

BTL Celebrates 30 Years of Innovation in 2023

By Kevin A. Wilson, Contributing Editor

Marking 30 years of industry-leading innovation and development of disruptive technologies, BTL Aesthetics (Boston, Mass.) has a lot to celebrate in 2023. With recent product offerings exploding onto the market, the company's global footprint has greatly expanded as consumers are swept up in a body sculpting revolution.

BTL's foundation – and legacy – stands strong on solid science. With an ever-evolving body of research supporting its technologies before they hit the market, BTL continues to set the bar high for competitors, and boost the confidence of physicians and patients enjoying the fruits of their ceaseless labor.

"Innovation, dedication and commitment are the words that come to mind," said board-certified and fellowship-trained dermatologist Joel Cohen, MD, director of AboutSkin Dermatology and AboutSkin Research (Denver, Colo.). "We have pictures demonstrating real results backed by imaging studies that show us what is happening. Confident patients are enjoying measurable improvements with noticeable benefits to quality of life. This is what the industry is supposed to be, and BTL's product launches like Emface and the Emsculpt Neo flank applicator are textbook examples of that."

According to Dr. Cohen, the unique potential of BTL devices and the scientific approach to their clinical trials is what intrigued him initially. "I was excited to be deeply involved in the process firsthand. Through research and engineering, BTL transforms concepts into clinical outcomes. They are hard at work with R&D, quietly combining engineering with robust research, building a foundational body of evidence that goes beyond pictures and surveys, and contributing to the overall body of literature we can all have confidence in and benefit from. It was thrilling to be part of the clinical trials and launch of technologies like the Emface and the flank applicators for Emsculpt Neo.

I see my patients' before-and-after pictures and hear their testimonies regularly, so I am constantly confronted by the reality of what these treatments mean for patients."

"These treatments provide measurable aesthetic and functional improvements that increase confidence, self-esteem and quality of life," said dermatologist Christopher Robb, MD, co-owner of the Skin & Allergy Center (Spring Hill, Tenn.). "With other companies' treatments, patients will talk about their improved appearance, which is fantastic, but with BTL, it is not just about body image. It goes way beyond that. Patients will rave about their appearance but even more so how improved function helped them recover capabilities damaged or lost due to pregnancy, injury, or just aging."



Before and after four treatments with Emface
Photos courtesy of Joel L. Cohen, MD

Exilis and Exilis Ultra, Vanquish and Vanquish ME, Emtone, Emsella, Emsculpt, and Emsculpt Neo, Emfemme and most recently, Emface, represent an evolutionary pathway. One that includes long-understood modalities like radiofrequency (RF) and BTL's proprietary targeted pressure energy (TPE), high-intensity focused electromagnetic (HIFEM) and high-intensity facial electromagnetic stimulation (HIFES) brand energies.

But BTL brings more to the table than just their excellent devices, which, above all, are proven safe. "Safety is paramount, and the data shows that these devices are among the safest and easiest to use in the space," mentioned Carolyn



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Before and one month after the last treatment of Emsculpt Neo

Photos courtesy of Stanley A. Okoro, MD

Jacob, MD, founder and medical director of Chicago Cosmetic Surgery and Dermatology (Chicago, Ill.). “Exciting efficacy means nothing without safety. The Company’s technologies are non-invasive and have been studied so thoroughly that our patients, as well as ourselves, can be confident we are not going to be caught off guard by unexpected problems. That is so vitally important.”

Arguably BTL is an overnight success 30 years in the making. A firm on the forefront of physiotherapy and aesthetic medical technology whose star shot into the stratosphere with the launches of Emsculpt, then Emsculpt Neo; culminations of the company’s entire experience and development history. Tying together industry-leading aesthetic RF technology with innovations in therapeutic muscle stimulation and electromagnetic fields, Emsculpt Neo flipped the industry on its head. As such, the Emsculpt franchise rapidly reached 1 million treatments in a short amount of time, and is on pace to reach 2 million treatments in less time than the previous leader reached 1 million.

“With their unique body of experience, BTL saw the potential for overlap in their physiotherapy and aesthetic technologies years ago,” said plastic surgeon Brian Kinney, MD (Beverly Hills, Calif.). “Instead of targeting a specific area of muscle, the research began to look at defocusing this for wider application to target the various abdominal muscles and contour the abdomen, leading to the ability to target segments of the extremities, and eventually the face.”

BTL began in 1993 with physiotherapy devices utilizing electric muscle stimulation and electromagnetic fields, moving into RF. Physiotherapy is about functional improvement, pain management and healing.



Before and three months after the last treatment of Emsculpt and Emtone

Photos courtesy of Diane Duncan, MD

The quiet beginnings of their current aesthetic revolution rest with Exilis and Vanquish, then later Emtone and Emsculpt, and then with Emface. “One word that comes to mind for me is ‘natural,’” Dr. Robb stated. “A true youthful appearance is natural, that of a healthy, functioning human being. BTL devices non-invasively address and restore what naturally deteriorates, be it tissue collagen or muscle, and we see not only improved appearance but improved function. This leads to greater wellness, which any physician is trying to accomplish regardless of medical specialty.

“This is where BTL’s unique engineering comes into play, Dr. Robb added. “It is incredible how they take something complicated and translate it into a user interface that a teenager could understand and safely use. And make no mistake; these technologies are fun and easy to use. It is very satisfying for doctors and staff to know that the patient is going to be happy, even thrilled, with not only the results but the treatment experience. Patient compliance is virtually assured, so you know you are getting outcomes patients will tell their friends about.”

“Consider Emsculpt Neo combining RF – which requires metal electrodes to deliver the energy – with high-intensity electromagnetic fields, which would be interfered with by metal,” Dr. Kinney explained. “BTL achieved this, and that is the power of their engineering, supported by thousands of treatments whose effects have been measured by MRI, CT, ultrasound, lab tests, biopsies, 3D imaging, physician observation, and patient satisfaction surveys.”

Science is the key, according to Melanie Palm, MD, director of Art of Skin MD (Solana Beach, Calif.), who came into the BTL fold about six years ago, captivated by the evolution of their



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Before and one month after the last treatment of Core to Floor
Photos courtesy of Diane Duncan, MD

product portfolio through academic presentations at meetings. “I was impressed by the scientific rigor supporting their devices when bringing products to the market. I appreciate their science-centered approach, continued emphasis on research and development, and openness to physician feedback regarding future development pathways,” she noted. “It is not just proof of concept and clinical efficacy trials, but a full gamut of rigorous studies with histology, protein markers, and animal and human subjects in clinical trials. This leads to a robust body of scientific knowledge that we may share with patients, raising confidence in applying these devices in our clinics.”

BTL thoroughly studies all aspects of an application before launch, hence the body of more than 40 powerful clinical studies behind their product line. Recent offerings, Emsculpt and Emsculpt NEO, launched with seven initial studies (including animal and human histology, MRI, CT, and ultrasound), and Emface with nine initial studies (including animal and human histology, ultrasound and echogenicity, 2D and 3D computed analysis).

Nevertheless, BTL’s science also considers existing literature and builds on it, which is what science should always do, according to Dr. Robb. “Their research does not just look good on its own but is in agreement and harmony with what is already out there in aesthetics, orthopedics, physiology, and other disciplines. That is the definition of scientific rigor; there is no hint of anything fishy. This means that if you bang on the walls and stomp the floors, there is a real house there! That is what appeals to me and so many others. Everything is scientifically driven and that is why I have been so eager to work with BTL.”

“I have known of BTL for almost a decade and have been working with them in research for about eight years,” Dr. Kinney began. “I was drawn to them by their commitment to science. Many companies will introduce a new device with one physician, 20 to 30 patients, a three-month follow-up and a few pictures. BTL often conducts multi-center trials with hundreds

of data points, with detailed statistical analysis and follow-up of six months or more. Their breakthrough technologies like HIFEM, HIFEM plus RF, HIFES and HIFES plus RF have been studied thoroughly and continue to be developed, with an extensive patient portfolio.”

In the conventional sense, combination therapies often meant sequential use of different modalities to provide greater-than-the-sum-of-its-parts global improvement, summed up in the word ‘synergy.’ BTL took this one step further into concurrent employment of modalities as well. This is exemplified by products such as Exilis Ultra (RF plus ultrasound) and Emtone (RF plus TPE), followed by more recent game-changers like Emsculpt Neo (HIFEM plus RF) and Emface (HIFES plus RF). Stand-alone devices, effective in their own right, were taken to the next level pushing BTL further into the spotlight they currently enjoy.

“Combination therapy is not new,” Dr. Kinney clarified, “but achieving it in a single device is always challenging. RF has been in use for decades, and electromagnetic therapies were not used to increase muscle strength until Emsculpt. Merging those treatment vectors in Emsculpt Neo meant combining increased muscle strength, tone and bulk with fat loss for previously unseen non-invasive body contouring results that also have functional benefits.”

And from their physiotherapy background to becoming an aesthetic industry leader, BTL understands muscle with institutional knowledge no other company can come close to claiming. “When discussing these treatments with patients, I describe the merging of aesthetic and physiotherapy technology. I explain how it can benefit them by tackling

sarcopenia, improving overall muscle bulk, strength, hyperplasia, and hypertrophy – how it is likely to lead to other health and quality of life benefits with improved core strength and balance,” Dr. Palm said. “The word ‘synergy’ is thrown around a lot, but it is what we are looking for when considering therapeutic combinations. Patients and practitioners alike seek and see the higher-level outcomes one can achieve by using more than one modality. Early on, BTL identified possible areas of synergy and uncovered ways their technologies could be safely combined for greater efficacy, and the success of their product portfolio is the proof and a prime example of innovation.”

“When I speak about innovation, for example,” Dr. Cohen added, “I have to admit that I never really considered addressing muscle lengthening/fatigue and muscle loss (sarcopenia) for facial correction. So many of us have been trapped in the paradigm of treating sagging tissue with different types of energy, not considering the role of muscle and interconnecting ligaments and how that might also be addressed. BTL was thinking in totally new directions, and now we have Emface tightening the weave of the well-worn hammock that is the aging face. When I explain it to patients that way, it really resonates with them.”

“BTL is also with you from the moment you adopt a device, providing everything you need from training to marketing and support,” said Dr. Jacob. “They are committed to your success because your success is their achievement as well. It begins with the design of their devices. They are very easy to learn and use, contributing to safety and efficacy. They are robust, so device downtime is minimal, and their support is very responsive to keep you in operation.”

She added that a commitment to minimizing consumables keeps operating costs more manageable. “BTL consumables are necessary for the safest, most effective use of the device,” Dr. Jacob explained. “The value of this cannot be overstated from a business standpoint because it allows us to price to the market regardless of geographical location, which is much

more difficult when high-cost consumables are involved. This makes treatment more accessible to patients without undercutting profits, thus preserving maximal return on investment.

“Accessibility is a large part of BTL’s success because it considerably increases your potential patient base,” Dr. Jacob continued. “Also, constant inventory tracking is a practice management headache because you never want to be concerned about whether or not needed supplies are on hand.” And with BTL, everything is developed, then manufactured in-house, minimizing supply-chain issues and maximizing responsiveness.

The process is ongoing, and BTL is by no means resting on its laurels. “For me personally – and I think I speak for a lot of physicians in this regard – it has been a real honor to work with BTL; to take their innovative engineering and use these devices in clinical testing for generation of solid data to bring aesthetic medicine to new frontiers,” said Dr. Cohen.

“Consider the revolutionary nature of HIFEM and HIFEM + RF for the body, then HIFES + RF for the face,” Dr. Kinney remarked. “Each of these devices – Emsculpt Neo and Emface – launched with multi-center trials and copious amounts of data to advance the technology and the industry. Those 400-plus engineers are busy at this moment with the next generation of devices and treatments. There will definitely be more to come. BTL is dedicated to patient outcomes through innovation, and it shows in everything they do.”



Before and one month after the last treatment of Core to Floor
Photos courtesy of Andrea Pezzella, MD