



Host (1000)

So it's 515 here in Boston, 215 on the West Coast.



Host (1000)

And we're headed into our final session, session nine. This is going to feature Dr. Larry Eikenfeld from UC San Diego, Doris Day. He's going to be talking about acne. Doris is going to be speaking about aesthetic treatments for the transgender patient. Reese is going to talk about laser treatment and basal cells.



Host (1000)

And best practices in the time of pandemic.



Omar, Ibrahimine, Susie Kilmer. And then we're going to have the world's expert on botched aesthetic procedures, Dr. Nils Solar. So why don't we start now with Dr.

Jon Bryant

Larry Eikenfeld? I'm Larry Eikenfeld. And I'm really happy to be a part of the message of aesthetics meeting.

Acne: New Treatments and Energy-Based Therapies



Lawrence F. Eichenfield, MD

Professor of Dermatology and Pediatrics

Vice Chair, Dermatology; Chief, Pediatric and Adolescent Dermatology

UCSD/Rady Children's Hospital, San Diego



I appreciate the invitation. And just wish we were hanging out together rather than doing this virtually. But that's the way it is. I was asked to talk about acne, new treatments, and energy-based therapies. And it was actually a fair amount to talk about, especially in 10 minutes. So let's try to crank through some of the material. Because I think it's actually an exciting time and acne book from a medical standpoint and continuing to have new advances procedurally as well.



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So from a top, so we deal with acne all the time. We have our significant inflammatory acne. We have our risk of scoring and active scoring. And certainly tremendous impact on individuals.

Disclosures

Investigator &/or consultant

- Almirall, Cassiopea, Dermata, Foamix, Galderma, L'Oreal, Ortho Dermatologics
- Have Lumenis Ultrapulse CO2; Candela V-Beam Perfectas; Candela GentleMax (but no relationship with the companies)



From a disclosure standpoint, I've been an investigator consultant in multiple companies predominantly in the Medical Acne Space. I have no association with any laser company, but I figured I'd list the lasers that I have. There, because those are the ones I tend to use.

Match up the Trade Name or Mechanism

- A. Minocycline Foam 4% 1. Topical Anti-Androgen
- B. Clascoterone 1% Cream 2. AMZEEQ
- C. Trifarotene Cream 0.005% 3. AKLIEF
- D. Sarecycline 4. ARAZLO
- E. Tazarotene Lotion 0.045% 5. SEYSARA
- F. Amnesia 6. AMNES-A

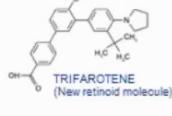
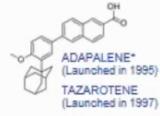
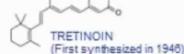
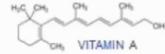


So first of all, with a lot of new information and a lot of new products that have come out in the Medical Space for Acne. If you look at the right column, you can see I've listed a few names. And usually we don't do trade names, but the point is there's a lot of names that have come out and it sounds somewhat similar. So we have an unnamed topical anti-androgen. We have a product called LAMZIC, a product called Acleif, a product called Araslo, a product called Sacera. And these are what come back to. So how do they match up with our new agents? Well, we actually have a new minocycline foam called AMZIC. We have a topical anti-androgen, which is a clascoterene, 1% cream. We have Trifarotene, a new retinoid, first new retinoid in several decades. And then we have a new oral cycling agent called Seracycling and a new formulation of Tazarotene, a lotion called Araslo. And Amnesia is if you forget what I just said.

TRIFAROTENE 50 µg/g CREAM (0.005%)

- Retinoid indicated for the topical treatment of acne vulgaris in patients 9 years of age and older.

Studied in facial as well as chest and back acne



Retinoids exert their effects through heterodimer of 2 families of nuclear receptors (RARs and RXRs) with 3 subtypes: α , β , γ

RAR α and RAR γ are ligand-dependent transcription factors that control transcription of retinoic acid target genes

These target genes are involved in anti-proliferative, anti-inflammatory, and normalization of differentiation pathways

Trifarotene has 20-fold selectivity for RAR γ over RAR α and RAR β , whereas tretinoin and adapalene are less specific



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So I just quickly reviewed the new topical medical therapies. There's a new retinoid called Trifarotene. It's a relatively gamma selective retinoid. It's approved for both chest and back acne, as well as a facial acne. So it's nice to have that in the Harlem, a material. It's also approved for ages nine and older.

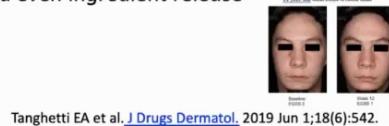
Tazarotene 0.045% polymeric emulsion

TAZAROTENE: New concentration, new formulation

- Historically: Irritation, dryness, erythema with tazarotene, with studies showing moisturizer benefits with use.

POLYMERIC EMULSION:

3-dimensional mesh matrix, with ingredients from an oil-in-water emulsion: Allows lower dosing, rapid even ingredient release



Tanghetti EA et al. *J Drugs Dermatol.* 2019 Jun 1;18(6):542.



Tazarotene, we have a new formulation. So Tazarotene has a 0.1% product that's been used for acne, but as we know, it can be a little harsh on the skin as a sort of a stronger retinoid. One of the best formulation companies has a redone Tazarotene and a polymeric emulsion. And the results look very good at efficacy results, but apparently with less irritation, dryness and erythema, then we might have seen traditionally with our higher strength Tazarotene product. And this works through a polymeric emulsion, this 3D matrix, which allows the delivery of the product from an oil and water emulsion. So it allows this sort of a graduated dosing on the skin without as much irritation.

Minocycline 4% Foam

Minocycline in suspension mode

— MST= Molecule Stabilizing Technology

Hydrophobic composition allows for stable and efficient delivery of inherently unstable active pharmaceutical ingredients (APIs):

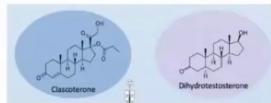
- “Waterless hydrophobic vehicle”
- No phototoxicity/photoallergy
- Low systemic levels vs. oral minocycline



Minicycling has been formulated as a 4% foam and studied for acne, a different formulation actually for parisacea. It's just sort of a waterless, hydrophobic, vehicle-based minicycling. Pretty interesting. No evidence of photosensitivity, as you'd expect from a minicycling-based product or photo allergy in low systemic levels, as compared to a oil minicycling.

Clascoterone (CB-03-01) Cream, 1%

- First-in-class topical androgen receptor inhibitor
- Clascoterone's chemical structure: fused four ring backbone- identical to dihydrotestosterone (DHT) ANDROGEN ANTAGONIST
- Competes with DHT and selectively targets androgen receptors (AR) in sebocytes and hair papilla cells
 - Studied on face and trunk Androgen antagonist
 - Has been shown to inhibit sebum production, reduce secretion of inflammatory cytokines, and inhibit inflammatory pathways



Rosette C, et al. *J Drugs Dermatol.* 2019;18:197-201.



And then last, and our topical is clasicarate, not approved yet, but interesting studies. This is a first-class topical antigen. So usually, a hormonal therapy has been systemic with sporadic electron or rural contraceptives. Now we have a new antigen antagonist that can be used in males for females and appears to inhibit sebum and reduce inflammatory cytokines and inhibit inflammatory pathways with some nice clinical results. We'll see what happens in the next steps of drug approval.

New Systemic Agents



So interesting things in our medical dermatology from a topical standpoint, from a systemic standpoint, sarocycling, this novel, cycling agent, and this is a once daily oral drug for treatment of inflammatory acne.

Sarecycline: New Tetracycline-Class Antibiotic

- NOVEL Cycline Agent
 - Once daily oral drug for treatment of inflammatory lesions of non-nodular moderate to severe acne vulgaris in patients 9 years and older
 - Weight-based dosing
Can be taken with or without food
- Narrow spectrum of antibacterial activity compared with other tetracyclines
- Limited activity against enteric gram-negative bacteria
- Does not appear to have photosensitivity issues

Moore A, et al. *J Drugs Dermatol*. 2018;17:987-996; b. SEYSARA™ (sarecycline) PI 2019.



Asia's nine and older is so it's a once a day weight-based dosing can be taken with it without food. And it's very nice they actually redid their statement of what they're allowed to say because there have been studies that they weren't allowed to talk about, but now they can. That this medicine appears to have a narrower spectrum in bacterial activity. So it has less impact on gut bacteria. So maybe something from a less of a negative effect on microbiome than some of some other traditional oral antibiotics.

Integrating the New into Traditional: Medical

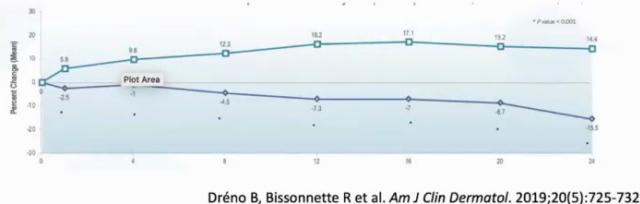
- General approach is the same, but with broadened selection of agents
- Topical anti-andogens: Await to see where it fits in regimens/algorithms
- Goal: Minimize scarring; minimize disease; modulate disease course



Now integrating the new into the traditional, I think the general approach actually is going to be the same, but we have a broad and a topical and systemic agents. The topical anti-estrogen would be interesting to see where they fit to the algorithm. And of course, our goal is to minimize scarring, minimize the disease and to modulate the disease course.

Scars: Can medical therapy repair them?

- Retinoid/BP combination study showed impressive prevention and *decreases* in scars
 - Split face, blinded, vehicle controlled study
 - Atrophic scars: Decreased 15.5% (vs. +14.4%)



Dréno B, Bissonnette R et al. Am J Clin Dermatol. 2019;20(5):725-732



Now there have been some studies showing that smaller scores actually respond to therapy.

They're probably retinoids of the mainstay of the impact. There was a really good prospective study, split face with canned filled imaging. That really showed a decrease in smaller atrophic scores. This was study of a BP retinoid combination, vehicle control, and basically on the vehicle, the scores increased in number over time. And those on the active not only had stabilization scores, but a decrease in scores over time. So I think nice to know that smaller scores could be re-modeled to a degree with a retinoid bentzo-proxide combination.

Energy Based Treatments

- Directed towards treatment of active acne vulgaris
- Directed towards minimizing acne scars
- *Am only discussing some of many devices, methodologies and approaches*



Now I'm quickly going to energy basis. And the way I look at it, there's two aspects. There's energy-based treatment for active acne. And then there's the whole treatment of acne scars and obviously can't discuss in great detail. All of these, so this is a very selective discussion based on just experiences and or who are articles in the literature. So I apologize if I'm not discussing what you want to do, but it's just the way the nature of it is.

Energy Based Treatments: Active Acne

- Blue Light
- PDL
- Nd:YAG (Long-pulsed; Q-switched; Combination)
- KTP
- Erb
- IPL
- Photodynamic Therapy
- Solid-state fractional 589/1319 nm
- Lots of others (Yellow light; infrared; gold particle suspension; medical plus laser)

"Carefully planned studies, using standardized outcome measures and common acne treatments as comparators, are needed."

Barbaric J, et al. Light therapies for acne: abridged Cochrane systematic review including GRADE assessments. *Br J Dermatol.* 2018;178(1):61-75.
doi:10.1111/bjd.15495



Especially when it comes to treatment of active acne, because there's this large use of a variety of products, it includes blue light, P-D-L, Nidiae, long pulse, cuswitch combination. I'll come back to that KTP, IRB, IPL, photodynamic therapy, solid state fractional. And a variety of others that either is light alone, light in combination, gold particle suspension, combinations of medical and other laser as well. So a large set of activities for active acne. And if you look at the Cochrane analysis from a few years ago, it says, well, unfortunately carefully planned studies are needed. We need standardized outcome measures to evaluate the many different products and nothing rose to the Cochrane review to go, boy, this is the way this is the way to do it.

1064nm Nd:YAG, 650 microsecond Laser

- 650-microsecond pulse duration
 - High power, short duration
- More tolerable than conventional long-pulsed Nd:YAG lasers
- Utilized safely in varying skin types
- Studies in combination with varying systemic therapies
 - Note: Traditional 1064 nm@ 5-30 msec
 - 650 msec avoids pain, need for significant cooling
 - Minimizes thermal damage
- Combination study with “low dose isotretinoin” (0.5-1.0 mg/kg/d x 4-8 mths) showed IGA reduction (72%) and quality of life (DLQI)



Gold MH et al. J Drugs in Dermatology 2020;19:646



I didn't want to highlight something that's pretty interesting, which is the 1064 Nidiae, 650 microsecond lasers. So this is a 650 microsecond laser. So it's a high power, short duration laser. Apparently this, the 650 microsecond duration makes it more tolerable than traditional Nidiae. Notice the traditional Nidiae glaciers would be five to 30 milliseconds. So this avoids both the need for significant after cooling and minimizes thermal damage and could be used in all different contexts. So there are several uses of this that are in the literature. I wanted to highlight a study by Michael Gole that I'll and this is combination with systemic therapy. So in this case, this was a study using what was called low dose isotretino and at 0.5 to 1 milligram per kilogram per day for eight, four to eight months. So it was combination with the laser. 72% Nidiae reduction and a more improvement in quality of life.

1064nm Nd:YAG Laser

Ortiz Experience

- All patients were treated with 3 passes
- Pulse stacked 3-6 times on the inflammatory/cystic lesions
- 6mm spot size



I also wanted to highlight Dr. Ortiz's experience. She's been using this with less aggressive systemic therapy and patients doing a triple pass pulse stack on an inflammatory acne, including cystic acne with the 6 millimeter spot size.

Subject	Age	Gender	Skin Type	# of Treatments	Additional Therapies
1	17	F	2	4	<ul style="list-style-type: none"> • Tretinoin 0.025% cream qhs • Clindamycin 1% gel daily • BP wash daily
2	17	F	2	7	<ul style="list-style-type: none"> • Tretinoin 0.025% cream qhs • Clindamycin 1% solution daily • BP wash daily
3	20	M	2	7	<ul style="list-style-type: none"> • BP wash daily
4	20	F	2	4	<ul style="list-style-type: none"> • Doxycycline 100mg BID • Tretinoin 0.05% cream qhs • BP wash daily
5	21	F	1	4	<ul style="list-style-type: none"> • Tretinoin 0.025% cream qhs • Clindamycin 1% lotion daily
6	27	F	2	4	<ul style="list-style-type: none"> • Tretinoin 0.025% cream qhs • Clindamycin 1% lotion BID • BP wash daily
7	29	F	4	4	<ul style="list-style-type: none"> • Tretinoin 0.025% cream qhs • Clindamycin 1% solution daily • BP wash daily • OCPs



And you can see that she's using a combination of just topicals alone, tretinoin and clindamycin and some patients who are BP, tretinoin and clinda in one patient oral antibiotics, but not with comparison with isotretinoin.

1. 30885568

- 17yo F
- Full face
 - 1. 6/12/19 – Mode 6
 - 2. 7/3/19 – Mode 6
 - 3. 7/23/19 – Mode 6
 - 4. 8/7/19 – Mode 6
- Tretinoin 0.025% cream
- Clindamycin 1% gel and then solution
- BP wash



And you can see some very nice clinical responses. So these are just three views of the same patient with four treatments plus tretenine and clindamysin.

4. 30285095

- 20yo F
- Full face
 - 1. 11/21/18 – Mode 4
 - 2. 12/14/18 – Mode 5
 - 3. 1/3/19 – Mode 5
 - 4. 5/14/19 – Mode 6
- Doxycycline 100mg BID x 6months
- Tretinoin 0.05% cream
- BP wash

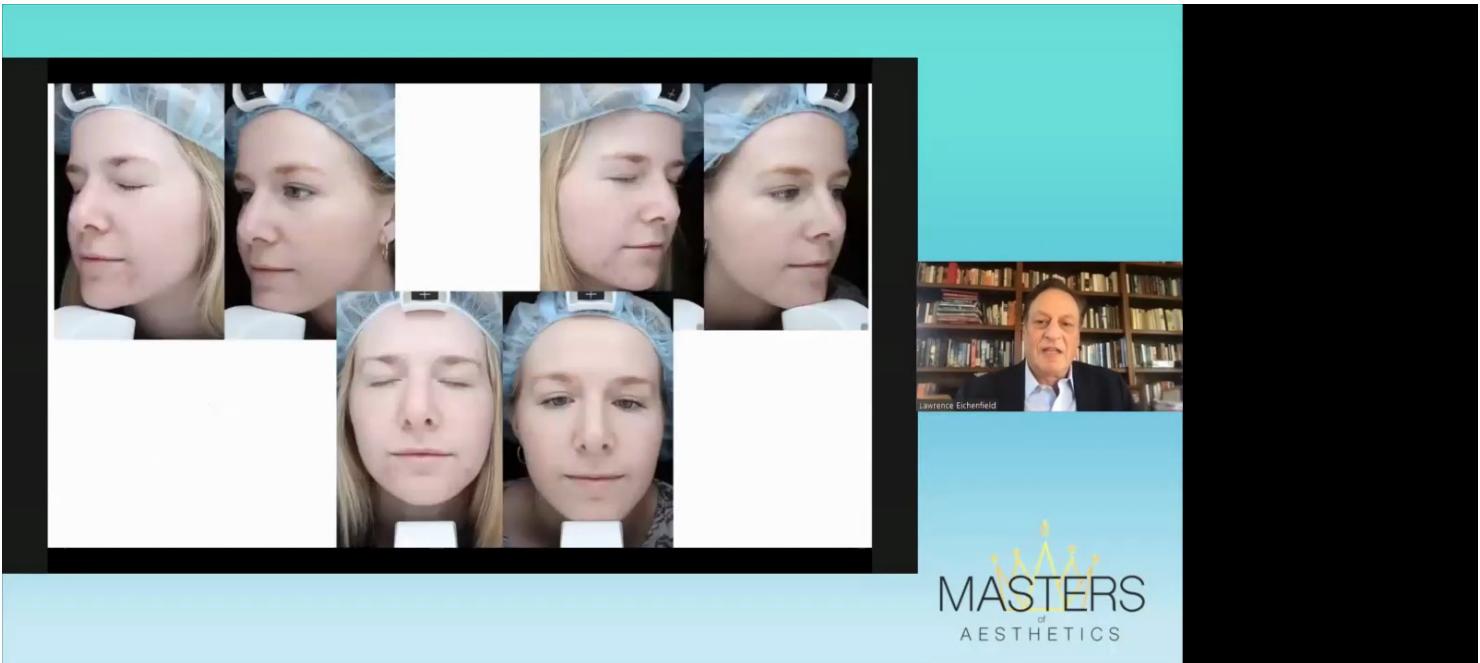


Here's another patient with on doxycycline plus a tretinene and BP wash.

5. 30248813

- 21yo F
- Full face
 - 1. 1/8/19 – Mode 5
 - 2. 1/18/19 – Mode 6
 - 3. 7/16/19 – Mode 6
 - 4. 7/31/19 – Mode 6
- Tretinoin 0.025% cream
- Clindamycin 1% lotion





A third patient who had tretenine and clindamycin and you can see the before and afters with the different views.



So for active acne, I think nice clinical successes. But of course, this is a patient who received just medical therapy with isotretinoin but certainly has leftover scars.

Energy Based Treatments: Scars

Macular Scars: Post inflammatory and erythema

UVB

Vbeam

Mild Scars

Moderate Scars

Deep Scars: Boxcar and Ice pick

Deep Atrophic

Hypertrophic Scars

Post-inflammatory Hyperpigmentation

No double-blind, placebo controlled trials

Few split face studies

MUCH OF CARE IS MULTI-MODAL:

Light/energy/"Scalpel"



And this is an area that I have a lot of interest in which is the treatment of scars. So the energy-based treatment of scars really range upon whether you're targeting erythema or the quality of the scars themselves, whether they're hypertrophic, atrophic, the aspects of the scars as well as post-inflammatory hyperpigmentation. And there's a broad set of energy of a device that no double blind placebo control trials.

Treatment Modalities: Resurfacing/Focal ablation

- Nonablative resurfacing with mid-infrared lasers
 - 1320 nm, 1450 nm, 1540 nm
 - Modest effect on rolling scars
- Ablative resurfacing with non-CO₂ fractional
 - 1550 nm; Er:Yag
 - Improvement of ice-pick and box-car scars
 - Possible improvement of overlying pigmentation
- Ablative resurfacing with CO₂ fractional
 - 10600 nm
 - Greater improvement of ice-pick and box-car scars
 - Greater risk of induced post-inflammatory hyperpigmentation



Treatment of Acne Scarring in Ethnic Skin. Cosmetic Dermatology for Skin of Color.
McGraw-Hill, 2009

Machine and operator dependent!



But just from a summary standpoint, there's resurfacing and or focal ablation. Don't have a variety of lasers, including mid infrared lasers, non-fractional CO₂ lasers and fractional CO₂ lasers might experience personally more with a blade of fractional CO₂ lasers. And certainly a literature on this. But this is, I'd say, machine and operator dependent.

Hodgepodge of Approaches:

Excision;
Punch-Float technique
"Subdermal manipulation"
-Subcision
-Fillers

Subdermal Manipulation with Energy:

Tightening devices: includes infrared, radiofrequency, and ultrasound devices
Non-invasive tightening
Invasive tightening

Others:

Cross technique: Chem Reconstruction of Skin Scars
TCA; Carboxylic Acid
Microneedling
PRP



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There's really a, but many times this energy-based therapy is mixed in with a hodgepodge of techniques, with both surgical techniques, excision, hodgepodge flow techniques, subtermill manipulation, subtermill manipulation with energy, including a variety of tightening devices and radio frequency devices. And certainly the cross technique, both with TCA and corbalic acids, most commonly in the literature, might be or needling and even up the RP. And nice of a few papers have come out in the last few months, looking at treatment of patients with skin of color, paper by Peter Ruland, and then a recent review on evidence-based surgical management of post-acne scouring in skin of color patients.

Medical Acne Care ◇ Procedural Acne Care

Many approaches to management of active acne!
Even more varied approaches to management of scars!

- Looking forward to “filling the chasm” between the “medical acneologists” and proceduralists!



So in summary, there's advances in medical therapy, advances in procedural acne care as well.

I'm sure people have their different methodologies. I look forward to trying to fill the chasm between the medical acneologists and proceduralists as we work together to try to minimize the impact of acne on our patients. Thank you very much. It's really been a pleasure to be part of the course.

HORMONES IN DERMATOLOGY

The Role of Noninvasive Aesthetic Treatments in the Physical Transformation of Transgender Patients



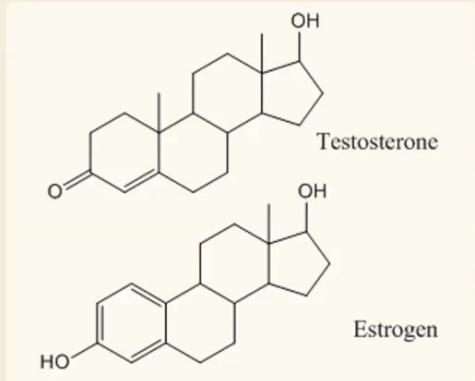
Doris Day, MD
Clinical Associate Professor, Dermatology
NYU Langone Medical Center, New York, NY



And Dr. Doris Day, and today I'll be talking about the effect of hormones in dermatology, but really talking about transgender patients and the physical transformation, the way that I look at it.

Changing Identity

- Trans and gender non-binary people often seek to change their bodies to better align with their gender identities.
- Gender-affirming hormone therapy is the primary medical intervention sought by transgender people. Such treatment allows the acquisition of secondary sex characteristics more aligned with an individual's gender identity.



So when we talk about patients who are looking to have their identity match how they perceive themselves, this is often a major transformation that's both physical and emotional. And there are many steps, and it's really a multi-disciplinary approach. So gender affirming hormone therapy is the primary medical intervention sought by transgender people. And this allows the acquisition of secondary sex characteristics more aligned with their gender identity. But what we do on an aesthetic level can have a big impact in helping that transformation.

Physician Responsibility



- Clinical management historically limited to mental health, endocrinology, and select surgeons with expertise in sex reassignment surgery
- Dermatologists have an important role in the physical transformation of transgender patients through noninvasive procedures



But we have to go through a transformation as well as we look at these patients because we need to manage them knowing a lot about them. So we need to know about their mental health, the medicines that they're taking. If they're having surgeons work in sex reassignment, we should have discussions with them as well. And we have a very important role in that physical transformation through non-invasive or minimally invasive procedures. And that's really what I'm going to focus on today.

Feminizing Hormone Therapy: Effects on the Skin

 Reduced sebaceous gland activity	 Slow-growing body and facial hair	 Decreased male-pattern scalp hair loss	 Smoother skin as the fat under the skin becomes thicker and pores smaller	 Increased pigment production	 Development of cherry angiomas
Fewer acne breakouts Smaller pores Drier skin				Darker, larger moles Development of melasma	



So when we look at demonizing hormone therapy, this also has effects on the skin. You can have reduced sebaceous gland activity, which in the good side can lead to fewer acne breakouts and smaller pores, but also drier skin. They have, we can slow down body and facial hair growth. Also, we can do hair removal treatments to help on that level as well. We look at decreased male pattern scalp hair loss. Overall, they can have smoother skin as the fat under the skin can become thicker and the pores become smaller. And increased pigmentation production, which is always a good thing, because they can have darker, larger moles and development of melasma. And then also they may develop cherry angiomas.

Transforming the face

In a survey of 327 people, most transgender women indicated that their **face was most imperative** to have changed.*



*Ginsberg BA, Calderon M, Seminara NM, Day D. November 2015 Journal of the American Academy of Dermatology 74(2) DOI: [10.1016/j.jaad.2015.10.013](https://doi.org/10.1016/j.jaad.2015.10.013)



So when we look at transformation of the face, in a survey done by one of my mentees at NYU, we looked at 327 people. Most of them were transgender women. And they indicated that their face, not their body, was most imperative to have changed. And that's really the goal of what they were looking for. Was that when people see them, they see them as the gender that they identified with.

Limitations of hormone therapy



- It can take two or more years for changes from hormone therapy to fully develop. Therefore it is recommended that patients wait at least 2 years after beginning hormone therapy before considering drastic facial feminization surgeries. So what options are available while waiting?
- Even with hormone therapy, **bone structure of the face is unaffected**. A significant majority of craniofacial changes occur during adolescence.



So that's where our focus has been. And there's limitations to hormone therapy, because it can take two or more years for the changes to fully develop. And I mean, at least here in New York, we kind of want everything in a New York minute. So that's always an issue. Also, we often recommend that patients wait at least two years after beginning hormone therapy before doing drastic facial feminization surgeries. But there's a lot of options that we have for them while they're waiting for that. So even with hormone therapy, it doesn't affect the bone structure of the face. So we need to work around that to create a more feminized balance in order to help them match their gender to their identity.



Noninvasive aesthetic procedures compound the effects of hormone therapy, in addition to offering physical transformation beyond hormone therapy



So non-invasive aesthetic procedures can compound the effects of hormone therapy. And in addition, they can offer physical transformation beyond hormone therapy.

Case Study: Patient history



And that is incredibly helpful and powerful. So we look at a patient. I just want to do a case study of a patient that I tweeted who I've learned so much in going through the process with him becoming her, both in the way I saw her and also in the way I addressed her, which is something I had a lot to learn about. So in 2007, he had a rhinoplasty. We started Botox in 2018. We added Voluma to her cheeks. And now she's starting her transformation to a more feminized gender matching identity. And in 2019, we did some more Voluma. Then, and over time, we did some more fillers. She had a hair transplant in 2019. And now we're continuing Botox and filler treatments on an ongoing as needed basis.



But you'll see that as we did this transformation, there were levels at which I felt that we could continue this transformation. We did some fillers in the lips, the cheeks. We did Botox to minimize the masseters. And when you look at the most recent photo, I felt, and when I saw her, I said, well, there's, I can still do this. And she looked at me and she said, actually, I feel so happy. This is how I want to be. And I realized that my vision for her wasn't the same as her vision. My vision of what a woman looks like and what a truly feminized face looks like wasn't exactly what she was looking for.



You can see before and after a lips as we continued this transformation, she was thrilled with these changes.



Acne scars improved with both fillers and some microneedling and other treatments and with the hormone therapy.

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But it's really understanding that as we softened her appearances and as she made changes like the earrings that she wore on the hairstyle that she changed to and the hair transplant and the hair removal, she was in line with what her perception was of her femininity. And that wasn't necessarily what I would do for my typical female patient who was cisgender, cis female.

THANK YOU!





And that's something that I really wanted to focus on that as we see these patients, for all that we can learn about the science of the gender transformation, the emotional aspects of our vision of what we can accomplish for our patients versus their vision of what their happiness level is may not entirely match. And we have to be careful to help them celebrate their version of their femininity or masculinity if you want the other way, rather than trying to have our patients match what we think we can accomplish for them. So little by little, we've been watching her really grow into her new self. And it's been a beautiful transformation and I was really honored to be able to share on that journey with her.

THANK YOU!



Thank you.

Beyond the Scalpel: Laser Treatment of BCC

Arisa Ortiz, MD
Director, Laser and Cosmetic Dermatology
Assistant Clinical Professor
Department of Dermatology
UC San Diego



Okay, so as a most surgeon and a laser surgeon, a lot of my research is dedicated to the laser treatment of Basal Cell Carcinoma. And I'm gonna talk to you a little bit about that.

Background

- Basal cell carcinoma (BCC) is the most common skin cancer
- Surgical options frequently result in disfigurement
- Topical therapies often result in recurrence
- Need for alternative, non-surgical options
 - Effective, efficient, low risk of side effects
- This has led to the emergence of laser and light-based therapeutic options



These are my disclosures. So Bazel Cell Carcinoma, as we know is the most common skin cancer, surgical options frequently result in disfigurement and topical therapies, often results in recurrent. So there really is this need for an alternative non-surgical option that works with low risk of side effects. And this has led to the emergence of laser and light-based therapeutic options.

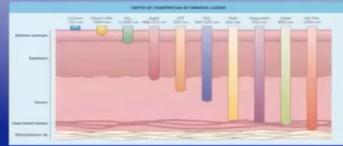
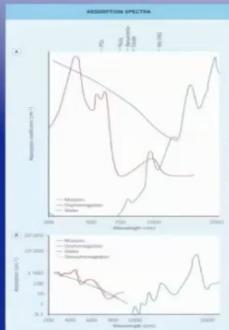
Mechanism of Action

- Based on selective photothermalysis of tumor vasculature
- Prototypic feature is presence of telangiectatic vessels
- Microvasculature of BCC are of significantly larger caliber than normal skin and more fragile
 - 40 µm vs 15 µm
 - Tailor pulse duration to size of vessels
- Targeting microvasculature -> tumor regression
 - Spare surrounding normal tissue



So the mechanism of action for this is based on selective photothermalizes of the tumor vasculature. So as we know, the prototypic feature is the presence of Kalendic Tatic vessels. The micro vasculature of Bazel Cell are actually significantly larger than normal skin and they're also more fragile. So you actually can exploit this difference until your pulsederation to the sides of the vessel. By targeting the vessels, this leads to tumor regression and also sparing of the normal tissue.

What is the ideal wavelength?



- 595 nm PDL is well absorbed by oxyhemoglobin
- 1064 nm Nd:YAG penetrates to deep arterial vessels



So what's the ideal way to do this? Well, the pulsedylizer is well absorbed by oxyhemoglobin, but the 1064 nanometer ND egg is able to penetrate deeper into deep arterial vessels, which has been the focus of most of my research.

Author	Type of Trial	# of Subjects/Tumors	Number of Treatments/Interval	Laser Settings	Evaluation	Results
Allison et al. (2003)	Prospective, open-label	7 pts	1	585 nm, 0.45 ms, 6.0 J/cm ² , 5 mm spot.	Excision 12 weeks after laser tx	1/7 showed clearance
Campomini et al. (2008)	Prospective, open-label	20 pts	5 Q20 days	595 nm, 7.5 J/cm ² , 7 mm spot, 1.5 ms, or 6.5 J/cm ² , 0.5 ms 10-mm spot, DCD	Clinical/12 to 24 months after laser tx	16/20 had a complete response. (3 recurrences and 1 did not respond)
Shah et al. (2009)	Matched historical control	12 pts/20 BCC	4 Q2 weeks	595nm, One pass, 15 J/cm ² , 3ms, no cooling, 7 mm spot, 10% overlap	Excision 2 weeks after last laser tx	61.7% (11/18) BCCs <1.5cm showed complete response, 25% (n=2/8) BCCs ≥ 1.5cm showed complete response
Kornikov et al (2011)	Open-label	14 pts/20 BCC	4 Q3-4 weeks	595nm, One pass, 15 J/cm ² , 3ms, DCD 3/20, 7 mm spot, 10% overlap	Bipolar or Excision at 1 year +	50%, (10/20) BCCs showed no evidence of BCC more than 12 months after PDL treatment.
Ballard et al. (2011)	Open-label	7 pts/9 BCC	1	585 nm, 0.45 ms, 7 mm spot, and 9.0 J/cm ² , no cooling, 10% overlap	Deep shave 4 weeks after laser tx	55.6% (5/9) sites demonstrated no evidence; 44% (4/9) sites showed residual BCC.
Tran et al. (2012)	Randomized-controlled	20 pts/21 BCC (2 SCCs)	1	S1 group: 595 nm, 15 J/cm ² , 3 ms, no cooling, 7 mm spot, 10% overlap, two passes S2 group: 595 nm, 7.5 J/cm ² , 3 ms, no cooling, 10 mm spot, 10% overlap, double stacked pulses	Excision 4 weeks after laser tx	25 % (2/8) clearance in S1 group 71% (5/7) clearance rate in S2 group



So the initial studies looked at the pulsedylizer and the results were fairly good.

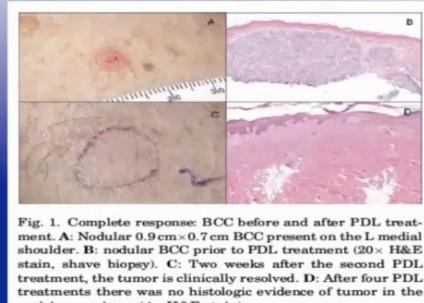


Fig. 1. Complete response BCC before and after PDL treatment. **A:** Nodular 0.9 cm × 0.7 cm BCC present on the L medial shoulder. **B:** nodular BCC prior to PDL treatment (20× H&E stain, shave biopsy). **C:** Two weeks after the second PDL treatment, the tumor is clinically resolved. **D:** After four PDL treatments there was no histologic evidence of tumor in the excision specimen (4× H&E stain).

Shah SM, Konnikov N, Duncan LM, Tannous ZS. The effect of 595 nm pulsed dye laser on superficial and nodular basal cell carcinomas. Lasers Surg Med. Aug 2009;41(6):417-422



So this was an example by Dr. Tnus' study and you can see that she had histologic clearance and clinical clearance after four treatments with the pulseddylyzer.

PDL

- Well absorbed by oxyhemoglobin
- Depth of penetration is limited into the superficial dermis
- Increase risk of subdermal recurrence



So the pulseddylizer works okay for Bazel cells and it's well absorbed by oxyheumoglobin, but it's depth of penetration is limited into the superficial dermis. So there is an increased risk of subtermal recurrence.

Author	Type of Trial	# of Subjects/Tumors	Number of Treatments/Interval	Laser Settings	Evaluation	Results
Ibrahim et al. (2011)	Case Report	1 pt/18 BCC	1	755nm, 2 passes, 100 J/cm ² , 3 ms, no cooling, 8mm spot, 10% overlap	Clinical/I biopsy at 7 months	83% (15/18) clinical response. One lesion examined had histopathologic clearance.
Jallan et al. (2014)	Open-label	10 pts/13 BCC	4 Q2-4 weeks	585nm, 7mm spot, 8 J/cm ² , 2 ms, 250 ms delay, 1,064nm, 40 J/cm ² , 10 mm spot, single pass, 10% overlap, forced chilled air	Excision 2-4 weeks after last laser tx	58% (7/12) clearance. 75% (6/8)BCCs <1 cm showed complete response.
El-Tonsy et al. (2004)	Open-label	37 pts	Q6 weeks until clinically resolved	Continuous-wave 1064 nm Nd:Yag laser, 10 W, 8mm spot, and irradiation time up to 1 minute)	Biopsy/3 months after clinical resolution	97.3 %, (36/37) were completely cured. 1 recurrence (2.7 %).
Mosalik et al. (2009)	Retrospective	3346 BCC	1 or 2	1060 nm, 1-4.5 ms, 700 J and 0.5 cm spot on 1000 J and 1.5 cm. Nd:YAG also used in pulsed mode,1060/1320 nm, 1 msec, 0.1 J, 1 mm spot, Nd: laser, 1-4 sec, 1000-15- to 60-sec intervals, total dose of 118-3520 J. Nd:YAG laser: scanning,6-225 sec, 37-1350 J	Clinical/I to 5 years	1.8% recurrence with Nd: laser, 2.5% recurrence with Nd:YAG laser. Few cases of hypertrophic scar.
Ortiz et al. (2014)	Open-label	10 pts/13 BCC	1	1064 nm, 60-120 J/cm ² , 10 ms, no cooling, 5 mm spot, 3 passes, 3 stacked pulses	Excision 30 days after laser tx	92% (12/13) clearance rate overall. At 120 J/cm ² , 100% (10/10) clearance rate



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So this led to the investigation of long-row wavelengths to try to target that deeper component.

And so during my fellowship with Dr. Averman, Dr. Anderson, we did a pilot study looking at 10 patients using the 1064 nanometer laser for one treatment then we excised the tumor 30 days later to look at the histology. And we actually saw 92% clearance in 12 to 13 tumors.

Anticoagulation

- Subjects with suboptimal response were currently on anticoagulation
- Intravascular coagulation is important for effective treatment with vascular selective lasers
- Anticoagulation may interfere with efficacy

Jillian HR, Avram MM, Stankiewicz KJ, Shofner JD, Tannous Z. Combined 585 nm pulsed-dye and 1,064 nm Nd:YAG lasers for the treatment of basal cell carcinoma. Lasers Surg Med. Jan 2014;46(1):1-7



So one of the things that has come up with these treatments is anti-quagulation. So in order for this to be effective, intravascular coagulation has to occur. And so if patients are on any type of blood that are this may affect the efficacy so you wanna keep this in mind with these patients.



So when we saw such good results with the pilot study, we actually did a multi-center study among UCSD and MGH.

1064 nm Laser Treatment of BCC

- 33 BCC tumors < 2.1 cm
- Treatment settings
 - One treatment
 - 1064 nm, 5-6 mm spot, 125 - 140 J/cm², 7-10 ms pulse duration
 - No cooling
 - No anesthesia
- Standard surgical excision with 5 mm margins 4 weeks following laser tx



And we treated 33 tumors, again, one treatment with no cooling or any anesthesia. And then a month later we did a standard excision to evaluate the histology.

Results

- 31 subjects completed the study
- BCC tumors had a 90% (28 of 31 BCC tumors) histologic clearance rate after one treatment with the long-pulsed 1064 nm Nd:YAG laser
- Treatments were generally well tolerated without any anesthesia
- No significant adverse events occurred



And so of the 31 patients that completed the study, 28 head clearance. So 90% of the tumors cleared. And it was well tolerated without anesthesia, it's a little bit painful, but patients were able to get through and there were no significant adverse events.

Results

Before Laser – Nodular BCC

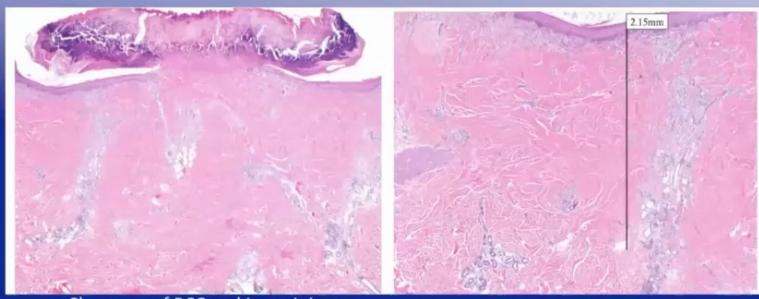


4 weeks After Laser



And so here is an example of a patient who was treated and this is four weeks later and we can see that there's essentially no scarring.

Histologic Evidence



So on histology, you can see that the depth of laser injury is beyond two millimeters so much deeper than what a pulse die is able to penetrate.

Clearance Rates

- Rate of clearance of BCC following biopsy ~ 20%
- Data is well powered to reject the null hypothesis that laser treatment does not have an effect
- Laser treatment is at least comparable if not superior to common modalities
 - Methyl aminolevulinate (MAL)-PDT – 72.8%
 - Imiquimod cream – 83.4%
 - Fluorouracil cream – 80.1%



So a lot of criticism that I get is that maybe be too unclear from biopsy alone, but we actually know the rate of clearance based on self-following biopsy is only 20% and our results have been a lot higher than that. Also, our clearance rates have been superior if not comparable or if not superior to some of the common modalities that we use like PDT, a michael mod or fluoride or so.

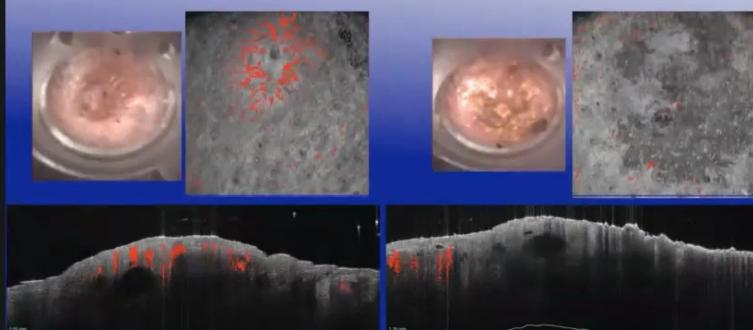
Bulk Heating?

Vascular specific?
Scar?



And at such high fluences that we're using, there's some suspicion that maybe we're getting bulk heating but we're not really seeing the scar and this OCT image actually shows evidence that it is vascular specific.

OCT Images of Vascular Supply



So if you look on the left, you can see the tumor vascular cure before treatment and on the right is immediately after laser treatment. You can kind of see on the cross section that the vascular cure of the tumor has been coagulated but that it's spared in the surrounding normal skin.

Advantages

- Potential for only one treatment visit
 - No follow-up for suture removal
- Fast
- No significant downtime
 - No limitations on activity
- Minimal wound care
- Relatively decreased risk for complications
 - Infection, bleeding
- Minimal scar



So there's so many advantages of laser treatment of basal cells. First of all, there's only one treatment visit. They don't have to come back for suturing removal. It's very quick, it's under five minutes. There's no downtime because there's no sutures so they don't have to limit their activity. Minimal wound care, just appointment and a bandaid and decreased risk of infection and bleeding haven't had one patient complain of that yet and minimal to no scar.



- Alternative for treating patients with multiple tumors or those who are poor surgical candidates
 - Gorlin's syndrome
 - Elderly

Ibrahimi OA, Sakamoto FH, Tannous Z, Anderson RR. 755 nm alexandrite laser for the reduction of tumor burden in basal cell Nevus syndrome. Lasers Surg Med 2011;43(2):68-71.



So it's great for patients like this where the multiple tumors or those who are elderly who are of course surgical candidates or patients who have just exhausted their surgical options.

Long-Term Results

16 BCC lesions
100% clearance
determined by
clinical observation
at mean 9 months
(6-15 months)



Outcomes of long-pulsed 1064 Nd:YAG Laser Treatment of Basal Cell Carcinoma: A retrospective review. Ahluwalia J, Avram M, Ortiz A.

1 year f/u

10 month f/u



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So now we're looking into the long-term advocacy of this.



So this was a retrospective study looking at 16 lesions that were treated and at a mean of nine months, none of them had recurred and you can see that when we go back

Long-Term Results

16 BCC lesions
100% clearance
determined by
clinical observation
at mean 9 months
(6-15 months)



Outcomes of long-pulsed 1064 Nd:YAG Laser Treatment of Basal Cell Carcinoma: A retrospective review. Ahluwalia J, Avram M, Ortiz A.



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to here, you can see that there's like really essentially no scar or minimal scarring on the trunk.



There's more risk of scarring but I still think this is an acceptable scar.

Long-Term Prospective Study

- Long-term outcomes of long-pulsed 1064 nm Nd:YAG Laser Treatment of Basal Cell Carcinoma
- 33/34 patients with no recurrence at 1 year follow-up
- Only 1 recurrence (pt AML on chemo)



And so we just completed a long-term prospective study that will be submitted for publication shortly where we looked at very four patients and followed them for a year. So we didn't excise the lesion. We just followed it clinically and only one patient had clinical recurrence and she had AML on chemotherapy. But again, you can see that the healing looks very well after laser treatment and essentially no scarring.

My Recommendations

- Treat nonaggressive BCC tumors
 - Nodular, superficial, multifocal, pigmented
 - Avoid aggressive subtypes since treatment margins are not defined
 - Avoid tumors that fall under Mohs AUC
- Treat off the face
 - Exceptions – poor surgical candidate, multiple tumors
- Monitor for recurrence with regular skin checks



So my recommendations when performing this is to start off non-aggressive basal cell tumors. So you wanna avoid aggressive subtypes like record modular or morpheiform because the margins are not well defined. So anything that falls under most criteria, I do not treat unless they're poor surgical candidates or are refusing surgery. And then you would just monitor like you would with any other modality with regular skin checks.

How to do it

- Treat with a standard 5 mm margin
- Lidocaine without epinephrine
 - To avoid vasoconstriction
- 1064 nm, 5mm, 8 ms, 140 J/cm², no cooling
 - Lift off slightly to avoid cooling
- Pulse duration may vary based on device (8-10 ms)
- Let cool in between passes to avoid bulk heating



And so I treat the tumor and I start a standard five millimeter margin. I currently now use light-a-can without epinephrine so it doesn't affect the vessels. These are the settings that I use but it may vary depending on which NDI you have. And then I make sure to let it cool in between pulses and passes to avoid any bulk healing.

How To Do It



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How To Do It



So here you see me perform the pieces of the atom perform the liposujects, and you can see this female around the tumor which is by no new margin.

How To Do It



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How To Do It



And the endpoint is gonna be some tissue contact and some oil which is sweet here.

How To Do It



Obviously that's not a cosmetic endpoint but this is a tumor.

Immediate Endpoint

Slight Greying
Slight Contraction



So you want to see that growing in contraction.

Future Directions



And this can be built under insurance just like an EDNC and shouldn't have any problems with coverage.

Antibody Targeted GNR Mechanism of Action

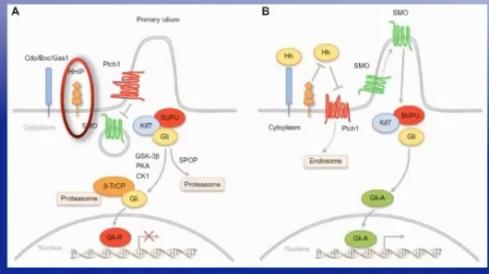
- Add antibody to GNR to specifically target tumor
- Inject intra-dermally and allow to bind to tumor cells
- Laser irradiation absorbed by GNR at specific wavelength
- Heat generation will specifically and preferentially kill tumor cells bound to GNR



And we're looking at how to improve the treatment. And so right now we're just kind of exploiting the difference of the side of the vessels but if we could make it more specific using antibody targeted gold nanorods that would make it more specific to the tumor. So essentially we're using an antibody that's attached to the nanorods that's specific to the basal cell tumor. And then you inject the nanoparticles and then attaches to the tumor.

HHIP

- HHIP expression is up-regulated in BCC
- HHIP is a surface protein with affinity to endogenous ligands (similar to *Patched*)
 - binds with affinity to HH agonists as a competitive binding site
- HHIP lacks a cytosolic signaling pathway so there is no known pharmacological consequence



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So we've found that hedgehog interactive protein is upregulated in basal cell carcinoma and there's no cytosolic singing pathway so there's no pharmacologic consequences just attaching the nanoparticle to the basal cell. And then when you fire the laser the nanoparticle absorbs that energy preferentially into the tumor.

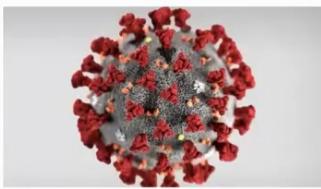
Conclusion

- Lasers and light-sources are a promising new non-invasive treatment approach for treating BCC
- Clearance rates are comparable to other topical modalities
 - ED&C, topical imiquimod
- Reasonable alternative for treating patients with multiple tumors or poor surgical candidates
- Nanoparticles may enhance results seen with laser treatment while decreasing side effects
- Further studies are warranted



So we're looking at doing further studies like human trials with these nanoparticles. So to conclude, lasers and light sources are promising new non-invasive treatment approach for the treatment of basal cell carcinoma. The clearance rates are comparable to other modalities that we already use. And I'm not trying to replace surgery but I do think this is a reasonable alternative for patients with multiple tumors or those that are poor surgical candidates. And if we were to use nanoparticle technology we may be able to enhance the results seen with laser treatment. But further studies are warranted. Thank you.

Best Practices in a Time of Pandemic



Suzanne L. Kilmer, MD and Omar A. Ibrahimi, MD, PhD

LASER & SKIN

Surgery Center of
Northern California

**CONNECTICUT
SKIN INSTITUTE**

Skin Cancer • Laser Surgery • Cosmetic Dermatology



Great, thank you so much. It's a pleasure to speak to you about best practices in a time of pandemic together with my friend and mentor, Dr. Susie Kilmer.

COVID-19 background

- Coronavirus is a large family of viruses that cause illness in hosts (animals, humans)
- Members of this virus family cause the common cold and other URIs
- SARS-CoV-2 is a novel coronavirus causing COVID19.
- First linked to an outbreak in Wuhan China



So it's a pretty sophisticated audience. So I'm not going to go too into detail about COVID-19.

Suffice to say that it's six months in still an active issue in the United States where we're topping five million cases and close to 200,000 dead.

Northeast experience

- First confirmed case in NYC 3/1/2020
- Studies show virus likely present in NYC area as early as Jan and likely came from Europe
- NYC metro area quickly became an epicenter
- Medical office supply chain under strain in March



My practice is basically in a suburb of New York City. And we had our first confirmed case in New York on March 1st. We know that the virus likely came to the New York area as early as January and probably mostly from Europe and Italy in particular. The New York City metro area actually very quickly became an epicenter. And much of our early experience was based off what happened in the New York and the New York metro area. And one of the first things that I noticed in my practice was that the supply chain just basically came under massive strain. So simple things like gloves, forget about N95 masks, but gloves and hand sanitizer. Literally you could not get or you had to pay highway robbery prices to obtain.

Northeast experience

- As cases started to rise, we began to require:
 - Employees to wear masks at all times, included commute
 - Gloves
 - Mandatory hand washing on entry and sanitizer before and after each visit.
 - Enhanced room cleaning
- Mid March "panic"
 - Stopped all elective care including nmsc
 - Went to model where only "urgent" cases were addressed (invasive melanoma, more aggressive nmsc, inflamed cysts, etc)
- Resumed medical (except cosmetic) on May 1st
- Resumed cosmetic on May 20th (Stay at home order lifted)



So as cases started to rise in our area, some of the changes we made, we began to ask our employees to wear masks at all times. In particular, we also provided them so that they could wear them during their commute from home into the office. We also had them wear gloves. When they came in, we asked everyone to wash their hands on entry, use hand sanitizer, as well as of course doing that before and after each visit. And we enhanced our room cleaning protocol. Right around mid-March, there started to be a little bit of panic in our area. And that's when we stopped all elective care, including the majority of non-melanoma skin cancers. And we went to a model where we only treated quote unquote urgent cases or basically things like aggressive melanomas or more aggressive non-melanoma skin cancers like subacous carcinomas. And things that we could offload to keep people out of the ER. So things like inflamed cysts and the sort. So once things kind of calm down a little bit, we resumed medical care on May 1st. And then on the 20th, we also resumed our cosmetic procedures. We timed this with when the stay-at-home order was lifted in our area.

Best Practices

- Patient communication and transparency
- Managing the office environment (cleaning, PPE)
- Employee Health
- Patient Management (Arrival, Check-In, Check-Out, Visit modifications)
- Financial health of business



So Suzy and I and a bunch of colleagues, we all kind of kept talking and also consulted our societies. And these were the best practices that we kind of put together. So I put them into a few different baskets, but a lot of them have some overlap and things in one kind of affect the others.

Patient communication

- Telederm offerings (minimize person-person contact)
- Newsletter updating patient on practice status and protocol changes
- Appointment reminders/instructions (masks) and pre-visit screening questions
- Goal “touchless” visit



So I'm going to break them down into these different baskets. So patient communication, we were very early adopters of telemedicine. We found this was a great way to avoid and minimize person-to-person contact. And while not everything could be done with telegram, we could at least kind of triage and see what needed to be brought into the office if it was urgent enough for a biopsy, et cetera. And a lot of our things like routine acne management, acutane, et cetera, et cetera could be handled with this. We also sent the newsletter updating patients on the status of our practice at the various times. And the changes that we've had in our protocols, particularly also we sent out appointment reminders. And we gave them specific instructions asking them to wear a mask. We also sent out our pre-visit screening questions, which we reconfirmed on entry. But we did a lot of screening before the patients even got there. So we could enter the chief complaint or update their medication or their past medical history before they even reached the office through the telephone or by having them send in documents. So the goal was really to have a touchless visit for our patients to minimize risk for everyone.

Managing Office Environment – Pre-entry

- Remove chairs/limit seating options/eliminate waiting room/checking in from car
- Hand sanitizer at entry
- Mask verification and temperature check
- Verify lack of symptoms or travel
- COVID testing for high risk (nursing home, travel)
- Schedule reduction
- No guests unless minor or needs assistance



In terms of managing the office environment, what we did in my office was we basically tried to not use our waiting area. And we achieved this mostly through minimizing our volume. But a lot of folks either removed chairs, limited seating options. They also, some folks also did check in from cars. And when you got to the parking lot, you called the office. And then they advised you when to come in. You see in hand sanitizer upon entry, of course, verifying that when someone's checking in, they're actually wearing a mask, doing a temperature check. And then we had a series of questions where we tried to verify lack of symptoms or travel. In the beginning, it was where you in China or Italy, now it's more like have you been to one of the 30 or something states where there's large numbers of coronavirus and person-to-person transmission is pretty high. High risk patients that were coming into the office, we tended to do COVID testing for those patients. And as I said, most of what we achieved also was through scheduled reduction. So we went to about 35% to 45% of our volume. And the goal really was to have no more than one or two people in the office at a time. And no one coming in or walking out at the same time. And I also do most surgery and skin cancer surgery. And so we were able to keep our patients in the room. We stopped using our common waiting area. And we also asked patients not to bring any guest unless it was a minor or somebody that needed assistance, somebody that has a skin cancer on their eye and they needed driver or somebody that just really needs someone to

physically be in the office with them.

Managing Office Environment

- Roomed, mask on, unless MD needs to access area
- Room cleaned post visit (exam table, countertops, door handle)
- Verbal consent
- Mid day and end of day wipe down
- Pt pays with card. CCOF. Online Pay.



Otherwise, we asked them to wait in the car. We would bring the patients directly back to the waiting room. We'd ask them to leave their mask on unless the doctor needed to take the mask off to examine something. We enhanced our room cleaning protocol. So besides cleaning the exam table, we also wiped down the countertops and door handles with Clorox wipes or the like. We stopped doing written consent. We went to verbal consent. Given we didn't want our patients touching our iPads or paper. And then we had a midday and end of day wiped down. We really tried to get credit card on file so that patients wouldn't even have to swipe their card in the office.

Employee health

- Each employee screened with questions and temperature check, hand sanitizer
- Travel discouraged
- Hand sanitizer at station
- Surgical mask (N95 for Mohs team)
- Eye protection
- Lunch breaks staggered
- Wipes for pens, iPads, keyboards



For our employees, we basically screen them every morning with questions about fever, sore throat, the store. We did a temperature check. We had been used hand sanitizer. When they came in, we discouraged them from traveling or are doing social events. Although you can't necessarily enforce this. We had a lot of hand sanitizer at everyone's work stations. Everyone wore surgical masks. The most surgery folks working with me also wore N95 masks. Everybody's wearing goggles at all times in the office. We staggered lunch breaks. We have a small lunch room. So that kind of also helped. And then we wiped down pens, iPads, and keyboards in between uses.

Financial considerations

- Layoff/furlough/WFH
- PPP/EIDL
- Bank LOC
- Inventory management
- Midlevel, Physician compensation



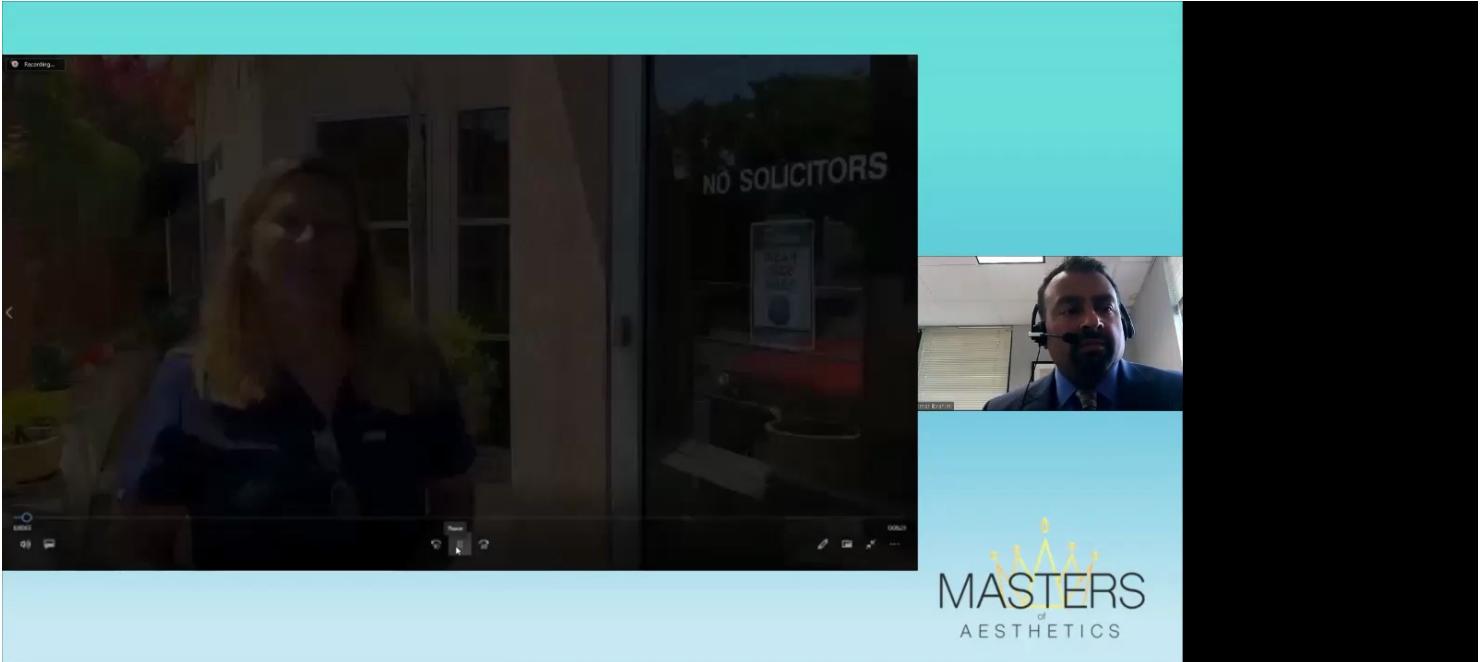
A little beyond the scope of this talk, but also just financial considerations and the health of the practice. I hopefully most people apply for the PPP loan here. We also got a line of credit through our bank. We've managed to go through the inventory management crisis and obtain supplies, but this is still a challenge.

Further reading

- American Society of Dermatologic Surgery Association (ASDSA) and American Society for Laser Medicine & Surgery (ASLMS) Guidance for Cosmetic Dermatology Practices During COVID-19. 6/10/2020
- A PATH TO RESUME AESTHETIC CARE PROJECT AesCert GUIDANCE: PRACTICAL CONSIDERATIONS FOR AESTHETIC MEDICINE PROFESSIONALS SUPPORTING CLINIC PREPAREDNESS IN RESPONSE TO THE SARS-CoV-2 OUTBREAK Project AesCert®, Editorial Review Board Members: Chairperson: Dover JS, MD, Moran, ML, MD, Figueroa JF, MD, MPH, Furnas H, MD, Vyas JM, MD, PhD, Wiviot, LD, MD, Karchmer AW, MD



These are some excellent resources. I think if people want to look to read some more. And I wanted to finish with a video that my colleague, Dr.



Kilmer, shot that kind of shows how we put these practices into play and her practice.



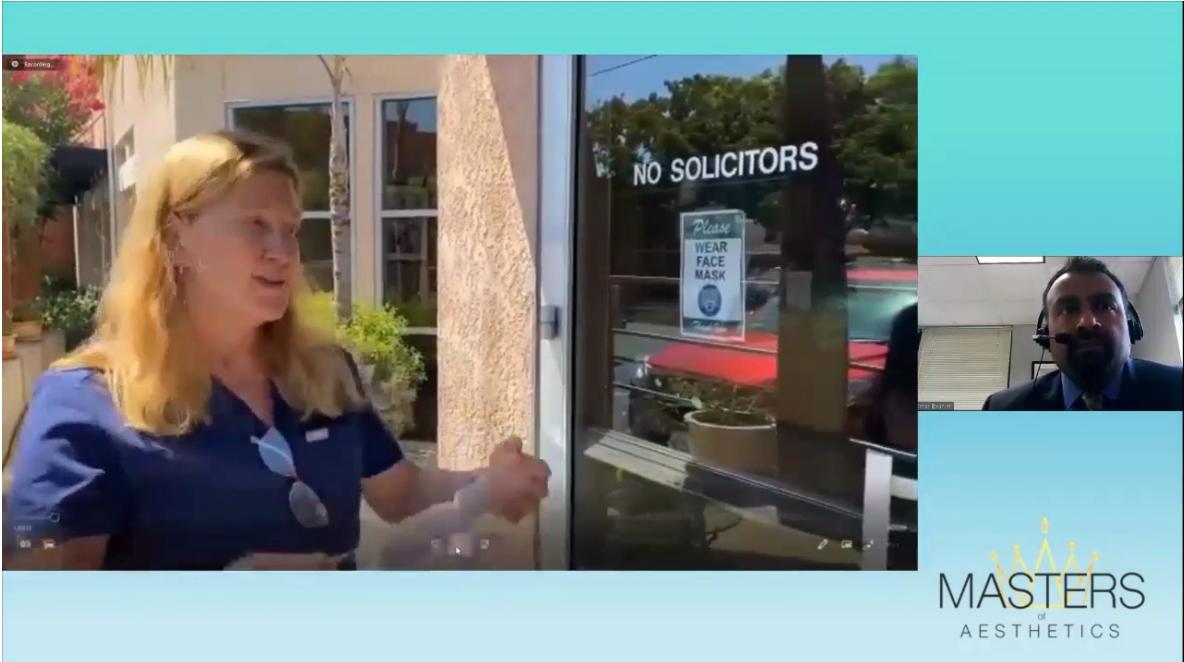


Hi, everyone.



I'm Dr. Kilmer. And I'm going to show you about the interior and the tree at the Laser and Skin Service Center of Northern California.

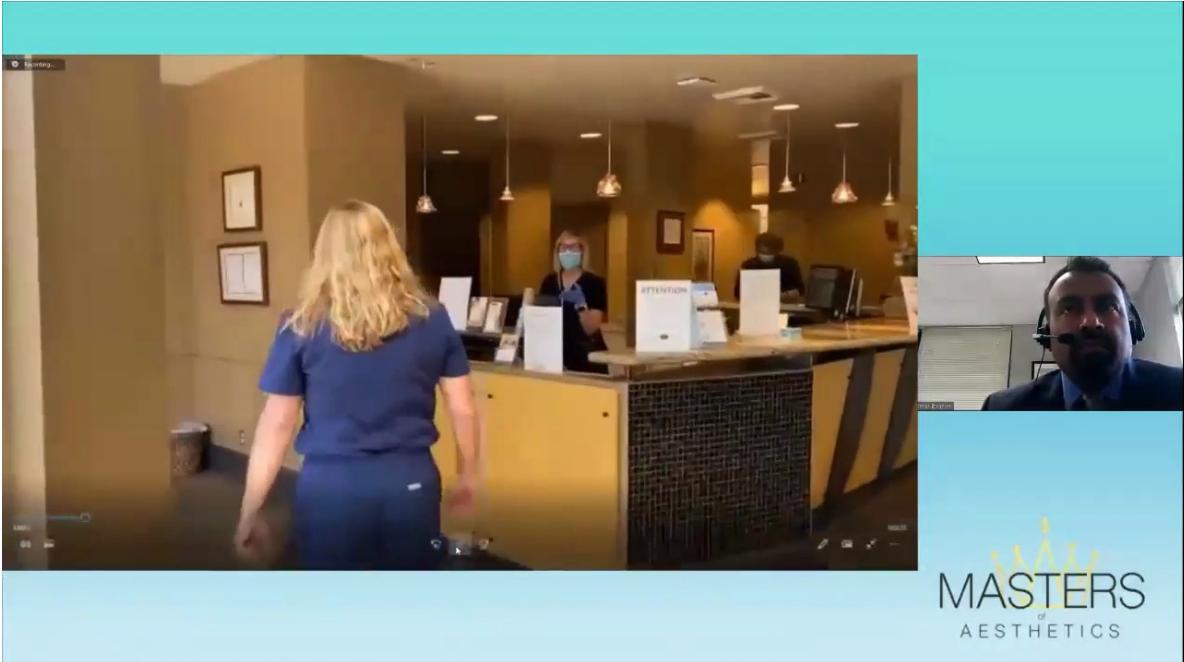




Very safely both for you and for us.



So first thing we're new is we're going to find masks on.



All the patients and all the employees have masks on. Okay.



Thank you.

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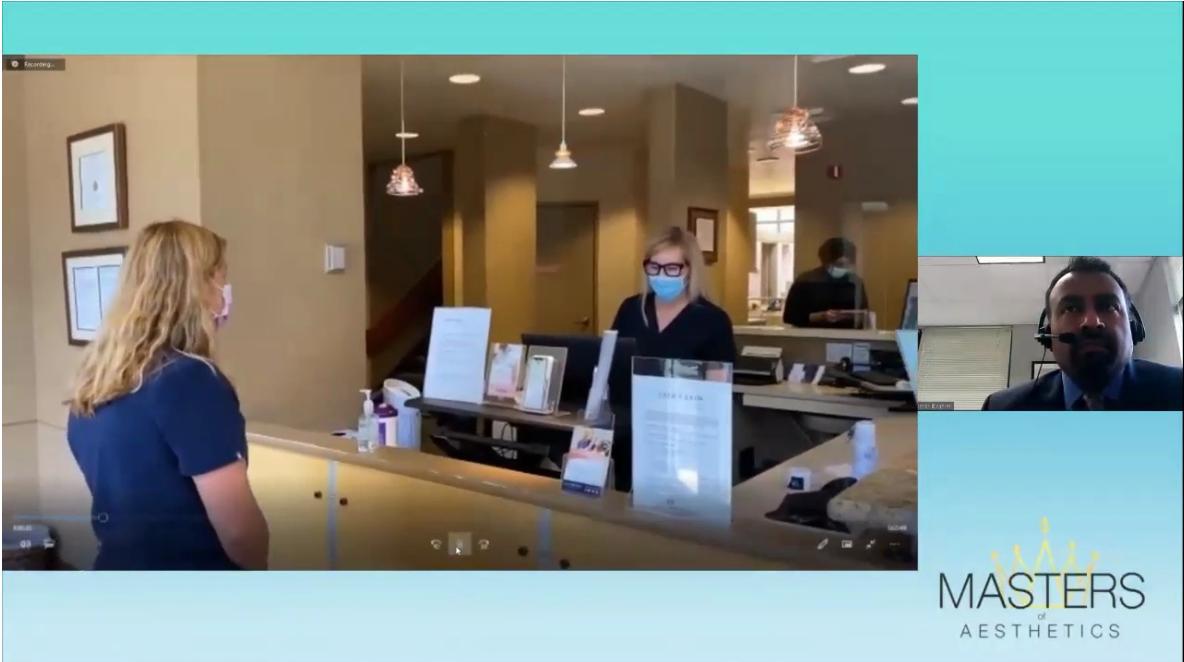
Thank you.



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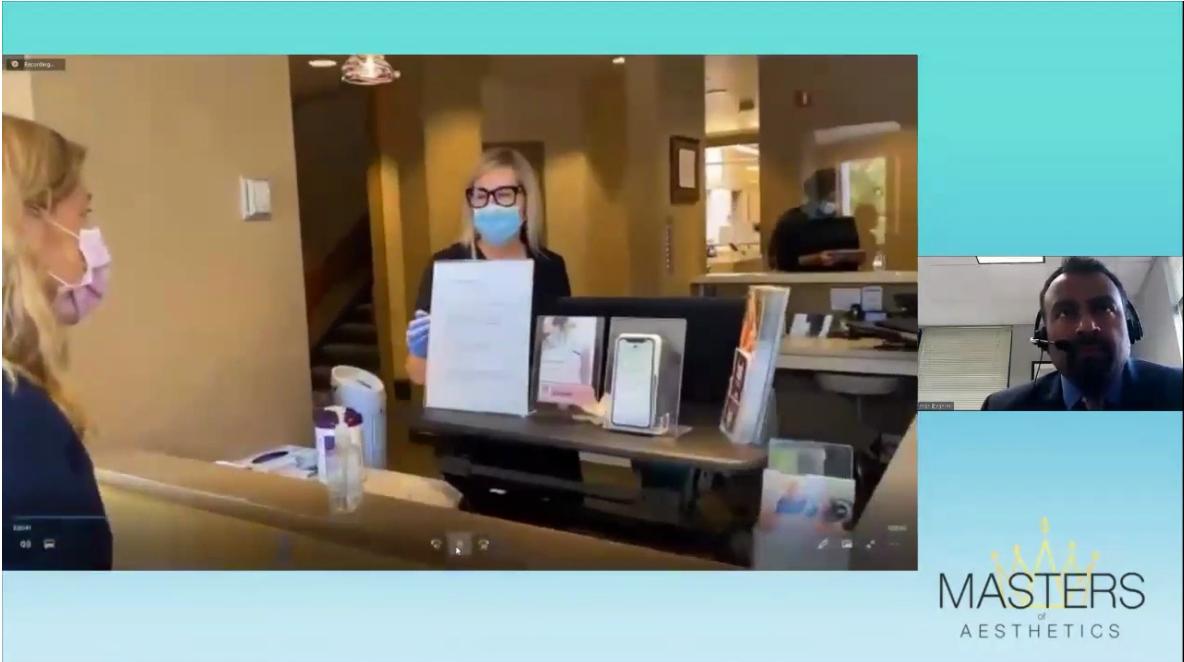
Good to see you. Great to be back.



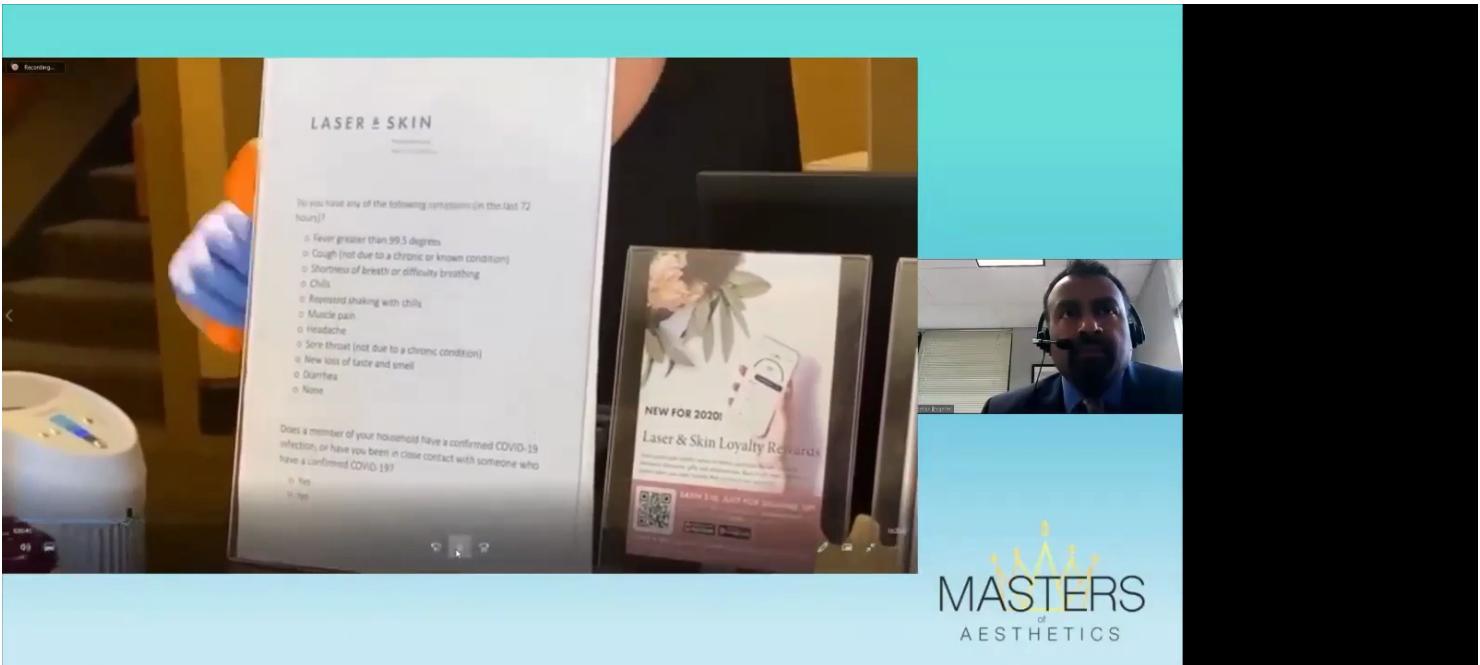
I'm going to get you checked in.



Perfect.



We're going to do quick health screening, on your hand.



Okay. Can you please read these two questions about your answers? No to all of those and no exposure. Perfect.



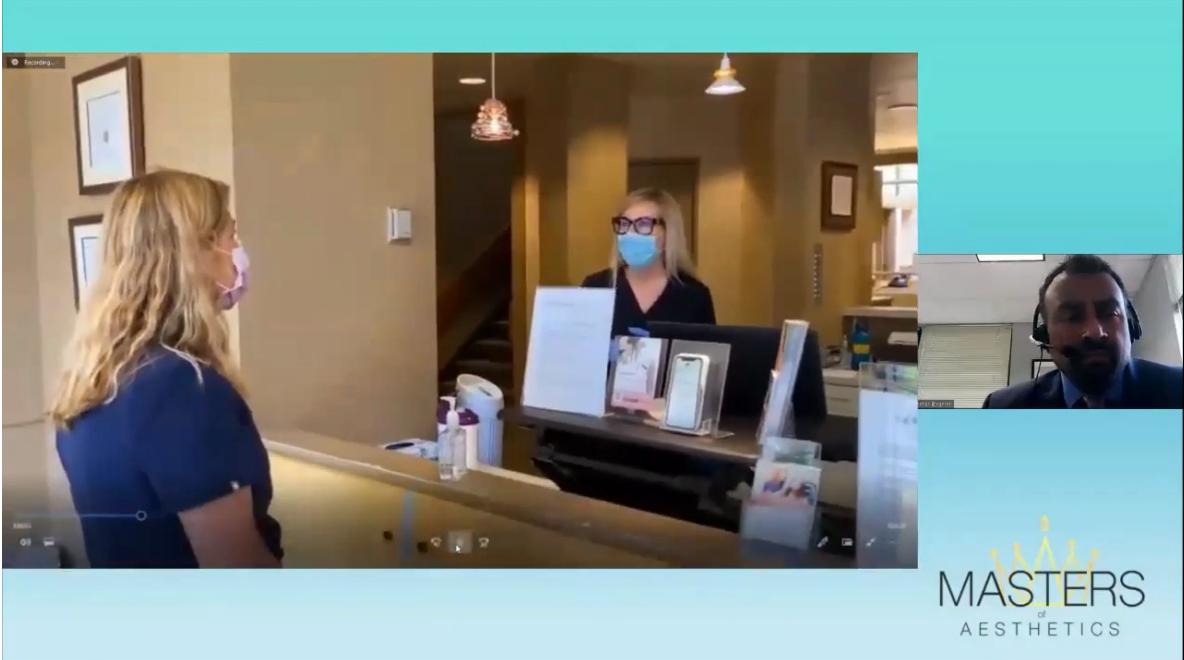
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Okay, I'm going to take your temperature.



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Great.



And then I'm going to let you know how things are going to go today.



Okay. First of all, we're going to get you back as soon as you social distance in our office.



Welcome to a little product that you need to be here sunscreen. Please don't be pulled out for you. As you're trying to keep that area as sanitary as possible. Most importantly today, we're going to ask you to keep on your as mask until the doctor asks you to remove it, at which time we're going to ask you to try to speak in all the masks. It's off to you. Before you go that, please use the hands. Third. Do you have any questions for me? No, I don't. See, wonderful. Thank you. You're welcome.



All right, I'm going to have a staff now. Come on. We. We are skin care specials.



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Should you have any questions about products? She's the queen bee. So we have Annie here acting as our patients and we have her in the room.



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I do want to point out the air doctor.

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Those are these are heaven filters that filter out bacteria viruses down to the si



ze that we need to cover or HIV for that matter as well as purify the air for any other allergens.





And so how do you do is we would talk and she keeps your mask on.



I have my mask on.



When we talk about what would you like to do? We have no idea. OK, let's do filler. So what would you like to do for? On my lips. OK, so when we do is I'm going to take a look and I'm going to have you take your mask off, but there's no talking when a mask is on.



All right, so let's take a peek. OK, perfect. We can go ahead and cover up.



And at this point, we'll kind of talk a little bit more.

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And I'll just kind of jump up to what we would do for treating. I'm not going to actually treat it today. So I put my gloves on. I would talk to you about what we're going to do. I would clean the area and I have her make sure she does stuff all over makeup. I make we get photographs. Actually, that's how it's important. And then we will clean the area with nitrogen, which is type of chlorosacid and clean that all off. I will be gloved up. I'll get my filler all set up.



And my alcohol that I'll wipe with afterwards.

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And I'll use God's probably to clean the area again.

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of
AESTHETICS



That's because she's doing something around the mouth. I'm going to either use dilute, populating iodine solution and we dilute this out. But if that's an iodine allergy, which you're going to make sure you ask about, you'll use coagate prosol. That's an affiance. So that does help to decrease the viral load if it would be there. Presumably she's not because she's passed all those tests. But you just never know because you never know that it can be the ace of genetic or pre-sage of genetic. Also, we have a mirror here.



And I've got a powder look at it. And examines are going to be green. What we're going to do, I sort of skip it with that. She's touched it. I've touched it.



We'll clean it into the dairy zone.





So after we go ahead and do all this, at that point, well, actually, before we do it, I will say, OK, we did 50 units of Hushlighter Toxin. We're going to do a storage of filler in the lip. And I know you've had the powder set side. We've decided on, we've talked about. So we've already taken the credit card number and it's on file. And that's so that we can do to facilitate the check out. So there's less waiting around anywhere. So the credit card will be on file. We'll be able to charge everything to about six. It's going to be \$X amount of dollars. You don't agree. And then, so check out that facilitates all that. We do our home procedure. She's ready to go. We couldn't clean her up. She's all good. We are grateful to everything. The check out person will come and say that you confirm the check out. You'll nod. They'll hand you the receipts. Any products that you might want it to have. And then you'll be ready to go. They will be teaching that up. It for some reason, you have to wait for anything. There are six foot markers out there. But in those cases, we're able to bring you into the room and then you leave the room all without having to wait anywhere in between. So I think that I cover everything for what we're doing here.



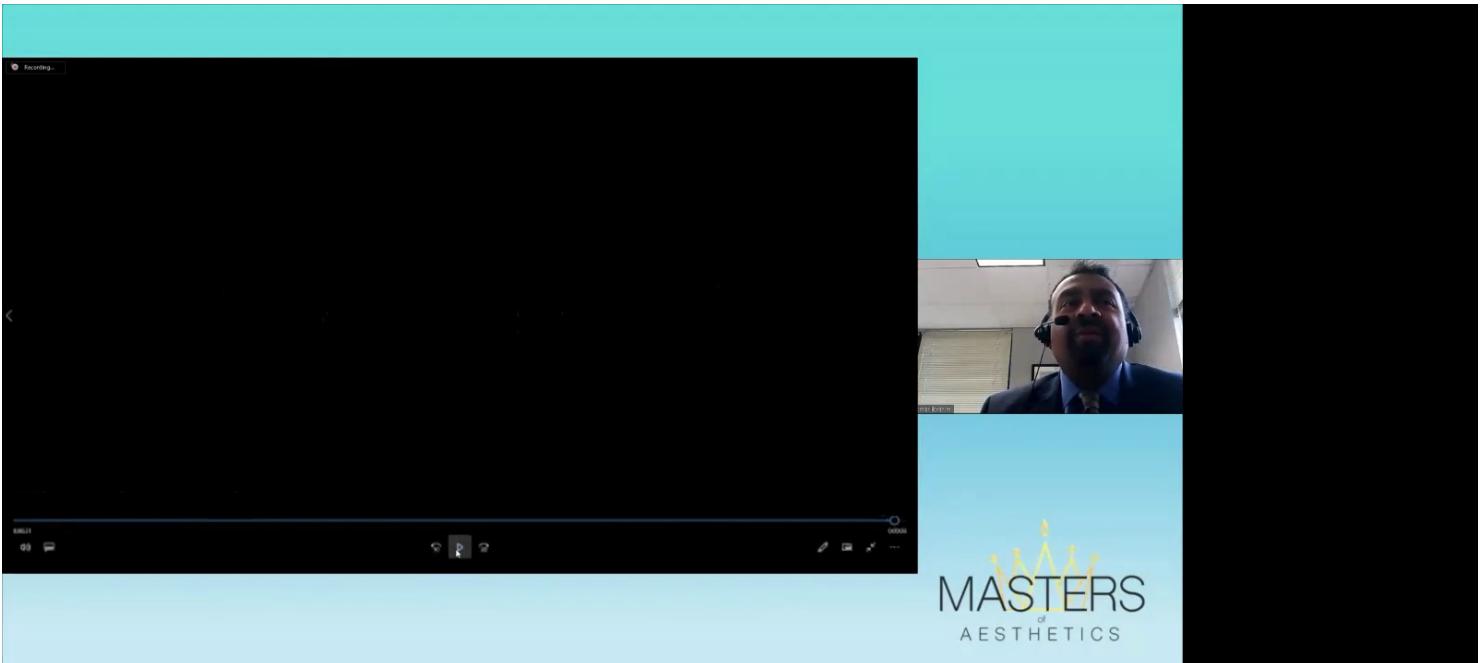
So what are we



doing to keep our employees safe? So I was very amased.



Everyone to stay six feet apart as much as they can. We are sanitizing everything all the time. Our break room in the kitchen area where you cook your food. I think there's things to sanitize. Err, areas to set up and get your food ready. And then you go, was this ready to eat? You go into, you have an eating area against six feet apart for each person. And only at that point you get to take your mask off. We also have outside earnest eat around too. So that's actually very helpful, especially in the summertime and good weather. And we do ask employees to try to refrain from any possible contact with anybody that's sick, anyone that might have exposed and try not to put yourself in a position that you could become infected with the COVID. So I think that settles down what we have to show you about this. So we hope our patients feel safe. We want to keep our employees safe. And we look forward to having you here at the Lizard's Conservatives Center and my name is California.

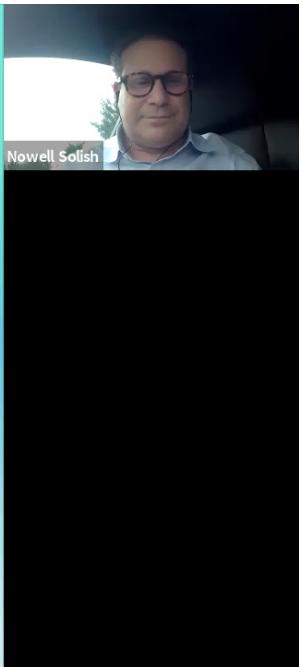


Jon Bryant

Thank you so much for your time and attention.



Well, thank you so much. We bring us to our next session, which is botched. Matt and Arissa asked me if I would help with this session. And moderated, I sent them all my complications. Matt went to the ER, Arissa ran and they said, no, don't show those. Maybe we can get others to do it. So thank you for the others that volunteered to show their cases. As they always say, if you send enough wood, you're going to get a sliver. We all get complications for sure. And it's, I think, a great thing to show your complications, how you manage them and what you did.



So I think with that, we'll get started on this session.

Botched!



Mathew M. Avram, MD, JD
Director, Laser, Cosmetics & Dermatologic Surgery
Massachusetts General Hospital
Associate Professor of Dermatology
Faculty Director for Laser & Cosmetic Dermatology
Training
Harvard Medical School
Past-President, ASLMS
President-Elect, ASDS
Boston, MA



So I'm going to talk about one of my botched cases.

Healthy 40 year old female

- 40 yo F presents for 1927nm fractional laser treatment for dermatoheliosis
- Healthy, other than anxiety
- Undergoes treatment at 10mJ, Treatment Level 4, total energy 1.24 kJ (conservative settings)
- Prophylactic Valacyclovir 500mg PO BID



And it starts with a healthy 40 year old female who presented for a 1927, the enemy to fractional laser treatment for dermatoheliosis. She was perfectly healthy, other inventing society. And I performed conservative treatment settings on her and gave her prophylactic valicyclovere. I treated her on a Friday afternoon. I treated six other patients with that device that day.

36 hours later...she calls us



I get a call Sunday morning from my fellow with these photos. And the fellow asks, what do you think is going on here? I think they're millia. She has an appointment tomorrow morning at 7.30. And I look at it and I say, some of those don't look quite like millia. They may be postuls. Why don't we take what can see what she is doing? I come into mass general and this is what I say.

5 hours later, we see her



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Extensive, a particular postural eruption. I'm almost lakes of pus that I see. And this is unnerving to me.

Vitals

- Temperature 103.3F
- BP: 90/40
- HR: 110



She said that she felt like she had the flu, had aches all over her body, and felt like she had a fever. We didn't have a thermometer. I went to CVS to buy one. Her temperature was 103.3. Her blood pressure was 90 over 40. Her heart rate was 110. And I think mine was about 200 at this point.



So what you got to do is start your investigations. We did some swabs and some investigations to see what was going on here.

Observation

- Went to the MGH ER for observation
- IV Vanco X 2
- IV hydration
- Dilute vinegar soaks
- Patient felt better within a few hours



We did tissue swabs twice, 2HSV cultures, direct fluorescent antibody times two, a KOH prep, which was negative, and a stat gram stain that I jogged over to the MGH micro lab. They called me back and said we see gram positive, coxion clusters looks like staff. She received oxycyclining, cyprophloxicin, typhlucan, and hydration prior to getting that result back because I was nervous about MRSA, and Cyprogeshal broad spectrum coverage. We wanted to cover for yeast as well. We centered to the MGH ER for observation. She received IV vanco twice, IV hydration, and we got to loot vinegar soaps by going to Whole Foods and buying some vinegar. And she actually felt better very quickly. As rapidly as she got very sick, she felt better very quickly.

Post-op Day 1



◀ ▶ ⏪ ⏩



This is what she looked up, looked like post-op day one.

Diagnosis: MSSA



And the diagnosis came back as methamcyclinsensitive staff orias.

Post-op Day 2



Here is post-op day two. She's looking a lot better now. No lakes of pus anymore.

Post-op Day 7



L Xu, S Kilmer, EV Ross, MM Avram. Bacterial Infections Following Non-Ablative Fractional Laser Treatment: A Case Series and Discussion. *Laser Surg Med* 2015.



Here she is day three, and here she is day seven, and her face looks wonderful when we publish this. Probably the exos toxin in the staff actually benefited her and she even got a better result on the new normally would see. So this is just approach when you see a rapidly accelerating infection. How to approach it and how to get on top of it right away.

Thank You



And thank you for your attention.

Vascular Complication Masters of Aesthetics 2020

KIMBERLY BUTTERWICK MD

COSMETIC LASER DERMATOLOGY, DIV OF WEST



Hi, I'm Dr. Kim Byterwick, and I'm going to present my botched job of acinar complication that I had three or four years ago.



Patient texted me at 9:30 pm
"Will need to come tomorrow morning to
laser this bruise"



So here we go. A patient texted me at 9.30 at night and it said, we'll need to come tomorrow to laser this bruise. And I'm in my PJ sort of winding down for the night. I asked her to send me a closer picture. She sends me this. And so my heart sank.



Patient texted me at 9:30 pm
"Will need to come tomorrow morning to
laser this bruise"



I was like, oh my God, that is not a bruise. He said, vascular pattern is reticulated. I knew that I had done an intravascular injection.

History of Office Visit

Microneedling RF to face
Wanted filler to lip
Asked for correction of NLF with remaining filler, had only 5 min
Injected 0.1 Restylane silk with insulin syringe, no blanch seen

Question: how urgent is this?



Now here's a history of the office visit earlier. I had done micro niddling RF to her face. She wanted a filler to her left. So we used wrestling silk. This is some years ago. She, at the very last minute, she said, you know, I said, I have a little left. She was, why don't you put it in my nasal labial fold? And she was, by the way, I've got to get out here in five minutes. So I had the filler in an insulin syringe teeny tiny. I knew I had only point one left. I injected that left nasal labial fold and must have gotten right into the vessel. I did not see a blanch of the time. She didn't have pain. And when she texted me that photo, she didn't have pain. But the question that I had that night in my pages is how urgent is this? So do I have to go in? Can I have a put long compresses on? When a vascular incident happens to you, all of a sudden these new questions come up. So I called a friend, got some advice, and she thought I could wait till the morning. But I knew that I wasn't gonna sleep. The patient wasn't probably gonna sleep. So I called the hospital. I didn't want to go to our loft office. It was too hard to get in the building. So I called the hospital determined that they did have some hyalinex, no vitrease. So it said, meet me in the ER. We both got there at 10.

Intervention

1. That night: met her in ER, injected Hylenex 1 vial
2. Next morning- one vial of vitrase
3. 48 hours light Vbeam 5J/6ms , refused further vitrase
- 4. Question– how do you know when to stop hyaluronidase?**



And I injected hyalinex, a vial of it. It didn't exactly clear all the way, but they only had the one bottle. And it improved. And she said she didn't feel anything. So I said, okay, great. Let's have you do warm compresses, take aspirin, massage, and see me for singing the morning. So I did sing better that night. I sat on the next morning. It still looked better, but not still kind of perperic, a little vascular. And I added another vial of vitrease, which she hated. It stings a lot. And she said, I hate this. You cannot do anymore vitrease ever. Now, speaking to friends, the next diysar again, they have recommended a very light v-beam for this type of pattern on the skin. The heat, the dispersal, something about it. So at only five jewels in six milliseconds, I treated that vascular pattern. Again, the patient refused further vitrease. But the question is, how do you know when to stop hiding your on a date? The vascular pattern was still there. Well, what happens is after you clear the emboss, there is reperfusion and there's a reperfusion injury, but the skin can still look a little bit modeled like this.

72h later
Repeated V-beam

Entirely clear at 5 days

Lesson: don't inject on same day as devices, especially if in same plane and patient is vasodilated



This is 72 hours later. It's still kind of red. You see the other side is periperic. That was just from the micrometalling. RF, some people do bruise with that. But the left side and the video cheek is still a little bit in that in that articulated pattern, the left lip. And I kind of wanted to add more highly runnydase, but there was no pain. And the way you tell is no pain and how fast it reproduces. So you pinch the skin and watch it refill. And she had a really good refill. So I knew that we were out of trouble. That it was okay that she refused further vitrease. She continued on the massaging and warm packs. And she sent me a picture, which I can't find, but it was entirely clear, look perfect at five days. And I think it was from the V-beam, the early polyuronidase and luck. But the lesson is, don't inject the same day as your due devices, especially if it's in the same plane in the patient's vasodilated. I should never have injected right in the same area where I had dynamite, like an edling RF. Now, can you inject or deeply? You might want to do your injections first and then do the microneeling or light peel or some other device. There are many articles that show it safe to do IPL, other lasers, overflows, but not afterwards. So hopefully you learned some lessons. Thank you.



Botched: Resurfacing Complication

Joel L. Cohen, MD

Director, AboutSkin Dermatology and DermSurgery
Greenwood Village and Lone Tree, Colorado

Assoc. Clin. Prof., Univ. of California Irvine Dept. of Dermatology

ASDS Fellowship Co-Director, AboutSkin/Colorado



So unfortunately, we all have situations that go awry. And I think that, in some cases, this may be an issue of something that we did. In some cases, it may be an issue of something that the patient did and didn't take care of things. And sometimes there's some areas in the middle. So these are always tough and challenging situations. And this is a resurfacing complication that I had.



So resurfacing and heavy resurfacing is something that I do on a regular basis. Pretty much every day I'm doing full field, heavy, early, and resurfacing around the mouth and eyes. It's Dr. Ross spoke about it this meeting and then a combination of fractional and full field on the rest of the face.

September: Monday



- Low Density FxCO2
- Post-Tx Instructions
 - Given
 - Explained
- Supplies
 - Cetaphil cleanser
 - HOCL, dilute vinegar
 - Aquaphor



This was one of those cases. It started on a September and on a Monday in September. I did low density fractional CO2.

Post-Laser Day 1 and 2 (Tues/Wed)

- AM (Tues/Wed):
 - Pt reports doing well
 - Following instructions
 - Seems to be healing fine
- PM (Wed)
 - "Feeling itchy"
 - ? Maybe Aquaphor
 - ? Maybe HOCL
- Sends pic
 - Looks OK



Peshit was given instructions and told him to use a cleanser and hypochlorous acid in aquifore after the procedure of the patient the next day and the next day after that reported doing well in the morning. By afternoon, she was feeling itchy on Wednesday. And she thought it may be the aquifore or the hypochlorous acid. I've seen some issues with aquifore in terms of some of the stabilizers.

Post-Laser Day 3: Thursday

- AM Pt calls and reports “burning”
- Thinks it’s definitely related to
 - Aquaphor or HOCL
- Told to come in
- ? Contact / Irritant Derm
 - Stop Aquaphor, HOCL, Cetaphil
 - Wash vanicream, white petrolatum
- Cx taken
- Cephalexin Rx given
 - Computer indicates possible dilaudid interaction –so waits to confirm
 - PCP confirms ok, “taken before”



So she said to pick and I thought it actually looked OK. By Thursday morning, she called and said it was burning. So I told her to come in. But she still thought it was one of the topics she was exposed to. Clinically, it looked like it may be contact or irritant related. So we had her switched to vantichreme and white petrolotum. But I did take a culture and I gave her cephalexin at that point.

Post-Laser Day 4: Friday



- Mid-morning
- Upp lip: less red, almost healed
- FH: more yellow / honey-colored
- Face: more burning, more itching
- Only has taken 2 doses Abx
- Added Rx:
 - Bactroban ointment
 - Continue dilute vinegar
- Plan to chat or take a look Sat AM



And at that point, so she came back on Friday, treatment Monday. And it looked more infectious at the top. She had taken two doses of antibiotics between the day before. And I was still waiting for the cultures. But I added back to abandon ointment and told her to use to loot vinegar. And we talked about taking a look at her over the weekend.



Post-Laser Day 6: Sunday

- AM: Pt answers call
- "Face not doing well"
- No fevers / No chills
- I meet her at office
 - Husband drives her
 - My Peds wife attends



It was a little hard to get a hold of her. On Saturday, but on Sunday, she finally answered the call.



Post-Laser Day 6: Sunday



- AM: Pt answers call
- "Face not doing well"
- No fevers / No chills
- I meet her at office
 - Husband drives her
 - My Peds wife attends
- Cx still pending
- I change Rx to Doxy
 - Pt reluctant due to IBD
 - Agrees Rx
- Disc ER



And I have her come in. And this was the case here. The culture, unfortunately, was still pending. It was Sunday. And I changed things to doxycycline. And I discussed with her going to the emergency room.

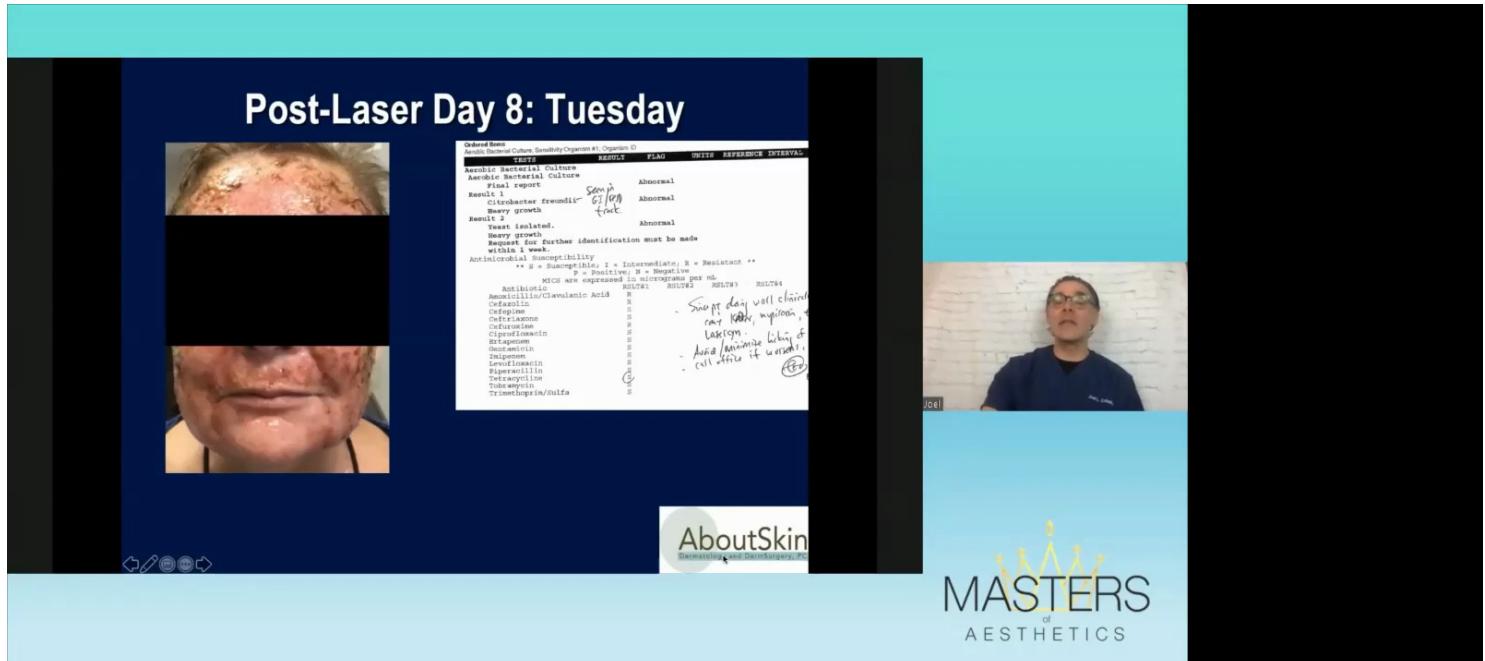
Post-Laser Day 8: Tuesday



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Unfortunately, doxycycline seemed to work.



I didn't see your Monday, but I saw her Tuesday when the cultures came back as a very rare citrovactor from the heavy growth. There was also some yeast that was isolated. But you can see that this was sensitive to the tetra-adoxy family of products.

Post-Laser Day 8: Tuesday



ANALYST	TEST	RESULT	FLU	UNITS	REFERENCE	INTERVAL
Analyst Culture Sensitivity Organism #1: Organism #1	Aerobic Bacterial Culture					
	Aerobic Bacterial Culture					
Result 1	Citrobacter freundii	Seen G/F/O/F	Abnormal			
	Heavy growth			Abnormal		
Result 2				Abnormal		
	Heavy isolated,					
	Heavy growth					
	Specimen culture identification must be made					
	within 1 week					
	Antimicrobial Susceptibility					
	Interpretation: I = Intermediate; R = Resistant **					
	MICs are expressed as mg/ml					
	** S = Sensitive; R = Resistant					
Antibiotic		RFLW1	SFLW2	SFLW3	RFLW4	
Methicillin/Clavulanic Acid		R				
Cefazolin		R				
Desfipine		S				
Cefuroxime		S				
Glycine		S				
Hemopenic		S				
Imipenem		S				
Levofloxacin		S				
Piperacilline		S				
Tigecycline		S				
Tobramycin		S				
Trimethoprim/Sulfa		S				

Citrobacter freundii is a species of facultative anaerobic gram-negative bacteria. It belongs to the family *Enterobacteriaceae* and is known to cause a number of opportunistic infections, as well as many nosocomial infections of the respiratory tract, urinary tract, blood and some other sites in patients.



The logo consists of the word "MASTERS" in a large serif font, with "of" in a smaller font below it, and "AESTHETICS" in a smaller serif font at the bottom. Above the text, there is a stylized graphic of five yellow human figures of varying heights, arranged in a curve that tapers towards the top.

So citrovactor, it is an anaerobic gram negative bacteria, which is why the keflex didn't work.

New History

- Pt on cruise 3w prior
- Had “bronchitis”
- Tx’d Z-pak
- “Still coughing some”
 - Esp when not taking cough suppressant

Ordered Tests	Specimen Source	Culture Sensitivity Report #	Report Date	RESULT	FLAG	REFID	REFERENCE INTERVAL
Bacterial Culture	Sputum	67109	10/10/2013	Abnormal			
Antimicrobial Susceptibility							
				** S = Susceptible I = Intermediate R = Resistant **			
				P = Positive; N = Negative			
				MICs and MIC ₅₀ in µg/ml			
Antibiotic				R02C1 R02T1 R02W2 R02W4			
Ampicillin/Sulbenicillin/Acid				R			
Cefazolin				R			
Ceftriaxone				R			
Ciprofloxacin				R			
Gentamicin				R			
Levofloxacin				R			
Penicillin				R			
Tetracycline				R			
Trimethoprim/Sulfa				R			



So on further history, the patient had been on a cruise three weeks prior, had bronchitis. I've been treated with a Z-pack at the time. It was still coughing. I didn't actually notice her coughing during her procedure or anything. And she said she had been taking a pretty regular cough suppressant.

Post-Laser Day 14: Monday



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Post-Laser Day 20



So by day 14, things looked better by day 24 surely things ended up better. But this was a circumstance where a patient had something before didn't seem active during any of appointments with me. And for some reason, this was a situation where the typical reflex of starting something like cephalexin was not helpful. But fortunately, I had taken a culture. And that culture did prove to be something that really confirmed what the bacteria was and something that actually was sensitive to doxycycline.

Botched

Omar A. Ibrahim
MD PhD

CONNECTICUT
SKIN INSTITUTE
Skin Cancer - Laser Surgery - Cosmetic Dermatology



Thank you so much. It's a privilege to be part of this distinguished panel.

Complication

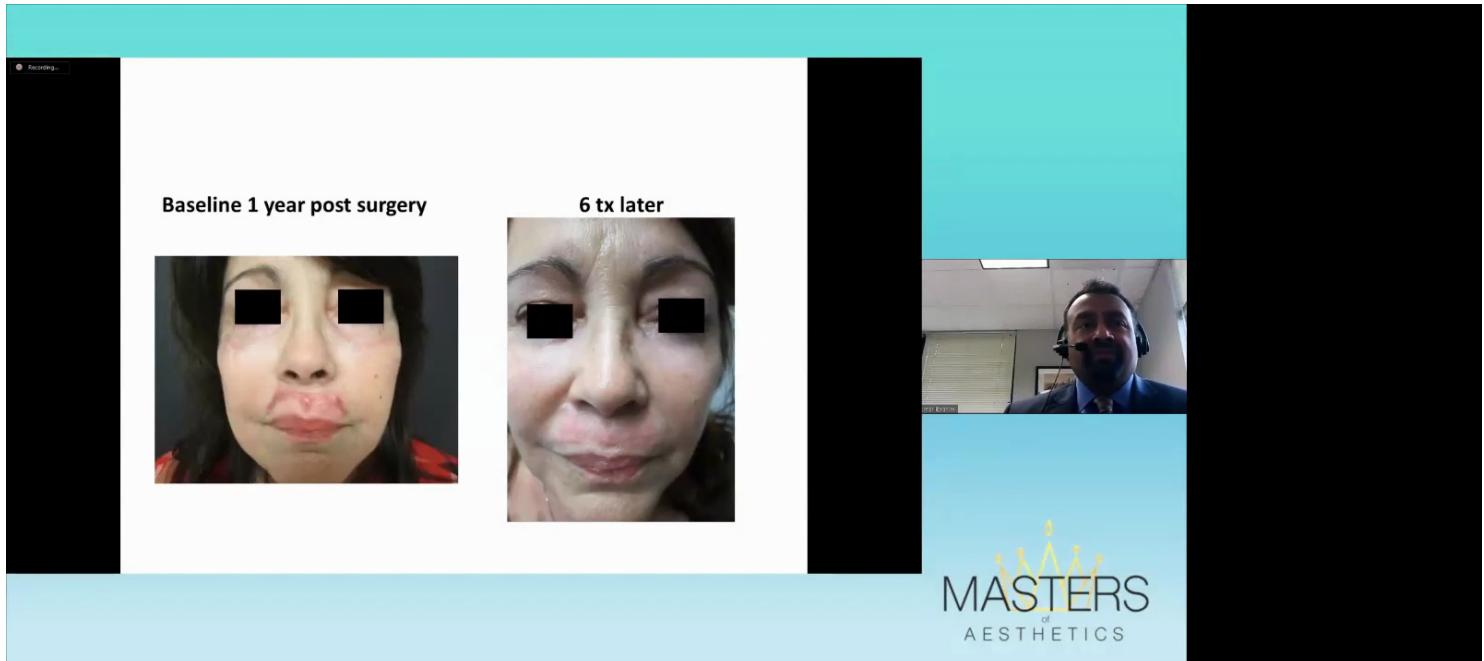
- 2014 Upper bleph, Lower lid TCA peel, fat injection to lips and dermabrasion to upper lip by Ivy league academic BC facial plastic surgeon.
- Appearance one year later
- The treating surgeon told her it would all heal with massage and silicon gel sheeting.
- Third opinion
- Medical history: 68 y/o Hispanic, RA, on rituximab, prednisone



So I'm going to share my case. So this is a woman who I saw recently that saw a well-regarded, well-known facial plastic surgeon who did a upper-bless, a TCA peel, and fat injection to the lips and dermabrasion. And this is her appearance one year later. She was told by the treating surgeon that everything would heal with massage and silicone gel sheeting. And she actually was seeing me in third opinion. She had actually seen a dermatologist in Puerto Rico where she spent some of her time. And then another facial plastic surgeon in Manhattan. And then I was the third opinion. Of note, reviewing her medical history, she has a longstanding history of rheumatoid arthritis. She's on retoxamab. And prednisone. And I think this is where we, as dermatologists, where we wear both a medical and surgical hat. It's important to look at the fact that she's on some medications that can not only suppress our immune system, but also when you look at the literature, are shown and documented in causing delayed wound healing. And I think this is, I don't think procedurally anything was done wrong, but it was probably in a patient that is in a situation where they aren't able to heal from wounds that most people normally would be able to.



And so just examining her closer, she has some prominent erythema on her lower lids, which, to me, is basically a form of very early scarring. On her lip, it's not projecting well, but she's got pretty raised hypertrophic scarring, very firm, the palpation. And so looking at this, I decided to break these up into two separate issues and how I approached it. So with the lower lid area, there wasn't much I could palpate. And so basically, my approach here was to use a pulse-style laser, just to help lighten the erythema and shut down any sort of smoldering scarring process. Over here, we had a little more work to do. The scar was certainly hypertrophic and palpable. So I did also use pulse-style laser here, but I also did a combination of ablative fractional CO₂ and combined that or did laser assisted drug delivery using a mixture of five-flora uricil and topical catalog mixed one to one. Thank you, Jill Weibull, for all your amazing work doing this for this patient.



And so this is her, obviously, one year after the procedure. And this is her after six treatments using this cocktail. You can see, basically, on the lower lids, the issue is nearly fully resolved. And she's gotten substantial improvement while it's not completely gone significantly better. Unfortunately, I lost her to follow up. She moved to Puerto Rico, but still significant improvement nonetheless. Thank you.

Botched!, E. Victor Ross MD



So Vic Ross, again, just a few minutes, quick botched cases. It's like a crime scene. When you have something that goes wrong, the first thing to do is try to find out what the heck went wrong.

– klebsiella variicola infection, on doxy at time of infection, then cipro, septrin, Diflucan and Valtrex, photos are pre, 4 days, 6 days , and 8 days post, and 11 days post



This is a case we had about eight months ago. This lady had come in. We did traditional one-pass resurfacing, which normally people heal in five to eight days. She came in over the weekend, apparently had some pain concerns. And then she came in Monday like this. This is like three or four days later. And of course, she looked bad. And it was obvious in infection. And she grew out Clibceola, their cola. Well, subsequently, we had put her on ciprofloxacin, diaphragm, pain, and baltrix. But it was a long recovery. This is her about 11 days later. We were really worried about her. The interesting was she was on doxycycline prior to the procedure, which actually was supposed to cover that bacteria although we didn't know it at the time with a very high MIC. But it didn't work very well.

Klebsiella variicola infection, pre and 7 months post



0:04:27:04



This is her now before and now about a month ago. This is her just July 8th. So certainly we got an OK result. I'd say we got a nice result. But we certainly were fearful. And what this really did to me is I really changed my algorithm to really focus more on gram negatives. And if you hear my non-fractional blade of talk, I really focus now more on topical gram negative antibiotics. And I really stay away from just focus oral antibiotics.

Fractional resurfacing- TOO MUCH BULK HEATING



So fractionally surfacing too much bulk heating, this was a fractional 1550 where we simply went back and forth too fast and without waiting and got some blisters that healed uneventfully, which was nice.

Marginal nerve injury path, thermi?



This was a marginally nerve injury from Thurmy. And what's tricky about this is what I learned is when I did my nerve stimulator, I traditionally would find one spot. And once I found a jiggle, I would stop. This case taught me when I took this gentleman back and did more nerve stimulation. I found out that actually there's a range of stimulatory effects. And so I would find out where it went and map out the entire area. And I think had I done that in this case, I would have not hit the nerve, which I did here. It took him three months to recover, not so happy patient, decent clinical result.

Guttate hypopig after Nd YAG Q melasma



And this is the most frustrating case I probably had. This is guttate hypopigmentation after repeated, a Q-switched, botico and nanosecond, low-fluance, near-giving meag. So we did everything that the book tells you to avoid this. That means low-fluance less than two jewels per semenin squared, spacing out the sessions more than two or three weeks, not too many passes. Nope, we didn't have any pain control, didn't need it. And what happened after four or five cases, she had this little malasmum acquired a new visiboda and a type six patient. She developed this, it was fairly rapid. It was after the fourth or fifth treatment, she got this guttate hypopigmentation that started in around 2016. I just saw her three weeks ago. I've done fractional CO₂, micro-needling, fractional or memiag, fractional 1550, fractional 1540, about 10 or 12 sessions, every three to four months, we spaced them out. I think the most helpful thing to be honest was the last thing I was doing, which was micro-needling, to be honest. And we just did one spot here with micro-needling in five FU, there was some suggestion from a Brazilian dermatologist that could work for IGH on the arms, which is a different entity than us. So we'll try that. But very frustrating case, I don't use laser toning anymore, really because of this case, because it's been very frustrating, the patient's been remarkably patient with us. And that's my four-botch cases. Thank you very much.

As physicians, we have a responsibility to educate others to prevent these terrible complications from happening. It is such a tragedy to ruin these young, beautiful healthy people who end up disfigured and scarred.

Botched: Cosmetic Complication Confessions
Masters of Aesthetics 2020

DISCLOSURES

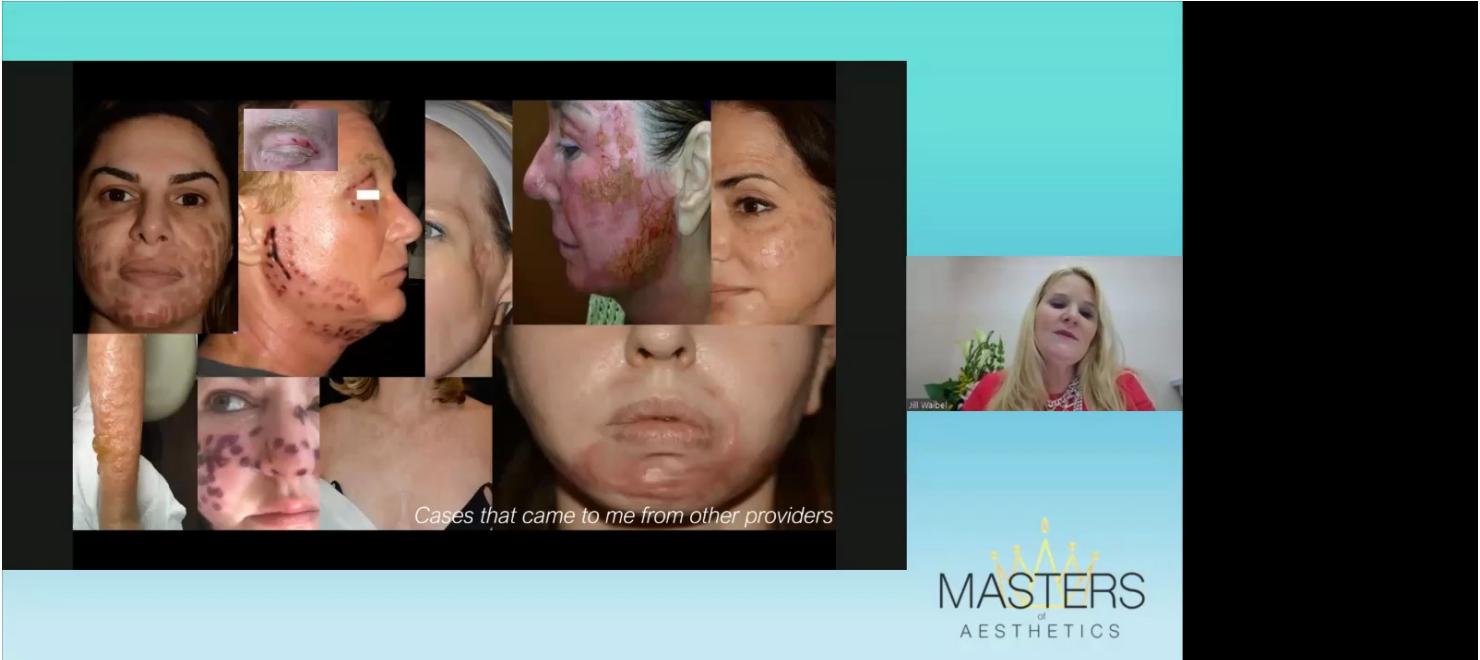
Cyberelle - Clinical Trial
Cynamed - Clinical Trial, Advisory Board
Dermion Aesthetic Technologies - Advisory Board
Elli Lilly and Company - Clinical Trial, Speaker
LaserX - Speaker
Lumenis - Clinical Trial
Lumenis - Clinical Trial, Equipment
Michelson Diagnostics - Clinical Trial, Equipment
Novartis - Clinical Trial, Speaker
Receptos - Clinical Trial, Speaker
Pfizer - Clinical Trial
Sotera - Clinical Trial, Advisory Board
Strata Skin Sciences - Consultant
SyneronCandela - Speaker, Consultant, Clinical Trial

DISCUSSES FDA OFF-LABEL USE

Jill S. Weibel, MD
MIAMI DERMATOLOGY & LASER INSTITUTE
Medical Director, Miami Cancer Institute
Subsection Chief of Dermatology, Baptist Hospital of Miami
Chief of Dermatology Miami Cancer Institute
Assistant Voluntary Professor, University of Miami Miller School of Medicine

MASTERS
of
AESTHETICS

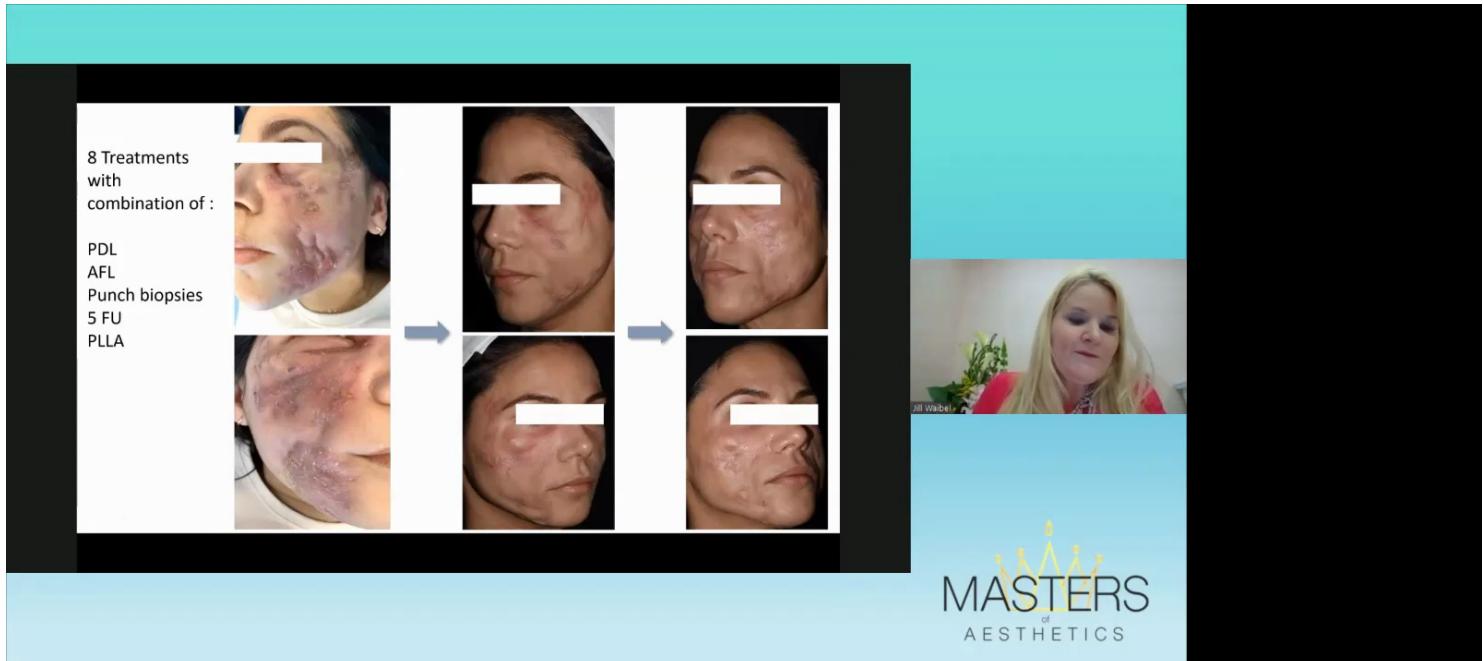
Hi, Jill Weibel, and it's a pleasure to join the masters of aesthetics virtually. So this section is botched cosmetic confessions. Because I'm a scar expert, unfortunately, I have a huge practice of build with these. And I did start by saying this positions, I believe we have a responsibility to educate others to prevent these terrible complications from happening. It's a tragedy when I see these young, beautiful, healthy people who end up disfigured and scarred. And I know that my colleagues on this panel, and certainly I have all made mistakes. And luckily, I always tell people, most of the time you can fix them with lasers, but I'm gonna share with you a couple of really tragic cases in the name of education and making us all better.



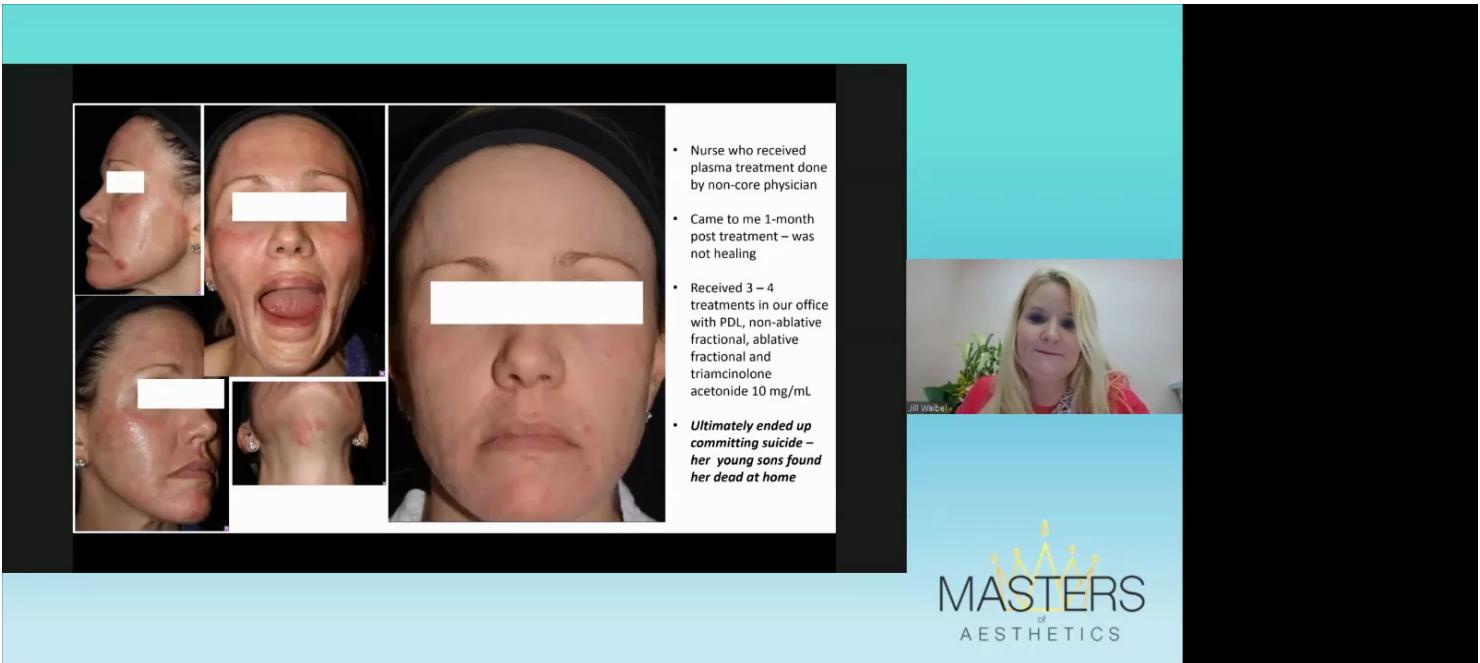
So I had our time choosing which patients I would discuss. These are all cases that have come to me from other providers that are pretty challenging.



But this is the first one that I wanna share with the panel, because again, I think it's important not just to understand the risks of cosmetic procedures, but also how to fix them. So I was sent this patient from a good friend of plastic surgeon who asked for my help. This was a patient that got a fat necrosis after she had liposuction with fat transfer to the face. This was months and months after she had had it. She was a beautiful, healthy young woman. And we've been treating her for about six months.



And we treat her once a month with lasers and then she comes in for a punch biopsies and some signs of injections. But you can sort of see the transformation and we're not done. We've used the Paul style laser for the redness. You'll be able to fractional to try to decrease these hypertrophic scars. I've done punch biopsies to help with some of the really deep scars and the cheeks. And then I've been using laser assisted delivery with five FU. You can see she had granulomas from the fat necrosis. And she did not culture any infection. Although there's a widespread theories across the world that sometimes that the cannulas are infected that can happen, but sometimes fat just doesn't get along well if it's moved to another location. And then I've also tried to use sculpture. And again, we feel like we've made a lot of progress and stay tuned. I think a few more sessions will have her back and it's been a challenging journey.



The last case I'm gonna share with you, I bring you with a heavy heart. This is a nurse. There were two nurses that were treated about three years ago with a new device on the market called the, it was a plasma laser. And after a month after they had it done by a non-core physician, they came to my office for consultation and they were besides themselves because they were nurses. And they had permanent scarring. And we did three to four treatments in our office. And as you can see in the picture on the right, we made a lot of progress. But I'm sorry to say as a direct result of this treatment and what it did to her marriage and her career in herself as seen, this patient ended up committing suicide and was sadly found at home by her young sons. So I just wanted in the session by saying, we all have great responsibility. And I'm sure Dr. Abram, who's also a lawyer, will tell you that we're here to make our lives of our patients better. And I hope that in the future, we don't see any more of these cases.



Thank you for letting me share these with you today.

Jon Bryant



Nowell Solish

Well, thank you very much to everyone that shared their cases. They were fantastic. I also decided that after this session, I'm gonna retire immediately.



But I appreciate everyone sharing.



We do have some questions, both from this session and the one just before. So maybe I'll do some of the ones before if we can. Dr. Ortiz, can you repeat the settings for Yag and Basil, Celcarcinoma? Do you have those handy? Or yeah, so I use a five millimeter spot.



I turn off the cooling. I use eight milliseconds and then 140 joules per centimeter squared. Now, I'm currently using the XLV, the QTera device. So if you have a different NDA, your puls duration may vary a little bit depending on which device you're using somewhere between eight to 10 milliseconds. But your endpoint is that slight grain. So not a cosmetic endpoint. Obviously, if you see that when you're doing something for cosmetic purposes, it means that you're getting dermal contraction and a crowsis. But this is an epidermal tumor. We want to destroy the tumor. So that's what we want to see.



Let me just stress one thing about that. That's very important. Just because it's an NDAG, and again, a race was good about saying which device that we use in our studies. We actually use two different NDAGs.





And against very technical, there's something called a pulse strain in terms of



how the laser fires and what that sequence is.



Host (1000)

It actually turns out that it makes a major difference in terms of the settings and the outcome.



Host (1000)

If you use a different laser with the same settings, with one setting that may be effective with one laser, another setting it may cause really serious ulceration. So this is not something to be done unless you really look at the device you're using and look at the studies and be very careful and do not exchange what you see on one laser for another.



If you do, I'm afraid that you're going to end up just doing a really deep and painful ED and CM
the patient rather than a non-invasive scoreless treatment.



Host (1000)



Thanks, Matt. The next question we had, and I'll leave this open, maybe, to Suzy or Omar was about when do you wear N95 bass in the office? And are there certain procedures that you use to use those? Are you using Zimmers or not? Those were the three questions. So Zimmers, when do you use N95s, when you're using laser in the office, and with what procedures? We rarely use Zimmers in any area where we might be spreading the virus.





And I know some people use even with CO2 resurfacing to cool down, but we're definitely not doing that. We wear N95 whenever I am doing filler around the mouth, doing any laser procedure and for sure resurfacing. And that video was made before. The newest one that you can use for cleaning the mouth out, by the way, is listarine mint.



It has the highest kill rate for everything.





Host (1000)

Plus it tastes way better than iodine mixture anyways, and it's much more elegant.



Host (1000)

And what am I forgetting? You're Omar, you feel in the rest.



Omar Ibrahim

I think anything around mucosal surfaces, anytime you're going to be in the room for a prolonged period of time. Also, I mean, I do use the Zimmer.



It is a nice way to help with patient comfort, but I'll have my N95 mask on when I use it.





Host (1000)

And one last thing, a really good trick is you tell people not to talk when you take their mask off and you're doing something, and they still want to talk, because everybody wants to be, I get wet gauze



, and I have them hold it in between their lips, which makes it virtually impossible for them to talk, and it reminds them that they can't do anything, and that's been a great help for us.



Host (1000)



Nowell Solish

Please don't tell my wife that trick.



Arisa Ortiz

I still use Zimmer for things like peer-pianjections, because it's not like making the plume go into the air.



Arisa Ortiz



So for certain things, I'm still...



That makes sense. I'm just thinking more in terms of plume or laser procedures.



Nowell Solish

And what are you doing after in the room? Are you using your



Nowell Solish

clean air to clean the room out? We have air filters in every room.



We alternate rooms, so we give it a little bit of time.



Host (1000)

We keep the door open the entire time, and I can't believe everyone's been, you know, other than if they're undressed. They've been very tolerant of that. And we try to get them into the room, and Omar, you made the point in the talk.



Host (1000)



Host (1000)

When they are making an appointment, we make sure that what they're coming in for is anything else they want to do, and



we have the rooms planned



out so that we can, you know, clean the room and have time in between, and we're not planning for last minute changes.



Gotcha.

A portrait photograph of a man with dark hair and glasses, wearing a light blue shirt. He is smiling slightly and looking directly at the camera. The background is dark, and there is a bright, overexposed area behind him, possibly a window or a bright outdoor scene.

Nowell Solish

Jill, there was a question about charging patients, and what they really asked was, if it's your complication, how do you feel about charging patients or not? Thanks, Noel.





Host (1000)

I would never, ever charge if it's my complication. Personally, I feel like it's my responsible to improve it. And like I said, the nice thing is, and I think Matt and others showed it beautifully is, you know, the lasers will fix almost everything, and quick culture and antibiotics.



Host (1000)



And the other thing I would add, since I sort of cheated at someone else's cases, is I give everyone my cell phone, and I have a nurse call the next day.





And I think if you communicate with your patients, it helps out, but yea



h, I would never charge for my own complication.



Host (1000)

You know, I'm gonna ask a question back on that, for particularly those who do fillers, because I'm with Jill, I would never charge in that case. But what about when you do filler on someone, and they come back, and what they're pointing to is the fact that maybe they need a little bit more filler, or they're pointing to an area that you weren't really treating in the first place, and they come back and they're unhappy, that's how it was an uncomfortable situation, because you did exactly what you told them they were gonna do.



Maybe they didn't understand every part of it, and they say, no, you didn't do everything that you're supposed to do, and I don't wanna pay for another syringe. That's where it gets more difficult.



I think that's where the consult ahead of time is super important. So when patients come in, I always tell them that we are not gonna optimize them in one visit, and they may need more, and we also do before photos. So I think it's managing expectations ahead of time, and I've had patients who come in, who think they can get a botox, such up, which I do, because I don't talk by the unit, I talk by the area, but when it comes to fillers, they're aware ahead of time, that there's no such thing as a touch up for filler, but they may need more to be optimized, and that's how it works.



All right, but if we get into the situation, we do all the same things, we're very careful about this. It doesn't happen very often, but I think we've all been in that situation. How do you approach that? Well, I agree with Doris.



Arisa Ortiz



Arisa Ortiz

I think it's mostly about counseling, but I wasn't in a situation the other day, actually, where I was



in the middle of filling,



Arisa Ortiz

and when I was done, I just, I pe



Arisa Ortiz

rsonally wasn't happy with



Arisa Ortiz

how, I mean, it didn't look symmetric enough to me, so



I just wen



t and got one of my sample syringes, and then touched it up.





Arisa Ortiz

So I don't normally do that, but in that case, I just wasn



Arisa Ortiz

't happy w



Arisa Ortiz

ith it, and once I did that, I was happier, and then I



Arisa Ortiz

mean, she didn't even say anything, but.



Host (1000)

I agree, I think if there's an asymmetry, and you see that something should have been done differently, that's one thing, if it's just that they expected more, or wanted more, I think that's managing expectations, and then if it's a patient who's a reliable patient, not someone who just kind of goes through and complains to get more free stuff, but somebody who you generally have a good relationship with, and out of all the time to treat it, there was a time where they said, well, I just didn't see what I hoped and expected to see. I will bite the bullet in that case, and then just treat them and add it, because it builds so much goodwill, and they're so grateful.



I didn't had a patient who came in, and her spouse had died, and I did both talks for them, and just didn't charge them for the treatment, and it was just my being nice on that day, and it goes so far in building goodwill. They wrote me a note, they were so happy, so grateful, it was someone who'd been in my practice a long time. And so, I don't know, I think there's ways you can build goodwill, and it goes by a case-by-case basis, but in general, it's building ahead of time, setting expectations, and then on the other side, it's if it's an asymmetry that you can correct easily, that you know you should have had right, you just added in, otherwise, they have to understand they have to pay.



Host (1000)



And just to reiterate the point about the pre-picture, because so many times, people don't notice something, until they're really looking at what you did



, and then they see, you know, whatever is different on them.



Host (1000)



Okay, so the before picture has saved me so many times.



Right, we go up a big picture side by side, and all of a sudden, that just diffuses what they were worried about, oh, wow, I do look a lot better, and I'll mention, so next time, let's address this, usually you can get out of it that way, but I agree with Dora, sometimes we just, it's kind of an unreasonable person, and you think they'll write a bad review, or is just better to just talk it off for free, and go on to the next nice patient.



Host (1000)

Yeah, I mean, what I've typically done is that's what samples are for.



Again, it doesn't happen a lot, but then, you have to make the expectation very clear, because I think once you start allowing for that, you get into a difficult situation, and we all treat a lot of patients, we have some that are di



fferent, and I just think that's tougher, a



nd again, we treat Botox by the area, so it's not an issue, but with filler, potentially, can, and yeah, I think it's, at the end of the day, it's better to play Kate and educate, not have it happen again, and make a note of it, and you know, it's an event that something like that happens again, and consultation so is important, but none of us are perfect at that.



Host (1000)



Can I make a comment on the infection's real quick, and try and forget to say this, is that, first of all



I, always fun to friend, I literally just had one of ou



r previous woman, people call me about



a resurfacing two hours ago, and



Host (1000)

so I told her to go ahead and get an anaerobic culture too, because she's clearly infected, and I just had this happen to me, where I had a patient who came back from a meeting, s



tarted leaving, down the hallway, and s



Host (1000)

he was just like, supess, Matt.





And I'm like, oh my God, did you guys get a good culture? And they said, yeah, but we've done too, and it came back normal for a, and I go, bring her back and do an anaerobic culture, and it was pep to streptococcus, and it was so



wonderful to see that, you know, culture positive, because that sort of helps with th



Host (1000)

e whole potential after, not to mention that I knew the antibiotics, all that kind of thing, but also, don't be afraid to call those of us, and if you're somehow affiliated with it, I'm not trying to solicit calls, but it's really helps for the patient to know that you're doing everything you can to help them out, even including contacting other experts and stuff, and this particular person was really happy that I'



d called some people, and it was probably



new, Matt, but anyways.



By the way, that's just from a legal standpoint, just good patient care standpoint, is to have a network of people that you can call in the event that there's a problem.



Host (1000)

A lot of people on this screen right now are in that group, and I'm very fortunate for that, but it's very important, and again, tell the patient that the patient, you know, where to referral center, a lot of these peop



Ie have never met me before, and we do aggressive things, and things sometimes don't turn out exactly where they're supposed to, it's rare that we can't fix things.



That's very, very rare, but the thing that scares me the most is if someone loses their faith in you and starts seeing someone else, because then they actually may not do well. So what I tell them is, you know, I'm speaking to some of the top people in the fields in this, and we're working really hard for you, that first of all, legally, that's really smart, because they know that you're sticking with them, it's your relationship with the patient that protects you more than anything else, plus you're gonna get a better result, and you learn in the process.



I learned so much from hearing my colleagues give me complications that they're experiencing in the same as true vice versa.



Host (1000)

It's a great continuing education, but legally and medically, it's super important, that's a really good point.



Host (1000)

And Matt and Susie, I wanna add on to that, I do a lot of facial resurfacing, and



it's pretty common, we'll get a focal infection once a month, and



we have this thing at Miami that we go, we call



it the kitchen sink, that the second patient has a problem, we're ca



Host (1000)

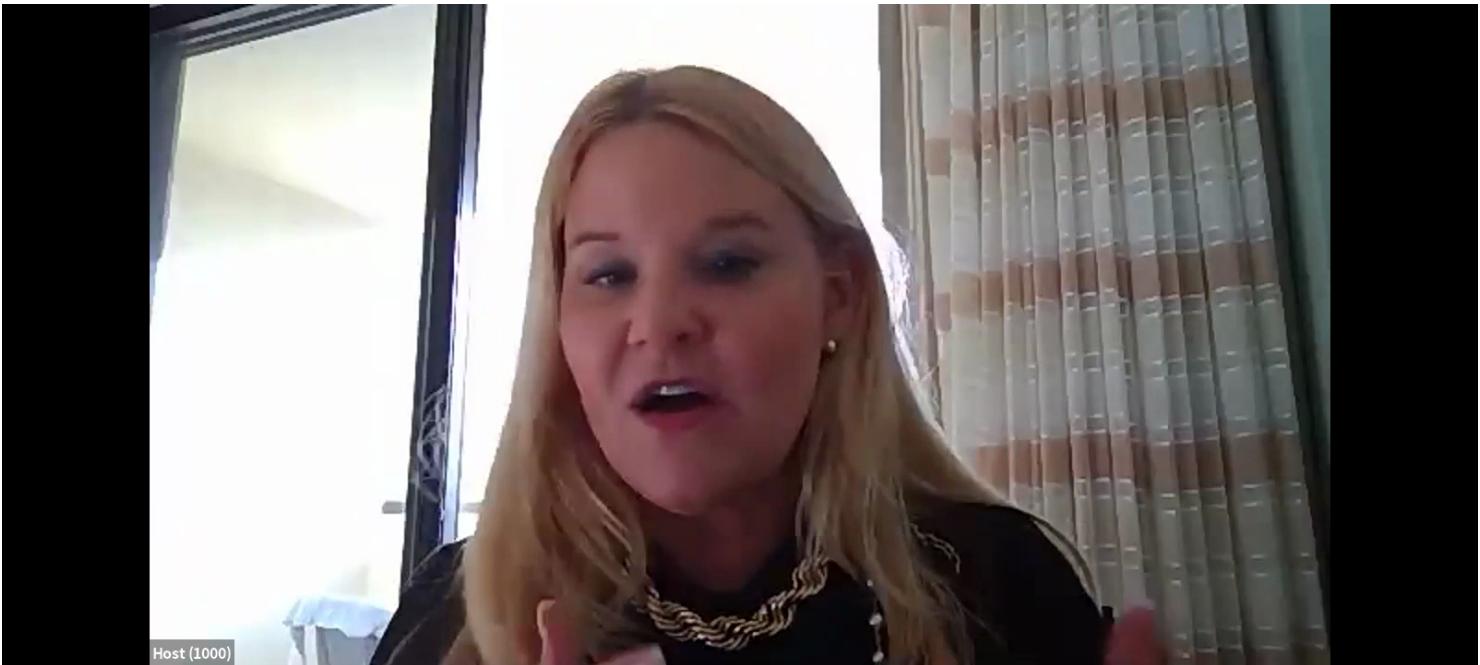
Iling it not just antibiotics, but antiviral and diflucan, and they get topical antibiotics



, and we get them in, and we call them every day



, and see them at least two or three times, and I'm happy to say knock on wood, even when we



've cultured MRSA



, all these weird, different types of bacteria, fungus, and yeast is the one that is sleeping.





If you have a burning red patient that looks fine, it's usually a yeast infection, an



d that culture takes long, so that's why I throw on diflucan, and we just call it the kitchen sink at my practice, and the nurse is no, if there's a problem, or if I'm on a



Host (1000)

n airplane, that's what we do as a pr



otocol, and then we pull it together a little later.



Yeah, I think that's an important point that the patient sees that you're doing everything possible, like the vascular complication I had, my friend told me, you don't have to see her medically, but you need to give the impression, you're doing everything you can for the patient. So seeing them frequently, just being all over it, I'll call in all the doctors, so they feel like they have a pan of people watching and caring about everything all step, that they heal up perfectly.



So I think there's a worry on the other side of it.



Host (1000)

So I had a patient years ago, it's about 10 years ago before, Botox was approved for their crow's feet, and they were identical twins, and so I did Botox



Host (1000)

for the crow's



Host (1000)

feet, a fan of care, even if it wasn't FDA approved, and then she went and stated her sister's house and used her lens contact lens solution, and she had an eye infection.





And so she called me and said, could this be related to the Botox? We went through everything I sent her to an ophthalmologist, it wasn't the Botox, but her husband wasn't happy she had done it, and the fact that I called her to check on her so much, because she was a long-standing patient, I wanted to make sure she got through it, I was just showing concern, but she still related it as a complication to the Botox, which wasn't FDA approved, she happened to be a lawyer, and she kept saying this is neglect. So I think while you're calling to check on the patient and show concern, there's times when you call, you also have to have control of your tone of voice and control over what you say, and control the authority that you're conveying, because it can be perceived as you're trying to cover up for a mistake that you made, or something that was done wrong. So I think when you call what you say, how long you're on the phone, how long you go over it is also important.



Thank you very much. All of you for the panel on the complications, I think I'll turn this back to Matt and Arissa, to conclude unless you had other things you wanted to continue Matt.



No, you continue to be the reigning ki



ng of complications and botch



Host (1000)

es, we have the brand name, you phone that, and thank you for your continuing service.





Nowell Solish

All right, thank you so much.



Host (1000)

We're just gonna conclude things very quickly here.



So, it's been wonderful over the last, I don't know, it's been like 17, 18 hours to go over just a ton of different material. You know, again, I'm gonna go back to the kind of guiding light of this meeting, which is Oz bin Richard Fitzpatrick. Richard Fitzpatrick was a fearless innovator who cared about teaching, cared about his patients, and cared about mentoring. And he has had a lasting impact on, I probably everyone on the screen just looking, and lots of people watching this right now, and there's still several hundred of you.



So, that's the goal of the meeting, and it was great to see Sandra Lee, one of his fellows win the award that's named for him and joined some really incredible company. And, you know, back in about March, I was getting a little nervous about what might be happening with this meeting and other meetings, and it looked like this would be a great time if you were to have a meeting. Obviously, there would have been a complete disaster, and then we did this virtually, and this is still a completely new thing, and I hope this isn't the future of meetings.



Host (1000)

I hope we see each other in the future, but this was really kind of an experiment from the beginning, and the peo



ple who make this meeting every year are the people on the screen, and the people you've seen on the screen, and the people who are watching with all of your questions and comments.



Host (1000)

So, from the bottom of our hearts, we want to thank you, and thank you for making this meeting special, and making it all worthwhile.



Host (1000)

Thank you so much for taking time from your schedules and to all the people watching. Thank you for being a part of this, and we look forward to seeing you in 2021, and enjoy the rest of your weekend, and there's a save the date there.



So August 27th to 29th, and thank you so much, and we will announce the winners of the gamification prizes right now, and then we'll conclude.



Host (1000)



Arisa Ortiz

So gamification was really new to us this year, and we did not anticipate all the creative ways you guys had to, I guess, manipulate the system.



Arisa Ortiz



So we wanted it to be fair to everyone, so we decided to take the top 15 and raffle those off so that it would be fair to everyone. So the top six through 11 prizes, which would be complimentary registration for next year, will be awarded to Marie Stoddard, Marcus Tan, Harry Liu, Amanda Hasler, Hassan Kosoz-Robbie, and Marcella Verapuzz. And then in fourth and fifth place for the \$100 Amazon gift card was Olivia Chen and Danny Yanis. And third place for the AirPods was Faria Sidiqi and the Nintendo Switch went to Ann Allen. And in first place for the iPad was Fiza Shafik.



Arisa Ortiz

Congratulations.





Congratulations, everyone. I want to take this last moment to thank Maya Botvanik and all the incredibly hard work that she's done over the last few months. It's been a very tough year to get that done this year. And I'd like to thank Joel Kohn, who's still on the screen for all of his hard work as well. Thank you, Joel.



Host (1000)



And finally, I want to thank Dr. Resortis for all of her hard work. And thank you so much. We look forward to seeing you next year.



Thank you and have a great rest of your weekend. And we look forward to seeing you in person sometime soon. Hopefully. Take care. Bye-bye.