

**From traditional to perforated flaps in OMS & Head and Neck Reconstruction:  
principle, indication, imaging and clinical applications**

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Free flaps transfer for oral maxillofacial and head neck reconstruction should not only eliminate the dead space, but also provide satisfactory contours and restore the original oral functions. Over the last decades, the perforator flaps have gained the interest of the reconstructive surgeons as an ideal option for tissue transfer without sacrificing main artery and muscle in the donor site. The purpose of this study is to report on the principle, indication, imaging and clinical applications of ideal perforator flaps

We used color Doppler ultrasound, CTA and MRA techniques for accurately locating the perforators preoperatively. We successfully applied a series of perforator flaps, such as the medial sural artery perforators flap, superficial iliac circumflex perforators flap, DIEA and buccal artery perforators flap on patients with different oral and maxillofacial defects for personalized rehabilitation. Perforator flap is more hidden, less injury, and more suitable thickness than traditional flap for oral maxillofacial defect reconstruction. Patients' postoperative facial morphology, swallowing and speech function is good. Perforator flaps represent the latest trends for the reconstructive surgeons.