# Over-rotated Rieger flap for a large lateral nasal tip defect reconstruction

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## The case

A 65-year-old man presented with a melanoma *in situ* of the nasal tip (Figure 1a). Complete excision was achieved after 2 "slow Mohs" stages, resulting in a circular 2.7′2.4 cm defect involving the right lateral nasal tip, dorsum and sidewall and extending to the perichondrium (Figure 1b).


**Figure 1.** CLentigo maligna of the right lateral nasal tip (**a**) and defect after the second "slow Mohs" stage (**b**).

## Our choice

We opted for a dorsonasal flap: it was designed involving the left lateral nasal tip, dorsum and left sidewall with a glabellar back-cut. After local anesthesia and flap incision, blunt dissection beneath the musculature of the nasal sidewall was performed until the entire flap was lifted from the periosteum and perichondrium. Defect margins were undermined as well. The flap was elevated and rotated to reduce the defect. After the flap was fixed to the nasal tip, the glabellar Burow's triangle was excised and the distal flap was further rotated upwards to complete repair (Figure 2). A triangular skin excess crossing the flap along the junction between the tip and nasal dorsum was excised.

**Figure 2.** Results after reconstruction.

## The outcome

Sutures were removed after 7 days, and follow-up continued for two years (Figure 3). No distal flap necrosis occurred.


**Figure 3.** Results two years after surgery: frontal (**a**), right (**b**) and left (**c**) view.

## Comment

Rieger flap (or dorsonasal flap) consists of an intranasal rotation flap of the nasal dorsum useful to repair distal nose defects, especially when medial. It was originally described by Rieger in 1967 as a random flap and in 1985 was modified by Marchac and Toth in an axial rotation flap based on a branch of the angular artery.[1,2] In this variant, the pedicle placement on the opposite side of the defect facilitates lateral defects repair, however, it produces a more visible scar crossing the nasal dorsum. Conventional Rieger Flap is not usually performed for defects larger than 2,5 cm because of the risk of nasal tip and alar deformities. Redondo *et al.*,3 described a solution consisting of lengthening the leading edge of a Rieger flap to provide tissue from the perinasal region, which allows to close defects up to 3 cm or more. However, this variant often requires a secondary defect repair. To avoid an oblique scar crossing the dorsum, we placed the pedicle ipsilateral to the defect.[4] This was too large to be vertically closed, thus we opted for an additional distal flap rotation, which minimized wound closure tension by reducing lateral flap movement. Triangular skin removal across the flap and over-rotation contributed to hide the suture lines in cosmetic subunit junctions and restored natural contour and convexity of the nasal tip without nasal alar or tip retraction.

## References


1. Rieger RA. A local flap for repair of the nasal tip. Plast Reconstr Surg 1967;40:147-9.
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4. de Fontaine S, Klaassen M, Soutar DS. Refinements in the axial frontonasal flap. Br J Plast Surg 1993;46:371-4.