Complex Facial Skin Cancers

Dr Joe Dusseldorp, plastic and reconstructive surgeon

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Non-melanoma skin cancer (NMSC) is the most common form of cancer in Australia and predominantly consists of basal cell carcinoma (BCC) and squamous cell carcinoma (SCC).

Skin lesions of the ears, lips, nose and eyelids present particular challenges for diagnosis, treatment and prognosis. BCCs can invade deeply and move rapidly, particularly around the nasal ala and in the medial canthi of the eyes. These junction zones occur in embryonic fusion planes: the sites of mesenchymal and ectodermal fusion of the embyronic facial processes. NMSC in these high risk locations should be treated more aggressively because of higher rates of invasiveness, pathogenicity, and recurrence.

Diagnosis

The single most useful tool in the diagnostic workup of facial NMSC is the punch biopsy. Consider it a first step when there is uncertainty as to the diagnosis of a skin lesion on the face.

A punch biopsy offers three important pieces of information:

1. Location - precise information about where the biopsy was taken is very useful.
   Hot Tip: use the patient's smart phone to take a photo of the location of the lesion before the punch biopsy
2. Histological sub-type – helps to determine the requisite margin.
3. Adverse features - rare but significant (peri-neural or lymphoma-vascular) to determine malignant potential.

For pigmented skin lesions, punch biopsy (or excision biopsy with a 2mm margin for small lesions) is superior to a shave biopsy. In these cases it is critical to assess the thickness of the lesion to determine its stage, prognosis, and to dictate further treatment options. A shave biopsy can transect the base of the lesion, making assessment of tumour depth much more difficult.

When to refer

The majority of small NMSC occurring on the face can be treated with standard techniques such as an elliptical excision allowing for a margin of 2-3mm (BCC) or 5mm (SCC).

However facial skin lesions that are large or in complex locations (eyelids, nose, lips, ears or scalp) often require specialist evaluation and referral.

Current Cancer Council guidelines for specialist referral (CCA & ACN 2008):

1. Lesions over 1cm diameter
2. SCCs on lips or ears
3. BCCs that have aggressive subtypes (i.e. infiltrative or morpheic)
4. Incompletely excised lesions
5. When cosmetically sensitive

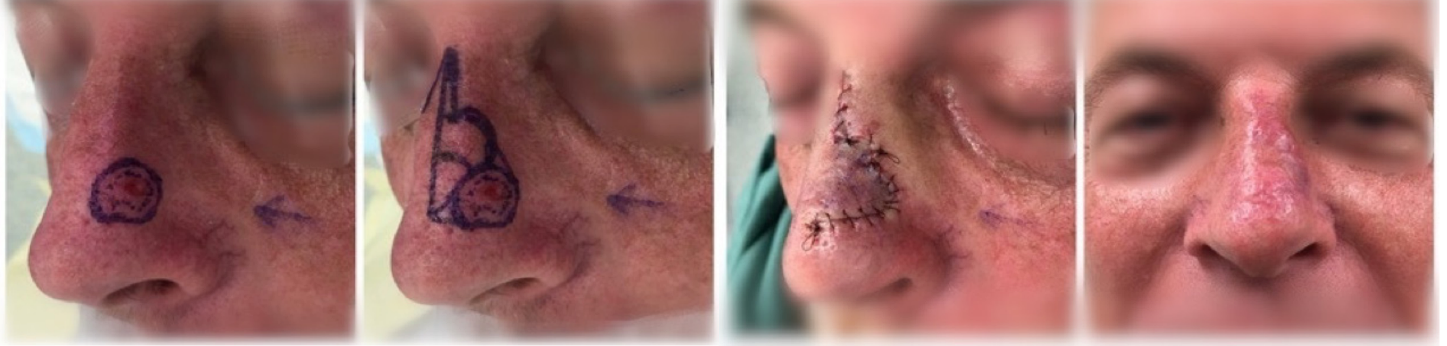
Clinical red flags

- Fixity – is the skin fixed to the underlying tissues or does it move freely.
- Ulceration – limits our ability to know how long the lesion has been there, and immediately upstages.
- Induration – formation of what feels like a scar or hard lump in the subcutaneous tissues around the skin lesion (generally for rarer skin cancers).

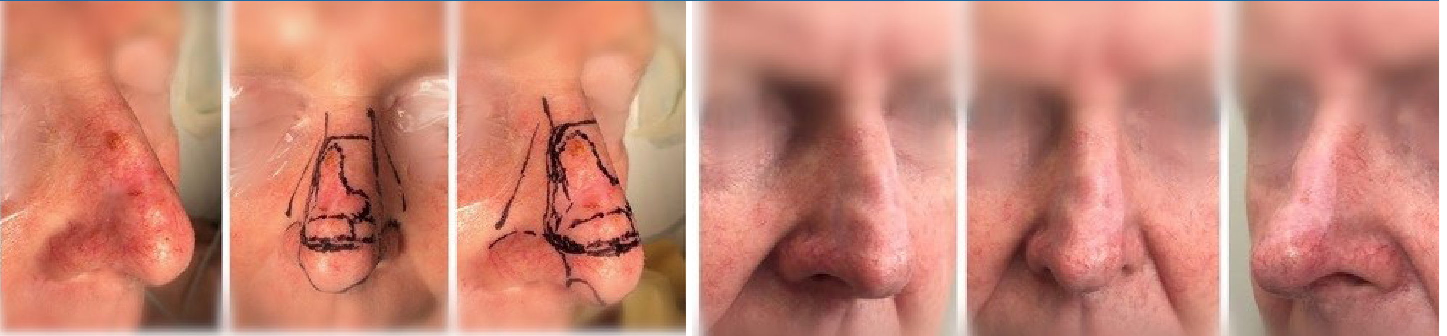
Facial reconstructions

- While often considered concerning or problematic, junction zones between the facial subunits provide an excellent opportunity to hide scars in natural crease lines. A sub-unit approach to facial skin cancer can lead to near-imperceptible scarring in many cases.
- Re-orienting scars into facial junction zones is technically demanding and occasionally requires taking more healthy tissue to avoid distortion of the surrounding structures.

Patient 1



Patient 2



These two patients had nasal skin cancers that required excision with adequate margins. Patient 1 demonstrates closure with a local flap technique known as a bi-lobed flap. Patient 2 had multiple foci of BCC with resurfacing of the entire nasal dorsum using a full thickness skin graft. Applying a subunit approach to the nose enables scars to be well camouflaged in the early stages of healing and as the scars fade even further. As swelling subsides the result can appear even more natural.

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Dr Joe Dusseldorp is a plastic and reconstructive surgeon with interests in skin cancer reconstruction, facial trauma and reconstruction, facial nerve disorders (congenital and acquired palsy, Bell's palsy, Ramsay Hunt Syndrome), ear reconstruction, cosmetic facial procedures (brow lift, blepharoplasty, facelift), breast reconstruction, abdominoplasty and body contouring post massive weight loss.