

Intra-epidermal Squamous cell carcinoma

Also known as Bowen's disease, Squamous cell carcinoma *in situ*

What is Bowen's disease?

Bowen's disease is a common superficial cancer of the skin. It appears most commonly as a slow-growing, persistent red scaly patch on areas of skin exposed to the sun.

What causes it?

Bowen's disease is a form of skin cancer that occurs on the upper layer of the skin (the epidermis).

The vast majority of lesions are the result of exposure to sunlight (ultraviolet radiation). It most commonly occurs on the head, neck, trunk, arms or lower legs. If left untreated, Bowen's disease may progress to invasive skin cancer, known as squamous cell carcinoma or SCC.

The possible causes of Bowen's disease include:

- **Ultraviolet radiation.** Exposure of the skin to sunlight is the major cause of Bowen's disease.
- **Immunosuppression.** People with suppressed immune systems, either from medications or other medical problems, are at higher risk of Bowen's disease.
- **Arsenic exposure.** Many years ago arsenic was used as an ingredient in medicines and agriculture to treat various conditions. In some cases this exposure led to the development of Bowen's disease many years later.
- **Human Papilloma Virus (HPV) infection.** When Bowen's disease develops on the lining of the mouth, genital or anal areas there is often a pre-existing wart/virus infection in the area.
- **Ionising radiation** exposure.
- Some rare **genetic disorders.**

What does it look like?

Bowen's disease most frequently looks like a persistent red scaly patch that slowly grows over time. It most commonly appears on areas highly exposed to sunlight such as the face, neck, chest, arms and legs. Bowen's disease can also occur on areas such as the lips, inside the mouth and the genital area. In these cases, it may look like an ulcer or thickened scar.

Bowen's disease often causes no symptoms and hence there is delay in seeking treatment. Bowen's disease may be mistaken for other conditions such as dermatitis (eczema), or psoriasis, fungal infection (tinea), seborrhoeic dermatitis, lichenoid keratosis or porokeratosis.

What other problems may occur?

If Bowen's disease is not treated, a small percentage may develop into an invasive skin cancer, squamous cell carcinoma (SCC).

How is Bowen's disease diagnosed?

Bowen's disease is usually diagnosed by its appearance, but a biopsy may be necessary to confirm the diagnosis.

How is Bowen's disease treated?

There are many ways to treat Bowen's disease. Each treatment has advantages and disadvantages.

The treatment chosen will depend on a number of factors, such as:

- The size and thickness of the Bowen's disease
- The location of the Bowen's disease
- Age and health of the person with Bowen's disease, and their preference and ability to undertake the treatment
- Cosmetic concerns
- Previous treatments
- Cost and availability of treatment.

In no particular order, the following treatments may be used to treat Bowen's disease:

- Cryotherapy or liquid nitrogen
- Topical chemotherapy
 - 5-Fluorouracil (Efudix)
 - Imiquimod (Aldara)
 - Ingenol mebutate (Picato)
- Curettage and Electrocautery
- Photodynamic therapy (PDT)
- Surgery including Mohs micrographic surgery
- Radiotherapy.

A small percentage of Bowen's disease may reappear after treatment. Follow up visits to your dermatologist at regular intervals are important after any treatment.

People who have been diagnosed with Bowen's disease should aim to protect their skin from further sun damage.