Surgery on the face is always demanding as most patients would expect a pleasing result in this exposed and most noticeable part of the body. To ensure good healing and an inconspicuous scar on the face, plastic surgeons have to take into consideration the following characteristics in facial surgeries.

(1) The facial structures have very good blood supplies, hence facial wounds usually heal well and fast. Infection is not common unless the wound is contaminated and poorly prepared.

(2) The human face is complicated and filled with a number of facial features in the centre. Special care has to be taken not to distort the position of the nearby facial features as well as to ensure symmetry of the face.

(3) The anatomy of the face is also complex with variations in the thickness, texture and tension of the skin in different areas. The underlying facial muscles responsible for the facial expressions will produce wrinkle lines (relaxed skin tennis lines) when we age. In planning for any facial surgery, considerations have to be taken into account of the skin crease alignment and skin quality to produce an inconspicuous linear fine line scar.

**Facial Injury**

Facial lacerations are common after road traffic accidents, accidental falls, sports injuries and assault incidents. The facial wounds should be managed at the earliest available time slot. Small and superficial wounds can be dealt with under local anaesthesia while large, extensive and complicated injuries would best be treated under general anaesthesia. The facial wounds should be irrigated and cleaned with chlorhexidine solution and the wound explored thoroughly to remove any foreign bodies and to determine the extent of the injury. Large bleeding vessels should be ligated and small bleeders coagulated with needle tip diathermy.

The facial wounds should be repaired anatomically in layers. Every effort should be made to approximate the structures in the correct layers with absorbable sutures. These will help to restore the anatomical defect, eliminate dead space and to hold up the tension of the wounds. The superficial skin layers would then be sutured with fine non-absorbable mono-filament sutures to be removed early. The skin edges can be trimmed smooth if they are irregular or rugged. En-mass closure of a facial wound with thick sutures should be avoided to prevent a wide uneven scar with poor contour and marked stitch marks. (Fig. 1) If noticed early, such wound can be taken down and repaired in layers with fine sutures again. (Fig. 2) In areas with extensive superficial skin abrasions or skin loss, healing by second intention with regular dressing changes can be carried out. The resulting red and irregular wound can be improved later with scar revision and laser treatment. (Fig. 3, 4)
Scar Revision and Laser Treatment

For various reasons, unsightly scars may result after the facial wounds have healed. Surgical revision and laser treatment can be done to improve the facial scars, if present.

Surgical revision aims at improving the scar by:

1. Surgical excision of a wide and irregular scar and re-sutured with fine stitches in layers to form a fine linear scar.
2. Scars running across the wrinkle lines (relaxed skin tension lines) would be pulled to become widened by the underlying muscles and are re-aligned to run-parallel to the lines to prevent recurrence of scarring.
3. Skin and tissue can be fitted in to reduce the tension in the wound that may cause a hypertrophic scar.
4. Scars with uneven contour can be assembled again and the contour restored by correctly re-attaching the deeper structure again. (Fig. 5, 6, 7, 8)

Irregular & rugged skin surface from scarring can be planed off by the use of CO\textsubscript{2} Laser or Erbium-Yag Laser with high energy pulses and short pulse widths. Excessively red and hypertrophic scars can be improved with the pulsed dye laser. (Fig. 9, 10)
Benign and Malignant Facial Lesions

Lumps and bumps are also common on the face. Most patients with benign facial lesions request surgical treatment either for cosmetic reasons or for a definitive diagnosis. Hence the expectation from these patients will usually be high and they would not accept any noticeable scar on the face. Patients with malignant skin lesions like basal cell carcinoma or squamous cell carcinoma usually worry about the complete removal of the cancer and would be more willing to accept some disfigurement on the face.

Benign Facial Lesions

Small benign lesions involving the full thickness of the facial skin are best treated by close elliptical excision and linear closure along the RSTL. (Fig. 11, 12) With adequate skin edge mobilisation and layered closure with fine sutures, most of these facial wounds would heal with acceptable scars.

In lesions deep to the skin, short incisions along the skin crease directly over the lesions would usually give good results. (Fig. 15, 16) In some demanding patients who prefer to have no scar on the facial skin, hair-line incisions or sub-brow incisions may hide the incision line and the lesion removed under a raised skin flap. (Fig. 17, 18, 19, 20)
Malignant Facial Lesions

Basal cell carcinoma and squamous cell carcinoma are the commonest skin cancer on the face especially in the elderly. Small skin cancers distant from important facial features can usually be comfortably removed with adequate margins by simple excision and primary closure. Frozen section determination of a clear margin is usually recommended. In larger skin cancers or cancers close to the facial structures like the eyelids, nasal tip, cancer clearance should not be compromised by limiting the resection to facilitate primary closure. (Fig. 21, 22) Usually local flaps are adequate to close most of the resection wounds without facial distortion and with good colour and texture matching. (Fig. 23, 24, 25, 26, 27, 28) Skin grafting is seldom necessary and the colour-match and contour would not be pleasing. Microvascular free flaps are usually reserved for closure of radical resection for recurrent or advanced cancer lesions and the cosmetic result is less favourable.
Fig. 25 Lower eyelid defect closed with local transposition skin flap

Fig. 26 Pigmented basal cell carcinoma with delay in treatment

Fig. 27 Surgical defect after wide excision

Fig. 28 Wound closure with local transposition skin flap