

# Squamous Cell Carcinoma: Understanding a Common Malignancy

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## Introduction

Squamous cell carcinoma (SCC) is a type of cancer that arises from the squamous epithelial cells, which are flat, thin cells found in the skin, mucous membranes, and various organs. It is the second most common form of skin cancer after basal cell carcinoma but can also occur in the oral cavity, lungs, esophagus, and cervix. SCC is characterized by uncontrolled cell growth, potential local tissue invasion, and the ability to metastasize to distant sites. Early detection and treatment are crucial for improving prognosis and minimizing complications.

## Discussion

The development of SCC is often associated with cumulative exposure to carcinogenic factors, particularly ultraviolet (UV) radiation from sunlight or tanning beds. Other risk factors include chronic inflammation, immunosuppression, tobacco and alcohol use, human papillomavirus (HPV) infection, and genetic predisposition. SCC typically begins as a precancerous lesion, such as actinic keratosis in the skin, which can progress to invasive carcinoma if left untreated.

Clinically, SCC presents as a firm, red nodule or scaly plaque on sun-exposed areas of the skin. Lesions in mucosal sites may appear as persistent ulcers, white or red patches, or growths that do not heal. Histopathological examination is essential for confirming the diagnosis, showing keratinocyte atypia, keratin pearls, and evidence of invasive growth. Staging is important to determine the extent of disease and guide treatment.

Treatment strategies depend on the tumor location, size, and stage. Surgical excision with clear margins remains the standard of care for localized SCC, while Mohs micrographic surgery is preferred for high-risk or cosmetically sensitive areas. Radiation therapy and topical chemotherapeutic agents may be used in cases where surgery is not feasible. Advanced or metastatic SCC

may require systemic therapies, including targeted agents or immunotherapy.

Early diagnosis significantly improves outcomes, as localized SCC has a high cure rate. However, untreated or aggressive SCC can invade deeper tissues, including bone and lymph nodes, leading to morbidity and, in rare cases, mortality. Preventive measures, such as limiting UV exposure, using sunscreen, avoiding tobacco and alcohol, and regular skin checks, play a critical role in reducing risk.

## Conclusion

Squamous cell carcinoma is a prevalent malignancy arising from squamous epithelial cells, with potential for local invasion and metastasis. Risk factors include UV exposure, lifestyle habits, infections, and immunosuppression. Early detection and appropriate treatment, primarily surgical excision, are essential for favorable outcomes. Preventive strategies and regular monitoring can help minimize disease incidence and progression. With advances in diagnosis and therapy, SCC remains a largely treatable cancer when identified and managed promptly.