

# Vulvar and clitoral reconstruction using bilateral Singapore island perforator flap after anterior vulvectomy

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Surgical treatment of vulvar cancer can lead an important defect to consider a direct skin closure without flap reconstruction. The reconstruction is challenging, as one has to maintain the important excretory and sexual functions. There are several options for reconstruction for perineal defect with local, regional, or distant flaps.<sup>1</sup>

We present the case of a 75-year-old patient diagnosed with squamous cell carcinoma of the vulva localized in the left labium minus, the prepuce of the clitoris, and the right labium minus, in contact with the urethra and vagina without invasion, requiring anterior vulvectomy with bilateral sentinel node. This surgery needed a multidisciplinary approach. First, the gynecological oncological surgeon proceeded to sentinel node excision and an en bloc resection of the tumor with security margins of at least 1 cm medially and laterally, and aponeurosis of perineal muscles for the deep margin. Then the plastic surgeon harvested and conformed the cutaneous flap after mapping the perforator with a pencil doppler. The patient

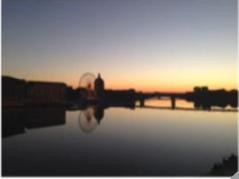


**Figure 1** Bilateral Singapore island perforator flap after anterior vulvectomy for vulvar cancer.

was placed in the lithotomy position throughout the procedure.

Vulvar reconstruction was performed using a perforator-based island pedicle flap, the Singapore

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## Video 1



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## Video article

flap, also called the internal pudendal perforator flap, to recreate the internal face of the labia majora, vestibule, and fill the space of the labia minora. This flap is easily reproducible, and cutaneous innervation and vasculature is maintained with minimal donor site morbidity.<sup>2</sup>

At the same time, we performed clitoral reconstruction using the Foldes technique, which restores the clitoral anatomy in patients who have undergone genital mutilation.<sup>3</sup> This procedure enabled elongation of the clitoris when the clitoral gland was sectioned.

Post-operative care was simple with wound drainage and bladder catheterization. The patient had no major complication.

The final anatomopathological analysis reported a 4 cm squamous cell carcinoma of the vulva of the right labium minus. The tumor was 1 mm from the urethra. Sentinel nodes were invaded, with micrometastasis in the right side and macrometastasis in the left side. After discussion, in accordance with the GROINSS-V II Trial, the patient received right inguinofemoral radiotherapy.<sup>4</sup> We proceeded to inguinal lymphadenectomy in the left side.

In conclusion, bilateral Singapore island perforator flap is an interesting flap for vulvar reconstruction and wound closure, maintaining vulvar cosmesis with minimal morbidity of the donor site after anterior vulvectomy.

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**Contributors** A-SN: Conceptualization, video editing, writing-original draft. TM: Conceptualization, surgery and video recording, video editing, supervision, writing-review. MAA: Conceptualization, video editing, supervision, writing-review. HL: Conceptualization, video editing, writing-original draft. GF: Conceptualization,

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