


Consensus Recommendations for the Reconstitution and Aesthetic Use of Poly-D, L-Lactic Acid Microspheres – Comment on the Facial Injection Techniques [Letter]

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Dear editor

We read with great interest the article entitled “Consensus Recommendations for the Reconstitution and Aesthetic Use of Poly-D,L-Lactic Acid Microspheres”, by Magacho-Vieira et al, published in a recent issue of *Clinical, Cosmetic and Investigational Dermatology*.¹ The article provides valuable recommendations on the reconstitution and injection techniques of injectable poly-D,L-lactic acid (PDLA; AestheFill, REGEN) for both facial and non-facial treatments. In this context, we would like to offer differing perspectives and further elaborate on the facial injection techniques for injectable PDLA.

The reconstitution volume of sterile water for injection (SWFI) for a vial of injectable PDLA can vary widely, accommodating diverse applications. The suspension can be categorized into four groups based on thickness: D1.5–3, the thickest suspension for bony projections; D3–6, a thick suspension for deep wrinkles; D6–12, a thin suspension for shallow wrinkles; and D12–24, a super-thin suspension for skin texture improvement. Consequently, injectable PDLA is regarded as a versatile filler.^{2,3} However, many practitioners find it challenging to determine the appropriate concentration or thickness for individual patients. Furthermore, injecting thicker suspensions superficially increases the likelihood of uneven distribution due to their higher elastic modulus, greater cohesivity, and lower lateral spreading ability.

We concur with the consensus recommendations in advocating for the use of D9–10 suspension in facial areas via wide-range, superficial injections. For moderate to severe wrinkles or depressions, treatments can be repeated at intervals exceeding one month until the desired outcome is achieved. However, for deep injections, we recommend using the thickest suspension instead of the D9–10 suspension suggested in the recommendations.⁴ As noted, the thickest suspension, with its highest elastic modulus, is ideally suited for bony projections.^{2,3} Using suspensions other than the thickest for this purpose may yield suboptimal results.

When injecting the thickest suspensions, the primary technique involves bolus injections using sharp needles targeting the supra-periosteum layer. To minimize the risk of palpable nodule formation, the injection volume per point should be carefully controlled.⁵ While 0.2 mL can serve as a general reference, adjustments should be made based on the thickness of the overlying soft tissue. For instance, larger volumes may be appropriate in the temple region, whereas smaller amounts should be employed in the zygomatic arch region.

In 2024, based on 10 years of injection experience, we developed the “AestheCode system” as a guide for injectable PDLA procedures in different facial regions.⁴ (Figure 1 and Table 1) This guide comprises two components: AestheZone, which focuses on thin suspensions for superficial injections, and AestheLift, which addresses the use of the thickest suspensions for deep injections. The AestheCode system provides recommendations not only on filler thickness and

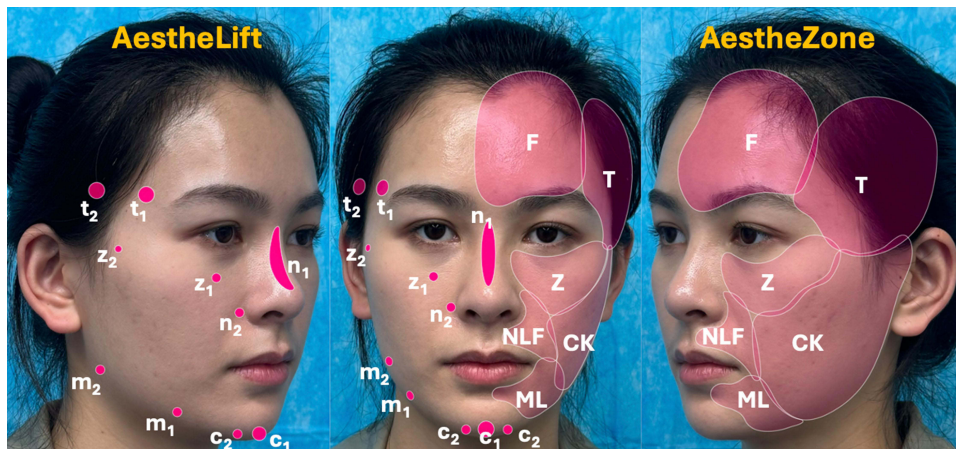


Figure 1 The facial surface maps of the AestheCode system: AestheLift(left) and AestheZone(right). (From Lin J-Y, Lin C-Y. The AestheCode System: A Safe and Efficient Guide for AestheFill Injection. *Aesth Plast Surg* (2024). <https://doi.org/10.1007/s00266-024-04250-4>; with permission).

injection layer but also on the injection method, tools, and dosage. Presented in workshops and online forums worldwide in recent years, the system has demonstrated both safety and efficacy.

The injection techniques for PDLA can vary. Ensuring both safety and efficacy is paramount during its administration. Utilizing AestheCode guidance can help clinicians minimize complications while enhancing efficacy.

Table 1 The AestheCode System: Injection Guidance for Anatomical Sites Using AestheFill. (From Lin J-Y, Lin C-Y. The AestheCode System: A Safe and Efficient Guide for AestheFill Injection. *Aesth Plast Surg* (2024). <https://doi.org/10.1007/s00266-024-04250-4>; With Permission)

AestheCode	Treatment Area ^a		Code ^b	Thickness ^c	Tool ^d	Layer ^e	Method	Amount
								(mL) ^f
AestheLift	Nose	Dorsum	n1	D _{1.5} (D _{1.5})	CNL	SPO	Linear	0.8/line
		Alar Base	n2	D _{1.5-2} (D ₂)	ND	SPO		Dotting
	Chin	Median	c1	D _{1.5-2} (D ₂)				0.5/dot
		Paramedian	c2	D _{1.5-2} (D ₂)				0.2/dot
	Temple	Anterior	t1	D _{1.5-3} (D ₃)				0.5/dot
		Posterior	t2	D _{1.5-3} (D ₃)				0.5/dot
	Zygoma	Arch	z1	D _{1.5-2} (D ₂)				0.1/dot
		Body	z2	D _{1.5-2} (D ₂)				0.2/dot
	Mandible	Angle	m1	D _{1.5-2} (D ₂)				0.3/dot
		Pre-jowl	m2	D _{1.5-2} (D ₂)				0.2/dot
AestheZone	Forehead		F	D ₃₋₈ (D ₆)	CNL	LAT	Fanning	0.1/cm ²
	Temple		T	D ₃₋₈ (D ₆)		SC/LAT		
	Zygoma		Z	D ₄₋₁₂ (D ₈)		SC/SD		
	Cheek		CK	D ₄₋₁₂ (D ₈)		SC		
	Naso-labial Fold		NLF	D ₄₋₁₂ (D ₈)		SC		
	Marionette Line		ML	D ₄₋₁₂ (D ₈)		SC		

Notes: ^aTreatment areas for AestheLift are the nose, chin, temple, zygoma, and mandible areas. Each area can further be divided into two sub-areas. Treatment areas for AestheZone are the forehead, temple, zygoma, cheek, nasolabial fold, and marionette line areas. ^bThe code for AestheLift contains a lowercase letter of the treatment area's first letter + a number (1 or 2) indicating different sub-areas. The code for AestheZone contains an uppercase letter of the treatment area's first one to three letters. ^cThe thickness (or concentration) of AestheFill is recorded as D_n, which means a vial of AestheFill is "diluted" by "n" mL of sterile water. In every column, the first thickness is a range, allowing the injector to choose a thickness from this range based on the patient's needs and the injector's experience. The second thickness in the bracket, which is recommended by the authors, is suitable for every patient's needs and injector's experience. ^dRecommended injection tool: CNL = cannula, ND = needle. ^eInjection layer: SPO = supra-periosteum, LAT = loose alveolar tissue, SC = subcutaneous tissue, SD = sub-dermis. ^fThis column shows the upper limit of the injection amount.

Disclosure

Dr. JY Lin and Dr. CY Lin are medical directors of REGEN Biotech. The authors report no other conflicts of interest in this communication.

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