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## Case Report

# Advancement flap to cover a defect between the junction of the alar base and the upper lip

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## ABSTRACT

Reconstruction following excision of skin lesions at the cosmetically sensitive junction between the alar base and upper lip continues to be challenging for surgeons. We describe an advancement flap from the nasolabial fold area to reconstruct such defects. Our case demonstrates a gentleman with a clinically diagnosed BCC between the alar base and upper lip. An advancement flap from the nasolabial area was designed to reconstruct the defect, with two Burrow's triangles excised to prevent standing cones. The scar of the two Burrow's triangles falls over the nasolabial fold, resulting in the integration of the scar within the natural line. This flap design also maintains the level of the upper lip, the shape and position of the nostril, and minimises flattening of the philtrum. Excellent cosmetic results were seen six weeks post-op.

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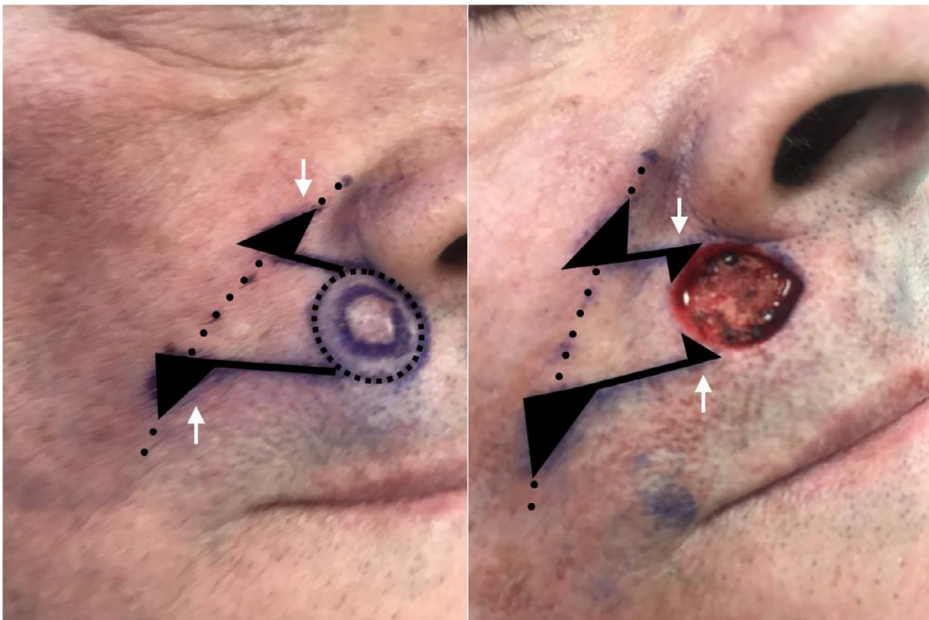
<sup>1</sup> S. Daniel and K. Fricke first co-authors.

## Introduction

Reconstruction following excision of skin lesions at the cosmetically sensitive junction between the alar base and upper lip continues to be challenging for surgeons. We describe an advancement flap from the nasolabial fold area to reconstruct such defects. Our case demonstrates a gentleman with a clinically diagnosed BCC between the alar base and upper lip. An advancement flap from the nasolabial area was designed to reconstruct the defect, with two Burrow's triangles excised to prevent standing cones. The scar of the two Burrow's triangles falls over the nasolabial fold, resulting in the integration of the scar within the natural line. This flap design also maintains of the level of the upper lip, the shape and position of the nostril, and minimises flattening of the philtrum. Excellent cosmetic results were seen six weeks post-op.

## Surgical technique

Firstly, excise the lesion with a predetermined oncological clearance margin. Following this, draw two parallel horizontal lines at the levels of the superior and inferior borders of the defect, with the lines stopping at the nasolabial fold. The superior line will be shorter, thus being an asymmetrical advancement flap. Next, draw two Burrow's triangles along the nasolabial fold (Figure 1). Incise along the two parallel horizontal lines and excise the Burrow's triangles. Excising the Burrow's triangles will remove standing cones (dog ears), and the scar of the excised Burrow's triangle should fall along the nasolabial fold. The skin flap is then raised to the same thickness as the depth of the defect, and the two triangular corners are trimmed to fit the medial curve of the defect. The flap is then inset, in a similar fashion to an advancement flap (Figure 2).



**Figure 1.** (Left): The lesion to be excised is marked by the broken line. Two parallel horizontal lines are drawn at the superior and inferior borders of the defect, ceasing at the nasolabial fold (indicated by the dotted line). The white arrows show the two Burrow's triangles that are designed along the nasolabial fold. (Right): Once the lesion is excised, an incision is made along the two parallel horizontal lines and the Burrow's triangles are excised. The skin flap is raised to the same thickness as the depth of the defect and the two triangular corners (indicated by the white arrows) are trimmed to fit the medial curve of the defect.



**Figure 2.** (Left): The flap is inset, in a similar fashion to an advancement flap. Direction of the flap is indicated by the white arrow. (Right): The nasolabial fold is maintained (highlighted by the dotted line).



**Figure 3.** After 6 weeks, the flap has integrated well. There is preservation of the subunits, and the scar is camouflaged within the nasolabial fold.

## Results

Our patient had a BCC excised at the junction between the alar base and upper lip. It was then reconstructed with an advancement flap from the nasolabial fold area. With this flap design we were

able to camouflage the scar within the nasolabial fold. Excellent cosmetic results were seen six weeks post-op (Figure 3).

## Discussion

Several other local flaps have been designed to cover this area. One of which is the Cake Flap,<sup>1</sup> a modified version of Evans' Staggered Ellipse<sup>2</sup> which aims to shorten the scar. However, a cake flap over the nasolabial area would create a visible scar over the upper lip. The asymmetrical nature of our flap design allows for such a scar to be hidden within the nasolabial fold.

The V-Y Advancement Flap<sup>3</sup> places scars along aesthetic borders, but can result in elevation of the red lip due to scar contracture. The Keystone Flap<sup>4</sup> would result in the raising of the upper lip and blunting of the oral commissure. The Rotation Flap<sup>5</sup> described by Cerci does not necessarily disrupt the position of the nostril or upper lip, but does blunt the oral commissure. Our method maintains the level of the upper lip and preserves the shape of the oral commissure.

One limitation of our technique is that the defect should ideally be located just below the alar base. A more lateral defect (towards the nasolabial fold) would limit the amount of tissue that could be advanced medially whilst still allowing for the Burrow's triangle to fall over the nasolabial fold.

## Declaration of Competing Interest

None.

## Funding

None.

## Ethical approval

This was a retrospective review, with the aforementioned patient consented for the publishing of medical photographs.

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