Superior Pedicle Mammoplasty

27

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27.1 Introduction

The superior pedicle for oncoplastic surgery is a technique which has a broad spectrum of indications. It may be used for any tumor location. It may even be possible to use this technique for centrally located breast cancer or breast cancer in the upper part of the breast. In this case the thickness of the pedicle for the nipple-areola complex (NAC) may be only 1 cm, and the NAC will be perfused by dermal vessels from the breast skin (Figs. 27.1 and 27.2). Usually the main vessels for the NAC come along Cooper's ligaments from the intercostal vessels which run throughout the breast. The superior pedicle reduction mammoplasty may be used with a vertical (Fig. 27.1) or an inverse T scar technique (Fig. 27.4).

Fig. 27.1 This shows a superior pedicled NAC from the frontal view

27.2 Preoperative Drawings

27.2.1 Neo-NAC

Before surgery incisions have to be drawn on the patient in an upright position. Usually the patient sits in front of me with hands and arms relaxed aside. I start with marking the jugulum and the sternum (Fig. 27.3a) down to the navel. Thereafter I mark the submammary fold from the sternum to the medial axillary line, and I draw the mediolavicular line from the clavicle through the NAC (Fig. 27.3b) down to the submammary fold. The crossing lines (submammary fold and mediolavicular line) are the center of the vertical scar from the areola to the submammary fold (Fig. 27.4). Thereafter the new nipple position will be marked (Fig. 27.3c). It should be—depending on the thorax size—between 22 and 26 cm from the jugulum, or, if the patient does

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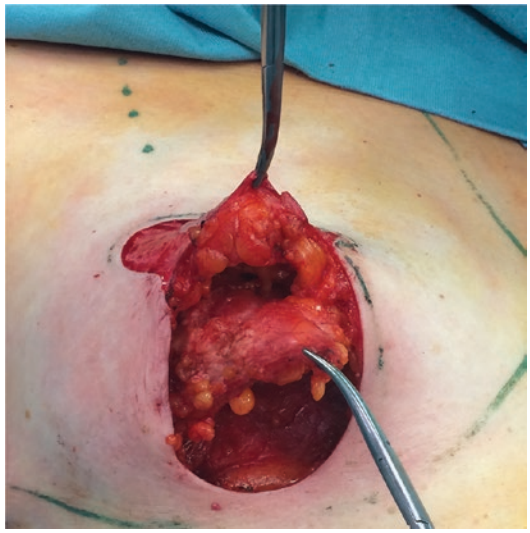

Fig. 27.2 This shows a superior pedicled NAC from the caudal view

not want to undergo contralateral symmetrization surgery, the nipple position should be similar to the other side if possible. Two centimeters above the new nipple position the upper pole of the areola will be marked (Fig. 27.3d). From this point on 5 cm below and from there 2.5 cm on each side, the next markings will be placed on the breast (Fig. 27.3e). All three points will now be connected with one circle as seen in Fig. 27.3. The breast will be torn left and right to mark the side borders of the new vertical incisions (Fig. 27.3f).

27.2.2 Vertical Scar Technique

It is possible to use a simple vertical scar such as in Figs. 27.1 and 27.2 which has been originally described by Lejour. In this case the vertical scar is simply sutured using several purse-string sutures to yield an areola-submammary fold distance between 5 and 7 cm depending on the thoracic size (Fig. 27.5). The purse-string sutures result in a folded scar which will be flat after around 4 weeks (Fig. 27.6). Earlier I used only one purse string; now I use several smaller purse string sutures. The vertical scar may be used for non- or minor ptotic breasts without the necessity to lift up the

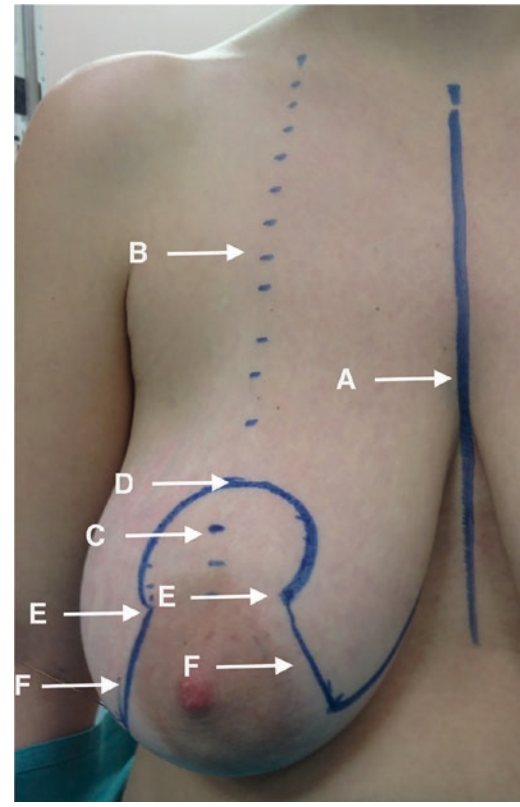

Fig. 27.3 Preoperative drawings: **A:** sternum midline **B:** medioclavicular line **C:** new nipple position **D:** upper limit for the new areola **E:** points of the new lower position of the areola **F:** vertical scar line 6-7cm in length. All these important markers are drawn in upright position

Fig. 27.4 Here you see the lower part of the breast after marking in upright position, the inverted T technique

breast too far. The incision from the vertical scar ends 2 cm above the submammary fold (Fig. 27.1).

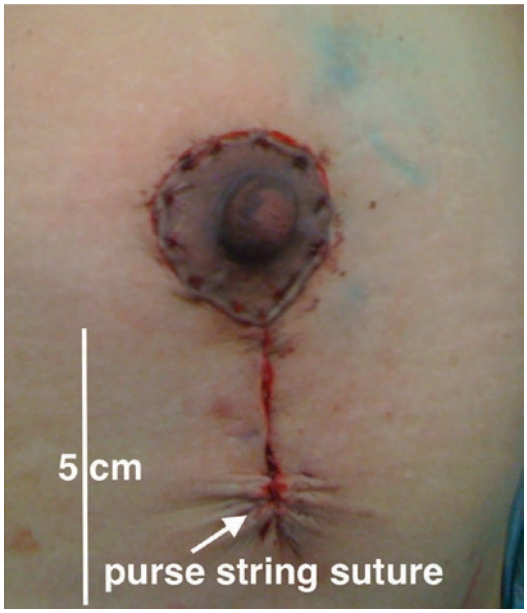

Fig. 27.5 Suture after vertical technique with a purse string suture in the lower part of the scar

Fig. 27.6 This is the vertical scar 4 weeks after surgery

27.2.3 Inverse T Scar

The inverse T technique is done in cases of larger or ptotic breasts in order to raise the breast more than 5 cm upward. It also results in less wound dehiscence compared with the vertical scar technique; however, necrosis is more often seen after the inverse T technique at the triangle due to skin tension (Figs. 27.7 and 27.8).

Fig. 27.7 Here you see the inverted T technique with quiet high tension on the lower part of the scar

Fig. 27.8 The tension mentioned in 27.7. lead to a small necrosis in the veritical axis of the scar

Case 27.1 Superior Pedicle with Inverse T Technique

The patient had a cup size 90D breast with a ptosis grade C. She was diagnosed with luminal B breast cancer in the right breast centrally behind the NAC but close to the pectoralis muscle. Thus, it was possible to leave the NAC with a 2-cm-thick but only 4-cm-short cranial pedicle. The inferior pedicle would have been too long to assure NAC perfusion in this case.

After preoperative drawings (Fig. 27.9) in an upright sitting position, the lines were incised, and the pedicle was de-epithelialized (Fig. 27.10). The inferior part of the breast has been left in place after de-epithelialization in order to use this tissue for defect reconstruction (Fig. 27.11). The tumor has been resected with a macroscopic 1 cm free tissue around the cancer and microscopic with free margins (not touching the ink) (Fig. 27.12). Figure 27.13 illustrates the defect and the cranial pedicle of the NAC with a 2 cm thickness as well as the inferior breast tissue left in place. The inferior tissue will be now rotated into the defect, and the skin will be closed (Fig. 27.14). One year after radiotherapy to the right breast, the left breast has been reduced for symmetrization using the same technique (Figs. 27.15 and 27.16).

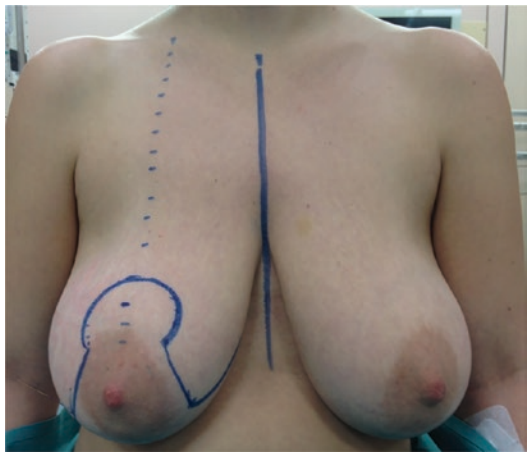

Fig. 27.9 Frontal picture of a woman with an inverted T technique

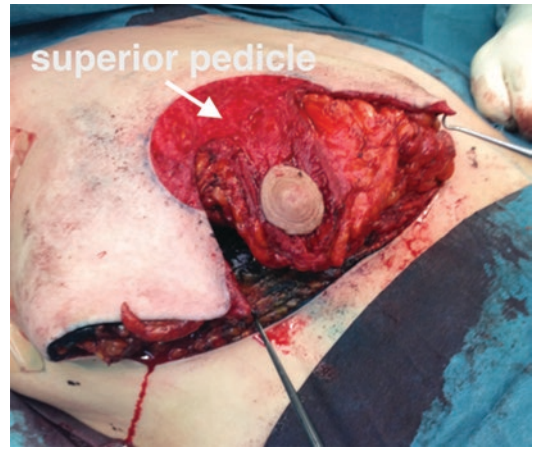

Fig. 27.10 Here you can see the superior pedicled NAC combined with an inverted T technique

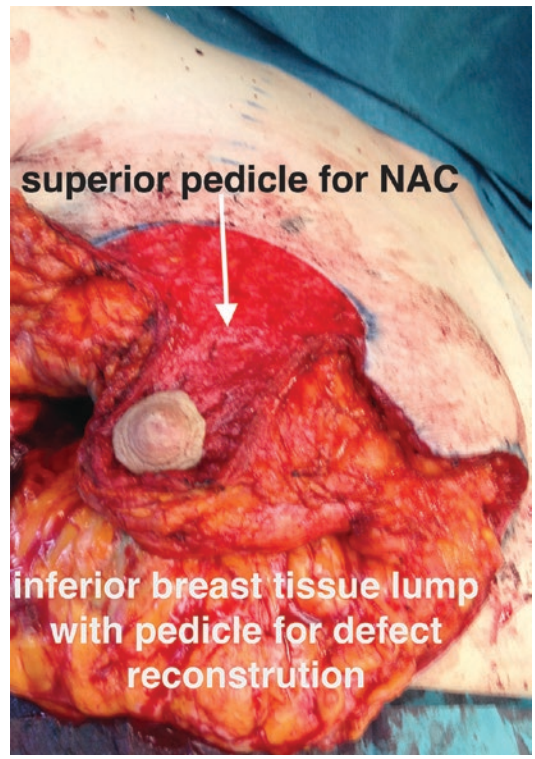

Fig. 27.11 Again a superior pedicled NAC flap and the inverted T technique, an inferior pedicle flap can also be seen in the lower part of the breast which is used to fulfill the upper whole of the breast

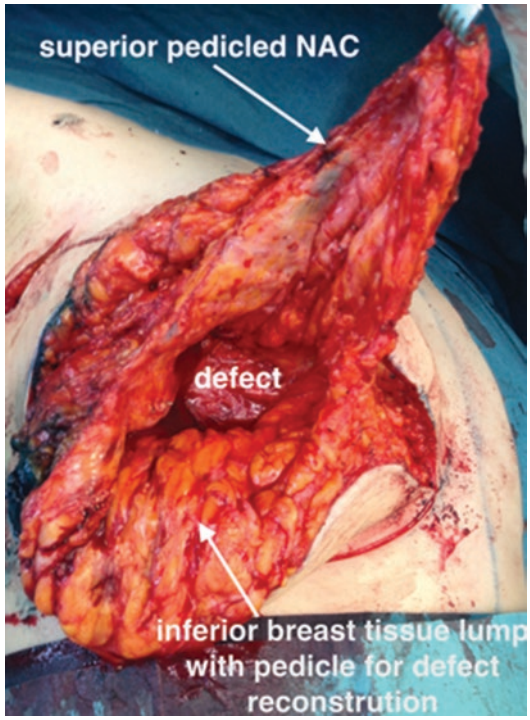

Fig. 27.12 Here you see the defect in the central and upper part of the breast which will be corrected with the lower part of the breast tissue, the superior NAC flap is seen in the upper part

Fig. 27.13 Here you see the same from the lateral view

Fig. 27.14 Picture after surgery

Fig. 27.15 Picture before contralateral symmetrization

Fig. 27.16 And after contralateral symmetrization

Case 27.2 Superior Pedicle with a Vertical Scar Technique for Breast Cancer at 6 o'clock
This postmenopausal female patient had a breast cancer at 6 o'clock close underneath the skin (Figs. 27.17 and 27.18). After preoperative drawing (Figs. 27.19 and 27.20; the patient did not want to undergo contralateral symmetrization; thus, the NAC was not elevated as usual), surgery started with de-epithelialization around the NAC (Fig. 27.21). We usually use a 40-mm-diameter cone as a sizer for the new NAC. In Fig. 27.21 the cancer has already been resected, and the defect will be covered using the breast tissue underneath the NAC (Figs. 27.22 and 27.23). After skin closure (Fig. 27.24), the immediate postoperative result in an upright position is seen in Fig. 27.25. Although the NAC has not been elevated too much, the difference is still clear comparing both breasts, and symmetrization should be recommended in this case in order to achieve an optimal cosmetic result.

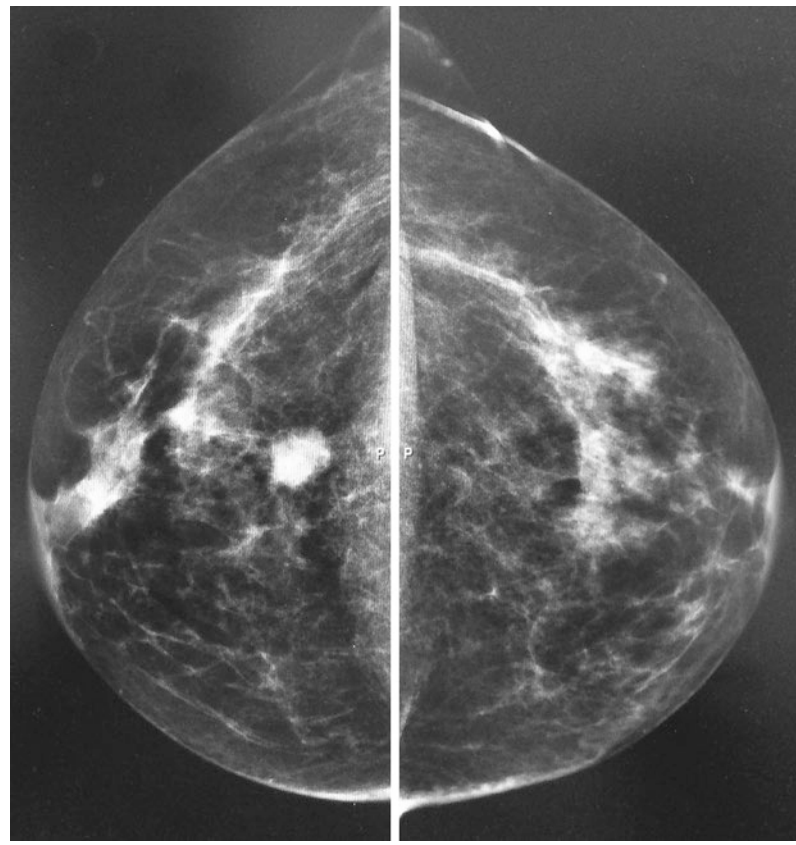

Fig. 27.17 Mammography CC showing the breast cancer in the right breast centrally

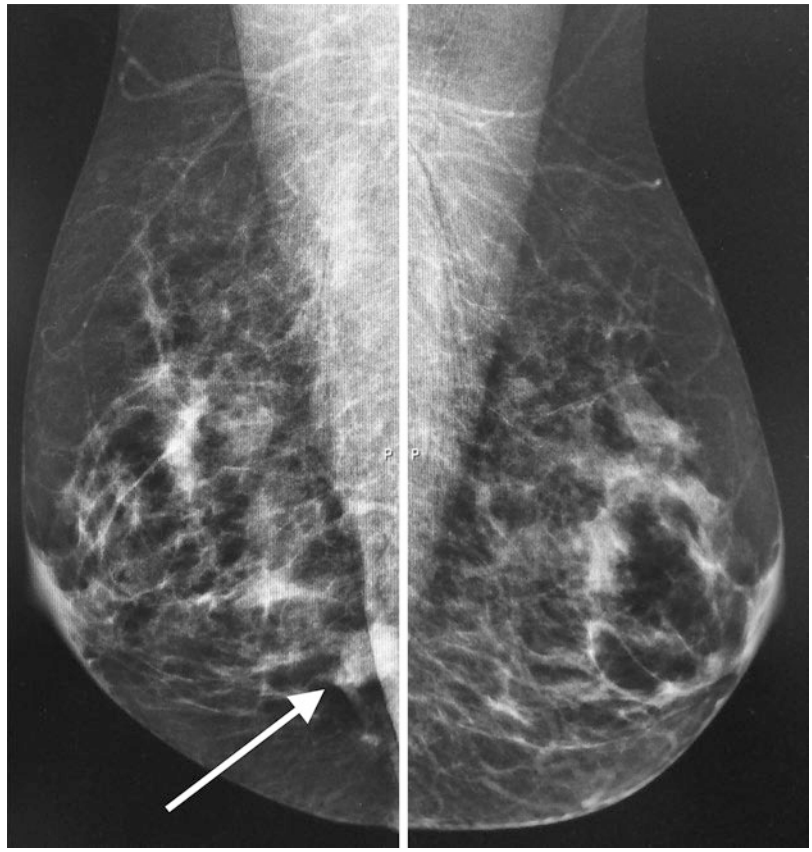

Fig. 27.18 Mammography OML showing the breast cancer in the lower central part

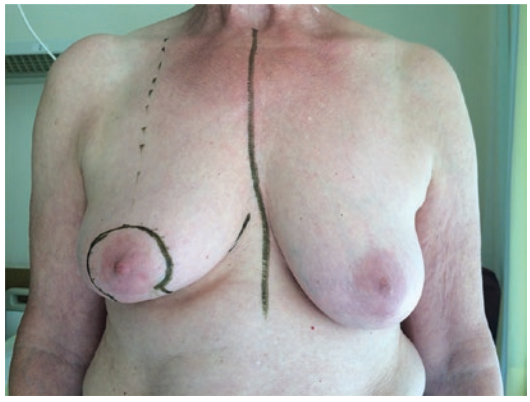

Fig. 27.19 Preoperative drawings with a linear vertical scar technique

Fig. 27.20 The vertical scar ends 2cm above the inframammary fold

Fig. 27.21 The tumor has been resected and sentinel lymph node biopsy has been done, the periareolar deepithelialization has also been done

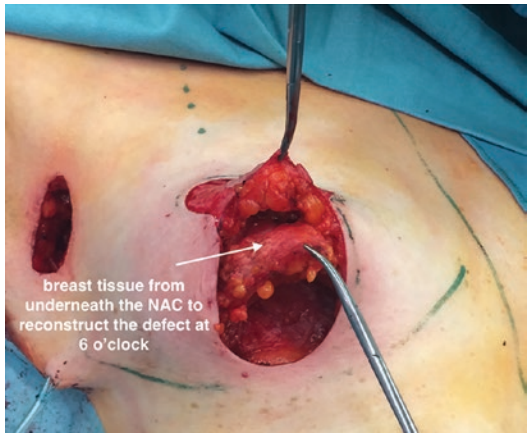

Fig. 27.22 The NAC is superiorely based and the breast below the NAC has been dissected

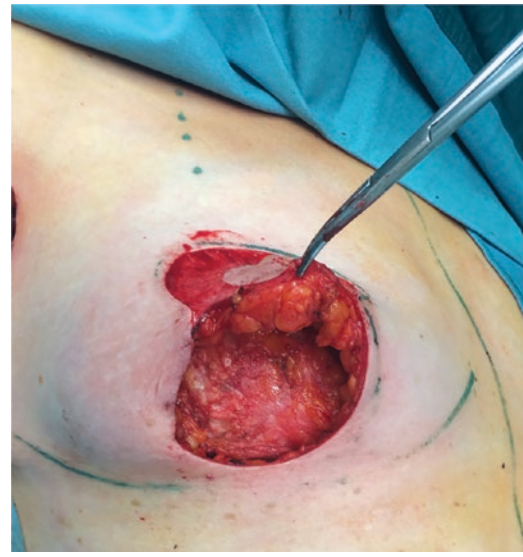

Fig. 27.23 And transferred into the lower breast defect

Fig. 27.24 The skin is closed after the defect has been mounted by the central pedicle under the breast NAC

Fig. 27.25 Postoperative result 2 weeks after surgery

Tips and Tricks

- Lower-quadrant tumors are good candidates for superior pedicle mammoplasty.
- The inverse T technique is preferable for larger and ptotic breasts.
- The new nipple position should be marked between 22 and 26 cm from the jugulum.

Further Reading

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