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ENERGY-BASED TREATMENT OUTCOMES

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ORIGINAL ARTICLE

s187 **Pre- and Post-Procedural Care Best Practices to Enhance Energy-Based Treatment Outcomes**

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Pre- and Post-Procedural Care Best Practices to Enhance Energy-Based Treatment Outcomes

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ABSTRACT

Consumer demand for skin tightening and resurfacing procedures has accelerated during the last several years. Numerous energy-based treatment options have emerged for facial rejuvenation together with new complementary skincare products that are specifically formulated for pre- and post-treatment care. Currently, no widely accepted “best practices” guideline exists for combining the safe and effective use of these devices and products for improving clinical outcomes, reducing recovery time, and enhancing overall patient satisfaction. A group of experienced aesthetic dermatologists and plastic surgeons convened for a roundtable discussion of the pre- and post-treatment skincare protocols they currently use with various energy-based facial rejuvenation devices. The objective of this discussion was to generate a *Best Practices Guideline*. Overall, participants agreed that rejuvenation procedures represent a significant investment in time and money for their patients. Any adjunctive treatment that improves outcomes of a rejuvenation procedure, shortens downtime, and increases patient convenience is desirable and will provide benefits to both the patient and the practice. Participants also agreed that the concept of pre-treatment skin preparation is a recent change in their overall treatment protocol. Depending on the procedure, a variety of pre-treatments being used include hydroquinones for patients prone to post-inflammatory hyperpigmentation, retinoids, moisturizers, ceramides, sunscreens, and exfoliants, along with products specifically formulated for pre-procedure use. Similarly, there is a range of post-procedural treatments including ice packs, vinegar soaks, hydroquinones, oral antibiotics, and antivirals, along with products specifically formulated for post-procedure recovery. Although the use of these treatments varied widely across practices, all authors use the Alastin® Skincare line of products, particularly Regenerating Skin Nectar, for both pre- and post-procedural skincare.

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INTRODUCTION

In recent years, numerous energy-based treatments have emerged for facial rejuvenation. Similarly, new complementary skincare options have become available to enhance the outcomes of these procedures. There are currently no widely accepted “best practices” for combining the use of skincare products with these devices to improve clinical outcomes, maximize patient safety, reduce recovery time, and enhance overall patient satisfaction.

A group of experienced aesthetic dermatologists and plastic surgeons convened for a roundtable discussion of their experiences with device-based non-ablative and ablative procedures. Specifically, they shared pre- and post-treatment regimen protocols used with various energy-based devices for facial rejuvenation. The objective of this discussion was to generate a *Best Practices Guideline* in order to share these experiences with other aesthetic clinicians.

METHODS

Prior to the meeting, a survey was sent to roundtable participants to establish the value of generating a *Best Practice Guideline*, confirm their experience with energy-based rejuvenation procedures, inquire about the current pre- and post-procedure practices used for the various procedures they perform, and form the basis for subsequent discussion.

Based on the results of this survey, it was determined that the primary value of a *Best Practices Guideline* is to ensure practitioner confidence and help establish and reinforce safe treatment practices (Table 1). Specifically, the most important factors practitioners consider when choosing products and protocols for pre and post-procedure use are the need for scientific evidence that supports product effectiveness and products that improve treatment outcomes. The most important factors for patients when choosing to undergo an energy-based procedure are results and downtime (Table 2). Based on the number of en-

TABLE 1.

Value of Best Practice Guidelines	
Increase Practitioner Confidence	28%
Establish Safe Use of Topical Procedure Products	22%
Improve Patient Experience	19%
Reduce Downtime	17%
Minimize Adverse Events	14%

TABLE 2.

Most Important Factors in Selecting a Treatment Protocol	
For Physicians	
Scientific Evidence that Supports Effectiveness	24%
Products that Improve Outcomes	21%
Products from a Trusted Company	9%
Products that Speed Recovery Time	8%
A Protocol that is Easy for the Patient	8%
Products that Improve Patient Comfort	7%
Products with no Allergenicity/Sensitivity Issues	6%
Products with an Elegant Look and Feel	5%
	100%
For Patients	
Results	54%
Downtime	17%
Discomfort	11%
Treatment Process Convenience	9%
Cost	9%
	100%

TABLE 3.

Mean Number of Monthly Procedures Across Practices	
Light-Based Treatments	152
Non-Ablative Lasers	82
Microneedling	25
Ablative Lasers	20
Radiofrequency	15
RF Microneedling	12

ergy-based procedures these physicians perform, it is evident that the participants in this roundtable were well-qualified to contribute in this discussion (Table 3). Light-based treatments, such as intense pulsed light, broadband light, and non-ablative lasers are the most commonly performed procedures by the authors.

ROUNDTABLE DISCUSSION

Roundtable discussions were led by Drs. Suzanne Kilmer and Roy Geronemus. There was a general agreement that rejuvenation procedures represent large financial investments for most

patients. Consequently, any pre- and post-procedural care that enhances treatment outcomes and improves recovery will increase patient confidence and overall satisfaction and should be part of the overall treatment experience. With the resurgence of more ablative resurfacing procedures, it was acknowledged that physician guidance in the selection of skincare products used peri-procedure has become even more important in the overall treatment process.

The objectives of this roundtable were to assemble thought leaders in the field of aesthetic medicine to discuss Best Practices for safe and effective pre- and post-procedural care when using energy-based devices for rejuvenation procedures and to determine how these practices have changed in recent years. Notably, pretreatment conditioning has become an important new aspect of treatment for all participants. Not surprisingly, product selection for use in post-procedure skincare is challenging because the skin is in a highly vulnerable state. At the outset, several participants commented on how and why they made the decision to add the Alastin Skincare® line of skin products to their protocols before and after procedures.

Dr. Tanzi: "I wouldn't say I was an especially early adopter of Alastin. I've probably been using it for about a year or two. But much of my impetus for adoption was driven by patients who really liked the products. I was always very skeptical of elaborate pre- and post-operative care regimens, but in this case it was patient-driven. I've been very pleased with the positive feedback from patients."

Dr. Saedi: "I've been using Alastin for the past 2 years as a pre-treatment and post-treatment regimen for my non-ablative and ablative patients, but I have also adopted it for other rejuvenation treatments, such as injectables."

Dr. Karimi: "I have been a user of Alastin for at least the last couple of years. We use it mostly for our combination non-ablative, ablative laser with the Halo, which is really how I learned about Alastin, but I have also been using the products now for ablative laser resurfacing."

Dr. Kilmer: "I started using Alastin Skincare mainly in an effort to decrease inflammation. Basically, enhance healing and enhance efficacy by adding in this topical skincare regimen. So, I think we were early adopters as well. And, as will come out later, I'm fully against anything that can cause problems when I'm doing a very big deal procedure, and I love when things are working well to enhance any procedure."

Summary: All roundtable participants have been using the Alastin line of skincare products in their practice as a pre- and post-procedure treatment for a year or more and are pleased with the enhanced results.

Importance of Overall Treatment Experience

The following comment, submitted by Dr. Burns in the survey, generated much discussion: "I am convinced that patients want an experience. Patients will choose experience and service over results." Participants agreed that as devices and products improve, making outcomes more predictable, the total patient experience becomes an important new treatment criterion.

Dr. Kilmer: "I really do think that the experience that patients have is so much more important than I appreciated before. You think it's all one thing, but it's the whole thing. With Alastin products, patients don't have to do soaks as much, they heal faster, they're back in their makeup faster, everything works better. We've maximized what we can do with a procedure, now we are maximizing the whole experience. I'm just talking CO₂ right now because that's the most dramatic."

Dr. Geronemus: "I've been an enthusiastic Alastin Skincare user for quite a few years now, and our usage continues to grow, as does the excitement among the physicians in our practice. In response to Suzanne Kilmer's pre- and post-regimen, in my situation, I think people want simple. I don't offer that many options. I strictly stick to the Alastin Procedure Enhancement System Regimen. I do not use vinegar soaks anymore, knock on wood, and don't see infections. I'm simply using some soaking with sterile water. That seems to work quite well with the Alastin Procedure Enhancement System for pre-treatment or the post-treatment, as I mentioned before."

Dr. Karimi: "The experience really reflects on the office, so obviously, from the person who answers the phones to the person prescribing the skincare, it's all part of your brand. So, if the skincare fits with the brand and it is doing what you want it to do, then I think in that sense, yes, it is definitely part of the experience and very important."

Dr. Geronemus: "My main reason for using products is to ensure the outcome of the procedures that I perform, and historically, I have had a lot of issues pre- and post-treatment where patients were using things without guidance, and without thought, and were using products that would be counterproductive to the efforts that we were making. But I think in terms of experience, patients very much appreciate when a physician recommends the perioperative treatment regimen in terms of concern for optimizing the outcome. So, I think Alastin fits in very nicely with the entire process, and the entire experience that we're trying to provide our patients in terms of providing them the ultimate benefit from the treatment and the recovery."

Dr. Tanzi: "I use the Alastin products frequently with larger laser procedures because these treatments are a significant invest-

ment for patients in terms of time and resources. They want to know they're going to squeak out every possible benefit from the procedure. So, if they are making the initial investment in a larger laser procedure, after learning about the products, most patients will choose to use them to enhance the experience."

Dr. Saedi: "Yes, and that's going back to what Liz [Tanzi] was saying about maximizing results but also improving the experience. Patients do want to get the most out of every procedure and are willing to invest in skincare to enhance their results."

Dr. Burns: "I want the patients to have an experience. I want them to have not just an interaction where they simply pay you for a service. I want our practice to be the land of "yes". I want their experience to be something that looks and feels a little different. I want them, when they leave, to say, "You can't believe what happened there. This is what happens when you go to this clinic". Part of that experience is having less downtime. That's all part of it. I want them to know that we pay not only attention to the service itself, but everything that surrounds that treatment, like comfort of the treatment and optimizing recovery. I think that's where Alastin fits in, as part of that experience, with regard to decreased redness and downtime. For the first time, the pre-treatment makes a lot of sense."

Summary: Overall, participants agreed that rejuvenation procedures represent a significant investment in time and money for their patients and they expect the most for their investment. Any treatment, in addition to the actual rejuvenation procedure, that improves outcomes, shortens downtime, and increases patient convenience is desirable and will enhance the reputation of their practice.

Patient and Energy-Based Treatment-Tailoring Considerations, Selection

Dr. Kilmer: "For any given indication, when I start off, I consider whether they have darker or lighter skin, acne-prone or not, reactive skin or not, downtime (length and intensity), and the cost – I don't think about it as much when I'm doing a big deal procedure, but I do think about it a lot more for the lesser procedures. Sometimes they pick those procedures not just because they want less downtime, but because they don't want to spend as much money. I think that anything that makes recovery time shorter has value. If I can speed up the recovery and the downtime, that's a huge benefit. The way I look at it, I tell everybody that, basically, whatever we are going to do is based on your pocket-book size, your fear factor and what you are afraid to do or not to do, what will react with your skin, and how much benefit you want to get versus how much pain and downtime you can tolerate."

Dr. Karimi: "Probably time availability for recovery. That's really

how I base most of my consultations. I ask them what kind of time can you give me? That's usually number one. Then, their skin type — Fitzpatrick skin type, and the patient goals. I think the Alastin products are great for all skin types. I think my fourth concern would be skin conditions. More or less, people who are acne-prone or have sensitivities to certain products."

Dr. Saedi: "I treat a lot of African-American darker skin types, so skin type is a high priority for my consideration of what to do, and then recovery time, and then probably what they can afford."

Dr. Tanzi: "Okay, for me, my highest two priorities are trying to deliver the best results possible with a reasonable amount of recovery time for the particular skin concern of the patient. That is how I approach laser selection to start, but then other factors such as the patient's lifestyle, cost, and maintenance requirements are considered."

Dr. Geronemus: "So, these people want to get in, they want to get out, they want to recover as quickly as they can, they want to look 30 years younger, and they don't want any downtime. So, there is a lot of concern on behalf of our patients and there is a lot of pressure on physicians to do the best we can to make sure that the patient recovers as well as they can, as quickly as they can. So, my main goal is recovery time. People just want to get back in action as quickly as possible and that's where the Alastin products really are extremely helpful in terms of the preconditioning, where we start ahead of time, and the post-treatment recovery where we have a very specific regimen that we ask them to follow. So, that would be my primary goal, and this does relate a lot to skin concerns as well for these patients. Some of them have exquisite sensitivities, a tendency towards acne breakouts when they're using products they buy at just any counter. These are the types of things that can be problematic in the healing phase. So, the concern for sensitivities, as well as what might be there as alternatives, would be my second concern. I don't see much difference in skin types. I think the Alastin products are great for all skin types including sensitive skin. My third concern would be conditions. More-or-less, people are acne-prone or have sensitivities to certain products or ingredients within commonly used topical agents. I think they might do very, very well with the Alastin products where we just don't seem to see the same level of sensitivity that we saw, or reactions, with other products."

Dr. Burns: I would assume that patient goals — you could also say patient expectations — are to receive quality results. Producing those results safely is also a big deal. In other words, when they talk about optimizing recovery, I think they must talk about not only the time required for recovery, but also the intensity of the recovery. When we can decrease the intensity of the recovery, that has great value as well. If we can minimize

redness during the recovery, they can then more easily cover it with makeup. So, there's an emphasis on the quality of the recovery and safety of the recovery and not just shortening the total recovery time."

Summary: The two most important factors that determine treatment selection are those relating to skin type, such as likelihood of experiencing pigmentary changes or acne, and the duration of the recovery period. Both appear to be somewhat practice-specific. Other factors include patient expectations, safety, and cost.

Non-Ablative Treatment Modalities and the Use of Topical Pre- or Post-treatment Protocols

Dr. Burns: "For BBL and other non-ablatives, I think they all should be on some kind of skin care as well. I think providing the valuable active peptides found in the Restorative Skin Complex helps, so I recommend this regimen to my patients. If I have a patient who appears to have light type-3 skin but has brown eyes and a tendency to lay down some pigment during pregnancy, then I usually add a lightening agent as soon as the inflammation calms down a bit, usually around 10 days post-procedure. I would give them something like a hydroquinone if they are high risk for PIH and can tolerate it. If hydroquinone is too harsh and irritating early in the recovery process, we use Lytera®, which is often tolerated much better."

Dr. Geronemus: "So, even though people are coming in for something where you may not need immediate post-treatment skincare, I do try to look at it from a long-term perspective. Have those patients on a long-term treatment plan that would include usually, of course, sunscreen, you have retinol products, and many patients are just loving the Regenerating Skin Nectar, and once they start that they simply won't stop."

Dr. Karimi: "Agree with Roy."

Dr. Kilmer: "I also agree with Roy."

Dr. Tanzi: "I talk to patients at length about at-home skin care routines and how they can support and maintain the results from office procedures. There are a few main ingredients that I look for in a good skin care routine, which include an anti-oxidant, glycolic acid, and a retinol. When I make recommendations, I like to give options to pick up in the office, or at the CVS, or department store. Patients appreciate the variety. For those patients too sensitive for a retinol, the peptide in the Alastin products makes a great alternative."

Summary: Post-treatment for non-invasive procedures includes antioxidants, a glycolic, retinoid, peptides, growth factor, and hydroquinone, but again, varied widely by practice. There were

also mentions of Regenerating Skin Nectar and Restorative Skin Complex.

Minimally Invasive Treatment Modalities and the Use of Pre-Treatment Topical Protocols

Dr. Kilmer: "With micro-needling, you do have some ablation occur as well as with minimally-ablative fractional treatments. The one thing we should talk about whenever we're penetrating the skin is the fact that you can't put anything on topically that you can't put into the skin. Granulomas can form and other reactions can be seen from micro-needling specifically, with some of the reactive ingredients that have been applied topically to the skin."

Dr. Geronemus: "A lot depends on what type of fractional laser we are using. Most of our work is done with a 1927 thulium, whether it be the Fraxel® Dual, LaseMD™, or the Clear + Brilliant, which is a 1927 diode. We use a 1550 as well with the Fraxel. The 1550 nanometer laser doesn't require as much post-treatment care. We do pretreat whenever possible with the Regenerating Skin Nectar."

Dr. Tanzi: "I have patients start Regenerating Skin Nectar about one to two weeks before the treatment. I am a huge fan of the 1927 nanometer wavelength and have several different devices within the practice. Depending on the device and the density delivered, I'll have the patients use the Nectar for a week or two afterward as well. I'll also recommend an over-the-counter ceramide-containing cleanser and moisturizer to use. After 2-3 days, patients may gently use the cleanser in a washcloth to stimulate the removal of the MENDs. I find that helpful to reduce the risk of an acneiform reaction. No intense rubbing or scrubbing with the washcloth, just gently to go over the skin while cleansing."

Dr. Saedi: "Before a non-ablative laser procedure, I prep with Regenerating Skin Nectar, a retinoid, and a sunscreen. I try to have patients use the Regenerating Skin Nectar 1-2 weeks before the treatment."

Dr. Karimi: "Ever since I've learned of the Regenerating Skin Nectar, we try to prepare everybody with that product, even for the non-ablative because the only non-ablative fractional laser we have is the 1540, the Palomar, and so we try to have everybody prepare for that, but sometimes they come in and do the treatment the same day, so we don't have the opportunity to pre-treat. But, very often, we do have the opportunity for them to pre-treat, so I would say just the Regenerating Skin Nectar, and then all the other regular stuff, sunscreen, and everything that has already been mentioned."

Dr. Burns: "If they have sun damage; I will start them on the

Regenerating Skin Nectar. If I can do it beforehand, that's great. If they walk in and want the treatment right then, I do the procedures. There's a business we've got to run and a convenience for the patient. If that is the case, do the treatment, and give them Regenerating Skin Nectar post-procedure. I like for everybody that's never had a round of Regenerating Skin Nectar to get it, and then get on the Restorative Skin Complex. Then, the moisturizer we use is CeraVe®. I would use Regenerating Skin Nectar for minimally invasives. I would use it for micro-needling. It just makes sense for me to use it in an ideal world. Now, if the cost is too much for the patient, then I would probably just go with something simple like CeraVe. But those are two different approaches."

Summary: Pre-treatment for minimally invasive procedures include retinoids, moisturizers, ceramides, and sunscreens, but varied widely by practice. The most consistently used pretreatment is Regenerating Skin Nectar.

Minimally Invasive Treatment Modalities and the Use of Post-Treatment Topical Protocols

Dr. Tanzi: "I use the Regenerating Skin Nectar post-treatment for faster skin healing as well. Patients love the feel and it enhances patient satisfaction. This is new for me as I have never been impressed with post-laser products before."

Dr. Saedi: "Immediately after, either I or my staff apply the Regenerating Skin Nectar. Then, after the treatment, I suggest they use the Regenerating Skin Complex at home along with sunscreen and hydroquinone if they're prone to hyperpigmentation."

Dr. Geronemus: "Post-treatment, we use the Regenerating Skin Nectar as well. If I'm using the 1927, particularly patients with a lot of photo damage, then the need for more appropriate skin care is a little bit greater because the skin becomes dry and it feels like sandpaper. They have the MENDs, which is the microscopic epidermal necrotic debris. In that situation, particularly with darker-skin patients, or people with more photo damage, I like to make sure that post-treatment, they get the Restorative Skin Complex as well as the Regenerating Skin Nectar in the healing phase. I think these are important additions. Of course, all of our patients, whenever possible, are using the Alastin Renewal Retinol and usually starting at the 0.25 and going up to 0.5, if indicated. The sunscreen is a critical component, particularly when you're dealing with photodamage. In New York, which is more seasonal, we put a much higher emphasis on that during the spring and summer. Less of an issue during the winter. Prior to the use of the Alastin Procedure Enhancement System regimen that we're on now, we sometimes would use some light exfoliating products that I found led to more trouble than it was worth. One of the purposes of having a skin care

regimen is that you really have total control with what the patient is using. That really makes me feel better and the patient has a better outcome."

Dr. Burns: "In an ideal world, I would pretreat everybody with Regenerating Skin Nectar for 2 weeks. And then, after we did the treatment, I would apply Regenerating Skin Nectar. If this is their second time, I would just put a moisturizer, like CeraVe, that day, and have them continue on the Restorative Skin Complex. I do the same thing for microneedling. I'm a little bit more cautious with RF micro-needling. I will give them an antibiotic right before the treatment, and maybe one dose afterwards, because we are creating a wound. It's a semi-sterile procedure, so I'll give them antibiotics, cephalexin or doxycycline, for maybe 1 to 3 days. I would apply Regenerating Skin Nectar immediately afterward."

Summary: Post-treatment for minimally invasive procedures included moisturizers, hydroquinone for hyperpigmentation-prone patients, sunscreens, Renewal Retinol, and oral antibiotics, but varied widely by practice. The most consistently used pre-treatments are Regenerating Skin Nectar or Restorative Skin Complex, which would then be continued post-treatment.

Ablative Treatment Modalities and the Use of Pre-Treatment Topical Protocols

Dr. Geronemus: "I don't know what you're seeing around the country, but we've had a rather significant resurgence of both fractional and fully ablative resurfacing."

Dr. Tanzi: "I absolutely agree that there is a resurgence of interest, not only by the patients, but also from physicians, for fully ablative resurfacing. In my office, adding focal fully-ablative resurfacing, particularly for the stubborn perioral rhytides, has been very successful. Then a non-ablative or fractional ablative is applied to the rest of the face. Skin care is extremely important for these patients to minimize side effects and reduce the downtime. I recommend a pre-treatment protocol with Alastin Regenerating Skin Nectar a week or two prior to treatment. I also have patients start mupirocin in their nose 3 days beforehand and Valtrex® starting the day before for fully ablative procedures."

Dr. Saedi: "Pre-treatment, I start everyone on Alastin Regenerating Skin Nectar. I try to start 2 weeks before if possible. I do mupirocin in the nose the day before, I start Valtrex the day before, and I start Keflex® the day before."

Dr. Karimi: "I've also been using the Alastin products now for ablative laser resurfacing. All my low-risk hyperpigmentation patients get 1 week of compounded cream. The high-risk get 2 weeks, which is an 8% hydroquinone...it's always sunny in

California. They get hydroquinone, they get hydrocortisone, kojic acid, and tretinoin. They all get that at least 1 week before. If they're really high-risk, type-4+, type-5, then they get it for 2 weeks. Then, I have them give themselves a break from the compounded cream for a few days, prior to the procedure."

Dr. Burns: "Everybody gets an antiviral. They get it for 10 days. I use Valtrex® because it has served me well for years and have had little issues with it. You could use Famvir®, as I suspect it works equally as well. However, I use Valtrex 500 mg per day. If they have a history of herpes, then I'll go ahead and treat them with 1 mg twice daily. If they have herpes outbreaks on a regular basis, then I will treat them with 1 mg three times a day, which would be the full treatment dose. I give them antibiotics, starting with typically one dose before the surgery. I pre-treat them with the Regenerating Skin Nectar for 2 weeks. And, I'm pretty adamant on that. I think that if they came in and they needed to be done next week, I'd probably do it, but I would start them on Regenerating Skin Nectar as soon as possible."

Summary: Pretreatment for ablative procedures include mupirocin in the nose several days prior to the procedure, oral antibiotics and antivirals, hydroquinone for 1 to 2 weeks, depending on skin type, or hydrocortisone, kojic acid, and tretinoin. Once again, specific treatments varied by practice, but most mention using Regenerating Skin Nectar 2 weeks before the procedure.

Ablative Treatment Modalities and the Use of Post-Treatment Topical Protocols

Dr. Geronemus: "Getting patients through the process. Many of them are a bit traumatized by how their skin looks and they want to heal as quickly as possible and as safely as possible. Historically, what I have found is that you have to be particularly cautious about what people apply to wounded skin to avoid the acneiform eruptions, and to avoid a prolonged healing process, as some products can actually delay the process. I think it's a very important topic, where Alastin fits in quite well. I like the healing impact of the Regenerating Skin Nectar. If I finish one side of the cheek, I'll have the nurse apply the Nectar immediately, just to help bring down some of the inflammation. I found that very valuable. I do not use vinegar soaks anymore and don't see infections. I'm simply using some soaking with sterile water. That seems to work quite well with the Alastin Procedure Enhancement System, the pre-treatment or the post-treatment, as I mentioned before. In general, in my practice, we cover patients with oral antibiotics for about 5 days. I know some physicians don't use any antibiotics and the antiviral-approach, which I believe is more important, is really through the whole rehabilitation process."

Dr. Saedi: "Afterwards, I place Alastin Regenerating Skin Nectar

on immediately. Then, I have the ice on top of the Alastin. One thing I used to do before that I don't do now, is I used to apply a steroid on immediately afterwards to calm down the inflammation. I've swapped out the steroid for the Regenerating Skin Nectar. I'm hospital-based, we have to use the McKesson ice bags. We just put sterile gauze around it."

Dr. Karimi: "Right afterwards, we do very aggressive cooling measures with sterile water in ice and then use sterile gauze compresses for nearly an hour afterwards with a Zimmer® chiller. Then, we will apply *refrigerated* Alastin Regenerating Skin Nectar for them to use with the Soothe and Protect Recovery Balm."

"Initially we were presenting it as an upcharge to use the Alastin Procedure Enhancement Kit with some of the lasers, but some of the price-sensitive patients don't want it. I was a medical director for a very short period of time for a laser clinic that would literally give every patient Crisco® after an ablative laser resurfacing procedure to use for skin healing and recovery. Since then, we've basically just built Alastin Procedure Enhancement Kit into the cost of the laser and say that's an essential part of healing."

Dr. Tanzi: "I use a lot of ice and forced chilled air to help make the patient comfortable and reduce the heat immediately after the procedure. At home, they can apply the Regenerating Skin Nectar and Aquaphor followed by a dilute white vinegar soak and ice packs."

Dr. Kilmer: "I'm having patients pretreat with the Alastin Regenerating Skin Nectar 2 weeks ahead of the procedure. I do that for almost everything. I also suggest hydroquinone for at least 2 weeks, and up to a month beforehand, depending on skin type. I use retinoids all the way up to right before the procedure. There's definitely the patient that comes in to do something that day and you don't have enough time to pre-condition the skin, and of course I go ahead and do the procedure. For post-procedure, as Dr. Geronemus stated, as soon as one side of the face is done, we apply Regenerating Skin Nectar and then do the other side. I don't ice, but I'm probably going to change that listening to this group. With darker skin types and fractional ablative, I will put on hydroquinone right after just to get it to go down the channels. With fully ablative, I'm more worried about anything that causes irritation, itching, or infection, so I haven't done it as much with fully ablative."

"After, we put on the Regenerating Skin Nectar, we let them cool down, and then I usually put another second dose of Regenerating Skin Nectar, which, from now on, will be refrigerated, because I really like that idea. Then, we put the Soothe and Protect Recovery Balm right on top. We've only had one person in all of our time react to the balm. We used to do Aquaphor®

versus Vaseline®. If anybody's reacting to something, we immediately change to Crisco®, but Soothe and Protect Recovery Balm has been a lot better. We used to do dilute vinegar soaks every 2 hours for the first day with one teaspoon of vinegar to two cups of water and we made them get up and do that at night also. Then, about a year or two ago, we quit that when we started using Alastin Regenerating Skin Nectar. Now, we let them sleep through the night, but we do every 3-hour soaks during the day for the first day or so. We still do vinegar soaks just because of the whole potential for infection."

"The other thing that we do, which I think a lot of you guys do, is Lasercyn®. Now that we're using Alastin Regenerating Skin Nectar and fewer soaks, we have patients do Lasercyn spray every 2 hours and just do two sprays, one to each side of their face. Also definitely use it for neck and chest. I don't think we've had one infection on the neck or chest, and the chest was really the issue. If you guys aren't doing that, really think about it."

"I also recommend 5 to 7 days of oral antibiotics, and at least 10 to 14 days of antivirals, depending on their history. I've had people break out in herpes simplex virus on days 7, 8, 9, when we're taking them off and they still had enough injured skin. So now, routinely, it's 10–14 days, depending on how invasive and their history. At 1 month, they are gradually back to their normal regimen so we transition from the Regenerating Skin Nectar to the Restorative Skin Complex."

Dr. Burns: "Afterwards, I give antibiotics, usually a cephalosporin, for about 3 days post-operatively. It might be overkill, but it's served me well for years without issue. I have found recently that Regenerating Skin Nectar and Stratamed® in combination is fantastic. I put on the Regenerating Skin Nectar twice a day, starting in the operating room immediately post-procedure. The Stratamed® is applied over the nectar twice a day and then as needed for comfort and to hold moisture in. That post-procedure approach has worked very well for me so far and has made life so much easier for both me and my patients. The other really important post-laser focus is to keep the crust off. Any crusting must be removed, and the wound kept moist as a priority. When I do my deep ablatives, the crust is the worst on day 5. So, it is important to stress that for deep resurfacing a physical and meticulous debridement is utilized as needed. The actual technique can be simple rolling off the crust with the Q-tip® or may require manual removal with forceps, but the wound must be kept clean and moist throughout the healing process. Any residual crust enhances the chance of infection, increases the time to healing, and inhibits penetration of the Regenerating Skin Nectar. After the wound is healed, I allow them to use the Regenerating Skin Nectar if they like it but once the Nectar is completed, I usually switch them over to Alastin Restorative Skin Complex. Most patients seem to love the Alastin Gentle Cleanser."

Summary: Post-treatment for ablative procedures include ice packs, more active post-procedure cooling, vinegar soaks, hydroquinone, oral antibiotics, and antivirals, Lasercyn, Stratamed, Restorative Skin Complex, and Alastin Gentle Cleanser. Specific treatments varied by practice, but Regenerating Skin Nectar and Soothe and Protect Recovery Balm received several mentions. Applying refrigerated Alastin Regenerating Skin Nectar immediately after the procedure is a novel use of the product.

What has Changed in Your Practice in the Last 5 Years?

Dr. Tanzi: "Preparing the skin beforehand. That was definitely not something that I was doing years ago, and I was very skeptical of these extended pre- and post-treatment regimens. But the researchers at Alastin have generated good science demonstrating the removal of collagen debris in preparation for a treatment that stimulates neocollagenesis. I find the patients are very interested to hear about the science and want to do everything they can to make the most out of their investment. Also, the Alastin products help reduce downtime, which is a big deal, because patients want to get back to their active lives as quickly as possible."

Dr. Saedi: "One thing that I do differently now is using the term 'pre-treating the skin' before the procedure, especially with the Regenerating Skin Nectar. In the past, I have always used retinoids, basically leading up to a non-ablative procedure to prep the skin and help with the efficacy of the laser treatment. But one thing that I do use now, that I didn't use before, is I do pre-treat with hydroquinone and I know especially for people who are prone to post-inflammatory hyperpigmentation, and I know that the data isn't that consistent for its efficacy, but I have found that when I pretreat with hydroquinone, patients do have less hyperpigmentation, and especially with the Regenerating Skin Nectar, I do find much less hyperpigmentation after laser procedures."

Dr. Kilmer: "Completely agree with Naz Saedi."

Dr. Geronemus: "Most definitely, I have found the pretreatment to be particularly helpful for all procedures, so that's a big departure for me. One of the issues I have is that we often treat the same day a patient comes in for a consultation, so we sometimes don't have the opportunity to pre-treat, but when we do, or patients are coming back for a second treatment, the fact that they are on, in particular, the Regenerating Skin Nectar, I think, is particularly helpful for them in the recovery process. The feedback from the patients has been extremely positive and the impact on the practice is as good as many patients appreciate the concern we have for them rather than just focusing on the procedure itself."

Dr. Karimi: "I think the only thing new that's in my vocabulary, and I'm newer than all of my skincare colleagues on this call, in terms of skincare, but the new term that I've made household term for all my patients is 'serum.' So, serum, when they hear the word serum, they're thinking of some sort of active ingredient that's going to be helping boost and maintain their skin."

Dr. Burns: "I'd say the biggest difference is that I've gotten away from all the heavy petroleum products. Utilizing something like CeraVe has been much preferred by my patients. Some patients have especially dry skin and Aquaphor is still utilized but this is an uncommon occurrence now. Also, I've switched everything over to the Alastin product line in the last year. I really wasn't pre-treating until Regenerating Skin Nectar came along, which makes sense scientifically. Honestly, I had to make the switch as my previous dressing, Flexan, was discontinued. I tried many other occlusive barriers and products, but nothing was really satisfactory. I discovered the science behind Alastin and was intrigued but really didn't think it would work on deep resurfacing patients. I thought it wouldn't work with the oozing and sensitivity of these wounds, but I was wrong. I switched all over to the Regenerating Skin Nectar by default, and it's the best thing that I've done in a long time. It's so much easier for the patients to use and it is very well tolerated. For ablative procedures, the thing I do differently is have patients pre-treat now for 2 weeks with the Regenerating Skin Nectar. I don't use an occlusive dressing anymore. I believe patients now have less redness and inflammation, but still enough inflammation to impact an effective outcome. I now have patients that I did 15 years ago coming back for repeat treatments. They all prefer the non-occlusive Alastin regimen. The Flexan served my patients well for years, but the topical regimen is just easier on the patient and produces an easier recovery."

Summary: Most participants agree that the concept of pre- and post-treatment skincare is a recent advance in their practice. Pre-treatments included hydroquinone for patients prone to post-inflammatory hyperpigmentation, abandoning petrolatum-containing products, and universal use of Regenerating Skin Nectar.

Drug-Assisted Delivery

Dr. Geronemus: "I have a general question for the entire group. One of the more interesting aspects of this field of energy-based devices, in combination with topicals, has been this issue or this concept of laser-assisted drug delivery. How does your skin care mix with that? Let's say, for example, you want to put on a topical poly-L-lactic acid after an ablative resurfacing procedure. How do you time the application of that product with the post-treatment skin care? Or does that not matter?"

Dr. Tanzi: "I'm interested to have this conversation because I've recently started to place a poly-L-lactic acid overlay after microneedling and ablative fractional resurfacing procedures in an attempt to enhance the neocollagenesis from the treatments. My timing is to place the PLLA solution on immediately after treatment then the Alastin Regenerating Skin Nectar over it. This order of placement seems like common sense to me because of the differences in viscosity, however others may have a different take on this. I'm interested to hear what everyone is doing."

Dr. Kilmer: "This is interesting because I actually do inject PLLA beforehand because a lot of those same people need volume, and you get the numbing from it. I've not done it as much topically for laser-assisted drug delivery. I don't have enough data to really know how much topical helps delivery. Most of my experience has been to inject it the normal way, then do the resurfacing, then do the Alastin Regenerating Skin Nectar right on the top, whether it's fractional ablative or fully ablative."

Dr. Karimi: "I don't use poly-L-lactic acid, but we do use platelet-rich plasma and more commonly platelet-rich fibrin and we try to let that sit for a good 5 minutes before applying any Regenerating Skin Nectar or anything else."

Summary: When applying topical treatments, such as poly-L-lactic acid, they are allowed to dry thoroughly before applying Regenerating Skin Nectar.

SUMMARY

- As devices and products improve, making outcomes more predictable, the overall treatment experience becomes an important new criterion for patient satisfaction.
- Preconditioning prior to performing energy-based procedures has become more widely accepted as a new advancement during the past 5 years.
- Previously, pigmentation issues were the primary reason for pretreatment. Preconditioning as a stimulus to improve the skin bed and reduce subsequent post-procedure healing time is gaining more attention.
- The use of corticosteroids and vinegar soaks is being replaced by other products, such as Alastin Regenerating Skin Nectar, which reduces patient discomfort and enhances recovery.
- It is beneficial to have control over pre- and post-procedure treatments to ensure safety and speed recovery.

DISCLOSURE

S. Kilmer has served on the Medical Advisory Board for Cutera, Cytrellis, Alastin Skincare, Allergan, Dominion Aesthetics, Lumenis, Lutronic, Merz, Miramar, Pulse Biosciences, Sciton, Sienna Labs, Syneron/Candela, Venus Concepts, and Solta/Valeant; and has received research support from Cutera, Cytrellis,

Alastin Skincare, Allergan, Dominion Aesthetics, Lumenis, Lutronic, Merz, Miramar, Pulse Biosciences, Sciton, Sienna Labs, Syneron/Candela, Venus Concepts, BTL Industries, Galderma, R2 Derm, and Revance; and has stock options with Avava, Cutera, Cytrellis, and HintMD.

R. Geronemus has served on the Medical Advisory Board for Allergan, Candela, Cearn, Cynosure, Cytrellis, Lutronics, and Soliton; and has served as Investigator and received research support for Allergan, ArchiMedus, Avava, Candela, Cynosure, Cytrellis Endo Pharmaceuticals, Galderma, Kerastem, Lutronic, Merz, New York Stem Cell Foundation, Pulse, Biosystem, Revance, Sciton, and Sienna Labs; and is a Stockholder in Cytrellis.

N. Saedi has served as a consultant for Alastin and Cartessa; has served on the advisory board for Aerolase, Cynosure, and Cartessa; and has received equipment from Cynosure and Cartessa.

A.J. Burns has served as a consultant for SkinMedica and Alastin, on the Advisory Board for Revision Skin Care and Allergan; and has served on the Advisory Committee for Sciton; has performed research and received equipment for InMode and Cytrellis; and is an investor in HintMD.

L. Tanzi is a consultant for Sciton, Allergan/Coolsculpting, and is on the Advisory Board for Allergan/Coolsculpting.

K. Karimi is Medical Director for CosmoFrance, Inc, NovaThreads, Inc, Prolenium, Inc; a consultant for Alastin, Inc, Sciton, Inc, Cynosure, Inc, InMode Inc, and serves on the Advisory Board and is a trainer for Galderma, Inc.

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