

Black Market Procedures
New Trends in Aesthetic Medicine
Benefits of Stem Cell Enriched AFT

New Technology Drives Global Expansion

Despite continuing economic uncertainty, the business of aesthetic medicine continues to grow worldwide. This is in no small part due to bold industry powerhouses developing and acquiring technologies to consolidate within the industry and solidify the confidence of patients and physicians alike.

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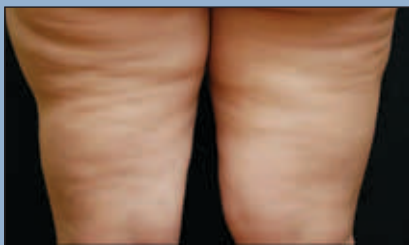
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With a Legacy of Innovation Cynosure Looks to the Future

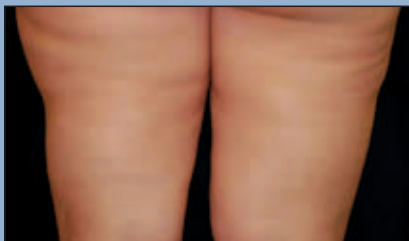


Michael Davin
CEO
Cynosure
Westford, MA

"We feel that to continue to meet the needs of the marketplace, innovation is the key to developing market leading and category expanding technologies."



Before Tx



After eight SmoothShapes treatments
Photos courtesy of Kenneth Beer, M.D.

By Kevin A. Wilson, Contributing Editor

With a history of innovation and forward-thinking technologies – including Elite MPX™, SmartLipo TriPlex™ and Cellulaze™ – Cynosure (Westford, Mass.) is setting a standard for science-based aesthetic products and technology that are safe and effective. As it celebrates its 20th year, Cynosure gives the impression that it is only getting started.

To Michael Davin, Cynosure's CEO, it's about foresight and meeting needs. "When we experienced rapid industry growth from 2005-2007, 72% of our laser revenue was coming out of North America," he began. "To grow, we knew that we needed to focus our efforts on expanding our technology and global footprint to become a true multinational company. With the aesthetic procedure market blossoming abroad, we needed to ensure that the Cynosure brand was well represented globally."

According to Mr. Davin, the company has established a global strategy to outpace the industry. "Over the past few years we have made deliberate moves to strengthen and grow our international business," he noted. "In the Far East, we opened a second office in China and shifted from a distributor model to direct sales in Korea, while in Latin America we strengthened our presence by opening a direct sales office in Mexico. We also strengthened our indirect sales channels, forging relationships with new third-party distributors in Singapore, Taiwan and Australia."

Fueled by these investments in Cynosure's international organizations, Mr. Davin said, "2010 revenue

from laser products sold outside of North America rose 22% and foreign markets now account for 57% of our laser revenue, up from 28% in 2007. Our global reach is one of the main reasons why we have been able to outpace the growth of the industry."

This growth was also generated from an expanding product portfolio, Mr. Davin added. "We feel that to continue to meet the needs of the marketplace, innovation is the key to developing market leading and category expanding technologies. Our organic growth strategy and the commitment we made internally is to develop and introduce a new flagship product each year that addresses a high volume cosmetic indication not currently being served," he said. "This past year we also expanded our technology stable with the acquisition of ConBio, as well as the SmoothShapes™ technology from Elemé Medical. We also recently announced our exclusive distribution partnership with PinPointe™ FootLaser™ for the treatment of onychomycosis."

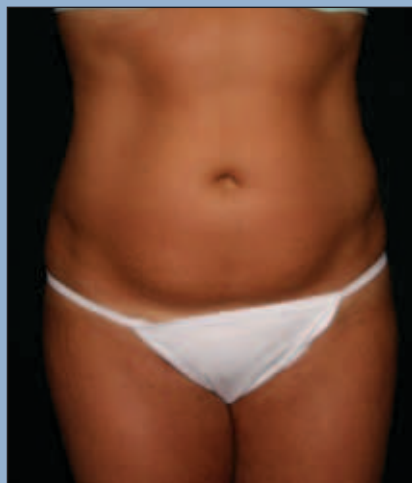
"The addition of ConBio's aesthetic business provides us with a West Coast technology arm to strengthen our overall research and development capabilities," Mr. Davin said. "This acquisition also bolstered our international footprint, as 85% of ConBio's revenue was derived from outside of the U.S. with a particularly strong presence in Asia. So through a combination of organic and synergistic non-organic growth of products and technologies, we have been able to deliver solutions and meet the unmet needs of our customers."



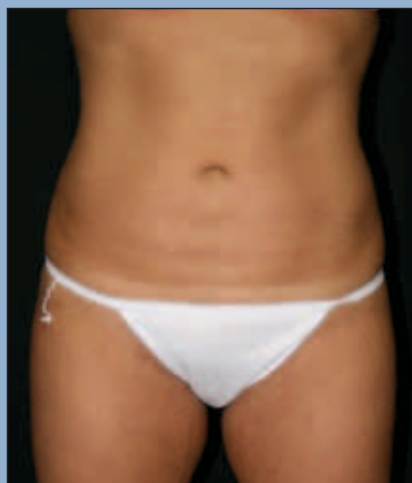
Jay M. Kulkin, M.D.
Owner
Women's Institute for Health
Atlanta, GA



Miles H. Graivier, M.D.
Plastic Surgeon
Medical Director
North Atlanta Plastic Surgery Center
Roswell, GA



Abdomen before Tx



Abdomen ten months after SmartLipo TriPlex and four SmoothShapes treatments

Photos courtesy of Miles H. Graivier, M.D.

Mr. Davin also explained Cynosure's unique philosophy on understanding customers' future needs. "We have built excellent relationships with top physicians and thought leaders around the world," he said. "By fostering a cooperative environment between the clinician and our direct distribution, we are able to constantly explore and challenge what physicians are seeking in terms of improved and expanded patient treatments and clinical outcomes."

"We analyze those requirements and bring the opportunity to our research and development teams to create technology that satisfies these clinical needs," Mr. Davin continued. "We also have the added benefit of a strong balance sheet, which allows us to take advantage of non-organic opportunities in the marketplace, such as our recent acquisitions of ConBio and SmoothShapes, as well as the PinPointe distribution."

One such need is the treatment of darker skin types with lasers – historically a challenge due to complications such as post-inflammatory hyperpigmentation (PIH). "Cynosure's versatile Elite MPX for hair removal, as well as pigmented and vascular lesions, harnesses the company's proprietary MultiPlex™ wavelength blending and sequencing technology to treat even darker skin types with lasers," according to Jay M. Kulkin, M.D., owner of the Women's Institute for Health, a laser aesthetic practice in Atlanta, Ga.

"When you look at hair removal, it's a stable profit center for aesthetic practices, and it's growing as the procedure becomes more mainstream,"

Dr. Kulkin advised. "I always say there are two factors going into great laser results: the laser device itself and the person holding the laser. Consumers are beginning to notice this dichotomy in quality, which is becoming more apparent as we treat all skin types because this opens us up to the melting pot of the global population, and great care must be taken. On their end Cynosure has developed the best and safest tool for the job."

Elite MPX provides the ability to blend 755 nm alexandrite and 1064 nm Nd:YAG laser wavelengths, allowing versatility in treatment that helps physicians address a variety of skin (and hair) types with the best approach. "In addition to the globalization of modern aesthetic medicine, which requires us to successfully address darker skin, we also see mixed ethnicity patients which serve as a unique challenge," Dr. Kulkin pointed out. "This is especially evident in the U.S. market. Thankfully we have Elite MPX."

Without question, Cynosure's flagship technology is SmartLipo TriPlex for body contouring via laser lipolysis. "Since the initial single wavelength model was introduced in 2007 the original technology and surrounding protocols have been refined, developed and reinvented into the innovative three-wavelength system it is today," stated Miles H. Graivier, M.D., plastic surgeon and medical director of the North Atlanta Plastic Surgery Center in Roswell, Ga.

"The main thing Cynosure added to the SmartLipo TriPlex is the 1440 nm wavelength, which is the most highly

absorbed wavelength for fat – 40 times greater than that of other wavelengths,” Dr. Graivier highlighted. “The 1064 nm wavelength targets hemoglobin to control bleeding, and the target chromophore of the 1320 nm wavelength is water. This adds a lot to what we’re able to do in terms of both photomechanical and photo-thermal effect, allowing users to more efficiently heat and melt the fat.”

Energy is emitted from a fiber in a slim cannula that reduces tissue trauma and promotes precision delivery that is safe enough for the face. SmartLipo technology also includes the SmartSense™ and ThermaGuide™ intelligent delivery systems, which monitor and mitigate treatment to improve both safety and efficacy.

In Dr. Graivier’s experience, the advantage of MultiPlex wavelength blending and sequencing in the realm of body shaping is especially evident in the treatment of more challenging areas such as the arms, face and breast, or for areas that are very sensitive such as the inner thigh. “For skin tightening from within, or for more superficial fat treatment, we’ll blend the 1064 nm and 1320 nm wavelengths,” he said.

“With the 1320 nm we have less heat scatter, and thus greater precision, coupled with the hemostasis and additional heating by the 1064 nm wavelength. The fat specific 1440 nm allows for the treatment of larger and deeper zones of adiposity such as the abdomen,” Dr. Graivier added. “The 1440 nm wavelength is huge for treating the deeper layers because while dermal tissue has a higher water content, closer to 70%, fatty tissue is only

about 20% water so you need that fat specificity. This is further improved when we harness the hemostatic effect of the 1064 nm wavelength in combination. That’s why SmartLipo TriPlex is so remarkable.”

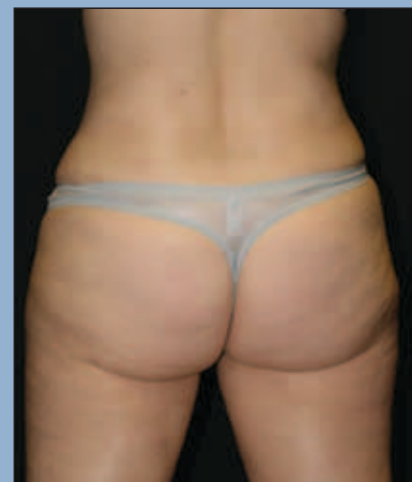
Dr. Graivier also mentioned that Cynosure has repeatedly demonstrated an ability to not only acquire emerging and existing laser modalities but properly support them. “Stability like that is part of what keeps us thriving as an industry,” he emphasized.

One example is the recently acquired SmoothShapes technology, a non-invasive body shaping solution that incorporates mechanical suction roller massage with biostimulation via 650 nm light emitting diode (LED) or 915 nm laser. The 650 nm energy causes transitory pores to form within adipocytes, out of which laser heated fat drains and is further expressed by massage. “The body’s natural waste removal processes deal with the expressed fat. This therapy, called photomology, is highly regarded for cellulite and non-invasive body shaping – a ‘holy grail’ in aesthetic medicine,” explained Dr. Graivier, who recommends eight to ten twice weekly treatments.

Dr. Graivier is an enthusiastic proponent of using SmoothShapes in conjunction with his liposuction procedures. “I find that SmoothShapes paves the way for liposuction if used within an hour before surgery by deflating and liquefying the adipocytes. This seems to reduce post-operative pain as well. I also use it about a week post treatment to inhibit bruising and swelling, with additional treatments to deal with cellulite and further stimulate waste



Before Tx



Five months after SmartLipo TriPlex and nine SmoothShapes treatments

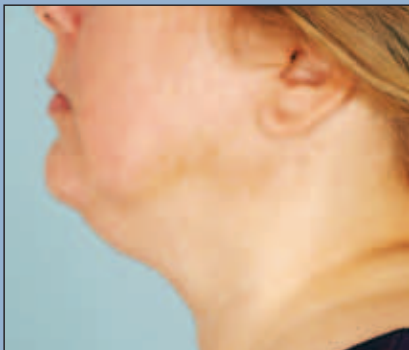
Photos courtesy of Miles H. Graivier, M.D.



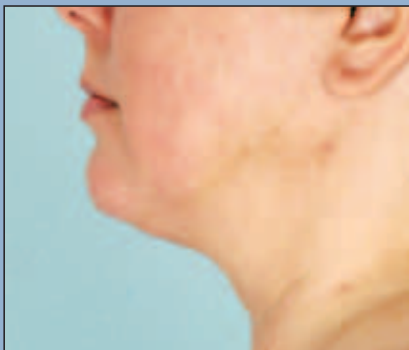
Kenneth Beer, M.D.
Dermatologist
West Palm Beach, FL



Barry DiBernardo, M.D., F.A.C.S.
Founder
New Jersey Plastic Surgery
Montclair, NJ



Submental area before Tx



Submental area one month after SmartLipo Tx
Photos courtesy of Barry DiBernardo, M.D., F.A.C.S.

removal and enhance the overall recovery process."

According to Kenneth Beer, M.D., a dermatologist in private practice in West Palm Beach, Fla., SmoothShapes is an excellent complementary piece of the aesthetic laser puzzle and a boon to the Cynosure portfolio. "Historically, Cynosure has continued to develop the technologies they have acquired. The company really pours everything its got into them. With the mature and robust support the community can expect from Cynosure, plus more powerful and driven research and development capabilities, SmoothShapes has a lot more to offer in the future from both the technology perspective and to physician users. There's no doubt Cynosure will stand behind this product and advance the technology."

Cellulaze, Cynosure's newest device, is currently being marketed in the European Union, Canada and Australia for the long lasting treatment of cellulite.¹ Cellulaze utilizes a side-firing 1440 nm laser fiber with thermistor technology incorporated into the cannula. "The term side-firing describes a difference between this technology and the forward-firing laser cannula in a laser lipolysis device such as the various iterations of SmartLipo," said Barry DiBernardo, M.D., F.A.C.S., founder of New Jersey Plastic Surgery in Montclair, N.J., who served as the lead author of a recent clinical trial evaluating Cellulaze's safety, efficacy and duration of result. "In fact, there are many similarities to that technology and this one," he added.

"By firing to the side, the laser can be directed downward, sideways and upward by simply twisting the

cannula," Dr. DiBernardo advised. "The thermistor technology serves a two-fold purpose, the first being to promote safety by creating a temperature limit at which the device will cease firing pulses. This also allows the user to treat to maximum effective energy deposition without risk of over-delivery; the device manages safety and efficacy for you."

Cellulite, according to Dr. DiBernardo, has three main components, each addressed by the new 1440 nm laser device. "The first defect is an overall undulation of the underlying base of fat, and the second is contraction and hardening of the vertical fibrous septae, which cause the skin to be pulled inward resulting in the unevenness or dimpling effect," he began. "Finally, the skin is thinner in those areas for these individuals, and thus it is inherently weaker, allowing the fat to herniate upward into the dermis. Between the underlying undulation, the fibrous septae and the thinner skin, we see what is often termed the orange peel skin appearance. After obtaining a better grasp of the anatomical problems, we can focus our efforts on treatment to address each of the problems specifically."

Cellulaze's side-firing fiber does exactly that. "Turned downward, the laser fiber delivers energy to smooth the uneven fatty base," said Dr. DiBernardo. "Turned 90° (parallel to the skin's surface), laser energy is used for thermal subcision of the fibrous septae to release the skin that's been held inward. When the laser is directed upward toward the dermis we see the melting of hypodermal fatty lobules, with a secondary effect

of heat stimulating the growth of new collagen and elastin, thickening the dermis by about 30%, a key endpoint I demonstrated in a previous study.² No other wavelength has the affinity for fat like the 1440 nm," he said.

In Dr. DiBernardo's investigation, the patient population included healthy women (n=10, mean age 47 years ± 5.4 years) with cellulite on the thighs, each receiving a single treatment with the device. Follow-up occurred at one, three, six and 12 months after treatment. Objective measurements of mean skin thickness and skin elasticity showed significant increases at each follow-up visit. Results were measured by subjective physician evaluation and patient assessment, with high patient satisfaction and minimal side effects. "Most often we saw swelling, which is hard to classify as a side effect when it is so often a part of the recovery process associated with treatments such as this one," said Dr. DiBernardo.

These recent advancements and acquisitions have further solidified Cynosure's position in the market, as well as physician confidence in the company's future. "As hard economic times continue there may be fewer and fewer aesthetic companies over time," said Dr. Beer. "The survivors will be well-capitalized, publicly traded companies due to the resources involved and the associated high level of scrutiny. Cynosure's been around a while and has an excellent track record. In addition to acquiring technologies they've gone out of their way to acquire talent as well – they've added some great people. Mike Davin is showcasing

Cynosure as a market leader and letting us know the company is committed to this space for the long haul."

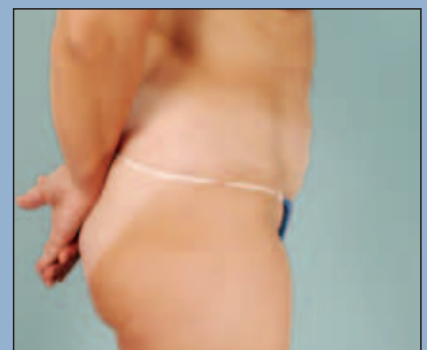
"Cynosure knows the market," Dr. DiBernardo added. "They analyze things very carefully and have superb management harnessing excellent research and development resources. They take proprietary and acquired technologies and capitalize on them where another company might not have the resources to bring the benefits of the technologies to market. The acquisition of SmoothShapes, which in my opinion is the best non-invasive technology for cellulite, is a great example of this."

"Lasers are still an exciting technology to the public, and though other modalities are emerging to supplement what lasers can do, it is still foremost in aesthetic medicine," Dr. DiBernardo said. "With a full complement of laser therapies for the complete spectrum of indications we treat, Cynosure's continued commitment to the laser ensures a focused and more comprehensive development of the technology, allowing us to truly exhaust its capabilities as we continue to explore and expand our own abilities within the field."

Mr. Davin agrees. "The ability to demonstrate value at any price has always been a strong sales position; innovation has always created excitement and opportunity, and reliability has always bred confidence. These are the focus of our company and why we have succeeded, and continue to grow and expand in the field of aesthetic laser technology and clinical treatments." ■



Abdomen before Tx



Abdomen one month after SmartLipo Tx

Photos courtesy of Barry DiBernardo, M.D., F.A.C.S.

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1. DiBernardo B. *Treatment of cellulite using a 1440-nm pulsed laser with one-year follow-up.* *Aesthet Surg J.* Mar 2011;31(3): 328-341. The Company's 510(k) application for marketing clearance of Cellulaze in the United States is continuing to undergo review by the U.S. Food and Drug Administration.
2. DiBernardo B, Reyes J, Chen B. *Evaluation of tissue thermal effects from 1064/1320-nm laser-assisted lipolysis and its clinical implications.* *J Cosmet Laser Ther* 2009;11:62-69.