



PROFILES IN INNOVATION: ROBERT WEISS, MD

When it comes to investing in energy-based technology, seeing is just the first step to believing for **Robert A. Weiss, MD**, Associate Professor of Dermatology at the Johns Hopkins University School of Medicine in Baltimore and Past President of the American Society for Laser Medicine and Surgery.

HOW ARE DEVICES VETTED?

Dr. Weiss aims to validate that devices work clinically as well as histologically before he signs on. His process starts with implementing a proof-of-concept study. Based on these results, he may do a clinical trial of a new device or a new indication for an existing device.

WHAT HAVE BEEN MAJOR INNOVATIONS?

Dr. Weiss began helping companies like BTL bring new devices to market in the 1990s.

“The first devices were pulsed-dye lasers and intense pulsed light that targeted blood vessels, and we noticed that these devices could shrink enlarged capillaries and background redness or pigmentation,” he says. The next giant step was to treat below the surface to achieve textural improvement and skin tightening, and BTL’s Exilis Ultra 360 filled this gap perfectly, he recalls.

“It is the only device that simultaneously applies monopolar radiofrequency and ultrasound,” he says. “Unlike other skin-tightening devices on the market, the cost of consumables with Exilis Ultra 360 is low.”

Dr. Weiss’s own histology studies of this device confirmed that sustained heating causes collagen remodeling and elastin production and produces textural improvements in skin tightening. His research on this device also helped to develop refined techniques and ideal therapeutic temperature —45°C—for maximum results. “We have seen excellent results for facial skin tightening (especially around the eyes and jawline), arm skin tightening, and thigh skin tightening, and improvement in cellulite,” he says.

HOW HAVE YOU WORKED ON MUSCLE TONING TECHNOLOGIES?

In recent years, much of Dr. Weiss’ research has focused on BTL’s muscle-toning technology, Emsculpt. His work helped to define

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ideal treatment protocols and device settings. “For the abdomen or buttocks, we suggest a 30-minute treatment twice a week for two weeks. It is a very short course that improves patient compliance,” he says.

Energy-based body contouring devices can now achieve what was once only possible with surgery, he says. “I stopped doing liposuction because I didn’t see any reason to put patients through downtime and bruising, and the treatment cost came out to be the same as liposuction.”

WHAT WILL BE THE NEXT BIG THING IN DEVICES?

Dr. Weiss has been on the frontlines of the energy-based device revolution and as such is uniquely poised to predict what will be the next big thing.

The Holy Grail will be a device or therapy that can eradicate cellulite. “We have treatments that work for dimples in the gluteal area but not so well for the thighs and a number of companies that are working on devices use RF and shock waves for the more common garden-variety fine-rippling kind of cellulite,” he says.

Robotic delivery systems will likely be another big advance in this field. The COVID-19 pandemic has accentuated the need for touchless devices. “These devices would have applicators that can be placed on skin so there is no human touch.”