

# The New Transverse–Facial Artery Musculomucosal Flap for Intraoral Reconstructions

Barbara Pompei, MD\*  
 Giuseppe Pollastri, MD†  
 Gabriele Molteni, MD†  
 Giorgio De Santis, MD\*  
 Alessio Baccarani, MD, FACS\*

### BACKGROUND

Head/neck cancer resections often require reconstruction to restore form and function. Small-to-medium size intraoral defects can be successfully reconstructed by local pedicled flaps, such as the facial artery musculomucosal (FAMM) flap,<sup>1</sup> which encompasses different layers: cheek mucosa and submucosa, the underlying layer of the buccinator muscle, a portion of the orbicularis oris close to the labial commissure, and the facial artery.<sup>2</sup> The flap is usually outlined longitudinally over the facial artery course, and average size is 5 × 2.5 cm. We describe here an innovative flap design and dissection, apt to treat larger defects than the usual ones.

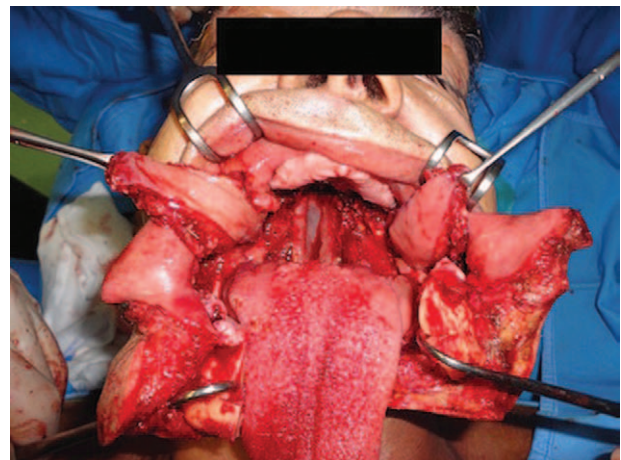
### METHODS

In a 50-year-old patient with squamous carcinoma of the soft palate involving also surrounding oral soft tissue, after oncological resection, we designed on the cheek mucosa an 8 × 3 cm flap with a squamous carcinoma orientation. The flap axis was crossing about 90 degrees the projection of the facial vessels. Dissection was carried out in antero-posterior direction and the facial artery skeleton-

ized in continuity 3.5 cm superiorly and inferiorly the flap entrance (Fig. 1). Once the vascular pedicles had been mobilized and the labial artery ligated, the transverse (t)-FAMM flap was transposed superoposteriorly and sutured to the residual mucosa of the hard palate. A contralateral t-FAMM flap was harvested and transposed. The whole soft palate was then reconstructed by suturing the 2 flaps together.

### RESULTS

With the bilateral progression of the 2 pedicled flaps, we were able to successfully restore both form and function of the soft palate, with a single-stage straightforward procedure, preserv-



**Fig. 1.** View of 50-year-old patient after resection of squamous cellular carcinoma involving the soft palate. Bilateral t-FAMM flaps have been dissected and are shown before rotation.

From the \*Division of Plastic Surgery, and †Division of ENT, Modena University Hospital, Modena, Italy.

Presented at the 64th Annual Meeting of the SICPRE, September 17–19, 2015, Milan, Italy.

Copyright © 2016 The Authors. Published by Wolters Kluwer Health, Inc. on behalf of The American Society of Plastic Surgeons. All rights reserved. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially.

*Plast Reconstr Surg Glob Open* 2016;4:e652; doi:10.1097/GOX.0000000000000632; Published online 18 March 2016.

**SICPRE:** La SICPRE, Società Italiana di Chirurgia Plastica Ricostruttiva ed Estetica, national meeting, in Milano, Italy on September 17–19, 2015.



**Fig. 2.** Six days postoperative view showing the reconstructed palate.

**Disclosure:** *The authors have no financial interest to declare in relation to the content of this article. The Article Processing Charge was supported by a grant of Egle Muti MD, in memory of Professor Aldo Fontana, MD.*

ing at the same time the natural course of the facial arteries. Both flaps healed uneventfully. Six days after operation, the patient was placed on a liquid diet with no velopharyngeal insufficiency (Fig. 2). This is to our knowledge the first extensive palatal reconstruction carried out with intraoral flaps only.

## CONCLUSION

The FAMM flap is a well-established and reliable flap to reconstruct defects of the oral cavity. With this new technique, we improved the reconstructive power of this flap by enhancing its size. Bilateral t-FAMM flap is a surgical option to free flaps to reconstruct extensive palatal defects.

*Alessio Baccarani, MD, FACS*

Division of Plastic Surgery

Modena University Hospital

Largo Pozzo 71, 41124 Modena, Italy

E-mail: [alessio.baccarani@unimore.it](mailto:alessio.baccarani@unimore.it)

## REFERENCES

1. Pribaz J, Stephens W, Crespo L, et al. A new intraoral flap: facial artery musculomucosal (FAMM) flap. *Plast Reconstr Surg.* 1992;90:421–429.
2. Ayad T, Xie L. Facial artery musculomucosal flap in head and neck reconstruction: a systematic review. *Head Neck.* 2015;37:1375–1386.