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The AestheCode System: A Safe and Efficient Guide for AestheFill Injection

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Abstract AestheFill is a biostimulator based on poly-D,L-lactic acid. It is supplied as lyophilized powders and is referred to as a versatile biostimulator. According to the amount of water added, the suspensions can be vary in thickness which can be divided into four groups for different indications: the thickest suspension ($D_{1.5–3}$) for nose or chin augmentation, thick suspension ($D_{3–6}$) for deep wrinkle correction, thin suspension ($D_{6–12}$) for shallow wrinkle correction, and super-thin suspension ($D_{12–24}$) for skin rejuvenation. However, practitioners may be confused about which filler thickness, injection layer, method, and amount should be chosen for their patients. Biostimulators tend to form non-inflammatory nodules if technical mishaps occur during injection. Based on 10 years of AestheFill injection experience, the authors proposed the AestheCode system for the safe and effective injection of AestheFill.

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Keywords Poly-D,L-lactic acid · AestheFill · AestheCode · AestheLift · AestheZone · Biostimulators

AestheFill is a biostimulator based on poly-D,L-lactic acid [1]. It is supplied as lyophilized powders and is referred to as a versatile biostimulator [2]. According to the amount of water added, the suspensions can be vary in thickness which can be divided into four groups for different indications: the thickest suspension ($D_{1.5–3}$) for nose or chin augmentation, thick suspension ($D_{3–6}$) for deep wrinkle correction, thin suspension ($D_{6–12}$) for shallow wrinkle correction, and super-thin suspension ($D_{12–24}$) for skin rejuvenation [2]. However, practitioners may be confused about which filler thickness, injection layer, method, and amount should be chosen for their patients. Biostimulators tend to form non-inflammatory nodules if technical mishaps occur during injection [1]. Based on 10 years of AestheFill injection experience, the authors proposed the AestheCode system for the safe and effective injection of AestheFill.

The AestheCode system contains two parts: AestheLift and AestheZone. Both have codes that are correlated with specific treatment areas. Each code has a recommended filler injection thickness, tool, layer, method, and amount. The treatment sequence is AestheLift first, followed by AestheZone. Only needed areas can be treated. Do not overtreat areas that do not need treatment.

AestheLift is designed using the thickest suspension for injecting onto the supra-periosteum layer. Due to its high G' and cohesivity values, it is suitable for nose and chin augmentation [2]. It is also suitable for using the dotting injection method onto the supra-periosteum for a lifting purpose [1–3]. However, the injection amount per dot should be limited, or palpable nodule formation might occur [1, 4].

AestheZone is designed using thin or super-thin suspensions for injecting evenly in a wide facial zone. It can soothe facial wrinkles and depressions and improve fine lines and pores [2, 5]. Besides the forehead and scalp region, where the injection layer is the loose alveolar tissue

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Table 1 AestheCode system: injection guidance for anatomical sites using AestheFill

AestheCode	Treatment Area[a]		Code[b]	Thickness[c]	Tool[d]	Layer[e]	Method	Amount (ml)[f]	Description
AestheLift	Nose	Dorsum	n1	$D_{1.5}$ ($D_{1.5}$)	CNL	SPO	Linear	0.8/line	Nose augmentation
		Alar Base	n2	$D_{1.5–2}$ (D_2)	ND	SPO	Dotting	0.2/dot	Nasolabial fold soothing
	Chin	Median	c1	$D_{1.5–2}$ (D_2)				0.5/dot	Chin augmentation
		Paramedian	c2	$D_{1.5–2}$ (D_2)				0.2/dot	Chin augmentation
	Temple	Anterior	t1	$D_{1.5–3}$ (D_3)				0.5/dot	Temple augmentation Lateral eyebrow/eyelid lifting
		Posterior	t2	$D_{1.5–3}$ (D_3)				0.5/dot	Temple augmentation Lateral eyebrow/eyelid lifting
	Zygoma	Arch	z1	$D_{1.5–2}$ (D_2)				0.1/dot	Lateral cheek lifting
		Body	z2	$D_{1.5–2}$ (D_2)				0.2/dot	Medial zygoma lifting
	Mandible	Angle	m1	$D_{1.5–2}$ (D_2)				0.3/dot	Lateral neck lifting
		Pre-jowl	m2	$D_{1.5–2}$ (D_2)				0.2/dot	Pre-jowl sulcus soothing
AestheZone	Forehead		F	$D_{3–8}$ (D_6)	CNL	LAT	Fanning	0.1/cm^2	Wrinkles/Depressions soothing Fine lines/Pores improvement
	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			
	Nasolabial fold		NLF	$D_{4–12}$ (D_8)		SC			
	Marionette line		ML	$D_{4–12}$ (D_8)		SC			

[a]Treatment 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.

[b]The 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.

[c]The thickness (or concentration) of AestheFill is recorded as Dn, 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.

[d]Recommended injection tool: CNL = cannula, ND = needle.

[e]Injection layer: SPO = supra-periosteum, LAT = loose alveolar tissue, SC = subcutaneous tissue, SD = sub-dermis.

[f]This column shows the upper limit of the injection amount.

layer, the injection layer for other facial parts is the subcutaneous or sub-dermis layer. Although deep wrinkles or depressions have large volume deficits that can be filled by a thick suspension with only one treatment [2], we still recommend using thin or super-thin suspensions because they have lower cohesivity and are easier to inject evenly than thick suspensions [1, 5]. By doing so, the nodules formation rate could be very low. For moderate or severe wrinkles, depressions, or saggings, the AestheCode treatment can be repeated several times with more than one month apart to achieve the optimal result. For more details on the AestheCode system, see Table 1 and Fig. 1.

Filler injection techniques can vary. However, some of them (e.g., fanning distribution of thick suspension AestheFill) are highly technical-dependent. The AestheCode injection guidance has been presented online or in workshops worldwide in recent years by the authors and has been proved safe and effective. The use of AestheCode injection guidance can decrease nodules formation and increase the success rate for all clinicians.

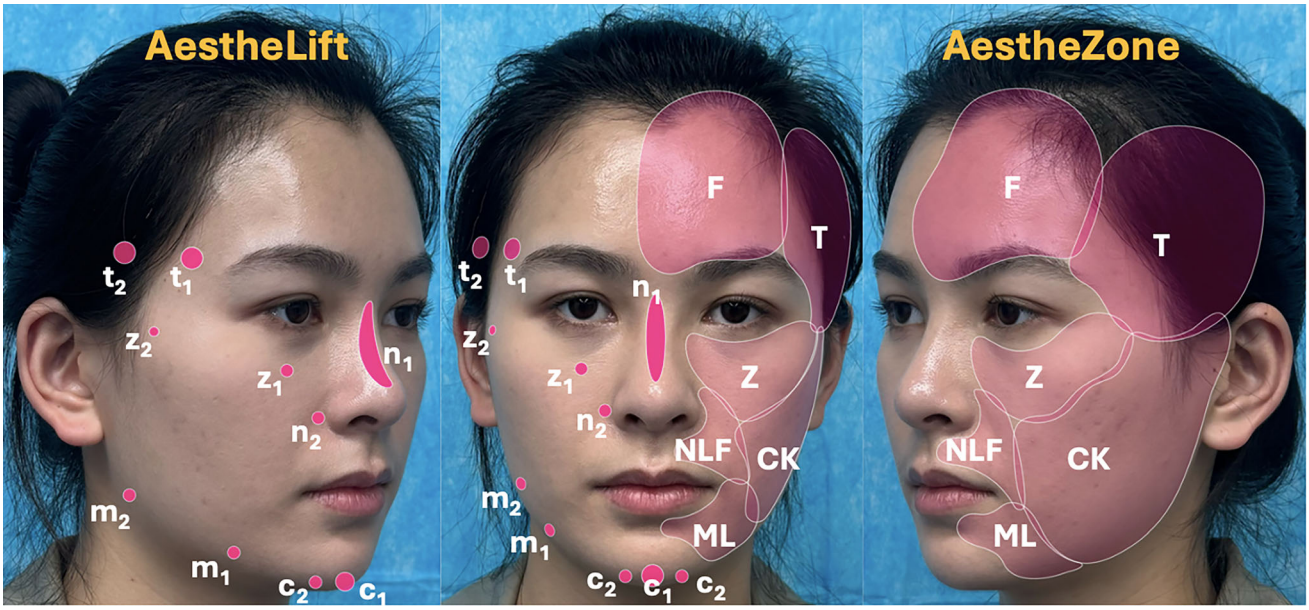


Fig. 1 Facial surface maps of the AestheCode system: AestheLift(left) and AestheZone(right)

Declarations

Conflict of interest Dr. Lin J-Y and Dr. Lin C-Y are medical directors of REGEN Biotech.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed Consent The patient in this manuscript has given written informed consent for publication.

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