SQUAMOUS CELL CARCINOMA (SCC)

What is it?

SCC is a type of skin cancer. There are two main types of skin cancer: melanoma and non-melanoma skin cancer. SCC is a non-melanoma skin cancer. Like any cancer the underlying cause is an mutation within the cells DNA, that facilitaes unregulated growth of the abnormal cells.

As SCCs develop in areas of excessive UV exposure, they usually begin within areas of actinic keratosis or SCC-in situ and progress to invasive SCC over months or years. SCC in-situ is an early lesion and remains as a local problem without the potential to spread beyond the epidermis. Invasive SCC has grown beyond the basement membrane of the epidermis and has the potential to spread to distant tissues (metastasise), fortunately this distant spread is uncommon.

What does it look like?

SCCs vary in their appearance. People often become aware of them as an area of crusty or scaly skin with a red, inflamed base. Because it is derived from the cells within the epidermis that make keratin (stratum spinosum) there may be excessive keratin scale or a cutaneous horn present. More advanced or aggressive lesions may have the appearance of an ulcer or a mass of friable, undifferentiated tissue. A SCC may bleed, scab and then refuse to heal; it may be painful.

SCCs can occur anywhere on the body but are most common in areas frequently exposed to UV light: the rim of the ear, lower lip, face, balding head, neck, upper arms.

There are a number of different lesions within the group of SCC type lesions:

> Actinic keratosis (AK): Actinic keratosis are a marker for UV damage, although the relationship between AKs and SCC, such as the rate of malignant transformation, is uncertain. Certainly the greater the number of AK the higher the risk of skin cancers. AK do contain some of the early genetic mutations found within skin cancers.
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> SCC in situ (Bowen's disease): A persistent red-brown, scaly patch. Overtime is may progress to invasive SCC. Between 3-5% of lesions will progress to invasive cancer.
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> Keratoacanthoma: Grows quickly over a few weeks and develops into a mass with a central core of keratin. It may be a few centimetres in diameter. A keratoacanthoma may resolve by itself over a few weeks or months, but because it cannot be reliably distinguished from a more aggressive skin cancer it should be excised.
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> Invasive SCC: A persistent patch of scaly skin, a keratotic horn, a wart-like growth or open sore that may ulcerate or bleed, and will not heal.

Why does it occur?

Risk factors for SCC include:

- Immunosuppression from any cause

    - Immunosuppressant medications eg methotrexate, cyclosporine, azathioprine, biologic agents, tacrolimus
    - Inherited or acquired conditions that suppress the immune system eg leukaemia, HIV
    - Organ transplant patients have a very high risk of developing SCC due to their long-term immunosuppression.
    - Advancing age is associated with a degree of immunosuppression
- Increasing age
- Cumulative UV exposure (sun, sunbeds, radiation treatment)
- Previous skin cancers (of any type)
- Fair skin, blue eyes, blond or red hair, tendency to freckle
- Previous injury to the skin or trauma leaving large scars eg burn scars, chronic wounds or ulcers

Is it inherited?

For the vast majority of patients, SCCs are not inherited, however people may inherit a tendency towards SCC due to their complexion and ethnicity eg people with celtic ancestry.

There are a few, rare, inherited conditions that increase propensity to SCC. These include Xeroderma pigmentosa and albinism.

How is the SCC diagnosed?

Usually they are diagnosed by inspection. Sometimes a biopsy is performed to confirm the diagnosis.

Does my SCC need treating?

Yes. SCCs can be cured in almost every case. A small number recur locally and/or spread to the lymph nodes or other parts of the body. Prompt treatment will optimise your chance of complete cure.

What are treatment options?

The commonest treatment for SCC is surgery

Surgery

- Requires a general or local anaesthetic
- The SCC is removed with a margin of normal tissue (5-10mm) around it and the wound closed with sutures
- Sometimes a skin graft or flap is required to reconstruct the area that has been excised

- A pathologist examines the specimen to confirm the diagnosis and ensure the lesion has been excised
- For advanced SCC sometimes radiotherapy is offered following surgery to reduce the risk of recurrence or metastasis.
- Possible complications
    - Bleeding
    - Infection
    - Delayed wound healing
    - Scarring
    - Incomplete margins : leaving some of the cancer cells behind
    - Recurrence
    - Further surgery

Efudix (5-flurouracil) Cream

- Suitable for SCC in-situ
- Is a topical chemotherapy agent to remove the abnormal cells
- Please see Rebecca Ayers' separate information sheet on Efudix

Will my SCC metastasise?

Cutaneous SCC is classified as low risk or high risk depending on certain characteristics of both patient and tumour. High risk lesion have a greater chance of local recurrence and metastasis.

High-risk cutaneous SCC may have the following features:

- Diameter > 2cm
- Location on ear, lip, central face, hands, feet, genitalia
- Histological features such as: thickness > 2mm, poor differentiation, invasion into nerves or blood vessels
- Occur in immuosupressed individuals

High risk lesions receive more aggressive treatment to reduce the risk of metastasis.

What can I do to prevent SCCs?

Prevention is better than cure.

- Avoid exposure to the sun, especially between 10am - 4pm
- Wear protective clothing, hats and sunglasses to prevent UV exposure
- Wear high sun protection factor (SPF) sunblock, at least SPF 50 +. This needs to be applied 15-30 mins before going out into sunlight and then reapplied every 2 hours, or after swimming or heavy physical exertion
- Watch your skin carefully for changes and seek medical attention early if there are any changes. In particular watch for any mark or skin lesions that are
    - Growing

- Bleeding and not completely healing
- Changing appearance

Once you have had one SCC you are at increased risk of developing other non-melanoma and melanoma skin cancers. Regular skin examination will identify lesions early and facilitate prompt treatment.

Patients on immunosuppression medication should be especially careful of any new skin lesion – prompt medical review is required.