



[Authoritative facts](#) about the skin from the [New Zealand Dermatological Society Incorporated](#).

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## Intraepidermal squamous cell carcinoma

Intraepidermal squamous cell carcinoma (intraepidermal SCC) is often known as Bowen disease, Bowen's disease or cutaneous squamous cell carcinoma in situ. It is a common type of skin cancer.

[Squamous cell carcinoma](#) (SCC) is a cancer derived from squamous cells, the flat cells that make up the outside layers of the skin (the epidermis). 'In situ' means the malignant cells are confined to cell of origin i.e., the epidermis.

The development of a lump or bleeding may indicate progression into invasive SCC and occurs in about 5% of intraepithelial SCC lesions.

### What does intraepidermal SCC look like?

Intraepidermal SCC presents as one or more irregular, flat, red and scaly patches of up to several centimetres in diameter. Although intraepidermal SCC may arise on any area of skin, the lesions are most often diagnosed on sun exposed sites such as the ears, the face, the hands and the lower legs.

#### Intraepidermal squamous cell carcinoma



[More images of intraepidermal SCC ...](#)

### What is the cause of intraepidermal SCC?

Intraepidermal SCC arises in aging skin. It may be caused by:

- Sun exposure: intraepidermal SCC is most often found on sun exposed sites of fair skinned individuals. This is because ultraviolet radiation damages the skin cell nucleic acids (DNA) resulting in a mutant clone of the gene p53. This sets off uncontrolled growth of the skin cells. Ultraviolet radiation also suppresses the immune response preventing recovery from this damage.
- [Arsenic](#) ingestion: this may result in multiple areas of intraepidermal SCC on the trunk and limbs some years after exposure.
- Ionising radiation: intraepidermal SCC was common on the hands of radiologists early in the 20th century.
- Human papillomavirus (HPV) infection: this rarely causes intraepidermal SCC. However, HPV infecting genital sites is the cause of [vulval](#) and [penile](#) intraepithelial neoplasia or mucosal SCC in situ.

## Treatment of intraepidermal SCC

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As intraepidermal SCC is confined to the surface of the skin, there are various ways to remove it.

### Cryotherapy

[Cryotherapy](#) means removing a lesion by freezing it, usually with liquid nitrogen. Cryotherapy may be suitable for small, flat patches of intraepidermal SCC.

### Superficial skin surgery

Superficial skin surgery refers to [shave, curettage, & electrosurgery](#). The lesion is sliced off or scraped out, then the base is cauterised. The wound usually heals rapidly without the need for stitches.

### Fluorouracil cream

[5-Fluorouracil cream](#) contains a cytotoxic agent. The cream may be applied to intraepidermal SCC for 4 to 12 weeks. It causes a vigorous skin reaction that may ulcerate.

### Imiquimod cream

[Imiquimod](#) is an immune response modifier in a cream base. Applied five times weekly for six to sixteen weeks, it will clear most patches of intraepidermal SCC but is not yet licensed for this purpose (June 2008).

### Photodynamic therapy

[Photodynamic therapy](#) (PDT) refers to treatment with a photosensitiser (a porphyrin chemical) that is applied to the affected area prior to exposing it to a strong source of visible light. The treated area develops a "burn" and then heals over a couple of weeks or so. [Metvix PDT](#) is now available to treat superficial skin cancers in New Zealand. It appears to provide high cure rates for intraepidermal SCC on the face or lower legs, but is not yet licensed for this purpose (June 2008).

## What happens after treatment?

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Intraepidermal SCC may recur months or years after treatment. It may be treated again by the same or another method.

Patients who have been treated for intraepidermal SCC are at risk of developing new lesions of intraepidermal SCC. They are also at increased risk of other skin cancers, especially [squamous cell carcinoma](#), [basal cell carcinoma](#) and [melanoma](#). Arrange a complete skin examination from time to time. Ask your [dermatologist](#) or GP to check any persisting or growing lumps or sores or otherwise odd-looking skin lesions. Early detection means easier treatment, and less scarring.

[Protect your skin](#) from excessive exposure to the sun. Stay indoors or under the shade in the middle of the day. Wear covering clothing. Apply broad spectrum [sunscreens](#) to exposed skin if you are outdoors for prolonged periods, especially during the summer months.

### Related information

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#### On DermNet NZ:

- [Squamous cell carcinoma](#)
- [Skin cancer](#)

#### Other websites:

- [Best Treatments](#) from the BMJ: clinical evidence about squamous cell carcinoma for patients
- [intraepidermal SCC](#) - e-medicine dermatology, the online textbook

#### Books about skin diseases:

See the [DermNet NZ bookstore](#)

DermNet does not provide an on-line consultation service.  
If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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