🧿 Squamous Cell Carcinoma (SCC) Fact Sheet

Cancer Type: Rare Eye Cancer (Epithelial Malignancy)
Primary Site: Conjunctiva, cornea, eyelid, limbus, or orbit
Subtype: Ocular Surface Squamous Neoplasia (OSSN), Cutaneous SCC of eyelid
Website Reference: OcularCancer.com

🔍 What is Squamous Cell Carcinoma?

Squamous Cell Carcinoma (SCC) is a **malignant tumor** arising from **squamous epithelial cells**. In the eye, it typically develops on the **conjunctiva** or **cornea**, and may extend to the eyelid, limbus, or orbit.

When it affects the ocular surface, it falls under the umbrella of **Ocular Surface Squamous Neoplasia (OSSN)** - a spectrum that includes dysplasia, carcinoma in situ, and invasive SCC.

📊 Key Facts:

- **Prevalence:** Rare; OSSN accounts for ~5% of all ocular tumors
- **Most Common Site: Conjunctiva**, especially at the **limbus**
- **Age of Onset:** Typically affects adults **aged 50+**

- **Gender:** More common in **males**
- **Geographic Risk:** Higher prevalence in equatorial regions (UV exposure)
- **Laterality:** Usually **unilateral**, localized but may invade orbit if untreated

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🧬 Causes & Risk Factors:

- **Chronic UV-B radiation** exposure (sunlight)
- **Fair skin**, **light eye color**
- **HPV infection** (especially types 16 & 18)
- **HIV/AIDS and other immunosuppressive conditions**
- **Cigarette smoking**
- **Chronic ocular inflammation or scarring**
- **Xeroderma pigmentosum** (genetic condition causing UV sensitivity)

👁️ Signs and Symptoms:

SCC often resembles benign growths and may go unnoticed early. Common signs include:

- **White, pink, or gelatinous mass** on the conjunctiva
- **Leukoplakia** (white plaque)
- **Feeder blood vessels** leading to the lesion
- Persistent **redness**, irritation, or foreign body sensation
- Decreased or blurry vision if the cornea is involved
- **Eyelid mass** or ulceration (in cutaneous SCC)
- **Bleeding**, crusting, or loss of eyelash in advanced eyelid SCC

🩺 Diagnosis:

- **Clinical eye exam** with slit-lamp and observation of lesion characteristics
- **High-resolution anterior segment imaging (HR-OCT)**
- **Biopsy** (excisional or incisional) with histopathologic confirmation
- **Immunohistochemistry** to differentiate from other ocular malignancies
- **HPV testing** if viral cause suspected
- **Imaging (MRI or CT)** for deeper orbital or lymphatic invasion

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⚙️ Types of Ocular SCC:

- **Conjunctival SCC (Invasive OSSN):**
  Most common; starts at limbus and can spread to orbit if untreated
- **Corneal SCC:**
  Less common; often an extension of conjunctival involvement
- **Eyelid SCC:**
  Cutaneous form; may ulcerate and mimic basal cell carcinoma
- **Orbital SCC:**
  Very rare; may result from local invasion

🧪 Treatment Options:

Treatment depends on the **extent**, **location**, and **depth** of invasion:

- **Surgical excision** with wide margins
- **Cryotherapy** to lesion edges and conjunctiva

- **Topical chemotherapy:**
    - **Mitomycin C**
    - **5-Fluorouracil (5-FU)**
    - **Interferon alpha-2b drops** (less toxic alternative)
- **Radiation therapy**:
  For unresectable, recurrent, or orbital-invasive cases
- **Orbital exenteration**:
  In extensive cases with deep tissue invasion
- **Lymph node biopsy** or dissection if metastasis is suspected

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🎯 Prognosis:

- **Early-stage SCC** has a **high cure rate** with surgical and medical treatment
- **Recurrence rate:** ~10–30%, especially with incomplete excision
- **Metastasis:** Rare but possible to **regional lymph nodes**, lungs, or brain
- **Orbital invasion** significantly worsens prognosis

🔄 Follow-Up & Monitoring:

- Frequent **ophthalmic exams** (every 3–6 months initially)
- Monitoring for **local recurrence or new lesions**
- **Lymph node checks** during follow-up visits
- **HIV testing** in immunocompromised patients
- Long-term follow-up required due to **recurrence risk**

❤️ Support & Resources:

- **Ocular oncologists** and **cornea specialists** for diagnosis and management
- **Dermatology** support for cutaneous SCC cases
- **HIV clinics or infectious disease specialists** if immunosuppression is involved
- **Cancer support groups** for mental and emotional support
- **Patient advocacy** organizations for rare cancer care access

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📌 Key Takeaways:

- Ocular SCC is rare and **potentially aggressive**, especially if untreated
- Early signs may mimic benign conditions like **pinguecula** or **pterygium**
- **Early biopsy and prompt treatment** are key to preserving vision and preventing spread
- **Topical treatments** can be effective for superficial lesions
- **Recurrence is possible**; lifelong monitoring is recommended

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📚 For more information, support, and survivor stories, visit:

🌐 OcularCancer.com – A home for rare eye cancer awareness, education, and community.