clarius Ultrasound Anywhere

WEBINAR

Facial Filler Safety 101: Ultrasound Mapping for Accurate Aesthetic Injections

August 2023

Your Host

Shelley Guenther, CRGS, CRCS

Sonographer | Clinical Marketing Manager

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The growing importance of ultrasonography in cosmetic dermatology: An update after the 23rd IMCAS Annual World Congress

> … in the near future, US will be an essential diagnostic tool in any dermatology or cosmetic doctor's office to both ensure safety and provide legal protection for the professional.

Haykal D, Cartier H, Benzaquen M, Damiani G, Habib SM. The growing importance of ultrasonography in cosmetic dermatology: An update after the 23rd IMCAS Annual World Congress (2022). J Cosmet Dermatol. 2023 Jan;22(1):222-225. doi: 10.1111/jocd.15503. Epub 2022 Nov 14. PMID: 36374262.jac353. PMID: 36594153.

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The growing importance of ultrasonography in cosmetic dermatology: An update after the 23rd IMCAS Annual World Congress (2022)

Diala Haykal [1], Hugues Cartier [2], Michael Benzaquen [3], Giovanni Damiani [4], Sayed Meelad Habib [5]

Affiliations + expand

PMID: 36374262 DOI: 10.1111/jocd.15503

Free article

Abstract

Background: Ultrasound (US) has been used for many years in the field of medicine. Many specialties have embraced US as a quick, painless, and relatively inexpensive tool to assist the clinician in determining anatomy, pathology, and aid in diagnostic or therapeutic procedures. US allows for precise mapping of cutaneous and subcutaneous structures in the face, in particular vascular structures. The use of US leads to reduced chances of complications and clinical failures, rendering more safety and high quality.

Methods: US is considered the first-imaging technique for dealing with fillers and managing their potential complications. US can be deployed for vascular mapping, safe placement of fillers, and directed low-dose hyaluronidase reversal of vascular adverse events. It is a noninvasive imaging modality that provides a good definition for studying the skin, deeper layers, and blood flow in real time. In other words, we go from static to dynamic anatomy. In addition, US can guide with the application of botulinum toxin, in order to define the muscular planes. US may contribute to a more personalized procedure, better cosmetic results, and help to avoid complications. In general, physicians tend to use it for prevention. Last, for research purposes, US examination provides valuable information on the behavior, longevity, and interaction of the filler within the tissues.

Conclusion: This new approach for US-guided treatments is a very practical and an effective method in cosmetic dermatology. As doctors, we owe it to our patients to do our best to prevent any harm. We feel that in near future, US will be an essential diagnostic tool in any dermatology or cosmetic doctor's office to both ensure safety and provide legal protection for the professional.

Keywords: aesthetics; cosmetic dermatology; dermal fillers; safety; ultrasound.

Description of a safe Doppler ultrasound-guided technique for hyaluronic acid filler in the face-A method to avoid adverse events

> That in the future the use of Doppler ultrasound-guided filling technique will be mandatory ….. to both Ensure patient safety and provide legal protection for the professional.

Rocha PS, Guerra TA, Teixeira DA. Description of a safe doppler ultrasound-guided technique for hyaluronic acid filler in the face-A method to avoid adverse vascular events. J Cosmet Dermatol. 2022 Jul;21(7):2783-2787. doi: 10.1111/jocd.14492. Epub 2021 Sep 29. PMID: 34587360.

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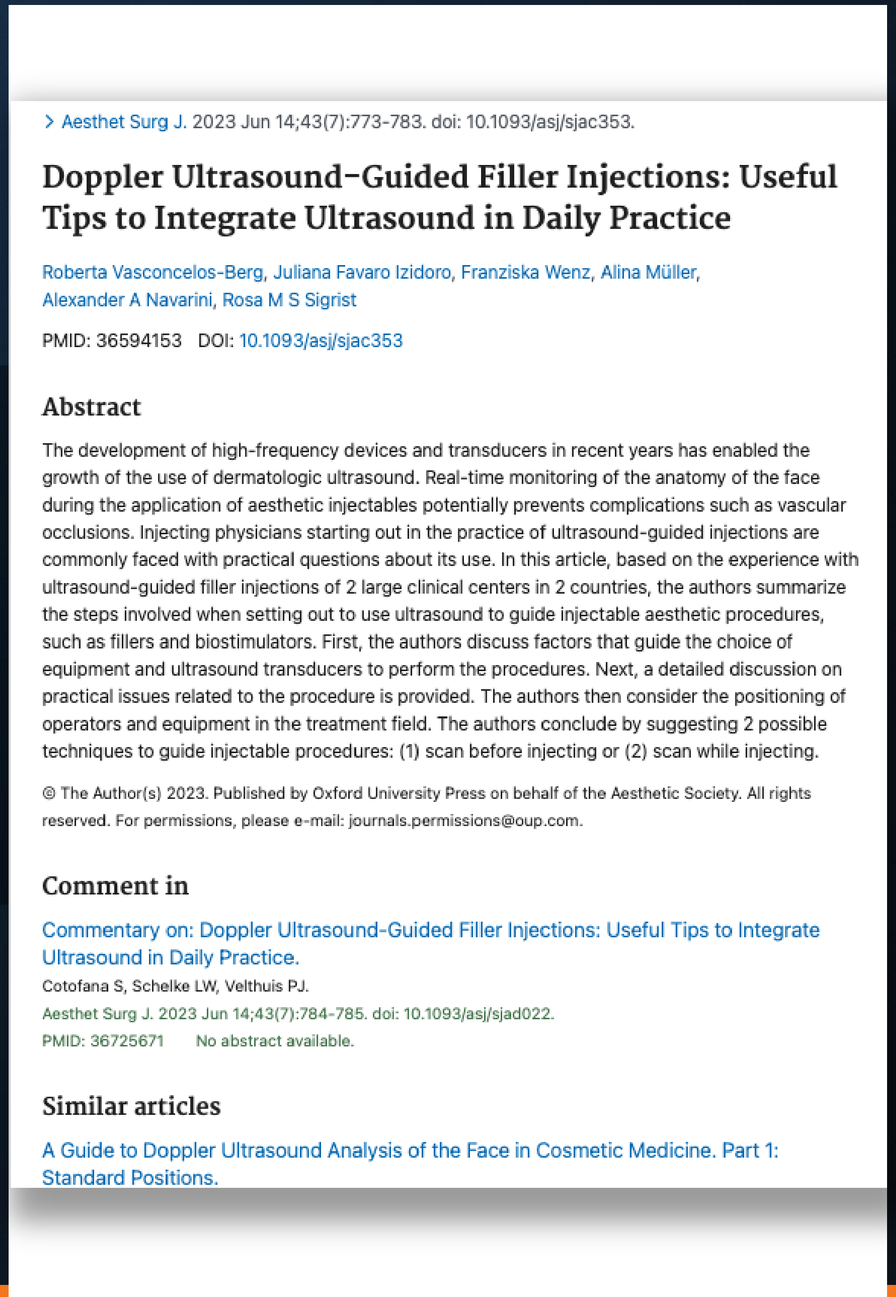
Doppler Ultrasound-Guided Filler Injections: Useful Tips to Integrate Ultrasound in Daily Practice

> The development of high-frequency ultrasound enabled its use in aesthetic medicine to guide the application of injectable and avoid complications, especially those of a vascular nature.

Vasconcelos-Berg R, Izidoro JF, Wenz F, Müller A, Navarini AA, Sigrist RMS. Doppler Ultrasound-Guided Filler Injections: Useful Tips to Integrate Ultrasound in Daily Practice. Aesthet Surg J. 2023 Jun 14;43(7):773-783. doi: 10.1093/asj/sjac353. PMID: 36594153.



Aesthet Surg J. 2023 Jun 14;43(7):773-783. doi: 10.1093/asj/sjac353.

Doppler Ultrasound-Guided Filler Injections: Useful Tips to Integrate Ultrasound in Daily Practice

Roberta Vasconcelos-Berg, Juliana Favaro Izidoro, Franziska Wenz, Alina Müller, Alexander A Navarini, Rosa M S Sigrist

PMID: 36594153 DOI: 10.1093/asj/sjac353

Abstract

The development of high-frequency devices and transducers in recent years has enabled the growth of the use of dermatologic ultrasound. Real-time monitoring of the anatomy of the face during the application of aesthetic injectables potentially prevents complications such as vascular occlusions. Injecting physicians starting out in the practice of ultrasound-guided injections are commonly faced with practical questions about its use. In this article, based on the experience with ultrasound-guided filler injections of 2 large clinical centers in 2 countries, the authors summarize the steps involved when setting out to use ultrasound to guide injectable aesthetic procedures, such as fillers and biostimulators. First, the authors discuss factors that guide the choice of equipment and ultrasound transducers to perform the procedures. Next, a detailed discussion on practical issues related to the procedure is provided. The authors then consider the positioning of operators and equipment in the treatment field. The authors conclude by suggesting 2 possible techniques to guide injectable procedures: (1) scan before injecting or (2) scan while injecting.

Comment in

Commentary on: Doppler Ultrasound-Guided Filler Injections: Useful Tips to Integrate Ultrasound in Daily Practice.

Cotofana S, Schelke LW, Velthuis PJ.

Aesthet Surg J. 2023 Jun 14;43(7):784-785. doi: 10.1093/asj/sjad022.

PMID: 36725671 No abstract available.

Similar articles

A Guide to Doppler Ultrasound Analysis of the Face in Cosmetic Medicine. Part 1: Standard Positions.

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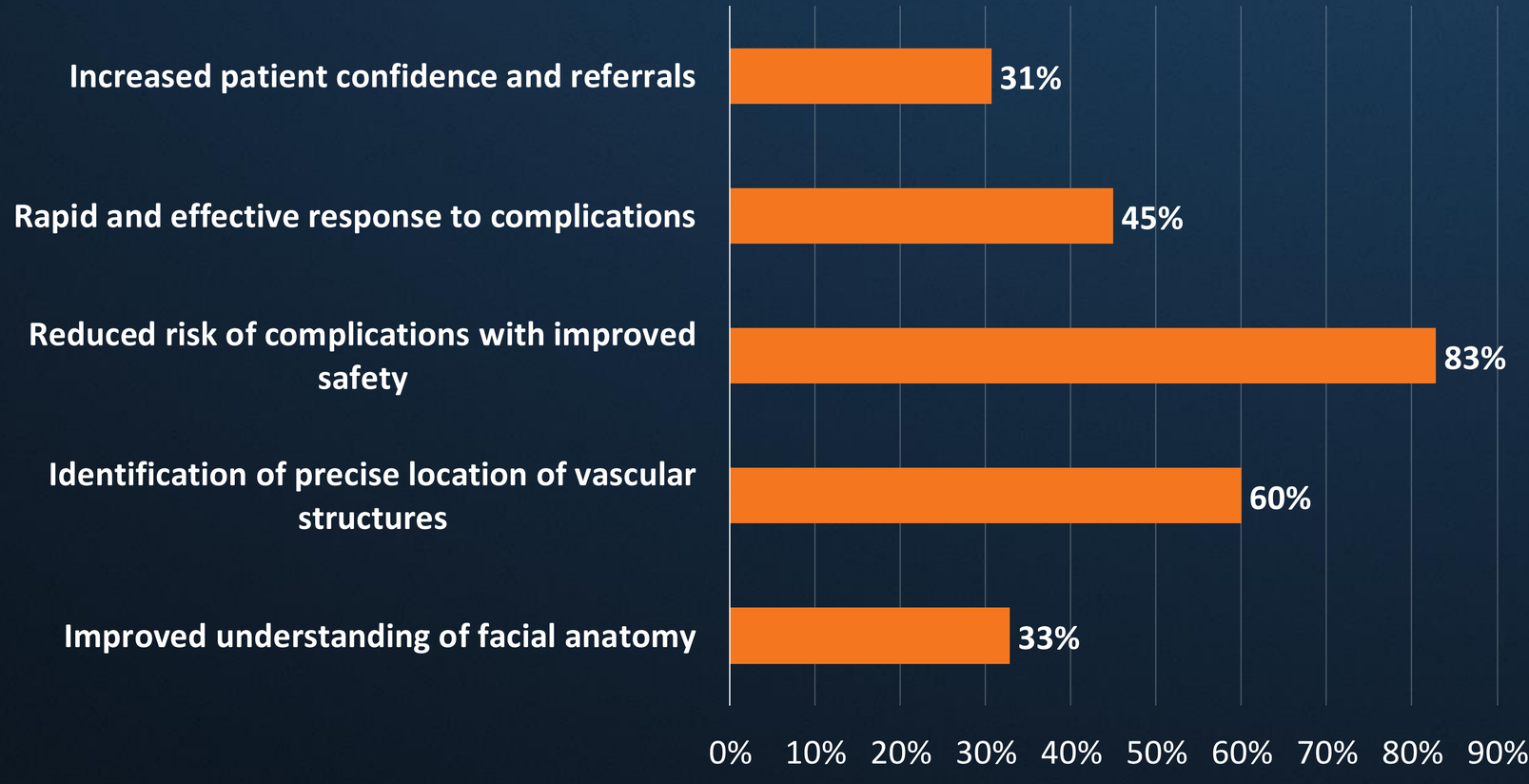
Interactive Poll

What key benefits do you see ultrasound bringing to facial aesthetics?



Your Host

Danice Sher, PA-C

Physician Assistant Injector
Founder, Sparkle Aesthetics

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Ultrasound & Safe Mapping™ For Injections: Avoid Complications like a Pro

Dani Sher

Sparkle Aesthetics

Oak Park, IL

Where SafeMapping™ Came From…

Plagued By the Idea of a VO…




- But now I can’t get away from them!

“Vascular Map”?

- Vascular Mapping felt onerous
- How to “mark” this mess
- Do we need to map this… ?

How To Integrate It?

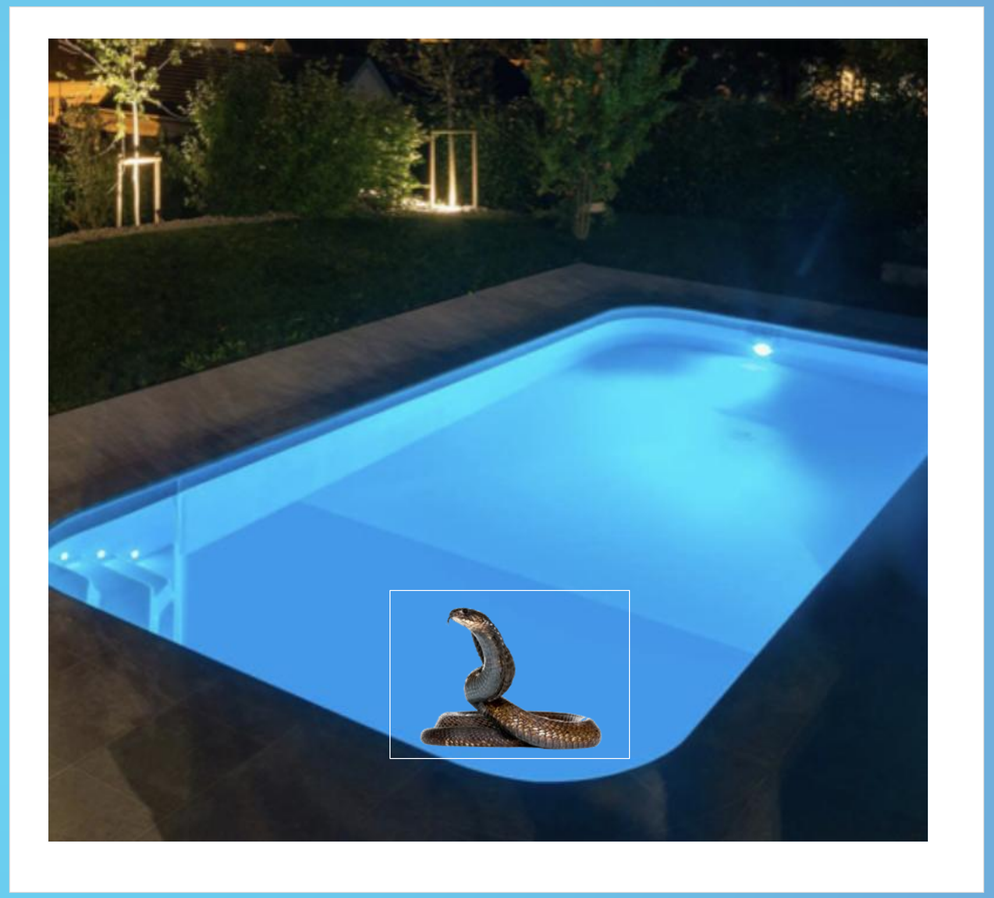
- To do this

3 Phases of Integrating U/S in Aesthetics

1. Checking if it's safe to Inject, then inject: Safe Mapping™
2. Watch while you're injecting: Ultrasound Guided
3. Managing complications

What is Safe Mapping™?

- Checking if it's safe to Inject, then inject
- Pros: It's easy, can watch correction
- Cons: Not live feedback, in higher risk areas, ultrasound-guided approach may be more appropriate



Which areas to SafeMap™?

- Chin
- Cheeks
- Prejowl Sulcus
- Gonial Angle
- Temples +/- (must be a pro-safe mapper™!)

Better for ultrasound-guided (higher risk!):

- Temples
- Pyriform

Safe Mapping To Avoid This…

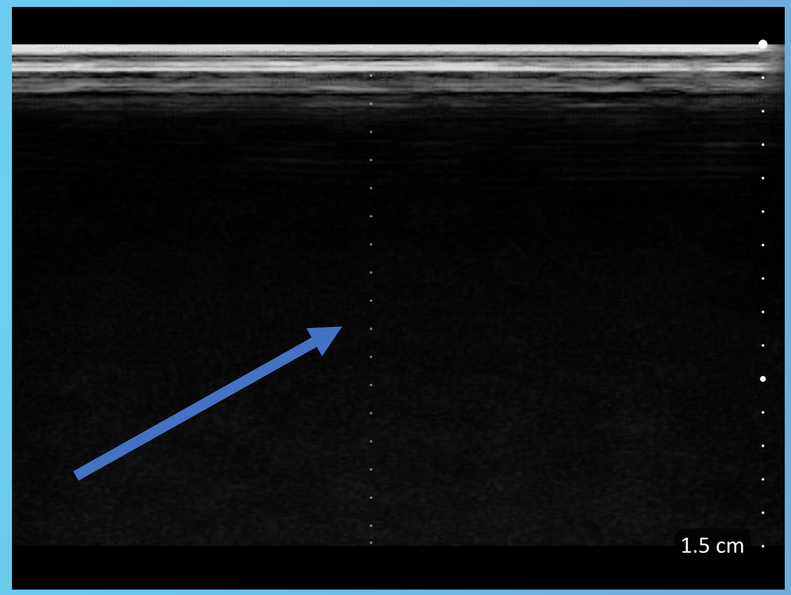
- Transverse Artery Occlusion

SafeMap™ : 4 Simple Steps

1. Where do I want to put filler? Circle it.
2. Put the ultrasound on, midline marker on
3. Power Doppler On
4. PART: Pressure, Alignment Rotation Tilt

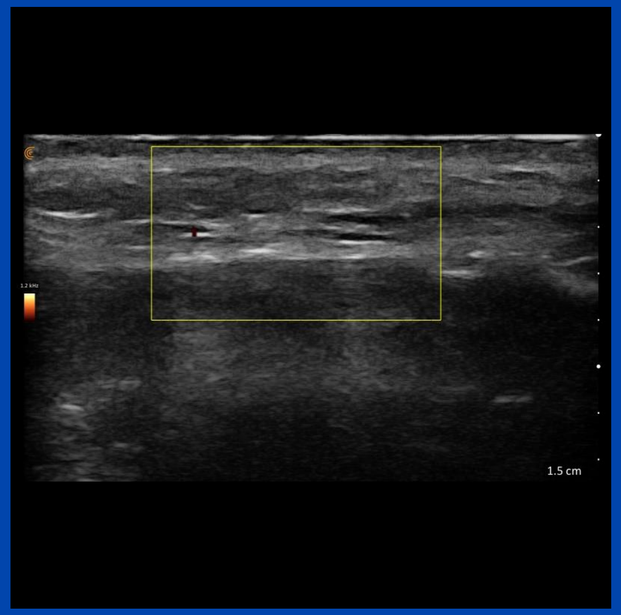
Midline Marker!

Your crosshairs! The midline marker-corresponds to the midline marker on the screen. Invaluable!

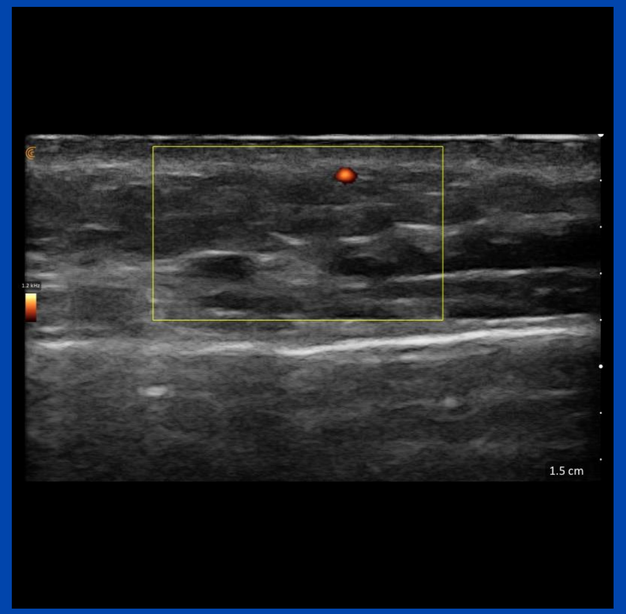


P.A.R.T.: Pressure

- Pressure: Pressing Hard vs. Releasing



Pressing Hard



Releasing


Dani HD3
Cheek
MI 0.56
TIS 0.04
TIB 0.06
1.2 kHz
1.5 cm
14 FPS / 16.0 MHz
PDI
2D

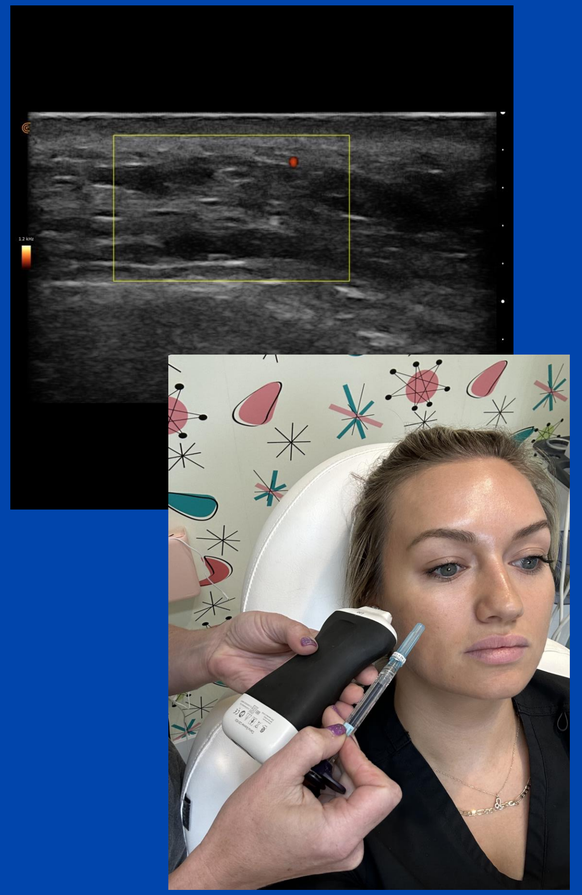
P.A.R.T.: Alignment

- Are you on top of your target?

P.A.R.T.: Rotation

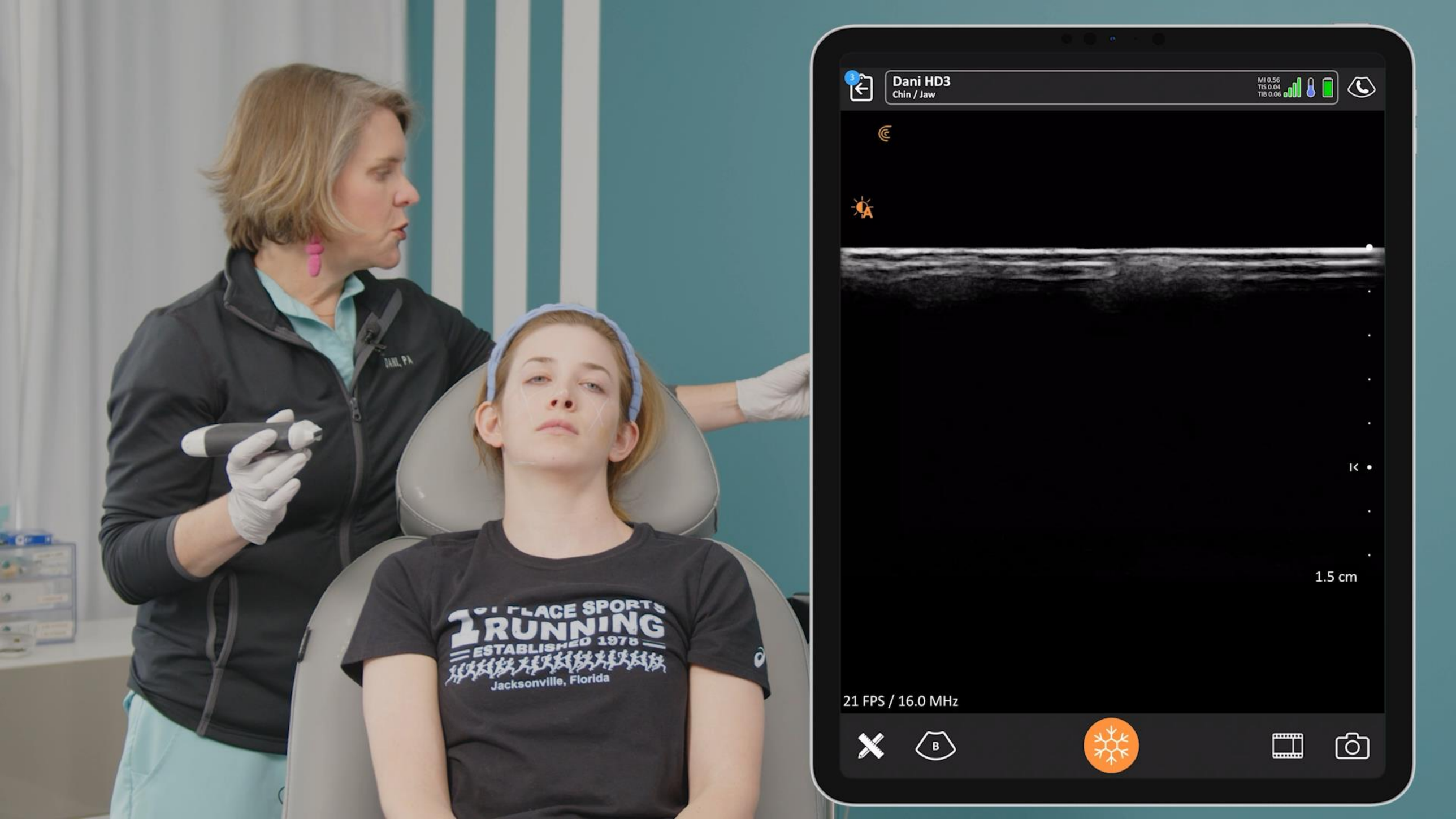
- Are you on top of your target?

P.A.R.T.: Tilt



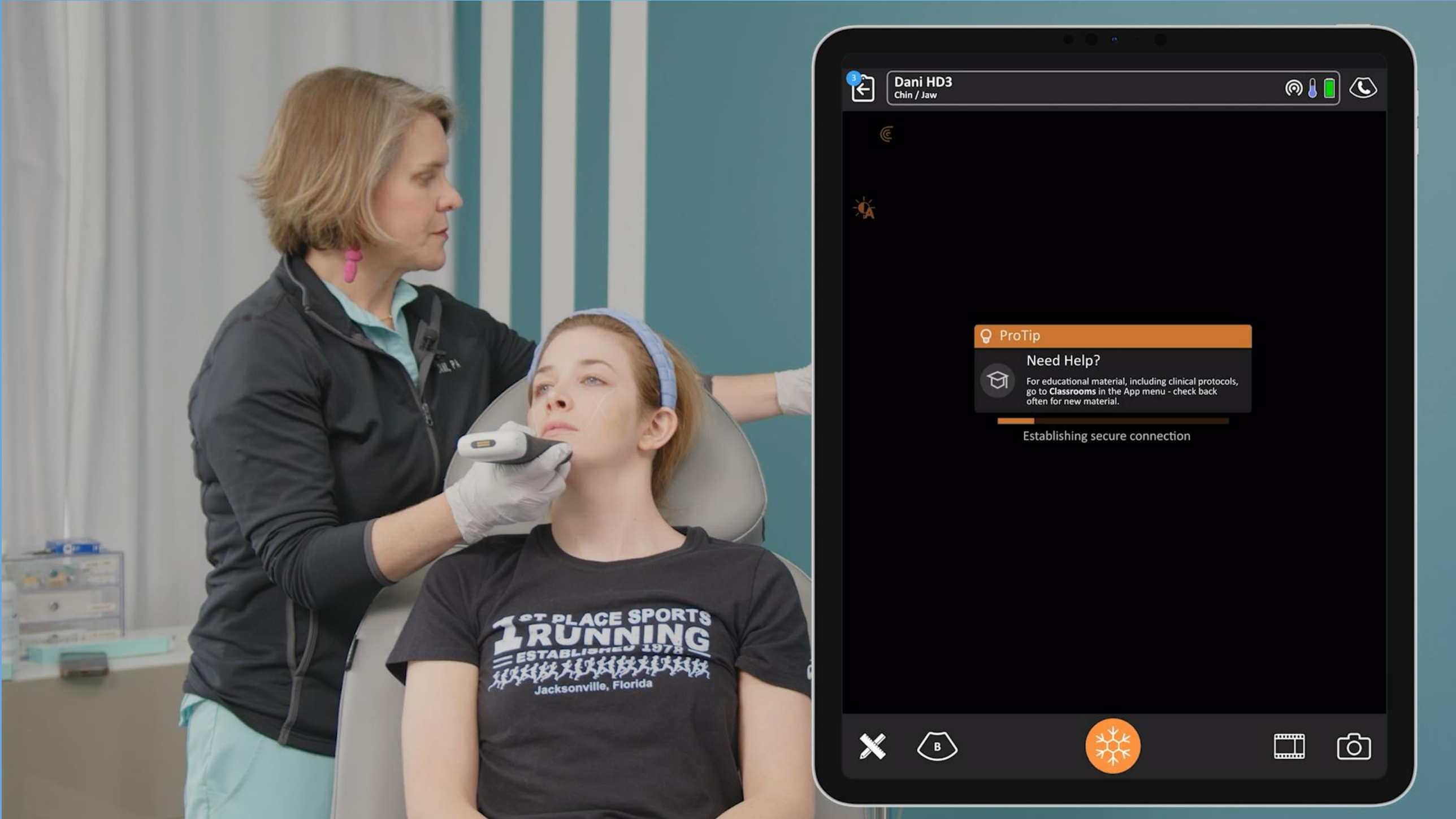
Gonial Angle – Radiesse Occlusion

- Facial artery


Dani HD3
Chin / Jaw
MI 0.56
TIS 0.04
TIB 0.06
1.5 cm
21 FPS / 16.0 MHz
B
Jacksonville, Florida

Safe Map™ of The Chin

- Ascending Submental Artery Occlusion


Dani HD3
Chin / Jaw
ProTip
Need Help?
For educational material, including clinical protocols, go to Classrooms in the App menu - check back often for new material.
Establishing secure connection
B
1ST PLACE SPORTS
RUNNING
Jacksonville, Florida

In Short… SafeMap™ Advantages!

1

Not “mapping” the course of a vessel

2

Easier to find a precise needle spot rather than a vessel course

3

Good for beginners

4

It’s FUN!

Go From Nervous to Nerd-ous!

Come Train With Me !

In-person Chicago training registration:

www.sparkleaesthetics.com

Virtual Learning:
Patreon

IG: Pictures, Pearls, Ridiculous Content

IG @ dani_sparkle_pa

Live Demonstration

Shelley Guenther, CRGS, CRCS

Sonographer | Clinical Marketing Manager

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What additional information would you like?

Interactive Poll

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Clarius L20 HD3

- 30% Smaller & More Affordable
- Wireless Freedom
- High-Definition Imaging
- Easy App for iOS & Android
- Advanced Aesthetics Package
- Clarius Cloud Storage
- Clarius Live Telemedicine
- Clarius Voice Controls

European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB) Position Statement on Dermatologic Ultrasound

> The minimum transducer frequency for dermatologic ultrasound should be 15 MHz. Higher transducer frequencies may provide further information that may be relevant (broad agreement 8/9, 88.9 %).

Alfageme F, Wortsman X, Catalano O, Roustan G, Crisan M, Crisan D, Gaitini DE, Cerezo E, Badea R. European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB) Position Statement on Dermatologic Ultrasound. Ultraschall Med. 2021 Feb;42(1):39-47. English. doi: 10.1055/a-1161-8872. Epub 2020 May 7. PMID: 32380567.
Source: https://pubmed.ncbi.nlm.nih.gov/32380567/

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Thieme

European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB) Position Statement on Dermatologic Ultrasound

Stellungnahme der European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB) zu Dermatologischem Ultraschall

Authors
Fernando Alfageme[1], Ximena Wortsman[2], Orlando Catalano[3], Gaston Roustan[1], Maria Crisan[4], Diana Crisan[5], Diana E. Gaitini[6], Eugenio Cerezo[7], Radu Badea[8]

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Key words
dermatologic ultrasound, guidelines and recommendations, skin ultrasound

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ABSTRACT

Dermatologic ultrasound is a recent application of ultrasound for the evaluation of healthy skin and appendages and their diseases. Although the scientific literature regarding this application is still not sufficient for evidence-based guidelines, general recommendations issued by scientific societies are necessary. The EFSUMB (European Federation of Societies for Ultrasound in Medicine and Biology) steering committee for dermatologic ultrasound has developed a series of consensus position statements regarding the main fields of dermatologic ultrasound (technical requirement, normal skin and appendages, inflammatory skin diseases, tumoral skin diseases, aesthetic dermatology and practice-training requirements). This document is the foundation for future evidence-based recommendations and guidelines for dermatologic ultrasound practice.

ZUSAMMENFASSUNG

Dermatologischer Ultraschall ist eine neuere sonografische Anwendung zur Beurteilung gesunder Haut, ihrer Adnexe und deren Erkrankungen. Obwohl die wissenschaftliche Literatur zu dieser Anwendung noch nicht für evidenzbasierte Leitlinien ausreicht, sind allgemeine Empfehlungen der wissenschaftlichen Gesellschaften erforderlich. Der Lenkungsausschuss für dermatologischen Ultraschall der EFSUMB (European Federation of Societies for Ultrasound in Medicine and Biology) hat eine Reihe von Konsensus-Stellungnahmen zu den Hauptgebieten des dermatologischen Ultraschalls erarbeitet (technische Anforderungen, normale Haut und Adnexe, entzündliche Hauterkrankungen, Tumorerkrankungen der Haut, ästhetische Dermatologie und Anforderungen an die praktische Ausbildung). Dieses Dokument bildet die Grundlage für zukünftige evidenzbasierte Empfehlungen und Leitlinien für die Praxis des dermatologischen Ultraschalls.

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A comparison of five point-of-care ultrasound devices for use in ophthalmology and facial aesthetics

> The L20 received the highest image quality rankings. While image quality is an important aspect of point-of-care ultrasound device selection, other factors such as cost, wireless capabilities, range of presets and battery life should also be considered.

Park KE, Mehta P, Tran C, Parikh AO, Zhou Q, Zhang-Nunes S. A comparison of five point-of-care ultrasound devices for use in ophthalmology and facial aesthetics. Ultrasound. 2023;0(0). doi:10.1177/1742271X231166895
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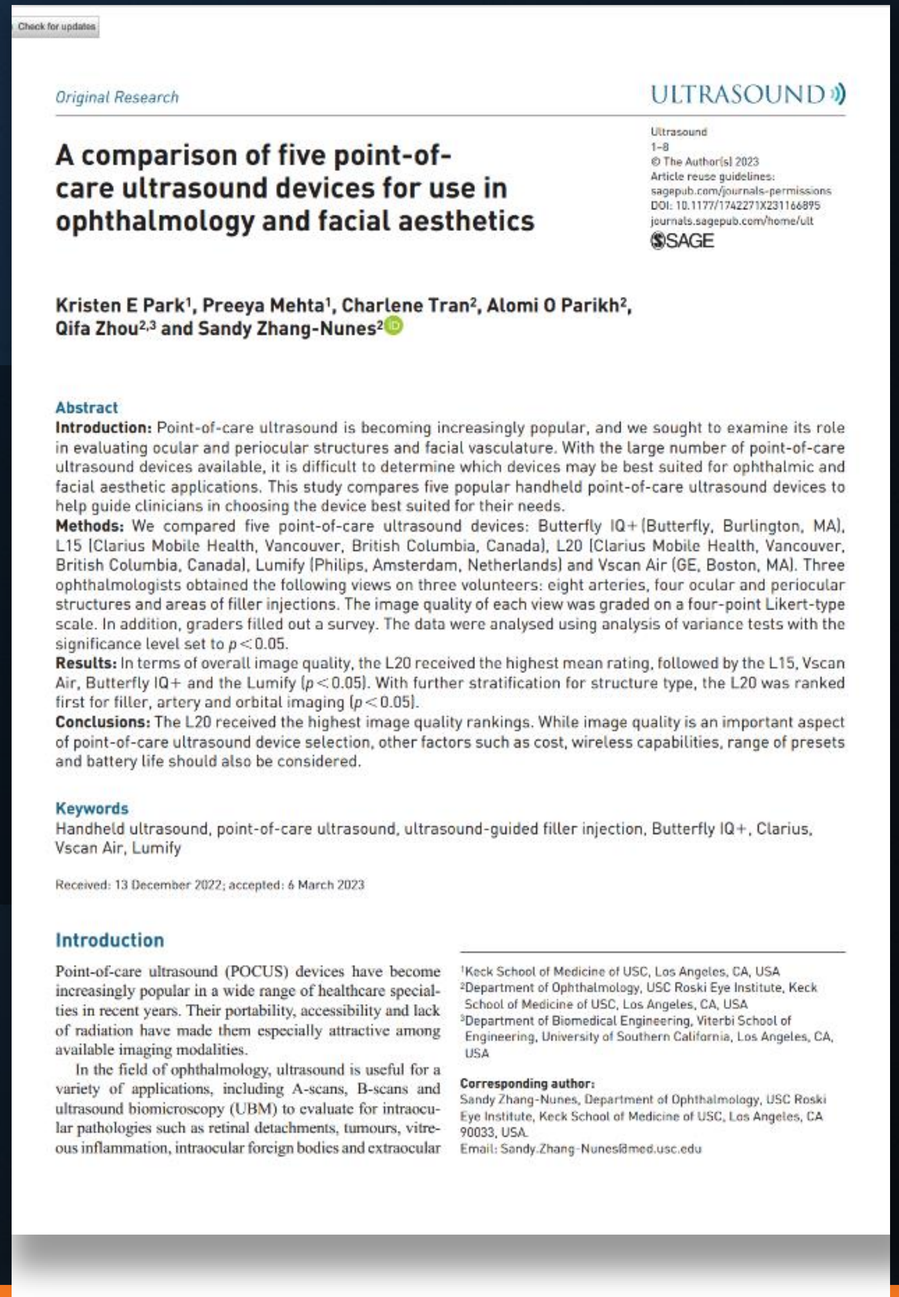

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SAGE

A comparison of five point-of-care ultrasound devices for use in ophthalmology and facial aesthetics

Kristen E Park[1], Preeya Mehta[1], Charlene Tran[2], Alomi O Parikh[2], Qifa Zhou[2,3] and Sandy Zhang-Nunes[2]

Abstract

Introduction: Point-of-care ultrasound is becoming increasingly popular, and we sought to examine its role in evaluating ocular and periocular structures and facial vasculature. With the large number of point-of-care ultrasound devices available, it is difficult to determine which devices may be best suited for ophthalmic and facial aesthetic applications. This study compares five popular handheld point-of-care ultrasound devices to help guide clinicians in choosing the device best suited for their needs.

Methods: We compared five point-of-care ultrasound devices: Butterfly IQ+ (Butterfly, Burlington, MA), L15 (Clarius Mobile Health, Vancouver, British Columbia, Canada), L20 (Clarius Mobile Health, Vancouver, British Columbia, Canada), Lumify (Philips, Amsterdam, Netherlands) and Vscan Air (GE, Boston, MA). Three ophthalmologists obtained the following views on three volunteers: eight arteries, four ocular and periocular structures and areas of filler injections. The image quality of each view was graded on a four-point Likert-type scale. In addition, graders filled out a survey. The data were analysed using analysis of variance tests with the significance level set to $p < 0.05$.

Results: In terms of overall image quality, the L20 received the highest mean rating, followed by the L15, Vscan Air, Butterfly IQ+ and the Lumify ($p < 0.05$). With further stratification for structure type, the L20 was ranked first for filler, artery and orbital imaging ($p < 0.05$).

Conclusions: The L20 received the highest image quality rankings. While image quality is an important aspect of point-of-care ultrasound device selection, other factors such as cost, wireless capabilities, range of presets and battery life should also be considered.

Keywords
Handheld ultrasound, point-of-care ultrasound, ultrasound-guided filler injection, Butterfly IQ+, Clarius, Vscan Air, Lumify

Received: 13 December 2022; accepted: 6 March 2023

Introduction

Point-of-care ultrasound (POCUS) devices have become increasingly popular in a wide range of healthcare specialties in recent years. Their portability, accessibility and lack of radiation have made them especially attractive among available imaging modalities.

In the field of ophthalmology, ultrasound is useful for a variety of applications, including A-scans, B-scans and ultrasound biomicroscopy (UBM) to evaluate for intraocular pathologies such as retinal detachments, tumours, vitreous inflammation, intraocular foreign bodies and extraocular

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Questions

Danice Sher, PA-C

Sparkle Aesthetics

Shelley Guenther

Sonographer

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Thank you!