

Excel V Roundtable

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Host and Moderator

Jeffrey S. Dover MD FRCPC is a director of SkinCare Physicians of Chestnut Hill in Chestnut Hill, Massachusetts. He is an Associate Clinical Professor of Dermatology at Yale University School of Medicine.

PARTICIPANTS

Macrene Alexiades-Armenakas MD PhD holds three Harvard degrees, an extensive 20+ year background in research, and runs clinical and laboratory studies focusing on anti-aging skin care, acne, skin cancer, and lasers. Her clinical practice on Park Avenue is focused on dermatology and laser surgery. Dr. Alexiades holds a BA from Harvard University, where she was elected to Phi Beta Kappa and awarded the Fay Prize, the highest undergraduate honor, an MD from Harvard Medical School, and a PhD in Genetics from Harvard University. She is dual certified in medicine, surgery, and dermatology in the EU as well as the US.

Jeremy B. Green MD a board-certified dermatologist, graduated cum laude with a bachelor's degree from Princeton University. He completed his medical education at the Northwestern University Feinberg School of Medicine and the University of Miami Miller School of Medicine where he graduated with Alpha Omega Alpha (AOA) honors. He trained at the University of Miami Department of Dermatology where he served as its chief resident. Dr. Green currently practices with Dr. Brandt Dermatology Associates in Coral Gables, Florida, where they have chosen to make the Excel V laser an integral part of their practice.

Neil Sadick MD FAAD FAACS FACP FACPh a native New York City resident, completed his medical school training at SUNY Upstate. His residency, in internal medicine, was completed at Cornell/North Shore University/Memorial Sloan Kettering Medical Center. Dr. Sadick then went on to train in dermatology at New York Hospital, during which time he served as chief resident until the completion of his training in 1983. Dr. Sadick holds five board certifications in internal medicine, dermatology, cosmetic surgery, hair restoration surgery, and phlebology. Dr. Sadick is the medical director and owner of Sadick Aesthetic Surgery and Dermatology with locations on Park Avenue in New York City and Great Neck, Long Island.

David B. Vasily MD FAAD received a Bachelor of Science in Biology degree, with honors from Moravian College, magna cum laude. He obtained his medical degree from SUNY at Buffalo School of Medicine. Following his internship at Allentown Hospital, he completed a dermatology residency at Geisinger Medical Center in Danville, Pennsylvania. Dr. Vasily is board-certified by the American Board of Dermatology and a Fellow of the American Academy of Dermatology. He is a well-known dermatologist, who has also served as founder and president of Lehigh Valley Dermatology Associates, Ltd. since its inception over 30 years ago.

INTRODUCTION

Dover: This is the nicest laser that I own. Dr. Arndt and I and others were approached and asked what our ideal vascular laser would look like. We told them it had to be small, solid state, key turn on and off, silent, large treatment window, contact cooling, variable spot sizes, variable pulse durations, and high energy. To my amazement two years later we received this amazing device.

CASE REVIEWS

Treatment of Telangiectatic Rosacea With 532nm KTP Wavelength

Green: This is a gentleman with telangiectatic rosacea and in this case I treated with same settings that Dr. Dover likes to use of 7Jcm², 10mm, 10ms, and 10°C. We are not getting purpura with this laser vs the pulse dye laser because the KTP laser delivers the pulse as a top hat so it is smooth and even heating. While the pulse dye also has 10ms pulse durations but there are micropulses within that pulse. There used to be four micro pulses and with the newer generation there are eight micropulses. That stecato heating might result in delayed purpura.

FIGURE 1. a) Before treatment; **b)** After 3 TX. Settings: 7 j/cm², 10 mm, 10 ms, 10°C. Photos courtesy Jeremy Green, MD.



I don't ever encounter purpura with this laser because of the smooth pulse. After three treatments we had very nice clearing

Dover: This is a fantastic result done at 7Jcm², 10mm, 10ms, and 10°C. Those are my favorite settings that Jeremy Green helped develop and have turned into my universal go to settings. This setting is very well tolerated and delivers a beautiful result. The pulse dye laser delivers a long pulse, which is a series of pulses stuck together. Theoretically the skin sees one broad pulse but it's micro spikes where this is truly a top hat square pulse, which means its much smoother and delivers the energy more smoothly to the skin. You get less ruptured vessels at the same settings.

Alexiades: I tend to be a little bit more aggressive with matted telangiectasia and rosacea. In this case I would probably use a little bit higher settings (between 8 - 9Jcm², 10mm, 10ms, and 10°C) but the problem is that universally the patient will get a hive like reaction and they will be very swollen – the advantage is that I can potentially clear the patient in one treatment as opposed to having to do more than one. I do adequately prepare the patients that they will be swollen, pre- and post, medicate them with antihistamines, and provide them with a topical corticosteroid.

Dover: What percentage of your patients, (Dr. Green), are swollen afterwards and what is your post care regiment?

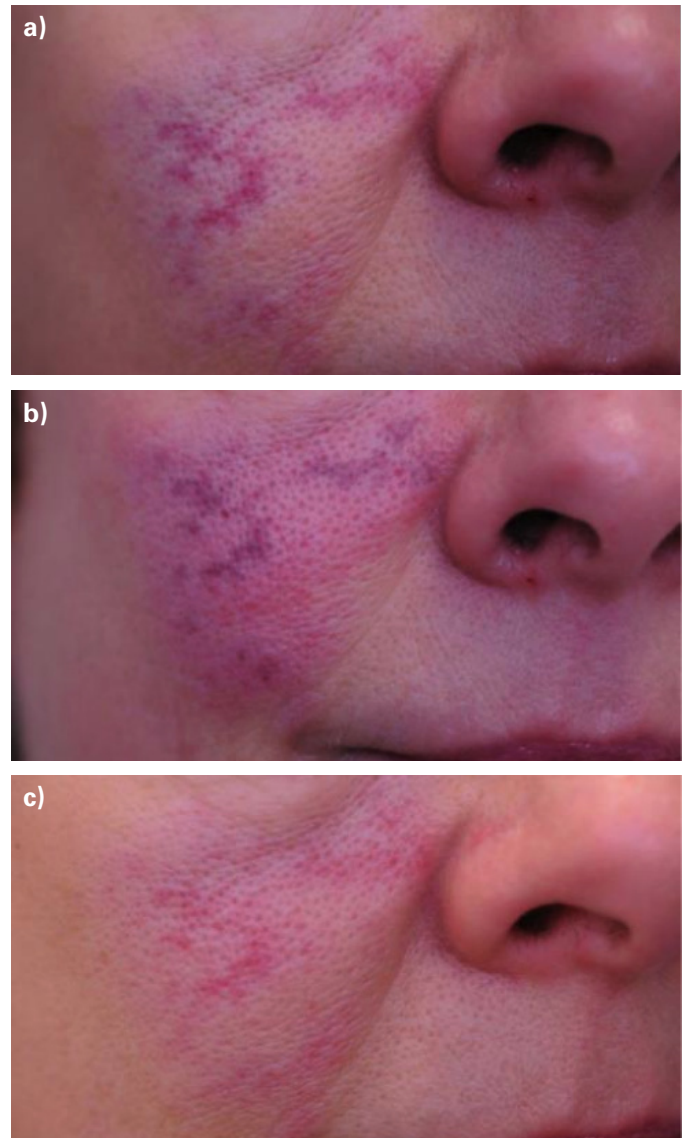
Green: There is some edema with this or with pulse dye lasers but it is rare for me to see those results. My Miami patients prefer to come in for additional treatments than have welts or be swollen. I tell my patients to ice as often as they can and to use an extra pillow. If you are treating intra orbital that elevation while sleeping might save you a call back because they might get some edema in the morning. It hasn't been studied but I tell my patients not to use a sauna or exercise during that day or the next day after treatment because theoretically anything that increases your heart rate and blood pressure will push blood through these vessels and could mitigate the effectiveness of the treatment.

Resistant Port Wine Stain

Alexiades: This is a fascinating case. This woman has a long standing PWS and she was one of the first patients treated at Mass General in the 1980's with argon and other early technologies. As you can see, there is a veil of hypo pigmented scarring there. Subsequent to that time, she was in some of the original pulse dye laser sessions with purpura and has received hundreds of treatments in her lifetime. After having a very large number of long pulse dye laser therapeutic sessions, she stopped responding and remained in remission for a number of years. Recently, she noted a sudden worsening of her PWS. Having treated her for many years with PDL, I decided to use the Excel V with 7Jcm², 7mm, 6ms, and 5°C. The intriguing aspect regarding her PWS is the faint blue dermal patch underlying the pink reticulated overlying vascular lesion.

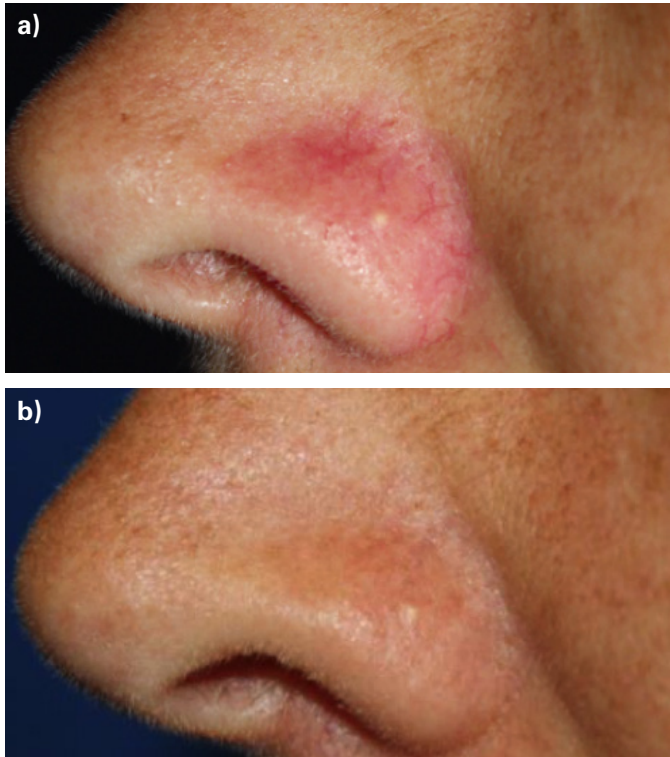
This blue patch correlated with the distribution of her baseline PWS, which was something she hasn't seen in about 20 years, demonstrating a deep-seated recrudescence of the PWS. After treating, you can see (I only treated the bright pink-red areas that you can see) you could see a hive like reaction that the patient attests exactly outlines her original PWS. The hive like reaction clearly demarcated the territory of the underlying blue vasculature, which is still present. After one treatment, this was by far (in the patients' opinion) the best result she has ever seen in 30 years of treatments from any of the vascular lasers with which she has been treated. This was a phenomenal level of efficacy after a single treatment. Interestingly she continued to improve two months out and she will continue to come in for follow up photos until she no longer observes a benefit.

FIGURE 2. a) Before; **b)** Immediately after; **c)** After 1TX. Settings: 532nm, 7 j/cm², 7mm, 6ms, and 5°C. Photos courtesy of Dr. Macrene Alexiades.



Facial Telangiectasia

FIGURE 3. a) Before; **b)** After 1TX. Settings: 532nm, 4 mm, 10 J/cm², and 15ms. Photos courtesy of Dr. Neil Sadick.



Sadick: This patient has an area of telangiectasia and a little bit of flaring of the vessel. For any vascular lesions it is important to use conservative settings with both 532nm and 1064nm. With 532nm you can be more aggressive and we find that using between 9 and 16 J is the optimal fluence for getting rid of a vessel like this. You can go to the central area, which is the area you want to blanch and do some degree of vaso spasm, a little bit of erthacation around there, and you don't want to stack your pulses. The settings used for this patient was 10Jcm², 4mm, 15ms, and 10C and got very nice clearance after a single treatment.

Alexiades: In my case, I've had great success in treating these types of lesions at a slightly lower fluence between 8 and 9, usually 8.5J, slightly shorter pulse durations of 10ms and a spot size of roughly 5 mm. What's nice about this handpiece is that while you are treating you can manually dial up and down by increments of 0.1mm spot size, so you can target your individual vessels as you are treating. That is a feature that is very helpful. You can treat any vessels around the nose in an ideal manner.

Dover: I frequently use a larger spot size 10mm 7J 10ms and my patients always tolerate it. I never use topical anesthesia with this device. If they clear I don't always use a smaller spot size to treat these types of vessels. Aelar telangiectasia can be stubborn and in my experience these vessels recur most of the time. I tell

my patients that they are the most difficult vessels on the face to treat and that almost always some of them will come back.

Laser Genesis

FIGURE 4. a) Before; **b)** Post 6 sessions. Photos Courtesy of Dr. David Vasily.

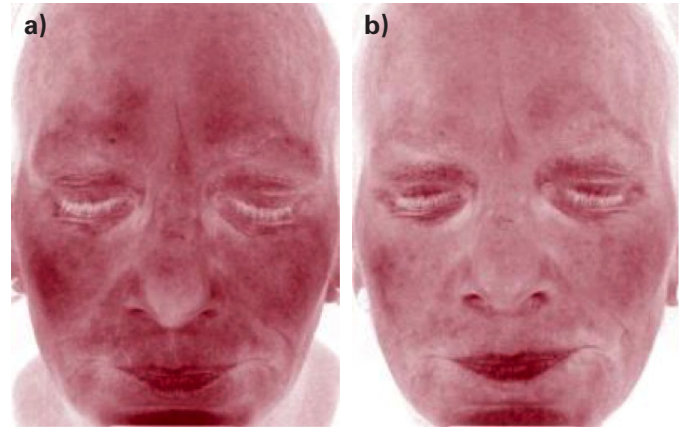
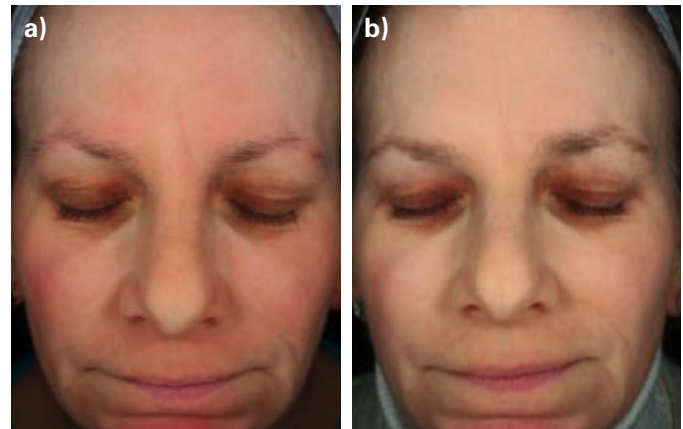


FIGURE 5. a) Before; **b)** Post 6 sessions. Photos Courtesy of Dr. David Vasily.



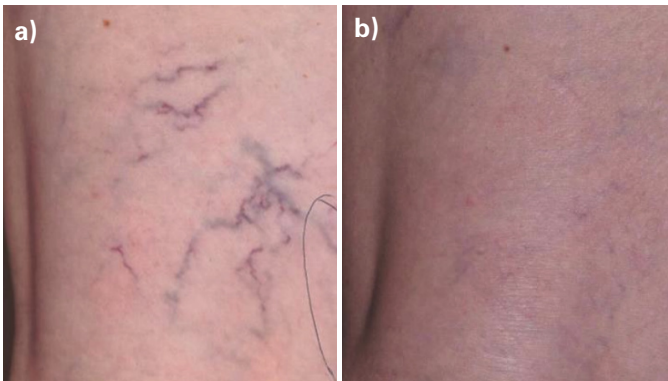
Vasily: Genesis is a fascinating component to this device. When you are buying an expensive device you want versatility and the combination of KTP, Nd:YAG and a long pulse 300ms genesis mode allows you to treat almost anything. It turns out that the genesis mode has become the single most effective modality in my practice. It's immensely popular and my extenders can use it. The pulse duration is fixed at 300ms and there is no cooling. The object is to heat evenly so you can maintain a temperature of about 42°C and you deliver 6000 to 8000 pulses in a treatment session. This patient had some residual redness after two photofacial treatments. She was treated every other week and got almost complete clearance.

Alexiades: I have two genesis devices and have been involved with this technology for the past 10 years. The genesis mode on the Excel V is twice as strong and more efficient than the

original. It is a crowd pleaser because you can treat patients of any age. What's great about this handpiece is that there is a temperature gage on the handpiece, which provides real-time feedback and makes this a very easy treatment. There are many studies, including the one that I published with Dr. Dover, demonstrating that you want to maintain the surface skin temperature at 42°C for a sustained period of time to attain effective neocollagenesis within the dermis. The device also has a counter that lets you know when you have delivered 5000 pulses, indicating that the treatment is done. In my hands, without stopping, a treatment is completed in 20 minutes.

Green: You can choose between 4J – 7J and has a fixed spot size of 8mm. I deliver about 6000 pulses and take about 15-20 min for an entire treatment. Another important factor is that the 1064nm wavelength allows you to treat any skin type, which is great in this increasingly global community.

FIGURE 1. a) Before; **b)** After 2TX. Settings: 160j/cm², 4mm, 25ms, 5°C, and 165j/cm², 6mm, 40ms, and 5°C. Photos Courtesy of Dr. David Vasily.



Vasily: This has become my go to device for leg veins. Its been very interesting for a number of resions. Typically we tell patients with spider veins that they will require a series of threathments with other modalities. The big problem was that we could see clearance after several treatments and the biggest problem was that they would develop PIH pigment streaks over the treated veins. We started playing with the Excel V and have discovered settings that have worked amazingly well. This patient was initially treated with 160J cm² 4mm 25ms 5C but I have now adjusted my settings with most of my spider leg vein (1mm-2mm) patients to a 40 ms pulse duration. It seems to be magical. There is a little more discomfort but with the 40 ms pulse duration I can get a lot of clearance in treatment. The most remarkable thing I have observed is that I see less than 1% PIH with my patients treated with Excel V.

Sadick: If you treat veins of varying sizes it is important to remember to vary the pulse duration and the fluence. The very small red vessels are superficial and need to be treated with higher fluences and shorter pulse durations and the large blue

vessels need to be treated with more gentle fluences and extended pulse durations.

Alexiades: With the larger blue vessels you should expect some clot formation and that can take three months to go away. It is important to prepare the patients. It is better to do this treatment in the fall and winter to allow time for the clot to resorb. However, the clearance of these reticular blue veins is durable on long-term follow up without evidence of recurrence.

DISCLOSURES

None of the authors have disclosed a conflict of interest.

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