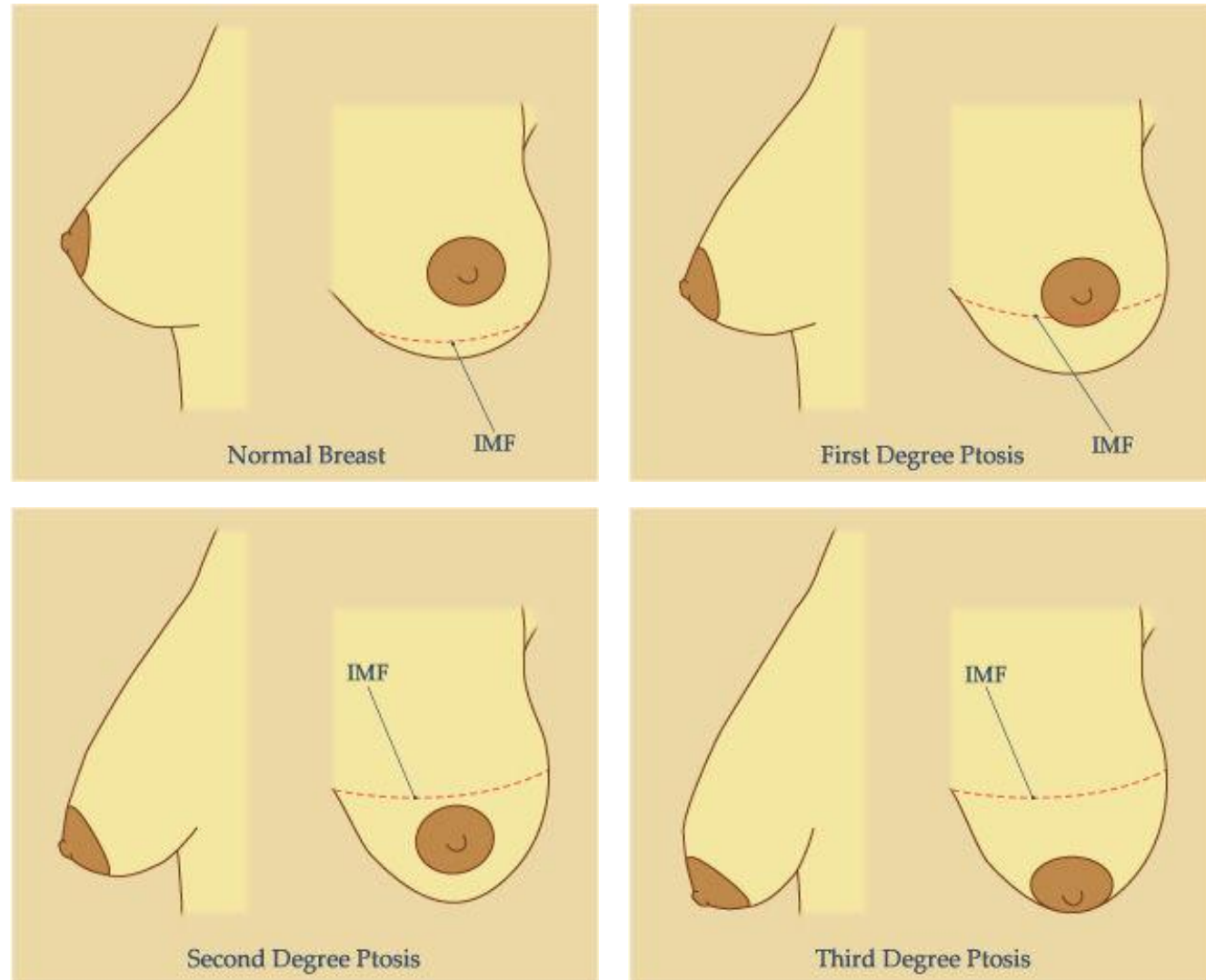


Mastopexy and Breast Reduction

By Dr. Herrero Antón de Vez

Concepts

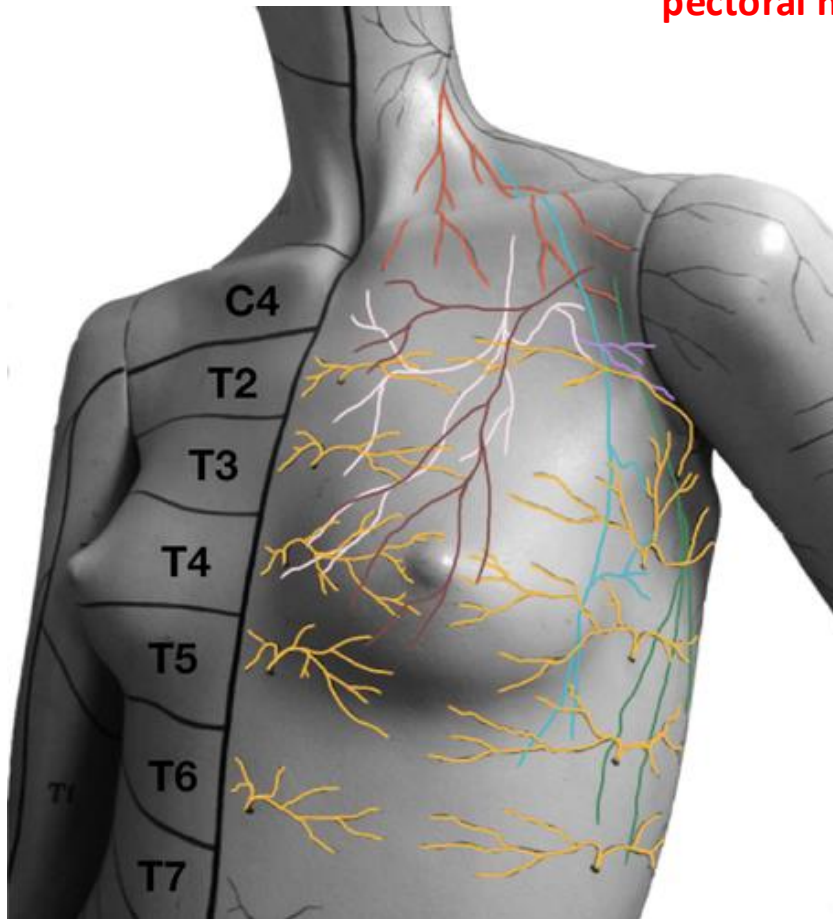
- Ptosis Vs Hypertr.
- Mastopexy
- Breast Reduction



Ptosis classification; Regnault

Anatomy

pectoral nerve blocks / thoracic paravertebral block / serratus anterior plane block

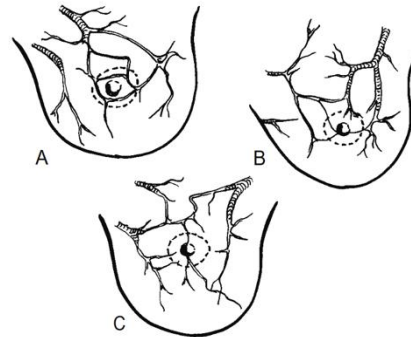
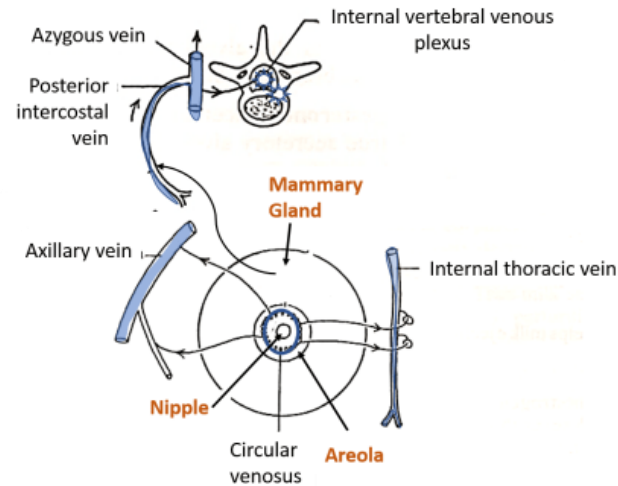
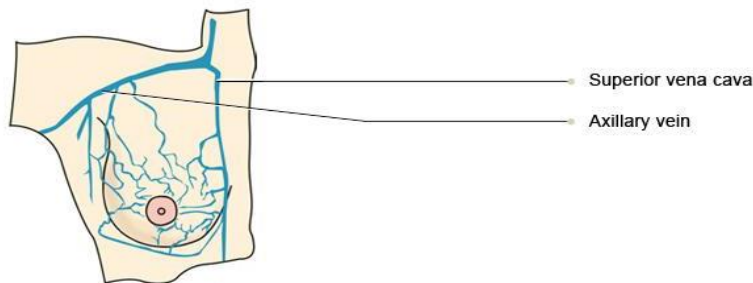
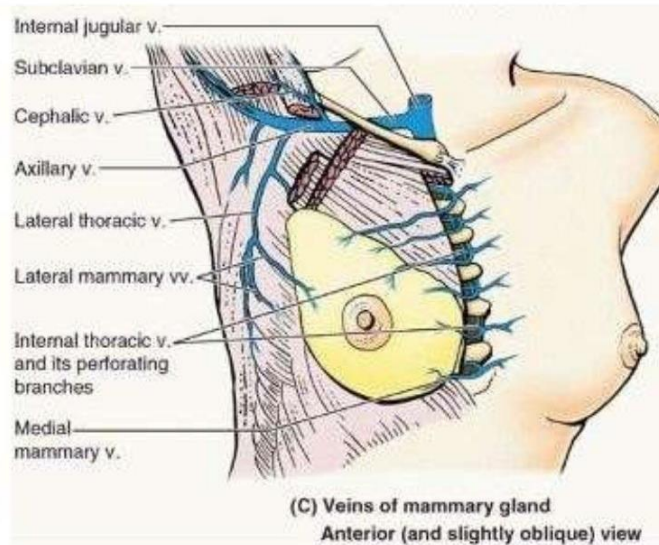


Innervation of the breast. Anterior and lateral branches of intercostal nerves (yellow); supraclavicular nerves (orange); lateral pectoral nerve (brown); medial pectoral nerve (pink); long thoracic nerve (blue); thoracodorsal nerve (green); intercostobrachial (purple).

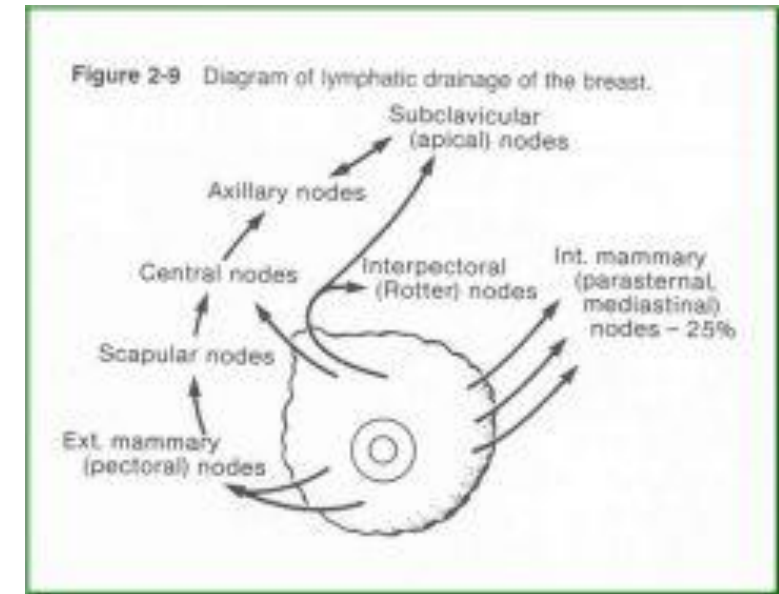
Pawa, Amit & Wight, J. & Onwochei, Desire & Vargulescu, R. & Reed, I. & Chrisman, L. & Pushpanathan, E. & Kothari, Ashutosh & El-Boghdadly, Kariem. (2018). Combined thoracic paravertebral and pectoral nerve blocks for breast surgery under sedation: A prospective observational case series. *Anaesthesia*. 73. 10.1111/anae.14213.

Anatomy

Venous drainage



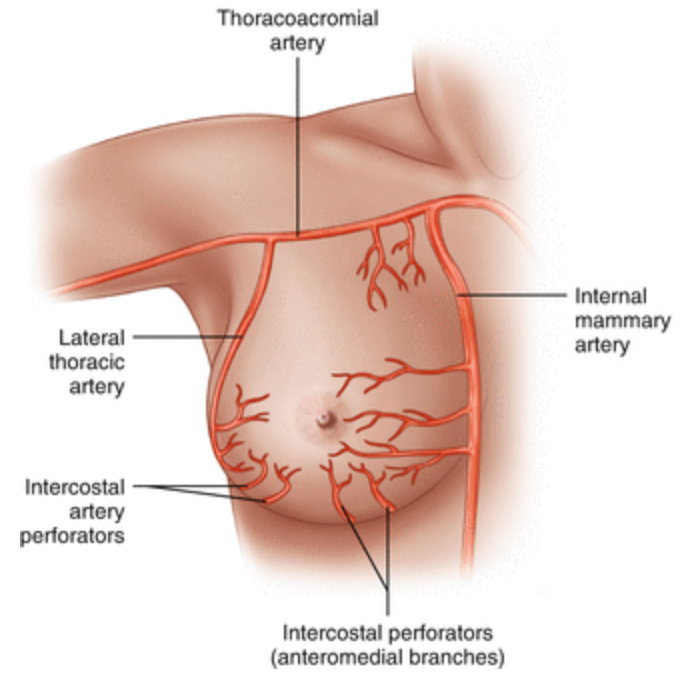
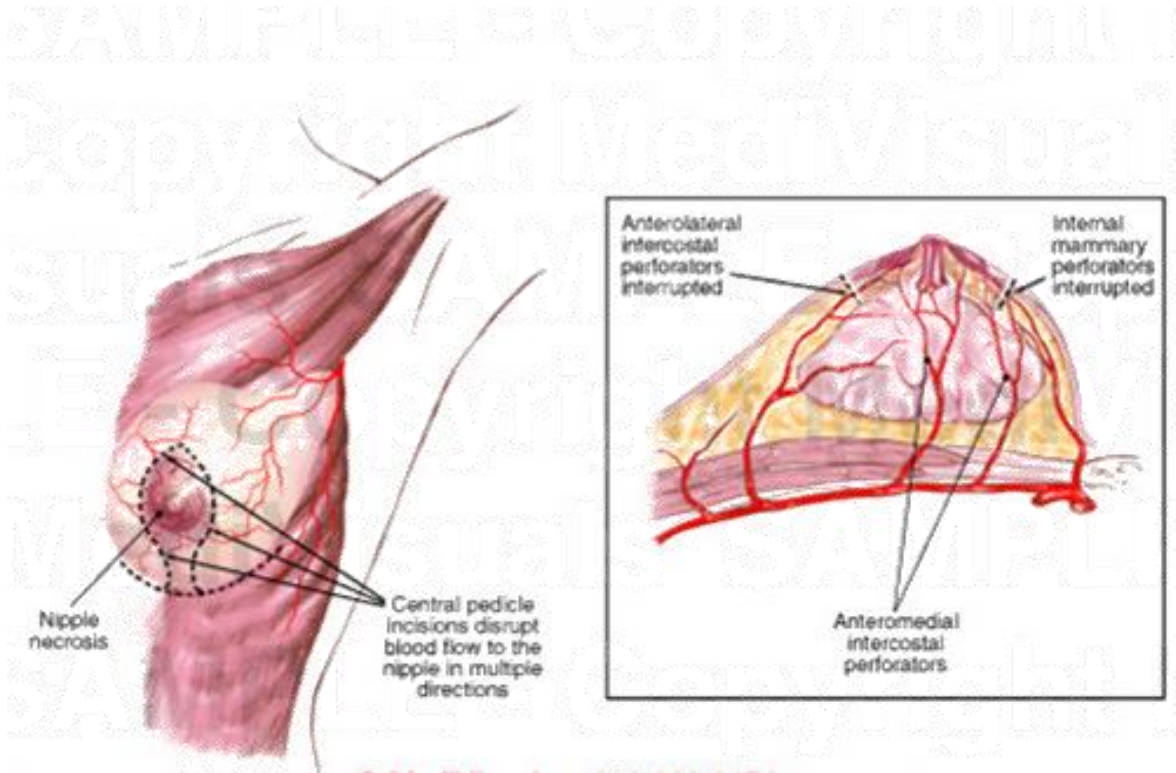
Marcus classified nipple-areolar circulation into three types: A, circular (70%), in which the internal mammary artery and lateral thoracic arteries anastomose in a typical circumareolar ring to supply the nipple; B, loop (20%), in which the medial and lateral branches anastomose above and below the nipple, forming a loop; and C, radial (6%), a tenuous configuration in which a strong anastomotic vascular supply is lacking.



85% Axillary (also internal Mammary)

Dehiscence And Infections

Anatomy



History

1905 → H. Morestin: Disk resection of breast basis.

1928 → H. Biesenberger -- central Mound -- Until 1960, this operation was the most common method of reduction mammoplasty.

formulated the **basic principles of the reduction mammoplasty technique**, which includes three main stages:

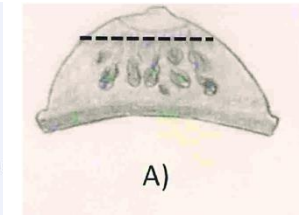
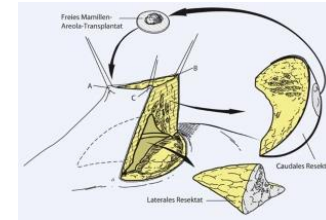
resection of the glandular tissue

transposition of the nipple-areola complex

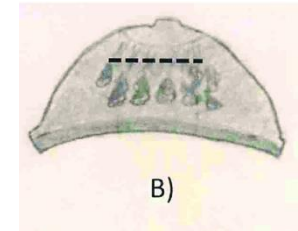
excision of the excess skin.

1930 → E. Schwarzmann areola-nipple nourishment due to vessels located directly in the dermis.

1922 → M. Thorek Free nipple transplant -- **Gygantomastia**

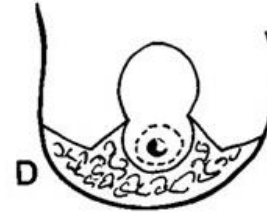


1960 → Strombeck horizontal bipedicle

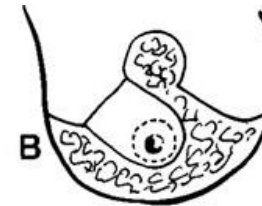


History

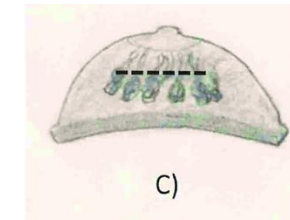
1962 → Pitanguy (first described by Arie 1957) **Superior Pedicle** → the best when < 500 mg excellent long term (ok with feeding and ok with sensation)



1963 → Skoog: **Superolateral Pedicle**. First to describe **transposition of the nipple on a vascularized dermal pedicle** without underlying glandular tissue. Skoog believed that an inferior resection diminished the possibility of future breast ptosis.



1972 → McKissock: Modification from Strombeck: Vertical bipedicle technique → Form (long Term Lasting) and flexible, but Sensibility return 65% // Nipple retraction.



Kraut, Roni & Brown, Erin & Korownyk, Christina & Katz, Lauren & Vandermeer, Ben & Babenko, Oksana & Gross, M. & Campbell, Sandra & Allan, G.. (2017). The impact of breast reduction surgery on breastfeeding: Systematic review of observational studies. PLOS ONE. 12. e0186591. 10.1371/journal.pone.0186591.

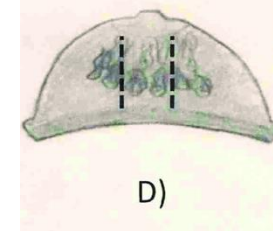
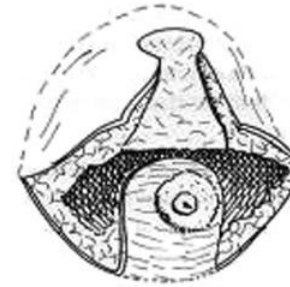
**vertical bipedicle (6-8cm) –
Superomedial/lat Thinning**

History

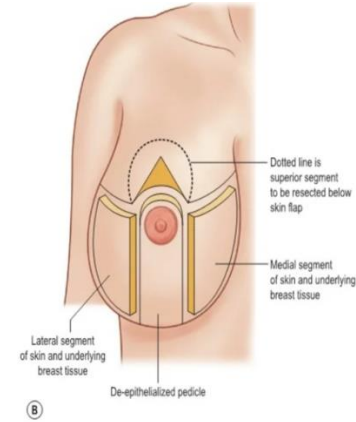
1975-1977 → Courtiss, Goldwyn, Georgiade, Ribeiro, Robbins: Inferior Piramidal Pedicle → Very versatile 300-1500 mg, excellent glandular exposure, long lasting, less chance nipple retraction. BUT **flat breast with poor projection**.

1975 → Orlando: Superomedial Pedicle

1985 → Hester: Back to the central Mound of Biesenberger



Robbins inferior bipedicle



History

1970-1999 → **Vertical Scar** Dartigues in 1925 for mastopexy and by Lassus (horizontal wedge) in 1987 for reduction.

1994 → **Lejour** (Shorter Vertical Scar)

1999 → Hall Findlay: inferolateral gland resection with superomedial pedicle

1999 → Hammond (SPAIR): Short Scar periareolar inferior pedicle reduction

- 1970-1974 → Regnault & Chiari: B or J Scar Reduction – Eliminate the medial component of horizontal scar (also inferolateral gland resection with superomedial pedicle)
- 1925 → Passot first in describing horizontal scar reduction: Inferior wedge resection and nipple transposition in buttonhole
- 1980-1982 → Marchac Peixoto: Vertical Scar with short inframammary scar – Central resection
- 1994 → Born modified L scar technique medial triangular flap + lateral rectangular flap
- 1999 → Schwarzmann : superomedial dermoglandular pedicle
- 2004 → Sculpted Pillar vertical reduction: Kent K. Hingdon and James C. Grotting

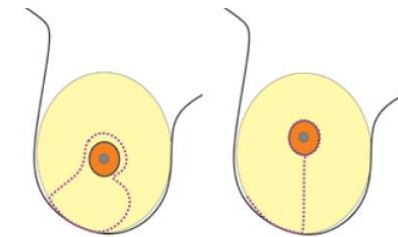
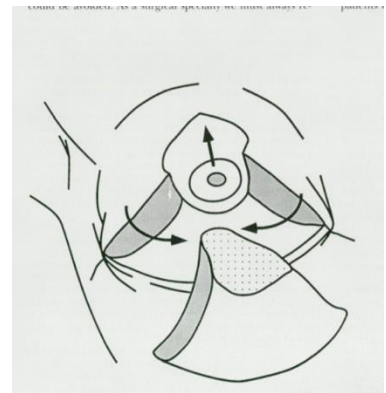
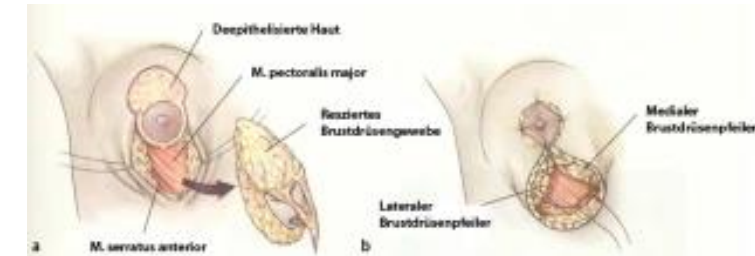
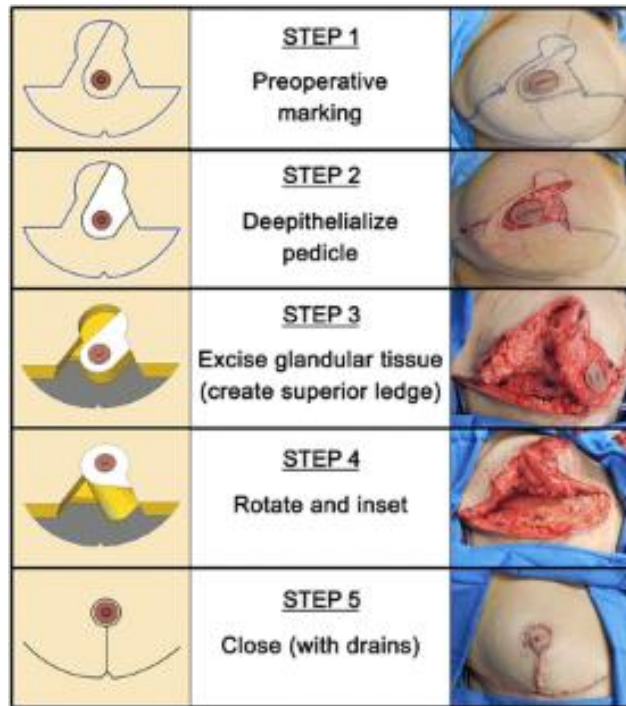
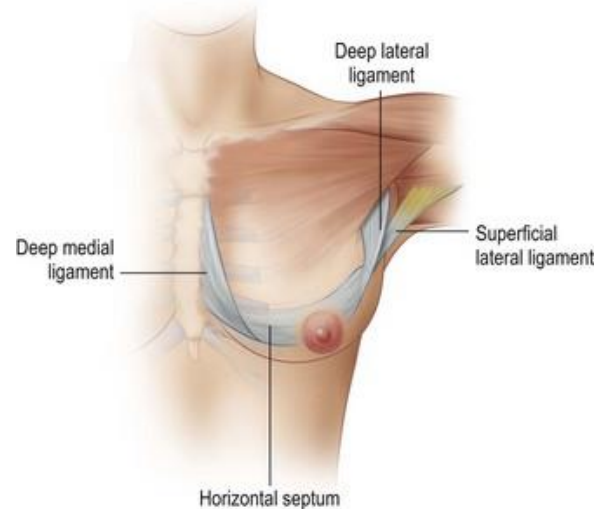


Figure 3. Regnault's skin incision pattern

Techniques

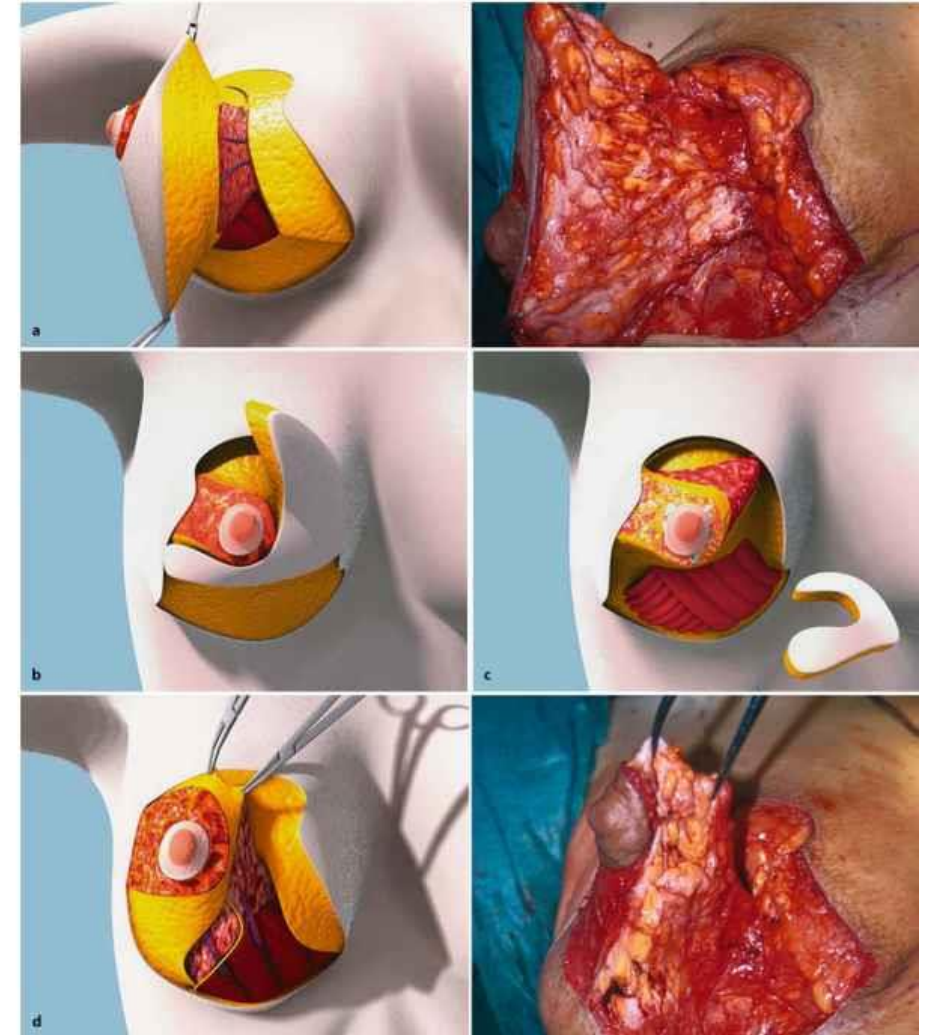


Henderson, P.W., Chang, M.M., Taylor, E.M. *et al.* The "Superior Ledge": a Modification of the Standard Superomedial Pedicle Reduction Mammoplasty to Accentuate Nipple-Areola Complex Projection. *Aesth Plast Surg* **40**, 733–738 (2016). <https://doi.org/10.1007/s00266-016-0687-9>



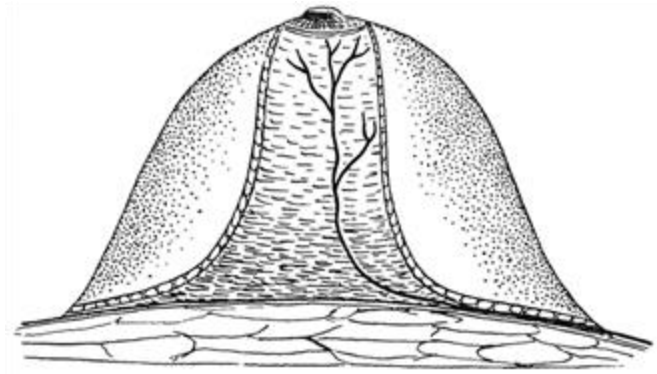
Würinger's horizontal septum, carries the main nerve supply to the nipple in addition to intercostal perforators.

Septum-Based Lateral or Medial Mammoplasty



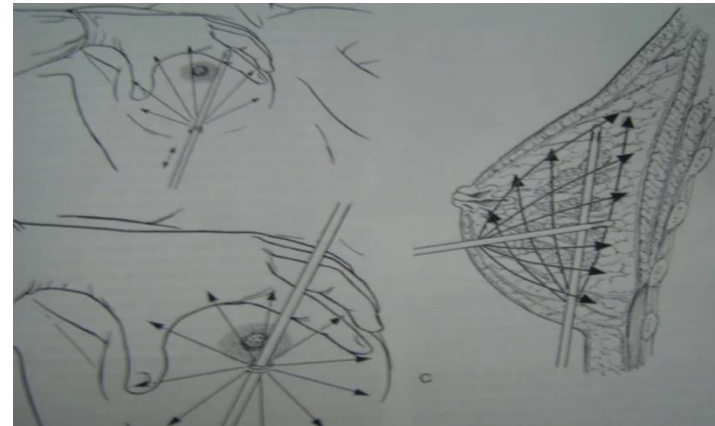
Hamdi M, Van Landuyt K, Tonnard P, Verpaele A, Monstrey S. Septum-based mammoplasty: a surgical technique based on Würinger's septum for breast reduction. *Plast Reconstr Surg*. 2009 Feb;123(2):443-454. doi: 10.1097/PRS.0b013e318196b852. PMID: 19182600

Moufarrege Total Posterior Pedicle Reduction Mammoplasty



Moufarrege, R., Botros, E. (2013). The Moufarrege Total Posterior Pedicle Mammoplasty. In: Shiffman, M., Di Giuseppe, A. (eds) *Cosmetic Surgery*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-21837-8_46

Liposuction-assisted four pedicle-based breast reduction (LAFPBR)



Pure liposuction:
Eugene Curtis

La Padula S, Hersant B, Noel W, Meningaud JP. Liposuction-assisted four pedicle-based breast reduction (LAFPBR): A new safer technique of breast reduction for elderly patients. *J Plast Reconstr Aesthet Surg*. 2018 May;71(5):691-698. doi: 10.1016/j.bjps.2018.01.006. Epub 2018 Jan 31. PMID: 29433957.

Techniques

Figure 7. Illustration of various pedicle-based designs for the NAC

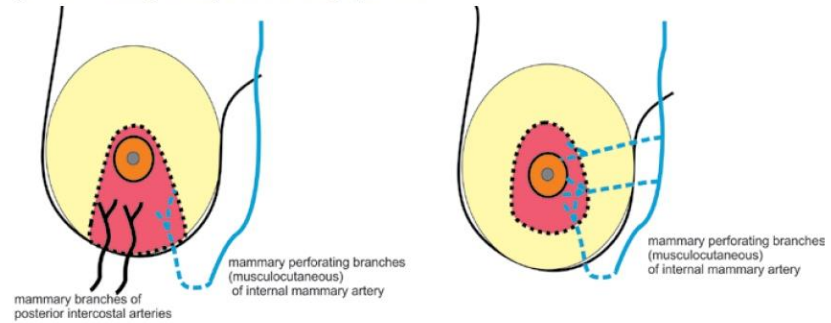


Figure 7A: Inferior pedicle

Figure 7B: central mound

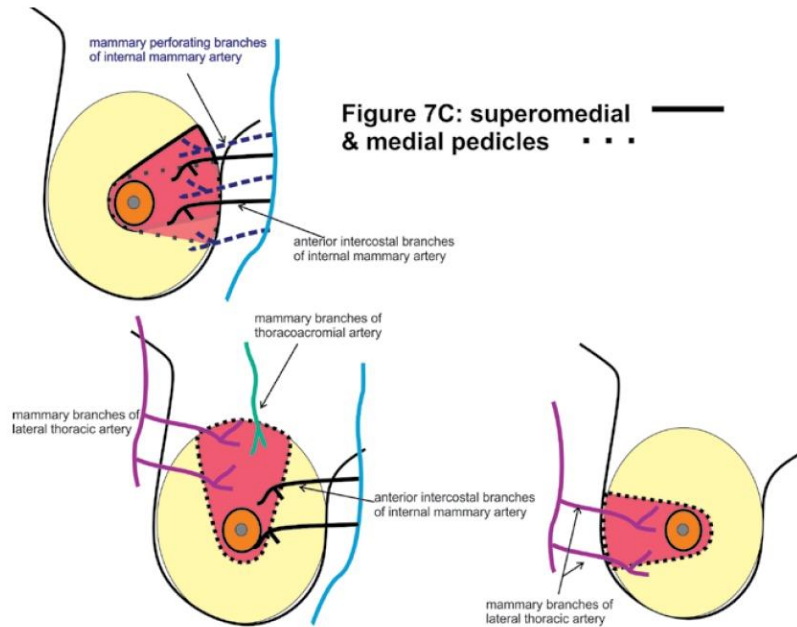
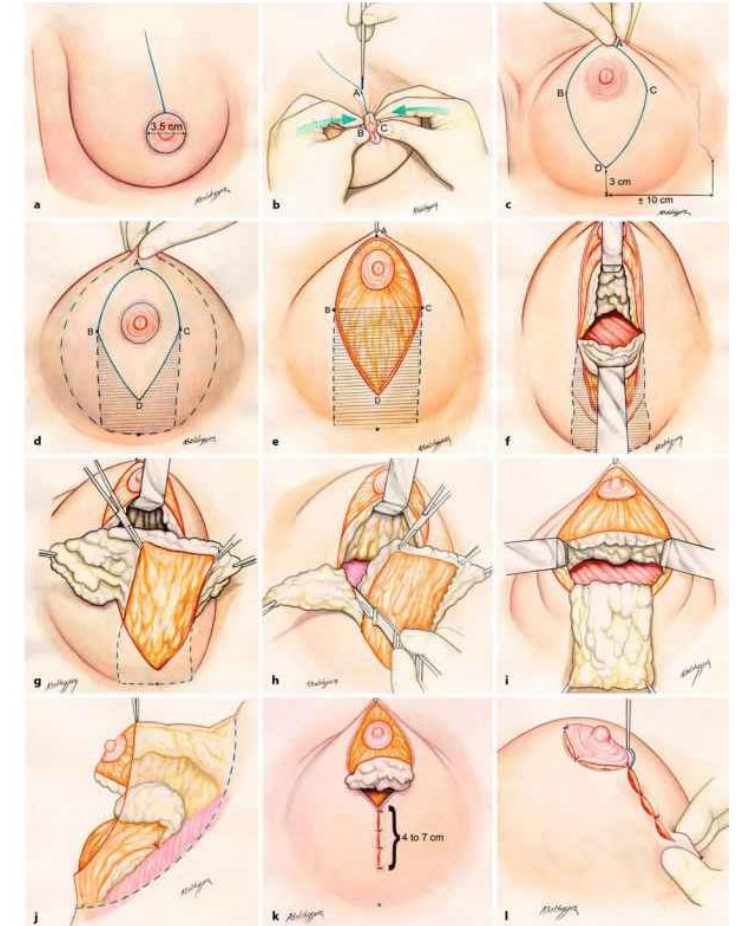


Figure 7D: Superior pedicle

Figure 7E: lateral pedicle



Liacyr Ribeiro: Losange Technique

Types of Skin Excisions

Benelli breast lift or Circumareolar lift



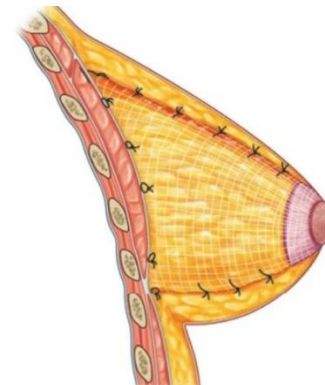
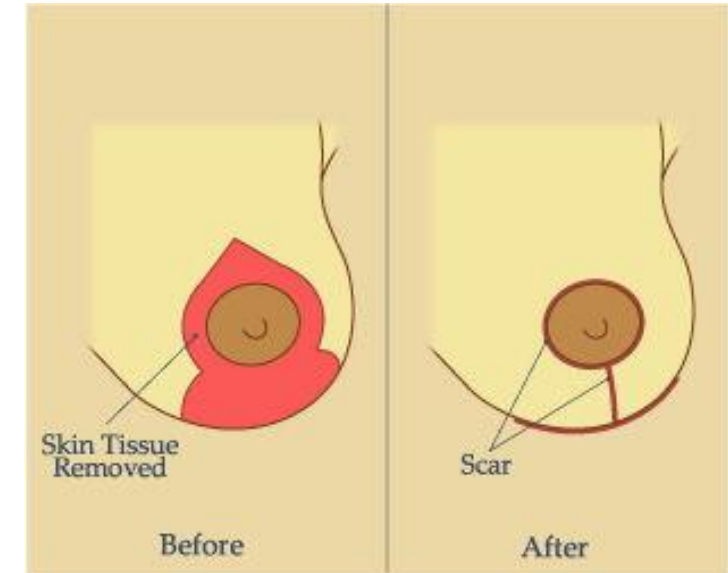
Only Small and Elastic Breast

Medium (Dufourmentel) breast lift



Ice-cream cone

Anchor lift

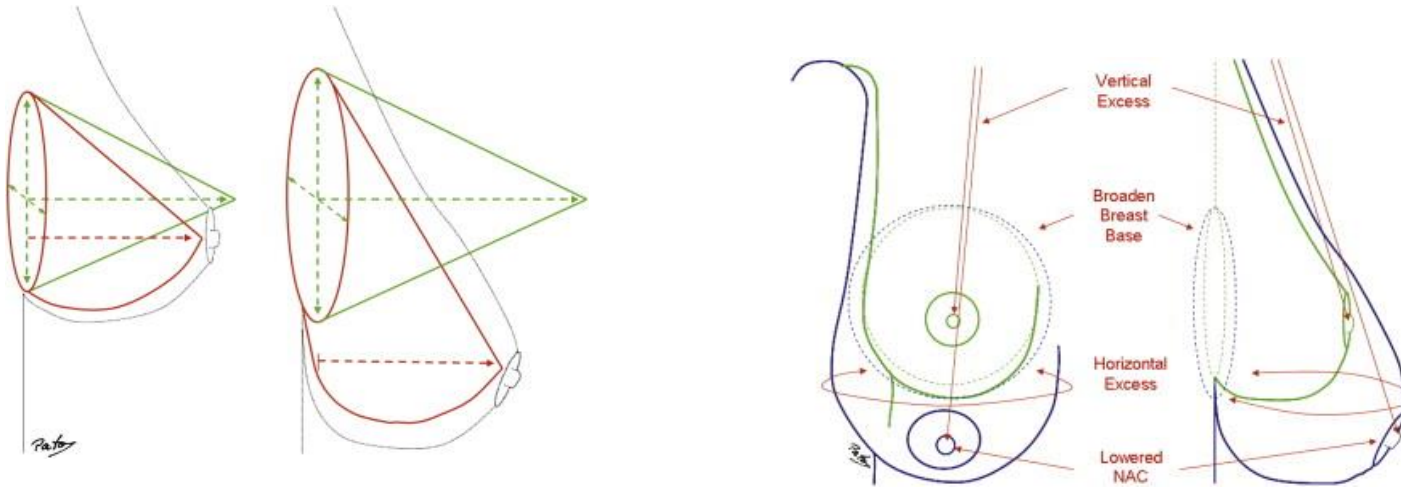


1990 → Benelli: Periareolar Reduction; round block procedure (anteroposterior flattening, pancake look)

1996 → Sampaio Goes: Periareolar Reduction; double skin technique + polyglactine-polyester MESH → Bustos

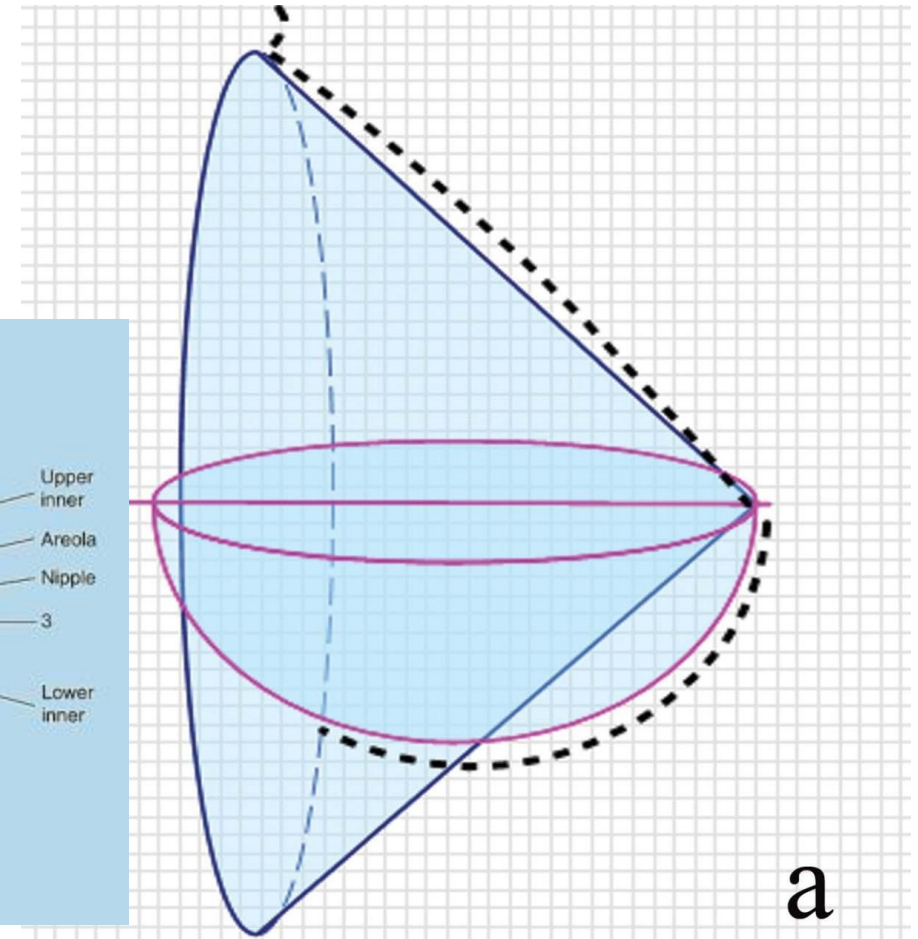
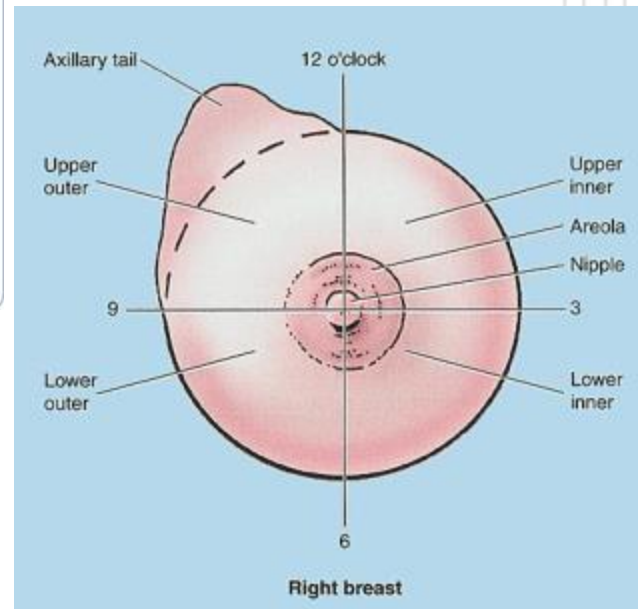
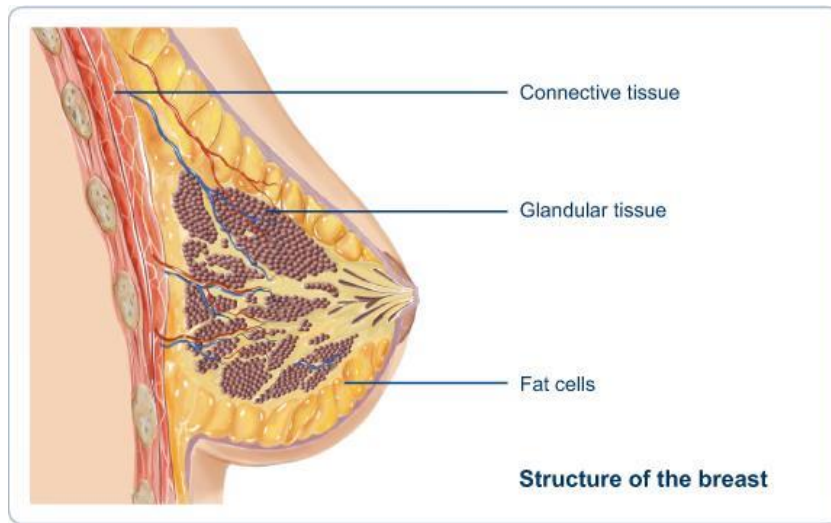
Fat Necrosis & Areola

Structure and Geometry

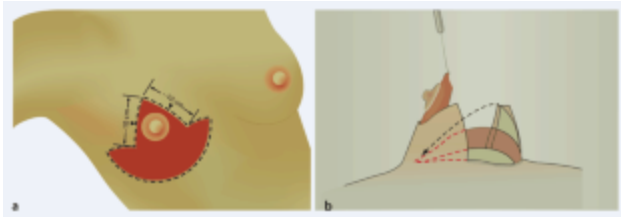


Patricio Andrades, Arturo Prado. Understanding modern breast reduction techniques with a simplified approach. Journal of Plastic, Reconstructive & Aesthetic Surgery, Volume 61, Issue 11, 2008, Pages 1284-1293, ISSN 1748-6815, <https://doi.org/10.1016/j.bjps.2007.11.060>.

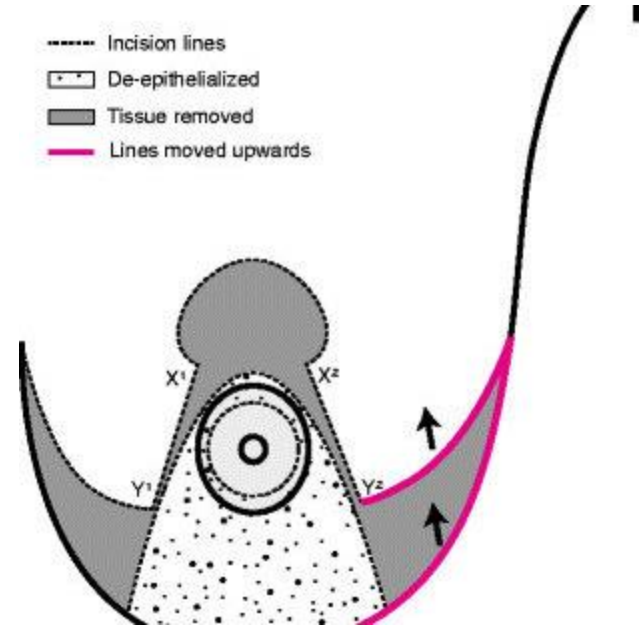
Structure and Geometry



Europa VS Brazil school



L Ribeiro (1975) A new technique for reduction mammoplasty. *Plas Reconstr Surg* **55** 330–334



Wise, J. and Robert, J. (1956) A Preliminary Report on a Method of Planning the Mammoplasty. *Plastic and Reconstructive Surgery*, 17, 367-375.
<http://dx.doi.org/10.1097/00006534-195605000-00004>

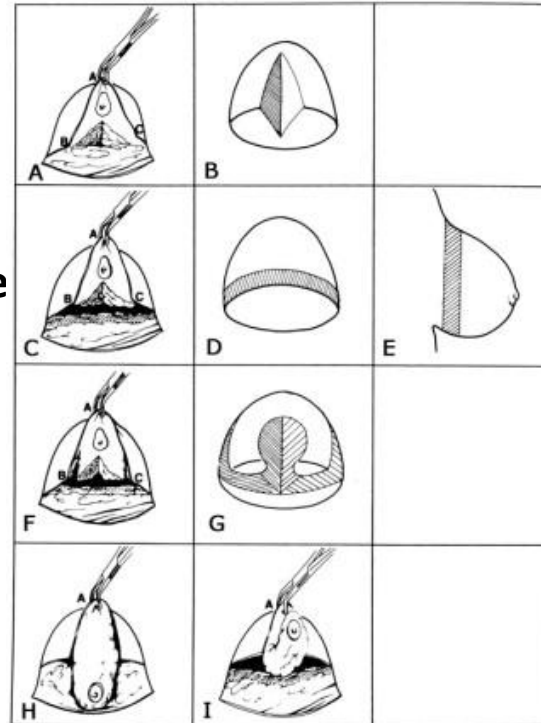
	Pitanguy (2822 patients) (%)	Skoog (149 patients) (%)	McKissock (52 patients) (%)	Mandrekas (371 patients) (%)	Bolger (300 patients) (%)	Lejour	
						With suction (~85 patients) (%)	Without suction (~135 patients) (%)
Glandular necrosis / dehiscence	—	1.3	>4	5.4	2.0	8.2	1.5
Cutaneous problems / delayed healing	3.8	6.9	“Several”	0.3	6.2	11	2.2
Hematoma / seroma	0.4	2.5	—	0.3	1.2	14	9.6
Areolar problems / nipple necrosis	0.9	1.3	6	0.8	—	1.1	0.7
“Unsightly” / hypertrophic scarring	1.4	4.4	~58 *	3.3	—	—	—
“Sagging” / contour revisions	—	1.3	~50 *	0.3	1.5	—	—
Altered nipple / breast sensation	—	—	~70 *	1.3	2.3	—	—
Occult cancer	1.5	—	—	0.5	—	—	—
Pulmonary embolus	—	—	—	—	0.4	—	—
Total reported by author	6.5	17.7	18	11.4	13.6	22.2	
						(11.2% of breasts)	

*There was standardization in reporting or adjustment for the amount of tissue resected. (Note: frequently the complication rates reported by the authors do not equal the totals reported in their published articles).

Operation Workflow

The 4-step surgical approach (common to more than 70 different techniques) consists of **vertical resection, horizontal resection, development of medial and lateral flaps, and development of the nipple areola flap.**

Alexandre de Souza, Renato Saltz; The common principles of effective breast reduction techniques. Aesthetic Surgery Journal, Volume 20, Issue 3, 2000, Pages 213-217, ISSN 1090-820X, [https://doi.org/10.1016/S1090-820X\(00\)70019-7](https://doi.org/10.1016/S1090-820X(00)70019-7).



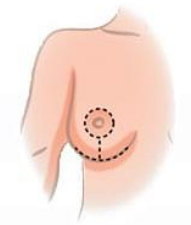
1. Incisions outline the area of the excess tissue to be removed.



2. Excess skin and fat are removed. The nipple and areola are then moved to a new and higher position.



3. The incisions are brought together to reshape the now smaller breast.



4. Sutures are placed around the areola and can extend downwards and horizontally under the breast crease.

Nipple-areola complex (NAC) should rest in a tension-free manner

Measurements

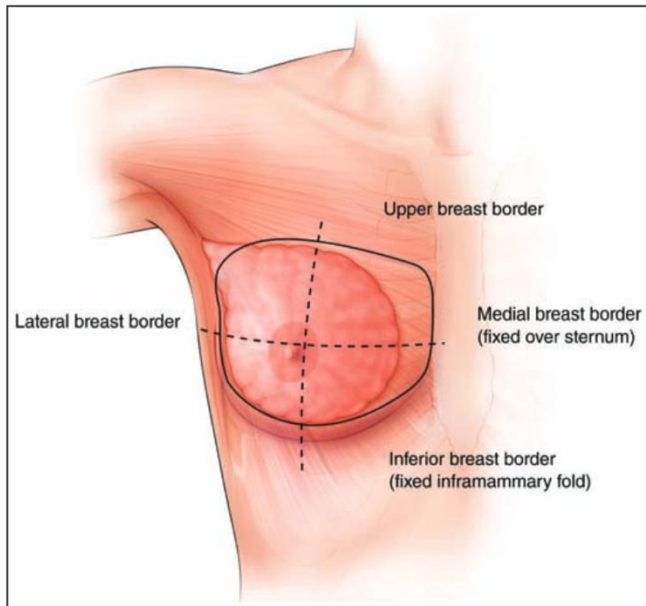


Figure 1. The outlines of the breast footprint on the chest wall. The upper breast border is at the level of the indentation between the preaxillary fold and the breast. From: Hall-Findlay EJ. *Aesthetic Breast Surgery: Concepts and Techniques*. St. Louis, MO: Quality Medical Publishing, 2011. Image used with permission.

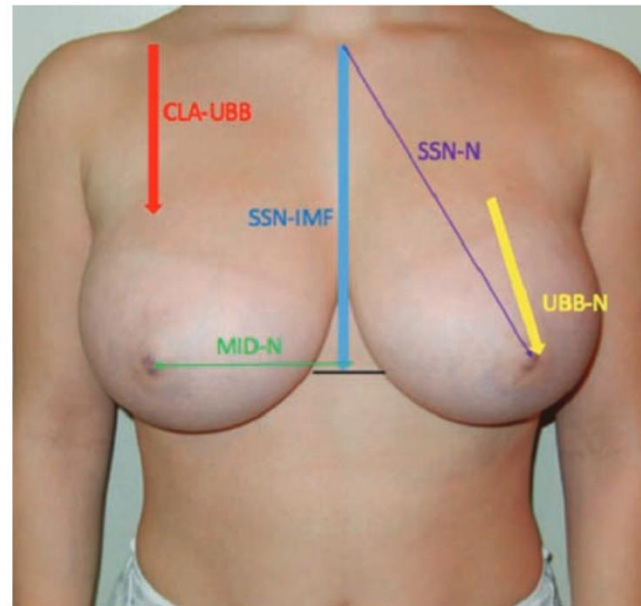
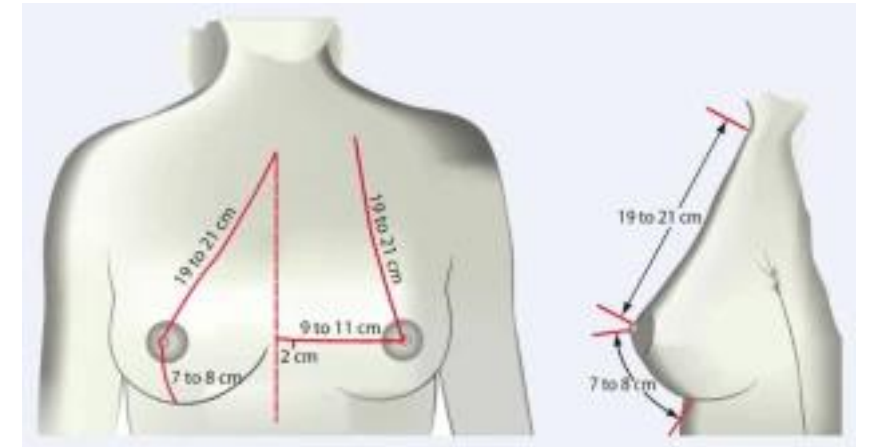


Figure 2. The standard measurements that were taken preoperatively and at each postoperative visit are outlined on this 17-year-old female patient: clavicle to upper breast border (CLA-UBB), UBB to nipple (UBB-N), suprasternal notch to nipple (SSN-N), suprasternal notch to inframammary fold (SSN-IMF), and chest midline to nipple (MID-N). Note that SSN-N and UBB-N were measured along the skin surface rather than vertically.



Establishing New Nipple Position



Evaluation Workflow

- Patient Problem
- Skin
- Symmetry
- Possibilities → Drawing



Thank You