

ADC 101st Annual Conference

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Facial Rejuvenation: Publications that changed my practice

Kachiu C. Lee, MD MPH

Main Line Center for Laser Surgery

Disclosures

- Merz (Investigator)
- Galderma (Investigator)
- Skinceuticals (Investigator)

Nonablative Fractional Laser Treatment Is Associated With a Decreased Risk of Subsequent Facial Keratinocyte Carcinoma Development

DERMATOLOGIC SURGERY • February 2023 • Volume 49 • Number 2

Travis A. Benson, MD,* Brian P. Hibler, MD,†‡ Dylan Kotliar, MD, PhD,§|| and Mathew Avram, MD, JD‡

43 NAFL, 52 control

29 received 1-2 treatments
14 received 3+ treatments

Subsequent KC development					
<i>Development (%)</i>	9 (20.93)	NAFL	21 (40.38)	Control	0.52 (RR)
<i>No development (%)</i>	34 (79.07)		31 (59.62)		.049
Mean time to subsequent KC diagnosis (d)	2,361.33 (±1800.85)		2,255.19 (±1968.64)		

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NAFL vs Control: 9 vs 21 developed KC (0.049)

Subsequent KC development					
<i>Development (%)</i>	9 (20.93)	NAFL	21 (40.38)	Control	0.52 (RR) .049
<i>No development (%)</i>	34 (79.07)		31 (59.62)		
Mean time to subsequent KC diagnosis (d)	2,361.33 (±1800.85)		2,255.19 (±1968.64)		

Safety Profile of Combined Same-Day Treatment for Botulinum Toxin With Full Face Nonablative Fractionated Laser Resurfacing

DERMATOLOGIC SURGERY • April 2021 • Volume 47 • Number 4

Hyemin Pomerantz, MD,* Lisa Akintilo, MD,† Katharina Shaw, MD,† Margo Lederhandler, MD,*† Robert Anolik, MD,*† and Roy G. Geronemus, MD*†

- 616 procedures
 - Botulinum toxin + NAFL
- 0.2% complication rate: eyelid ptosis (n=1)
 - Diffusion of toxin to levator palpebrae superioris

TOXIN + NAFL = SAFE

Augmentation and eversion of lips without injections: The lip peel



Carlos G. Wambier, MD, PhD,^{a,j} Ideli C. Neitzke, MD,^b Kachiu C. Lee, MD, MPH,^c Seaver L. Soon, MD,^d
Peter P. Rullan, MD,^e Marina Landau, MD,^f João Carlos L. Simão, MD, PhD,^g J. Barton Sterling, MD,^h
and Harold J. Brody, MD,ⁱ for the International Peeling Society J AM ACAD DERMATOL
MAY 2019



Augmentation and eversion of lips without injections: The lip peel



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- Phenol-croton oil chemical peels for lip volumization
- No risk of cardiac events
- HSV prophylaxis
- ~1 week of super dry lips



Day 6



Day 7

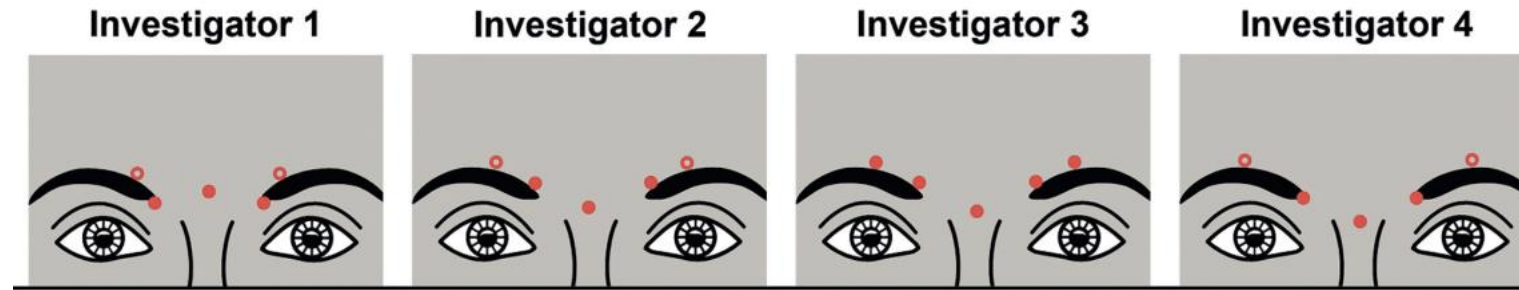




Impact of Glabellar Injection Technique With DaxibotulinumtoxinA for Injection on Brow Position

Aesthetic Surgery Journal
2022, 1-9

Vince Bertucci, MD; Jeremy B. Green, MD; John P. Fezza, MD;
Jessica Brown, PharmD; Conor J. Gallagher, PhD;
and Nowell Solish, MD

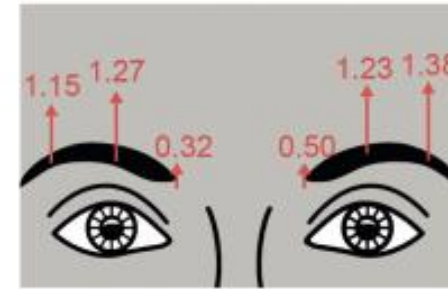
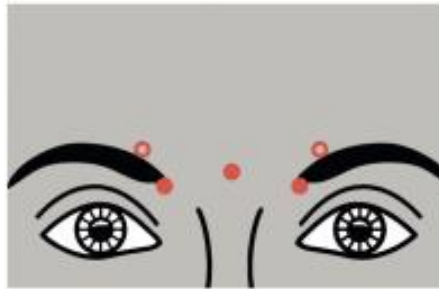


At rest

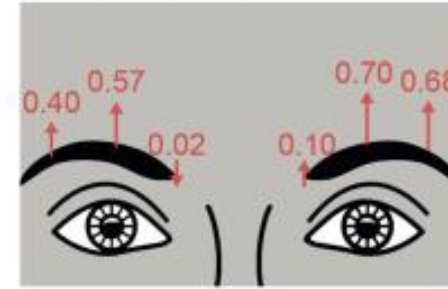
Baseline

Week 2

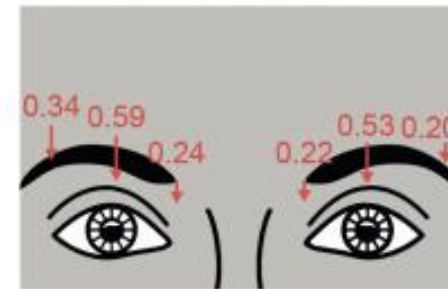
Investigator 1
N = 13



Investigator 2
N = 16



Investigator 3
N = 15



Investigator 4
N = 16



At rest

At maximum lift

Baseline

Week 2

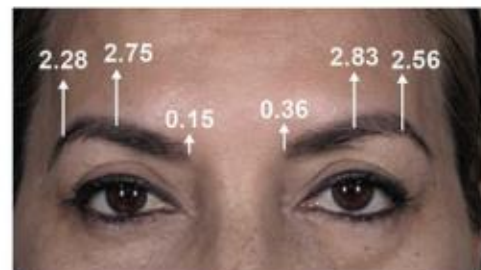
Baseline

Week 2

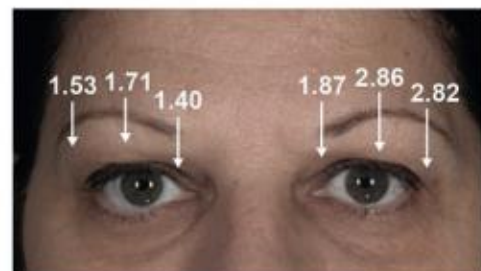
Inv 1



Inv 2



Inv 3



Inv 4

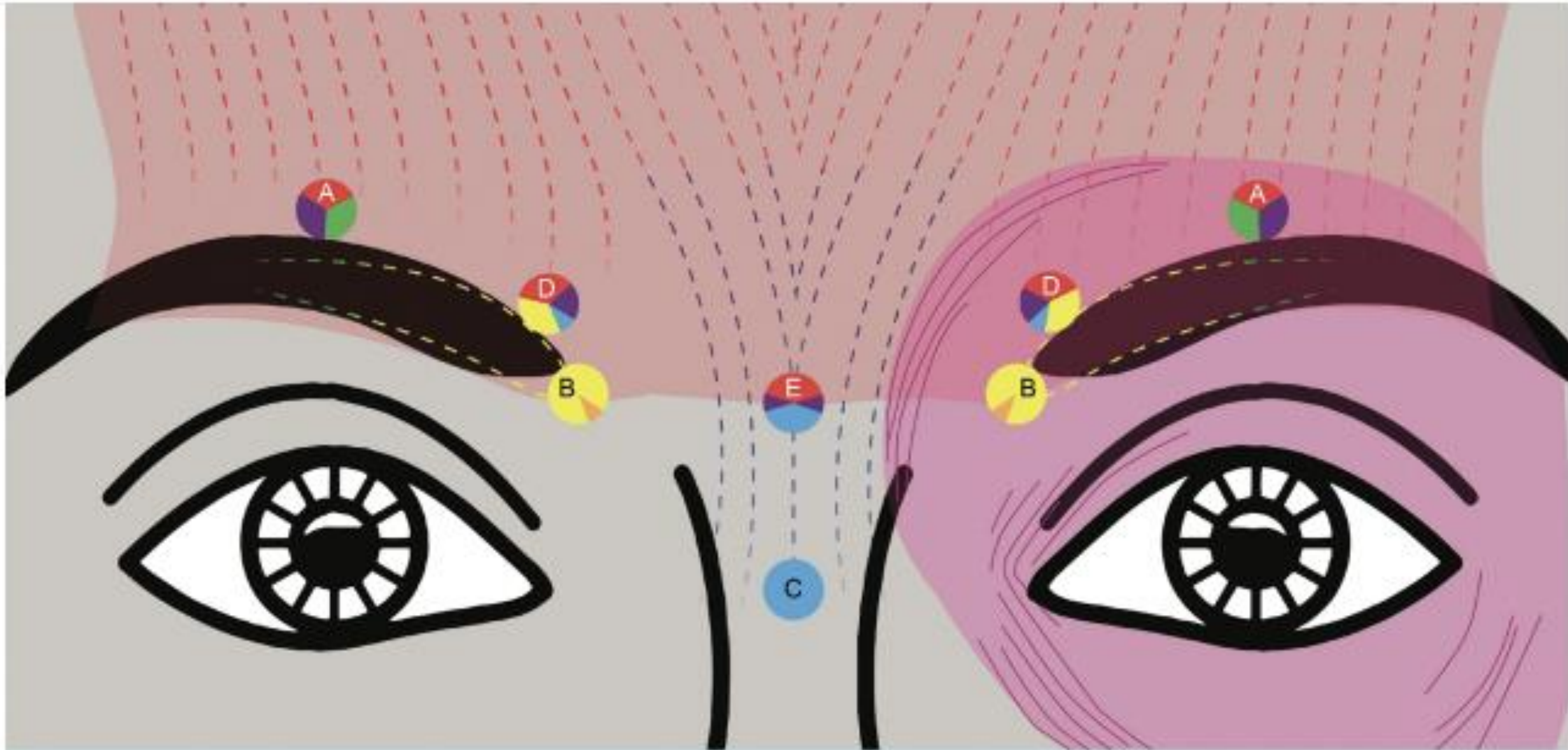








A



B





- | | | |
|---|--|---|
|  Procerus |  Lateral corrugator |  Orbicularis oculi |
|  Medial corrugator |  Frontalis |  Depressor |



Retrospective analysis of the MAUDE database on dermal filler complications from 2014–2020

J AM ACAD DERMATOL
NOVEMBER 2022

- N = 5994 (1/2014 – 12/2020)

Table I. Top 10 complications from January 2014 to December 2020

Complication	%	Percent difference from 2014 to 2016 versus 2017 to 2020 (95% CI)	P value
Skin inflammation	16.0	3.05 (1.67-4.44)	<.001
Swelling	14.1	−4.14 (−5.46 to −2.81)	<.001
Infection	13.4	1.08 (0.53-1.62)	<.001
Pain	7.9	−2.38 (−3.43 to −1.35)	<.001
Erythema	5.5	−3.69 (−4.57 to −2.81)	<.001
Necrosis	3.5	0.85 (0.15-1.55)	.018
Skin discoloration	3.5	−0.48 (−1.19 to 0.23)	.19
Allergic reaction	3.4	0.94 (0.24-1.64)	.008
Blood pressure changes	3.4	5.65 (4.98-6.33)	<.001
Systemic symptoms	3.4	−1.29 (−1.99 to −0.59)	<.001

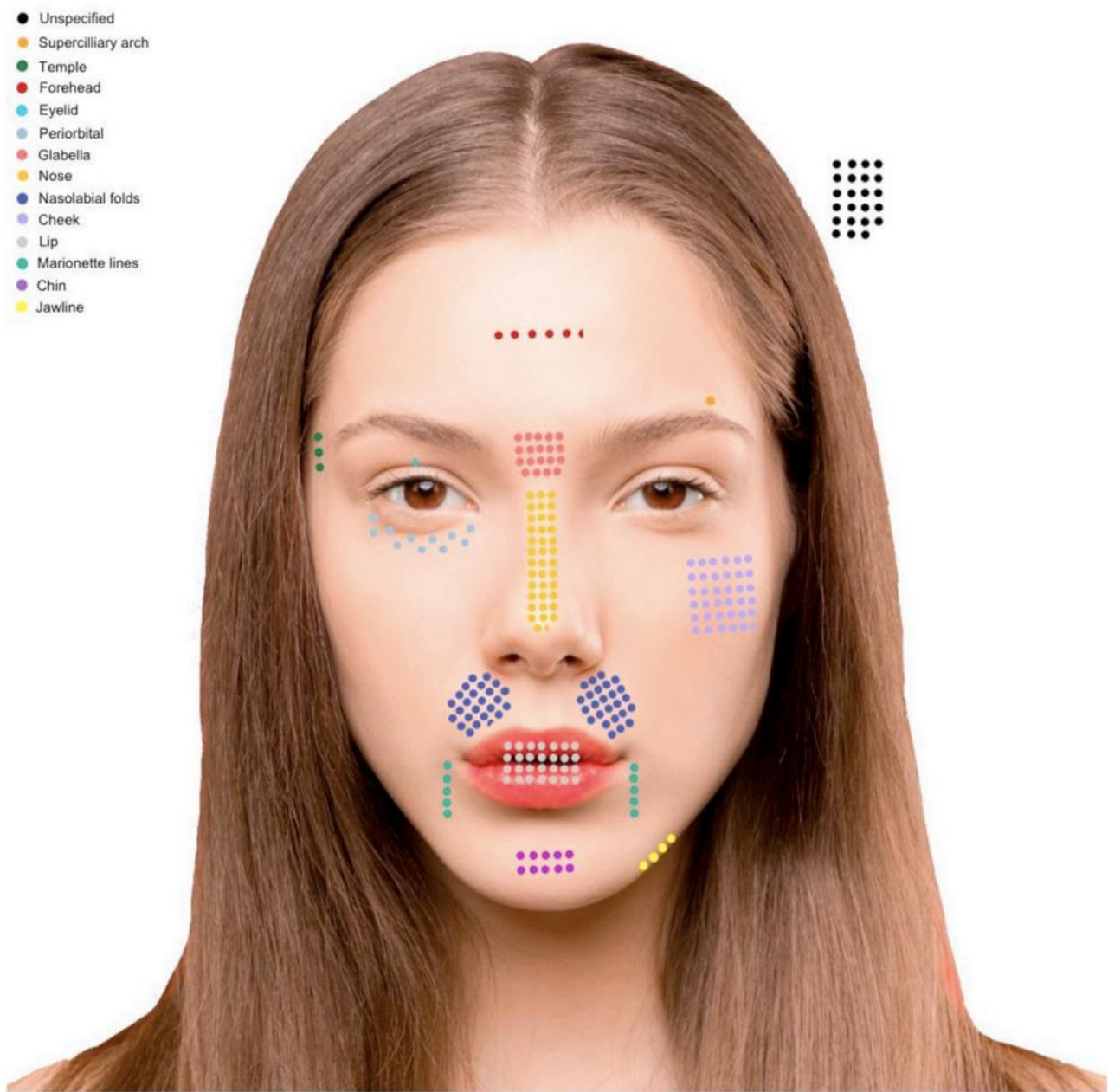
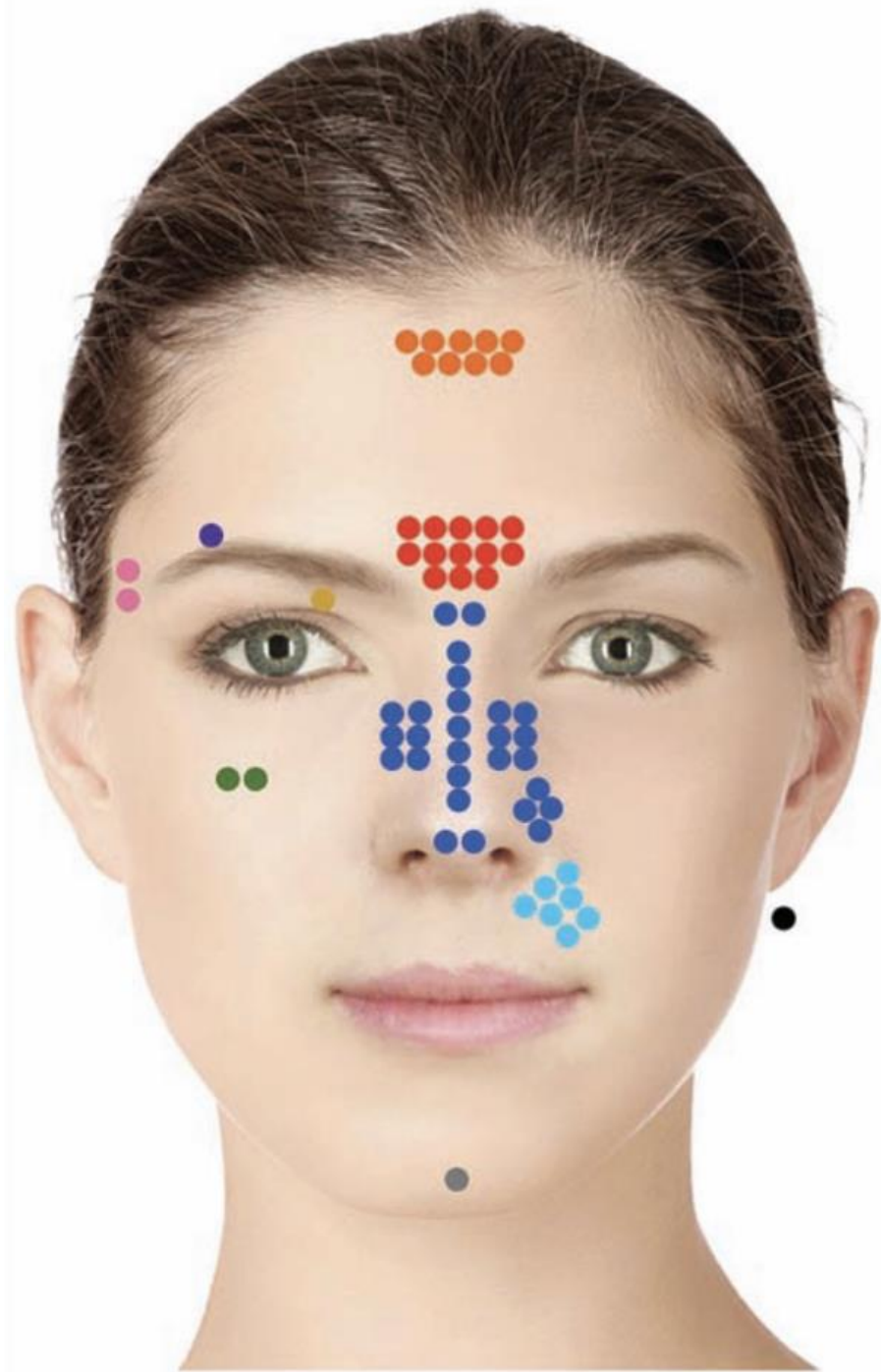


Fig 1. Injection site location for each report of necrosis from filler in 475 patients. Each dot represents 2 counts.

Update on Avoiding and Treating Blindness From Fillers: A Recent Review of the World Literature

Aesthetic Surgery Journal 39(6)

Katie Beleznay, MD, FRCPC; Jean D.A. Carruthers, MD, FRCSC, FRC (OPHTH); Shannon Humphrey, MD, FRCPC; Alastair Carruthers, MD, FRCPC; and Derek Jones, MD



Rates of Vascular Occlusion Associated With Using Needles vs Cannulas for Filler Injection

JAMA Dermatology February 2021 Volume 157, Number 2

Murad Alam, MD, MSCI, MBA; Rohit Kakar, MD; Jeffrey S. Dover, MD; Vishnu Harikumar, BA; Bianca Y. Kang, BS; Hoi Ting Wan, BS; Emily Poon, PhD; Derek H. Jones, MD

What is the risk of vascular occlusion with needle vs cannula?

Table 1. Occlusions by Filler and Injection Instrument Type Among Participants

Filler and instrument	Total No. of syringes injected in past 10 y	Total No. of occlusions in the past 10 y	No. of syringes per occlusion	<i>P</i> value	Total No. of participants who reported occlusions
All fillers ^a					
Needle	1 128 192	176	6410	<.001	103
Cannula	531 466	13	40 882		9
Hyaluronic acid					
Needle	927 841	162	5727	<.001	95
Cannula	420 281	12	35 023		8
Poly-L-lactic acid					
Needle	82 593	4	20 648	.31	2
Cannula	39 550	0	NA		0
Polymethylmethacrylate					
Needle	24 034	0	NA	.38	0
Cannula	14 647	1	14 647		1
Calcium hydroxyapatite					
Needle	64 399	10	6440	.01	10
Cannula	40 118	0	NA		0

Global Consensus Guidelines for the Injection of Diluted and Hyperdiluted Calcium Hydroxylapatite for Skin Tightening

KATE GOLDIE, MBChB,* WOUTER PEETERS, MD,[†] MOHAMMED ALGHOUL, MD, FACS,[‡] KIMBERLY BUTTERWICK, MD,[§] GABRIELA CASABONA, MD,^{||} YATES YEN YU CHAO, MD,[¶] JOANA COSTA, MD,[#] JOSEPH EVIATAR, MD, FACS,^{**} SABRINA GUILLEN FABI, MD, FAAD, FAACS,^{††} MARY LUPO, MD,^{‡‡} GERHARD SATTLER, MD,^{§§} HEIDI WALDORF, MD,^{||¶¶} YANA YUTSKOVSKAYA, MD,^{##} AND PAUL LORENC, MD^{***}

- Biostimulatory properties of dilute and hyperdilute CaHA
- Type I and III collagen appear as early as 4 weeks after treatment
- Deep dermal or sub-dermal plane

TABLE 1. Definitions of Diluted and Hyperdiluted CaHA

	<i>Dilution Ratio</i>
Diluted CaHA	1:1
Hyperdiluted CaHA	≥1:2

CaHA, calcium hydroxylapatite.

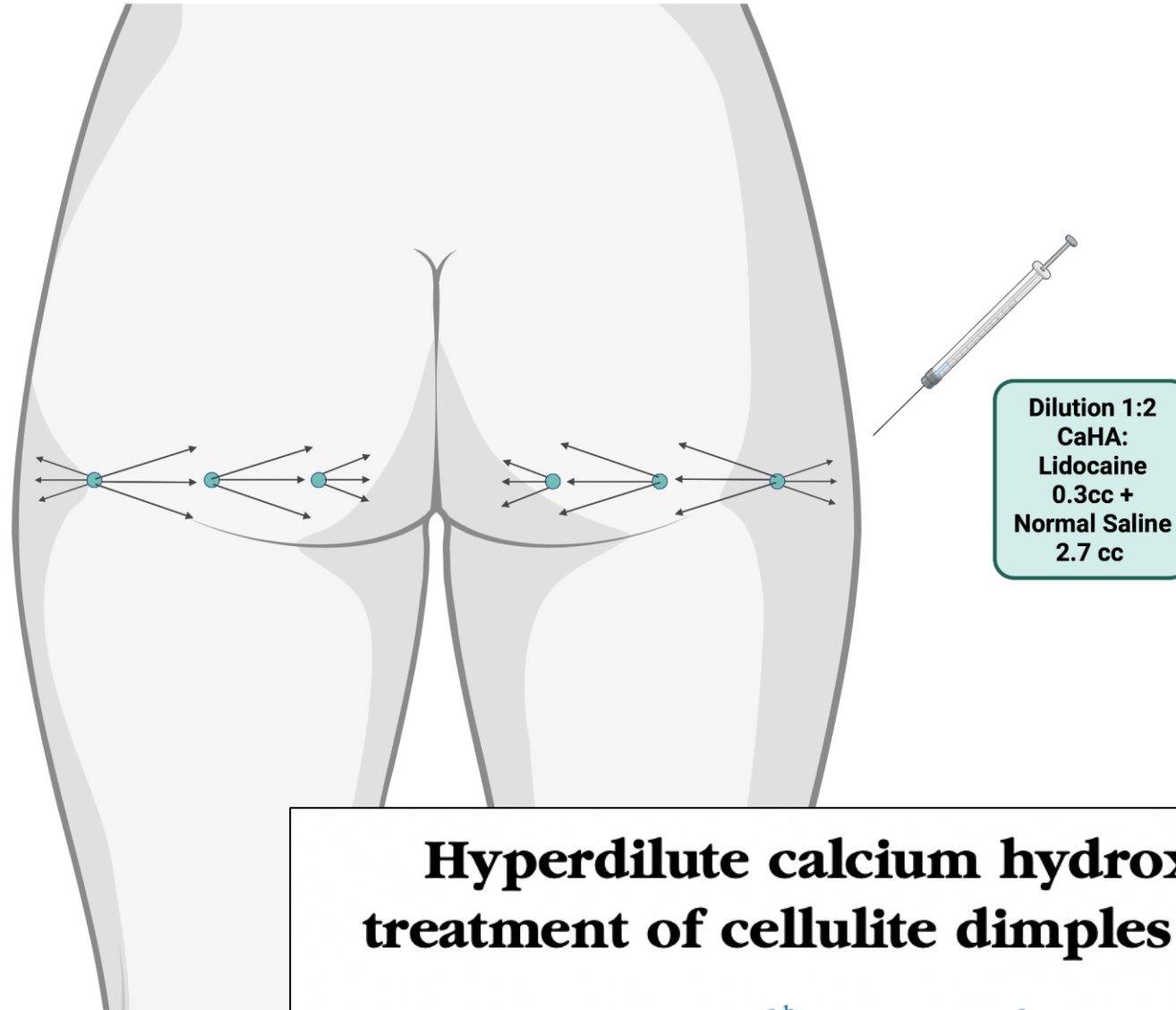
TABLE 4. Recommended Treatment Paradigm for Diluted and Hyperdiluted CaHA

<i>Indication</i>	<i>Average Volume of Undiluted CaHA</i>	<i>Dilution Ratio</i>	<i>Injection Plane/ Technique</i>
Pan-facial rejuvenation	1.5 mL/side	Most commonly 1:1; up to 1:3	Subdermal Retrograde linear fanning
Neck	1.5 mL	1:2–1:4	Immediate subdermal Retrograde linear threads
Décolletage	1.5 mL	1:2–1:4*	Immediate subdermal Retrograde linear threads
Mild laxity of the upper arm	3 mL/arm	1:2*	Immediate subdermal Retrograde linear fanning
Abdomen	1.5 mL/100 cm ²	1:1	Subdermal Cross-hatching or fanning
Buttocks Gluteal sagging; mild dermal irregularities	1.5 mL per side	1:2 and 1:6, layered	Deep dermal Cross-hatching
Mild laxity of the legs	1.5 mL/100 cm ²	1:2*	Immediate subdermal Horizontal “rasping”
Cellulite	1.5 mL per side	1:1	Subdermal Vectored fanning
Striae	1.5–3 mL per session	1:1	Subcutaneous to superficial dermis Microbolus or retrograde linear thread

*In select situations and in individuals with thicker skin, dilution ratios of 1:1 may be more appropriate.
CaHA, calcium hydroxylapatite.

Niaz, Ghassan, Ali Alajmi, and Kachiu Lee. "Hyperdilute calcium hydroxyapatite for treatment of cellulite dimples in the buttock." *JAAD Case Reports* 38 (2023): 127-129.

CaHA injection technique



Hyperdilute calcium hydroxyapatite for treatment of cellulite dimples in the buttock

Ghassan Niaz, MD,^{a,b} Ali Alajmi, MD,^a and Kachiu Lee, MD, MPH^{a,c}



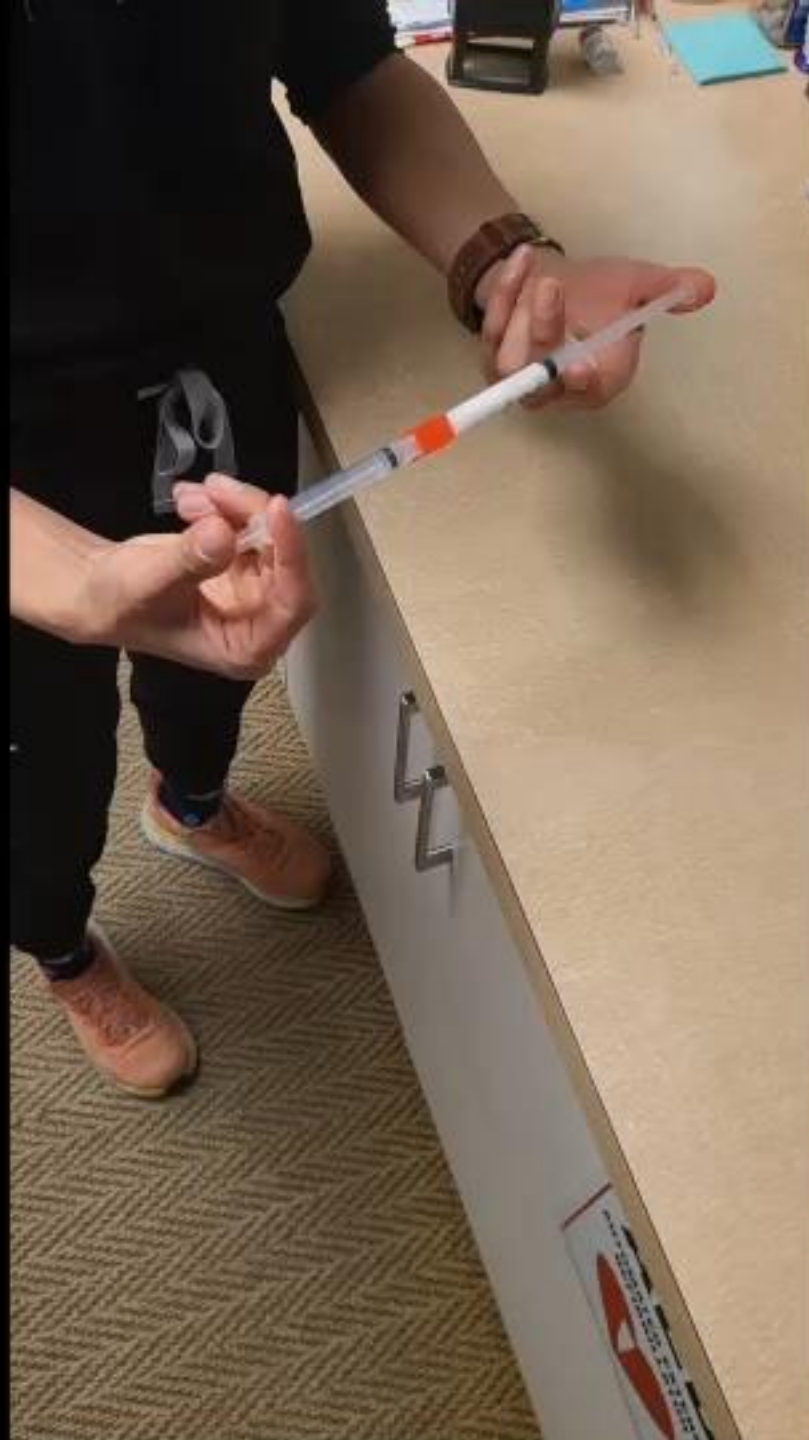
(A)



(B)

Niaz, Ghassan, Ali Alajmi, and Kachiu Lee. "Hyperdilute calcium hydroxyapatite for treatment of cellulite dimples in the buttock." *JAAD Case Reports* 38 (2023): 127-129.

Dilution of CaHA
with normal saline
and lidocaine



1:2 dilution of CaHA
with normal saline
(0.3cc 1%
lidocaine, 2.7cc
saline)



Synchronous
Ultrasound
Parallel Beam
(SUPERB)
technology

FDA-cleared
indication

1x speed



Summary

- NAFL - ?reduction of KC risk
- Deep chemical peels – alternative for lip augmentation
- Consider 3-point injection technique for glabella
- Lower face injections – risk of necrosis (in contrast to blindness)
- Significantly lower risk of occlusion with cannula compared to needle
- Consensus on dilution of CaHA

Thank you!



 @kachiuleemd