

L1 L2 L3 L4 L5  
L6 L7 L8  
F1 F2 F3  
T1 T2 E3 E2 E1  
G2 M1 M2 M3

**MD Codes™**  
A Decade of Partnership



**AMI**  
Allergan Medical Institute

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# MD Codes™ Leaders Workbook



## Welcome to MD Codes™ Leaders

In celebration of the 10-year anniversary of MD Codes™ and Allergan Aesthetics, I reflect on a pioneering partnership that set a new standard in aesthetic medicine education.

MD Codes™ and AMI—the training arm of Allergan Aesthetics—have delivered robust, evidence-based training to more than 160,000 trained participants in more than 70 countries.<sup>1-4,\*</sup> Medical Aesthetics professionals all over the world have accessed this universal language of codes and symbols that provide specific injection guidelines detailing precise locations, target layers, delivery devices, products, and the active numbers, tailored to Allergan Aesthetics facial injectable products.<sup>1</sup> With the MD Codes™ injection methodology, practitioners can reproduce desired results no matter the patient’s gender or ethnicity.<sup>1</sup>

As new products and indications become available, MD Codes™ continually adapts to the changing facial aesthetic landscape.<sup>1</sup> For the next decade and beyond, MD Codes™, Allergan Aesthetics, and AMI will remain dedicated to empowering healthcare professionals like you with evidence-based injection techniques, constantly evolving to help redefine the future of facial aesthetics.

**Dr Maurício de Maio**  
Plastic Surgeon

**A decade of partnership. A legacy of excellence.  
A vision for innovation.**



The MD ASA™, MD Codes™, MD DYNA Codes™, and Next Human™ have been developed by Dr. Maurício de Maio (CRM/SP 69.331, RQE 14.478), and all recommendations presented in this guide are based on his extensive clinical experience and peer-reviewed publications he has authored or coauthored. Treatment must always be tailored to the individual needs of the patient. Results may vary between patients.

\*Data as of November 2024.





Not an actual patient.

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JUVÉDERM® Collection of Fillers Important Information

INDICATIONS

JUVÉDERM® VOLUMA® XC injectable gel is indicated for deep (subcutaneous and/or supraperiosteal) injection for cheek augmentation to correct age-related volume deficit in the mid-face, for augmentation of the chin region to improve the chin profile, and for supraperiosteal injection to augment the temple region to improve moderate to severe temple hollowing in adults over the age of 21.

JUVÉDERM® VOLUX® XC injectable gel is indicated for subcutaneous and/or supraperiosteal injection for improvement of jawline definition in adults over the age of 21 with moderate to severe loss of jawline definition.

JUVÉDERM® VOLLURE® XC injectable gel is indicated for injection into the mid-to-deep dermis for correction of moderate to severe facial wrinkles and folds (such as nasolabial folds) in adults over the age of 21.

JUVÉDERM® VOLBELLA® XC injectable gel is indicated for injection into the lips for lip augmentation and correction of perioral rhytids, and for the improvement of infraorbital hollowing in adults over the age of 21.

JUVÉDERM® Ultra Plus XC and JUVÉDERM® Ultra XC injectable gels are indicated for injection into the mid-to-deep dermis for correction of moderate to severe facial wrinkles and folds (such as nasolabial folds).

JUVÉDERM® Ultra XC injectable gel is also indicated for injection into the lips and perioral area for lip augmentation in adults over the age of 21.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS

These products should not be used in patients who have severe allergies, marked by a history of anaphylaxis or history or presence of multiple severe allergies, and should not be used in patients with a history of allergies to Gram-positive bacterial proteins or lidocaine contained in these products.

WARNINGS

- Do not inject into blood vessels. Introduction of these products into the vasculature may lead to embolization, occlusion of the vessels, ischemia, or infarction. Take extra care when injecting soft tissue fillers; for example, after insertion of the needle and just before injection, the plunger rod can be withdrawn slightly to aspirate and verify the needle is not intravascular, inject the product slowly, and apply the least amount of pressure necessary. Rare, but serious, adverse events associated with the intravascular injection of soft tissue fillers in the face have been reported and include temporary or permanent vision impairment, blindness, cerebral ischemia or cerebral hemorrhage leading to stroke, skin necrosis, and damage to underlying facial structures. Immediately stop the injection if a patient exhibits any of the following symptoms: changes in vision, signs of a stroke, blanching of the skin, unusual pain during or shortly after the procedure. Patients should receive prompt medical attention and, possibly, evaluation by an appropriate healthcare professional specialist should an intravascular injection occur
- Product use at specific sites in which an active inflammatory process (skin eruptions such as cysts, pimples, rashes, or hives) or infection is present should be deferred until the underlying process has been controlled

PRECAUTIONS

- To minimize the risk of potential complications, these products should only be used by healthcare professionals who are knowledgeable about the anatomy and the product(s) for use in indicated area(s), and who have appropriate training in facial anatomy, vasculature, safe injection techniques, and identification and management of potential adverse events, including intravascular complications
- The potential risks of soft tissue injections should be discussed with patients prior to treatment to ensure they are aware of signs and symptoms of complications
- The safety and effectiveness for the treatment of anatomic regions other than indicated areas for each product have not been established in controlled clinical studies
- The safety for use of these products in patients with known susceptibility to keloid formation, hypertrophic scarring, and pigmentation disorders has not been studied
- The safety for use during pregnancy and in breastfeeding females has not been established
- The safety for use of JUVÉDERM® VOLUMA® XC has been established in patients between 35 and 65 years of age for cheek augmentation, 22 and 80 years of age for chin augmentation, and 32 and 82 years of age for improvement of temple hollowing
- The safety for use of JUVÉDERM® Ultra Plus XC and JUVÉDERM® Ultra XC in patients under 18 years, and the safety for use of JUVÉDERM® VOLUX® XC, JUVÉDERM® VOLLURE® XC, and JUVÉDERM® VOLBELLA® XC in patients under 22 years, has not been established

PRECAUTIONS (continued)

- Dermal filler implantation carries a risk of infection. Follow standard precautions
- Dermal fillers should be used with caution in patients on immunosuppressive therapy
- Patients taking medications that can prolong bleeding (such as aspirin, nonsteroidal anti-inflammatory drugs, and warfarin) may experience increased bruising or bleeding at treatment sites
- Patients who experience skin injury near the site of implantation may be at a higher risk for adverse events
- If laser treatment, chemical peel, or any other procedure based on active dermal response is considered after treatment, or before skin has healed from a procedure prior to treatment, there is a possible risk of eliciting an inflammatory reaction at the injection site
- The safety for use of JUVÉDERM® VOLUMA® XC injectable gel in patients with very thin skin in the mid-face has not been established
- The safety of using a cannula with JUVÉDERM® VOLUMA® XC for cheek augmentation in patients with Fitzpatrick Skin Types V and VI or to improve temple hollowing has not been established
- JUVÉDERM® VOLUMA® XC was not evaluated in subjects with significant skin laxity of the chin, neck, or jaw in the chin augmentation study
- The effect of JUVÉDERM® VOLUMA® XC injection into the chin on facial hair growth has not been studied
- Patients may experience late-onset adverse events with injectable gel implants, and late-onset nodules with use of JUVÉDERM® VOLUMA® XC
- Based on preclinical studies, patients should be limited to 20 mL of any JUVÉDERM® injectable gel per 60 kg (132 lb) body mass per year. The safety of injecting greater amounts has not been established
- Injection of more than 9 mL of JUVÉDERM® VOLUX® XC for improvement of jawline definition has not been studied

ADVERSE EVENTS

The most common reported side effects for JUVÉDERM® injectable gels were redness, swelling, pain, tenderness, firmness, lumps/bumps, bruising, discoloration, and itching. For JUVÉDERM® VOLBELLA® XC, dryness was also reported. The majority were mild or moderate in severity.

To report an adverse reaction with any product in the JUVÉDERM® Collection, please call Allergan® Product Support at 1-877-345-5372. Please visit [rxabbvie.com](http://rxabbvie.com) for more information.

Products in the JUVÉDERM® Collection are available only by a licensed physician or properly licensed practitioner.













# Introduction to the MD Codes™



Ck: cheek, C: chin, Jw: jawline, T: temple, M: marionette line, NL: nasolabial fold, Tt: tear trough, Lp: lip.  
Not an actual patient. This is a representation of injection points for the JUVÉDERM® Collection of Fillers with the MD Codes™ developed by Dr. Mauricio de Maio.

UPPER FACE /MIDFACE		<p><b>JUVÉDERM® VOLUMA® XC</b> injectable gel is indicated for deep (subcutaneous and/or supraperiosteal) injection for cheek augmentation to correct age-related volume deficit in the midface, and for supraperiosteal injection to augment the temple region to improve temple hollowing in adults over the age of 21.<sup>5</sup></p>
CHIN		<p><b>JUVÉDERM® VOLUMA® XC</b> injectable gel is indicated for deep (subcutaneous and/or supraperiosteal) injection for augmentation of the chin region to improve the chin profile in adults over the age of 21.<sup>5</sup></p>
JAWLINE		<p><b>JUVÉDERM® VOLUX® XC</b> injectable gel is indicated for subcutaneous and/or supraperiosteal injection for improvement of jawline definition in adults over the age of 21 with moderate to severe loss of jawline definition.<sup>6</sup></p>
LOWER FACE		<p><b>JUVÉDERM® VOLLURE® XC</b> injectable gel is indicated for injection into the mid to deep dermis for correction of moderate to severe facial wrinkles and folds (such as nasolabial folds [NLFs]) in adults over the age of 21.<sup>7</sup></p>
		<p><b>JUVÉDERM® Ultra Plus XC</b> injectable gel is indicated for injection into the mid to deep dermis for correction of moderate to severe facial wrinkles and folds (such as NLFs).<sup>8</sup></p>
LIPS AND PERIORAL AREA		<p><b>JUVÉDERM® VOLBELLA® XC</b> injectable gel is indicated for injection into the lips for lip augmentation and for the correction of perioral rhytids in adults over the age of 21.<sup>9</sup></p>
		<p><b>JUVÉDERM® Ultra XC</b> injectable gel is indicated for injection into the lips and perioral area for lip augmentation in adults over the age of 21.<sup>10</sup></p>
INFRAORBITAL HOLLOW		<p><b>JUVÉDERM® VOLBELLA® XC</b> injectable gel is indicated for improvement of infraorbital hollowing in adults over the age of 21.<sup>9</sup></p>

Please note that the safety and efficacy of these products for combined use have not been studied.

# What are the MD Codes™?

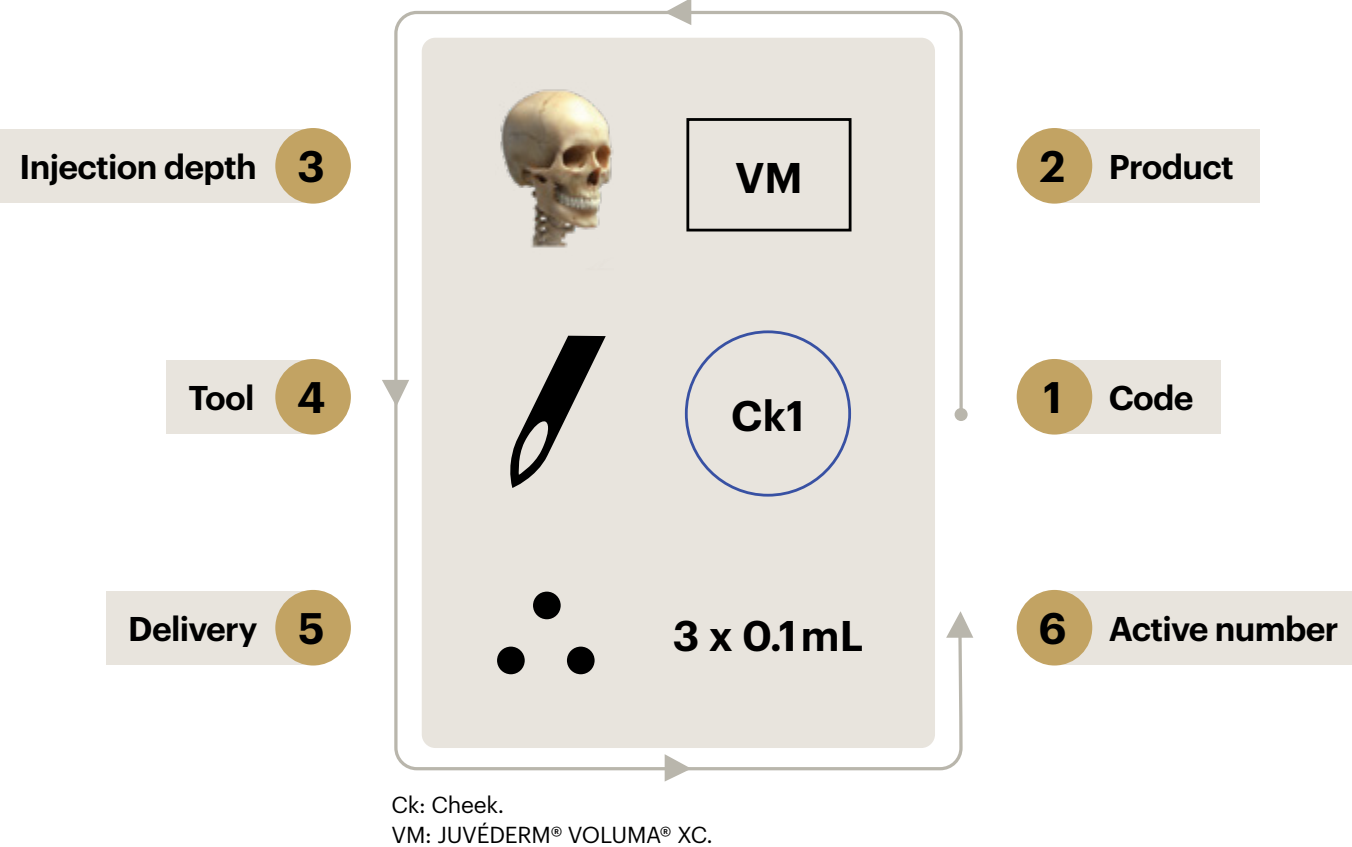
## The MD Codes™ are:

- A series of predefined injection sites (subunits) within each anatomical unit that demonstrates how to rebuild the unit in an architectural manner¹
- The MD Codes™ were developed for use with HA fillers, with a focus on the JUVÉDERM® Collection based on clinical experience<sup>5-12</sup>
- A universal language for facial aesthetics that enables injectors to accurately read the complex messages of the face to strategize treatment and help achieve desired and reproducible results¹

## The MD Codes™ Flashcard

The MD Codes™ Flashcard contains symbols and codes required for treatment. Each card provides the injection code, product code, injection depth, tool, and delivery symbols. Flashcards are read counterclockwise starting with the injection code, shown here in a blue circle.¹

## Flashcard: Begin with the code¹



# The Language of the MD Codes™

## Each code is depicted with a combination of the following¹:

LETTER	The anatomical area (eg, Ck = cheek)
NUMBER	The subunit of the anatomical unit (eg, Ck1 = zygomatic arch; Ck2 = zygomatic eminence)
NUMBER LOCATION	The side of the face (eg, Ck1R is the zygomatic arch on the right-hand side; Ck1L is the zygomatic arch on the left-hand side)
NUMBER POSITION	Superscript (X <sup>n</sup> ) refers to upper areas (eg, Lp <sup>1</sup> = vermilion body of the upper lip) Subscript (X <sub>n</sub> ) refers to lower areas (eg, Lp <sub>1</sub> = vermilion body of the lower lip)
COLOR	Alert areas denoted in red
SHAPE	Technical delivery of the product (eg, linear, fanning, aliquots, bolus)



# The Language of the MD Codes™

## The MD Codes™ and treatment areas¹

Ck	Cheek	The 5-point cheek: Ck1, Ck2, Ck3, Ck4, Ck5
C	Chin	The 6-point chin: C1, C2, C3, C4, C5, C6
Jw	Jawline	The 5-point jawline: Jw1, Jw2, Jw3, Jw4, Jw5
T	Temple	The 2-point temple: T1, T2
M	Marionette line	The 3-point marionette line: M1, M2, M3
NL	Nasolabial fold	The 3-point nasolabial fold: NL1, NL2, NL3
Tt	Tear trough	The 3-point tear trough: Tt1, Tt2, Tt3
Lp	Lip	The 8-point lip: Lp1, Lp2, Lp3, Lp4, Lp5, Lp6, Lp7, Lp8

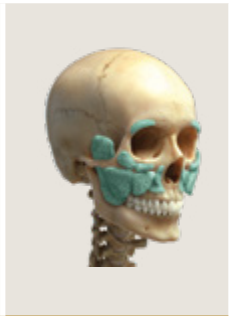
## The MD Codes™ : product name abbreviations

VM	JUVÉDERM® VOLUMA® XC	VX	JUVÉDERM® VOLUX® XC
VL	JUVÉDERM® VOLLURE® XC	VB	JUVÉDERM® VOLBELLA® XC
JUP	JUVÉDERM® ULTRA PLUS XC	JU	JUVÉDERM® ULTRA XC

Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.

## MD Codes™ : injection depth¹

Targeted structure

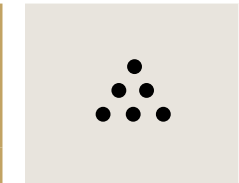
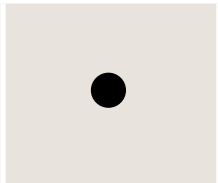
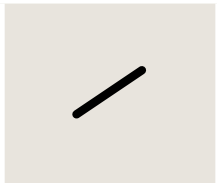


					
Supraperiosteal	Deep fat pads	Subcutaneous	SOOF*	Dermal/subdermal	Mucosa/submucosa

\*Suborbicularis oculi fat.



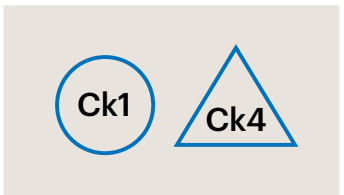

## MD Codes™ : key symbols¹

Tools

Injection delivery

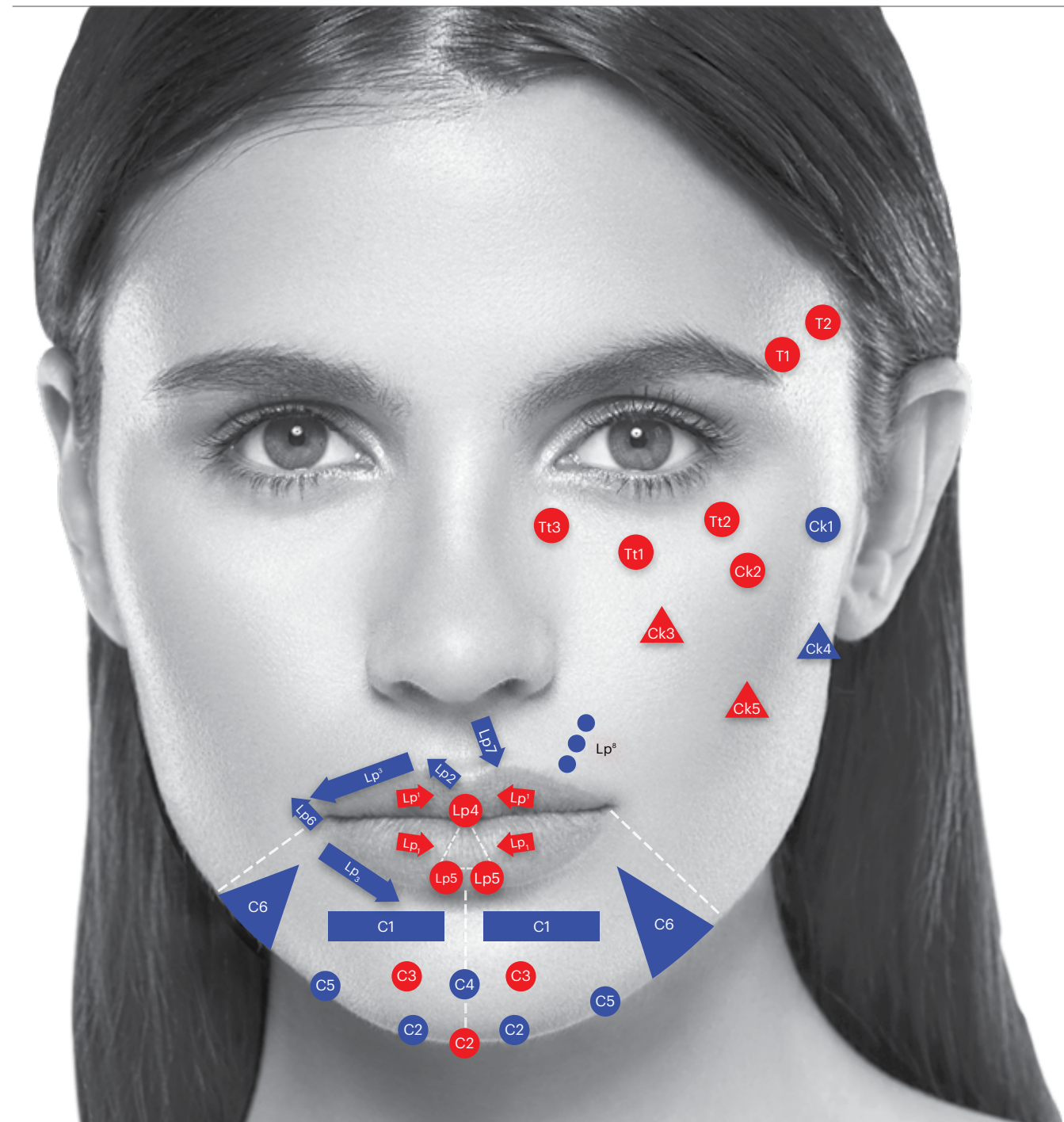
 Needle	 Microaliquot 0.01–0.05 mL	 Aliquot 0.1–0.2 mL	 Bolus 0.3 mL	 Linear 0.5 mL	 Fanning 0.5 mL
 Cannula					

## MD Codes™ language: cheek as an example¹

			
Letters Anatomical area (eg, Cheek)	Numbers The subunit of the anatomical unit (eg Ck1 = zygomatic arch)	Shapes Technical delivery of the product	Colors Red indicates an alert area

Ck: cheek.

# The Language of the MD Codes™

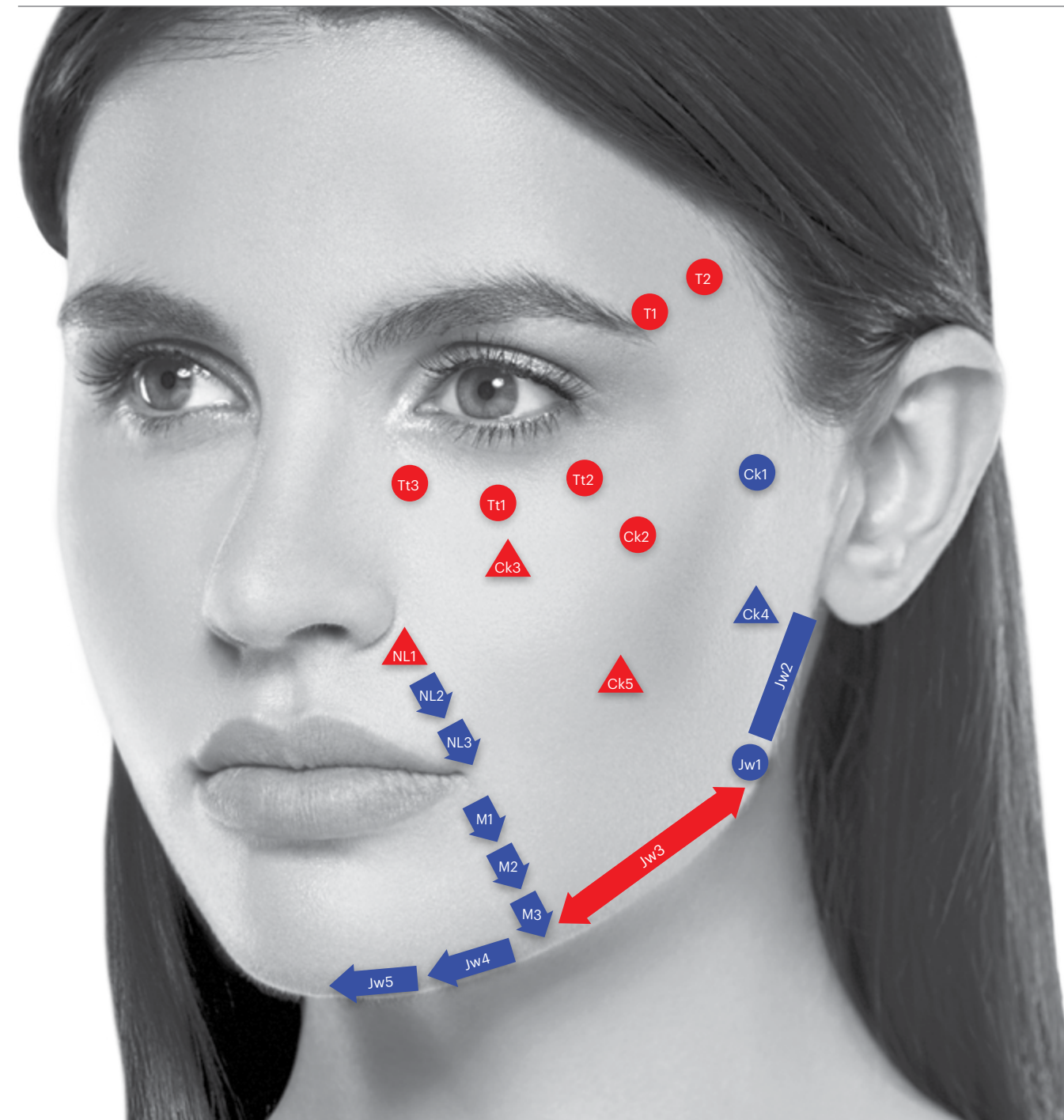


● Alert areas

Image for illustrative purposes only. Not an actual patient.

Ck: cheek, C: chin, Jw: jawline, T: temple, M: marionette lines, NL: nasolabial fold, Tt: tear trough, Lp: lip.

Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.



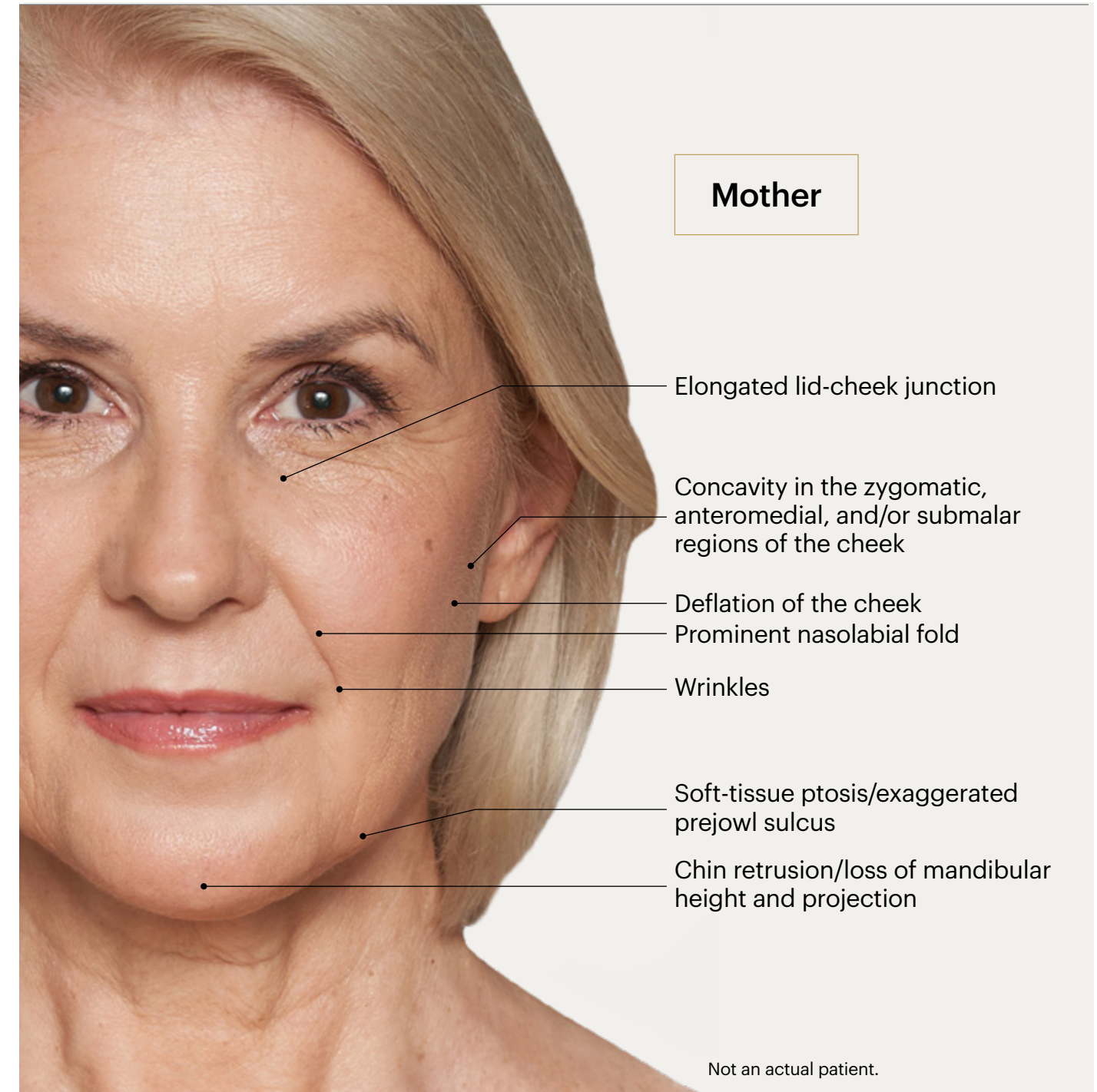
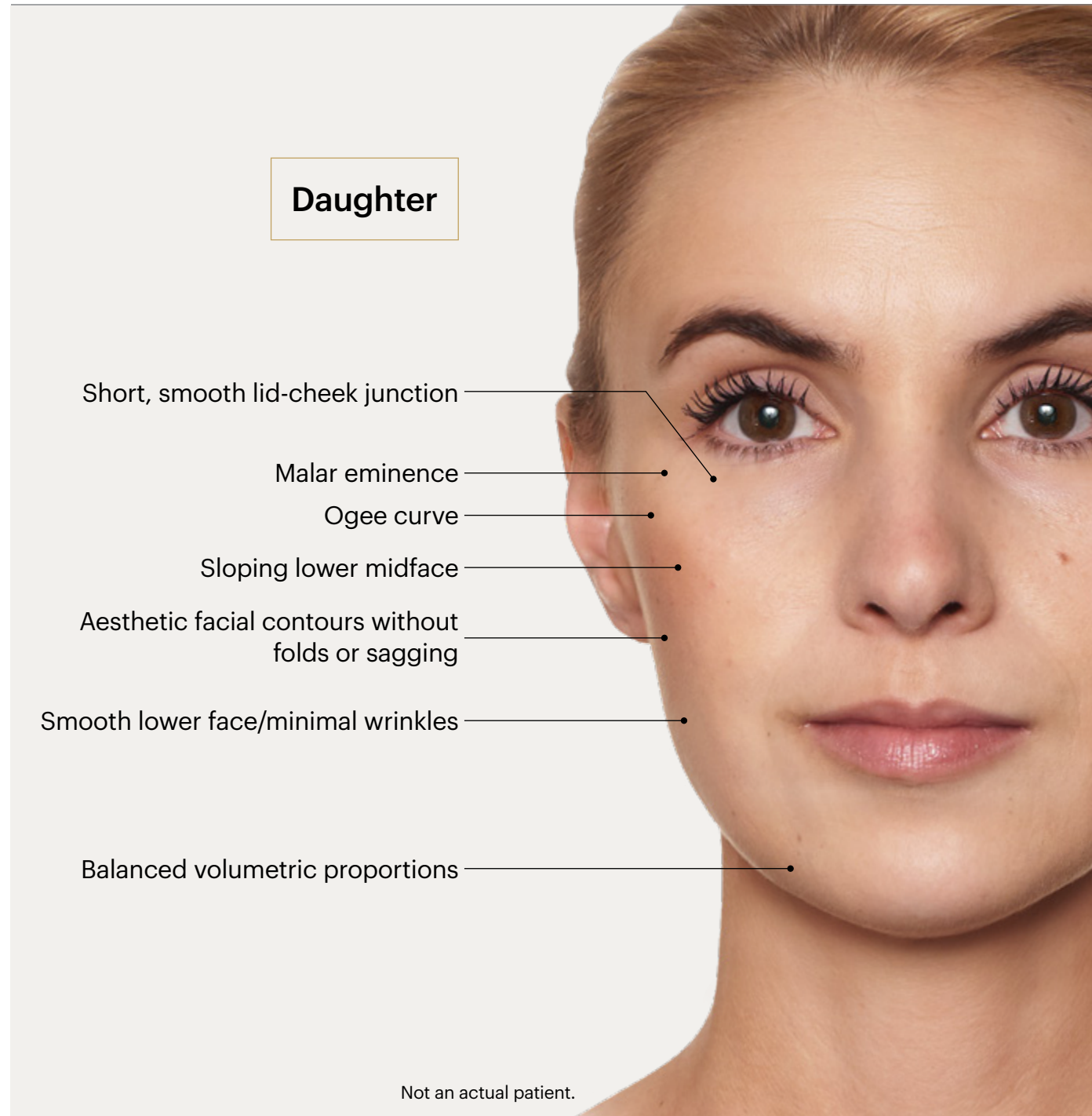
● Alert areas

Image for illustrative purposes only. Not an actual patient.

Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.



## Facial changes over time<sup>13-16</sup>



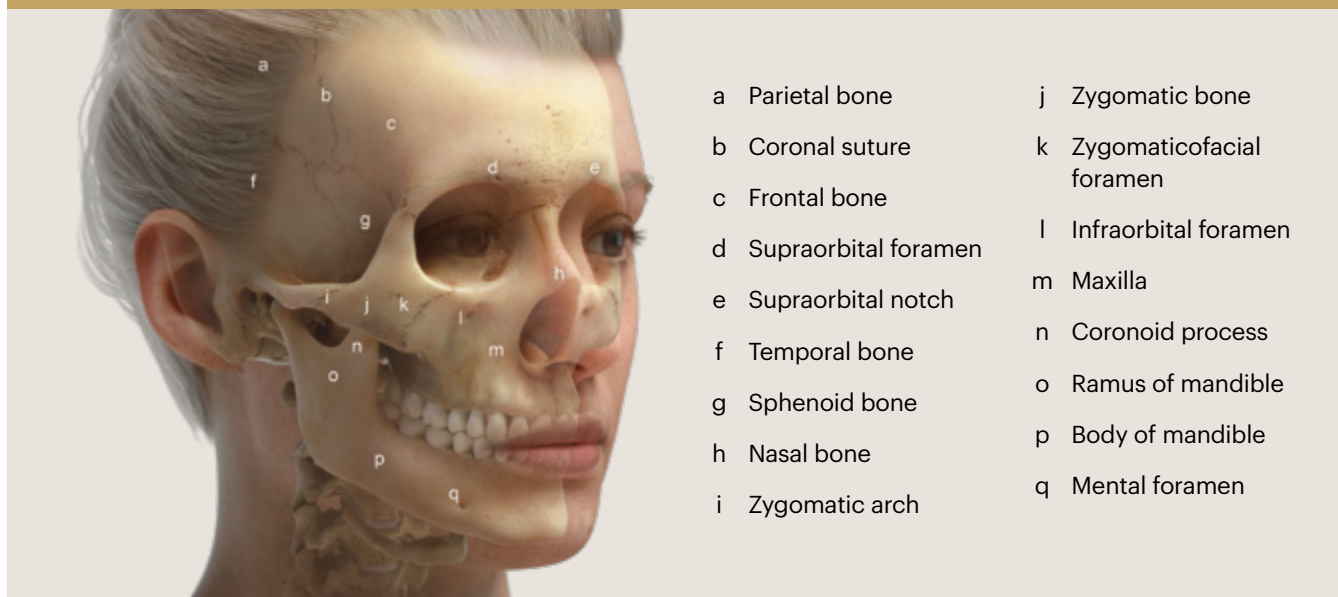
# Main layers and structures of the face

## Main layers and structures of the face

- Bone
- Deep fat
- Muscle
- Superficial fat
- Vasculature
- Skin

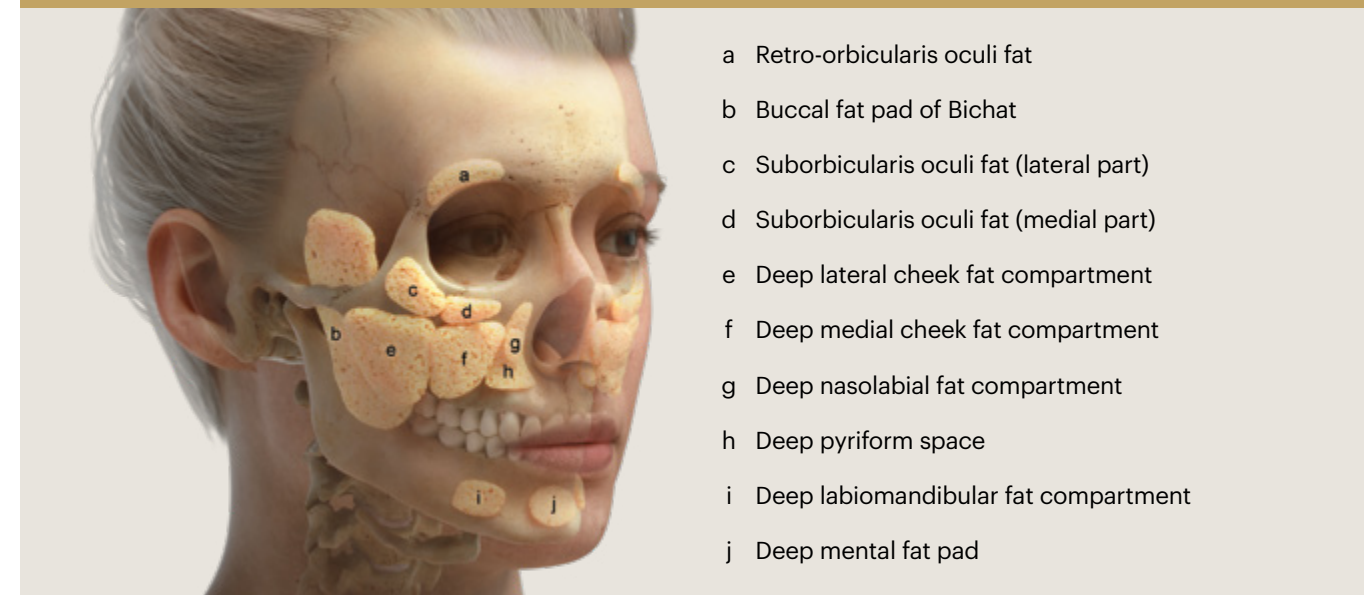


## Facial skeleton/bone



Bones form the framework for all the other layers and undergo growth and selective resorption throughout life.<sup>17</sup>

## Deep fat compartments



Deep fat pads run deep to the SMAS\* layer and are loosely held in a honeycomb of fascia.<sup>18,19</sup>

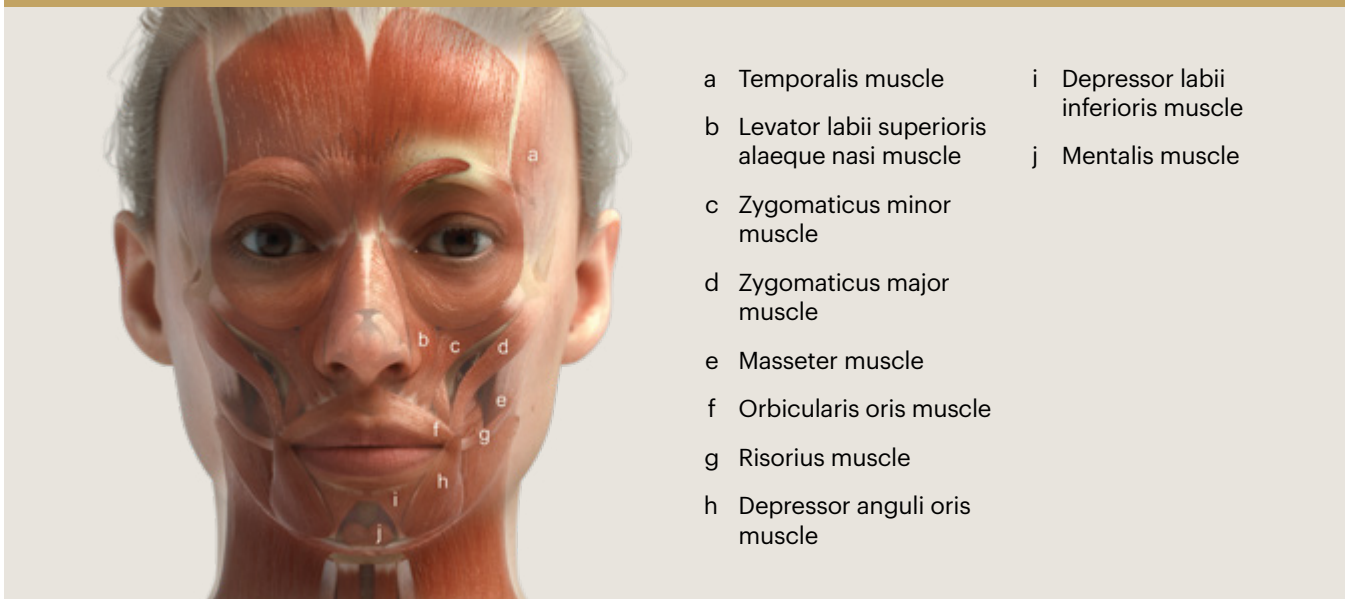
\*SMAS: superficial muscular aponeurotic system.

NOTES:



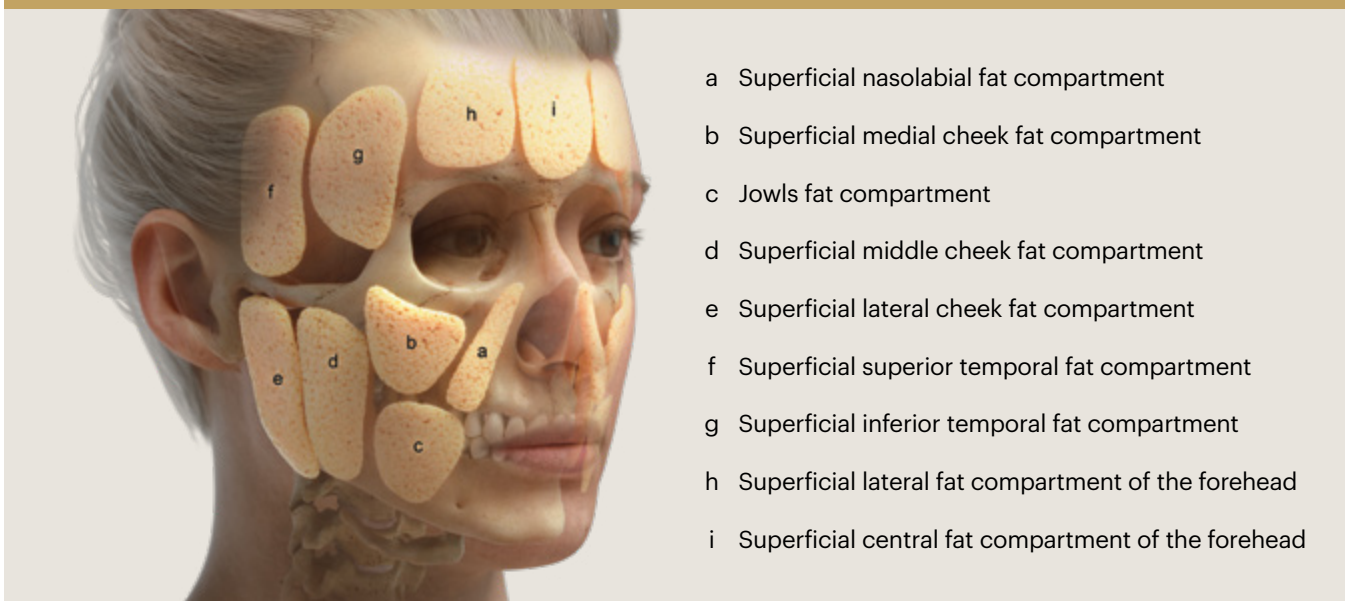
# Anatomy overview

## Muscles



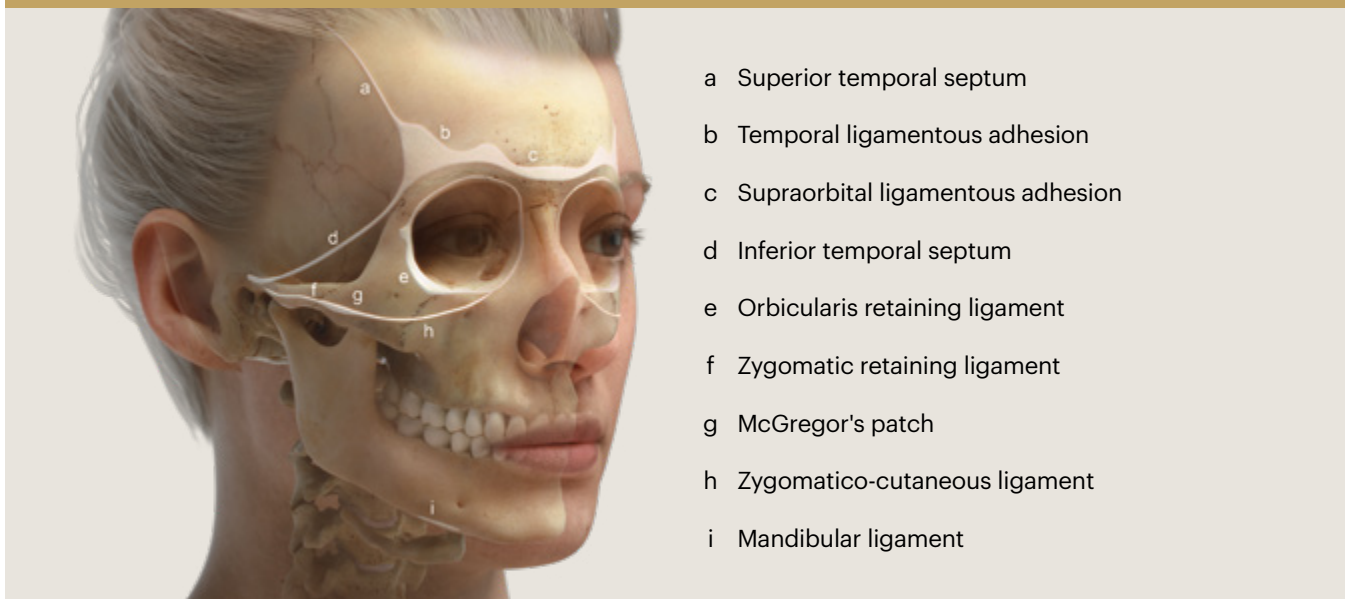
Mimetic muscles control dynamic movement in the face. These muscles are thin and flat, and act either as sphincters of facial orifices, as dilators, or as elevators and depressors of the eyebrows and mouth.<sup>15</sup>

## Superficial fat compartments



Superficial fat pad compartments are separated from one another by delicate facial tissue and septa where adjacent compartments meet to form retaining ligaments.<sup>15</sup>

## Ligaments



Retaining ligaments are strong and fibrous attachments running perpendicular through the facial layers.<sup>20</sup>

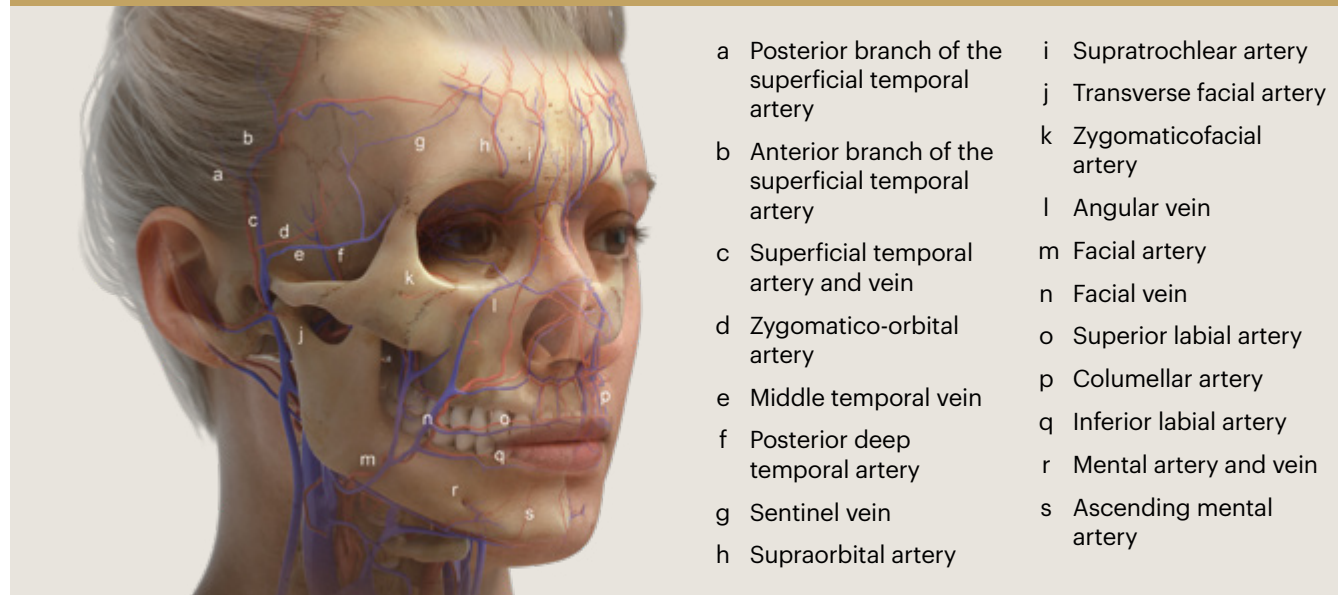
Their function is to<sup>20</sup>:

- retain or hold the facial structures and soft tissue together
- anchor the soft tissue to the skeletal foundation below and support fascia soft tissue against forces of gravity

NOTES:

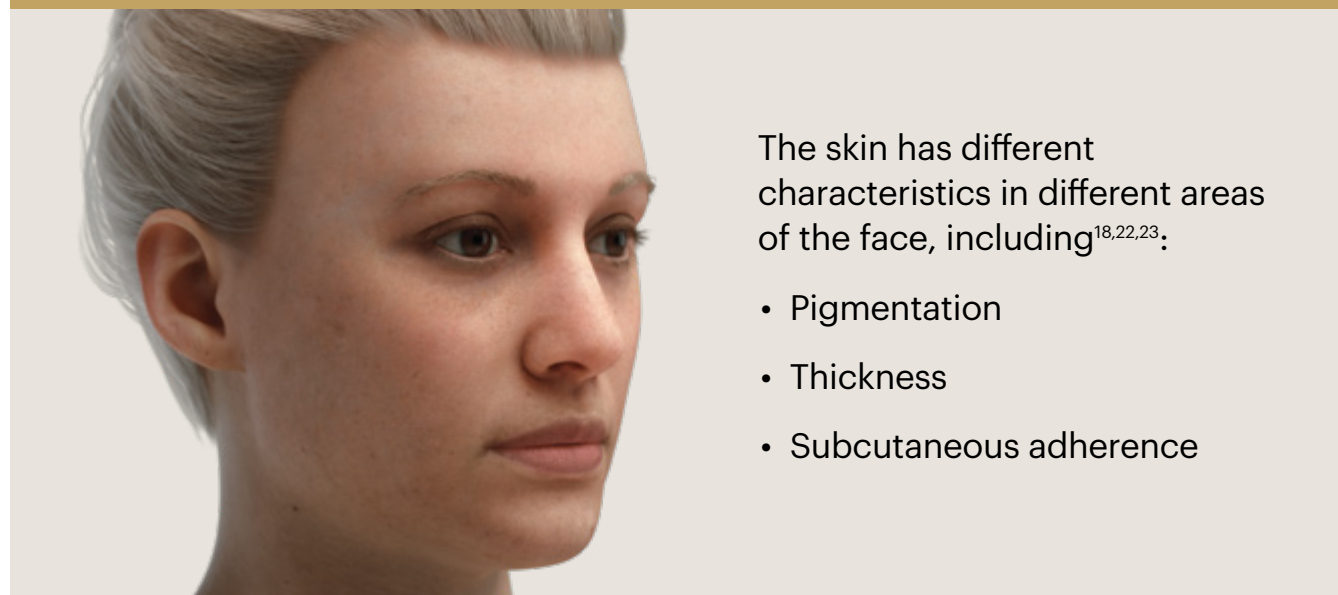
## Anatomy overview (continued)

## Vasculature



The location, size, and origin of the major arteries may vary between individuals.<sup>21</sup>

## Skin



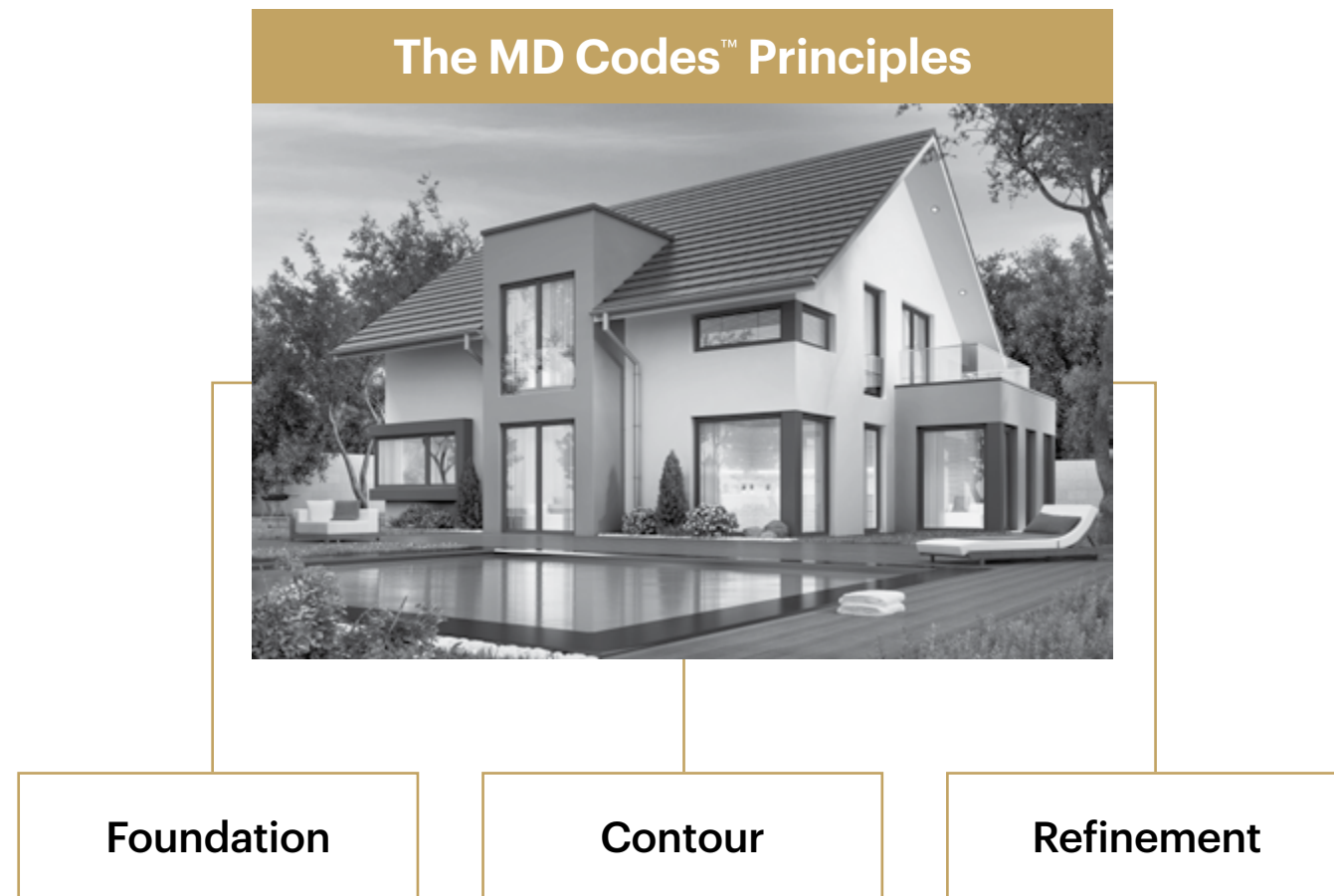
## Notes



## Notes

## Notes

## MD Codes™ analogy: the face is like a house



The MD Codes™ sequential approach is described using the analogy of the construction of a house<sup>1</sup>:

- Laying a **foundation** is always the first step: **Ck codes**
- This is followed by **contouring**, or constructing the framing, floors, and walls: **C, Jw, and T codes**
- **Refinements**, such as interior décor, are added last: **NL, M, Tt, and Lp codes**

Ck: cheek, C: chin, Jw: jawline, T: temple, NL: nasolabial fold, M: marionette line, Tt: tear trough, Lp: lip.

## MD Codes™ FCR

### Foundation – Contour – Refinement<sup>1</sup>

#### Step 1

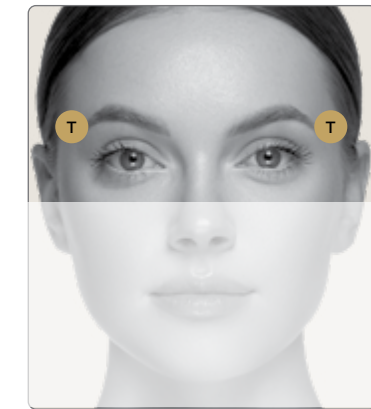
##### Foundation



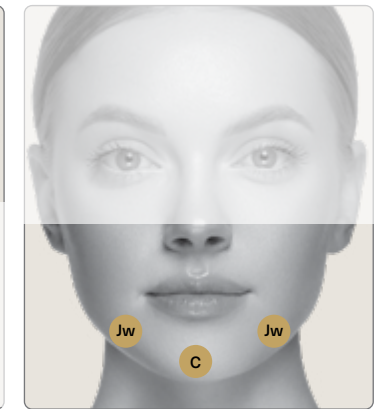
**Midface**  
Ck: Cheek

#### Step 2

##### Contour and definition



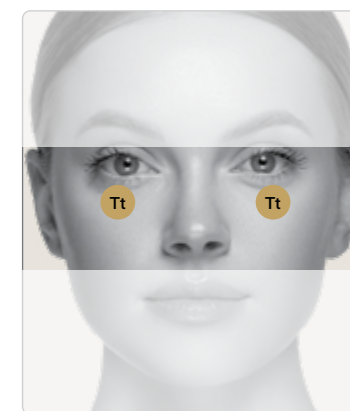
**Upper face**  
T: Temple



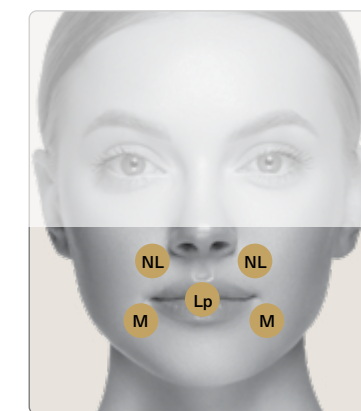
**Lower face**  
C: Chin  
Jw: Jawline

#### Step 3

##### Refinement



**Periorbital**  
Tt: Tear trough

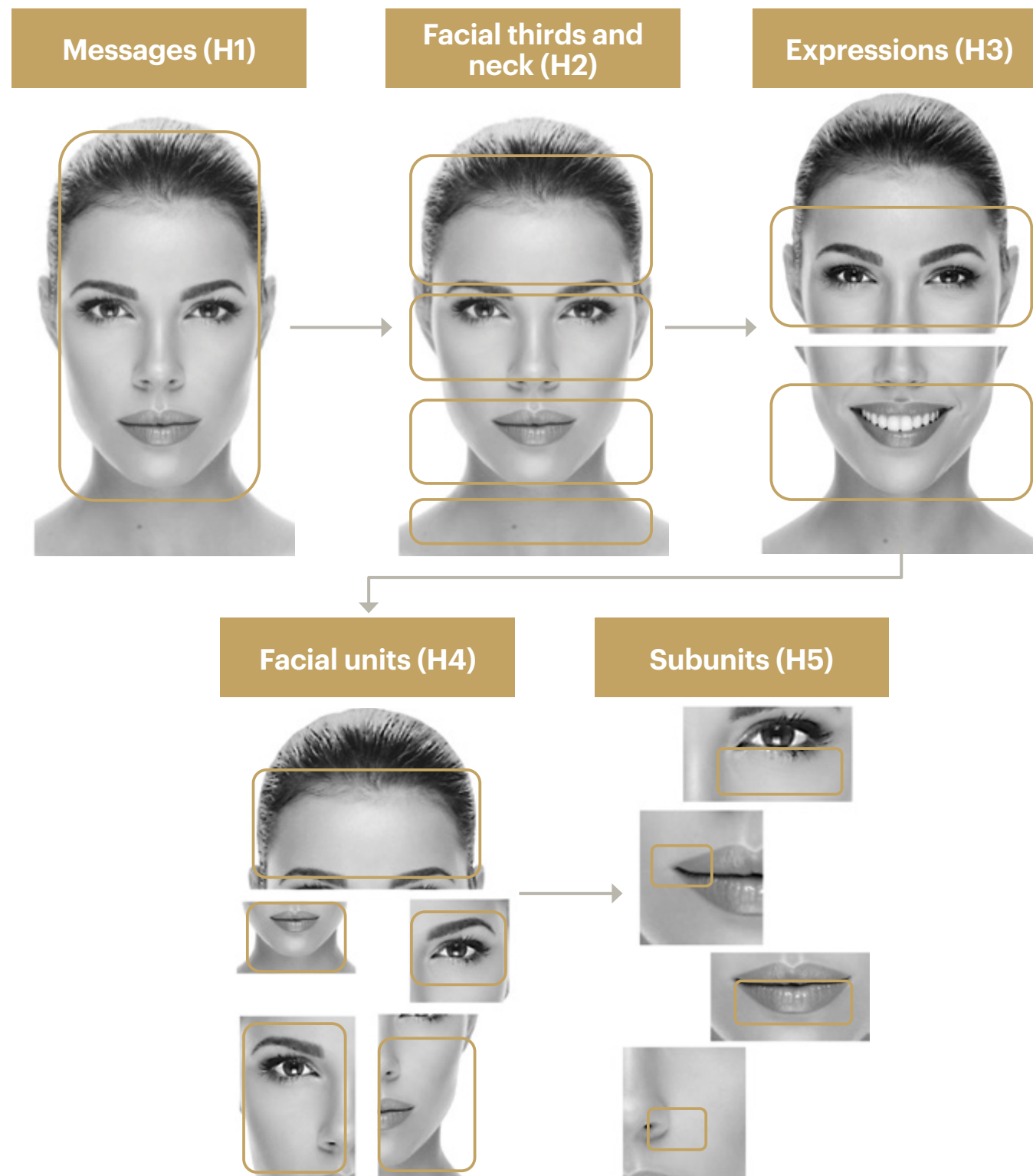


**Perioral**  
Lp: Lip  
NL: Nasolabial fold  
M: Marionette line

Images for illustrative purposes only. Not an actual patient. The circles do not indicate injection points for the MD Codes™.



## MD ASA™: The aesthetic hierachy<sup>2</sup>



Not an actual patient.  
MD ASA™: Multi-Dimensional Aesthetic Scan Assessment.

## MD ASA™: The systemic process of facial evaluation<sup>2</sup>



Not an actual patient.

# PATIENT 1 Expert consults

About the patient’s medical history

☐ Medical history reviewed

☐ Surgical history reviewed

☐ Aesthetic treatment history reviewed

About the patient’s self-assessment

MIRROR: Please ask the patient to select 3 facial areas.

Patient wants: facial areas

1	
2	
3	

PHOTOS: Please ask the patient to select 3 facial areas.

Patient wants: facial areas

1	
2	
3	

## MD ASA™ H1

EXPERT OPINION: What are the top 3 priorities for treatment in order of rank?

Patient needs: facial areas

1	
2	
3	

Ck: cheek. NL: nasolabial fold.

# PATIENT 1 Expert works

MD ASA™ H2 and H5: Key structural facial signs assessed live and with photos

Anatomical location	Assess structure and volume	Assessment of severity
Ck1: Zygomatic arch	Volume loss/sagginess in the upper cheek	∅ + ++ +++
	Loss of definition/contour in the upper cheek	∅ + ++ +++
Ck4: Lateral lower cheek	Volume loss/hollowness in lower lateral cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
Ck3: Anteromedial cheek	Loss of projection in the anteromedial cheek	∅ + ++ +++
	Volume loss in the anteromedial cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
NL1: Upper NLF	Prominence of upper nasolabial fold	∅ + ++ +++
NL2: Central NLF	Prominence of central nasolabial fold	∅ + ++ +++
NL3: Lower NLF	Prominence of lower nasolabial fold	∅ + ++ +++

Legend					
∅	Absent	+	Mild	++	Moderate
+++	Severe				



## PATIENT 1 *Expert plans*

## Treatment plan

Create the MD Codes™ Formula treatment plan.

SESSION 1	
SESSION 2	
SESSION 3	
SESSION 4	
SESSION 5	

## Notes

## PATIENT 2 Expert consults

About the patient’s medical history

☐ Medical history reviewed

☐ Surgical history reviewed

☐ Aesthetic treatment history reviewed

About the patient’s self-assessment

**MIRROR:** Please ask the patient to select 3 facial areas.

Patient **wants:** facial areas

1	
2	
3	

**PHOTOS:** Please ask the patient to select 3 facial areas.

Patient **wants:** facial areas

1	
2	
3	

### MD ASA™ H1

**EXPERT OPINION:** What are the top 3 priorities for treatment in order of rank?

Patient **needs:** facial areas

1	
2	
3	

Ck: cheek. NL: nasolabial fold.

## PATIENT 2 Expert works

**MD ASA™ H2 and H5:** Key *structural* facial signs assessed live and with photos

Anatomical location	Assess structure and volume	Assessment of severity
Ck1: Zygomatic arch	Volume loss/sagginess in the upper cheek	∅ + ++ +++
	Loss of definition/contour in the upper cheek	∅ + ++ +++
Ck4: Lateral lower cheek	Volume loss/hollowness in lower lateral cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
Ck3: Anteromedial cheek	Loss of projection in the anteromedial cheek	∅ + ++ +++
	Volume loss in the anteromedial cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
NL1: Upper NLF	Prominence of upper nasolabial fold	∅ + ++ +++
NL2: Central NLF	Prominence of central nasolabial fold	∅ + ++ +++
NL3: Lower NLF	Prominence of lower nasolabial fold	∅ + ++ +++

Legend					
∅	Absent	+	Mild	++	Moderate
+++	Severe				



## PATIENT 2 *Expert plans*

## Treatment plan

Create the MD Codes™ Formula treatment plan.

SESSION 1	
SESSION 2	
SESSION 3	
SESSION 4	
SESSION 5	

## Notes

# PATIENT 3 Expert consults

About the patient’s medical history

☐ Medical history reviewed

☐ Surgical history reviewed

☐ Aesthetic treatment history reviewed

About the patient’s self-assessment

MIRROR: Please ask the patient to select 3 facial areas.

Patient wants: facial areas

1	
2	
3	

PHOTOS: Please ask the patient to select 3 facial areas.

Patient wants: facial areas

1	
2	
3	

## MD ASA™ H1

EXPERT OPINION: What are the top 3 priorities for treatment in order of rank?

Patient needs: facial areas

1	
2	
3	

Ck: cheek. NL: nasolabial fold.

Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.

# PATIENT 3 Expert works

MD ASA™ H2 and H5: Key structural facial signs assessed live and with photos

Anatomical location	Assess structure and volume	Assessment of severity
Ck1: Zygomatic arch	Volume loss/sagginess in the upper cheek	∅ + ++ +++
	Loss of definition/contour in the upper cheek	∅ + ++ +++
Ck4: Lateral lower cheek	Volume loss/hollowness in lower lateral cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
Ck3: Anteromedial cheek	Loss of projection in the anteromedial cheek	∅ + ++ +++
	Volume loss in the anteromedial cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
NL1: Upper NLF	Prominence of upper nasolabial fold	∅ + ++ +++
NL2: Central NLF	Prominence of central nasolabial fold	∅ + ++ +++
NL3: Lower NLF	Prominence of lower nasolabial fold	∅ + ++ +++

Legend					
∅	Absent	+	Mild	++	Moderate
+++	Severe				



## PATIENT 3 *Expert plans*

## Treatment plan

Create the MD Codes™ Formula treatment plan.

SESSION 1	
SESSION 2	
SESSION 3	
SESSION 4	
SESSION 5	

**Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.**

## Notes

## PATIENT 4 Expert consults

About the patient’s medical history

☐ Medical history reviewed

☐ Surgical history reviewed

☐ Aesthetic treatment history reviewed

About the patient’s self-assessment

**MIRROR:** Please ask the patient to select 3 facial areas.

Patient **wants:** facial areas

1	
2	
3	

**PHOTOS:** Please ask the patient to select 3 facial areas.

Patient **wants:** facial areas

1	
2	
3	

### MD ASA™ H1

**EXPERT OPINION:** What are the top 3 priorities for treatment in order of rank?

Patient **needs:** facial areas

1	
2	
3	

Ck: cheek. NL: nasolabial fold.

Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.

## PATIENT 4 Expert works

**MD ASA™ H2 and H5:** Key *structural* facial signs assessed live and with photos

Anatomical location	Assess structure and volume	Assessment of severity
Ck1: Zygomatic arch	Volume loss/sagginess in the upper cheek	∅ + ++ +++
	Loss of definition/contour in the upper cheek	∅ + ++ +++
Ck4: Lateral lower cheek	Volume loss/hollowness in lower lateral cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
Ck3: Anteromedial cheek	Loss of projection in the anteromedial cheek	∅ + ++ +++
	Volume loss in the anteromedial cheek	∅ + ++ +++
	Sagginess	∅ + ++ +++
NL1: Upper NLF	Prominence of upper nasolabial fold	∅ + ++ +++
NL2: Central NLF	Prominence of central nasolabial fold	∅ + ++ +++
NL3: Lower NLF	Prominence of lower nasolabial fold	∅ + ++ +++

Legend					
∅	Absent	+	Mild	++	Moderate
+++	Severe				



## PATIENT 4 Expert *plans*

## Treatment plan

Create the MD Codes™ Formula treatment plan.

SESSION 1	
SESSION 2	
SESSION 3	
SESSION 4	
SESSION 5	

**Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.**

## Notes

# JUVÉDERM® Collection of Fillers highlights and rheology

**SPECIFICALLY DESIGNED**<sup>5-10,24</sup>

The JUVÉDERM® Collection offers a true range of products specifically designed to help you achieve your facial aesthetic goals. One collection, 6 products, 10 FDA approvals, which allow for a completely customized treatment plan.

**SMOOTH. NATURAL-LOOKING. LONG-LASTING.**<sup>5-10,24-29,\*</sup>

The products in the JUVÉDERM® Collection of fillers are FDA approved with long-lasting duration.<sup>5-10</sup>

**2X MORE PROVIDERS PREFER JUVÉDERM® OVER OTHER DERMAL FILLER BRANDS**<sup>30,†</sup>

In a survey of HCPs (n = 440) with experience using 3+ dermal filler brands, including JUVÉDERM®, over 2X more providers preferred the JUVÉDERM® brand over the other dermal filler brands.\*

**WELL-STUDIED**<sup>31</sup>

The JUVÉDERM® Collection of Fillers has established safety profiles, and the JUVÉDERM® fillers have been included in over 330 publications worldwide.<sup>31,‡</sup>

\*In a survey of patients (n = 368) who have been treated with one or more filler products in the past 2 years.  
 †Based on a May-June 2022 US healthcare provider survey (n = 440) of current injectors of Allergan Aesthetics dermal fillers who must have used at least 2 other aesthetic dermal fillers from 2 separate aesthetics companies.  
 ‡Data on file, Allergan, July 20, 2022; Number of Allergan product publications.

## JUVÉDERM® VOLUMA® XC

Designed for lift and contour for up to 2 years in the cheeks with optimal treatment.<sup>5,24</sup>

Highest lift capacity of any FDA-approved HA midface filler.<sup>5,24</sup>

A structural gel that may be gently sculpted and massaged with little spread.<sup>5,24</sup>

**HA Concentration**<sup>5</sup>  
20 mg/mL

Gel properties assessed in vitro. Clinical significance has not been established.

**GEL PROPERTIES**<sup>24</sup>

**G' (FIRMNESS)**

**COHESIVITY**

**WATER AFFINITY (EXPANDABILITY)**

## JUVÉDERM® VOLLURE® XC

Designed for a natural look that lasts.<sup>7,24</sup>

A smooth and balanced, yet spreadable, gel which may allow for easy integration to areas of facial movement<sup>7,24</sup>

Lasts through 18 months with optimal treatment.<sup>7</sup>

**HA Concentration**<sup>7</sup>  
17.5 mg/mL

Gel properties assessed in vitro. Clinical significance has not been established.

**GEL PROPERTIES**<sup>24</sup>

**G' (FIRMNESS)**

**COHESIVITY**

**WATER AFFINITY (EXPANDABILITY)**

# Aspiration and ergonomics

Clinicians should not rely on negative aspiration to rule out the risk of intravascular injection.<sup>32</sup>

**+** If aspiration is **POSITIVE**<sup>33</sup>

- Indicates possible intravascular placement
- Immediately stop injection and reposition

**—** If aspiration is **NEGATIVE**<sup>33</sup>

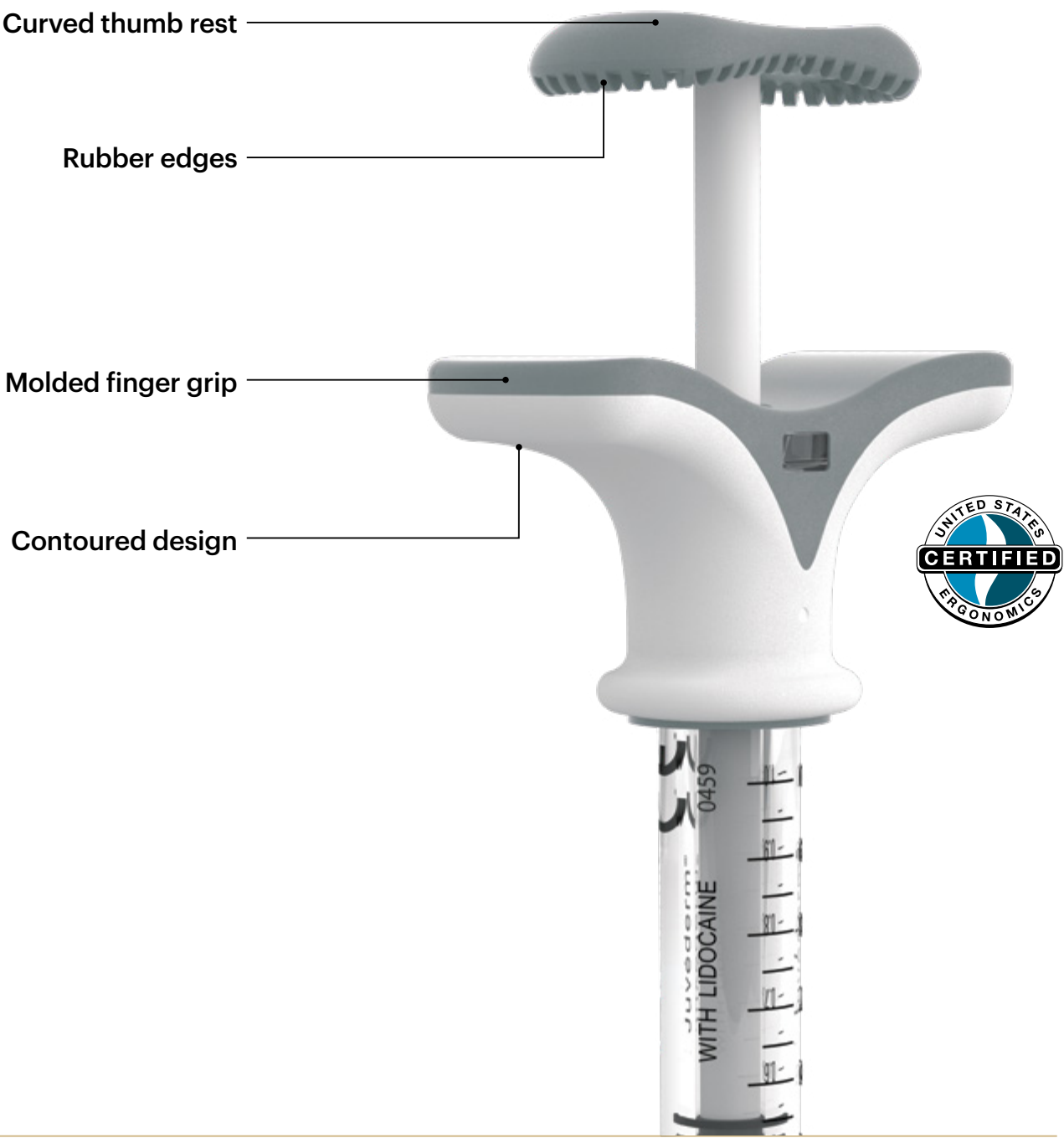
- DOES NOT exclude intravascular placement
- Proceed with caution

As you aspirate, consider<sup>34,35</sup>

Sufficient time for aspiration; 5–7 seconds, dependent on product and device	Be aware of bevel angle of needle in relationship to tissue plane	Depth and placement: subcutaneous vs suprapariosteal	Steady position and needle, with no movement

## Did you know?

The JUVÉDERM® syringe is the first and only certified ergonomic syringe, with improved injection comfort, minimal muscle fatigue, and enhanced grip.<sup>36</sup>



Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.



## Aseptic technique

## Preprocedure preparation

## Injector prep:



- Have treatment plan ready
  - Pull hair back so it does not drape over shoulders and potentially touch the patient
  - Wash hands
  - Remove all jewelry
  - Put on gloves to prepare tray
  - Prepare tray with disposable liner
    - Do not overcrowd tray, have only what will be used, plus a few extras in case obstacles are encountered
    - Marking pencils
    - Prepare all syringes by unboxing and placing them on procedure tray
    - Ensure cannulas and needles are ready for their respective syringes and codes. DO NOT REMOVE RUBBER STOPPERS UNTIL CANNULA OR NEEDLE IS APPLIED
    - Do not rest the needle or cannula on the unsterile packaging; only the product is sterile
    - Cotton-tipped applicators
    - Saturated cleansing pads (alcohol pads or hypochlorous acid pads)
- PRO TIP** Hypochlorous acid wipes do not have vasodilatory effect like alcohol
- Folded, unwoven 4" x 4" gauze for the “stop the bleeding” step
  - Sterile cotton-tipped applicators in case your assistant needs to help with a bleeding—spot as you inject other areas



- Now that the tray is ready, discard gloves and put on a clean pair for the procedure

**PRO TIP** Use gloves a size smaller than usual to ensure a tight fit. Loose, baggy gloves may contribute to contamination

## Preprocedure preparation

### Patient prep:



- Remove jewelry (earrings, necklaces, etc)
- Upon arrival, thoroughly wash entire face with facial cleanser, thoroughly dry
- Pull hair back tightly, ideally in a braid



- Apply a 2- to 3-inch headband, revealing only the front of the hairline and covering part of the ears, ensuring hair strands are pulled away from preauricular skin
- Prep skin surface with 2 antiseptic/antimicrobial solutions

NOTES:

## Aseptic technique (continued)

## During procedure



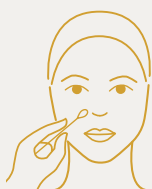
- Clean beyond the entry point before penetrating with needle or cannula
- Use noninjecting hand to help facilitate passage of cannula
- Always keep noninjecting hand opposite of cannula entry point to assist cannula passage and help reduce contamination risk
- Change the needle or cannula if contamination is suspected. This is an opportunity to identify risk factors and take immediate action to mitigate them
- Change gloves if the inner surface of lip, oral mucosa, saliva, or nasal mucosa are touched
- Change gloves if they touch anything other than the syringes or if the patient's clean skin is touched



**PRO TIP**

Change your introducer needles frequently.  
Consider changing them per region or per syringe as they become dull with each injection

## Post procedure



- Massage area with saline or antiseptic solution and gauze. Remember, needle insertion and cannula introducer sites are open wounds that must not be contaminated
- Instruct the patient to clean their cell phone prior to use
- Use a cold massage roller to help with massage of large surface areas or areas with more irregularity

## Potential points of contamination



- |                          |                 |
|--------------------------|-----------------|
| Makeup                   | Cell phones     |
| Tray                     | Instruments     |
| Filler product boxes     | Uncleansed skin |
| Injector's hands or hair | Saliva/lips     |
| Patient's hair and neck  | Cabinets/drawer |
| Treatment chair          |                 |

NOTES:

## Best practices for injecting with **needle**

1	MARK
2	CLEAN
3	PINCH AND PULL
4	NEEDLE IN
5	ASPIRATE
6	INJECT THE CODE*
7	NEEDLE OUT
8	STOP ANY BLEEDING
9	CHECK VOLUME
10	CLEAN AGAIN

\*Do not inject through the markings.

## Best practices for injecting with **cannula**

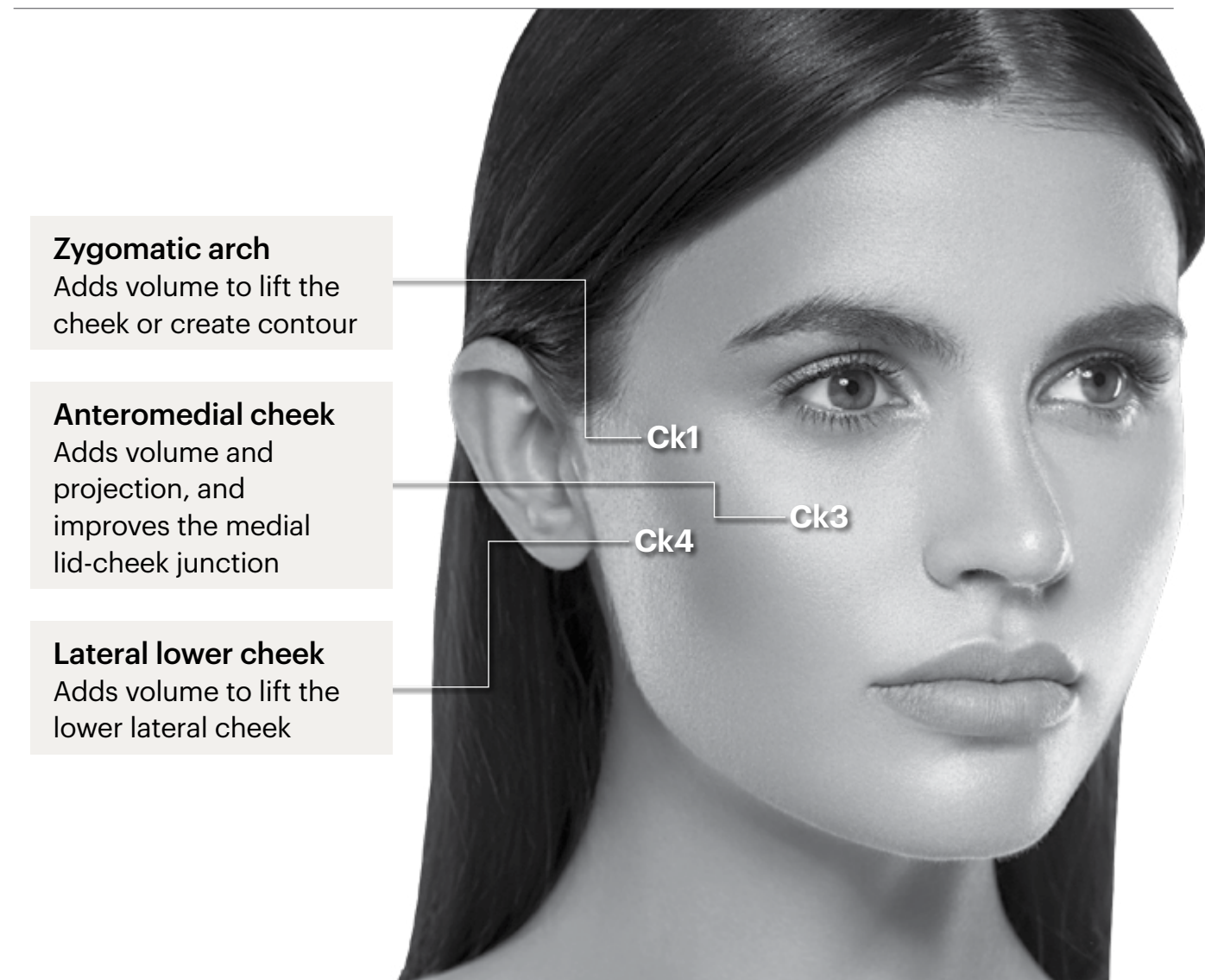
1	MARK
2	CLEAN
3	PINCH AND CLEAN AGAIN
4	INTRODUCER IN
5	CIRCULAR MOVEMENT
6	INTRODUCER OUT
7	CANNULA IN
8	INJECT THE CODE*
9	CANNULA OUT
10	STOP ANY BLEEDING
11	CHECK VOLUME
12	CLEAN AGAIN

\*Do not inject through the markings.



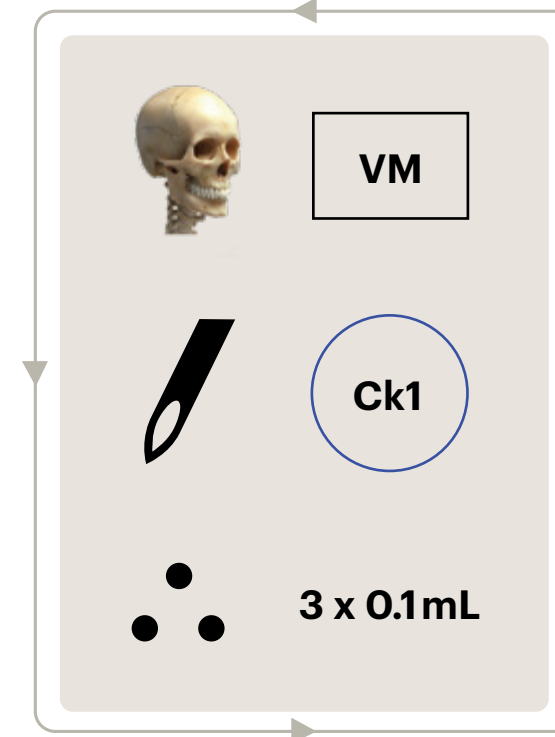


## Goals of the Ck codes<sup>5,37</sup>

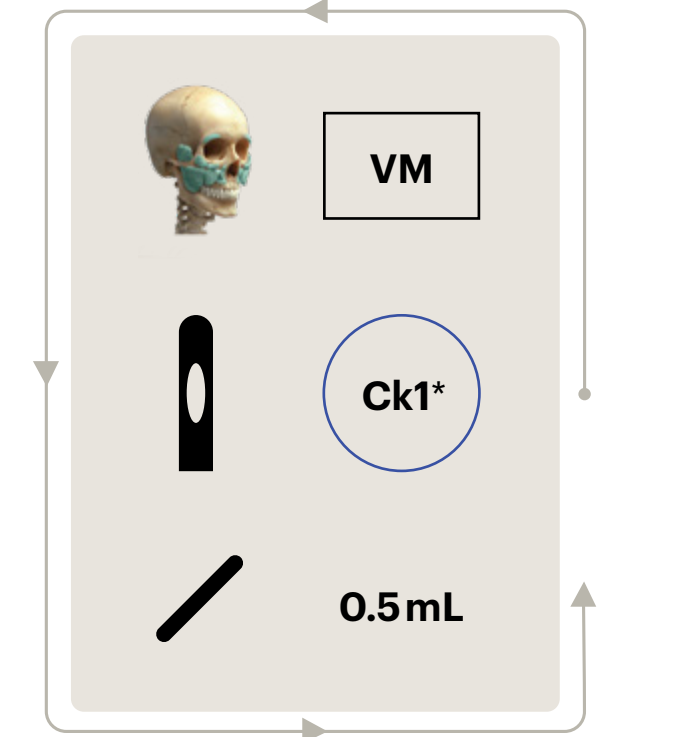


Not an actual patient. Position of codes is for illustration only.  
Ck: cheek.

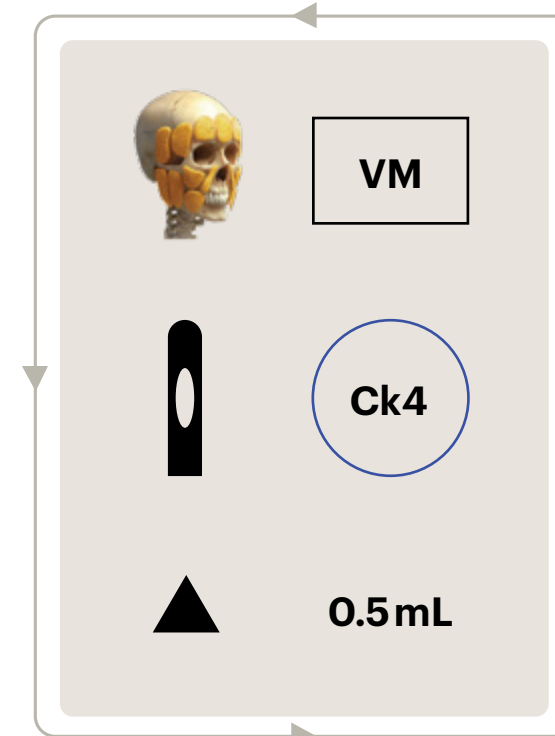
### Ck1 anchor (Zygomatic arch)<sup>1,5,37</sup>



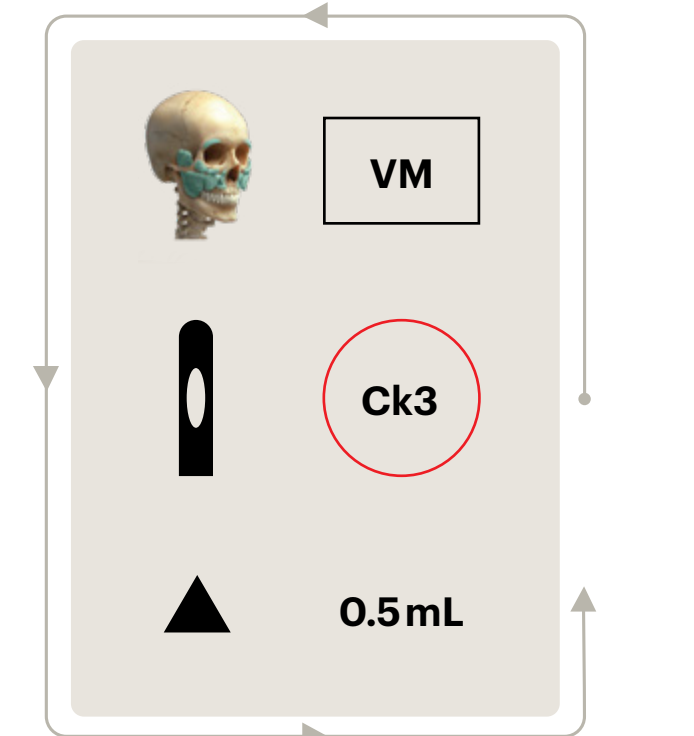
### Ck1 curve (Ck1\*)(Zygomatic arch)<sup>1,5,37</sup>



### Ck4 (Lateral lower cheek)<sup>1,5</sup>



### Ck3 DMFP (Anteromedial cheek)<sup>1,5</sup>



Ck1\*: Ck1 curve/define; VM: JUVÉDERM® VOLUMA® XC; DMFP: deep medial fat pad.

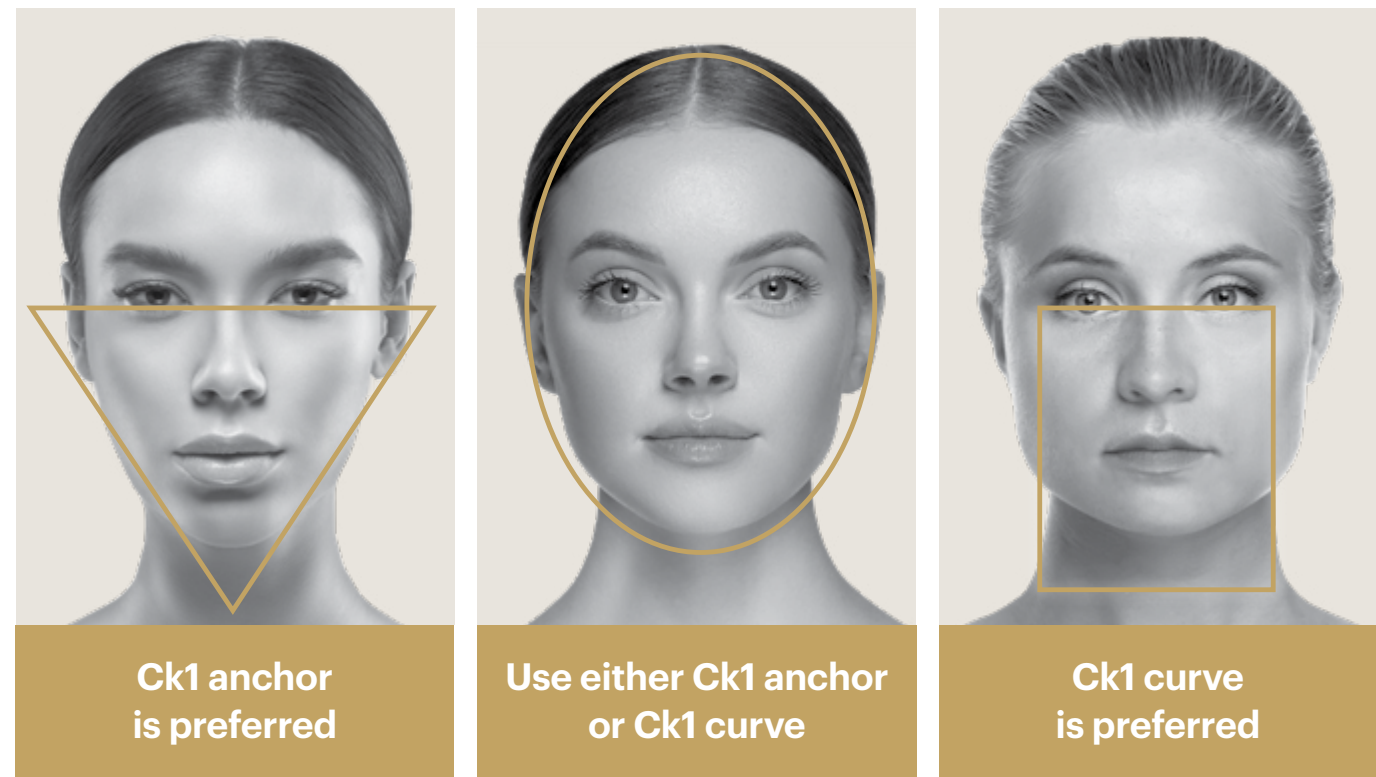
Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.

## Evaluating Ck1: Anchor vs curve/define

The Ck1 code has distinct purposes. Ck1 anchor is injected in 3 points at the periosteal layer to lift the cheek, repositioning it higher and more laterally. This may help improve cheek sagging.<sup>37</sup>

The Ck1 curve is injected into the sub-SMAS\* layer to provide structure along the zygomatic arch and definition to the upper cheek for a feminine appearance. Ck1 define, also delivered to the sub-SMAS\*, provides a more masculine look.<sup>37</sup>

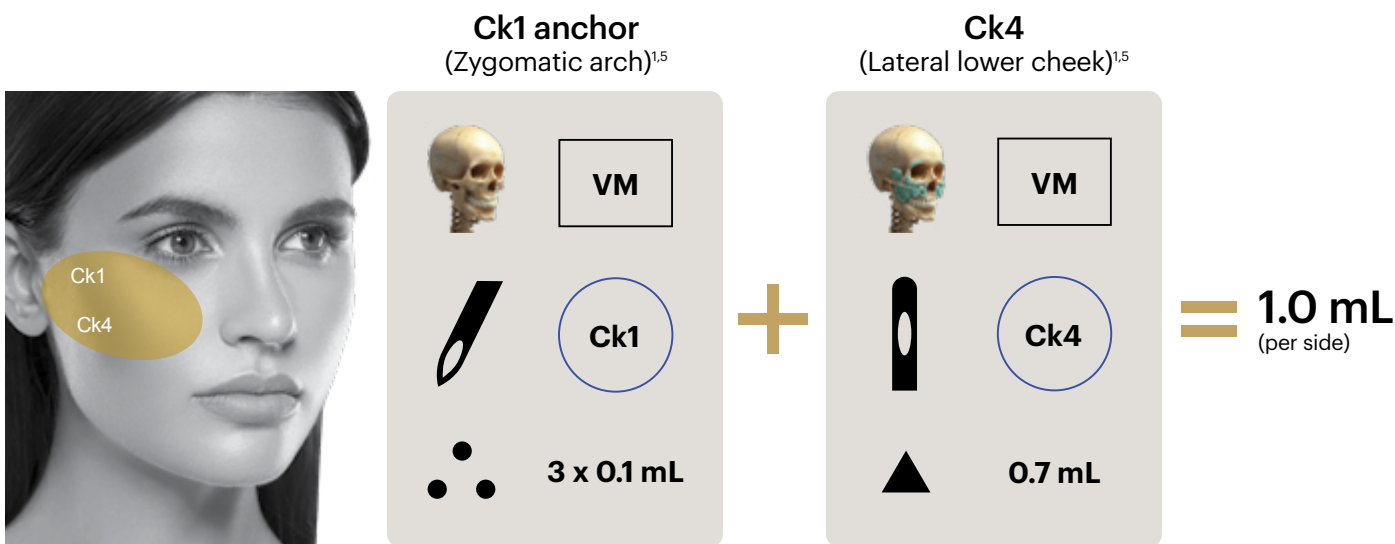
### Patient shape impacts approach



Not actual patients.  
 \*Sub-SMAS: Subsuperficial musculoaponeurotic system.  
 Ck: cheek.

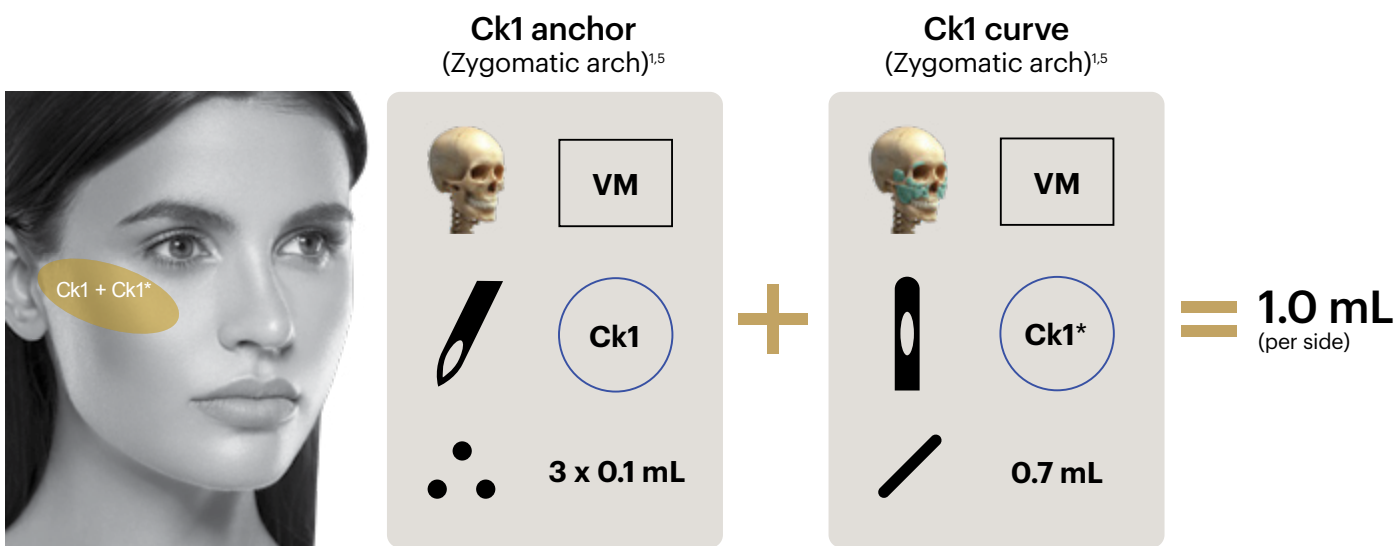
## Combining Ck codes

**Important note: This is the preferred and most common approach. Keep in mind: If Ck4 is injected in the same session as Ck1 anchor, the active number of Ck4 becomes 0.7 mL<sup>37</sup>**



Not an actual patient. Position of codes is for illustration only.  
 VM: JUVÉDERM® VOLUMA® XC.

**If Ck1 curve is injected in the same session as Ck1 anchor, the active number of Ck1 curve becomes 0.7 mL<sup>37</sup>**



Not an actual patient. Position of codes is for illustration only.  
 Ck1\*: Ck1 curve; VM: JUVÉDERM® VOLUMA® XC.

Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.

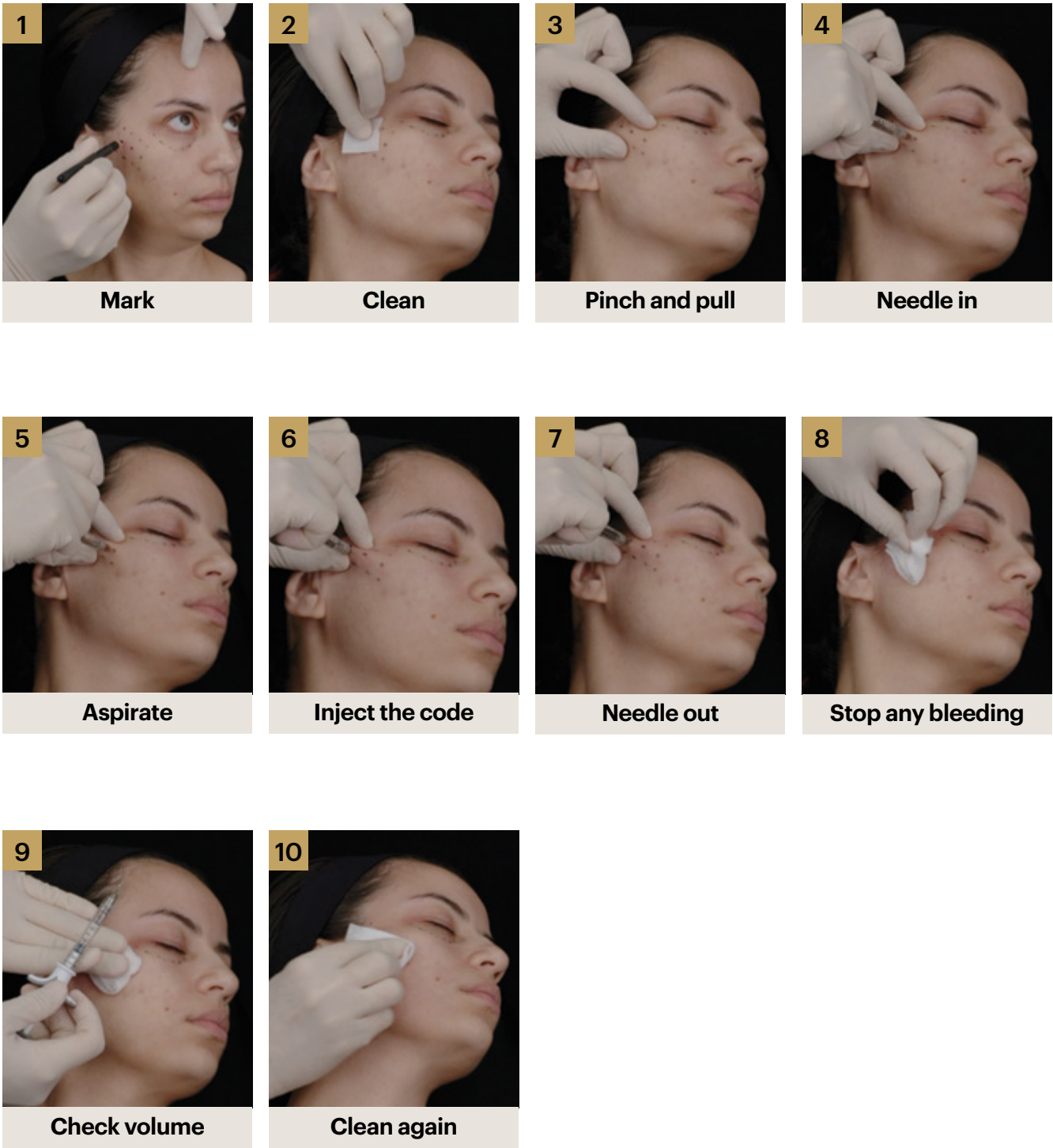


# Best practices for injecting **Ck1 anchor** with **needle**

1	MARK
2	CLEAN
3	PINCH AND PULL
4	NEEDLE IN
5	ASPIRATE
6	INJECT THE CODE*
7	NEEDLE OUT
8	STOP ANY BLEEDING
9	CHECK VOLUME
10	CLEAN AGAIN

Ck: cheek.  
 \*Do not inject through the markings.

## Best practices for injecting Ck1 anchor with needle



The photos above demonstrate an on-label treatment with JUVÉDERM® VOLUMA® XC by Dr Maurício de Maio.

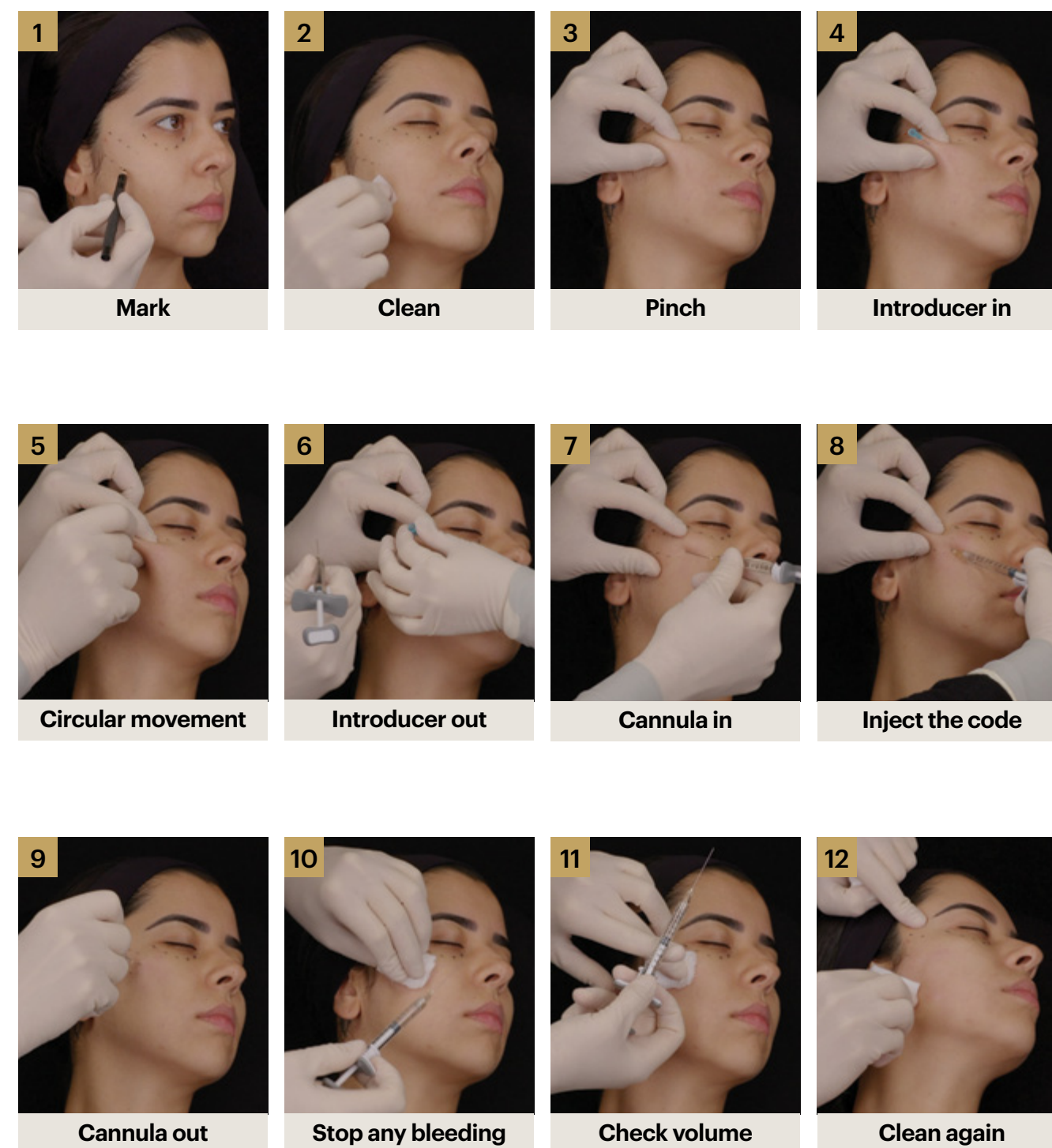
## Best practices for injecting **Ck1 curve** with **cannula**

1	MARK
2	CLEAN
3	PINCH AND CLEAN AGAIN
4	INTRODUCER IN
5	CIRCULAR MOVEMENT
6	INTRODUCER OUT
7	CANNULA IN
8	INJECT THE CODE*
9	CANNULA OUT
10	STOP ANY BLEEDING
11	CHECK VOLUME
12	CLEAN AGAIN

Ck: cheek.

\*Do not inject through the markings.

## Best practices for injecting Ck1 curve with cannula



The photos above demonstrate an on-label treatment with JUVÉDERM® VOLUMA® XC by Dr Maurício de Maio.

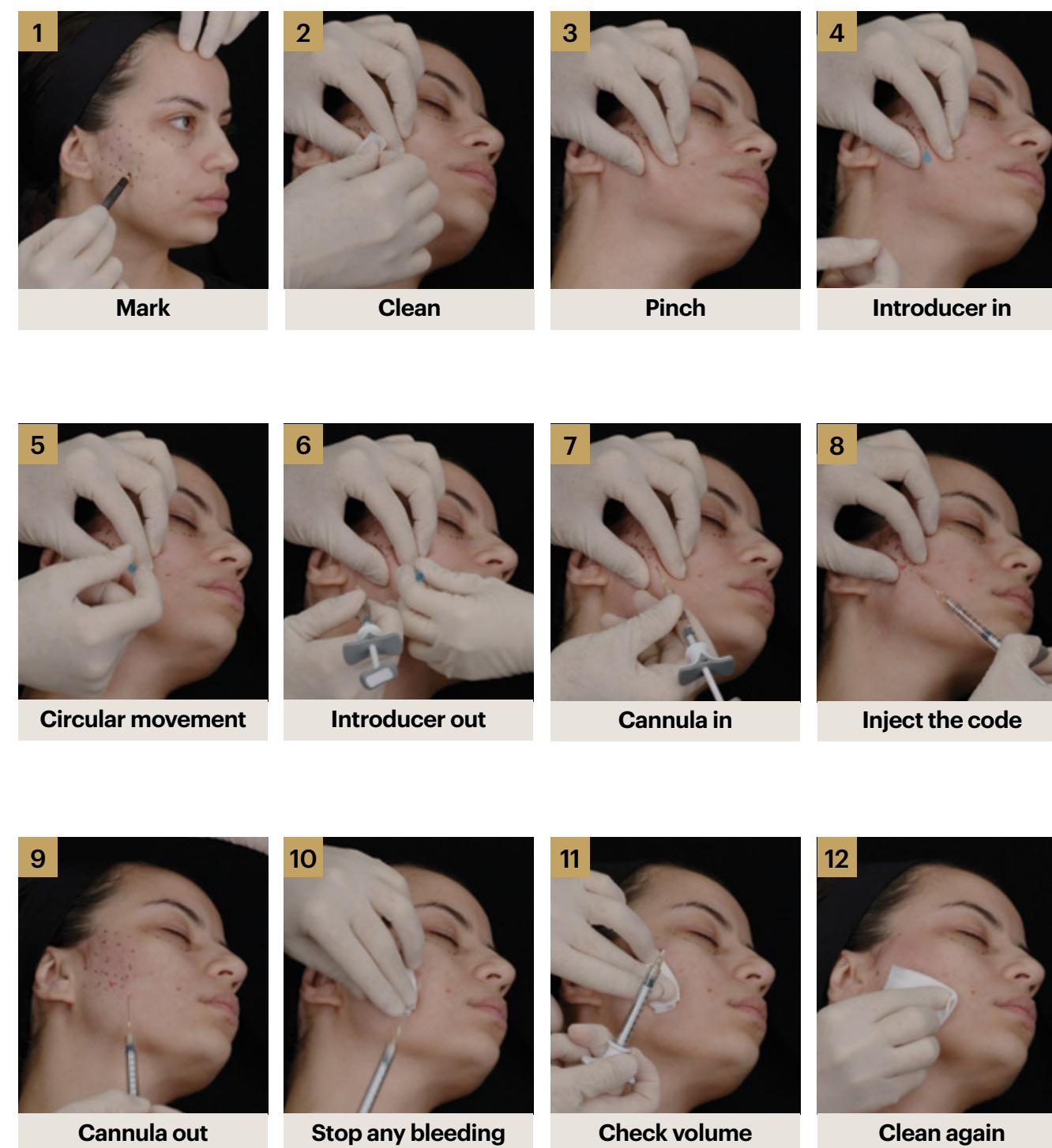
## Best practices for injecting **Ck4** with **cannula**

1	MARK
2	CLEAN
3	PINCH AND CLEAN AGAIN
4	INTRODUCER IN
5	CIRCULAR MOVEMENT
6	INTRODUCER OUT
7	CANNULA IN
8	INJECT THE CODE*
9	CANNULA OUT
10	STOP ANY BLEEDING
11	CHECK VOLUME
12	CLEAN AGAIN

Ck: cheek.

\*Do not inject through the markings.

## Best practices for injecting Ck4 with cannula



The photos above demonstrate an on-label treatment with JUVÉDERM® VOLUMA® XC by Dr Maurício de Maio.

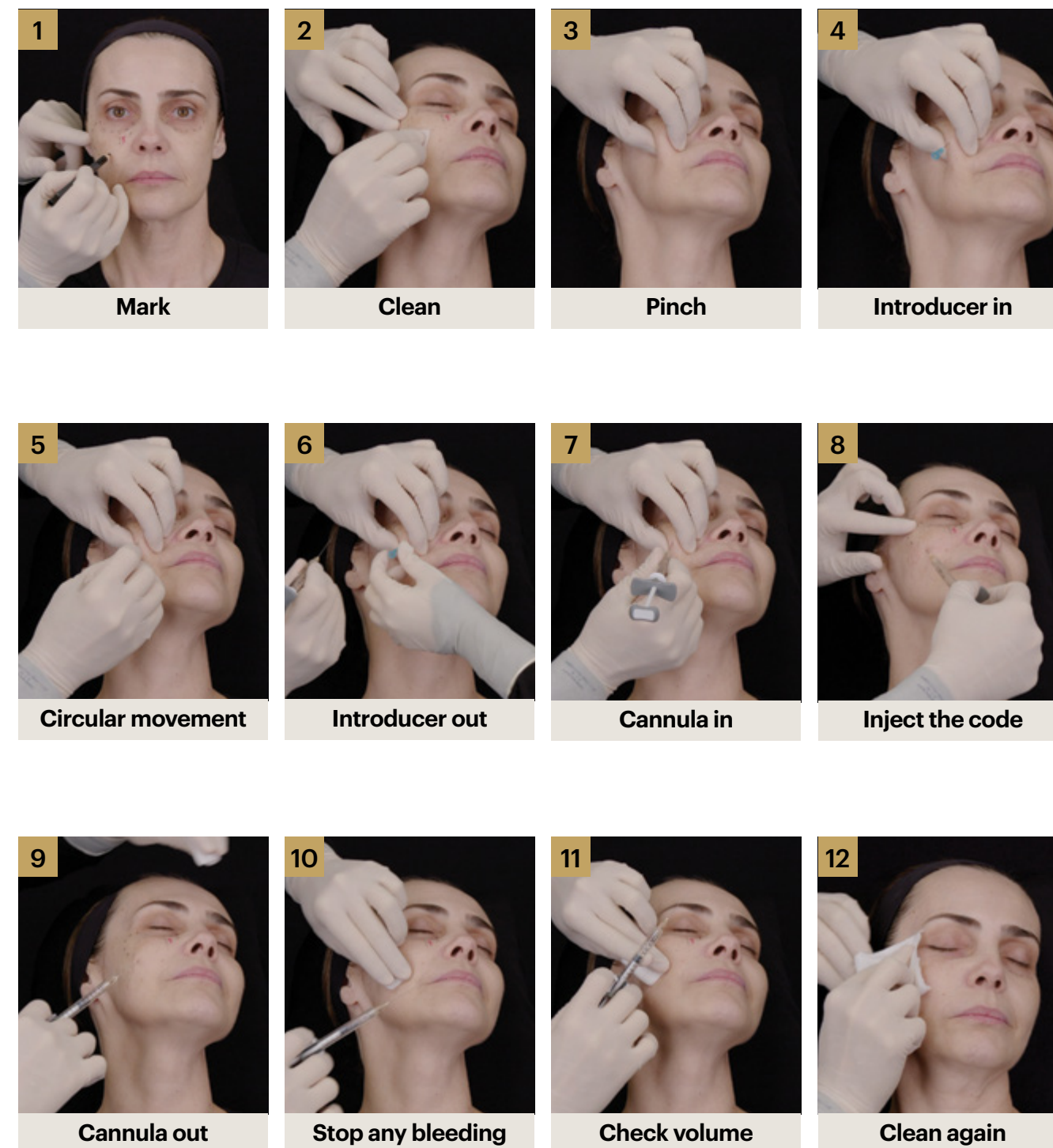


## Best practices for injecting **Ck3 DMFP** with **cannula**

1	MARK
2	CLEAN
3	PINCH AND CLEAN AGAIN
4	INTRODUCER IN
5	CIRCULAR MOVEMENT
6	INTRODUCER OUT
7	CANNULA IN
8	INJECT THE CODE*
9	CANNULA OUT
10	STOP ANY BLEEDING
11	CHECK VOLUME
12	CLEAN AGAIN

Ck: cheek; DMFP: deep medial fat pad.  
\*Do not inject through the markings.

## Best practices for injecting Ck3 DMFP with cannula



The photos above demonstrate an on-label treatment with JUVÉDERM® VOLUMA® XC by Dr Maurício de Maio.

## Goals of the NL codes

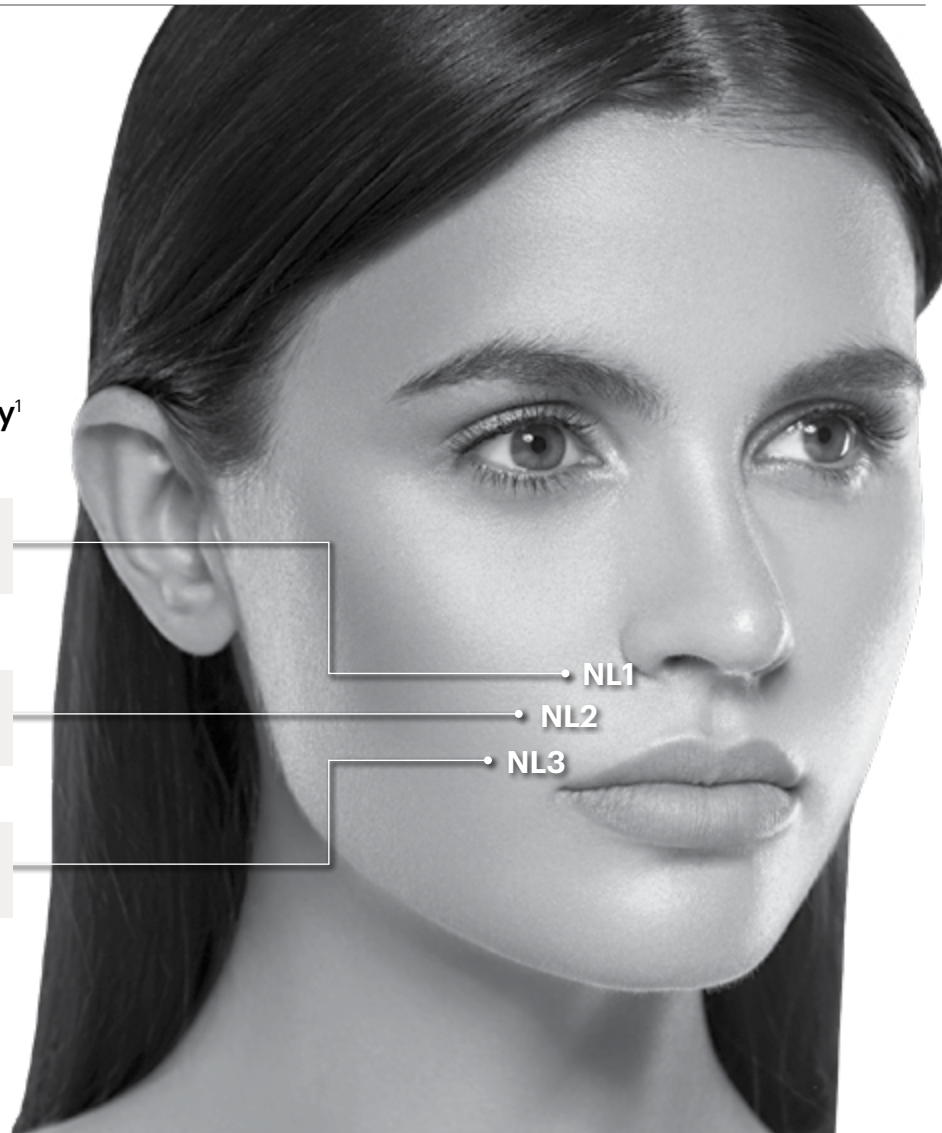
The goal for all 3 NL codes is the same

Reduce prominence by treating the area directly<sup>1</sup>

Upper nasolabial fold

Central nasolabial fold

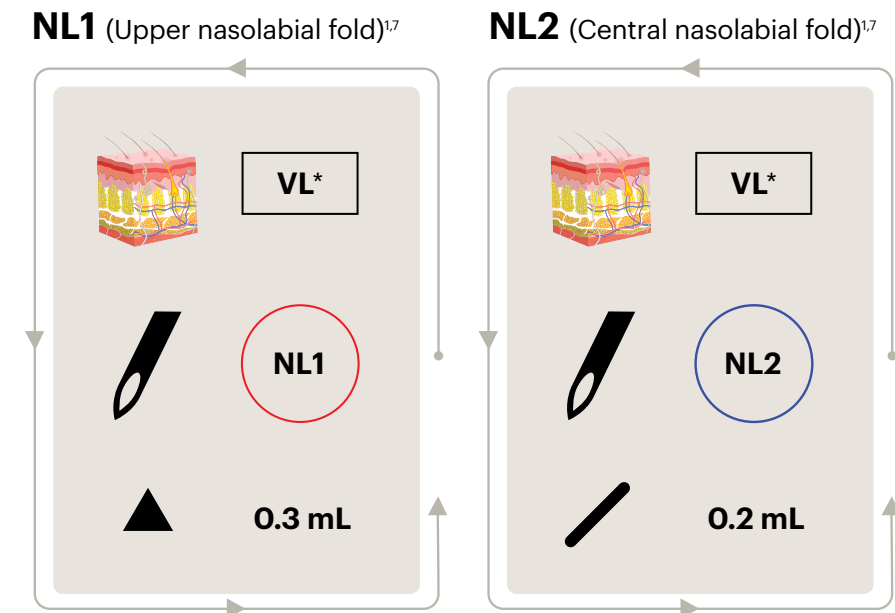
Lower nasolabial fold



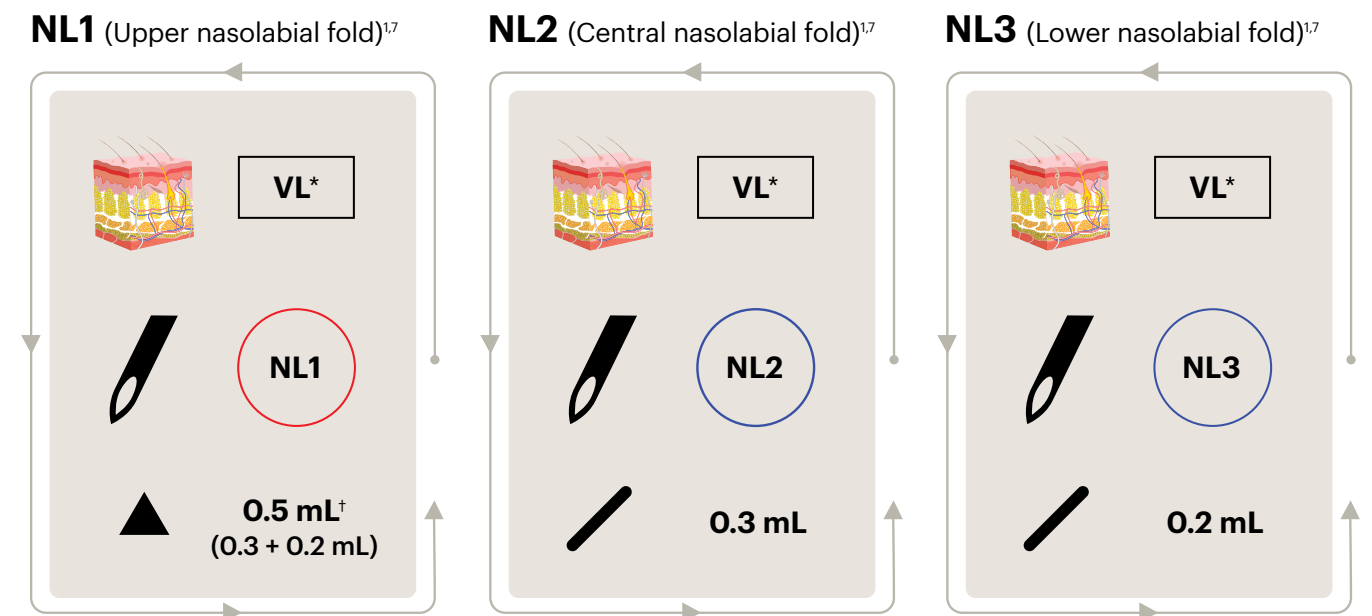
Not an actual patient. Position of codes is for illustration only.  
NL: nasolabial fold.

Please see Indications and Important Safety Information for the JUVÉDERM® Collection of Fillers on pages 6 and 7.

### Moderate nasolabial folds



### Severe nasolabial folds



VL: JUVÉDERM® VOLLURE® XC.

\*JUVÉDERM® Ultra Plus XC is also approved for moderate to severe NLFs.<sup>8</sup>

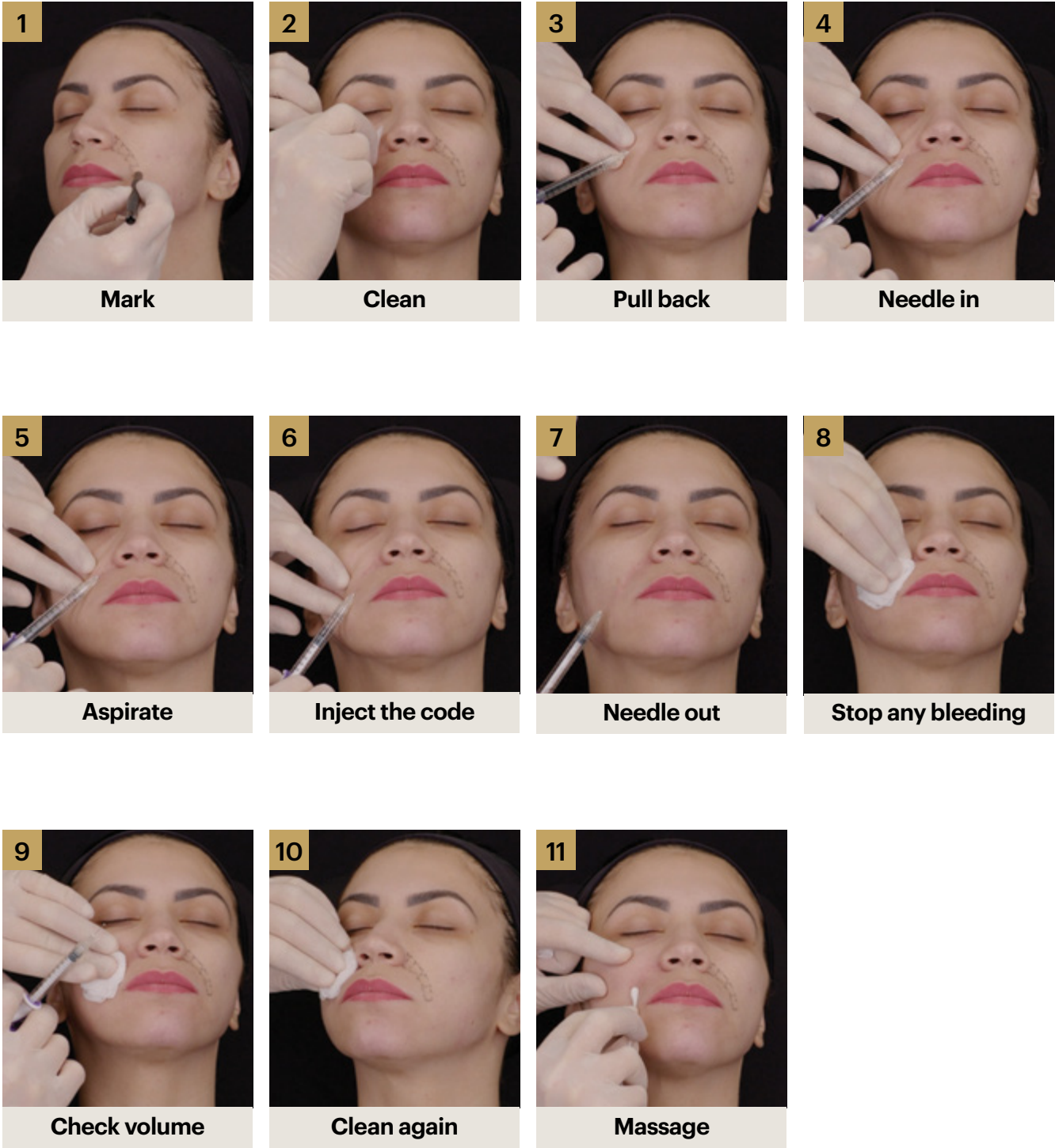
†For NL1, the active number of 0.5 mL should be delivered as 0.3 mL and 0.2 mL, split between 2 entry points for severe nasolabial folds.

## Best practices for injecting **NL1 + NL2 + NL3** with **needle**

1	MARK
2	CLEAN
3	PINCH AND PULL
4	NEEDLE IN
5	ASPIRATE
6	INJECT THE CODE*
7	NEEDLE OUT
8	STOP ANY BLEEDING
9	CHECK VOLUME
10	CLEAN AGAIN
11	MASSAGE

NL: nasolabial fold.  
 \*Do not inject through the markings.

## Best practices for injecting **NL1 + NL2 + NL3** with **needle**



The photos above demonstrate an on-label treatment with JUVÉDERM® VOLLURE® XC by Dr Mauricio de Maio.



## Notes

## Notes



**BOTOX® Cosmetic (onabotulinumtoxinA) Important Information**

**Indications**

BOTOX® Cosmetic (onabotulinumtoxinA) is indicated in adult patients for the temporary improvement in the appearance of:

- Moderate to severe glabellar lines associated with corrugator and/or procerus muscle activity
- Moderate to severe lateral canthal lines associated with orbicularis oculi activity
- Moderate to severe forehead lines associated with frontalis activity
- Moderate to severe platysma bands associated with platysma muscle activity

**IMPORTANT SAFETY INFORMATION, INCLUDING BOXED WARNING**

**WARNING: DISTANT SPREAD OF TOXIN EFFECT**

Postmarketing reports indicate that the effects of BOTOX® Cosmetic and all botulinum toxin products may spread from the area of injection to produce symptoms consistent with botulinum toxin effects. These may include asthenia, generalized muscle weakness, diplopia, ptosis, dysphagia, dysphonia, dysarthria, urinary incontinence, and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity, but symptoms can also occur in adults treated for spasticity and other conditions, particularly in those patients who have an underlying condition that would predispose them to these symptoms. In unapproved uses and approved indications, cases of spread of effect have been reported at doses comparable to those used to treat cervical dystonia and spasticity and at lower doses.

**CONTRAINDICATIONS**

BOTOX® Cosmetic is contraindicated in the presence of infection at the proposed injection site(s) and in individuals with known hypersensitivity to any botulinum toxin preparation or to any of the components in the formulation.

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.



# Introduction to the MD DYNA Codes™

**BOTOX®**  
COSMETIC  
onabotulinumtoxinA injection

BOTOX® Cosmetic is indicated in adult patients for the temporary improvement in the appearance of<sup>38</sup>:

**UPPER FACIAL LINES**

- Moderate to severe glabellar lines associated with corrugator and/or procerus muscle activity
- Moderate to severe lateral canthal lines associated with orbicularis oculi activity
- Moderate to severe forehead lines associated with frontalis muscle activity

**PLATYSMA BANDS**

- Moderate to severe platysma bands associated with platysma muscle activity

Ftox: frontalis, Ctox: corrugator, Ptox: procerus, Otox: orbicularis oculi, PLtox: platysma.  
Not an actual patient. This is a representation of injection areas for BOTOX® Cosmetic with the MD DYNA Codes™ developed by Dr Mauricio de Maio.

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.

## What are the MD DYNA Codes™?

The MD DYNA Codes™ are injection techniques for the precise placement of product with respect to the influence on muscle activity.<sup>39</sup> With the precise dosing of BOTOX® Cosmetic (onabotulinumtoxinA), we have the technical strategy to achieve desired patient outcomes.<sup>38,40</sup>



Not an actual patient. This is a representation of injection points for BOTOX® Cosmetic with the MD DYNA Codes™ developed by Dr Maurício de Maio. These injection points are consistent with approved injection patterns shown in the package insert. Injectors should assess muscle activity when identifying the location of appropriate injection sites for individualized treatment based on each patient's unique anatomy.<sup>38</sup>

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.

## BOTOX® (onabotulinumtoxinA): Over 35 years of experience<sup>41,\*</sup>



### Unparalleled clinical innovation

Developed the clinical scales and injection protocols to establish 4 first-of-their-kind aesthetic uses<sup>38</sup>



### More FDA approvals than any other neurotoxin<sup>38,41-46</sup>

4 BOTOX® Cosmetic aesthetic uses  
12 BOTOX® therapeutic uses



### Most studied neurotoxin

Over 6600 publications featuring BOTOX® and/or BOTOX® Cosmetic<sup>47,†</sup>



### Quality product

Owning end-to-end development, from drug substance development to manufacturing and distribution, since its therapeutic approval in 1989<sup>41,48</sup>

\*Since first approval of BOTOX® for therapeutic use in 1989.<sup>41</sup>

†For therapeutic and aesthetic use.



# How do you reconstitute BOTOX® Cosmetic?

The reconstituted formulation of BOTOX® Cosmetic was studied in clinical trials and is critical to achieve the correct dose.




Reconstituted concentration<sup>38</sup>:  
4 Units = 0.1 mL

100 unit vial	2.5 mL of sterile, preservative-free 0.9% sodium chloride injection USP <sup>38</sup>	50 unit vial	1.25 mL of sterile, preservative-free 0.9% sodium chloride injection USP <sup>38</sup>
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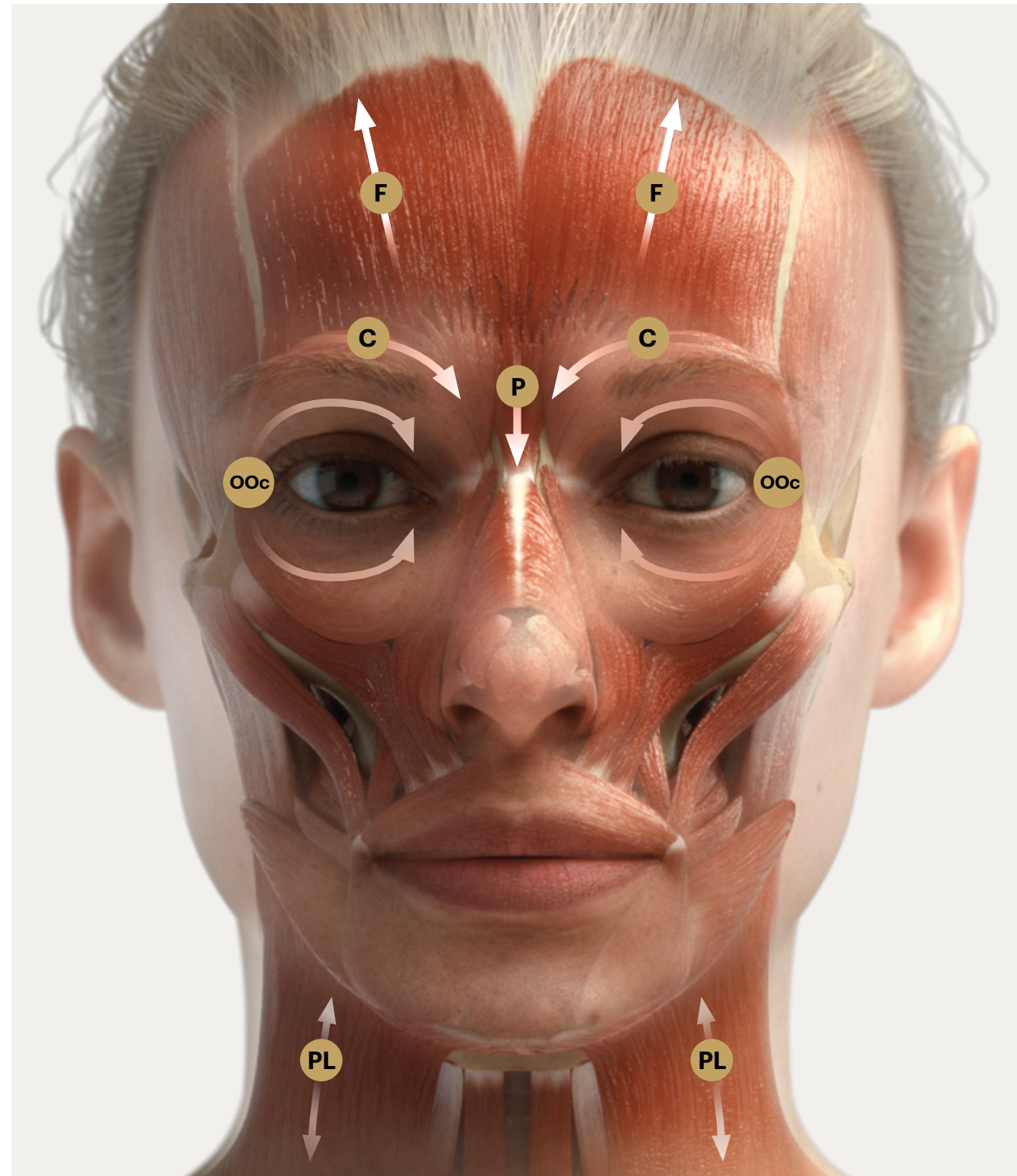
## Required amount of reconstituted BOTOX® Cosmetic solution<sup>38</sup>:

20 Units	0.5 mL for moderate to severe <b>forehead lines</b>
20 Units	0.5 mL for moderate to severe <b>glabellar lines</b>
24 Units	0.6 mL for moderate to severe <b>lateral canthal lines</b>
26 Units	0.65 mL (26 Units for 1 band on each side)
31 Units	0.78 mL (31 Units for 1 band on one side, 2 bands on the other)
36 Units	0.9 mL (36 Units for 2 bands on each) for moderate to severe <b>platysma bands</b>

 Administer within 24 hours after reconstitution.<sup>38</sup>

Visual is of 1 mL syringe and is not to scale.

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.

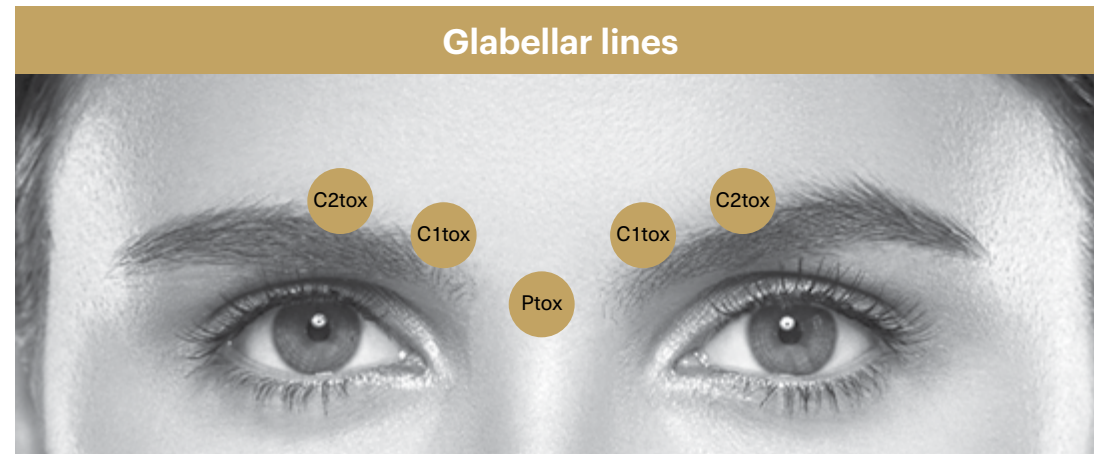


## MD DYNA Codes™: BOTOX® Cosmetic expression

F	Frontalis
C	Corrugator supercilii
P	Procerus
OOc	Orbicularis oculi
PL	Platysma



## Injecting moderate to severe glabellar lines with MD DYNA Codes™



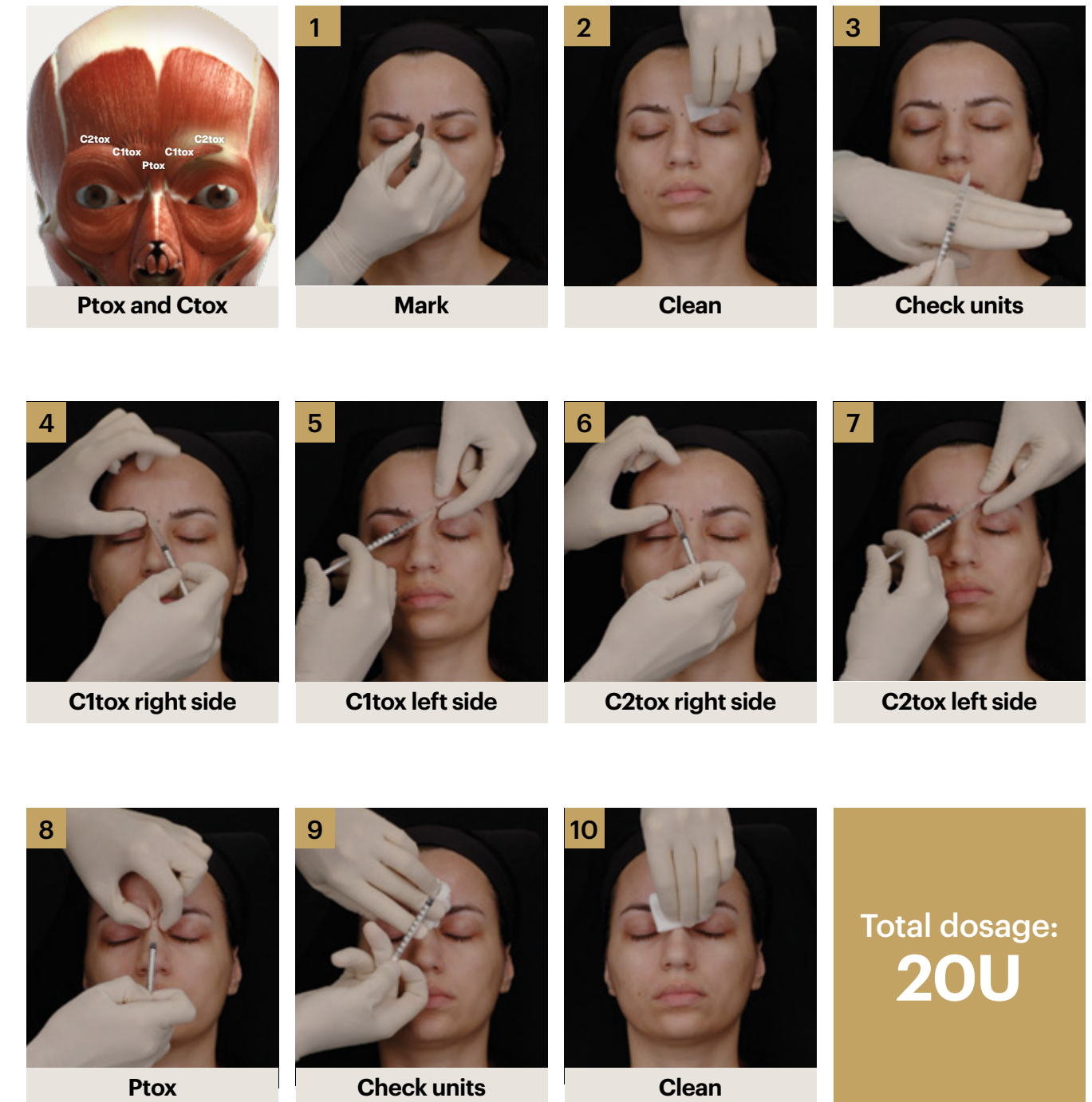
● MD DYNA Codes™ for BOTOX® Cosmetic (onabotulinumtoxinA)  
Images for illustrative purposes only. Not an actual patient.

Code	Targeted structure	Muscle depth	Units per code	Total dosage
<b>C1tox (R+L)</b>	Corrugator supercillii	Deep	4+4	} <b>20U</b>
<b>C2tox (R+L)</b>	Corrugator supercillii	Superficial	4+4	
<b>Ptox</b>	Procerus	Deep	4	

AMI TIP	<b>Placement in the medial corrugator muscle<sup>49</sup></b> Deep depth at 45°–60° angle	⚠ Injecting too high and superficially may cause injection of the frontalis, leading to loss of eyebrow support <sup>49</sup>
	<b>Placement in the lateral corrugator muscle<sup>49</sup></b> Superficial depth at an oblique angle	⚠ Injecting too low near the orbital rim or too deep on bone may cause injection into the levator palpebrae superioris, leading to eyelid ptosis <sup>49</sup>
	<b>Placement in the procerus muscle<sup>49</sup></b> Deep depth at 60°–90° angle	🪡 Inject perpendicular <sup>49</sup>

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.

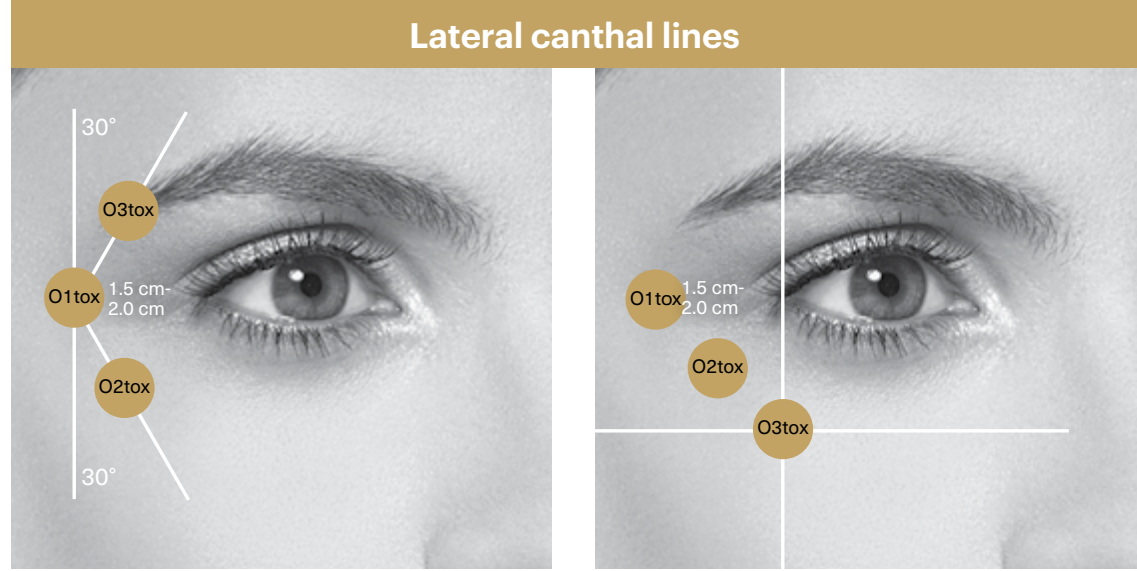
## Injection technique: Moderate to severe glabellar lines



The photos above demonstrate an on-label treatment with BOTOX® Cosmetic by Dr Maurício de Maio. Not all of the steps for MD Codes™ injection best practices are shown.

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.

Injecting moderate to severe lateral canthal lines with MD DYNA Codes™



Injection Pattern 1                      Injection Pattern 2

● MD DYNA Codes™ for BOTOX® Cosmetic (onabotulinumtoxinA)  
Images for illustrative purposes only. Not an actual patient.

Code	Targeted structure	Muscle depth	Units per code	Total dosage
<b>O1tox</b> (R+L)	Orbicularis oculi	Superficial	4+4	} <b>24U</b>
<b>O2tox</b> (R+L)	Orbicularis oculi	Superficial	4+4	
<b>O3tox</b> (R+L)	Orbicularis oculi	Superficial	4+4	

AMI TIP

**Placement in the Orbicularis Oculi Muscle<sup>49</sup>**

Superficial intradermal depth at 30° angle

Inject medial to lateral to keep away from the orbit

Injecting too deep, especially at the inferior injection points, or too low may increase the chances of toxin impacting the zygomaticus muscles, leading to a modification of normal smile dynamics<sup>49</sup>

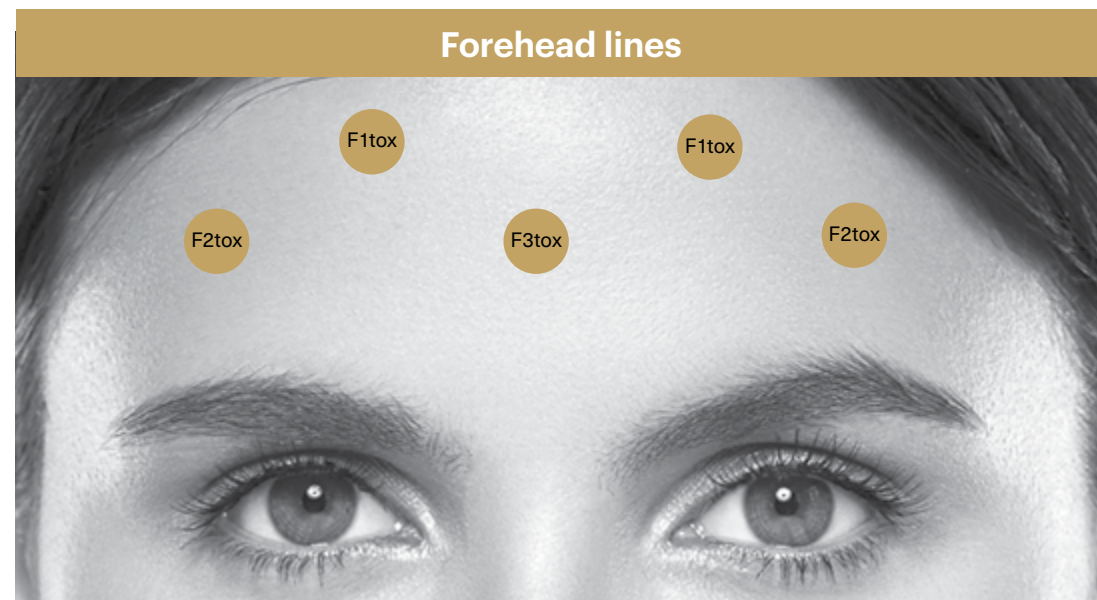
Injection technique:  
**Moderate to severe lateral canthal lines**



The photos above demonstrate an on-label treatment with BOTOX® Cosmetic by Dr Maurício de Maio. Not all of the steps for MD Codes™ injection best practices are shown. Full injection pattern and procedure not shown.




## Injecting moderate to severe forehead lines with MD DYNA Codes™

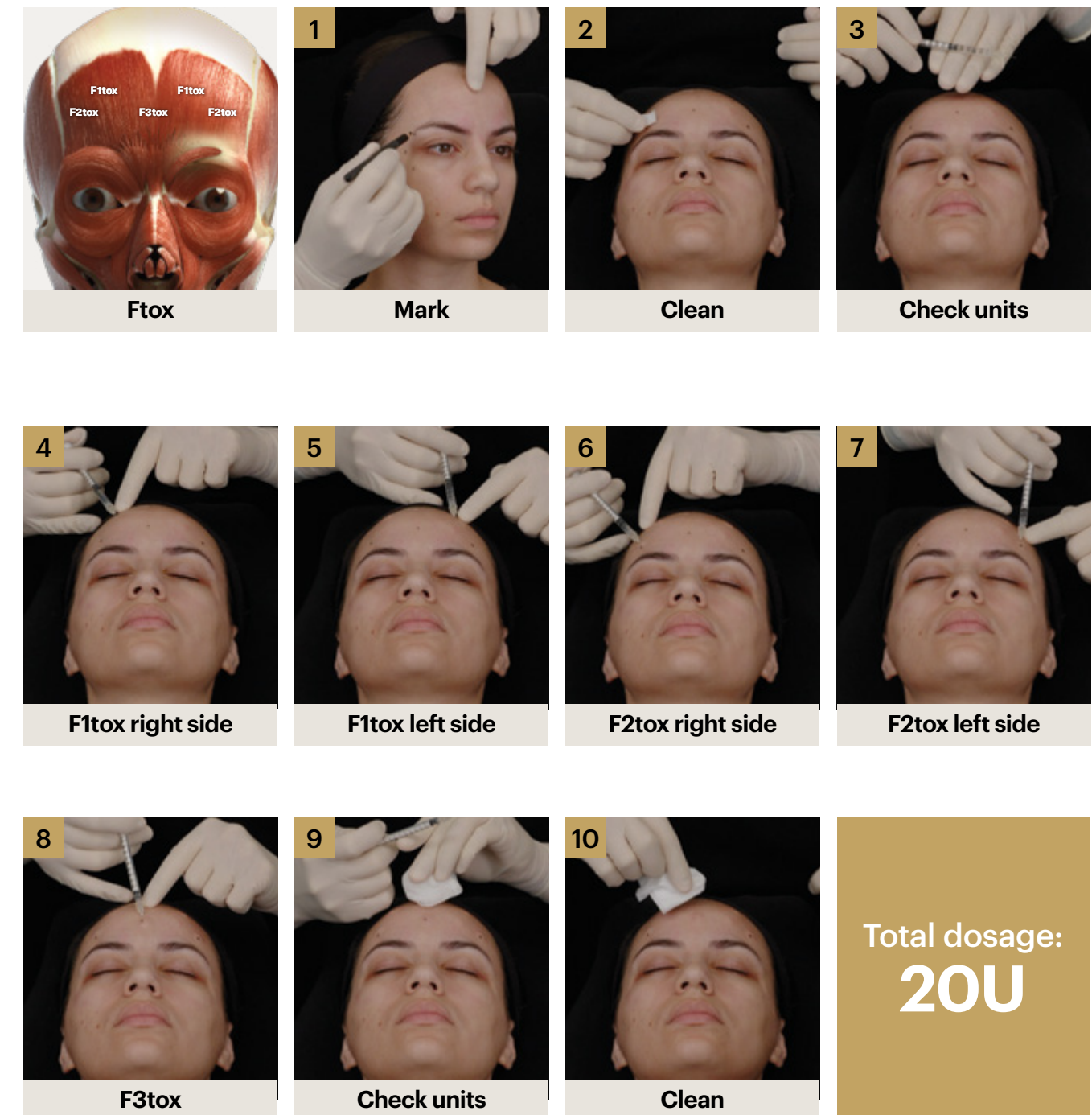


● MD DYNA Codes™ for BOTOX® Cosmetic (onabotulinumtoxinA)  
Images for illustrative purposes only. Not an actual patient.

Code	Targeted structure	Muscle depth	Units per code	Total dosage
<b>F1tox (R+L)</b>	Frontalis	Superficial	4+4	} <b>20U</b>
<b>F2tox (R+L)</b>	Frontalis	Superficial	4+4	
<b>F3tox</b>	Frontalis	Superficial	4	

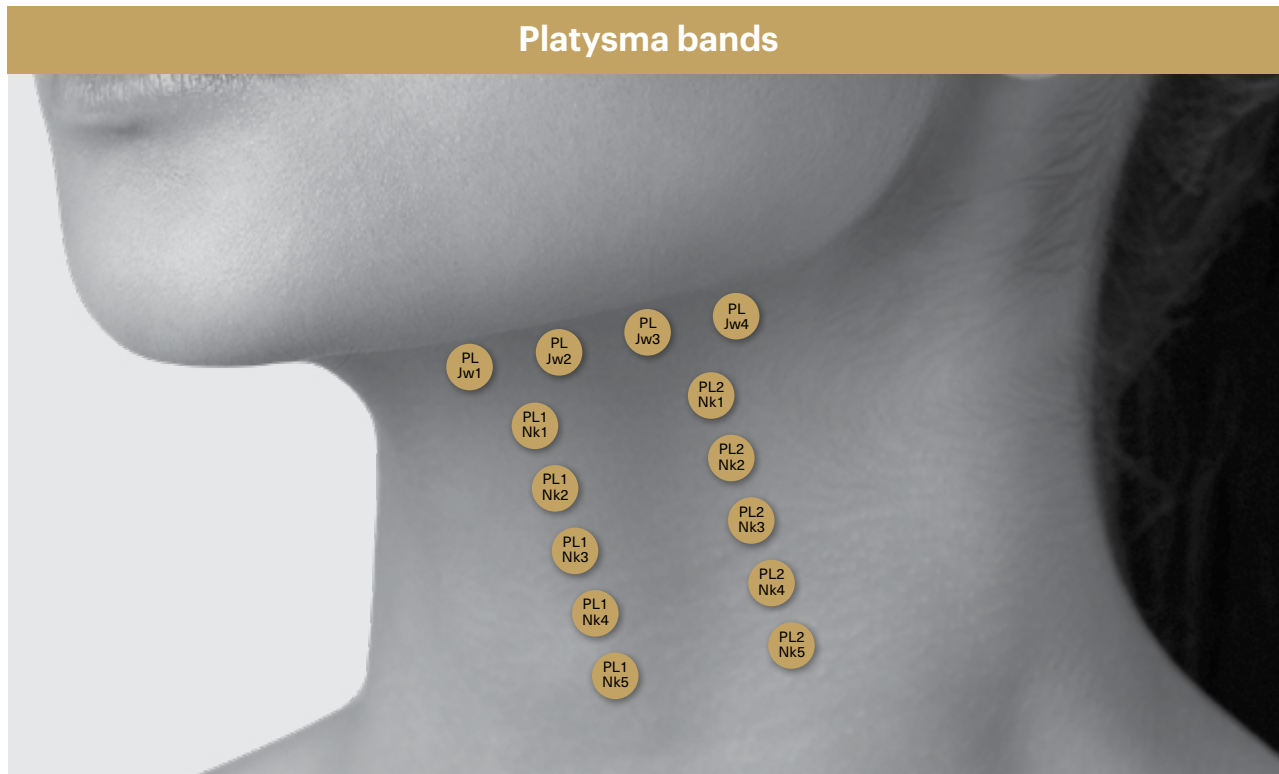
<b>AMI TIP</b>	<b>Placement in the frontalis muscle<sup>49</sup></b> Subcutaneous depth at a 45°–60° angle Inject perpendicular to the skin	 Injecting only the medial frontalis may cause “Mephisto” or “Spock” lateral brow elevation <sup>49</sup>
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## Injection technique: Moderate to severe forehead lines



The photos above demonstrate an on-label treatment with BOTOX® Cosmetic by Dr Maurício de Maio. Not all of the steps for MD Codes™ injection best practices are shown.

## Injecting moderate to severe platysma bands with the MD DYNA Codes™



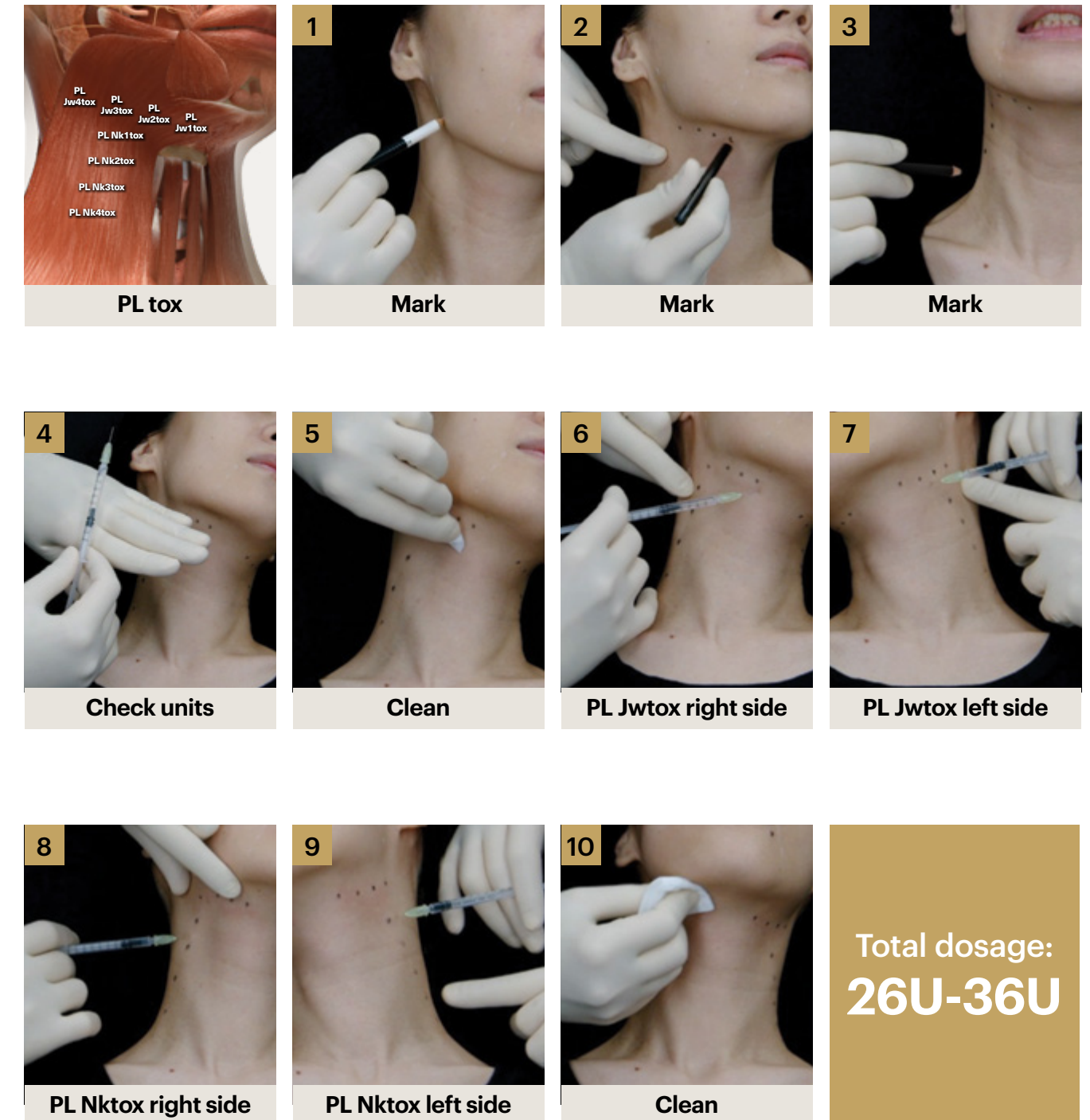
MD DYNA Codes™ for BOTOX® Cosmetic (onabotulinumtoxinA)  
Images for illustrative purposes only. Not an actual patient.

Placement in the jawline		
PL Jw1 PL Jw2 PL Jw3 PL Jw4	Fixed 8 Units per side <sup>42</sup>	Inject 4 sites on both sides of jawline – 2 Units in 4 sites on each side – A total of 16 Units

Vertical neck bands (customizable 5 Units per band based on patient presentation)			
Codes	Number of bands	Units in neck bands	Total dose in jawline and neck
PL Nk1 PL Nk2 PL Nk3 PL Nk4 PL Nk5	1 band on both sides	10 Units in 10 sites	26 Units
	1 band on one side and 2 bands on the other side	15 Units in 15 sites	31 Units
	2 bands on both sides	20 Units in 20 sites	36 Units

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.

## Injection technique: Moderate to severe platysma bands



The photos above demonstrate an on-label treatment with BOTOX® Cosmetic by Dr Mauricio de Maio. Not all of the steps for MD Codes™ injection best practices are shown. Full injection pattern and procedure not shown.

Please see additional Important Safety Information about BOTOX® Cosmetic (onabotulinumtoxinA) on pages 92 and 93.



**BOTOX® Cosmetic (onabotulinumtoxinA)**  
**IMPORTANT SAFETY INFORMATION (continued)**

**WARNINGS AND PRECAUTIONS**

**Lack of Equivalency Between Botulinum Toxin Products**

**The potency Units of BOTOX® Cosmetic are specific to the preparation and assay method utilized. BOTOX® Cosmetic is not equivalent to other preparations of botulinum toxin products, and therefore, Units of biological activity of BOTOX® Cosmetic cannot be compared to nor converted into Units of any other botulinum toxin products assessed with any other specific assay method.**

**Spread of Toxin Effect**

Please refer to Boxed Warning for Distant Spread of Toxin Effect.

No definitive serious adverse event reports of distant spread of toxin effect associated with dermatologic use of BOTOX® Cosmetic at the labeled dose of 20 Units (for glabellar lines), 24 Units (for lateral canthal lines), 40 Units (for forehead lines with glabellar lines), 44 Units (for simultaneous treatment of lateral canthal lines and glabellar lines), and 64 Units (for simultaneous treatment of lateral canthal lines, glabellar lines, and forehead lines) have been reported. Patients or caregivers should be advised to seek immediate medical care if swallowing, speech, or respiratory disorders occur.

**Serious Adverse Reactions With Unapproved Use**

Serious adverse reactions, including excessive weakness, dysphagia, and aspiration pneumonia, with some adverse reactions associated with fatal outcomes, have been reported in patients who received BOTOX® injections for unapproved uses. In these cases, the adverse reactions were not necessarily related to distant spread of toxin, but may have resulted from the administration of BOTOX® to the site of injection and/or adjacent structures. In several of the cases, patients had preexisting dysphagia or other significant disabilities. There is insufficient information to identify factors associated with an increased risk for adverse reactions associated with the unapproved uses of BOTOX®. The safety and effectiveness of BOTOX® for unapproved uses have not been established.

**Hypersensitivity Reactions**

Serious and/or immediate hypersensitivity reactions have been reported. These reactions include anaphylaxis, serum sickness, urticaria, soft-tissue edema, and dyspnea. If such a reaction occurs, discontinue further injection of BOTOX® Cosmetic and immediately institute appropriate medical therapy. One fatal case of anaphylaxis has been reported in which lidocaine was used as the diluent and, consequently, the causal agent cannot be reliably determined.

**Cardiovascular System**

There have been reports following administration of BOTOX® of adverse events involving the cardiovascular system, including arrhythmia and myocardial infarction, some with fatal outcomes. Some of these patients had risk factors, including preexisting cardiovascular disease. Use caution when administering to patients with preexisting cardiovascular disease.

**Increased Risk of Clinically Significant Effects With Preexisting Neuromuscular Disorders**

Patients with neuromuscular disorders may be at increased risk of clinically significant effects, including generalized muscle weakness, diplopia, ptosis, dysphonia, dysarthria, severe dysphagia, and respiratory compromise from onabotulinumtoxinA (see *Warnings and Precautions*). Monitor individuals with peripheral motor neuropathic diseases, amyotrophic lateral sclerosis or neuromuscular junction disorders (eg, myasthenia gravis or Lambert-Eaton syndrome) when given botulinum toxin.

**Dysphagia and Breathing Difficulties**

Treatment with BOTOX® and other botulinum toxin products can result in swallowing or breathing difficulties. Patients with preexisting swallowing or breathing difficulties may be more susceptible to these complications. In most cases, this is a consequence of weakening of muscles in the area of injection that are involved in breathing or oropharyngeal muscles that control swallowing or breathing (see *Boxed Warning*).

**Preexisting Conditions at the Injection Site**

Use caution when BOTOX® Cosmetic treatment is used in the presence of inflammation at the proposed injection site(s) or when excessive weakness or atrophy is present in the target muscle(s).

**Dry Eye in Patients Treated With BOTOX® Cosmetic**

There have been reports of dry eye associated with BOTOX® Cosmetic injection in or near the orbicularis oculi muscle. If symptoms of dry eye (eg, eye irritation, photophobia, or visual changes) persist, consider referring patients to an ophthalmologist.

**Human Albumin and Transmission of Viral Diseases**

This product contains albumin, a derivative of human blood. Based on effective donor screening and product manufacturing processes, it carries a remote risk for transmission of viral diseases and variant Creutzfeldt-Jakob disease (vCJD). There is a theoretical risk for transmission of Creutzfeldt-Jakob disease (CJD), which would also be considered remote. No cases of transmission of viral diseases, CJD, or vCJD have ever been identified for licensed albumin or albumin contained in other licensed products.

**ADVERSE REACTIONS**

The most frequently reported adverse reactions following injection of BOTOX® Cosmetic for glabellar lines were eyelid ptosis (3%), facial pain (1%), facial paresis (1%), and muscular weakness (1%).

The most frequently reported adverse reaction following injection of BOTOX® Cosmetic for lateral canthal lines was eyelid edema (1%).

The most frequently reported adverse reactions following injection of BOTOX® Cosmetic for forehead lines with glabellar lines were headache (9%), brow ptosis (2%), and eyelid ptosis (2%).

The safety profile of BOTOX® Cosmetic treatment of platysma bands is consistent with the known safety profile of BOTOX® Cosmetic for other indications.

**DRUG INTERACTIONS**

Coadministration of BOTOX® Cosmetic and aminoglycosides or other agents interfering with neuromuscular transmission (eg, curare-like compounds) should only be performed with caution as the effect of the toxin may be potentiated. Use of anticholinergic drugs after administration of BOTOX® Cosmetic may potentiate systemic anticholinergic effects.

The effect of administering different botulinum neurotoxin products at the same time or within several months of each other is unknown. Excessive neuromuscular weakness may be exacerbated by administration of another botulinum toxin prior to the resolution of the effects of a previously administered botulinum toxin.

Excessive weakness may also be exaggerated by administration of a muscle relaxant before or after administration of BOTOX® Cosmetic.

**USE IN SPECIFIC POPULATIONS**

There are no studies or adequate data from postmarketing surveillance on the developmental risk associated with use of BOTOX® Cosmetic in pregnant women. There are no data on the presence of BOTOX® Cosmetic in human or animal milk, the effects on the breastfed child, or the effects on milk production.

**For more information on BOTOX® Cosmetic, please see accompanying full Prescribing Information, including Boxed Warning and Medication Guide or visit [https://www.rxabbvie.com/pdf/botox-cosmetic\\_pi.pdf](https://www.rxabbvie.com/pdf/botox-cosmetic_pi.pdf)**

## Notes

W O R K B O O K

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L1 L2 L3 L4 L5  
L6 L7 L8 L9 L10  
F1 F2 F3 F4 F5  
T1 T2 E3 E2 E1  
G2 M1 M2 M3

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L6 L7 L8 L9 L10  
F1 F2 F3 F4 F5  
T1 T2 E3 E2 E1  
G2 M1 M2 M3

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