

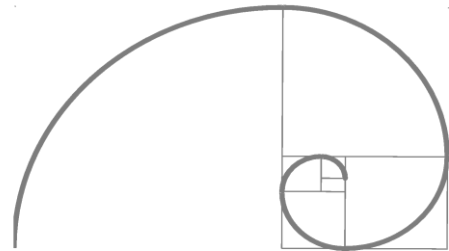
Addressing the Tear Trough: Latest Technology for Periorbital Rejuvenation

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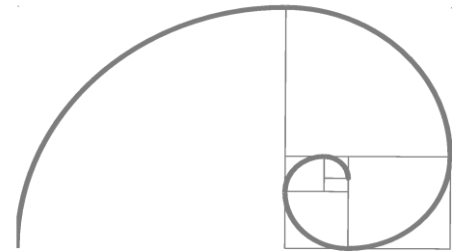
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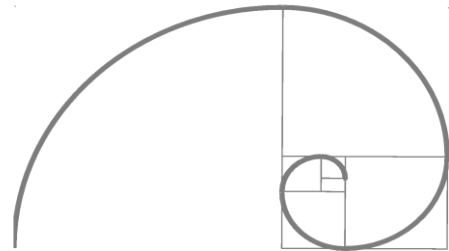
Disclosures

- US Patent 5/611,814
Resorbable surgical appliance for use in supporting soft tissue in a superior position
- US Patent 60/950,423
Composition and Method of Use for Soft Tissue Augmentation, Drug Delivery
- US Patent 12/797,710
Method for Measuring Change in Lip Size
After Augmentation
- US Patent 13/604,012 Light Therapy Platform System
- US Patent Taurolidine Antimicrobial Wound Closure Materials
- Consultant to Johnson & Johnson
- Consultant to Allergan
- Consultant to Galderma
- Consultant to Sinclair Pharma
- Consultant to Merz
- Consultant to ThermiAesthetics
- Consultant to Suneva
- Consultant to Revance
- Consultant to Croma



Objective

- Aging
- Anatomy
- Available Products: Pros and cons
- Latest Technology
- Virtual Demonstration



Aging

Facial aging manifest in various forms:¹

- Diminished skin elasticity
- Appearance of wrinkles
- Volume loss
- Descent of facial features

Due to loss of underlying support: ²⁻⁴

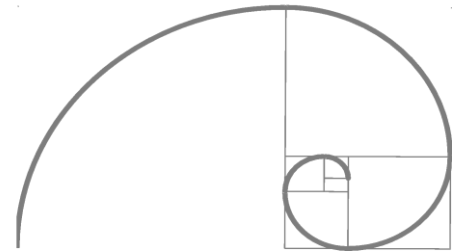
- Decreases in ligament stability
- Involution of bony attachments
- Volume loss and descent of the fat compartments
- Changes in musculature

1.Farkas JP, Pessa JE, Hubbard B, Rohrich RJ. *Plast Reconstr Surg Glob Open*. 2013;1(1):e8-e15.

2.Cotofana S, et al. *Facial Plast Surg*. 2016;32(3):253-260.

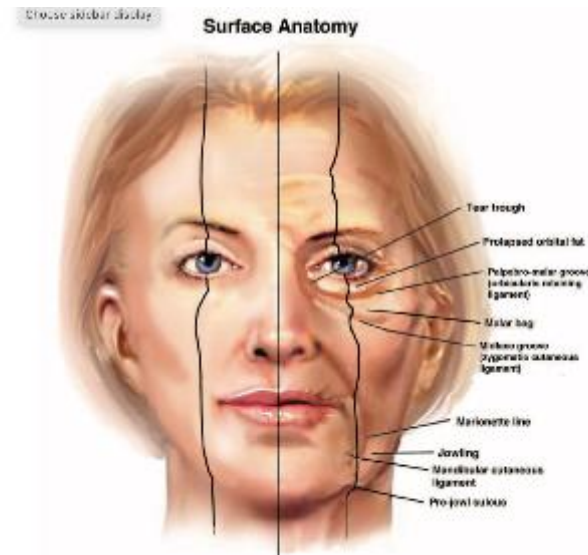
3.Kretlow JD, Hollier LH, Jr, Hatef DA. *Plast Reconstr Surg*. 2012;130(1):180e-181e; author reply 182e.

4.Wong CH, Mendelson B. *Plast Reconstr Surg*. 2015;136(5 Suppl):44S-48S.



Aging: Tear Trough

- The first thing we look at a human face are the eyes which also play a major role in our perception of the beauty of a face, more than any other facial component. ⁵
- Thus, the presence of tear trough deformities will be an element that will influence both facial recognition and the perception of its attractiveness. ⁵
- A deep tear trough can create a shadow that is perceived as :
 - Dark circle below the eye. It also creates a division between the lower eyelid and cheek that is an early sign of aging around the eyes.
 - Patients complain of looking tired and older than they really are.



5. Anido J et al. *J Cosmet Dermatol*. 2021 Jan;20(1):6-17

6. Alghoul M et al. *Aesthet Surg J*. 2013 Aug 1;33(6):769-82

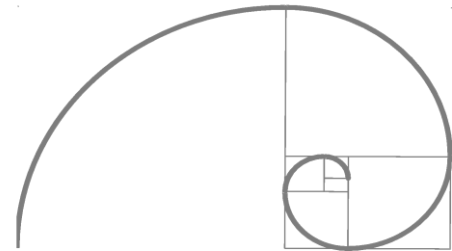
4 R's of Rejuvenation



How to choose one over the other?

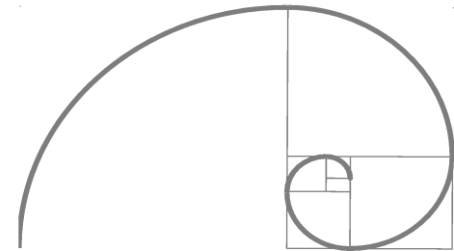
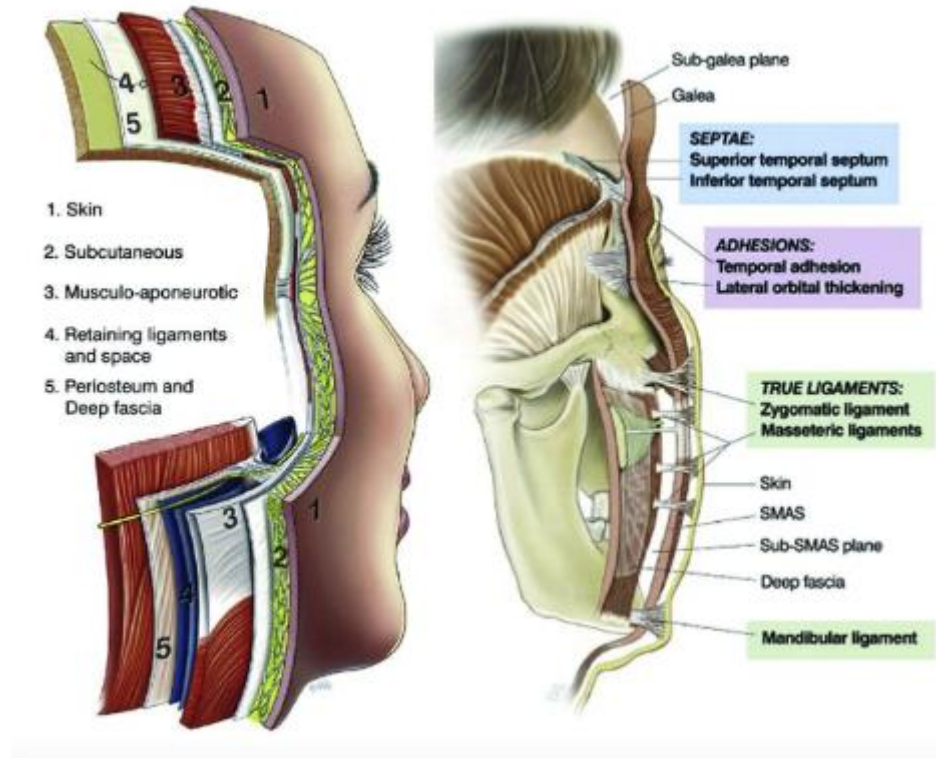
- Right diagnosis
- Patient's expectation
- Cost
- Invasive vs minimally invasive

However, for all these options knowing **ANATOMY** is a must

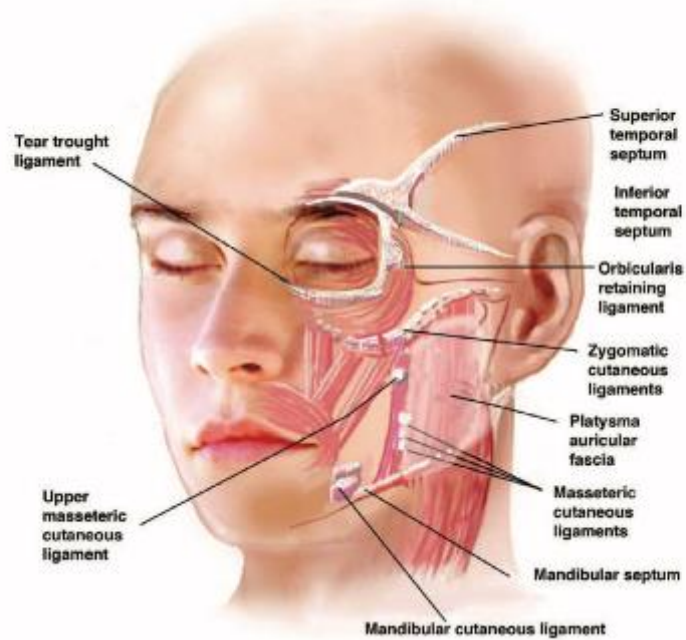


Face Anatomy:

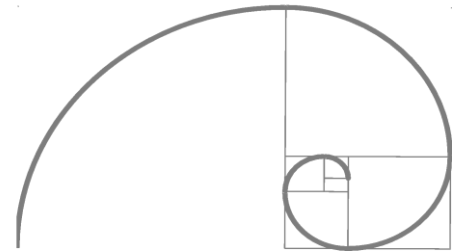
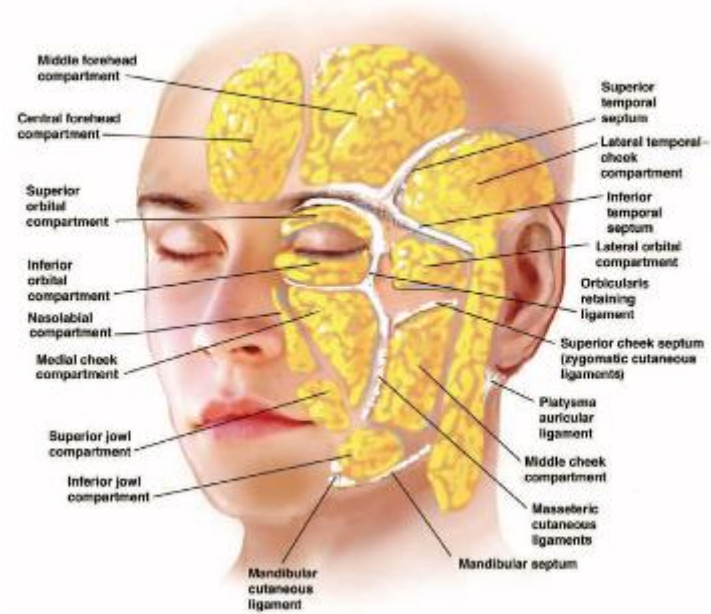
The basic five layers of the face, which are simple on the scalp and complex on the mid-cheek.



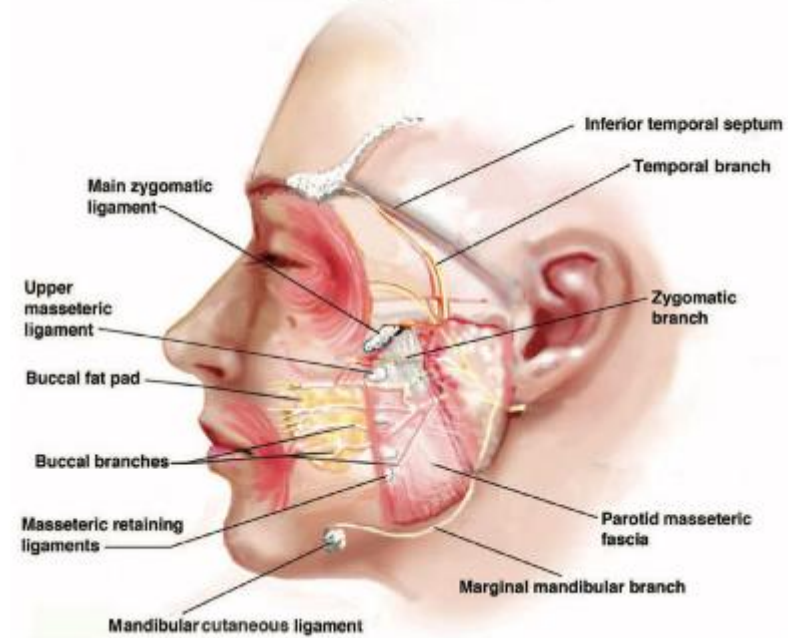
Retaining Ligaments of the Face



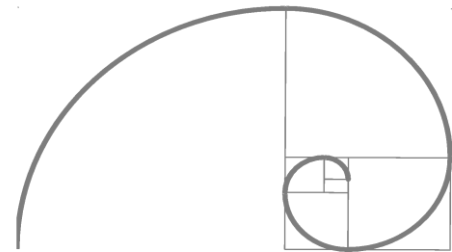
Superficial Fat Compartments



Relationship of Facial Nerve Branches to Retaining Ligaments of Face

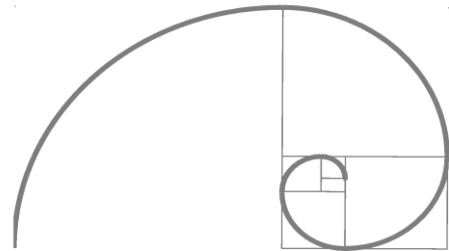


Alghoul M et al. *Aesthet Surg J.* 2013 Aug 1;33(6):769-82



Structural characteristics that contribute to the appearance of the tear trough deformity

Skin	<ul style="list-style-type: none">• Loss of volume• Reduction in the amount of collagen• Distortion of elastin fibers and decrease in their elasticity
Fat	<ul style="list-style-type: none">• Thinning and descent of facial fat pads• Redistribution, accumulation, and atrophy of the fat, which leads to loss of facial volume• Dilation of dermal vessels
Musculature	<ul style="list-style-type: none">• The contraction of the orbicularis oculi muscle contributes to the appearance of wrinkles in fine skin.• Laxity of the orbicularis oculi muscle• Hyperlaxity of the orbitomalar muscle ligament
Bone	<ul style="list-style-type: none">• Widened orbits: receding of the inferior orbital rim



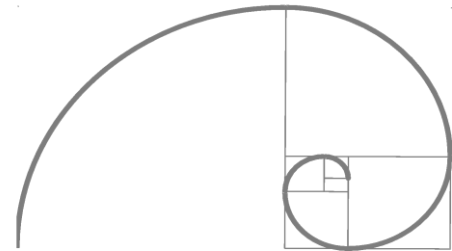
Latest technology

Belotero Balance was safe and effective for the correction of infraorbital hollows.

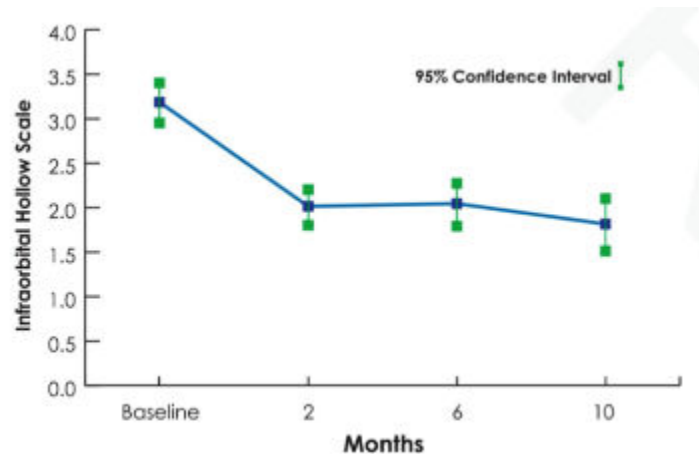
#1 Study

- **Methods**
 - Subjects (49) with at least a grade 2 Merz infraorbital hollow scale in the Validated Assessment Scales for the mid face (0-4) of the right and/or left side were photographed and treated at baseline, and with a touch up treatment after 2 weeks if necessary.
 - Subjects were also photographed at 2, 6, and 10 months after baseline, with optional retreatment at 6 months. The photographs were graded by a blinded sub-investigator.

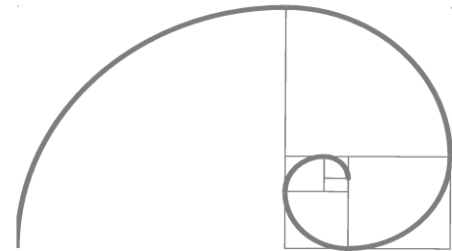
Hevia O, Cohen BH, Howell DJ. Safety and efficacy of a cohesive polydensified matrix hyaluronic acid for the correction of infraorbital hollow: an observational study with results at 40 weeks. J Drugs Dermatol. 2014 Sep;13(9):1030-6. PMID: 25226002.

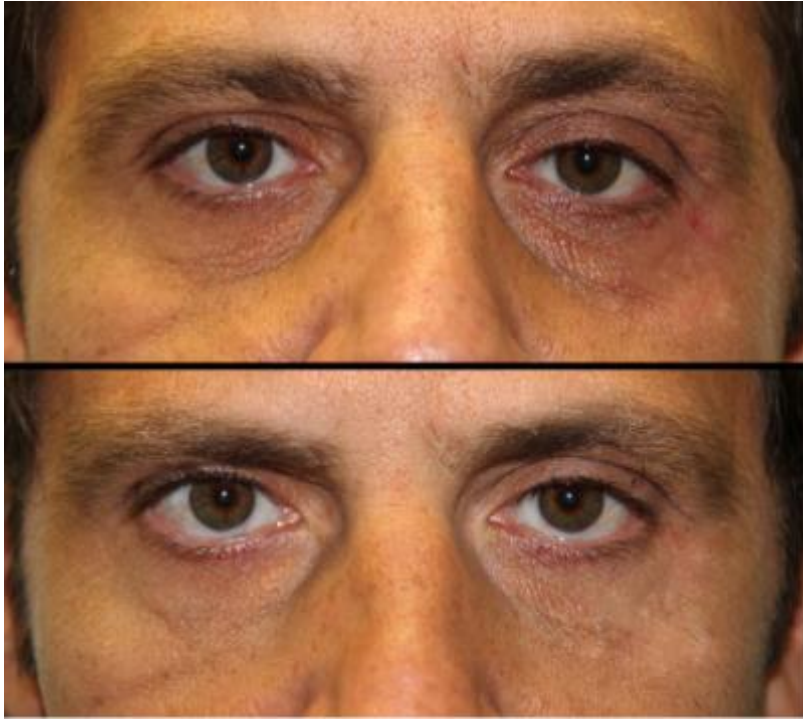


- Results
 - Mean hollowness scores for both eyes considerably improved compared to baseline ($P < .001$).
 - No serious adverse events were reported.
 - 46 subjects completing the study did not request retreatment after 6 months.
 - At 10 months, 27/31 (87%) still exhibited a hollowness improvement of at least 1-point from baseline.

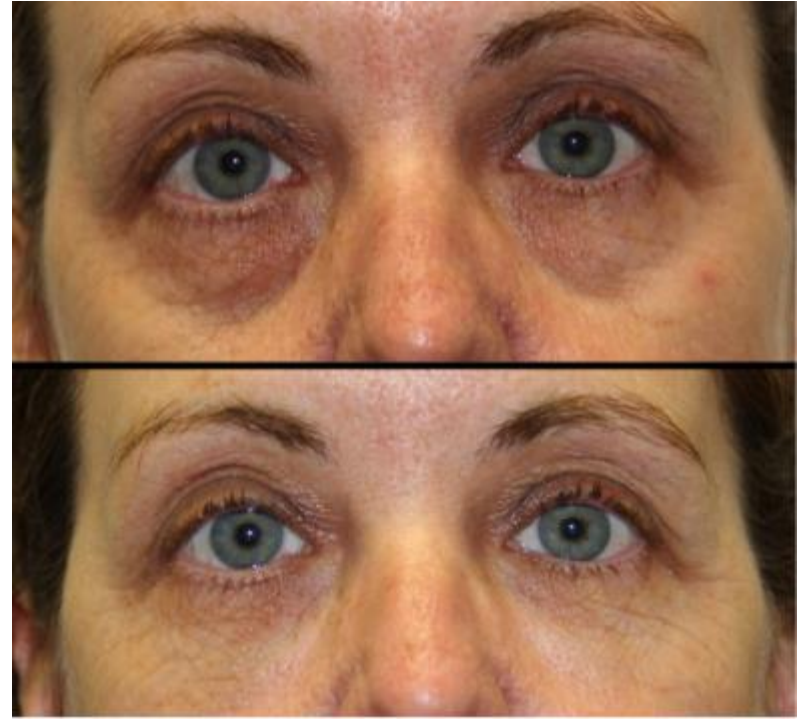


Post baseline Hollowness Improvement
Means for combined left and right eyes
in patients treated with BELOTERO
BALANCE at three time points.

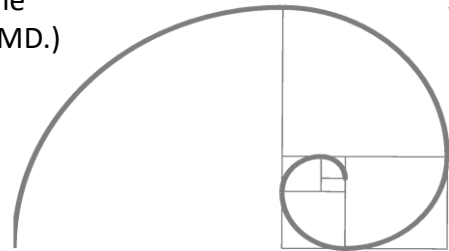




(Above) Baseline. Treated with 1.0 mL of BELOTERO BALANCE and 0.2 mL of BELOTERO BALANCE at touch-up 2 weeks later. (Below) 10 months after baseline treatment. (Images courtesy of Oscar Hevia MD.)

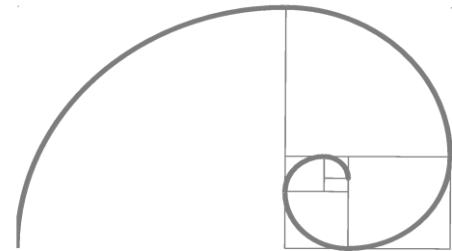


(Above) Baseline. Treated with 2.0 mL of BELOTERO BALANCE and 0.2 mL of BELOTERO BALANCE at touch-up 2 weeks later. (Below) 6 months after baseline treatment. (Images courtesy of Oscar Hevia MD.)



#2 Study

- Method
 - Retrospective evaluation of 45 Caucasian female patients ≥ 40 years (mean age of $[58.8 \pm 8.9]$ years).
 - Severity of tear trough was classified according to Hirmand: 3 as grade I, 28 as grade II, and 14 grade III tear trough deformities.
 - Used a monophasic hyaluronic acid, low G prime filler placed inferior to the lateral orbital thickening.
 - On average, 0.4 ml of hyaluronic acid (HA) filler were injected per side.
- Results
 - The improvement was I grade 29 patients and II grades in 16 patients. The improvement lasted (10.8 ± 2.3) months.
 - No severe adverse events were noted. Vascular danger zones can be avoided.

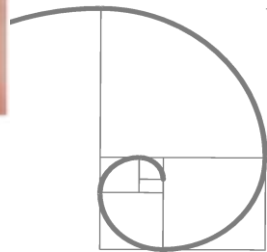




Correction of tear trough deformity class II. (A) Before and (B) after hyaluronic acid (HA) injection. Tear trough deformity was smooth end and fine wrinkling of the lower lid improved

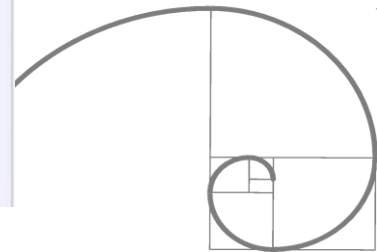
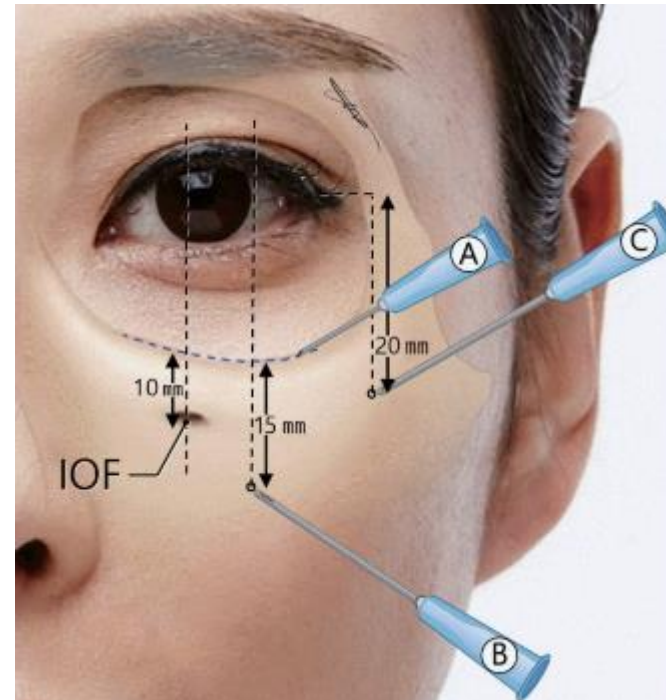
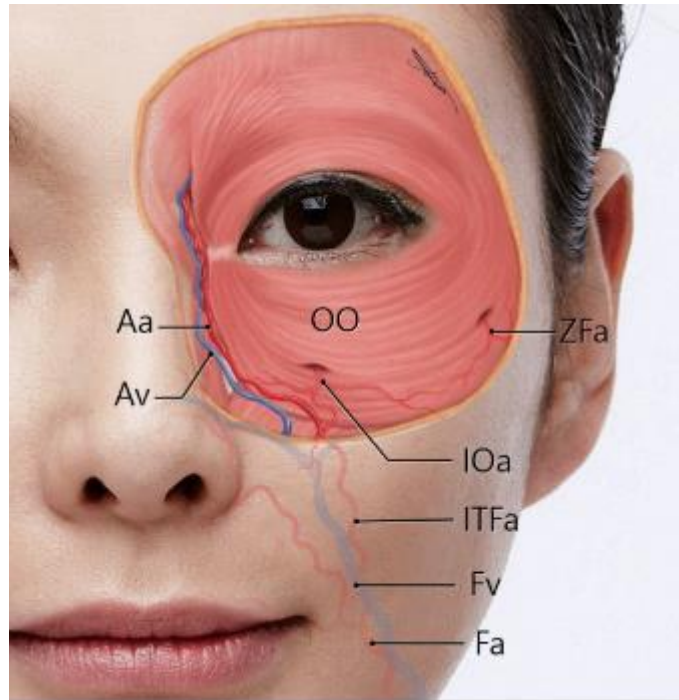


Correction of tear trough deformity class III. (A) Before and (B) after hyaluronic acid (HA) injection. Tear trough became less visible, dark circle disappeared, and wrinkling of the lower lid improved as well



Practical Pearls

- Belotero: No dilution
- Restylane: 1:1 with Lidocaine
- Cannula size: 27 Gauge - 1"
- Needle size: 30 Gauge - 1/2"
- Juvéderm Volbella XC- FDA

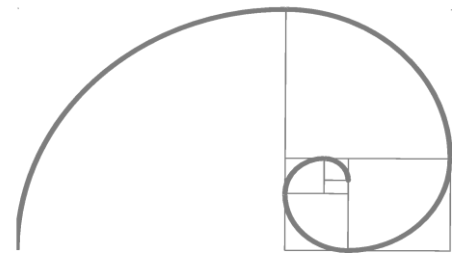




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Restylane



Different Roles

- Fillers can lift indirectly, but should be used for replacing volume only

Diagnosis

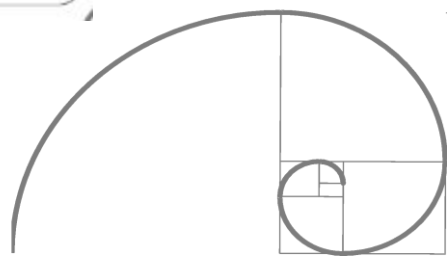
- Proper diagnosis is key for choosing the right tool!

Communication

- Discuss the limitations of each modality with the patient and understand their priorities

Combination treatment

- To address the complete picture, combination treatment is needed- HYBRID MODEL



Thank You!

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