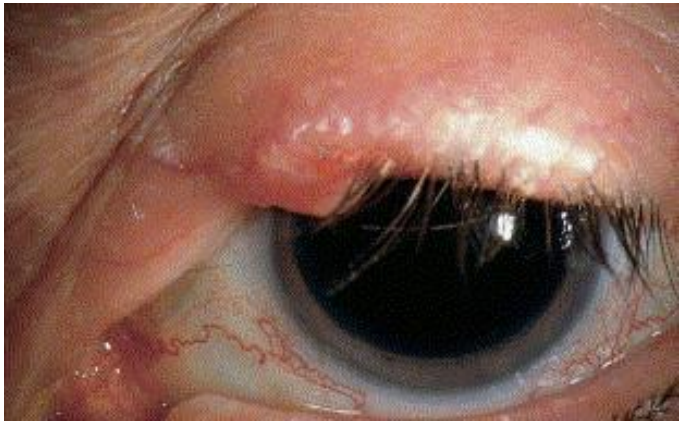
- Highly malignant neoplasm that arises from the meibomian glands, Zeis and the sebaceous glands of the caruncle and eyebrow
- Aggressive tumor with a high recurrence rate, significant metastatic potential and notable mortality rate
  - **rates of misdiagnosis have been reported as high as 50%**



Malignant Eyelid Lesions: Sebaceous Gland Carcinoma

- Relatively rare, 3rd most common eyelid malignancy
- Uncommon in the Caucasian population and represents only 3% of eyelid malignancies,
  - most common eyelid malignancy in Asian Indian population, where it represents approximately 40% or more of eyelid malignancies





Malignant Eyelid Lesions: Malignant Melanoma

- MM of the eyelid accounts for about 1% of all eyelid malignancies
- Risk factors include congenital and dysplastic nevi, changing cutaneous moles, excessive sun exposure and sun sensitivity, family history, age greater than 20 and white.
- History of severe sunburns rather than cumulative actinic exposure thought to be a major risk factor

Malignant Eyelid Lesions: Malignant Melanoma