

# Vanquish RF-Based Body Contouring Receives High Clinical Marks



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By Jeffrey Frentzen, Executive Editor

Non-invasive body contouring procedures continue to attract patients that want to lose stubborn fat without surgery, pain or downtime. Although the high efficiency of radiofrequency (RF) based technology for tissue heating has made it an attractive source of energy for various aesthetic applications, manufacturers and physicians have experienced some difficulty in determining that elusive, yet precise, energy level, frequency and treatment protocol to answer the no pain, no downtime patient mantra. One system that has reportedly attained that sweet spot is the Vanquish™ device from BTL Aesthetics (Boston, Mass.), which offers a truly painless, effective fat reduction procedure, and the largest treatment area available, according to users.

The Vanquish utilizes a focused RF field system designed for no contact deep tissue energy application. Energy Flow Control™ (EFC™) automatically tunes the tissue-applicator-generator circuitry to selectively deliver RF energy to adipose tissue layers with specific impedance, shaping the energy field to optimize penetration and maximize the treatment area. The adipose tissue layer heats faster than other tissue layers such as skin and muscle. However, these layers cool down much more rapidly than adipose tissue because of the circulating blood. In addition, skin can be cooled by air circulation due to the no contact applicator.

As pointed out by Robert A. Weiss, M.D., F.A.A.D., F.A.C.Ph., a dermatologist and dermatologic researcher at the Maryland Laser, Skin and Vein Institute in Hunt Valley, Md., the combination of

Vanquish's form factor and favorable science makes it especially attractive to practitioners. "We've seen the interest in non-invasive contouring. Many people really don't have the downtime required for liposuction and want a treatment that's a walk-in walk-out procedure," he stated. "What initially attracted me to the concept of the Vanquish was that we could treat large areas and more fat. The large field of RF that is created covers an area that includes not only the abdomen, but also the flanks, all in a single 30-minute treatment session. Also, patient satisfaction with the Vanquish has been very high."

Operator ease-of-use, effectiveness, the ability to treat a large surface area and lack of consumables are the main advantages of Vanquish, according to Amir Moradi, M.D., a facial plastic and reconstructive surgeon in San Diego, Calif. "The Vanquish device treats a large cross-sectional area of the body without any contact by the applicator. It tunes the power delivered so that it is absorbed mostly by the fat cells, thus decreasing any potential for side effects and/or pain, as well as zero recovery time."

According to Jason Pozner, M.D., F.A.C.S., a plastic surgeon in Boca Raton, Fla., "the Vanquish is good, and for patients it is painless. I've seen patients who look like they have really lost circumference. The results are very even, with no hot spots. With other devices, sometimes treatment hurts, sometimes it doesn't, but the Vanquish doesn't hurt."

Currently, Dr. Pozner uses the Vanquish to reduce fat on abdomens, backs and flanks, and he is looking forward to seeing applicators for the legs. "I like being able to treat these whole

areas at one time and the results are smooth," he advised. "I haven't observed any divots from it. We're excited to use it on leaner people to see how well it works on them, too. Wherever you use it, I think you're going to see

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some secondary skin tightening, and it's also important for patients to stay very hydrated."

Marc Salzman, M.D., F.A.C.S., director of the Salzman Institute of Cosmetic Surgery in Louisville, Ky., feels the Vanquish is a good solution for the busy plastic or cosmetic surgeon looking for a non-invasive option to offer patients. After evaluating a variety of possible non-invasive technologies including cryolipolysis, low-level laser and ultrasound, Dr. Salzman selected Vanquish. "I think Vanquish provides a

more homogenous heat deposition by creating an RF field rather than having to use a monopolar device, in which you create the field wherever you move it," he shared, adding that whatever device is used, it has to work as advertised. "When patients come into your office, they expect that what you are doing for them is going to work. You can read all the science you want, but it really has to work. While some other devices definitely work, the Vanquish offers a more effortless way to make people thinner."

Dr. Salzman explained, the key to understanding tissue response is to use the "three Ts: time, temperature and tolerability. We kind of know what the temperature is going to be. We know what the minimum times are going to be, but nobody knows what the maximum times are going to be. Most people can't tolerate more than 43° degrees of heat at the skin level, and if you need to be at 45° to 46° to induce apoptosis then you need to figure out a way to have that happen without harming the patient. This is what the Vanquish's RF field does perfectly. It allows you to keep the skin at 41° to 43° degrees, while deep into the fat you are at apoptotic temperatures of 45° to 46°."

As a result, Vanquish allows me to offer a procedure that has good efficacy and is universally applicable, Dr. Salzman added. "It is really an improvement over practically everything we have ever used. As a plastic surgeon, it is the first non-surgical procedure that I'm really comfortable selling to patients. Everybody can be treated and it is well tolerated by all. My patients like it and there really is no downtime involved."



Before Tx



After Vanquish Tx

Photos courtesy of Melanie Palm, M.D.



Before Tx



After six Vanquish treatments  
Photos courtesy of Amir Moradi, M.D.

In addition to its standalone use, the Vanquish can become a central platform for integrated treatment protocols that combine modalities, noted Dr. Moradi. "In non-invasive body contouring, the best approach is combination treatment using the devices that are most effective for different tissues," he pointed out. "Many of our patients are treated by Vanquish on their abdomen and flanks, combined with CoolSculpting from Zeltiq Aesthetics (Pleasanton, Calif.) for the bra fat. In other cases, we might have performed CoolSculpting in the past and for further improvement introduce Vanquish or Exilis Elite to obtain more fat reduction and skin tightening."

Similarly, for Dr. Pozner, the Vanquish has become a pivotal aspect of his practice's body shaping program. "The scientific data and clinicals looked good on the Vanquish, and in practice it was surprisingly better than I anticipated," he reported. "When we began using it, we got early results, which I wasn't expecting. Also, it's a device that we haven't advertised very much, yet it has gotten pretty considerable use in my practice. It's easy-to-use and there are no consumable costs."

Considering the state of the economy, there is a tremendous advantage in using a device that needs practically no consumables, Dr. Moradi expressed, adding, "patients can be retreated if they do not feel the results have been satisfactory. This increases the patient satisfaction rate significantly. The most exciting results so far have been not only with fat reduction, but also skin tightening and perceived improvements in cellulite."

Key practitioners that are investigating the device's settings and developing best practices have confirmed the Vanquish's verisimilitude in the field. As well, Dr. Salzman has worked on defining an optimal protocol for the device.

"Right now, we are mostly doing a series of four treatments usually given ten to twelve days apart," he indicated. "When we get a little better at it, maybe we'll reduce to as few as two one-hour sessions instead of four half-hour sessions. We've played around with mixing Vanquish and the Exilis Elite, all in the same session. Since we already have a head start on heating the skin, due to the heat radiating out from the skin, we can add some more external heat and keep it going as there is a rhythmic relationship between temperature and time. You need much higher temperature intervals for sure. However, if you are going to use much lower temperatures then you are going to need to extend the intervals in order to obtain the same response in the patient. My thought was maybe we'll just do treatments in concert and do them one right after the other. I am still trying to determine the best protocol using both machines."

Another practitioner working to achieve the best results using Vanquish is Melanie Palm, M.D., a dermatologist and cosmetic surgeon in Solana Beach, Calif. "If you look at the initial clinical study that was done on humans, they did four treatments based a week apart and each treatment was about 30 minutes. That was the study that gave us an average reduction of 2.25 inches in waistline circumference," she stated. "I have been telling patients we'll do a series of six treatments and we've been achieving some good results from that. I see

them weekly for a 30-minute treatment, then I like to see them back in a month. At this time, I'm starting to see some patients for their follow-up and we are probably going to see them again in about three months."

In Dr. Palm's opinion, identifying the ideal Vanquish candidate is easy. It is someone who wants the benefits of liposuction without surgery or downtime. "They might have a muffin top, or maybe stubborn areas of fat in the midsection, flanks, back of the waist or the bra area. They just want to look better in clothes," she expressed. "I caution patients that this treatment isn't a substitute for liposuction and it will achieve more modest results, but many patients are still happy with that. They like the idea of no downtime and no pain, and the ability to do treatments gradually, over time, as simply as sitting still for 30 minutes at a time. I think that is the real appeal of Vanquish."

Along with satisfying patient requests for non-invasive body contouring, Dr. Palm also wanted an energy-based device that could run in the background while she continues seeing other patients, one that was easy enough to use so that she could delegate treatments to a trained assistant. "I think that the Vanquish has phenomenal potential," she said. "It is important that both the operator and the patient be fully onboard for treatment success."

The addition of the Vanquish has also greatly enhanced the non-surgical armamentarium of Hartsough Dermatology in Loves Park, Ill., according to practice manager David Leum. "I was very interested in the Vanquish

because of the skin tightening results we got from the Exilis Elite," he stated. "For us, the Exilis Elite has become kind of a gateway that attracts people to us, and from there we book them for broadband light therapy, facial resurfacing and treatments using the Vanquish. When I saw Vanquish I was intrigued. I had a chance to talk to BTL's engineer. The way he explained the system's mechanism of action, and my understanding of RF signals from my own due diligence, made me become very interested."

Due to the "gateway results" achieved from using the Exilis Elite, as well as BTL's track record of excellent service and support, Mr. Leum recommends buying the Vanquish. "We've gone down the road with Vanquish and started achieving very astounding results on some of our patients. We measure their fat content to give us an empirical benchmark to work off of," he explained. "Vanquish has been phenomenal for reducing a lot of that belly fat."

The repeated success of combining Vanquish body contouring and Exilis Elite skin tightening treatments have helped formulate Hartsough Dermatology's Skin Trim program. "It has been going full tilt," Mr. Leum reported. "I don't know how many patients we have treated already, but there is excitement about it among existing patients. This has led to an increase in new patients coming in who are interested in the program. It has just worked very well."

**Editorial note:** In the E.U., Vanquish is CE marked for the treatment of adipose tissue. In the U.S., Vanquish is cleared for use in applying therapeutic deep heat to the tissue. Vanquish is not yet cleared for the treatment of adipose tissue in the U.S.



Before Tx



After four Vanquish treatments  
Photos courtesy of Marc Salzman, M.D.



Before Tx



After Vanquish Tx  
Photos courtesy of BTL Aesthetics